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<i>This handy Locator lists all cataloged and some non-cataloged Sandwich Bodies and Subplates. Included are ISO/CETOP Interface Patterns, Function Descriptions and Function Symbols, with Cavities, Typical Cartridges used with each specific body and a stacking height for quick ordering. Also listed beneath each cartridge/body is a page number for location of more detailed information on each body.</i>	
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The Sandwich Catalog

SUN offers the broadest and most comprehensive range of sandwich products in the ISO 03 to ISO 08 interface sizes of any manufacturer. All sandwiches are available in a choice of materials; aluminum for 3000 psi operation and ductile iron for 5000 psi operation. Many sandwich products are also available in both standard and high capacity versions.

The SUN Hydraulics Sandwich Catalog contains more than 300 pages of ISO 03, 05, 07, and 08 sandwich bodies, side-ported and rear-ported subplates, and one- to five-station bar manifolds. Sandwiches are available with single cavities, dual cavities, and multiple cavity variants to make unique circuit elements for mounting under standard directional control valves.

Products are cataloged by ISO/CETOP interface pattern and function, with ISO 03 bodies appearing first, followed by ISO 05, ISO 05 with x and y ports (U.S. and European), ISO 07, and ISO 08 bodies. Within each ISO interface pattern, products are cataloged by function.

Because SUN's ISO 03 sandwich bodies are designed for multi-functional use, you will see the same three letter model code appear in different functional areas. To achieve multi-functional usage, SUN ISO 03 sandwiches do not conform to the ISO standard stacking height. See page 12.003 in the Technical Tip Section for a more detailed explanation of ISO 03 sandwiches.

▶▶▶ Technical Tips

The Technical Tip section, starting on page 12.003, provides detailed information on SUN sandwich products. The material presented in this section explains how to order and orient SUN sandwiches in a stack, and when and how to order seal plates. There is also information for ordering studkits for ISO 03 and 05 sandwiches.

▶▶▶ Sandwich Locator (See Figure 1)

The Sandwich Body Locator on pages 12.007 through 12.024 is the easiest way to locate a specific sandwich product in this catalog. The Locator groups products by function and presents the sandwich model code and stacking height, cavity configuration, and page number for every sandwich, subplate, and bar manifold in this catalog. Most sandwich model codes are preceded by a typical cartridge model code to present a full valve assembly.

On the left side of each locator page is a pictorial description of a sandwich stack. The P, T, A, and B ports (with appropriate symbols) at the bottom of the page are connected with simulated lines to a directional valve (no center configuration shown) at the top of the page. The functional schematic renderings shown between the directional valve and P, T, A, and B ports realistically describe how a specific sandwich will function in a stack.

Once a function is selected, available sandwich bodies are listed across the page under the five different ISO/CETOP interface patterns. Simply note the model code for the sandwich you have selected and turn to the referenced page to see detailed information on that product.

Figure 1 Sandwich Locator

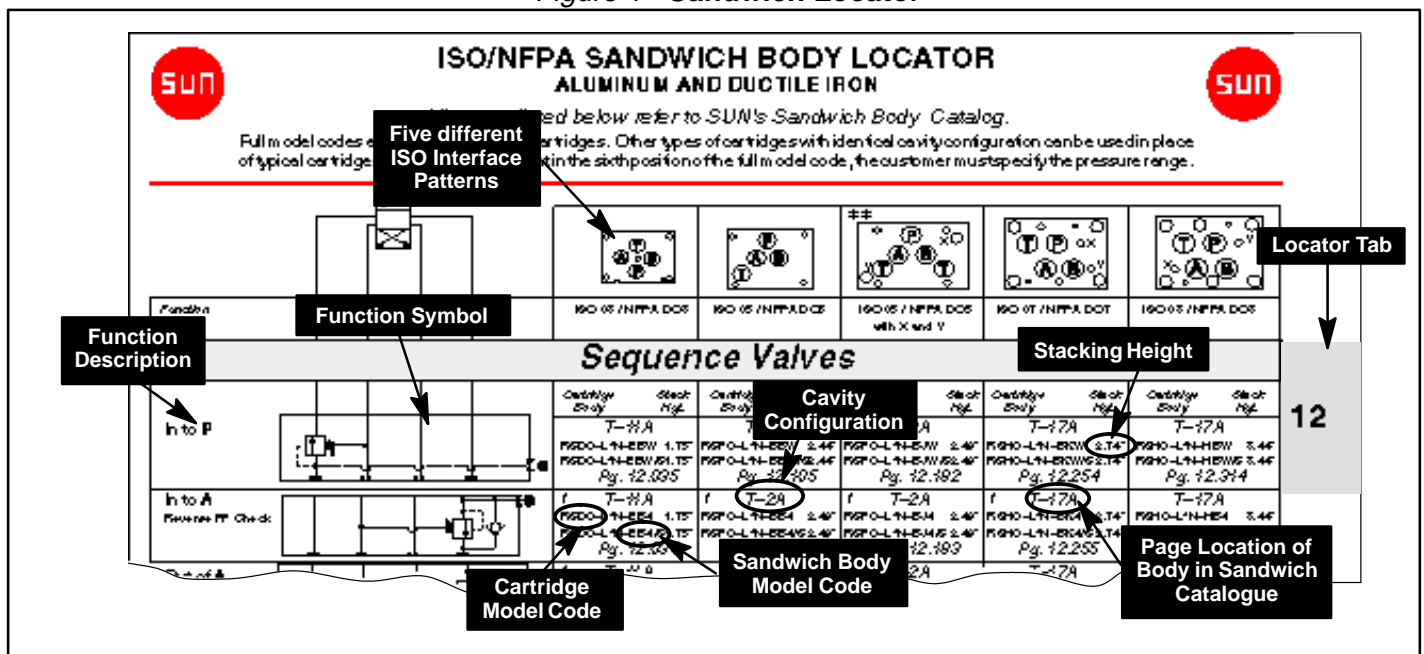




Figure 2 Sandwich Data Page

ISO 08 SANDWICH BODIES
 * Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
 See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Ordering Information Page Location

ISO Interface Pattern identified in each page heading

Flow Control Valves

FUNCTION
Meter-Out T

Function Symbol

Function Description

Physical Description of Body showing Cavity, LS Depth, O-rings, and other Information

American 3rd Angle Projection Symbol

Sandwich Body Model Code

ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBT		IBTAS	

Flow Control Valves

FUNCTION
Meter-Out T (High Capacity)

Quick Reference Tabs with ISO Interface Size and Function

Cartridge Table showing Typical Cartridges used with Bodies on this page

Cartridge Function Symbol

Cartridge Model Code

Cartridge Description

Page Location of Cartridge in Cartridge Catalog

ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBVS			

TYPICAL CARTRIDGE USED WITH BODIES SHOWN ABOVE

08 FLOW CONTROL		Fully Adjustable Needle Valve NPC Page 5.13		Fixed Orifice, Pressure-Compensated Flow Control FXA Page 5.21
		Fully Adjustable Needle Valve with Reverse Free Flow Check NC*B Page 5.17		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check FC*B Page 5.23
		Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow NC*C Page 5.19		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check FD*A Page 5.25
	OTHER VALVES: ONO			

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 CD #999-901-105 Rev. 01-Jan-96

12.350



►►► Sandwich Data Pages (See Figure 2)

Each sandwich data page presents information in a similar fashion. The function symbol(s) shown on the left part of the page replicate the same description found in the Locator, including the text description. To the right of the symbols, a complete physical description of the sandwich body is presented, including the cavity location and locating shoulder depth. (When the locating shoulder depth is subtracted from the maximum control extension dimension on a cartridge, you are able to calculate the stick-out length for the cartridge.) Convenient tabs on the outer margin of each page denote the ISO interface size and sandwich function for quick reference.

Under the physical sandwich description is a chart providing the sandwich model codes for both aluminum and ductile iron versions, and port types and sizes if there are ports in the body. ISO standard interface dimensions can be found on page 14.13 of the catalog.

At the bottom of most sandwich data pages is a box titled "Typical Cartridges used with Bodies shown above". This box contains cartridge model codes, cartridge function symbols and descriptive text for cartridges used with the sandwiches on a specific page. The key to matching cartridges to sandwich bodies is the SUN cavity. Anytime the cavity configuration of a cartridge matches the cavity configuration of a body, you are guaranteed a physical fit.

Most sandwich data pages show two sandwich bodies with identical cavities. However, sometimes the two bodies will have different cavities, especially in the case where a standard and high capacity sandwich body are shown on

the same page. (To achieve a high capacity sandwich version, SUN often uses the next size larger cartridge.) On these pages, cartridge model codes are shown with an asterisk in the third position. To complete the model code, select the cartridge model that has the identical cavity as the sandwich being used.

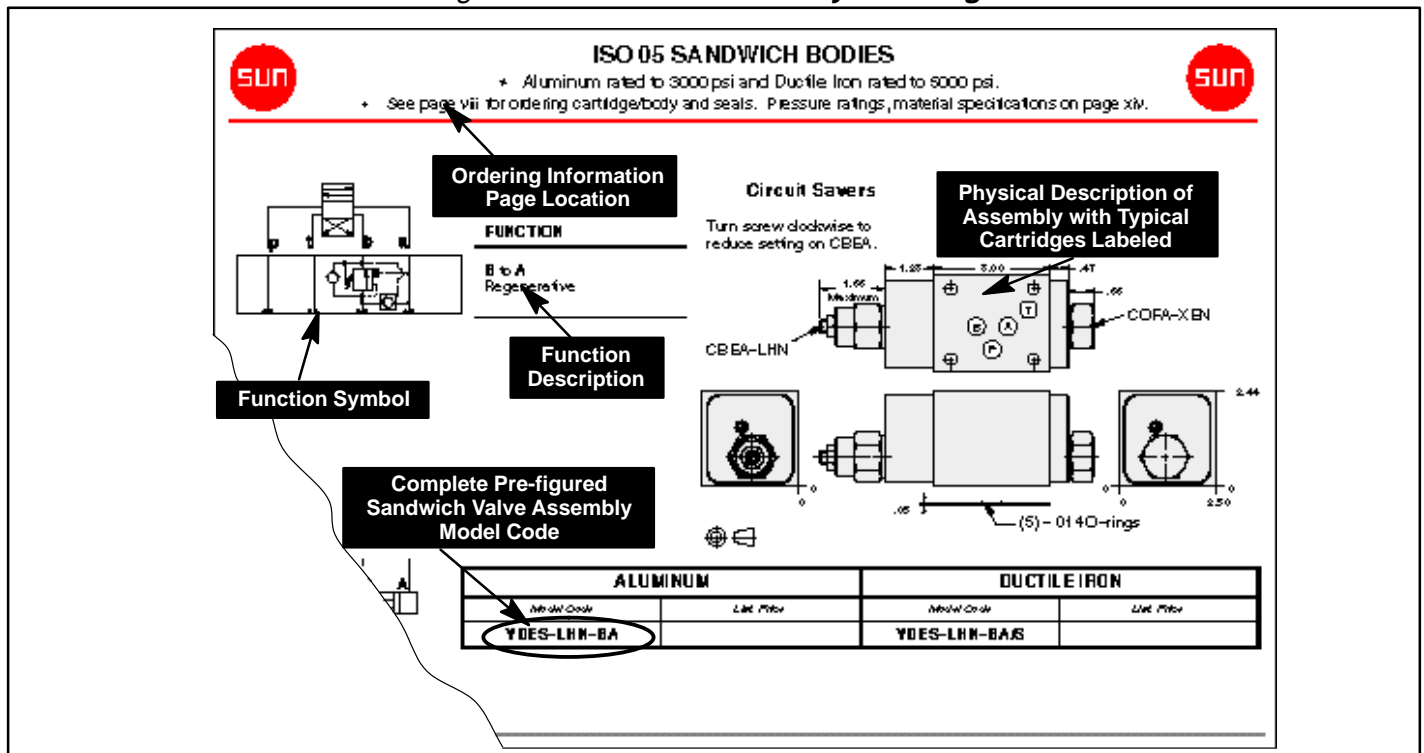
SUN Sandwich Valve Assemblies

(See Figure 3)

Some sandwich bodies are offered as complete, pre-configured valve assemblies. Sandwich Valve Assemblies typically include at least two different cartridges in the assembly and are designated by a nine-position model code. These product data pages do not include a listing of typical cartridges used as they are complete circuit elements. The cartridges used in the assembly are described with complete model codes in the physical description of the assembly. If you need to change a control or adjustment range on cartridges, please contact your SUN distributor *before* making the change.

Some sandwich valve assemblies include a solenoid valve. The model codes listed on these pages are incomplete, with an * in the eighth position of the model code. To complete the model code, the solenoid connector/voltage option must be selected from page 14.16 at the back of the catalogue or page 50 of SUN's Price List. Once the appropriate option is selected, insert the option code in place of the * and add the option price to the assembly List Price. Please note that all solenoid operated valve assemblies are limited to 3000 psi operation.

Figure 3 Sandwich Assembly Data Page





General Information Section

All SUN catalogs contain a general information section for customer reference. This section includes:

- A charted listing, by function, of direct motor mount bodies for Danfoss, Eaton, and Staffa motors.
- Cavity drawings for all SUN cavities in the catalog with model codes for cavity tooling.
- ISO standard interface dimensions with selected directional valve manufacturers' model codes.

- A listing of field service kits for SUN cartridges.
- Orifice size pressure drop curves to be used when applying flow controls.
- A listing of solenoid connector and voltage options.
- A complete model code alphabetical index for all products in all SUN catalogs. The model code index is organized by Cartridge, Cartridge Accessories, Body (Line Mount and Sandwich), Parts, and Valve Assembly Packages.

Figure 4 (Top to bottom) SUN Cavity Drawing page, ISO/CETOP standard interface page and solenoid connector and voltage options page.

CARTRIDGE CAVITIES AND CAVITY TOOLS

See Sun Price List for Tooling Prices.

3 Port SUN Cavity Series 1, T-11A
**M20 x 1.5-6H Thread

Minimum Hex Extension: 30.18
Minimum L.S. Depth: 17.48
Minimum Centreline-to-Edge Distance: 15.09
Minimum Centreline-to-Centreline Distance: 26.97

Socket Wrench Clearance Diameter
Socket Clearance: 31.75 0 mm.*
Recommended Maximum L.S. Depth without Socket Clearance: 23.82.

Locating Shoulder

Socket Wrench Clearance Diameter

Socket Clearance: 31.75 0 mm.*
Recommended Maximum L.S. Depth without Socket Clearance: 23.82.
Minimum Centreline-to-Edge Distance: 15.09.
Minimum Centreline-to-Centreline Distance: 26.97.

Sockets

Deep thin wall hex sockets are the preferred tools to use when installing SUN cartridges are readily available from Snap-On Tools Corporation. (See Chart)

Dimension Tolerances
(unless otherwise specified)

±0.05 | A | **

SOLENOID VALVE INTERFACES

ISO 03/NFPA D03

Valve Models

Continental	VSSM, ED03M
Delta	Series 4000
Denison	A-3D01, D2D02-35
Double A	Q*-3
Parker Hannifin	D1VW
Racine	FD4
Rexroth	WE6, 4WRA6
Rivett	65**03
Rucker/Yuken	DSGR-01, DG4V, SSG01, NG6

ISO 05/NFPA D05

Valve Models

Continental	VS12M, ED05M
Denison	DID04, 3D02, A-D2D04
Double A	Q*-5
Parker Hannifin	D3W
Racine	FD4
Rexroth	WE8, WE10
Rivett	65**02
Rucker/Yuken	DSG-03
Vickers	DG4S4
Nachi	SSG03, E10, E20
Racine-Bosch	NG10

Electrical Connections for Solenoid Operated

Below is a listing of current optional electrical connections for solenoid operated valve assemblies in the catalog utilize the Waterman which is available with three basic connector options and a variety of voltage configurations. Solenoid operated valve assemblies incorporate the Waterman solenoid, current operating pressures are limited.

The letter codes listed below are required to complete the model code and pricing of all SUN solenoid operated valve assemblies. (See Model Code Explanation in the front of this catalogue.)

ISO 05/DO5 with X and Y European

Valve Models

WIRE LEADS

18 Gage
0,6 metres Long

J - 12 V DC-24" Leads
K - 24 V DC-24" Leads

CONDUIT

1/2" NPTF

18 Gage
0,6 metres Long

N - 115 V 50/60Hz-Conduit
O - 230 V 50/60Hz-Conduit

ISO/DIN

DIN 43650
Plug Face

S - 12 V DC ISO/DIN
T - 24 V DC ISO/DIN
V - 115 V 50/60Hz ISO/DIN
W - 230 V 50/60Hz ISO/DIN

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NOTES





Sandwich Bodies



Click Here for
MOUNTING and ASSEMBLY of SANDWICH BODIES
Technical Tips

See **Product > Technical Information > Technical Tips for Sun Products**



Click Here for
MOUNTING and ASSEMBLY of SANDWICH BODIES
Technical Tips

See **Product > Technical Information > Technical Tips for Sun Products**



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MOUNTING and ASSEMBLY of SANDWICH BODIES
Technical Tips

See **Product > Technical Information > Technical Tips for Sun Products**



Click Here for
MOUNTING and ASSEMBLY of SANDWICH BODIES
Technical Tips

See **Product > Technical Information > Technical Tips for Sun Products**



12



ISO/NFPA SANDWICH BODY LOCATOR ALUMINUM AND DUCTILE IRON

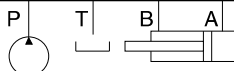


All pages listed below refer to SUN's Sandwich Body Catalog.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a * is present in the sixth position of the full model code, the customer must specify the pressure range.

	p	t	b	a						
Function					ISO 03 / NFPA DO3	ISO 05 / NFPA DO5	ISO 05 / NFPA DO5 with X and Y	ISO 07 / NFPA DO7	ISO 08 / NFPA DO8	
Relief Valves										
					Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.
P to T					T-10A RPEC-L*N-CBE 1.94" RPEC-L*N-CBE/S1.94" Pg. 12.093	T-3A RPGC-L*N-CBP 1.94" RPGC-L*N-CBP/S1.94" Pg. 12.093	T-3A RPIC-L*N-CJP 1.99" RPIC-L*N-CJP/S 1.99" Pg. 12.173	T-3A RPGC-L*N-CKP 1.96" RPGC-L*N-CKP/S1.96" Pg. 12.245	T-3A RPGC-L*N-CDP 1.94" RPGC-L*N-CDP/S 1.94" Pg. 12.305	
P to T (High Capacity)					T-10A RPEC-L*N-FBP 1.75" RPEC-L*N-FBP/S1.75" Pg. 12.025	T-3A RPGC-L*N-CBP 1.94" RPGC-L*N-CBP/S1.94" Pg. 12.093	T-3A RPIC-L*N-CJP 1.99" RPIC-L*N-CJP/S 1.99" Pg. 12.173		T-16A RPIC-L*N-CDO 3.44" RPIC-L*N-CDO/S 3.44" Pg. 12.305	
P to T Externally Vented					† T-11A RVCA-L*N-EBC 1.75" RVCA-L*N-EBC/S1.75" Pg. 12.026	T-2A RVEA-L*N-BBC 2.44" RVEA-L*N-BBC/S2.44" Pg. 12.094	T-2A RVEA-L*N-BJC 2.49" RVEA-L*N-BJC/S2.49" Pg. 12.174	T-17A RVGA-L*N-CKQ 2.74" RVGA-L*N-CKQ/S2.74" Pg. 12.246	† T-17A RVGA-L*N-HBV 3.44" RVGA-L*N-HBV/S3.44" Pg. 12.306	
P to T N.O. Solenoid Vented					† YRCO-LAN-*A 1.75" YRCO-LAN-*A/S1.75" Pg. 12.027	† YREO-LAN-*A 2.44" YREO-LAN-*A/S 2.44" Pg. 12.095		YRFI-LAN-*B 2.74" YRFI-LAN-*B/S 2.74" Pg. 12.247	YRHI-LAN-*A 3.44" YRHI-LAN-*A/S 3.44" Pg. 12.307	
P to T N.C. Solenoid Vented					† YRCP-LAN-*A 1.75" YRCP-LAN-*A/S1.75" Pg. 12.027	† YREP-LAN-*A 2.44" YREP-LAN-*A/S2.44" Pg. 12.095		YRFJ-LAN-*B 2.74" YRFJ-LAN-*B/S 2.74" Pg. 12.247	YRHJ-LAN-*A 2.74" YRHJ-LAN-*A/S 2.74" Pg. 12.307	
Out of T								† T-16A RPIC-L*N-DKT 2.74" RPIC-L*N-DKT/S 2.74" Pg. 12.248	† T-16A RPIC-L*N-IBT 3.44" RPIC-L*N-IBT/S 3.44" Pg. 12.308	
Out of T (High Capacity)					T-10A RPEC-L*N-FBT 1.75" RPEC-L*N-FBT/S1.75" Pg. 12.028	† T-3A RPGC-L*N-CBT 1.94" RPGC-L*N-CBT/S1.94" Pg. 12.096		† T-18A RPKC-L*N-DKV 3.49" RPKC-L*N-DKV/S3.49" Pg. 12.248	† T-18A RPKC-L*N-IBV 3.44" RPKC-L*N-IBV/S 3.44" Pg. 12.308	
A to T						† T-10A RPEC-L*N-CBF 1.94" RPEC-L*N-CBF/S1.94" Pg. 12.097		T-3A RPGC-L*N-CKA 1.96" RPGC-L*N-CKA/S1.96" Pg. 12.249	T-3A RPGC-L*N-CDA 1.94" RPGC-L*N-CDA/S1.94" Pg. 12.309	
A to T (High Capacity)					T-10A RPEC-L*N-FBA 1.75" RPEC-L*N-FBA/S1.75" Pg. 12.029	† T-3A RPGC-L*N-CBA 1.94" RPGC-L*N-CBA/S1.94" Pg. 12.097	T-3A RPGC-L*N-CJA 1.99" RPGC-L*N-CJA/S1.99" Pg. 12.175		T-16A RPIC-L*N-CDC 3.44" RPIC-L*N-CDC/S 3.44" Pg. 12.309	
A to T FF Check T to B					† T-10A RPEC-L*N-FB2 1.75" RPEC-L*N-FB2/S1.75" Pg. 12.030	† T-3A RPGC-L*N-CB2 1.94" RPGC-L*N-CB2/S1.94" Pg. 12.098	† T-3A RPGC-L*N-CJ2 2.49" RPGC-L*N-CJ2/S2.49" Pg. 12.176	† T-3A RPGC-L*N-CKJ 1.96" RPGC-L*N-CKJ/S1.96" Pg. 12.250		
A to B						T-10A RPEC-L*N-CBH 1.49" RPEC-L*N-CBH/S1.49" Pg. 12.099				
A to B (High Capacity)					T-10A RPEC-L*N-FBC 1.75" RPEC-L*N-FBC/S1.75" Pg. 12.031	† T-3A RPGC-L*N-CBC 1.46" RPGC-L*N-CBC/S1.46" Pg. 12.099	T-3A RPGC-L*N-CJC 1.99" RPGC-L*N-CJC/S1.99" Pg. 12.177			
A to T Externally Vented					† T-11A RVCA-L*N-EBI 1.75" RVCA-L*N-EBI/S1.75" Pg. 12.032	T-2A RVEA-L*N-BBD 2.44" RVEA-L*N-BBD/S2.44" Pg. 12.100			† T-17A RVGA-L*N-HBE 3.44" RVGA-L*N-HBE/S3.44" Pg. 12.310	
A to T N.O. Solenoid Vented						† YREU-LAN-*A 2.49" YREU-LAN-*A/S 2.49" Pg. 12.101				
A to T N.C. Solenoid Vented						† YRET-LAN-*A 2.49" YRET-LAN-*A/S 2.49" Pg. 12.101				

Continued on next page.



****Seal plate must be ordered separately. U.S. and European X and Y available.**

* Incomplete model number. Cartridges included. Consult your SUN distributor for order information.

† These bodies do not have a gage port.

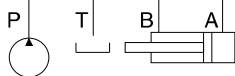
ISO/NFPA SANDWICH BODY LOCATOR ALUMINUM AND DUCTILE IRON



All pages listed below refer to SUN's Sandwich Body Catalog.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a * is present in the sixth position of the full model code, the customer must specify the pressure range.

Function					ISO 03 / NFPA DO3	ISO 05 / NFPA DO5	ISO 05 / NFPA DO5 with X and Y	ISO 07 / NFPA DO7	ISO 08 / NFPA DO8	
Relief Valves (Continued)										
					Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.
A and B to T					† T-10A RPEC-L*N-CBD 1.44" RPEC-L*N-CBD/S 1.44" Pg. 12.102					
A and B to T (High Capacity)					† T-10A RPEC-L*N-FBX 1.75" RPEC-L*N-FBX/S 1.75" Pg. 12.033	† T-3A RPGC-L*N-CBX 1.44" RPGC-L*N-CBX/S 1.44" Pg. 12.102	† T-3A RPGC-L*N-CJX 1.49" RPGC-L*N-CJX/S 1.49" Pg. 12.178	† T-3A RPGC-L*N-CKX 2.74" RPGC-L*N-CKX/S 2.74" Pg. 12.251	† T-16A RPIC-L*N-CDZ 3.44" RPIC-L*N-CDZ/S 3.44" Pg. 12.311	
A to B and B to A (Cross-Port)					† T-10A RPEC-L*N-CBI 2.44" RPEC-L*N-CBI/S 2.44" Pg. 12.103	† T-10A RPEC-L*N-CJY 2.49" RPEC-L*N-CJY/S 2.49" Pg. 12.179		† T-10A RPEC-L*N-CKY 1.96" RPEC-L*N-CKY/S 1.96" Pg. 12.252	† T-3A RPGC-L*N-CDY 1.94" RPGC-L*N-CDY/S 1.94" Pg. 12.312	
A to B and B to A (High Capacity) (Cross-Port)					† T-10A RPEC-L*N-FBY 1.75" RPEC-L*N-FBY/S 1.75" Pg. 12.034	† T-3A RPGC-L*N-CBY 2.44" RPGC-L*N-CBY/S 2.44" Pg. 12.103			† T-16A RPIC-L*N-CDW 3.44" RPIC-L*N-CDW/S 3.44" Pg. 12.312	
B to T						T-10A RPEC-L*N-CBG 1.94" RPEC-L*N-CBG/S 1.94" Pg. 12.104		T-3A RPGC-L*N-CKB 1.96" RPGC-L*N-CKB/S 1.96" Pg. 12.253	T-3A RPGC-L*N-CDB 1.94" RPGC-L*N-CDB/S 1.94" Pg. 12.313	
B to T (High Capacity)					† T-10A RPEC-L*N-FBA 1.75" RPEC-L*N-FBA/S 1.75" Pg. 12.029	† T-3A RPGC-L*N-CBB 1.94" RPGC-L*N-CBB/S 1.94" Pg. 12.104	T-3A RPGC-L*N-CJB 1.99" RPGC-L*N-CJB/S 1.99" Pg. 12.180		T-16A RPIC-L*N-CDD 3.44" RPIC-L*N-CDD/S 3.44" Pg. 12.313	
B to T (FF Check to T to A)					† T-10A RPEC-L*N-FB2 1.75" RPEC-L*N-FB2/S 1.75" Pg. 12.030					
B to A						T-10A RPEC-L*N-CBH 1.49" RPEC-L*N-CBH/S 1.49" Pg. 12.099				
B to A (High Capacity)					† T-10A RPEC-L*N-FBC 1.75" RPEC-L*N-FBC/S 1.75" Pg. 12.031	† T-3A RPGC-L*N-CBC 1.46" RPGC-L*N-CBC/S 1.46" Pg. 12.099	T-3A RPGC-L*N-CJC 1.99" RPGC-L*N-CJC/S 1.99" Pg. 12.177			
B to T Externally Vented					† T-11A RVCA-L*N-EBI 1.75" RVCA-L*N-EBI/S 1.75" Pg. 12.032	† T-2A RVEA-L*N-BBE 2.44" RVEA-L*N-BBE/S 2.44" Pg. 12.100			† T-17A RVGA-L*N-HBF 3.44" RVGA-L*N-HBF/S 3.44" Pg. 12.310	
B to T N.O. Solenoid Vented						† YREU-LAN-*A 2.49" YREU-LAN-*A/S 2.49" Pg. 12.101				
B to T N.C. Solenoid Vented						† YRET-LAN-*A 2.49" YRET-LAN-*A/S 2.49" Pg. 12.101				



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* Incomplete model number. Cartridges included. Consult your SUN distributor for order information.

† These bodies do not have a gage port.

ISO/NFPA SANDWICH BODY LOCATOR ALUMINUM AND DUCTILE IRON

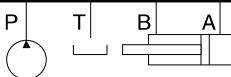


All pages listed below refer to SUN's Sandwich Body Catalog.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a * is present in the sixth position of the full model code, the customer must specify the pressure range.

Function	p	t	b	a	ISO 03 / NFPA DO3	ISO 05 / NFPA DO5	ISO 05 / NFPA DO5 with X and Y	ISO 07 / NFPA DO7	ISO 08 / NFPA DO8
Sequence Valves									
In to P					Cartridge Body: T-11A Stack Hgt.: RSDC-L*N-EBW 1.75" RSDC-L*N-EBW/S1.75" Pg. 12.035	Cartridge Body: T-2A Stack Hgt.: RSFC-L*N-BBW 2.44" RSFC-L*N-BBW/S2.44" Pg. 12.105	Cartridge Body: T-2A Stack Hgt.: RSFC-L*N-BJW 2.49" RSFC-L*N-BJW/S2.49" Pg. 12.182	Cartridge Body: T-17A Stack Hgt.: RSHC-L*N-BKW 2.74" RSHC-L*N-BKW/S 2.74" Pg. 12.254	Cartridge Body: T-17A Stack Hgt.: RSHC-L*N-HBW 3.44" RSHC-L*N-HBW/S 3.44" Pg. 12.314
In to A Reverse FF Check					Cartridge Body: T-11A Stack Hgt.: RSDC-L*N-EB4 1.75" RSDC-L*N-EB4/S1.75" Pg. 12.036	Cartridge Body: T-2A Stack Hgt.: RSFC-L*N-BB4 2.49" RSFC-L*N-BB4/S 2.49" Pg. 12.106	Cartridge Body: T-2A Stack Hgt.: RSFC-L*N-BJ4 2.49" RSFC-L*N-BJ4/S 2.49" Pg. 12.183	Cartridge Body: T-17A Stack Hgt.: RSHC-L*N-BK4 2.74" RSHC-L*N-BK4/S 2.74" Pg. 12.255	Cartridge Body: T-17A Stack Hgt.: RSHC-L*N-HB4 3.44" RSHC-L*N-HB4/S 3.44" Pg. 12.315
Out of A Reverse FF Check					Cartridge Body: T-11A Stack Hgt.: RSDC-L*N-EB5 1.75" RSDC-L*N-EB5/S1.75" Pg. 12.036	Cartridge Body: T-2A Stack Hgt.: RSFC-L*N-BB5 2.49" RSFC-L*N-BB5/S 2.49" Pg. 12.106	Cartridge Body: T-2A Stack Hgt.: RSFC-L*N-BJ5 2.49" RSFC-L*N-BJ5/S 2.49" Pg. 12.183	Cartridge Body: T-17A Stack Hgt.: RSHC-L*N-BK6 2.74" RSHC-L*N-BK6/S 2.74" Pg. 12.255	Cartridge Body: T-17A Stack Hgt.: RSHC-L*N-HB6 3.44" RSHC-L*N-HB6/S 3.44" Pg. 12.315
In to B Reverse FF Check					Cartridge Body: T-11A Stack Hgt.: RSDC-L*N-EB5/S1.75" Pg. 12.036	Cartridge Body: T-2A Stack Hgt.: RSFC-L*N-BB5/S 2.49" Pg. 12.106	Cartridge Body: T-2A Stack Hgt.: RSFC-L*N-BJ5/S 2.49" Pg. 12.183	Cartridge Body: T-17A Stack Hgt.: RSHC-L*N-BK5 2.74" RSHC-L*N-BK5/S 2.74" Pg. 12.256	
Out of B Reverse FF Check					Cartridge Body: T-11A Stack Hgt.: RSDC-L*N-EB4 1.75" RSDC-L*N-EB4/S1.75" Pg. 12.036	Cartridge Body: T-2A Stack Hgt.: PBF-BL*N-BB4 2.49" PBF-BL*N-BB4/S 2.49" Pg. 12.106	Cartridge Body: T-2A Stack Hgt.: RSFC-L*N-BJ4 2.49" RSFC-L*N-BJ4/S 2.49" Pg. 12.183	Cartridge Body: T-17A Stack Hgt.: RSHC-L*N-BK7 2.74" RSHC-L*N-BK7/S 2.74" Pg. 12.256	Cartridge Body: T-17A Stack Hgt.: RSHC-L*N-HB7 3.44" RSHC-L*N-HB7/S 3.44" Pg. 12.316
Reducing Valves									
On P Drained to T					Cartridge Body: T-11A Stack Hgt.: PBDB-L*N-EBP 1.75" PBDB-L*N-EBP/S1.75" Pg. 12.037	Cartridge Body: T-2A Stack Hgt.: PBF-BL*N-BBP 2.44" PBF-BL*N-BBP/S 2.44" Pg. 12.107	Cartridge Body: T-2A Stack Hgt.: PBF-BL*N-BJP 2.49" PBF-BL*N-BJP/S 2.49" Pg. 12.184	Cartridge Body: T-17A Stack Hgt.: PBHB-L*N-BKP 2.74" PBHB-L*N-BKP/S 2.74" Pg. 12.257	Cartridge Body: T-17A Stack Hgt.: PBHB-L*N-HBP 3.44" PBHB-L*N-HBP/S 3.44" Pg. 12.317
On P Drained to T (High Capacity)						Cartridge Body: T-17A Stack Hgt.: PBHB-L*N-WCC 3.94" PBHB-L*N-WCC/S3.94" NOT CATALOGED			Cartridge Body: T-19A Stack Hgt.: PBJB-L*N-HBO 3.44" PBJB-L*N-HBO/S 3.44" Pg. 12.317
On P Drained Externally					Cartridge Body: T-11A Stack Hgt.: PBDB-L*N-EBQ 1.75" PBDB-L*N-EBQ/S1.75" Pg. 12.038	Cartridge Body: T-2A Stack Hgt.: PBF-BL*N-BBQ 2.49" PBF-BL*N-BBQ/S2.49" Pg. 12.108		Cartridge Body: T-17A Stack Hgt.: PBHB-L*N-BKQ 2.74" PBHB-L*N-BKQ/S2.74" Pg. 12.258	Cartridge Body: T-19A Stack Hgt.: PBJB-L*N-HBQ 3.44" PBJB-L*N-HBQ/S 3.44" Pg. 12.318
On A Drained to B					Cartridge Body: T-11A Stack Hgt.: PBDB-L*N-EBA 1.75" PBDB-L*N-EBA/S1.75" Pg. 12.039	Cartridge Body: T-2A Stack Hgt.: PBF-BL*N-BBA 1.94" PBF-BL*N-BBA/S1.94" Pg. 12.109	Cartridge Body: T-2A Stack Hgt.: PBF-BL*N-BJA 2.49" PBF-BL*N-BJA/S2.49" Pg. 12.185	Cartridge Body: T-17A Stack Hgt.: PBHB-L*N-BKA 2.74" PBHB-L*N-BKA/S2.74" Pg. 12.259	Cartridge Body: T-17A Stack Hgt.: PBHB-L*N-HBL 3.44" PBHB-L*N-HBL/S 3.44" Pg. 12.319
On A Drained to B (High Capacity)									Cartridge Body: T-19A Stack Hgt.: PBJB-L*N-HBA 3.44" PBJB-L*N-HBA/S 3.44" Pg. 12.319
On A Drained Externally					Cartridge Body: T-11A Stack Hgt.: PBDB-L*N-EBD 1.75" PBDB-L*N-EBD/S1.75" Pg. 12.040	Cartridge Body: T-2A Stack Hgt.: PBF-BL*N-BBF 2.49" PBF-BL*N-BBF/S 2.49" Pg. 12.110		Cartridge Body: T-17A Stack Hgt.: PBHB-L*N-BKC 2.74" PBHB-L*N-BKC/S 2.74" Pg. 12.260	Cartridge Body: T-17A Stack Hgt.: PBHB-L*N-HBG 3.44" PBHB-L*N-HBG/S 3.44" NOT CATALOGED
On A Drain to T Reverse FF Check					Cartridge Body: T-11A Stack Hgt.: PBDB-L*N-EB2 1.75" PBDB-L*N-EB2/S1.75" Pg. 12.041	Cartridge Body: T-2A Stack Hgt.: PBF-BL*N-BB2 2.49" PBF-BL*N-BB2/S 2.49" Pg. 12.111	Cartridge Body: T-2A Stack Hgt.: PBF-BL*N-BJ2 2.49" PBF-BL*N-BJ2/S 2.49" Pg. 12.186	Cartridge Body: T-17A Stack Hgt.: PBHB-L*N-BK2 2.74" PBHB-L*N-BK2/S 2.74" Pg. 12.261	Cartridge Body: T-17A Stack Hgt.: PBHB-L*N-HBK 3.44" PBHB-L*N-HBK/S 3.44" Pg. 12.320
On B Drained to A					Cartridge Body: T-11A Stack Hgt.: PBDB-L*N-EBA 1.75" PBDB-L*N-EBA/S1.75" Pg. 12.039	Cartridge Body: T-2A Stack Hgt.: PBF-BL*N-BBB 1.94" PBF-BL*N-BBB/S1.94" Pg. 12.112	Cartridge Body: T-2A Stack Hgt.: PBF-BL*N-BJB 2.49" PBF-BL*N-BJB/S 2.49" Pg. 12.187	Cartridge Body: T-17A Stack Hgt.: PBHB-L*N-BKB 2.74" PBHB-L*N-BKB/S 2.74" Pg. 12.262	Cartridge Body: T-17A Stack Hgt.: PBHB-L*N-HBM 3.44" PBHB-L*N-HBM/S 3.44" Pg. 12.321
On B Drained to A (High Capacity)									Cartridge Body: T-19A Stack Hgt.: PBJB-L*N-HBB 3.44" PBJB-L*N-HBB/S 3.44" Pg. 12.321

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ISO/NFPA SANDWICH BODY LOCATOR ALUMINUM AND DUCTILE IRON



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	p	t	b	a	ISO 03 / NFPA DO3	ISO 05 / NFPA DO5	ISO 05 / NFPA DO5 with X and Y	ISO 07 / NFPA DO7	ISO 08 / NFPA DO8
Reducing Valves (Continued)									
					Cartridge Body Stack Hgt.	Cartridge Body Stack Hgt.	Cartridge Body Stack Hgt.	Cartridge Body Stack Hgt.	Cartridge Body Stack Hgt.
On B Drained Externally					† T-11A PBDB-L*N-EBD 1.75" PBDB-L*N-EBD/S 1.75" Pg. 12.040	† T-2A PFB-L*N-BBG 2.49" PFB-L*N-BBG/S 2.49" Pg. 12.110			
On B Drain to T Reverse FF Check					† T-11A PBDB-L*N-EB3 1.75" PBDB-L*N-EB3/S 1.75" Pg. 12.041	† T-2A PFB-L*N-BB3 2.49" PFB-L*N-BB3/S 2.49" Pg. 12.111	† T-2A PFB-L*N-BJ3 2.49" PFB-L*N-BJ3/S 2.49" Pg. 12.186	† T-17A PBHB-L*N-BKJ 2.74" PBHB-L*N-BKJ/S 2.74" Pg. 12.261	T-17A PBHB-L*N-HBJ 3.44" PBHB-L*N-HBJ/S 3.44" Pg. 12.320
On A and B Drains to Opposite Port					† T-11A PBDB-L*N-EBY 1.75" PBDB-L*N-EBY/S 1.75" Pg. 12.042	† T-2A PFB-L*N-BBY 1.94" PFB-L*N-BBY/S 1.94" Pg. 12.113	† T-2A PFB-L*N-BJY 2.49" PFB-L*N-BJY/S 2.49" Pg. 12.188	† T-17A PBHB-L*N-BKY 2.74" PBHB-L*N-BKY/S 2.74" Pg. 12.263	† T-17A PBHB-L*N-HBN 3.44" PBHB-L*N-HBN/S 3.44" Pg. 12.322
On A and B Drains to Opposite Port (High Capacity)									† T-19A PBJB-L*N-HBY 3.44" PBJB-L*N-HBY/S 3.44" Pg. 12.322
On A and B Drains to T Reverse FF Check					† T-11A PBDB-L*N-EB9 2.49" PBDB-L*N-EB9/S 2.49" NOT CATALOGED	† T-2A PFB-L*N-BB9 2.99" PFB-L*N-BB9/S 2.99" NOT CATALOGED	† T-2A PFB-L*N-BJ9 2.99" PFB-L*N-BJ9/S 2.99" NOT CATALOGED		
Reducing/Relieving Valves									
					Cartridge Body Stack Hgt.	Cartridge Body Stack Hgt.	Cartridge Body Stack Hgt.	Cartridge Body Stack Hgt.	Cartridge Body Stack Hgt.
On P Tank to T Drained to T					† T-11A PPDB-L*N-EBP 1.75" PPDB-L*N-EBP/S 1.75" Pg. 12.043	T-2A PFB-L*N-BBP 2.44" PFB-L*N-BBP/S 2.44" Pg. 12.114	T-2A PFB-L*N-BJP 2.49" PFB-L*N-BJP/S 2.49" Pg. 12.189	T-17A PPHB-L*N-BKP 2.74" PPHB-L*N-BKP/S 2.74" Pg. 12.264	T-17A PPHB-L*N-HBP 3.44" PPHB-L*N-HBP/S 3.44" Pg. 12.323
On P Tank to T Drained to T (High Capacity)						T-17A PPHB-L*N-WCC 3.94" PPHB-L*N-WCC/S 3.94" Pg. 12.114			T-19A PPJB-L*N-HBO 3.44" PPJB-L*N-HBO/S 3.44" Pg. 12.323
On P Tank to T Vented Externally					† T-21A PVDB-L*N-MBP 1.75" PVDB-L*N-MBP/S 1.75" Pg. 12.044	T-22A PVFB-L*N-NBP 2.49" PVFB-L*N-NBP/S 2.49" Pg. 12.115	T-22A PVFB-L*N-NJP 2.49" PVFB-L*N-NJP/S 2.49" Pg. 12.190		T-23A PVHB-L*N-PBP 3.44" PVHB-L*N-PBP/S 3.44" Pg. 12.324
On P Tank to T Drained Externally					† T-21A PVDA-L*N-MBP 1.75" PVDA-L*N-MBP/S 1.75" Pg. 12.044	T-22A PVFA-L*N-NBP 2.49" PVFA-L*N-NBP/S 2.49" Pg. 12.115	T-22A PVFA-L*N-NJP 2.49" PVFA-L*N-NJP/S 2.49" Pg. 12.190		T-23A PVHA-L*N-PBP 3.44" PVHA-L*N-PBP/S 3.44" Pg. 12.324
On P Tank to T N.O. Solenoid on Drain					† YPCG-LAN-*A 1.75" YPCG-LAN-*A/S 1.75" NOT CATALOGED	† YPDG-LAN-*A 2.49" YPDG-LAN-*A/S 2.49" Pg. 12.116			
On P Tank to T N.C. Solenoid on Drain					† YPCH-LAN-*A 1.75" YPCH-LAN-*A/S 1.75" NOT CATALOGED	† YPDH-LAN-*A 2.49" YPDH-LAN-*A/S 2.49" Pg. 12.116			
On A Tank to B Drained to B					T-11A PPDB-L*N-EBA 1.75" PPDB-L*N-EBA/S 1.75" Pg. 12.045	T-2A PFB-L*N-BBA 1.94" PFB-L*N-BBA/S 1.94" Pg. 12.117	T-2A PFB-L*N-BJA 2.49" PFB-L*N-BJA/S 2.49" Pg. 12.191	† T-17A PPHB-L*N-BKA 2.74" PPHB-L*N-BKA/S 2.74" Pg. 12.265	† T-17A PPHB-L*N-HBL 3.44" PPHB-L*N-HBL/S 3.44" Pg. 12.325
On A Tank to B Drained to B (High Capacity)									† T-19A PPJB-L*N-HBA 3.44" PPJB-L*N-HBA/S 3.44" Pg. 12.325
On A Tank to T Drained to T Reverse FF Check					† T-11A PPDB-L*N-EB2 1.75" PPDB-L*N-EB2/S 1.75" Pg. 12.046	† T-2A PFB-L*N-BB2 2.49" PFB-L*N-BB2/S 2.49" Pg. 12.118	† T-2A PFB-L*N-BJ2 2.49" PFB-L*N-BJ2/S 2.49" Pg. 12.192	† T-17A PPHB-L*N-BK2 2.74" PPHB-L*N-BK2/S 2.74" Pg. 12.266	T-17A PPHB-L*N-HBK 3.44" PPHB-L*N-HBK/S 3.44" Pg. 12.326

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ISO/NFPA SANDWICH BODY LOCATOR ALUMINUM AND DUCTILE IRON



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Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a * is present in the sixth position of the full model code, the customer must specify the pressure range.

Function	p t b a	ISO 03 / NFPA DO3	ISO 05 / NFPA DO5	ISO 05 / NFPA DO5 With X and Y	ISO 07 / NFPA DO7	ISO 08 / NFPA DO8

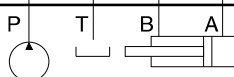
Reducing/Relieving Valves (Continued)

		Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.
On A tank to T Vented Externally Reverse FF Check		† T-21A PVDB-L*N-MB2 2.44" PVDB-L*N-MB2/S 2.44" NOT CATALOGED		† T-22A PVFB-L*N-NB2 2.99" PVFB-L*N-NB2/S 2.99" Pg. 12.119		† T-22A PVFB-L*N-NJ2 2.99" PVFB-L*N-NJ2/S 2.99" Pg. 12.193					
On A tank to T Drained Externally Reverse FF Check		† T-21A PVDA-L*N-MB2 2.44" PVDA-L*N-MB2/S 2.44" NOT CATALOGED		† T-22A PVFA-L*N-NB2 2.99" PVFA-L*N-NB2/S 2.99" Pg. 12.119		† T-22A PVFA-L*N-NJ2 2.99" PVFA-L*N-NJ2/S 2.99" Pg. 12.193					
On B Tank to A Drained to A		T-11A PPDB-L*N-EBA 1.75" PPDB-L*N-EBA/S 1.75" Pg. 12.045		T-2A PPFB-L*N-BBB 1.94" PPFB-L*N-BBB/S 1.94" Pg. 12.120		T-2A PPFB-L*N-BJB 2.49" PPFB-L*N-BJB/S 2.49" Pg. 12.194		† T-17A PPHB-L*N-BKB 2.74" PPHB-L*N-BKB/S 2.74" Pg. 12.267		† T-17A PPHB-L*N-HBM 3.44" PPHB-L*N-HBM/S 3.44" Pg. 12.327	
On B Tank to A Drained to A (High Capacity)										† T-19A PPJB-L*N-HBB 3.44" PPJB-L*N-HBB/S 3.44" Pg. 12.327	
On B Tank to T Drained to T Reverse FF Check		† T-11A PPDB-L*N-EB3 1.75" PPDB-L*N-EB3/S 1.75" Pg. 12.046		† T-2A PPFB-L*N-BB3 2.49" PPFB-L*N-BB3/S 2.49" Pg. 12.118		† T-2A PPFB-L*N-BJ3 2.49" PPFB-L*N-BJ3/S 2.49" Pg. 12.192		† T-17A PPHB-L*N-BKJ 2.74" PPHB-L*N-BKJ/S 2.74" Pg. 12.266		T-17A PPHB-L*N-HBJ 3.44" PPHB-L*N-HBJ/S 3.44" Pg. 12.326	
On B Tank to T Vented Externally Reverse FF Check		† T-21A PVDB-L*N-MB3 2.44" PVDB-L*N-MB3/S 2.44" NOT CATALOGED		† T-22A PVFB-L*N-NB3 2.99" PVFB-L*N-NB3/S 2.99" Pg. 12.119		† T-22A PVFB-L*N-NJ3 2.99" PVFB-L*N-NJ3/S 2.99" Pg. 12.193					
On B Tank to T Drained Externally Reverse FF Check		† T-21A PVDA-L*N-MB3 2.44" PVDA-L*N-MB3/S 2.44" NOT CATALOGED		† T-22A PVFA-L*N-NB3 2.99" PVFA-L*N-NB3/S 2.99" Pg. 12.119		† T-22A PVFA-L*N-NJ3 2.99" PVFA-L*N-NJ3/S 2.99" Pg. 12.193					
On A and B Tanks and Drains to Opposite Port		† T-11A PPDB-L*N-EBY 1.75" PPDB-L*N-EBY/S 1.75" Pg. 12.047		† T-2A PPFB-L*N-BBY 1.94" PPFB-L*N-BBY/S 1.94" Pg. 12.121		† T-2A PPFB-L*N-BJY 2.49" PPFB-L*N-BJY/S 2.49" Pg. 12.195		† T-17A PPHB-L*N-BKY 2.74" PPHB-L*N-BKY/S 2.74" Pg. 12.268		† T-17A PPHB-L*N-HBN 3.44" PPHB-L*N-HBN/S 3.44" Pg. 12.328	
On A and B Tanks and Drains to Opposite Port (High Capacity)										† T-19A PPJB-L*N-HBY 3.44" PPJB-L*N-HBY/S 3.44" Pg. 12.328	
On A and B Tanks and Drains to T Reverse FF Check		† T-11A PPDB-L*N-EB9 2.49" PPDB-L*N-EB9/S 2.49" NOT CATALOGED		† T-2A PPFB-L*N-BB9 2.99" PPFB-L*N-BB9/S 2.99" NOT CATALOGED		† T-2A PPFB-L*N-BJ9 2.99" PPFB-L*N-BJ9/S 2.99" NOT CATALOGED					

Counterbalance Valves

		Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.
On A Pilot from B		T-11A CBCA-LHN-EBA 1.75" CBCA-LHN-EBA/S 1.75" Pg. 12.048		T-2A CBEA-LHN-BBA 1.94" CBEA-LHN-BBA/S 1.94" Pg. 12.122		T-2A CBEA-LHN-BJA 2.49" CBEA-LHN-BJA/S 2.49" Pg. 12.196		† T-17A CBGA-LHN-BKA 2.74" CBGA-LHN-BKA/S 2.74" Pg. 12.269		† T-17A CBGA-LHN-HBL 3.44" CBGA-LHN-HBL/S 3.44" Pg. 12.329	
On A Pilot from B (High Capacity)										† T-19A CBIA-LHN-HBA 3.44" CBIA-LHN-HBA/S 3.44" Pg. 12.329	
On A Pilot from B Vent to T		† T-21A CWCA-LHN-MBA 1.75" CWCA-LHN-MBA/S 1.75" Pg. 12.049		† T-22A CWEA-LHN-NBA 2.49" CWEA-LHN-NBA/S 2.49" Pg. 12.123		† T-22A CWEA-LHN-NJA 2.49" CWEA-LHN-NJA/S 2.49" Pg. 12.197		† T-23A CWGA-LHN-NKA 3.52" CWGA-LHN-NKA/S 3.52" Pg. 12.270		† T-23A CWGA-LHN-PBA 3.44" CWGA-LHN-PBA/S 3.44" Pg. 12.330	
On A No Pilot Assist		† T-10A RDDA-L*N-FB4 1.75" RDDA-L*N-FB4/S 1.75" Pg. 12.050		† T-3A RDFA-L*N-CB4 2.49" RDFA-L*N-CB4/S 2.49" Pg. 12.124		† T-3A RDFA-L*N-CJ4 2.49" RDFA-L*N-CJ4/S 2.49" Pg. 12.198		† T-16A RDHA-L*N-CK4 2.74" RDHA-L*N-CK4/S 2.74" Pg. 12.271		† T-16A RDHA-L*N-CD4 3.44" RDHA-L*N-CD4/S 3.44" Pg. 12.331	

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****Seal plate must be ordered separately. U.S. and European X and Y available.**

* Incomplete model number. Cartridges included. Consult your SUN distributor for order information.

† These bodies do not have a gage port.

ISO/NFPA SANDWICH BODY LOCATOR ALUMINUM AND DUCTILE IRON



All pages listed below refer to SUN's Sandwich Body Catalog.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a * is present in the sixth position of the full model code, the customer must specify the pressure range.

Function	p t b a	ISO 03 / NFPA DO3	ISO 05 / NFPA DO5	ISO 05 / NFPA DO5 with X and Y	ISO 07 / NFPA DO7	ISO 08 / NFPA DO8

Counterbalance Valves (Continued)

		Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.
On B Pilot from A		T-11A CBCA-LHN-EBA 1.75" CBCA-LHN-EBA/S 1.75" Pg. 12.048		T-2A CBEA-LHN-BBB 1.94" CBEA-LHN-BBB/S 1.94" Pg. 12.125		T-2A CBEA-LHN-BJB 2.49" CBEA-LHN-BJB/S 2.49" Pg. 12.199		T-17A CBGA-LHN-BKB 2.74" CBGA-LHN-BKB/S 2.74" Pg. 12.272		T-17A CBGA-LHN-HBM 3.44" CBGA-LHN-HBM/S 3.44" Pg. 12.332	
On B Pilot from A (High Capacity)										T-19A CBIA-LHN-HBB 3.44" CBIA-LHN-HBB/S 3.44" Pg. 12.332	
On B Pilot from A Vent to T		T-21A CWCA-LHN-MBB 1.75" CWCA-LHN-MBB/S 1.75" Pg. 12.049		T-22A CWEA-LHN-NBB 2.49" CWEA-LHN-NBB/S 2.49" Pg. 12.123		T-22A CWEA-LHN-NJB 2.49" CWEA-LHN-NJB/S 2.49" Pg. 12.197		T-23A CWGA-LHN-NKB 3.52" CWGA-LHN-NKB/S 3.52" Pg. 12.270		T-23A CWGA-LHN-PBB 3.44" CWGA-LHN-PBB/S 3.44" Pg. 12.330	
On B No pilot assist		T-10A RDDA-L*N-FB4 1.75" RDDA-L*N-FB4/S 1.75" Pg. 12.050		T-3A RDFA-L*N-CB5 2.49" RDFA-L*N-CB5/S 2.49" Pg. 12.124		T-3A RDFA-L*N-CJ5 2.49" RDFA-L*N-CJ5/S 2.49" Pg. 12.198		T-16A RDHA-L*N-CK5 3.52" RDHA-L*N-CK5/S 3.52" Pg. 12.271			
On A and B Cross-Piloted		T-11A CBCA-LHN-EBY 1.75" CBCA-LHN-EBY/S 1.75" Pg. 12.051		T-2A CBEA-LHN-BBY 1.94" CBEA-LHN-BBY/S 1.94" Pg. 12.126		T-2A CBEA-LHN-BJY 2.49" CBEA-LHN-BJY/S 2.49" Pg. 12.200		T-17A CBGA-LHN-BKY 2.74" CBGA-LHN-BKY/S 2.74" Pg. 12.273		T-17A CBGA-LHN-HBN 3.44" CBGA-LHN-HBN/S 3.44" Pg. 12.333	
On A and B Cross-Piloted (High Capacity)										T-19A CBIA-LHN-HBY 3.44" CBIA-LHN-HBY/S 3.44" Pg. 12.333	
On A and B Cross-Piloted Vents to T		T-21A CWCA-LHN-MBY 1.75" CWCA-LHN-MBY/S 1.75" Pg. 12.052		T-22A CWEA-LHN-NBY 2.49" CWEA-LHN-NBY/S 2.49" Pg. 12.127		T-22A CWEA-LHN-NJY 2.49" CWEA-LHN-NJY/S 2.49" Pg. 12.201		T-23A CWGA-LHN-NKY 3.52" CWGA-LHN-NKY/S 3.52" Pg. 12.274		T-23A CWGA-LHN-PBY 3.44" CWGA-LHN-PBY/S 3.44" Pg. 12.334	
Cushion Lock Circuit On A and B		T-11A CBCA-LHN-EB8 2.49" CBCA-LHN-EB8/S 2.49" Pg. 12.053		T-2A CBEA-LHN-BB8 2.99" CBEA-LHN-BB8/S 2.99" Pg. 12.128		T-2A CBEA-LHN-BJ8 2.99" CBEA-LHN-BJ8/S 2.99" Pg. 12.202					

Pilot Operated Check Valves

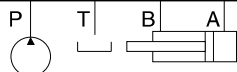
		Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.
On A Pilot from B		T-11A CKCB-XCN-EBA 1.75" CKCB-XCN-EBA/S 1.75" Pg. 12.054		T-2A CKEB-XCN-BBA 1.94" CKEB-XCN-BBA/S 1.94" Pg. 12.129		T-2A CKEB-XCN-BJA 2.49" CKEB-XCN-BJA/S 2.49" Pg. 12.203		T-17A CKGB-XCN-BKA 2.74" CKGB-XCN-BKA/S 2.74" Pg. 12.275		T-17A CKGB-XCN-HBL 3.44" CKGB-XCN-HBL/S 3.44" Pg. 12.335	
On A Pilot from B (High Capacity)										T-19A CKIB-XCN-HBA 3.44" CKIB-XCN-HBA/S 3.44" Pg. 12.335	
On A Pilot from B Vent to T		T-21A CVGV-XCN-MBA 1.75" CVGV-XCN-MBA/S 1.75" Pg. 12.055		T-22A CVEV-XCN-NBA 2.49" CVEV-XCN-NBA/S 2.49" Pg. 12.130		T-22A CVEV-XCN-NJA 2.49" CVEV-XCN-NJA/S 2.49" Pg. 12.204		T-23A CVGV-XCN-NKA 3.52" CVGV-XCN-NKA/S 3.52" Pg. 12.276		T-23A CVGV-XCN-PBA 3.44" CVGV-XCN-PBA/S 3.44" Pg. 12.336	
On B Pilot from A		T-11A CKCB-XCN-EBA 1.75" CKCB-XCN-EBA/S 1.75" Pg. 12.054		T-2A CKEB-XCN-BBB 1.94" CKEB-XCN-BBB/S 1.94" Pg. 12.131		T-2A CKEB-XCN-BJB 2.49" CKEB-XCN-BJB/S 2.49" Pg. 12.205		T-17A CKGB-XCN-BKB 2.74" CKGB-XCN-BKB/S 2.74" Pg. 12.277		T-17A CKGB-XCN-HBM 3.44" CKGB-XCN-HBM/S 3.44" Pg. 12.337	
On B Pilot from A (High Capacity)										T-19A CKIB-XCN-HBB 3.44" CKIB-XCN-HBB/S 3.44" Pg. 12.337	

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* Incomplete model number. Cartridges included. Consult your SUN distributor for order information.

† These bodies do not have a gage port.

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ISO/NFPA SANDWICH BODY LOCATOR ALUMINUM AND DUCTILE IRON



All pages listed below refer to SUN's Sandwich Body Catalog.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a * is present in the sixth position of the full model code, the customer must specify the pressure range.

	p	t	b	a	ISO 03 / NFPA DO3	ISO 05 / NFPA DO5	ISO 05 / NFPA DO5 with X and Y	ISO 07 / NFPA DO7	ISO 08 / NFPA DO8
Pilot Operated Check Valves (Continued)									
On B Pilot from A Vent to T					† T-21A CVCV-XCN-MBB 1.75" CVCV-XCN-MBB/S 1.75" Pg. 12.055	† T-22A CVEV-XCN-NBB 2.49" CVEV-XCN-NBB/S 2.49" Pg. 12.130	† T-22A CVEV-XCN-NJB 2.49" CVEV-XCN-NJB/S 2.49" Pg. 12.204	† T-23A CVGV-XCN-NKB 3.52" CVGV-XCN-NKB/S 3.52" Pg. 12.276	† T-23A CVGV-XCN-PBB 3.44" CVGV-XCN-PBB/S 3.44" Pg. 12.336
On A and B Cross-Piloted					† T-11A CKCB-XCN-EBY 1.75" CKCB-XCN-EBY/S 1.75" Pg. 12.056	† T-2A CKEB-XCN-BBY 1.94" CKEB-XCN-BBY/S 1.94" Pg. 12.132	† T-2A CKEB-XCN-BJY 2.49" CKEB-XCN-BJY/S 2.49" Pg. 12.206	† T-17A CKGB-XCN-BKY 2.74" CKGB-XCN-BKY/S 2.74" Pg. 12.278	† T-17A CKGB-XCN-HBN 3.44" CKGB-XCN-HBN/S 3.44" Pg. 12.338
On A and B Cross-Piloted (High Capacity)									† T-19A CKIB-XCN-HBY 3.44" CKIB-XCN-HBY/S 3.44" Pg. 12.338
On A and B Cross-Piloted Vents to T					† T-21A CVCV-XCN-MBY 1.75" CVCV-XCN-MBY/S 1.75" Pg. 12.057	† T-22A CVEV-XCN-NBY 2.49" CVEV-XCN-NBY/S 2.49" Pg. 12.133	† T-22A CVEV-XCN-NJY 2.49" CVEV-XCN-NJY/S 2.49" Pg. 12.207	† T-23A CVGV-XCN-NKY 3.52" CVGV-XCN-NKY/S 3.52" Pg. 12.279	† T-23A CVGV-XCN-PBY 3.44" CVGV-XCN-PBY/S 3.44" Pg. 12.339
Flow Control Valves									
Meter-In P					† T-13A NFCC-LCN-GBP 1.75" NFCC-LCN-GBP/S 1.75" Pg. 12.058	† T-5A NFDC-LAN-DBP 2.44" NFDC-LAN-DBP/S 2.44" Pg. 12.134	† T-5A NFDC-LAN-DJP 2.44" NFDC-LAN-DJP/S 2.44" Pg. 12.208	† T-16A NFEC-LCN-DKP 2.74" NFEC-LCN-DKP/S 2.74" Pg. 12.280	† T-16A NFEC-LCN-IBP 3.44" NFEC-LCN-IBP/S 3.44" Pg. 12.340
Meter-In P (High Capacity)					† T-5A NFDC-LAN-GBO 1.75" NFDC-LAN-GBO/S 1.75" Pg. 12.058		† T-16A NFEC-LCN-DJO 2.49" NFEC-LCN-DJO/S 2.49" Pg. 12.208	† T-18A NFFC-LGN-DKO 3.49" NFFC-LGN-DKO/S 3.49" Pg. 12.280	† T-18A NFFC-LGN-IBO 3.44" NFFC-LGN-IBO/S 3.44" Pg. 12.340
Bleed-Off P to T					† T-13A NCCB-LAN-GBQ 1.75" NCCB-LAN-GBQ/S 1.75" Pg. 12.059	† T-5A NCEB-LCN-DBQ 1.94" NCEB-LCN-DBQ/S 1.94" Pg. 12.135			† T-16A NCFB-LCN-CDO 3.44" NCFB-LCN-CDO/S 3.44" Pg. 12.341
Priority Flow on P					† T-11A FRCA-LAN-WBN 1.75" FRCA-LAN-WBN/S 1.75" Pg. 12.060		† T-2A FRDA-LAN-DJN 2.49" FRDA-LAN-DJN/S 2.49" Pg. 12.209		
Meter-In A					† T-13A NCCB-LCN-GBA 1.75" NCCB-LCN-GBA/S 1.75" Pg. 12.061	† T-5A NCEB-LCN-DBB 1.99" NCEB-LCN-DBB/S 1.99" Pg. 12.136	† T-5A NCEB-LCN-DJB 2.49" NCEB-LCN-DJB/S 2.49" Pg. 12.210	† T-16A NCFB-LCN-DKC 2.74" NCFB-LCN-DKC/S 2.74" Pg. 12.281	† T-16A NCFB-LCN-IBC 3.44" NCFB-LCN-IBC/S 3.44" Pg. 12.342
Meter-In A (High Capacity)					† T-5A NCEB-LCN-GBD 1.75" NCEB-LCN-GBD/S 1.75" Pg. 12.061		† T-16A NCFB-LCN-DJC 2.49" NCFB-LCN-DJC/S 2.49" Pg. 12.210	† T-18A NCGB-LCN-DKG 3.52" NCGB-LCN-DKG/S 3.52" Pg. 12.281	† T-18A NCGB-LCN-IBG 3.44" NCGB-LCN-IBG/S 3.44" Pg. 12.342
Meter-Out A					† T-13A NCCB-LCN-GBA 1.75" NCCB-LCN-GBA/S 1.75" Pg. 12.061	† T-5A NCEB-LCN-DBA 1.99" NCEB-LCN-DBA/S 1.99" Pg. 12.137	† T-5A NCEB-LCN-DJA 2.49" NCEB-LCN-DJA/S 2.49" Pg. 12.211	† T-16A NCFB-LCN-DKA 2.74" NCFB-LCN-DKA/S 2.74" Pg. 12.282	† T-16A NCFB-LCN-IBA 3.44" NCFB-LCN-IBA/S 3.44" Pg. 12.343
Meter-Out A (High Capacity)					† T-5A NCEB-LCN-GBD 1.75" NCEB-LCN-GBD/S 1.75" Pg. 12.061		† T-16A NCFB-LCN-DJD 2.49" NCFB-LCN-DJD/S 2.49" Pg. 12.211	† T-18A NCGB-LCN-DKE 3.52" NCGB-LCN-DKE/S 3.52" Pg. 12.282	† T-18A NCGB-LCN-IBE 3.44" NCGB-LCN-IBE/S 3.44" Pg. 12.343
Bleed-Off A to T					† T-13A NCCB-LCN-GBW 1.75" NCCB-LCN-GBW/S 1.75" Pg. 12.062	† T-5A NCEB-LCN-DBC 1.49" NCEB-LCN-DBC/S 1.49" Pg. 12.138			† T-16A NCFB-LCN-CDC 3.44" NCFB-LCN-CDC/S 3.44" Pg. 12.344
Bleed-Off A to T (High Capacity)					† T-5A NCEB-LCN-GBE 1.75" NCEB-LCN-GBE/S 1.75" Pg. 12.062				

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**Seal plate must be ordered separately. U.S. and European X and Y available.
† These bodies do not have a gage port.

ISO/NFPA SANDWICH BODY LOCATOR ALUMINUM AND DUCTILE IRON



All pages listed below refer to SUN's Sandwich Body Catalog.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a * is present in the sixth position of the full model code, the customer must specify the pressure range.

Function	p	t	b	a	ISO 03 / NFPA D03	ISO 05 / NFPA D05	ISO 05 / NFPA D05 with X and Y	ISO 07 / NFPA D07	ISO 08 / NFPA D08
Flow Control Valves (Continued)									
Priority Flow On A, Bypass to T Reverse FF Check							† T-2A FRDA-XAN-WHY 2.49" FRDA-XAN-WHY/S 2.49" Pg. 12.213		
Meter-In B					† T-13A NCCB-LCN-GBA 1.75" NCCB-LCN-GBA/S 1.75" Pg. 12.061	† T-5A NCEB-LCN-DBA 1.99" NCEB-LCN-DBA/S 1.99" Pg. 12.137	† T-5A NCEB-LCN-DJA 2.49" NCEB-LCN-DJA/S 2.49" Pg. 12.211	† T-16A NCFB-LCN-DKD 2.74" NCFB-LCN-DKD/S 2.74" Pg. 12.283	† T-16A NCFB-LCN-IBD 3.44" NCFB-LCN-IBD/S 3.44" Pg. 12.345
Meter-In B (High Capacity)					† T-5A NCEB-LCN-GBD 1.75" NCEB-LCN-GBD/S 1.75" Pg. 12.061		† T-16A NCFB-LCN-DJE 2.49" NCFB-LCN-DJE/S 2.49" Pg. 12.212	† T-18A NCGB-LCN-DKI 3.49" NCGB-LCN-DKI/S 3.49" Pg. 12.283	† T-18A NCGB-LCN-IBH 3.44" NCGB-LCN-IBH/S 3.44" Pg. 12.345
Meter-Out B					† T-13A NCCB-LCN-GBA 1.75" NCCB-LCN-GBA/S 1.75" Pg. 12.061	† T-5A NCEB-LCN-DBB 1.99" NCEB-LCN-DBB/S 1.99" Pg. 12.136	† T-5A NCEB-LCN-DJB 2.49" NCEB-LCN-DJB/S 2.49" Pg. 12.210	† T-16A NCFB-LCN-DKB 2.74" NCFB-LCN-DKB/S 2.74" Pg. 12.284	† T-16A NCFB-LCN-IBB 3.44" NCFB-LCN-IBB/S 3.44" Pg. 12.346
Meter-Out B (High Capacity)					† T-5A NCEB-LCN-GBD 1.75" NCEB-LCN-GBD/S 1.75" Pg. 12.061		† T-16A NCFB-LCN-DJF 2.49" NCFB-LCN-DJF/S 2.49" Pg. 12.212	† T-18A NCGB-LCN-DKF 3.49" NCGB-LCN-DKF/S 3.49" Pg. 12.284	† T-18A NCGB-LCN-IBF 3.44" NCGB-LCN-IBF/S 3.44" Pg. 12.346
Bleed-Off B to T					† T-13A NCCB-LCN-GBW 1.75" NCCB-LCN-GBW/S 1.75" Pg. 12.062	† T-5A NCEB-LCN-DBC 1.49" NCEB-LCN-DBC/S 1.49" Pg. 12.138			† T-16A NCFB-LCN-CDD 3.44" NCFB-LCN-CDD/S 3.44" Pg. 12.347
Bleed-Off B to T (High Capacity)					† T-5A NCEB-LCN-GBE 1.75" NCEB-LCN-GBE/S 1.75" Pg. 12.062				
Priority Flow On B, Bypass to T Reverse FF Check							† T-2A FRDA-XAN-WHZ 2.49" FRDA-XAN-WHZ/S 2.49" Pg. 12.213		
Meter-In A and B					† T-13A NCCB-LCN-GBY 1.75" NCCB-LCN-GBY/S 1.75" Pg. 12.063	† T-5A NCEB-LCN-DBY 1.99" NCEB-LCN-DBY/S 1.99" Pg. 12.139	† T-5A NCEB-LCN-DJY 2.49" NCEB-LCN-DJY/S 2.49" Pg. 12.214	† T-16A NCFB-LCN-DKZ 2.74" NCFB-LCN-DKZ/S 2.74" Pg. 12.285	† T-16A NCFB-LCN-IBX 3.44" NCFB-LCN-IBX/S 3.44" Pg. 12.348
Meter-In A and B (High Capacity)					† T-5A NCEB-LCN-GBZ 1.75" NCEB-LCN-GBZ/S 1.75" Pg. 12.063		† T-16A NCFB-LCN-DJZ 2.99" NCFB-LCN-DJZ/S 2.99" Pg. 12.214	† T-18A NCGB-LCN-DKU 3.52" NCGB-LCN-DKU/S 3.52" Pg. 12.285	† T-18A NCGB-LCN-IBZ 3.44" NCGB-LCN-IBZ/S 3.44" Pg. 12.348
Meter-Out A and B					† T-13A NCCB-LCN-GBY 1.75" NCCB-LCN-GBY/S 1.75" Pg. 12.063	† T-5A NCEB-LCN-DBY 1.99" NCEB-LCN-DBY/S 1.99" Pg. 12.139	† T-5A NCEB-LCN-DJY 2.49" NCEB-LCN-DJY/S 2.49" Pg. 12.214	† T-16A NCFB-LCN-DKY 2.74" NCFB-LCN-DKY/S 2.74" Pg. 12.286	† T-16A NCFB-LCN-IBW 3.44" NCFB-LCN-IBW/S 3.44" Pg. 12.349
Meter-Out A and B (High Capacity)					† T-5A NCEB-LCN-GBZ 1.75" NCEB-LCN-GBZ/S 1.75" Pg. 12.063		† T-16A NCFB-LCN-DJZ 2.99" NCFB-LCN-DJZ/S 2.99" Pg. 12.214	† T-18A NCGB-LCN-DKW 3.52" NCGB-LCN-DKW/S 3.52" Pg. 12.286	† T-18A NCGB-LCN-IBY 3.44" NCGB-LCN-IBY/S 3.44" Pg. 12.349
Bleed-Off A and B to T					† T-13A NCCB-LCN-GBX 1.75" NCCB-LCN-GBX/S 1.75" Pg. 12.064	† T-5A NCEB-LCN-DBX 1.44" NCEB-LCN-DBX/S 1.44" Pg. 12.140	† T-5A NCEB-LCN-DJX 1.49" NCEB-LCN-DJX/S 1.49" Pg. 12.215		
Bleed-Off A and B to T (High Capacity)					† T-5A NCEB-LCN-GBF 1.75" NCEB-LCN-GBF/S 1.75" Pg. 12.064				
Bleed-Off A to B and B to A					† T-13A NFCC-LCN-GBS 1.24" NFCC-LCN-GBS/S 1.24" Pg. 12.065	† T-13A NFCC-LCN-DBS 1.24" NFCC-LCN-DBS/S 1.24" Pg. 12.141	† T-13A NFCC-LCN-DJS 1.24" NFCC-LCN-DJS/S 1.24" Pg. 12.216		

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† These bodies do not have a gage port.

ISO/NFPA SANDWICH BODY LOCATOR ALUMINUM AND DUCTILE IRON

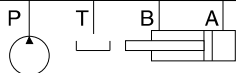


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Function	p	t	b	a	ISO 03 / NFPA DO3	ISO 05 / NFPA DO5	ISO 05 / NFPA DO5 With X and Y	ISO 07 / NFPA DO7	ISO 08 / NFPA DO8	
Flow Control Valves (Continued)										
Meter-Out T					Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.
Meter-Out T (High Capacity)					†	T-5A	†	T-18A	†	T-18A
					NCCB-LCN-GBP	1.75"	NCEB-LCN-DBT	1.94"	NCFB-LCN-DKT	2.74"
					NCCB-LCN-GBP/S	1.75"	NCEB-LCN-DBT/S	1.94"	NCFB-LCN-DKT/S	2.74"
					Pg. 12.058	Pg. 12.142		Pg. 12.287		Pg. 12.350
					†	T-5A			†	T-18A
					NCEB-LCN-GBO	1.75"			NCEB-LCN-DKT	2.74"
					NCEB-LCN-GBO/S	1.75"			NCEB-LCN-DKT/S	2.74"
					Pg. 12.058			Pg. 12.287	Pg. 12.350	
Check Valves (use only CX*A check valves)										
On P					†	T-13A	†	T-5A	†	T-16A
On P (High Capacity)					†	T-5A			†	T-18A
					CXDA-XCN-GDP	1.75"	CXFA-XCN-DBP	2.44"	CXHA-XCN-DJP	2.49"
					CXDA-XCN-GDP/S	1.75"	CXFA-XCN-DBP/S	2.44"	CXHA-XCN-DJP/S	2.49"
					Pg. 12.066	Pg. 12.143		Pg. 12.219		Pg. 12.288
					†	T-5A			†	T-18A
					CXFA-XCN-GDO	1.75"			CXHA-XCN-DJO	2.49"
					CXFA-XCN-GDO/S	1.75"			CXHA-XCN-DJO/S	2.49"
					Pg. 12.066			Pg. 12.219	Pg. 12.351	
T to P					†	T-13A				
					CXDA-XAN-GDQ	1.75"				
					CXDA-XAN-GDQ/S	1.75"				
					Pg. 12.067					
On A Free Flow Out of Valve					†	T-13A	†	T-5A	†	T-16A
On A Free Flow Out of Valve (High Capacity)					†	T-5A			†	T-18A
					CXDA-XCN-GDA	1.75"	CXFA-XCN-DBK	1.99"	CXHA-XCN-DJK	2.49"
					CXDA-XCN-GDA/S	1.75"	CXFA-XCN-DBK/S	1.99"	CXHA-XCN-DJK/S	2.49"
					Pg. 12.068	Pg. 12.144		Pg. 12.220		Pg. 12.289
					†	T-5A			†	T-18A
					CXFA-XCN-GDD	1.75"			CXHA-XCN-DJC	2.49"
					CXFA-XCN-GDD/S	1.75"			CXHA-XCN-DJC/S	2.49"
					Pg. 12.068			Pg. 12.220	Pg. 12.352	
On A Free Flow Into Valve					†	T-13A	†	T-5A	†	T-16A
On A Free Flow Into Valve (High Capacity)					†	T-5A			†	T-18A
					CXDA-XCN-GDA	1.75"	CXFA-XCN-DBJ	1.99"	CXHA-XCN-DJK	2.49"
					CXDA-XCN-GDA/S	1.75"	CXFA-XCN-DBJ/S	1.99"	CXHA-XCN-DJK/S	2.49"
					Pg. 12.068	Pg. 12.145		Pg. 12.221		Pg. 12.290
					†	T-5A			†	T-18A
					CXFA-XCN-GDD	1.75"			CXHA-XCN-DJD	2.49"
					CXFA-XCN-GDD/S	1.75"			CXHA-XCN-DJD/S	2.49"
					Pg. 12.068			Pg. 12.221	Pg. 12.290	
T to A					†	T-13A				
					CXDA-XAN-GDW	1.75"				
					CXDA-XAN-GDW/S	1.75"				
					Pg. 12.069					
T to A (High Capacity)					†	T-5A	†	T-16A	†	T-18A
					CXFA-XAN-GDE	1.75"	CXHA-XAN-DBM	2.99"	CXHA-XAN-DJM	2.99"
					CXFA-XAN-GDE/S	1.75"	CXHA-XAN-DBM/S	2.99"	CXHA-XAN-DJM/S	2.99"
					Pg. 12.069	NOT CATALOGED		NOT CATALOGED		NOT CATALOGED
					†	T-13A				
					CXDA-XAN-GBS	1.24"	CXDA-XAN-DBS	1.24"	CXDA-XAN-DJS	1.24"
					CXDA-XAN-GBS/S	1.24"	CXDA-XAN-DBS/S	1.24"	CXDA-XAN-DJS/S	1.24"
					Pg. 12.070	Pg. 12.146		Pg. 12.222		
On B Free Flow Out of Valve					†	T-13A	†	T-5A	†	T-16A
On B Free Flow Out of Valve (High Capacity)					†	T-5A			†	T-18A
					CXDA-XCN-GDA	1.75"	CXFA-XCN-DBJ	1.99"	CXHA-XCN-DJK	2.49"
					CXDA-XCN-GDA/S	1.75"	CXFA-XCN-DBJ/S	1.99"	CXHA-XCN-DJK/S	2.49"
					Pg. 12.068	Pg. 12.145		Pg. 12.221		Pg. 12.291
					†	T-5A			†	T-18A
					CXFA-XCN-GDD	1.75"			CXHA-XCN-DJE	2.49"
					CXFA-XCN-GDD/S	1.75"			CXHA-XCN-DJE/S	2.49"
					Pg. 12.068			Pg. 12.223	Pg. 12.291	
					†	T-13A			†	T-16A
					CXDA-XCN-GDA	1.75"			CXHA-XCN-DKD	2.74"
					CXDA-XCN-GDA/S	1.75"			CXHA-XCN-DKD/S	2.74"
					Pg. 12.068			Pg. 12.291	Pg. 12.354	
					†	T-5A			†	T-18A
					CXFA-XCN-GDD	1.75"			CXHA-XCN-DKI	3.49"
					CXFA-XCN-GDD/S	1.75"			CXHA-XCN-DKI/S	3.49"
					Pg. 12.068			Pg. 12.291	Pg. 12.354	

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ISO/NFPA SANDWICH BODY LOCATOR ALUMINUM AND DUCTILE IRON

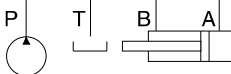


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Function	p	t	b	a	ISO 03 / NFPA DO3	ISO 05 / NFPA DO5	ISO 05 / NFPA DO5 with X and Y	ISO 07 / NFPA DO7	ISO 08 / NFPA DO8					
Check Valves – use CX*A check valves (Continued)														
					Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.
On B Free Flow Into Valve					T-13A CXDA-XCN-GDA 1.75" CXDA-XCN-GDA/S 1.75" Pg. 12.068		T-5A CXFA-XCN-DBK 1.99" CXFA-XCN-DBK/S 1.99" Pg. 12.144		T-5A CXFA-XCN-DJK 2.49" CXFA-XCN-DJK/S 2.49" Pg. 12.220		T-16A CXHA-XCN-DBK 2.74" CXHA-XCN-DBK/S 2.74" Pg. 12.292		T-16A CXHA-XCN-IBB 3.44" CXHA-XCN-IBB/S 3.44" Pg. 12.355	
On B Free Flow Into Valve (High Capacity)					T-5A CXFA-XCN-GDD 1.75" CXFA-XCN-GDD/S 1.75" Pg. 12.068			T-16A CXHA-XCN-DJF 2.49" CXHA-XCN-DJF/S 2.49" Pg. 12.223		T-18A CXJA-XCN-DKF 3.49" CXJA-XCN-DKF/S 3.49" Pg. 12.292		T-18A CXJA-XCN-IBF 3.44" CXJA-XCN-IBF/S 3.44" Pg. 12.355		
T to B					T-13A CXDA-XAN-GDW 1.75" CXDA-XAN-GDW/S 1.75" Pg. 12.069									
T to B (High Capacity)					T-5A CXFA-XAN-GDE 1.75" CXFA-XAN-GDE/S 1.75" Pg. 12.069		T-16A CXHA-XAN-DBM 2.99" CXHA-XAN-DBM/S 2.99" NOT CATALOGED		T-16A CXHA-XAN-DJM 2.99" CXHA-XAN-DJM/S 2.99" NOT CATALOGED		T-18A CXJA-XAN-DKN 3.52" CXJA-XAN-DKN/S 3.52" NOT CATALOGED		T-18A CXJA-XAN-IBN 3.44" CXJA-XAN-IBN/S 3.44" NOT CATALOGED	
B to A					T-13A CXDA-XAN-GBS 1.75" CXDA-XAN-GBS/S 1.75" Pg. 12.070		T-13A CXDA-XAN-DBS 1.24" CXDA-XAN-DBS/S 1.24" Pg. 12.146		T-13A CXDA-XAN-DJS 1.24" CXDA-XAN-DJS/S 1.24" Pg. 12.222					
B to P (For Regenerative Circuits)					T-13A YDCK-XCN-AA 2.70" YDCK-XCN-AA/S 2.70" Pg. 12.070									
On A and B Free Flow Out of Valve					T-13A CXDA-XCN-GDY 1.75" CXDA-XCN-GDY/S 1.75" Pg. 12.071		T-5A CXFA-XCN-DBL 1.99" CXFA-XCN-DBL/S 1.99" Pg. 12.147		T-5A CXFA-XCN-DJL 2.49" CXFA-XCN-DJL/S 2.49" Pg. 12.224		T-16A CXHA-XCN-DKZ 2.74" CXHA-XCN-DKZ/S 2.74" Pg. 12.293		T-16A CXHA-XCN-IBX 3.44" CXHA-XCN-IBX/S 3.44" Pg. 12.356	
On A and B Free Flow Out of Valve (High Capacity)					T-5A CXFA-XCN-GDZ 1.75" CXFA-XCN-GDZ/S 1.75" Pg. 12.071			T-16A CXHA-XCN-DJZ 2.99" CXHA-XCN-DJZ/S 2.99" Pg. 12.224		T-18A CXJA-XCN-DKU 3.52" CXJA-XCN-DKU/S 3.52" Pg. 12.293		T-18A CXJA-XCN-IBZ 3.44" CXJA-XCN-IBZ/S 3.44" Pg. 12.356		
On A and B Free Flow Into Valve					T-13A CXDA-XCN-GDY 1.75" CXDA-XCN-GDY/S 1.75" Pg. 12.071		T-5A CXFA-XCN-DBL 1.99" CXFA-XCN-DBL/S 1.99" Pg. 12.147		T-5A CXFA-XCN-DJL 2.49" CXFA-XCN-DJL/S 2.49" Pg. 12.224		T-16A CXHA-XCN-DKY 2.74" CXHA-XCN-DKY/S 2.74" Pg. 12.294		T-16A CXHA-XCN-IBW 3.44" CXHA-XCN-IBW/S 3.44" Pg. 12.357	
On A and B Free Flow Into Valve (High Capacity)					T-5A CXFA-XCN-GDZ 1.75" CXFA-XCN-GDZ/S 1.75" Pg. 12.071			T-16A CXHA-XCN-DJZ 2.99" CXHA-XCN-DJZ/S 2.99" Pg. 12.224		T-18A CXJA-XCN-DKW 3.52" CXJA-XCN-DKW/S 3.52" Pg. 12.294		T-18A CXJA-XCN-IBY 3.44" CXJA-XCN-IBY/S 3.44" Pg. 12.357		
T to A and B					T-13A CXDA-XAN-GDX 1.75" CXDA-XAN-GDX/S 1.75" Pg. 12.072		T-5A CXFA-XAN-DBW 2.49" CXFA-XAN-DBW/S 2.49" Pg. 12.148		T-5A CXFA-XAN-DJW 2.49" CXFA-XAN-DJW/S 2.49" Pg. 12.225		T-5A CXFA-XAN-DKX 1.96" CXFA-XAN-DKX/S 1.96" NOT CATALOGED		T-5A CXFA-XAN-CDX 1.94" CXFA-XAN-CDX/S 1.94" Pg. 12.358	
T to A and B (High Capacity)					T-5A CXFA-XAN-GDF 1.75" CXFA-XAN-GDF/S 1.75" Pg. 12.072		T-16A CXHA-XAN-DBR 2.99" CXHA-XAN-DBR/S 2.99" NOT CATALOGED		T-16A CXHA-XAN-DJR 2.99" CXHA-XAN-DJR/S 2.99" NOT CATALOGED		T-18A CXJA-XAN-DKR 3.52" CXJA-XAN-DKR/S 3.52" NOT CATALOGED		T-16A CXHA-XAN-CDV 3.44" CXHA-XAN-CDV/S 3.44" Pg. 12.358	
On T					T-13A CXDA-XCN-GDP 1.75" CXDA-XCN-GDP/S 1.75" Pg. 12.066		T-5A CXFA-XCN-DBT 1.94" CXFA-XCN-DBT/S 1.94" Pg. 12.149		T-5A CXFA-XCN-DJT 2.49" CXFA-XCN-DJT/S 2.49" Pg. 12.226		T-16A CXHA-XCN-DKT 2.74" CXHA-XCN-DKT/S 2.74" Pg. 12.295		T-16A CXHA-XCN-IBT 3.44" CXHA-XCN-IBT/S 3.44" Pg. 12.359	
On T (High Capacity)					T-5A CXFA-XCN-GDO 1.75" CXFA-XCN-GDO/S 1.75" Pg. 12.066							T-18A CXJA-XCN-IBV 3.44" CXJA-XCN-IBV/S 3.44" Pg. 12.359		

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ISO/NFPA SANDWICH BODY LOCATOR ALUMINUM AND DUCTILE IRON

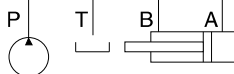


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Function		ISO 03 / NFPA D03	ISO 05 / NFPA D05	ISO 05 / NFPA D05 with X and Y	ISO 07 / NFPA D07	ISO 08 / NFPA D08
Circuit Savers						
		Cartridge Body Stack Hgt. T-3A NQEB-XAN-FBO 1.75" NQEB-XAN-FBO/S 1.75" NOT CATALOGED	Cartridge Body Stack Hgt. T-3A NQEB-XAN-CBP 1.94" NQEB-XAN-CBP/S 1.94" Pg. 12.150	Cartridge Body Stack Hgt. T-3A NQEB-XAN-CJP 1.99" NQEB-XAN-CJP/S 1.99" Pg. 12.228	Cartridge Body Stack Hgt. T-3A NQEB-XAN-CKP 1.96" NQEB-XAN-CKP/S 1.96" Pg. 12.296	Cartridge Body Stack Hgt. T-3A NQEB-XAN-CDP 1.94" NQEB-XAN-CDP/S 1.94" Pg. 12.360
Air-Bleed and Start-Up						
Pilot Choke		† YNAA-LDN-AA 1.75" YNAA-LDN-AA/S 1.75" Pg. 12.073	† YNAB-LDN-BA 1.11" YNAB-LDN-BA/S 1.11" Pg. 12.151			
Shuttle A and B Output External		† T-13A CSAA-EXN-GBS 1.24" CSAA-EXN-GBS/S 1.24" Pg. 12.074	† T-13A CSAA-EXN-DBS 1.24" CSAA-EXN-DBS/S 1.24" Pg. 12.152	† T-13A CSAA-EXN-DJS 1.24" CSAA-EXN-DJS/S 1.24" Pg. 12.229	† T-13A CSAA-EXN-DKS 1.18" CSAA-EXN-DKS/S 1.18" Pg. 12.297	† T-13A CSAA-EXN-HBS 1.44" CSAA-EXN-HBS/S 1.44" Pg. 12.361
Checks from A and B Output to Y Port				† T-11A CDAB-XBN-BJS 1.18" CDAB-XBN-BJS/S 1.18" Pg. 12.229	† T-11A CDAB-XBN-BKS 1.18" CDAB-XBN-BKS/S 1.18" Pg. 12.297	† T-11A CDAB-XBN-HBS 1.44" CDAB-XBN-HBS/S 1.44" Pg. 12.361
Checks from A and B-Adapter to ISO 05 W/Y Port		† T-11A CDAB-XBN-EBS 1.44" CDAB-XBN-EBS/S 1.44" Pg. 12.074	† T-11A CDAB-XBN-BJS 1.19" CDAB-XBN-BJS/S 1.19" Pg. 12.152			
Pressure Compensator (Restrictive)		† YFCG-XHN-AA 1.75" YFCG-XHN-AA/S 1.75" Pg. 12.075	† YFEJ-XHN-BA 2.49" YFEJ-XHN-BA/S 2.49" Pg. 12.153	† YFEK-XHN-BB 2.49" YFEK-XHN-BB/S 2.49" Pg. 12.230	† YFFE-XHN-AB 2.74" YFFE-XHN-AB/S 2.74" Pg. 12.298	† YFIA-XHN-CA 3.44" YFIA-XHN-CA/S 3.44" Pg. 12.362
Pressure Compensator (Restrictive) W/LS Port		† YFCJ-XHN-AA 2.55" YFCJ-XHN-AA/S 2.55" Pg. 12.075	† YFEP-XHN-BB 2.49" YFEP-XHN-BB/S 2.49" Pg. 12.153	† YFEQ-XHN-BB 2.49" YFEQ-XHN-BB/S 2.49" Pg. 12.230	† YFFF-XHN-AB 2.74" YFFF-XHN-AB/S 2.74" Pg. 12.298	† YFIB-XHN-CA 3.44" YFIB-XHN-CA/S 3.44" Pg. 12.362
Pressure Compensator (Bypass)		† YFCK-XHN-AA 2.55" YFCK-XHN-AA/S 2.55" Pg. 12.075	† YFEV-XHN-BA 2.49" YFEV-XHN-BA/S 2.49" Pg. 12.153	† YFEW-XHN-BB 2.49" YFEW-XHN-BB/S 2.49" Pg. 12.230	† YFFG-XHN-AB 2.66" YFFG-XHN-AB/S 2.66" Pg. 12.298	† YFIC-XHN-CA 3.44" YFIC-XHN-CA/S 3.44" Pg. 12.362
Flow Divider and/or Combiner on A		† T-31A FSCA-XAN-MBJ 2.49" FSCA-XAN-MBJ/S 2.49" Pg. 12.076				
Flow Divider and/or Combiner on B		† T-31A FSCA-XAN-MBJ 2.49" FSCA-XAN-MBJ/S 2.49" Pg. 12.076				
B to A Regenerative		† YDCA-LHN-AA 1.75" YDCA-LHN-AA/S 1.75" Pg. 12.077	† YDES-LHN-BA 2.49" YDES-LHN-BA/S 2.49" Pg. 12.154	† YDEL-LAN-BB 2.49" YDEL-LAN-BB/S 2.49" Pg. 12.231	† YDFG-LHN-AB 2.74" YDFG-LHN-AB/S 2.74" Pg. 12.299	† YDFF-LHN-CA 3.44" YDFF-LHN-CA/S 3.44" Pg. 12.363
B to A Regenerative (High Capacity)						† YDGF-LHN-CA 3.44" YDGF-LHN-CA/S 3.44" Pg. 12.363
B to A Regenerative (Full Time)		† YDCF-XCN-AA 1.81" YDCF-XCN-AA/S 1.81" Pg. 12.078	† YDET-XCN-BA 2.49" YDET-XCN-BA/S 2.49" Pg. 12.155		† YDFH-XCN-AB 2.74" YDFH-XCN-AB/S 2.74" Pg. 12.300	† YDGH-XCN-CA 3.44" YDGH-XCN-CA/S 3.44" Pg. 12.364

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ISO/NFPA SANDWICH BODY LOCATOR ALUMINUM AND DUCTILE IRON

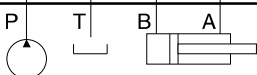


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Function	p	t	b	a	ISO 03 / NFPA D03	ISO 05 / NFPA D05	ISO 05 / NFPA D05 with X and Y	ISO 07 / NFPA D07	ISO 08 / NFPA D08					
Circuit Savers (Continued)														
					Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.
A to B Regenerative					YDCA-LHN-AA YDCA-LHN-AA/S Pg. 12.077	1.75" 1.75"	YDER-LHN-BA YDER-LHN-BA/S Pg. 12.156	2.49" 2.49"			YDFE-LAN-AB YDFE-LAN-AB/S Pg. 12.301	2.74" 2.74"	YDFJ-LHN-CA YDFJ-LHN-CA/S Pg. 12.365	3.44" 3.44"
A to B Regenerative (High Capacity)													YDGE-LHN-CA YDGE-LHN-CA/S Pg. 12.365	3.44" 3.44"
A to B Regenerative (Full Time)					YDCF-XCN-AA YDCF-XCN-AA/S Pg. 12.078	1.81" 1.81"	YDEV-XCN-BA YDEV-XCN-BA/S Pg. 12.155	2.49" 2.49"			YDFI-XCN-AB YDFI-XCN-AB/S Pg. 12.300	2.74" 2.74"	YDGI-XCN-CA YDGI-XCN-CA/S Pg. 12.364	3.44" 3.44"
P and A Tap in Manifold					ZPT ZPT/S Pg. 12.079	.99" .99"	ZPS ZPS/S Pg. 12.157	.99" .99"	WCA WCA/S NOT CATALOGED	1.49" 1.49"				
P and B Tap in Manifold					ZPT ZPT/S Pg. 12.079	.99" .99"	ZPS ZPS/S Pg. 12.157	.99" .99"	WCA WCA/S NOT CATALOGED	1.49" 1.49"				
P, T, A and B Tap in Manifold							ZKL ZKL/S Pg. 12.157	.99" .99"	ZCA ZCA/S NOT CATALOGED	1.49" 1.49"			WKE WKE/S NOT CATALOGED	1.49" 1.49"
A and B Tap in Manifold					ZUO ZUO/S Pg. 12.079	.99" .99"	ZPR ZPR/S Pg. 12.158	.94" .94"	WGA WGA/S NOT CATALOGED	1.49" 1.49"				
Swap Block Swaps A and B					ZKX ZKX/S Pg. 12.079	.99" .99"	ZTB ZTB/S Pg. 12.158	1.44" 1.44"						
Adapter to Next Smaller Valve Pattern							ZWU ZWU/S Pg. 12.159	1.44" 1.44"						
ISO 05 to ISO 05 with Dual Tank Ports							ZXC ZXC/S Pg. 12.159	.94" .94"						
ISO 05 to ISO 05 with X and Y Access to X and Y (amer)							ZSV ZSV/S Pg. 12.160	.94" .94"						
ISO 05 to ISO 05 with X and Y Access to X and Y (Euro)							ZST ZST/S Pg. 12.160	.94" .94"						
ISO 05 with X and Y Amer to Euro									ZSX ZSX/S Pg. 12.232	.99" .99"				
ISO 05 with X and Y Euro to Amer									ZSW ZSW/S Pg. 12.232	.99" .99"				
Bosch L Port to ISO 05 X Port (European)									ZJA ZJA/S Pg. 12.233	.95" .95"				

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ISO/NFPA SANDWICH BODY LOCATOR ALUMINUM AND DUCTILE IRON



All pages listed below refer to SUN's Sandwich Body Catalog.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a * is present in the sixth position of the full model code, the customer must specify the pressure range.

<i>Function</i>	p t b a	ISO 03 / NFPA D03	ISO 05 / NFPA D05	ISO 05 / NFPA D05 with X and Y	ISO 07 / NFPA D07	ISO 08 / NFPA D08

Circuit Savers (Continued)

	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.
ISO 05 X Port (European) to Bosch L Port 					ZJB ZJB/S <i>Pg. 12.233</i>	.95" .95"				

Cover Plates

Counterbored for socket head cap screws. Clamp height and engagement in subplate determines cap screw length.

	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.	Cartridge Body	Stack Hgt.
All Ports Blocked 	ZJR ZJR/S <i>Pg. 12.090</i>	.50" .50"			ZJP ZJP/S <i>Pg. 12.241</i>	.38" .38"				
P to A and B to T 	ZJS ZJS/S <i>Pg. 12.090</i>	.50" .50"			ZJM ZJM/S <i>Pg. 12.241</i>	.38" .38"				
P to B and A to T 	ZJT ZJT/S <i>Pg. 12.090</i>	.50" .50"			ZJJ ZJJ/S <i>Pg. 12.241</i>	.38" .38"				
P to T A and B blocked 	ZJV ZJV/S <i>Pg. 12.091</i>	.50" .50"			ZJN ZJN/S <i>Pg. 12.242</i>	.38" .38"				
A to B P and T blocked 	ZJW ZJW/S <i>Pg. 12.091</i>	.50" .50"			ZJL ZJL/S <i>Pg. 12.242</i>	.38" .38"				
P to B A and T blocked 	ZWE ZWE/S <i>Pg. 12.091</i>	.50" .50"			ZJK ZJK/S <i>Pg. 12.242</i>	.38" .38"				
P to A and B T blocked 	WJG WJG/S <i>Pg. 12.092</i>	.50" .50"								

**Seal plate must be ordered separately. U.S. and European X and Y available.

ISO/NFPA SANDWICH BODY LOCATOR ALUMINUM AND DUCTILE IRON



All pages listed below refer to SUN's Sandwich Body Catalog.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a * is present in the sixth position of the full model code, the customer must specify the pressure range.

			** 		
Function	ISO 03 / NFPA DO3	ISO 05 / NFPA DO5	ISO 05 / NFPA DO5 with X and Y	ISO 07 / NFPA DO7	ISO 08 / NFPA DO8
Side Ported Subplates					
	Cartridge Body Overall Hgt.	Cartridge Body Overall Hgt.	Cartridge Body Overall Hgt.	Cartridge Body Overall Hgt.	Cartridge Body Overall Hgt.
Relief P to T 	T-10A RPEC-L*N-FSJ 2.00" RPEC-L*N-FSJS 2.00" Pg. 12.080	† T-10A RPEC-L*N-FSK 1.94" RPEC-L*N-FSK/S 1.94" Pg. 12.161	† T-10A RPEC-L*N-ZHL 2.44" RPEC-L*N-ZHL/S 2.44" Pg. 12.234	† T-3A RPGC-L*N-ZLX 1.94" RPGC-L*N-ZLX/S 1.94" Pg. 12.302	† T-3A RPGC-L*N-CSM 1.94" RPGC-L*N-CSM/S 1.94" Pg. 12.366
Relief P to T Check on P 	† T-10A YRCC-L*N-BJ 2.00" YRCC-L*N-BJS 2.00" Pg. 12.081	† T-10A YREJ-L*N-BK 1.94" YREJ-L*N-BK/S 1.94" Pg. 12.162			
Air-Bleed and Start-Up 		† T-3A NQEB-XAN-CSK 1.94" NQEB-XAN-CSK/S 1.94" Pg. 12.163		† T-3A NQEB-XAN-ZLX 1.94" NQEB-XAN-ZLX/S 1.94" Pg. 12.302	† T-3A NQEB-XAN-CSM 1.94" NQEB-XAN-CSM/S 1.94" Pg. 12.366
Reducing on P 	T-11A PBDB-L*N-ESJ 2.00" PBDB-L*N-ESJS 2.00" Pg. 12.083	T-2A PFBF-L*N-BSK 1.94" PFBF-L*N-BSK/S 1.94" Pg. 12.164			T-17A PBHB-L*N-HSM 3.44" PBHB-L*N-HSM/S 3.44" Pg. 12.367
Reducing/ Relieving on P 	T-11A PPDB-L*N-ESJ 2.00" PPDB-L*N-ESJS 2.00" Pg. 12.083	T-2A PFBF-L*N-BSK 1.94" PFBF-L*N-BSK/S 1.94" Pg. 12.164			T-17A PPHB-L*N-HSM 3.44" PPHB-L*N-HSM/S 3.44" Pg. 12.367
Bypass Compensator for Proportional Valves 	† T-11A YFCL-XHN-BJ 2.00" YFCL-XHN-BJS 2.00" Pg. 12.084	† T-2A YFES-XHN-BK 2.00" YFES-XHN-BK/S 2.00" Pg. 12.165			
Relief P to T and Bypass Flow Regulator 	† T-11A YFCS-L*N-BJ 2.00" YFCS-L*N-BJS 2.00" Pg. 12.085	† T-2A YFED-L*N-BK 1.94" YFED-L*N-BK/S 1.94" Pg. 12.166			
Relief P to T Regenerative B to A 	† T-11A YDCG-LAN-BK 2.50" YDCG-LAN-BK/S 2.50" Pg. 12.086	† T-2A YDEM-LAN-BL 2.94" YDEM-LAN-BL/S 2.94" Pg. 12.167			
Rear Ported Subplates					
	Cartridge Body Overall Hgt.	Cartridge Body Overall Hgt.	Cartridge Body Overall Hgt.	Cartridge Body Overall Hgt.	Cartridge Body Overall Hgt.
Relief P to T 	† T-10A RPEC-L*N-FRJ 2.00" RPEC-L*N-FRJS 2.00" Pg. 12.080	† T-10A RPEC-L*N-FRK 2.12" RPEC-L*N-FRK/S 2.12" Pg. 12.161			T-3A RPGC-L*N-CRM 1.94" RPGC-L*N-CRM/S 1.94" Pg. 12.366
Relief P to T Check on P 	† T-10A YRCB-LAN-BJ 2.00" YRCB-LAN-BJS 2.00" Pg. 12.081	† T-10A YREQ-LAN-BK 1.94" YREQ-LAN-BK/S 1.94" Pg. 12.162			

Continued on next page.

** Seal plate must be ordered separately. U.S. and European X and Y available.

* Incomplete model number. Cartridges included. Consult your SUN distributor for order information.

† These bodies do not have a gage port.

ISO/NFPA SANDWICH BODY LOCATOR ALUMINUM AND DUCTILE IRON



All pages listed below refer to SUN's Sandwich Body Catalog.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a * is present in the sixth position of the full model code, the customer must specify the pressure range.

			** 			
<i>Function</i>	ISO 03 / NFPA DO3	ISO 05 / NFPA DO5	ISO 05 / NFPA DO5 with X and Y	ISO 07 / NFPA DO7	ISO 08 / NFPA DO8	
Rear Ported Subplates (Continued)						
	<i>Cartridge Body</i>	<i>Overall Hgt.</i>	<i>Cartridge Body</i>	<i>Overall Hgt.</i>	<i>Cartridge Body</i>	<i>Overall Hgt.</i>
Air-Bleed and Start-Up 			T-3A NQEB-XAN-CRK 1.94" NQEB-XAN-CRK/S 1.94" Pg. 12.163			† T-3A NQEB-XAN-CRM 1.94" NQEB-XAN-CRM/S 1.94" Pg. 12.366
Reducing on P 	T-11A PBDB-L*N-ERJ 2.00" PBDB-L*N-ERJ/S 2.00" Pg. 12.083		T-2A PBFB-L*N-BRK 1.94" PBFB-L*N-BRK/S 1.94" Pg. 12.164		T-17A PBHB-L*N-HRM 3.44" PBHB-L*N-HRM/S 3.44" Pg. 12.367	
Reducing/Relieving on P 	T-11A PPDB-L*N-ERJ 2.00" PPDB-L*N-ERJ/S 2.00" Pg. 12.083		T-2A PPFB-L*N-BRK 1.94" PPFB-L*N-BRK/S 1.94" Pg. 12.164		T-17A PPHB-L*N-HRM 3.44" PPHB-L*N-HRM/S 3.44" Pg. 12.367	
Side Ported Subplates with Gasket Mount Tank Port						
	<i>Cartridge Body</i>	<i>Overall Hgt.</i>	<i>Cartridge Body</i>	<i>Overall Hgt.</i>	<i>Cartridge Body</i>	<i>Overall Hgt.</i>
Relief P to T 	† T-10A RPEC-L*N-FTJ 2.00" RPEC-L*N-FTJ/S 2.00" Pg. 12.080		† T-10A RPEC-L*N-FTK 1.94" RPEC-L*N-FTK/S 1.94" Pg. 12.161		† T-3A RPGC-L*N-VTF 2.44" RPGC-L*N-VTF/S 2.44" NOT CATALOGED	† T-3A RPGC-L*N-CTM 1.94" RPGC-L*N-CTM/S 1.94" Pg. 12.366
Air-Bleed and Start-Up 	T-3A NQEB-XAN-CTJ 2.00" NQEB-XAN-CTJ/S 2.00" Pg. 12.082		† T-3A NQEB-XAN-CTK 1.94" NQEB-XAN-CTK/S 1.94" Pg. 12.163		† T-3A NQEB-XAN-VTF 2.44" NQEB-XAN-VTF/S 2.44" NOT CATALOGED	† T-3A NQEB-XAN-CTM 1.94" NQEB-XAN-CTM/S 1.94" Pg. 12.366
Reducing on P 	T-11A PBDB-L*N-ETJ 2.00" PBDB-L*N-ETJ/S 2.00" Pg. 12.083		T-2A PBFB-L*N-BTK 1.94" PBFB-L*N-BTK/S 1.94" Pg. 12.164		T-17A PBHB-L*N-HTM 3.44" PBHB-L*N-HTM/S 3.44" Pg. 12.367	
Reducing/Relieving on P 	T-11A PPDB-L*N-ETJ 2.00" PPDB-L*N-ETJ/S 2.00" Pg. 12.083		T-2A PPFB-L*N-BTK 1.94" PPFB-L*N-BTK/S 1.94" Pg. 12.164		T-17A PPHB-L*N-HTM 3.44" PPHB-L*N-HTM/S 3.44" Pg. 12.367	

** Seal plate must be ordered separately. U.S. and European X and Y available.

* Incomplete model number. Cartridges included. Consult your SUN distributor for order information.

† These bodies do not have a gage port.

ISO/NFPA SANDWICH BODY LOCATOR

ALUMINUM AND DUCTILE IRON

All pages listed below refer to SUN's Sandwich Body Catalog



Function	p t b a	ISO 03 / NFPA DO3	ISO 05 / NFPA DO5	ISO 05 / NFPA DO5 with Y Port	ISO 07 / NFPA DO7 with Y Port	ISO 08 / NFPA DO8 with Y Port

Bar Manifolds

	Model	Price	Model	Price	Model	Price	Model	Price	Model	Price	Model	Price		
One Station 	VSL VSL/S		VPT VPT/S		VNN VNN/S	00.000 00.000	VMJ VMJ/S		VRL VRL/S		VLE VLE/S		VLV VLV/S	
	Pg. 12.087		Pg. 12.168		Pg. 12.168		Pg. 12.235		Pg. 12.235		Pg. 12.303		Pg. 12.368	
Two Station 	VSM VSM/S		VPV VPV/S		VNP VNP/S		VMK VMK/S		VRM VRM/S		VLF VLF/S		VLV VLV/S	
	Pg. 12.088		Pg. 12.169		Pg. 12.169		Pg. 12.236		Pg. 12.236		Pg. 12.304		Pg. 12.369	
Three Station 	VSN VSN/S		VPW VPW/S		VNR VNR/S		VML VML/S		VRN VRN/S		VLG VLG/S		VLW VLW/S	
	Pg. 12.088		Pg. 12.170		Pg. 12.170		Pg. 12.237		Pg. 12.237		Pg. 12.304		Pg. 12.369	
Four Station 	VSP VSP/S		VPX VPX/S		VNS VNS/S		VMM VMM/S		VRP VRP/S					
	Pg. 12.089		Pg. 12.171		Pg. 12.171		Pg. 12.238		Pg. 12.238					
Five Station 	VSR VSR/S		VPY VPY/S		VNT VNT/S		VMN VMN/S		VRR VRR/S					
	Pg. 12.089		Pg. 12.172		Pg. 12.172		Pg. 12.239		Pg. 12.239					

12



NOTES





NOTES

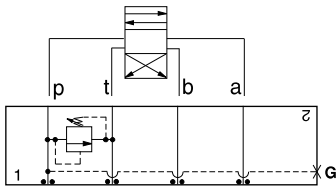




ISO 03 SANDWICH BODIES



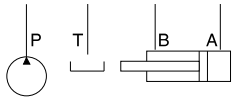
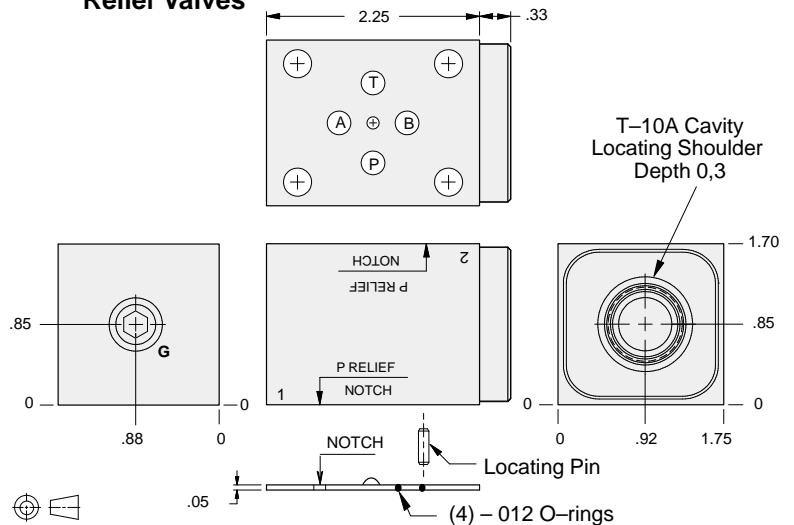
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

P to T
(High Capacity)

Relief Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	FBP		FBP/S	
.25 BSPP	FBP/M		FBP/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Pilot Operated "Kick-Down" Relief Valve
	RPEC Page 1.06		RQEB Page 1.12
	Pilot Operated, Rapid Response Relief Valve		
	RPEE Page 1.08		
	Direct Acting Relief Valve		
	RDDA Page 1.10		
OTHER VALVES:			

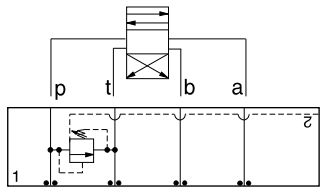


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

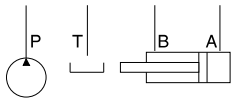
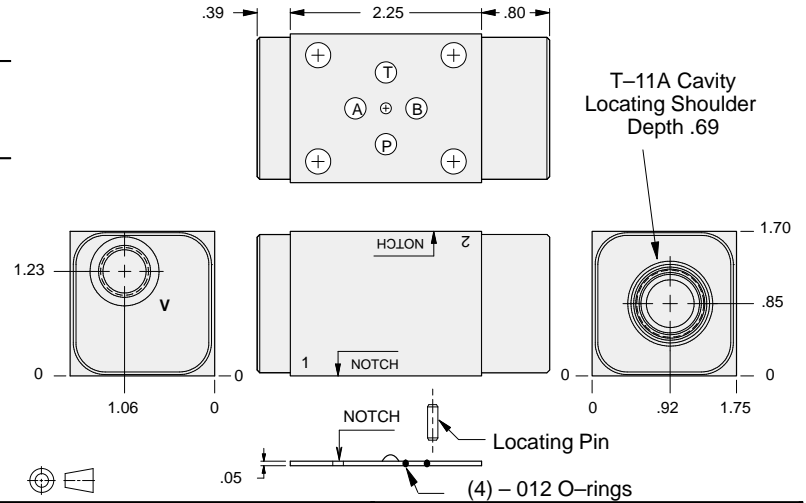
03 RELIEF



FUNCTION

P to T
Externally Vented

Relief Valves



Vent Port	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
SAE-6	EBC		EBC/S	
.25 BSPP	EBC/M		EBC/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

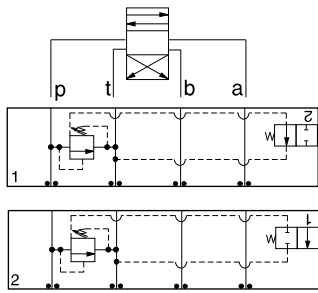
	<i>Pilot Operated Vented Relief Valve</i>		
	RVCA Page 1.18		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

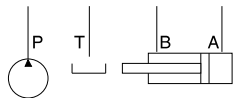
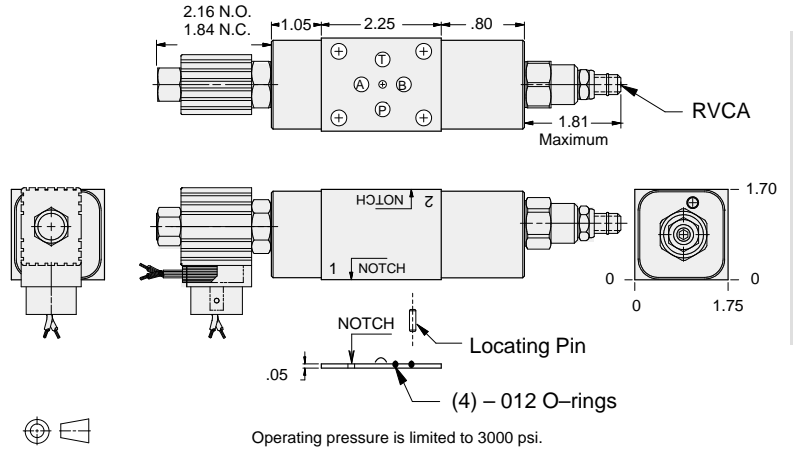


FUNCTION

P to T
N.O. Solenoid
Vented *

P to T
N.C. Solenoid
Vented *

Relief Valves



Solenoid Type	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
N.O.	YRCO-LAN-*A		YRCO-LAN-*A/S	
N.C.	YRCP-LAN-*A		YRCP-LAN-*A/S	

* Select solenoid connection/voltage option from page 14.16 and add option price to List Price.

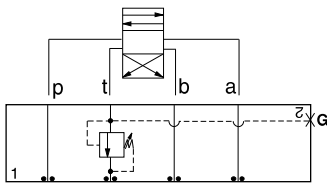


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

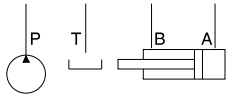
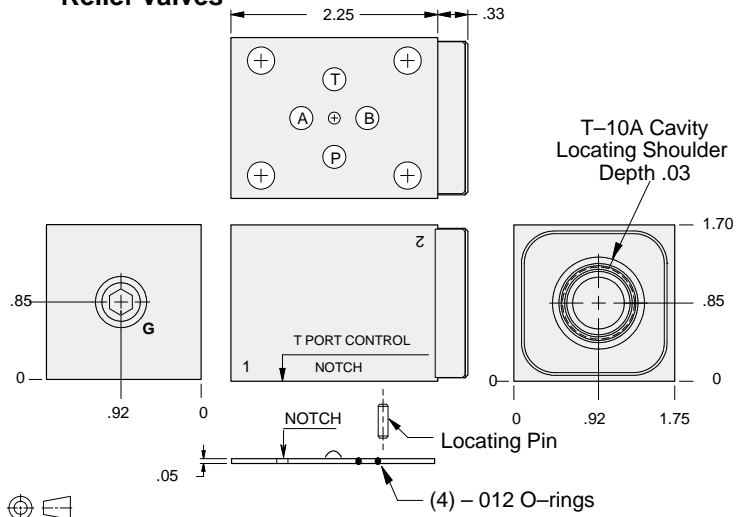
03 RELIEF



FUNCTION

Out of T
(High Capacity)

Relief Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	FBT		FBT/S	
.25 BSPP	FBT/M		FBT/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

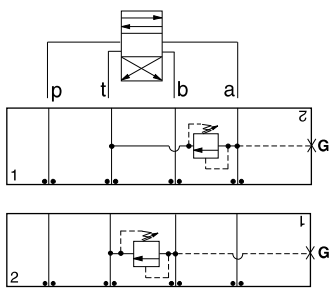
	<i>Pilot Operated Relief Valve</i> RPEC Page 1.06		<i>Pilot Operated "Kick-Down" Relief Valve</i> RQEB Page 1.12
	<i>Pilot Operated, Rapid Response Relief Valve</i> RPEE Page 1.08		
	<i>Direct Acting Relief Valve</i> RDDA Page 1.10		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

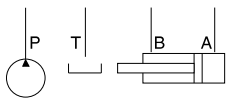
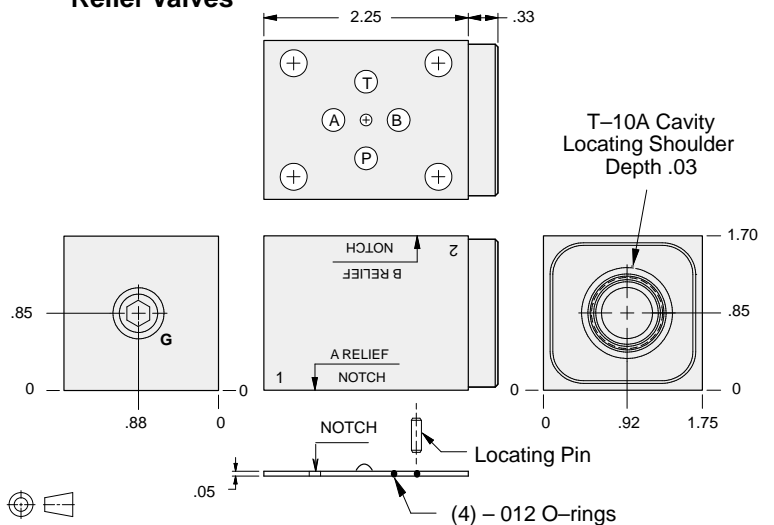


FUNCTION

A to T
(High Capacity)

B to T
(High Capacity)

Relief Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	FBA		FBA/S	
.25 BSPP	FBA/M		FBA/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	<i>Pilot Operated Relief Valve</i>		<i>Pilot Operated "Kick-Down" Relief Valve</i>
	RPEC Page 1.06		RQEB Page 1.12
	<i>Pilot Operated, Rapid Response Relief Valve</i>		
	RPEE Page 1.08		
	<i>Direct Acting Relief Valve</i>		
	RDDA Page 1.10		
OTHER VALVES:			

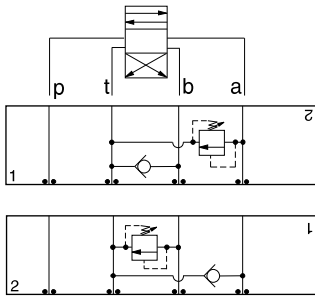


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

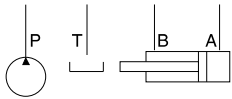
03 RELIEF



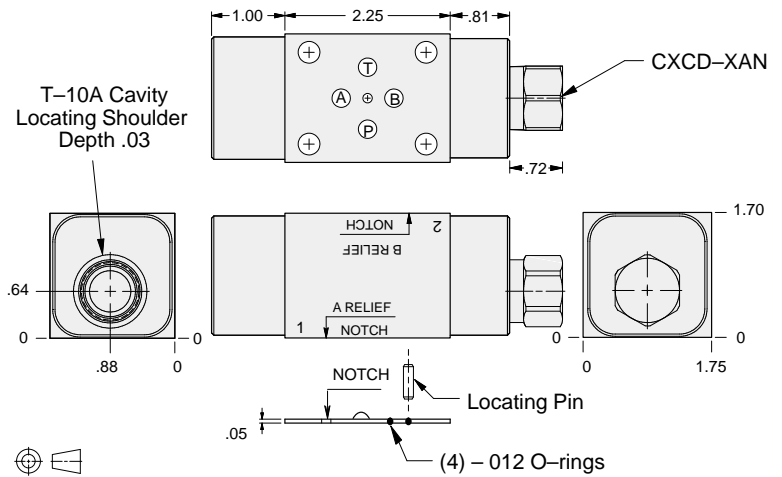
FUNCTION

A to T
FF Check T to B

B to T
FF Check T to A



Relief Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
FB2		FB2/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

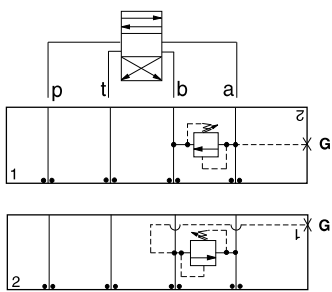
	<i>Pilot Operated Relief Valve</i>		<i>Pilot Operated "Kick-Down" Relief Valve</i>
	RPEC Page 1.06		RQEB Page 1.12
	<i>Pilot Operated, Rapid Response Relief Valve</i>		
	RPEE Page 1.08		
	<i>Direct Acting Relief Valve</i>		
	RDDA Page 1.10		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

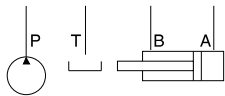
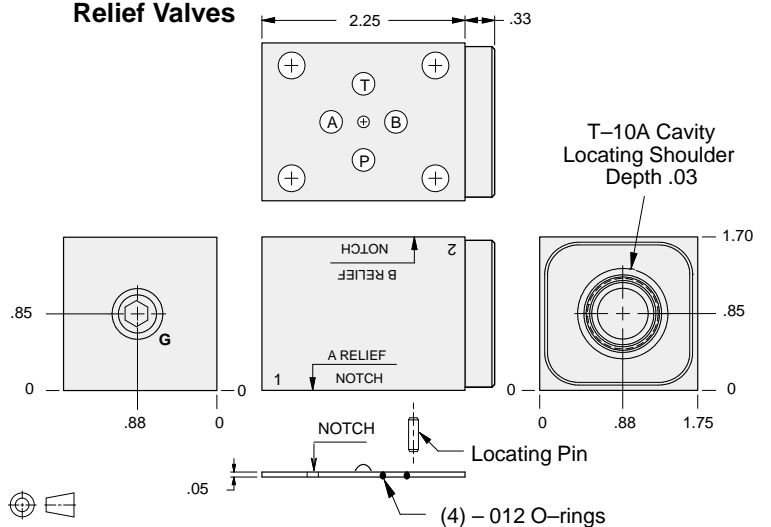


FUNCTION

A to B
(High Capacity)

B to A
(High Capacity)

Relief Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	FBC		FBC/S	
.25 BSPP	FBC/M		FBC/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Pilot Operated "Kick-Down" Relief Valve
	RPEC Page 1.06		RQEB Page 1.12
	Pilot Operated, Rapid Response Relief Valve		
	RPEE Page 1.08		
	Direct Acting Relief Valve		
	RDDA Page 1.10		
OTHER VALVES:			

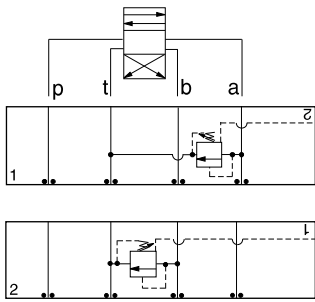


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 RELIEF

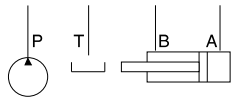
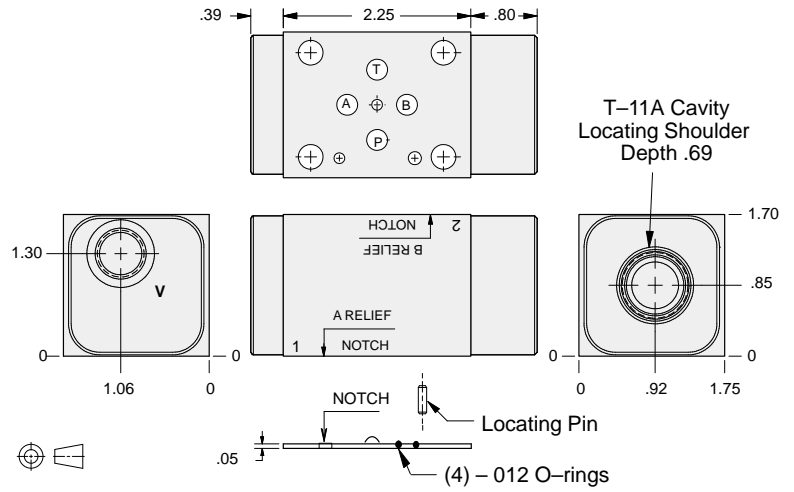


FUNCTION

A to T
Externally Vented

B to T
Externally Vented

Relief Valves



Vent Port	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
SAE-6	EBI		EBI/S	
.25 BSPP	EBI/M		EBI/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

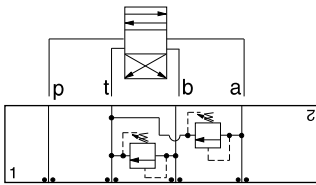
	<i>Pilot Operated Vented Relief Valve</i>		
	RVCA Page 1.18		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



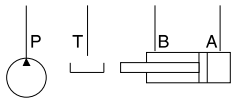
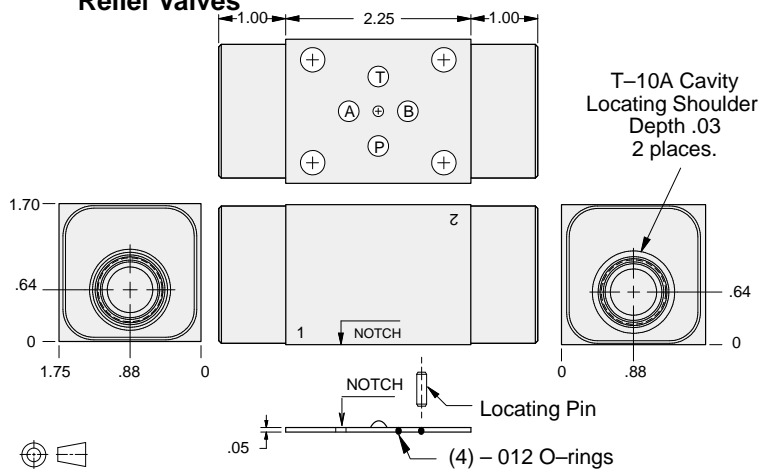
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

A and B to T
(High Capacity)

Relief Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
FBX		FBX/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	<i>Pilot Operated Relief Valve</i>		<i>Pilot Operated "Kick-Down" Relief Valve</i>
	RPEC Page 1.06		RQEB Page 1.12
	<i>Pilot Operated, Rapid Response Relief Valve</i>		
	RPEE Page 1.08		
	<i>Direct Acting Relief Valve</i>		
	RDDA Page 1.10		
OTHER VALVES:			

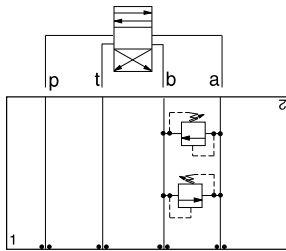


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

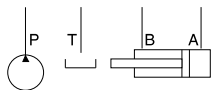
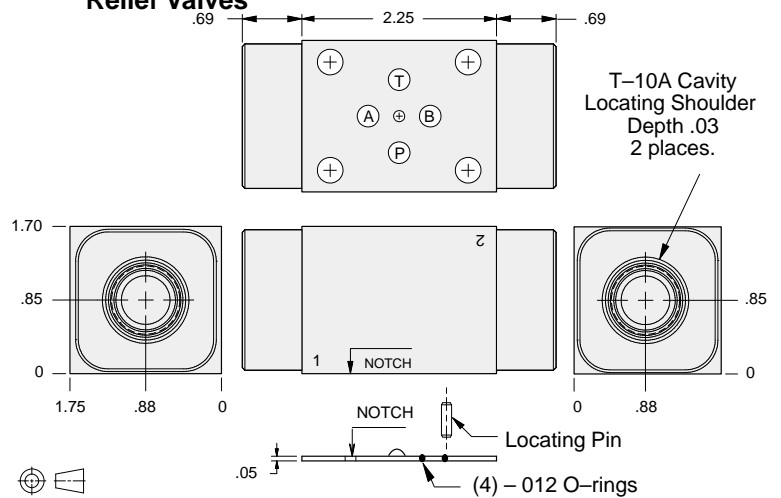
03 RELIEF



FUNCTION

A to B and B to A
(High Capacity)
(Cross-Port)

Relief Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
FBY		FBY/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

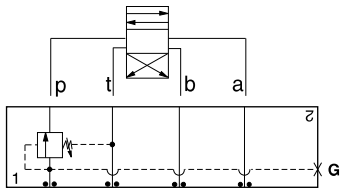
	Pilot Operated Relief Valve		Pilot Operated "Kick-Down" Relief Valve
	RPEC Page 1.06		RQEB Page 1.12
	Pilot Operated, Rapid Response Relief Valve		
	RPEE Page 1.08		
	Direct Acting Relief Valve		
	RDDA Page 1.10		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



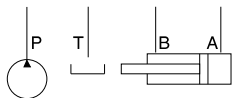
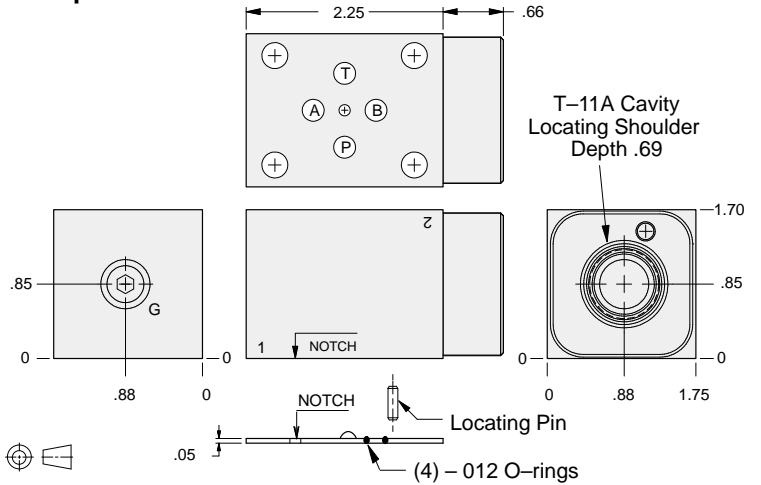
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

In to P

Sequence Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	EBW		EBW/S	
.25 BSPP	EBW/M		EBW/T	

03 SEQUENCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	<i>Pilot Operated Sequence Valve</i>		
	RSDC Page 2.06		
	<i>Pilot Operated "Kick-Down" Sequence Valve</i>		
	SQDB Page 2.08		
	<i>Direct Acting Sequence Valve with Reverse Free Flow Check</i>		
	SCCA Page 2.12		
OTHER VALVES:			

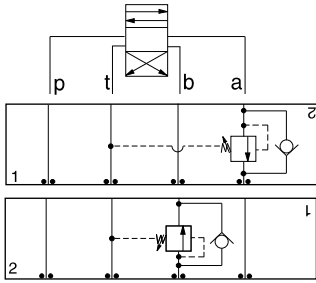


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

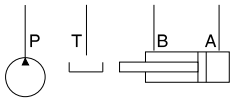
03 SEQUENCE



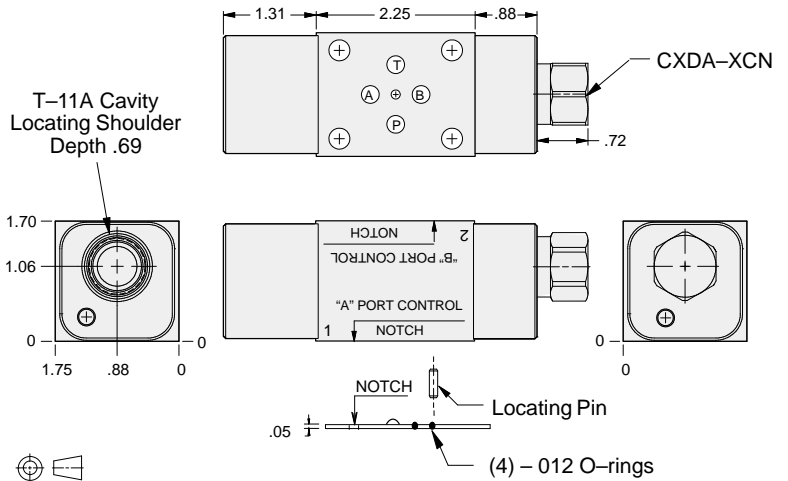
FUNCTION

In to A
Reverse FF Check

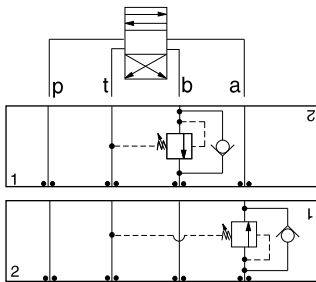
Out of B
Reverse FF Check



Sequence Valves



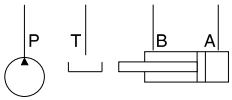
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
EB4		EB4/S	



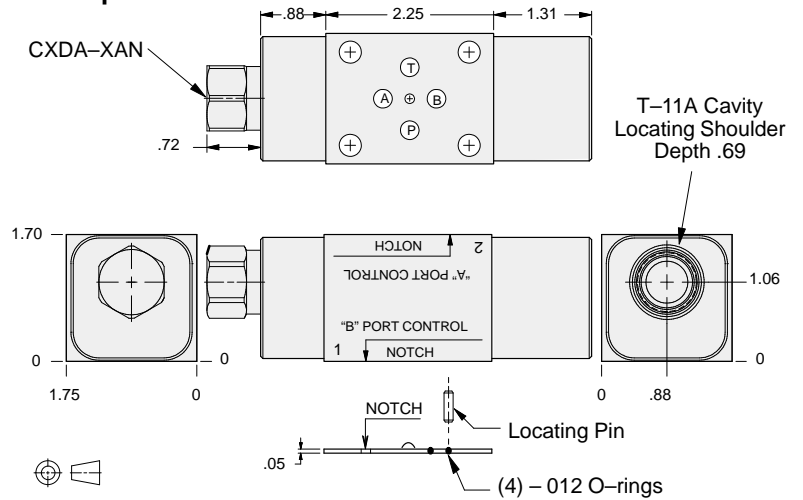
FUNCTION

In to B
Reverse FF Check

Out of A
Reverse FF Check



Sequence Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
EB5		EB5/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

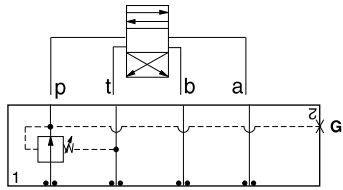
	Pilot Operated Sequence Valve		
	RSDC Page 2.06		
	Pilot Operated "Kick-Down" Sequence Valve		
	SQDB Page 2.08		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



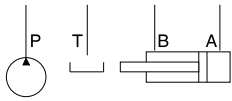
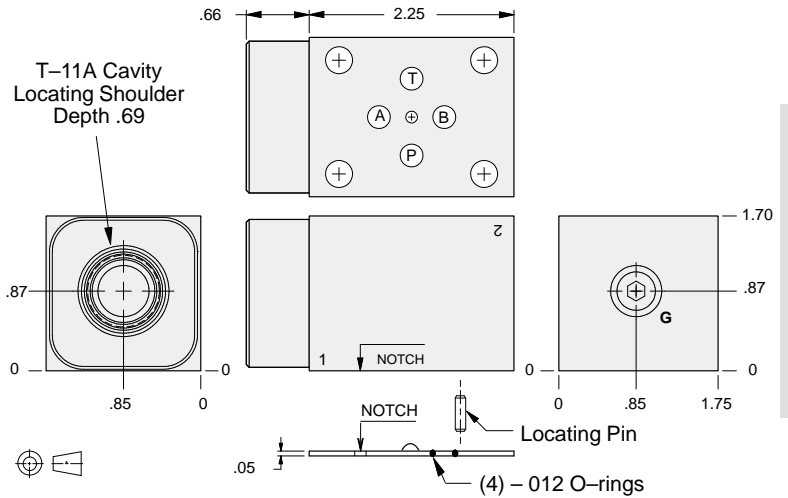
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On P
Drained to T

Reducing Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	EBP		EBP/S	
.25 BSPP	EBP/M		EBP/T	

03 REDUCING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing Valve		
	PBDB Page 3.06		
OTHER VALVES:			

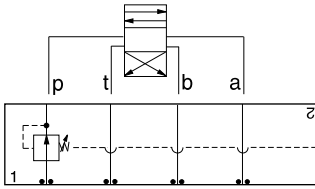


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

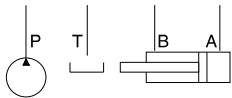
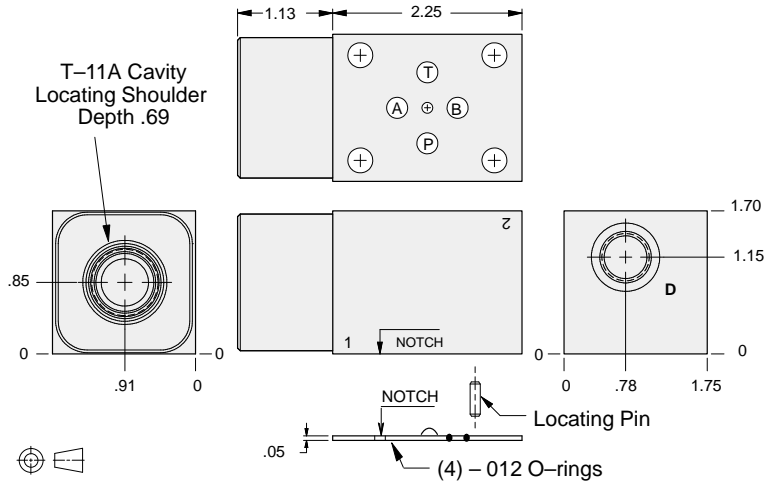
03 REDUCING



FUNCTION

On P
Drained Externally

Reducing Valves



Drain Port	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
SAE-6	EBQ		EBQ/S	
.25 BSPP	EBQ/M		EBQ/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

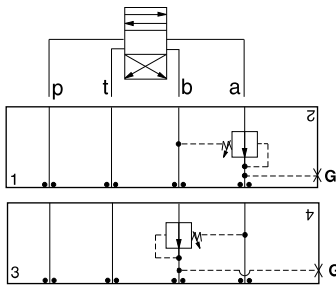
	Pilot Operated Reducing Valve		
	PBDB Page 3.06		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

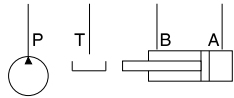
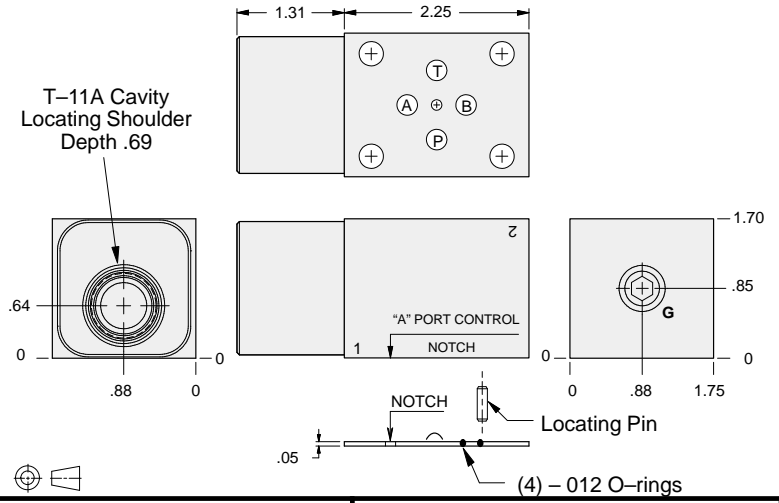


FUNCTION

On A
Drained to B

On B
Drained to A

Reducing Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	EBA		EBA/S	
.25 BSPP	EBA/M		EBA/T	

03 REDUCING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Reducing Valve		
	PBDB Page 3.06		
OTHER VALVES:			

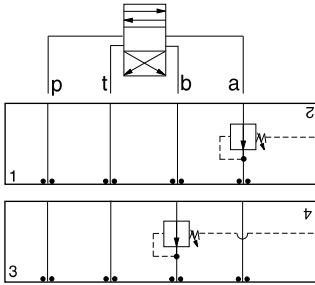


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 REDUCING

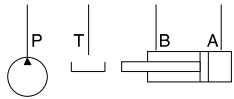
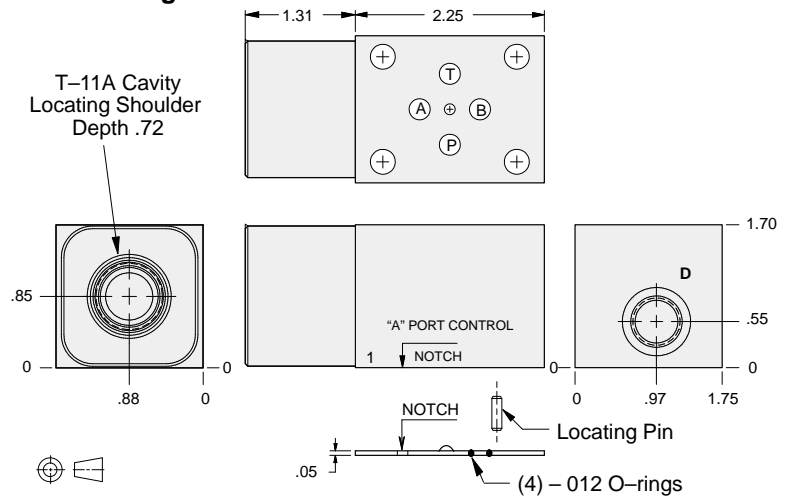


FUNCTION

On A
Drained Externally

On B
Drained Externally

Reducing Valves



Drain Port	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
SAE-6	EBD		EBD/S	
.25 BSPP	EBD/M		EBD/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

Cartridge Diagram	Cartridge Name	Material	Pressure Rating
	Pilot Operated Reducing Valve		
	PBDB Page 3.06		
OTHER VALVES:			

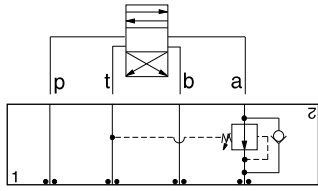


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

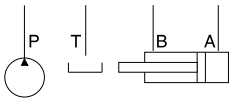
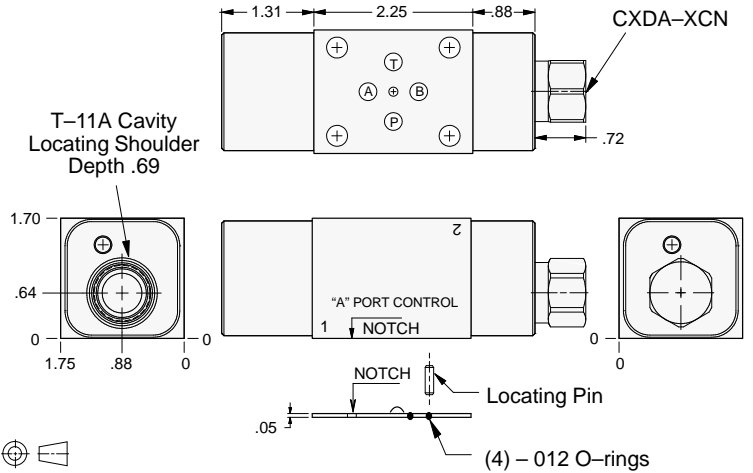
03 REDUCING



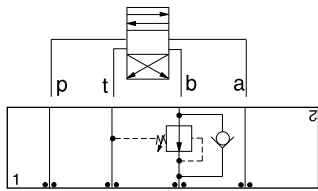
FUNCTION

On A Drain to T
Reverse FF Check

Reducing Valves



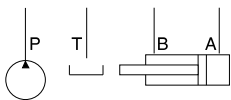
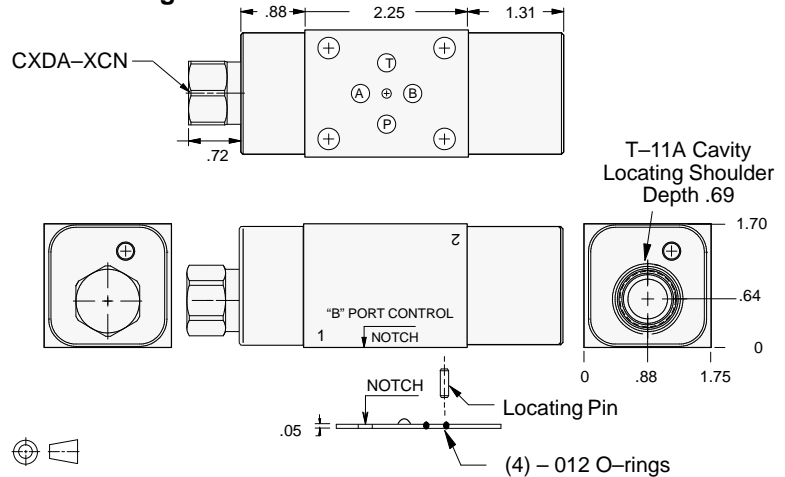
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
EB2		EB2/S	



FUNCTION

On B Drain to T
Reverse FF Check

Reducing Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
EB3		EB3/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Reducing Valve		
	PBDB Page 3.06		
OTHER VALVES:			

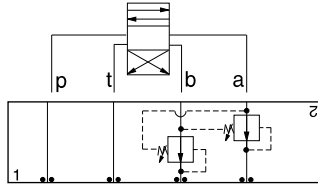


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

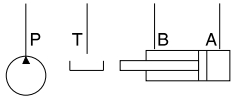
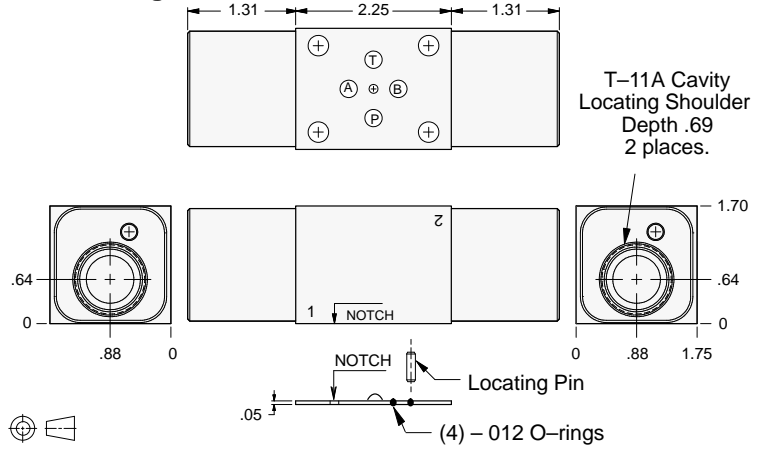
03 REDUCING



FUNCTION

On **A** and **B**
Drains to Opposite Port

Reducing Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
EBY		EBY/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

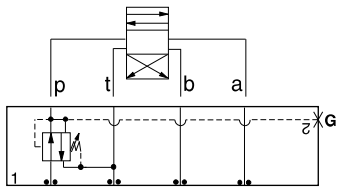
	Pilot Operated Reducing Valve		
	PBDB Page 3.06		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



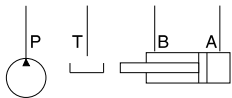
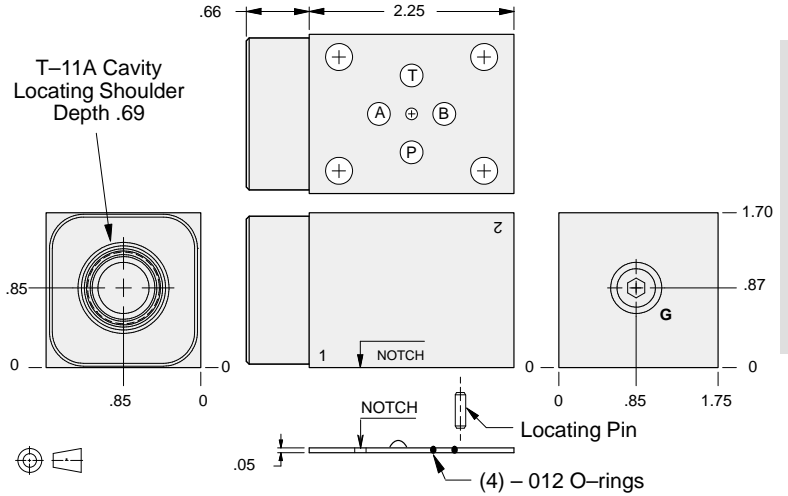
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On P Tank to T
Drained to T

Reducing/Relieving Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	EBP		EBP/S	
.25 BSPP	EBP/M		EBP/T	

03 REDUCING/RELIEVING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Reducing/Relieving Valve		
	PPDB Page 3.10		
OTHER VALVES:			

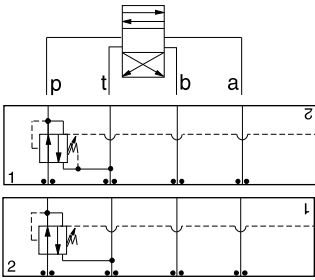


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 REDUCING/RELIEVING

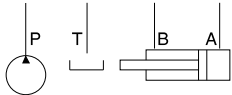
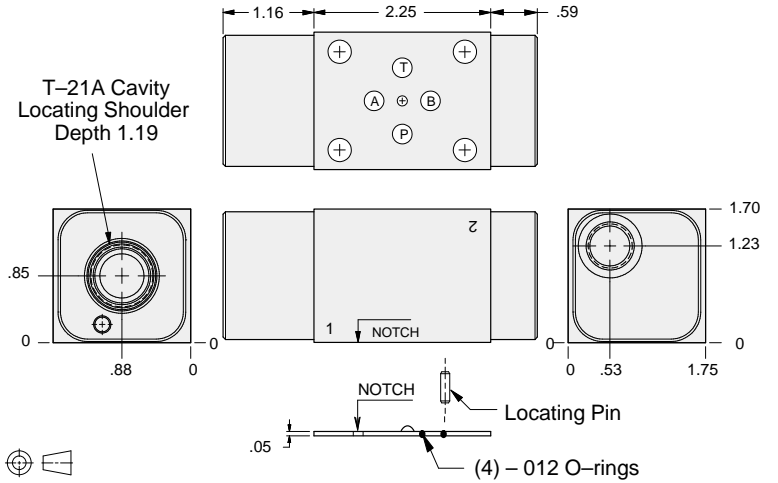


FUNCTION

On P Tank to T
Vented Externally

On P Tank to T
Drained Externally

Reducing/Relieving Valves



External Port	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
SAE-6	MBP		MBP/S	
.25 BSPP	MBP/M		MBP/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

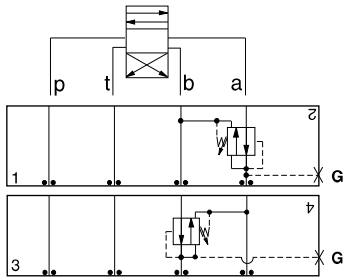
	Pilot Operated Reducing/Relieving Valve with Drain Port		
	PVDA Page 3.14		
	Pilot Operated Reducing/Relieving Valve with Vent Port		
	PVDB Page 3.16		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

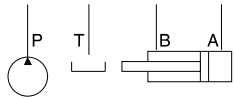
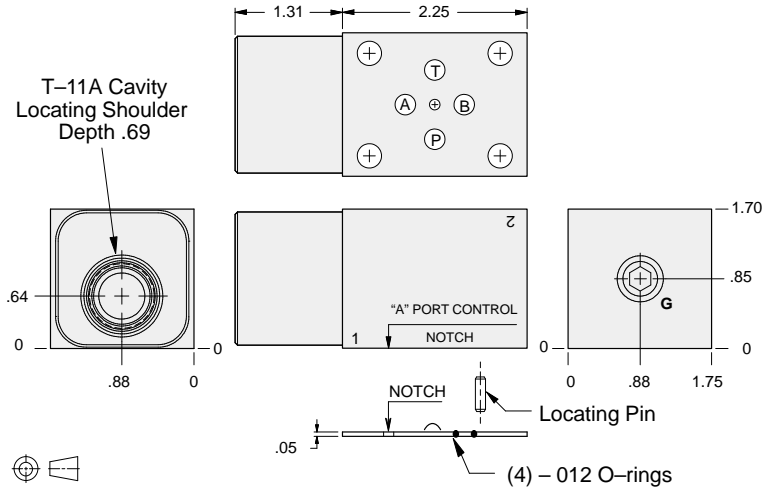


FUNCTION

On A Tank to B
Drained to B

On B Tank to A
Drained to A

Reducing/Relieving Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	EBA		EBA/S	
.25 BSPP	EBA/M		EBA/T	

03 REDUCING/RELIEVING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing/Relieving Valve		
	PPDD Page 3.10		
OTHER VALVES:			

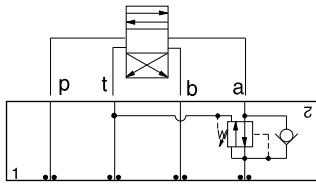


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

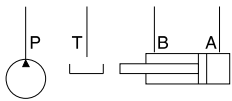
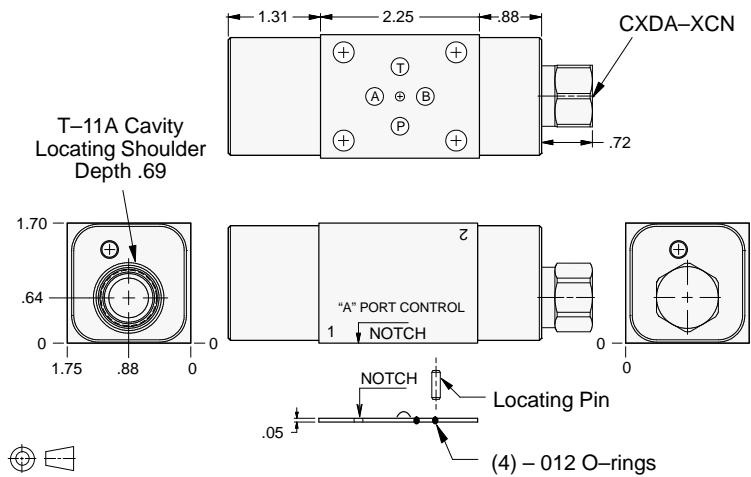
03 REDUCING/RELIEVING



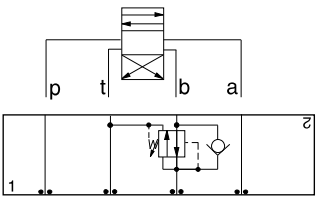
FUNCTION

On A Tank to T
Drained to T
Reverse FF Check

Reducing/Relieving Valves



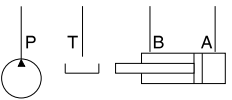
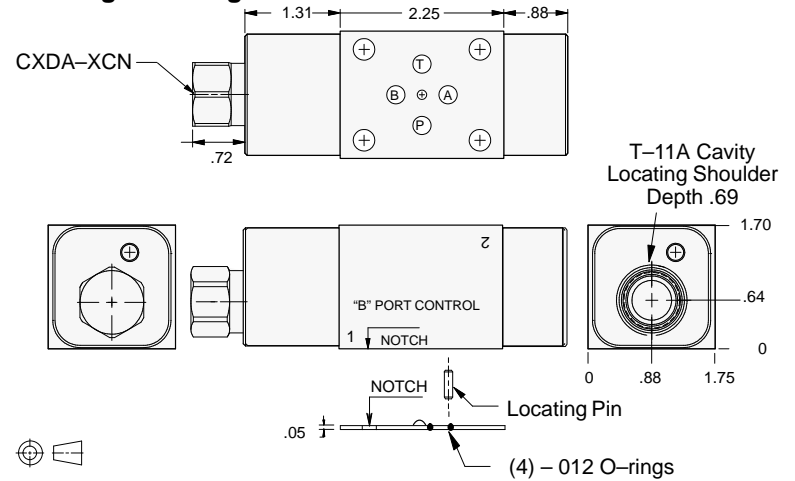
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
EB2		EB2/S	



FUNCTION

On B Tank to T
Drained to T
Reverse FF Check

Reducing/Relieving Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
EB3		EB3/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

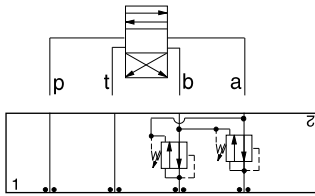
	Pilot Operated Reducing/Relieving Valve		
	PPDB Page 3.10		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



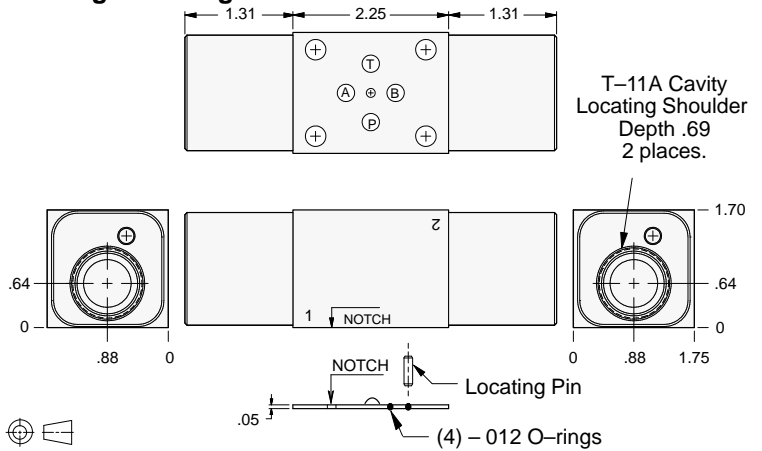
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



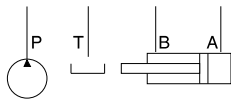
FUNCTION

On **A** and **B**
Tanks and Drains to
Opposite Port

Reducing/Relieving Valves



03 REDUCING/RELIEVING



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
EBY		EBY/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing/Relieving Valve		
	PPDB Page 3.10		
OTHER VALVES:			

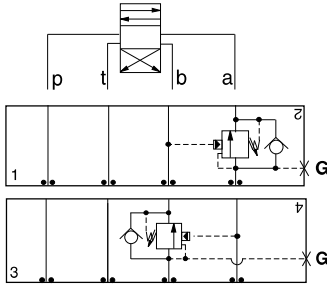


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 COUNTERBALANCE

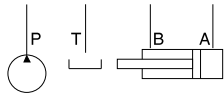
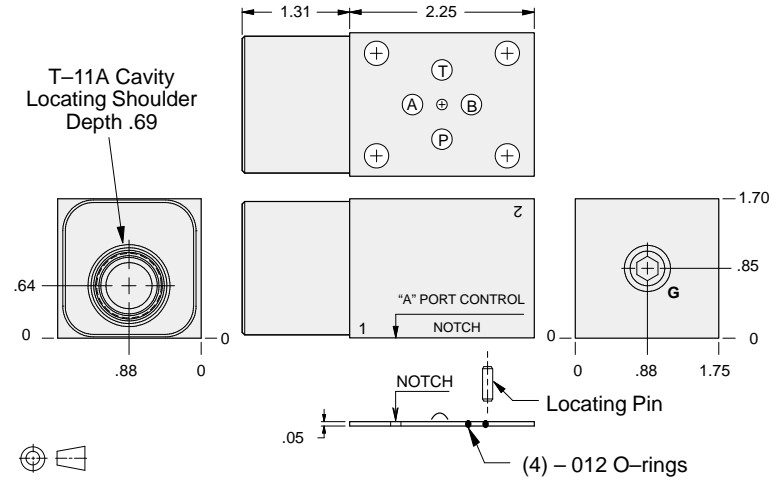


FUNCTION

On A
Pilot from B

On B
Pilot from A

Counterbalance Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	EBA		EBA/S	
.25 BSPP	EBA/M		EBA/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Counterbalance Valve, 3:1 Pilot Ratio		
	CBCA Page 4.10		
	Counterbalance Valve, 4.5:1 Pilot Ratio		
	CBCG Page 4.12		
	Counterbalance Valve, 10:1 Pilot Ratio		
	CBCH Page 4.14		
OTHER VALVES:			

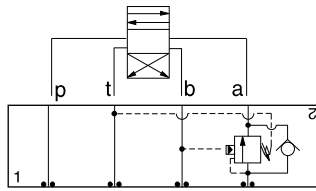


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

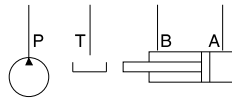
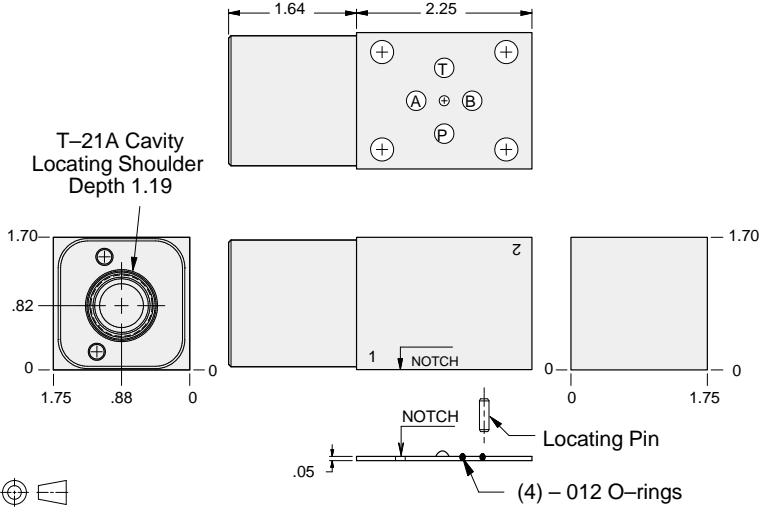
03 COUNTERBALANCE



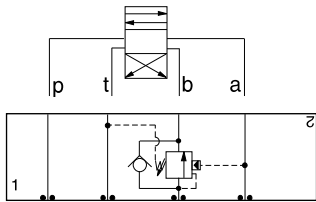
FUNCTION

On A Pilot
from B
Vent to T

Counterbalance Valves



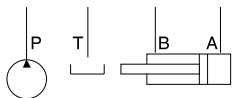
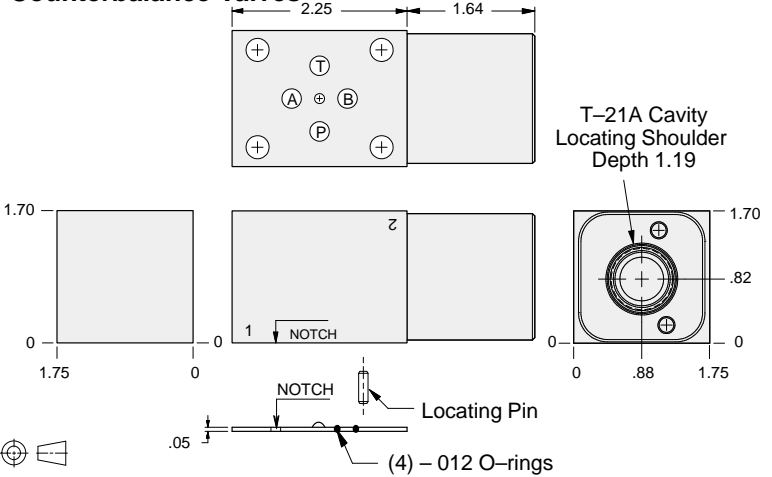
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
MBA		MBA/S	



FUNCTION

On B Pilot from A
Vent to T

Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
MBB		MBB/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Vented Counterbalance Valve, 3:1 Pilot Ratio		
	CWCA Page 4.18		
	Vented Counterbalance Valve, 5:1 Pilot Ratio		
	CWCG Page 4.20		
OTHER VALVES:			

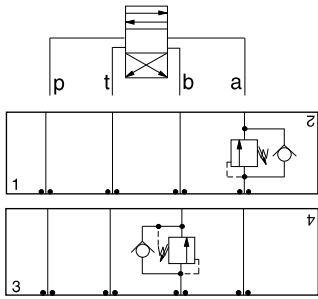


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 COUNTERBALANCE

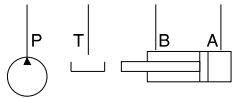
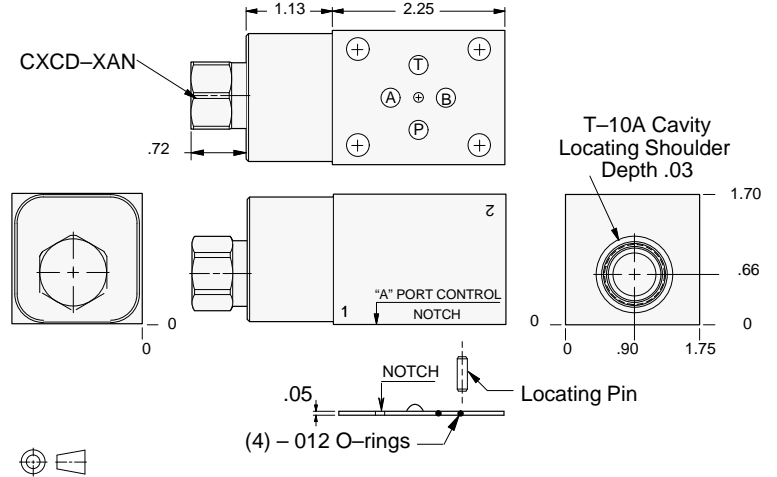


FUNCTION

On A
No pilot assist

On B
No pilot assist

Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
FB4		FB4/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

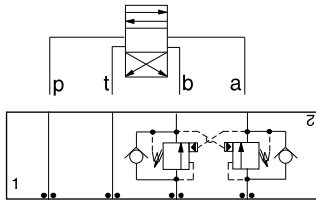
	Direct Acting Relief Valve		
	RDDA Page 1.10		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



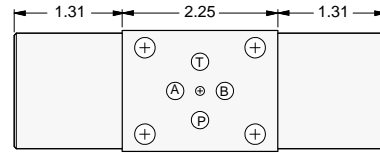
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



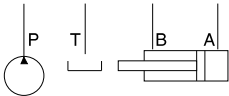
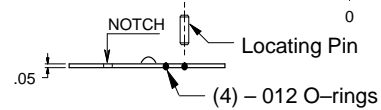
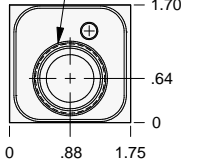
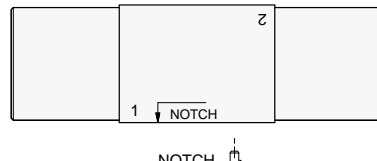
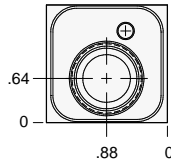
FUNCTION

On A and B
Cross-Piloted

Counterbalance Valves



T-11A Cavity
Locating Shoulder
Depth .69
2 places.



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
EBY		EBY/S	

03 COUNTERBALANCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Counterbalance Valve, 3:1 Pilot Ratio		
	CBCA Page 4.10		
	Counterbalance Valve, 4.5:1 Pilot Ratio		
	CBCG Page 4.12		
	Counterbalance Valve, 10:1 Pilot Ratio		
	CBCH Page 4.14		
OTHER VALVES:			

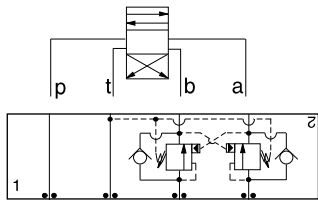


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

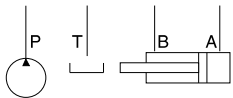
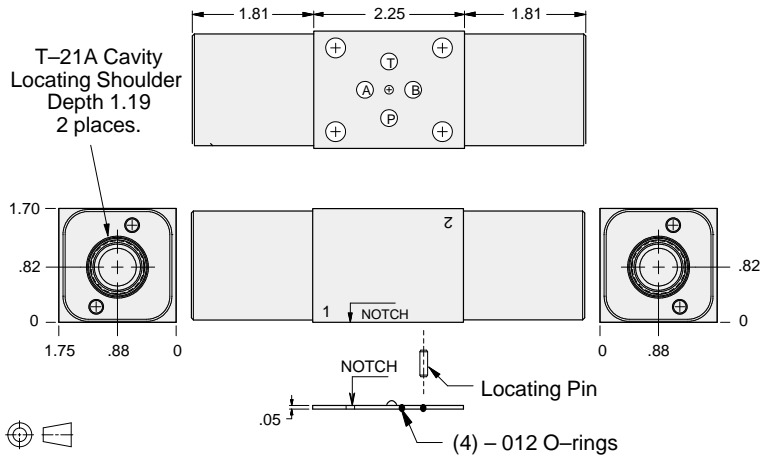
03 COUNTERBALANCE



FUNCTION

On **A** and **B**
 Cross-Piloted
 Vents to **T**

Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
MBY		MBY/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

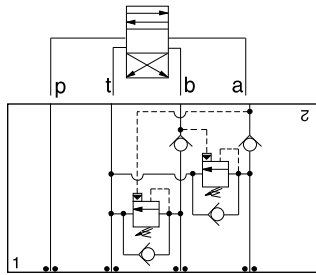
	Vented Counterbalance Valve, 3:1 Pilot Ratio		
	CWCA Page 4.18		
	Vented Counterbalance Valve, 5:1 Pilot Ratio		
	CWCG Page 4.20		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



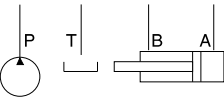
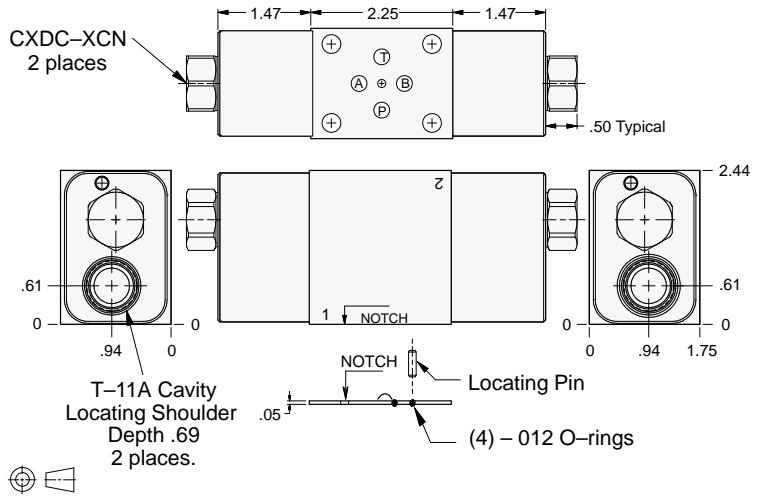
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

Cushion Lock
Circuit
On A and B

Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
EB8		EB8/S	

03 COUNTERBALANCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Counterbalance Valve, 3:1 Pilot Ratio		
	CBCA Page 4.10		
	Counterbalance Valve, 4.5:1 Pilot Ratio		
	CBCG Page 4.12		
	Counterbalance Valve, 10:1 Pilot Ratio		
	CBCH Page 4.14		
OTHER VALVES:			

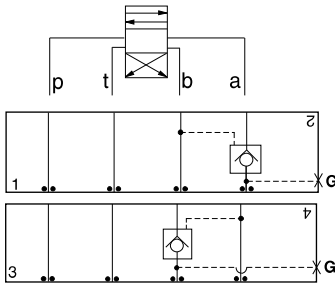


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 P.O. CHECK

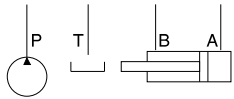
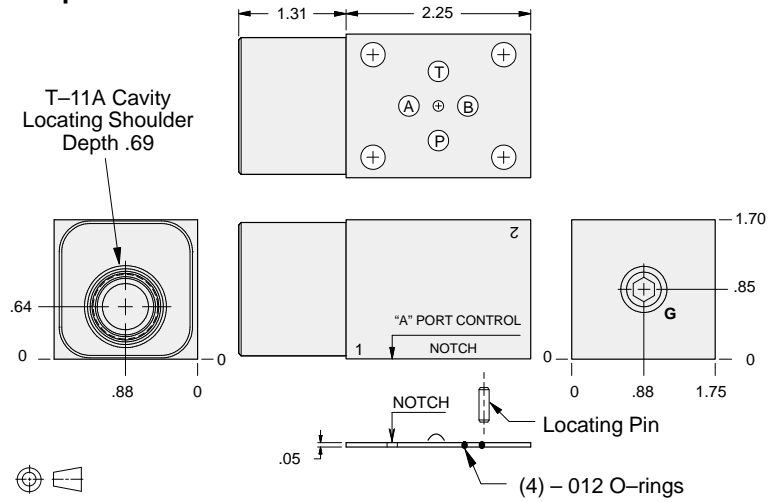


FUNCTION

On A
Pilot from B

On B
Pilot from A

Pilot Operated Check Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	EBA		EBA/S	
.25 BSPP	EBA/M		EBA/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CKCB Page 4.16		
OTHER VALVES:			

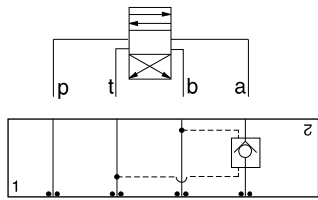


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

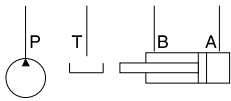
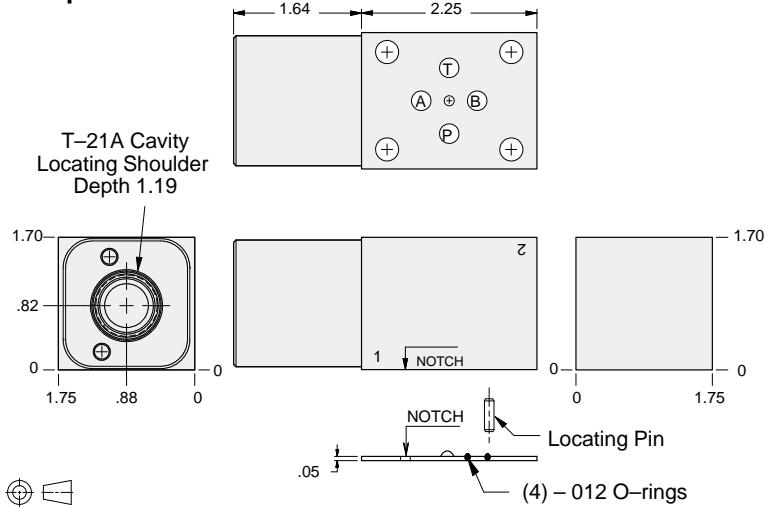
03 P.O. CHECK



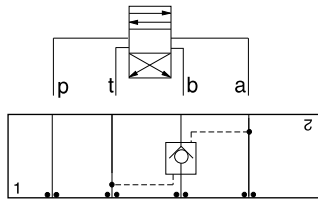
FUNCTION

On **A**
Pilot from **B**
Vent to **T**

Pilot Operated Check Valves



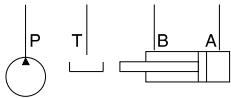
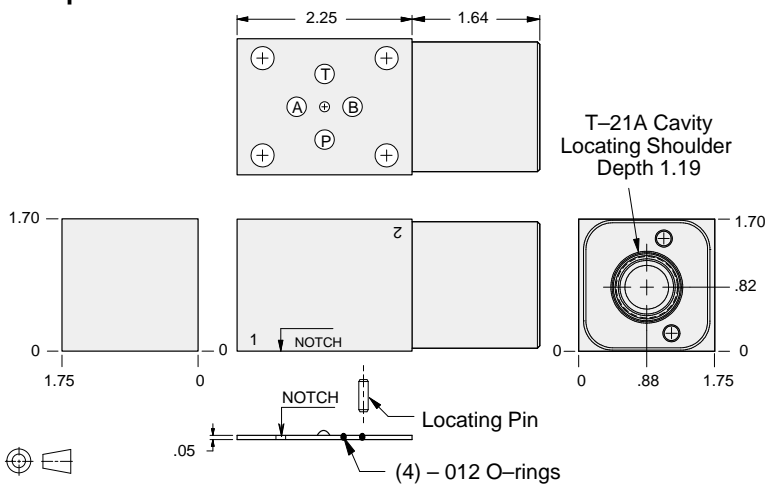
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
MBA		MBA/S	



FUNCTION

On **B**
Pilot from **A**
Vent to **T**

Pilot Operated Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
MBB		MBB/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Vented Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CVCV Page 4.22		
OTHER VALVES:			



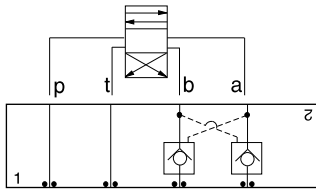
ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

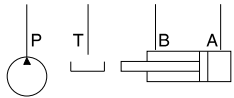
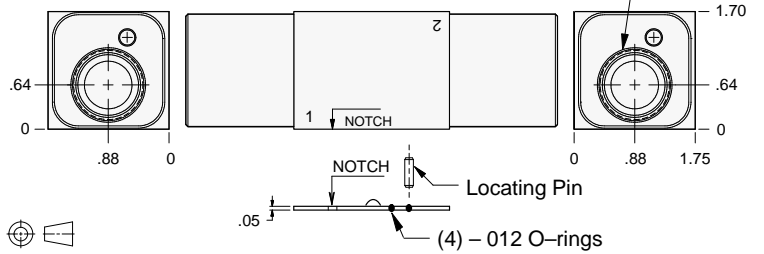
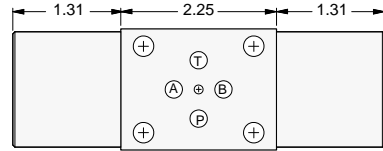
03 P.O. CHECK

Pilot Operated Check Valves



FUNCTION

On A and B
Cross-Piloted



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
EBY		EBY/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

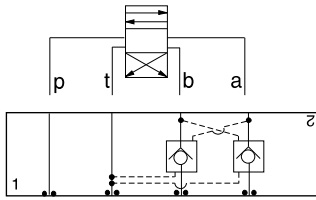
Cartridge Symbol	Cartridge Description	Material	Price
	Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CKCB Page 4.16		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



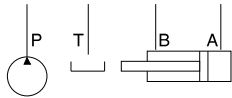
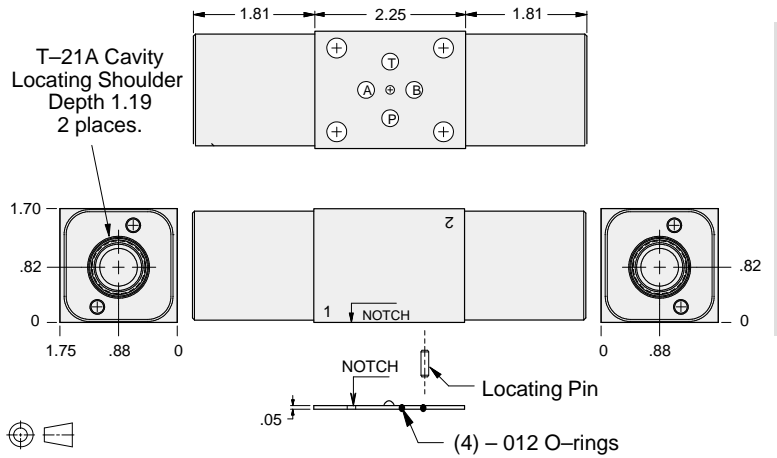
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On **A** and **B**
Cross-Piloted
Vents to **T**

Pilot Operated Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
MBY		MBY/S	

03 P.O. CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Vented Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CVCV Page 4.22		
OTHER VALVES:			

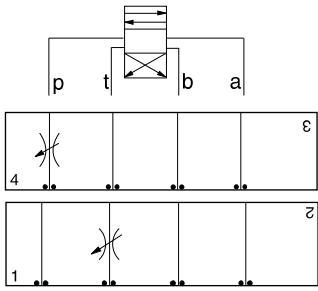


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 FLOW CONTROL

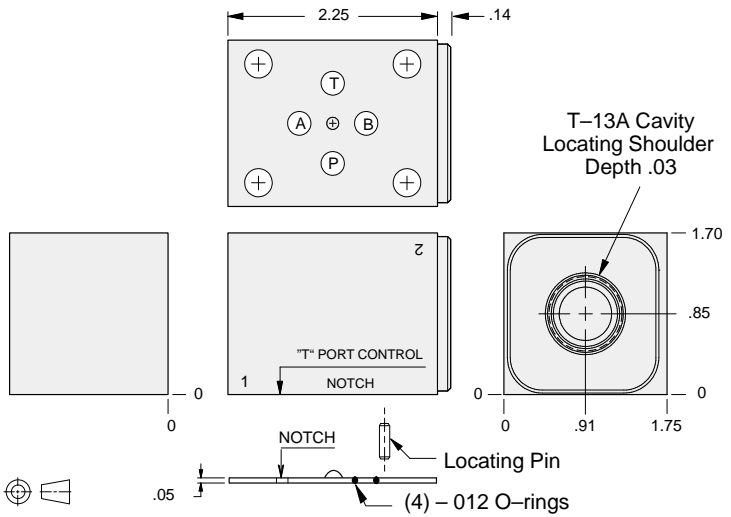


FUNCTION

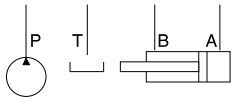
Meter-In P

Meter-Out T

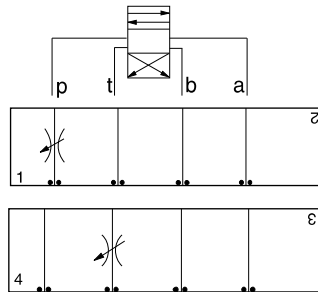
Flow Control Valves



T-13A Cavity
Locating Shoulder
Depth .03



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GBP		GBP/S	

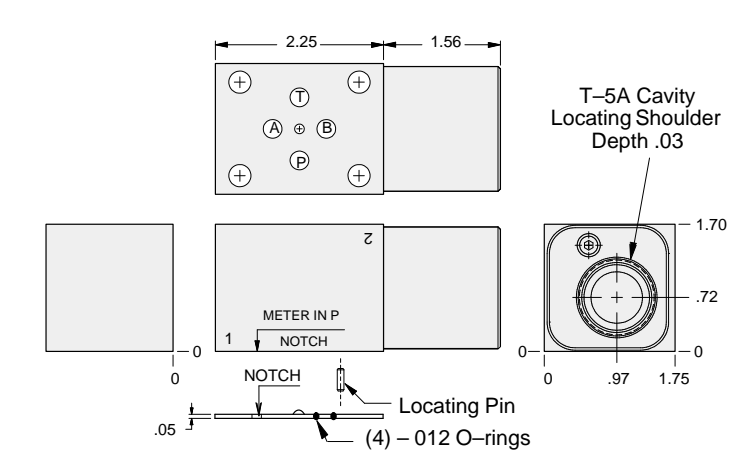


FUNCTION

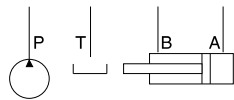
Meter-In P
(High Capacity)

Meter-Out T
(High Capacity)

Flow Control Valves



T-5A Cavity
Locating Shoulder
Depth .03



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GBO		GBO/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

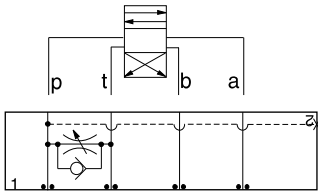
	Fully Adjustable Needle Valve		
	NF*C Page 5.12		
	Fixed Orifice, Pressure-Compensated Flow Control		
	FX*A Page 5.20		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



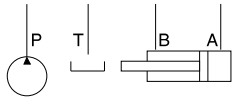
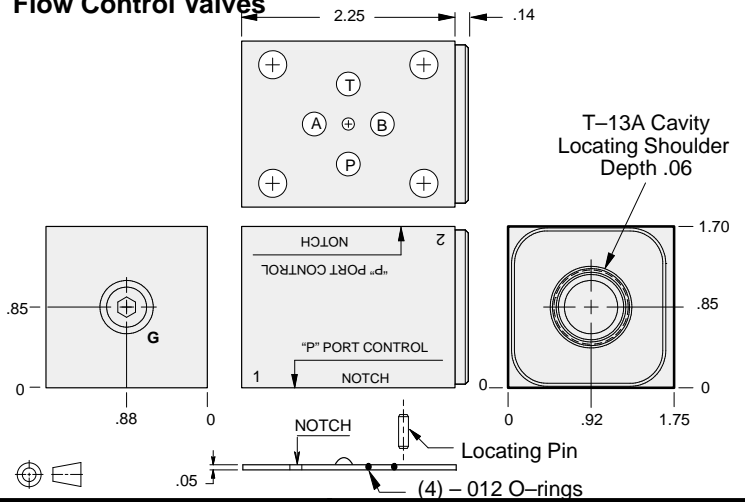
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

Bleed-Off
P to T

Flow Control Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	GBQ		GBQ/S	
.25 BSPP	GBQ/M		GBQ/T	

03 FLOW CONTROL

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NFCC Page 5.12		FXCA Page 5.20
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NCCB Page 5.16		FCCB Page 5.22
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NCCC Page 5.18		FDBA Page 5.24
OTHER VALVES:	CNCC		

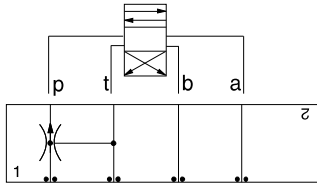


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

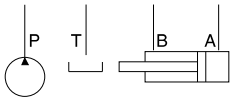
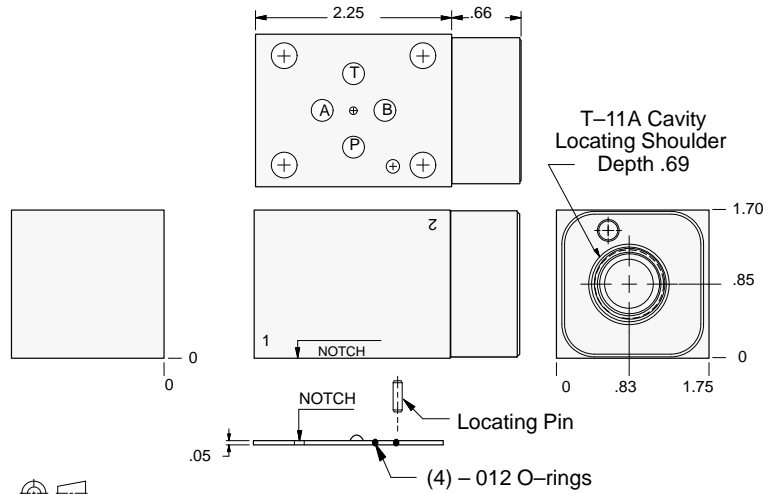
03 FLOW CONTROL



FUNCTION

Priority Flow on P

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
WBN		WBN/S	

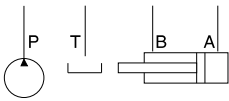
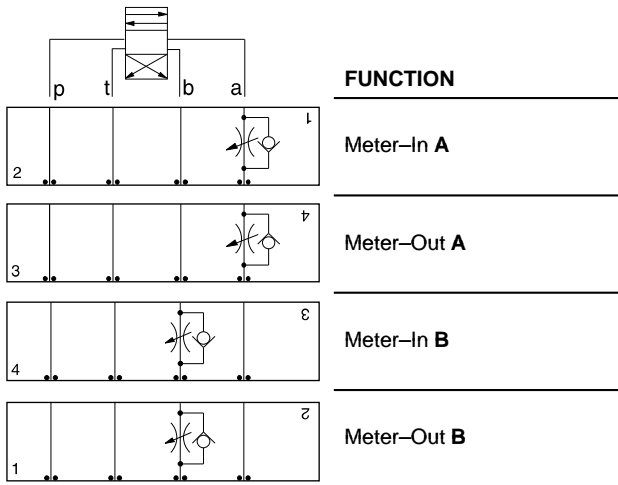
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Priority Flow Control, Bypass/Restrictive, Fixed Orifice		
	FRCA Page 6.02		
OTHER VALVES:			



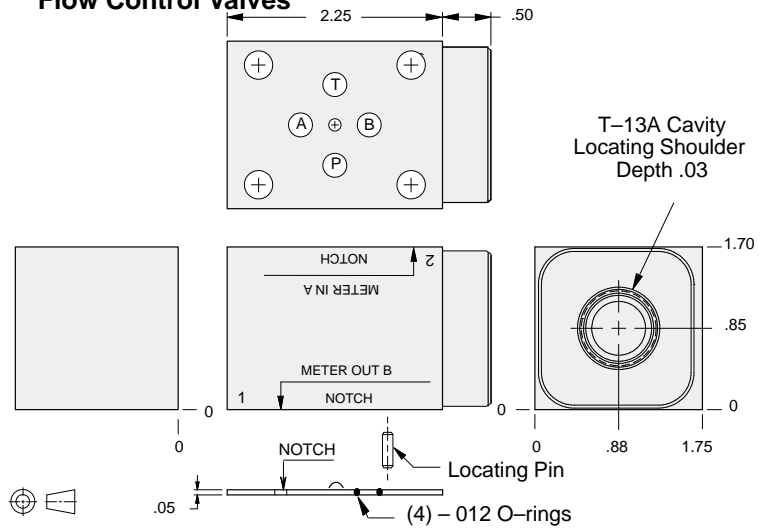
ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

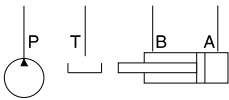
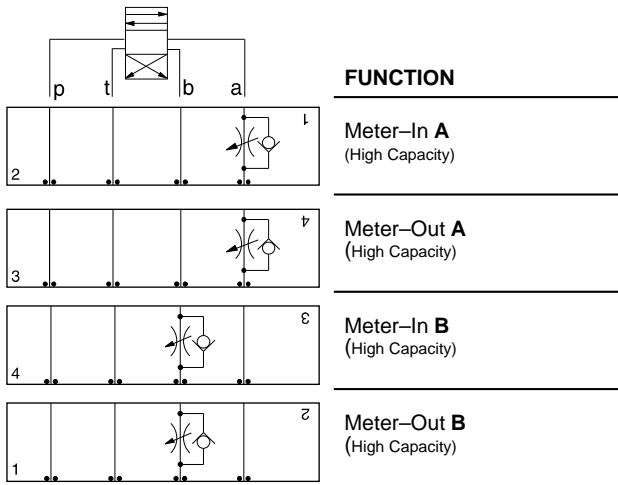


Flow Control Valves

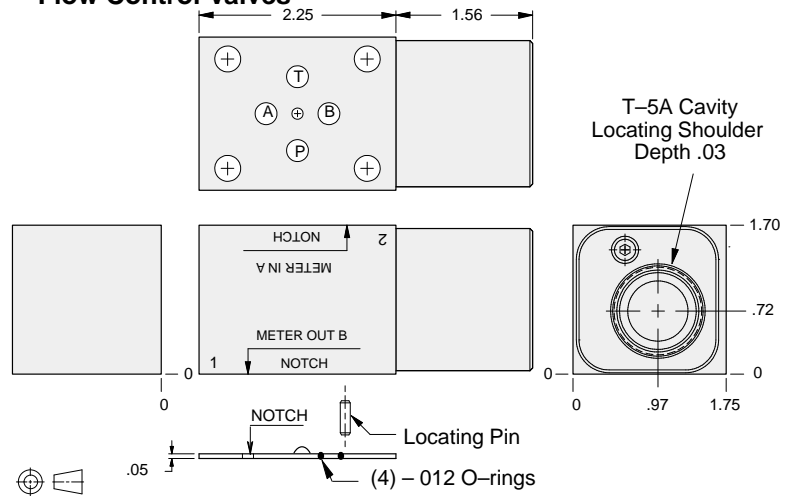


ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GBA		GBA/S	

03 FLOW CONTROL



Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GBD		GBD/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NF*C Page 5.12		FX*A Page 5.20
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*B Page 5.16		FC*B Page 5.22
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*C Page 5.18		FDBA, FDCB Page 5.24
OTHER VALVES:	CN*C		

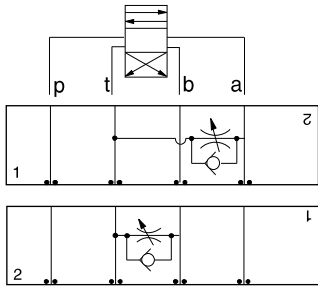


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

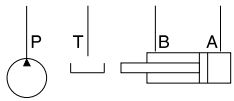
03 FLOW CONTROL



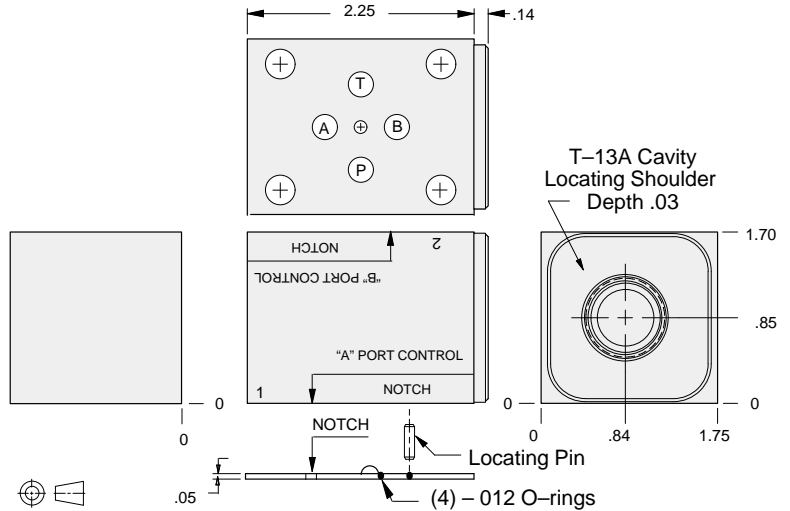
FUNCTION

Bleed-Off
A to T

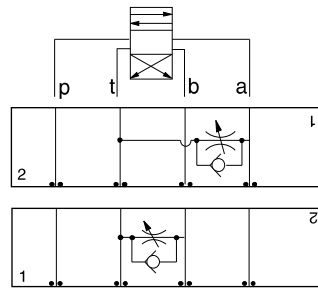
Bleed-Off
B to T



Flow Control Valves



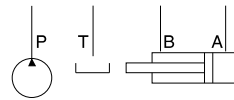
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GBW		GBW/S	



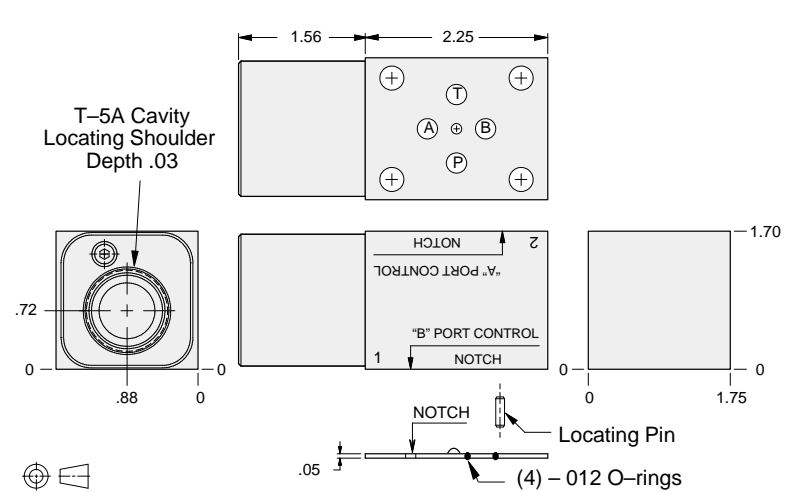
FUNCTION

Bleed-Off
A to T
(High Capacity)

Bleed-Off
B to T
(High Capacity)



Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GBE		GBE/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NF*C Page 5.12		FX*A Page 5.20
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*B Page 5.16		FC*B Page 5.22
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*C Page 5.18		FDBA, FDCB Page 5.24
OTHER VALVES: CNCC, CNEC			

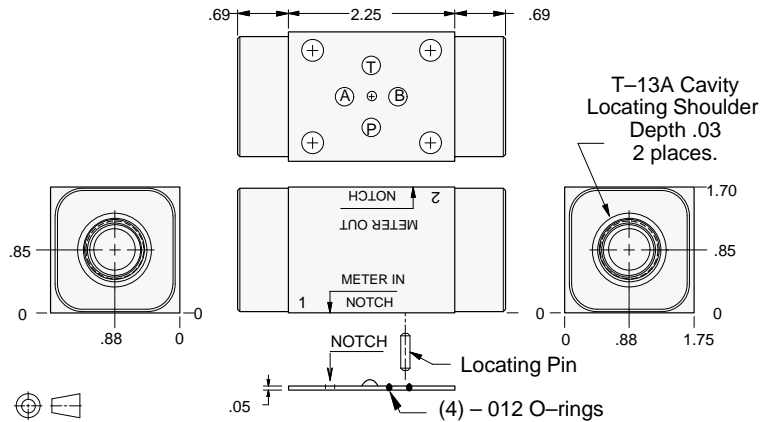
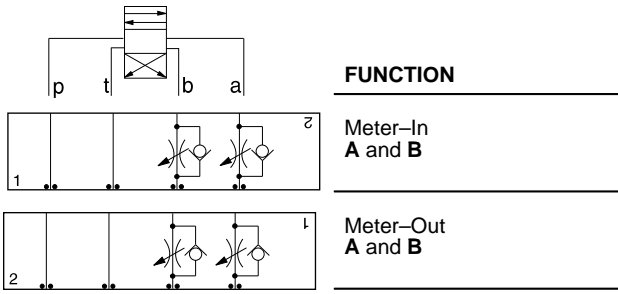


ISO 03 SANDWICH BODIES

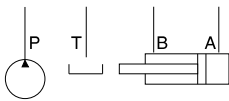


- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Flow Control Valves

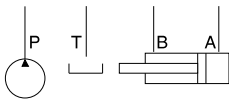
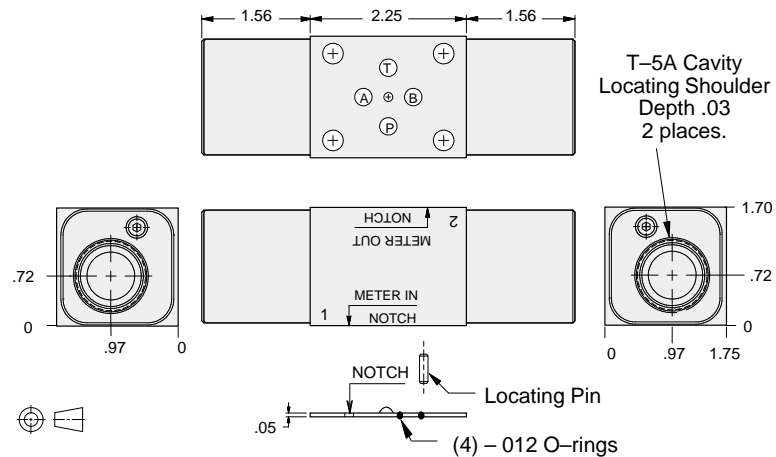
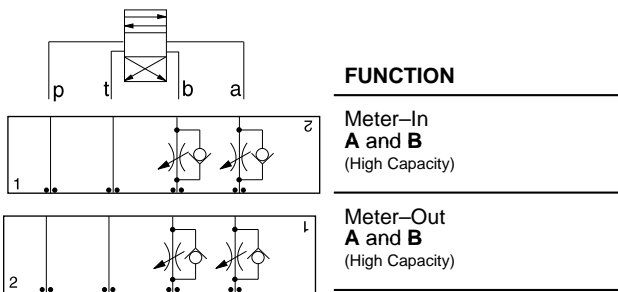


03 FLOW CONTROL



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GBY		GBY/S	

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GBZ		GBZ/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NF*C Page 5.12		FX*A Page 5.20
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*B Page 5.16		FC*B Page 5.22
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*C Page 5.18		FDBA, FDCB Page 5.24
OTHER VALVES:	CNCC, CNEC		

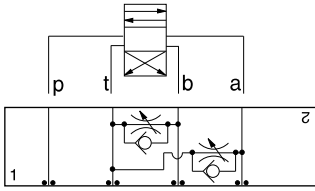


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

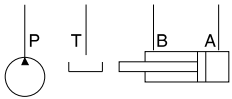
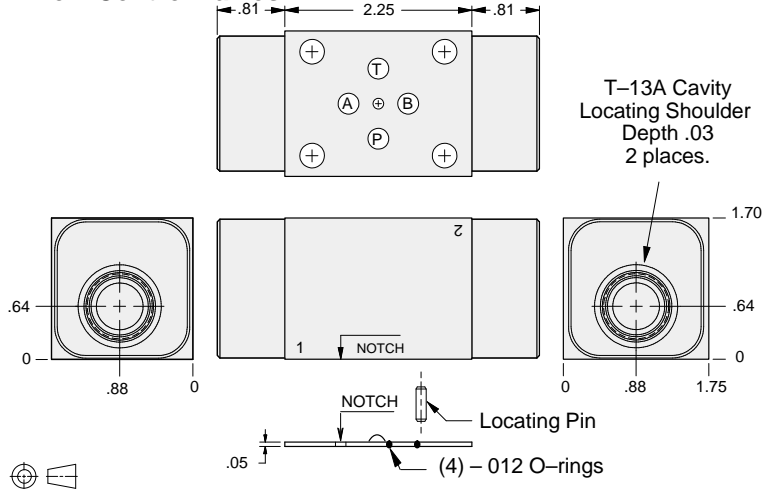
03 FLOW CONTROL



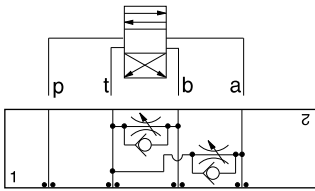
FUNCTION

Bleed-Off
A and B to T

Flow Control Valves



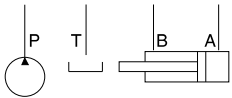
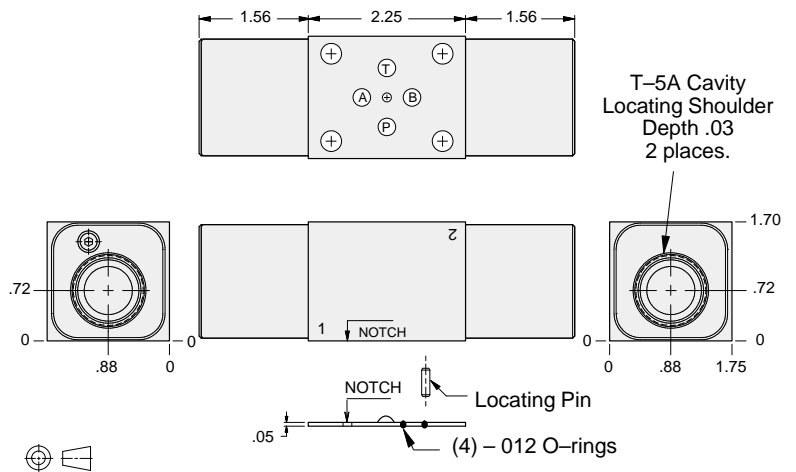
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GBX		GBX/S	



FUNCTION

Bleed-Off
A and B to T
(High Capacity)

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GBF		GBF/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

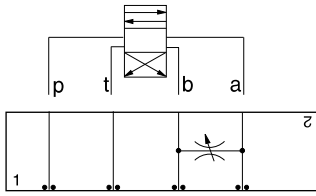
	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NF*C Page 5.12		FX*A Page 5.20
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*B Page 5.15		FC*B Page 5.22
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*C Page 5.18		FDBA, FDCB Page 5.24
OTHER VALVES:	CNCC, CNEC		



ISO 03 SANDWICH BODIES



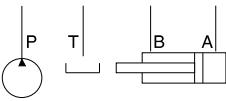
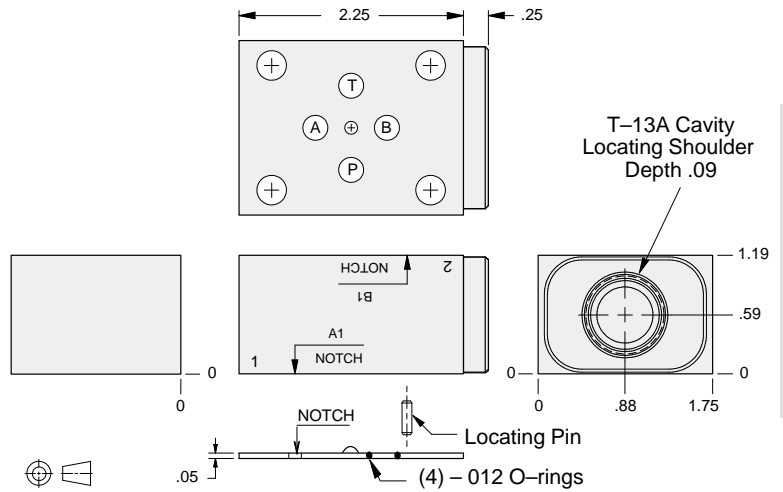
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

Bleed-Off
A to B and
B to A

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GBS		GBS/S	

03 FLOW CONTROL

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Fully Adjustable Needle Valve		
	NFCC Page 5.12		
	Fixed Orifice, Pressure-Compensated Flow Control		
	FXCA Page 5.20		
OTHER VALVES:			

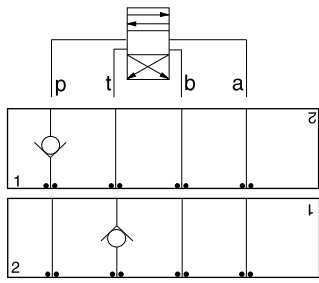


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 CHECK

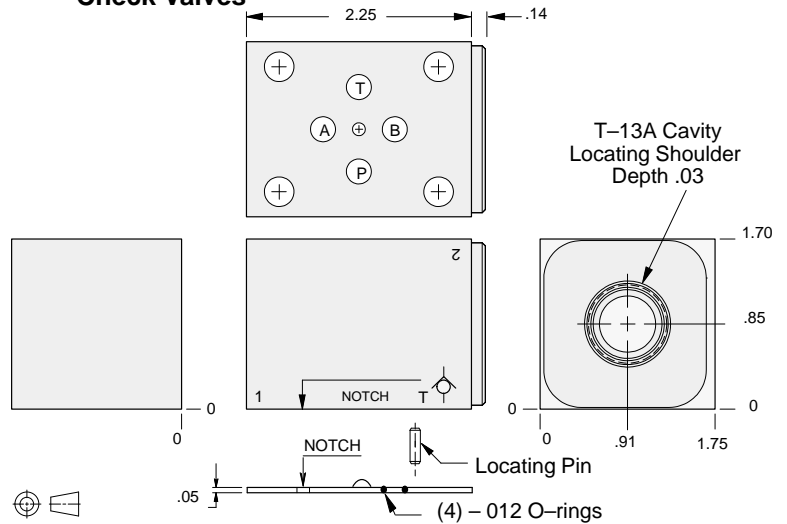


FUNCTION

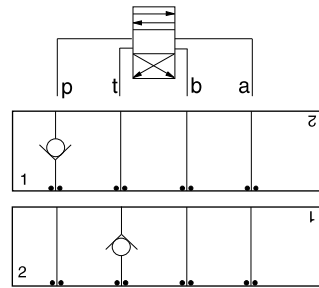
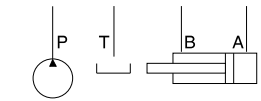
On P

On T

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GDP		GDP/S	

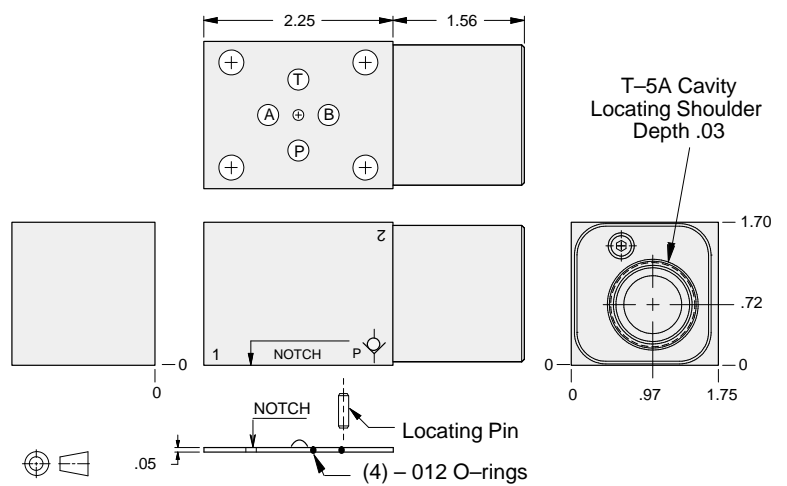


FUNCTION

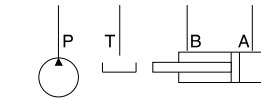
On P
(High Capacity)

On T
(High Capacity)

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GDO		GDO/S	



TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

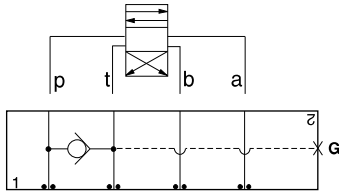
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXDA Page 5.08 (use with GDP)		
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXFA Page 5.08 (use with GDO)		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



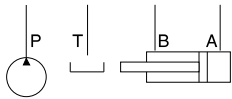
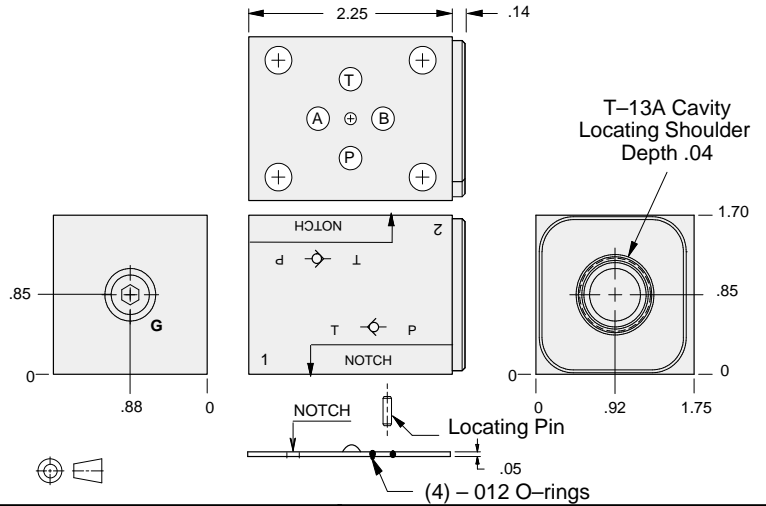
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

T to P

Check Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	GDQ		GDQ/S	
.25 BSPP	GDQ/M		GDQ/T	

03 CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXDA Page 5.08		
OTHER VALVES:			

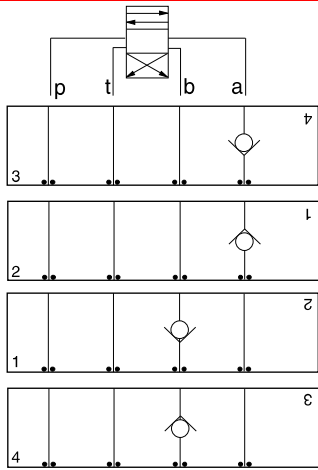


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 CHECK



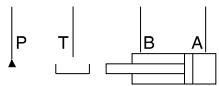
FUNCTION

On A
Free Flow Into Valve

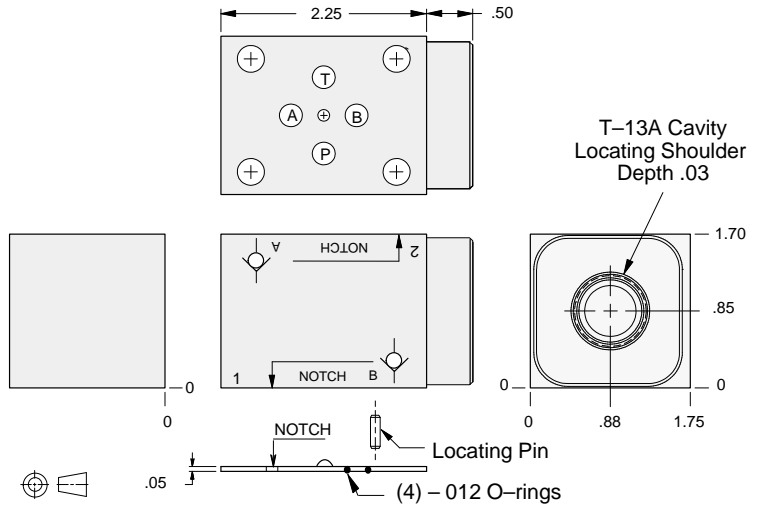
On A
Free Flow Out of Valve

On B
Free Flow Into Valve

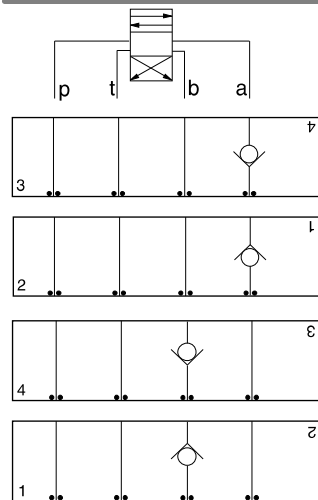
On B
Free Flow Out of Valve



Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GDA		GDA/S	



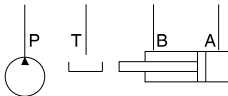
FUNCTION

On A
Free Flow Into Valve
(High Capacity)

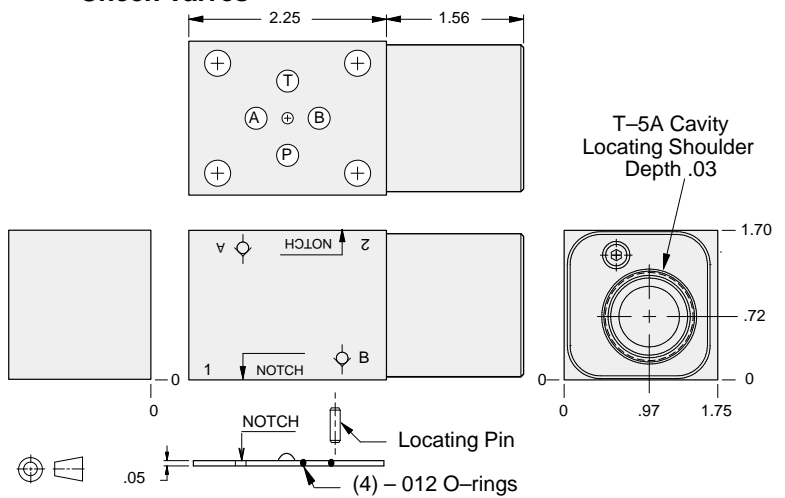
On A
Free Flow Out of Valve
(High Capacity)

On B
Free Flow Into Valve
(High Capacity)

On B
Free Flow Out of Valve
(High Capacity)



Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GDD		GDD/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

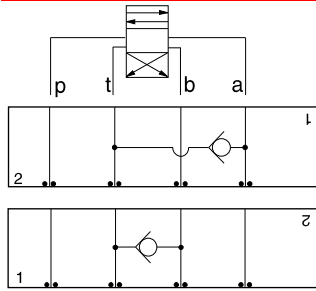
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXDA Page 5.08 (use with GDA)		
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXFA Page 5.08 (use with GDD)		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

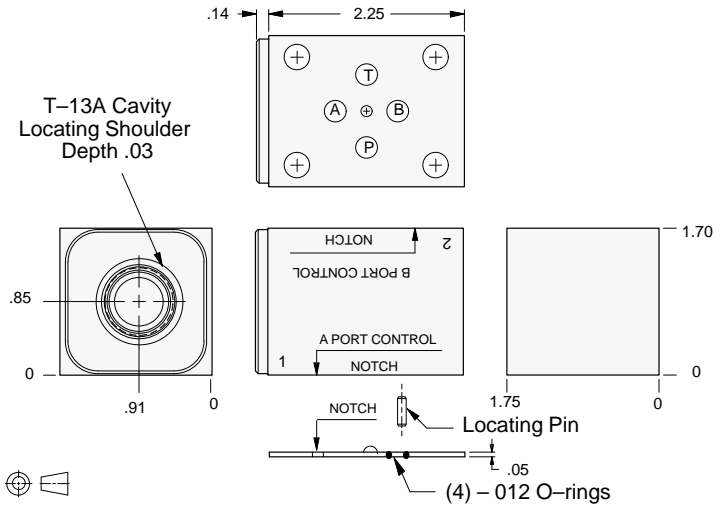


FUNCTION

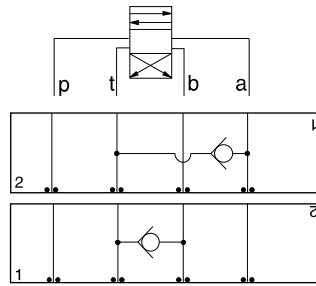
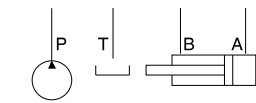
T to A

T to B

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GDW		GDW/S	

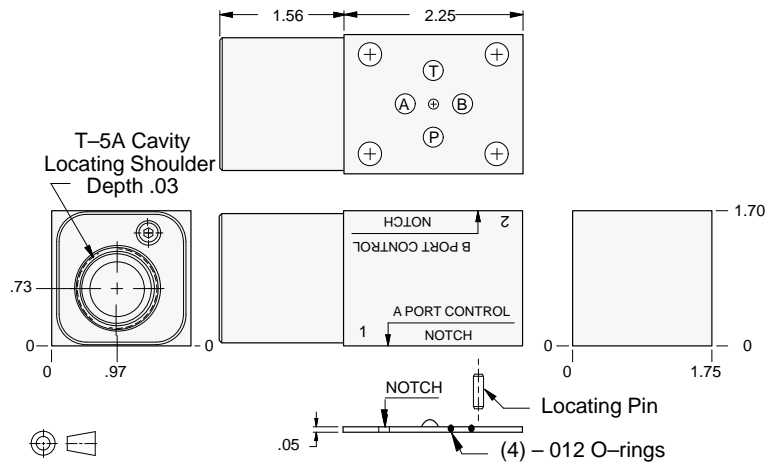


FUNCTION

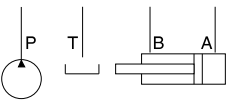
T to A
(High Capacity)

T to B
(High Capacity)

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GDE		GDE/S	



TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXDA Page 5.08 (use with GDW)		
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXFA Page 5.08 (use with GDE)		
OTHER VALVES:			

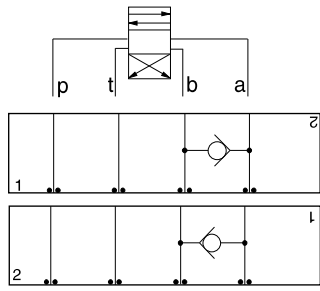


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 CHECK

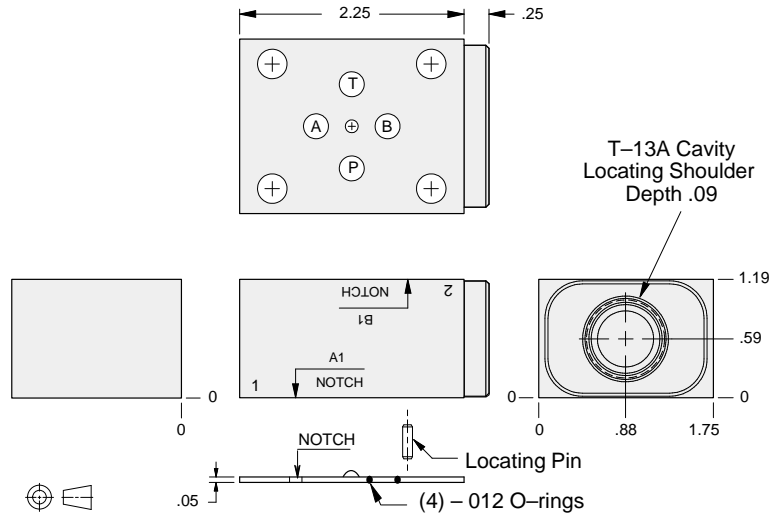


FUNCTION

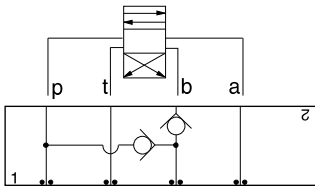
A to B

B to A

Check Valves



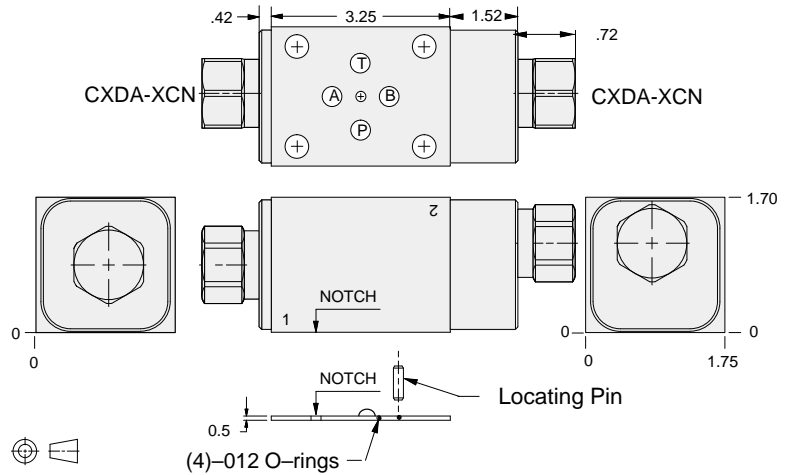
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GBS		GBS/S	



FUNCTION

B to P
(For Regenerative Circuits)

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YDCK-XCN-AA		YDCK-XCN-AA/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

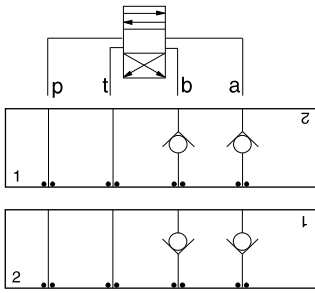
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXDA Page 5.08		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



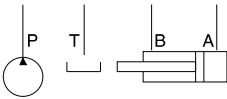
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



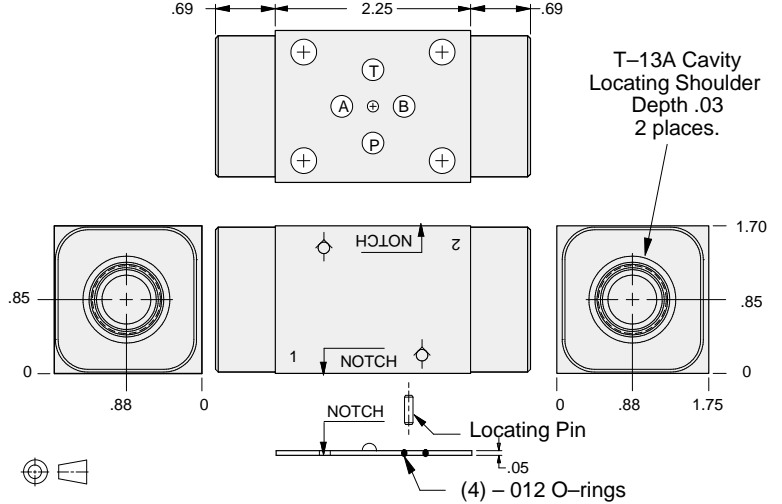
FUNCTION

On A and B
Free Flow **Out** of Valve

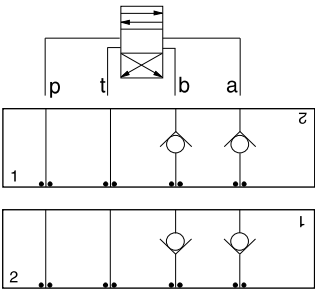
On A and B
Free Flow **Into** Valve



Check Valves



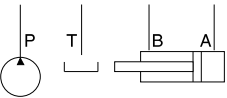
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GDY		GDY/S	



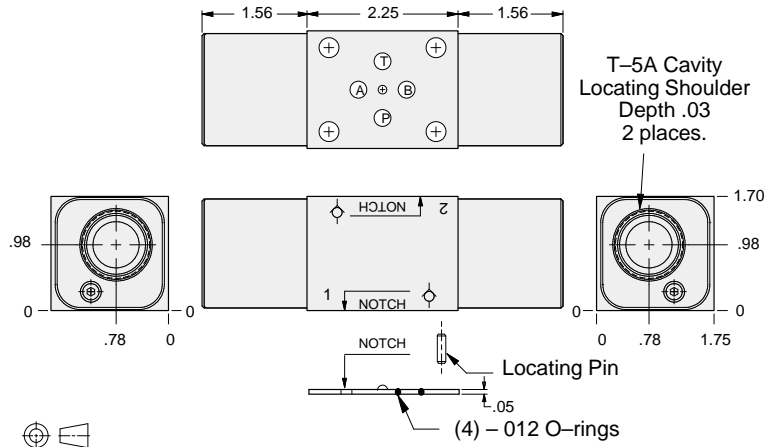
FUNCTION

On A and B
Free Flow **Out**
of Valve (High Capacity)

On A and B
Free Flow **Into** Valve
(High Capacity)



Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GDZ		GDZ/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXDA Page 5.08 (use with GDY)		
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXFA Page 5.08 (use with GDZ)		
OTHER VALVES:			

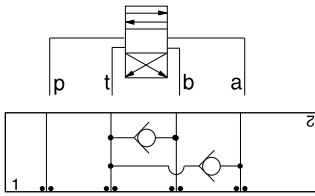


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

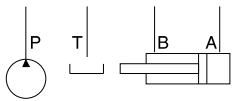
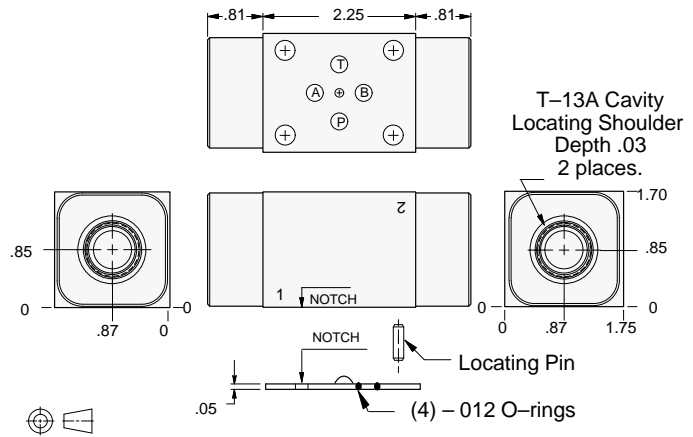
03 CHECK



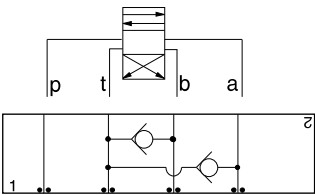
FUNCTION

T to A and B

Check Valves



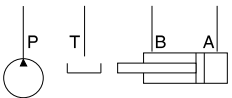
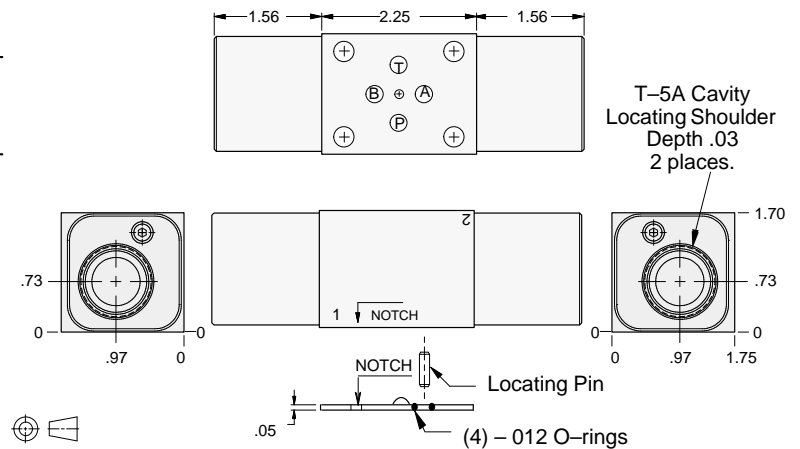
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GDX		GDX/S	



FUNCTION

T to A and B
(High Capacity)

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GDF		GDF/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

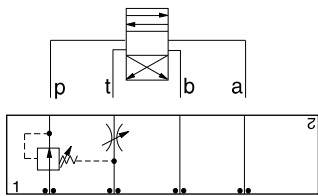
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXDA Page 5.08 (use with GDX)		
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXFA Page 5.08 (use with GDF)		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



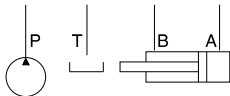
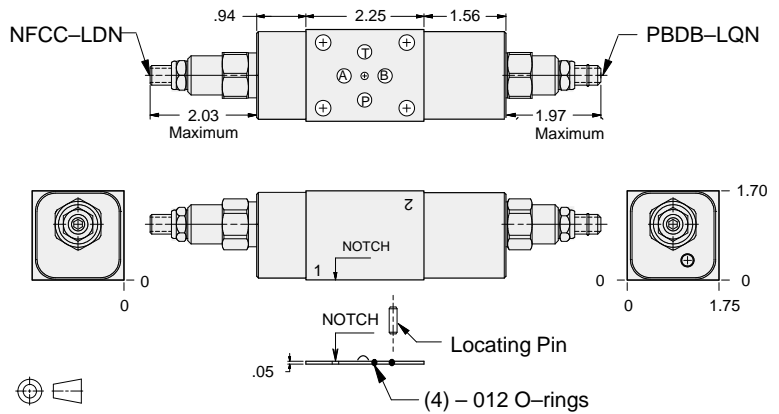
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

Pilot Choke

Circuit Savers



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YNAA-LDN-AA		YNAA-LDN-AA/S	

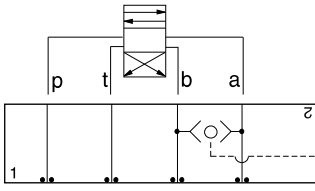


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

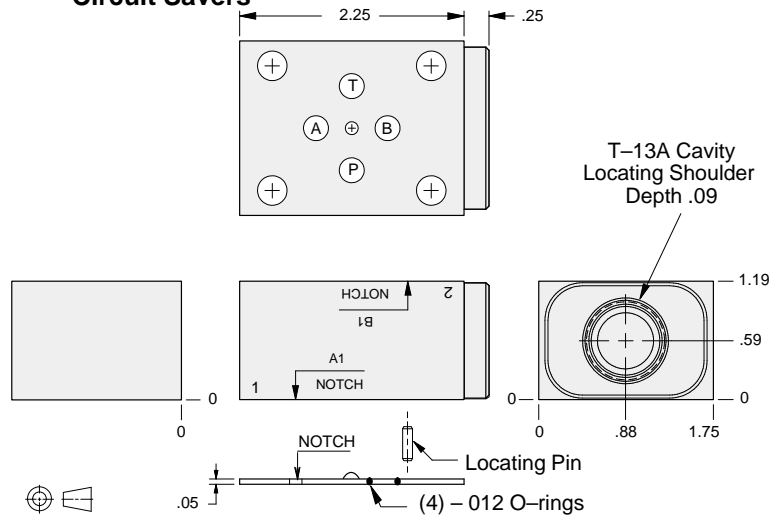
03 CIRCUIT SAVER



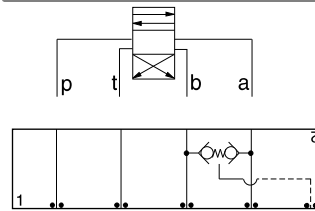
FUNCTION

Shuttle
A and B
 Output External

Circuit Savers



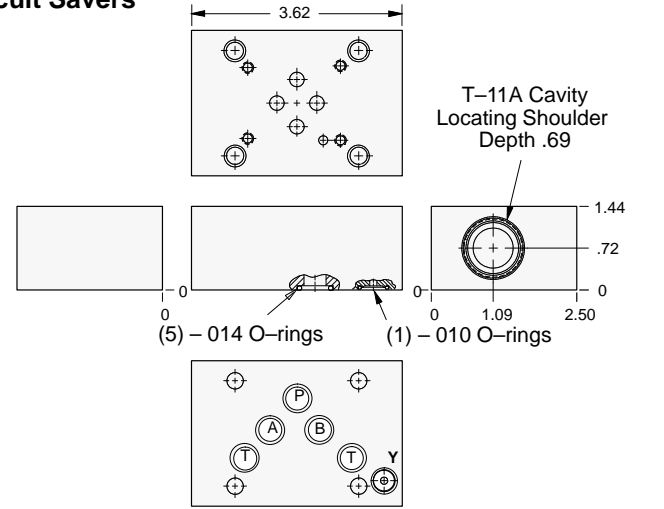
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
GBS		GBS/S	



FUNCTION

Checks from
A and B-Adapter
 to ISO 05 w/Y Port

Circuit Savers



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
EBS		EBS/S	

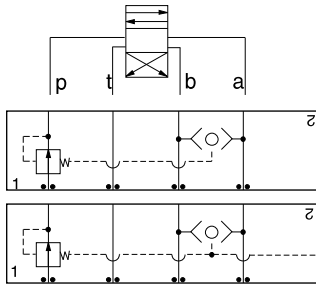
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
 Ext.	2 Port Shuttle Valve, Signal External		
	CSAA Page 10.09 (use with GBS)		
 3	3 Port Back-to-Back Check Valve, Signal at Port 3		
	CDAB Page 10.10 (use with EBS)		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

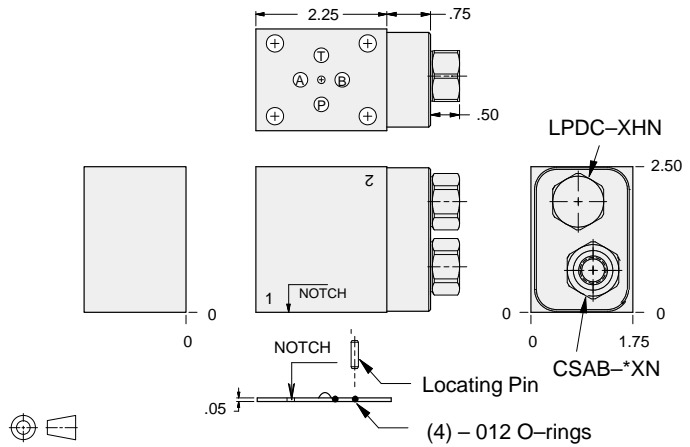


FUNCTION

Pressure Compensator (Restrictive)

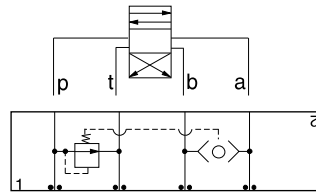
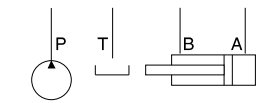
Pressure Compensator (Restrictive) w/Load-Sensing Port

Circuit Savers



Shuttle Cartridge	External Shuttle Port	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
CSAB-XXN	None	YFCG-XHN-AA		YFCG-XHN-AA/S	
CSAB-AXN	SAE-4	YFCJ-XHN-AA		YFCJ-XHN-AA/S	
CSAB-BXN	.250 BSPP	YFCJ-XHN-AA/M		YFCJ-XHN-AA/T	

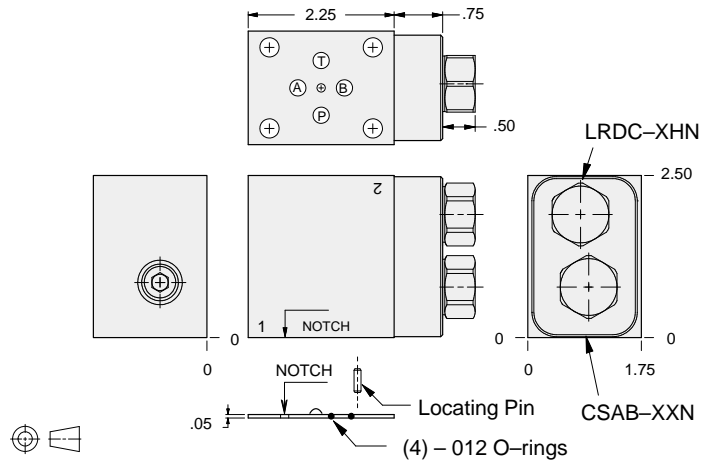
03 CIRCUIT SAVER



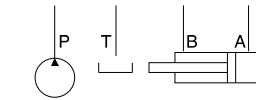
FUNCTION

Pressure Compensator (Bypass)

Circuit Savers



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YFCK-XHN-AA		YFCK-XHN-AA/S	



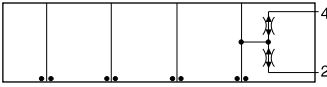
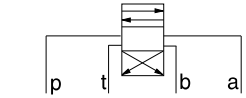


ISO 03 SANDWICH BODIES



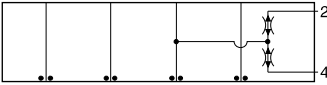
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 CIRCUIT SAVER

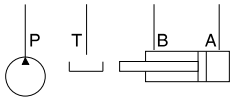


FUNCTION

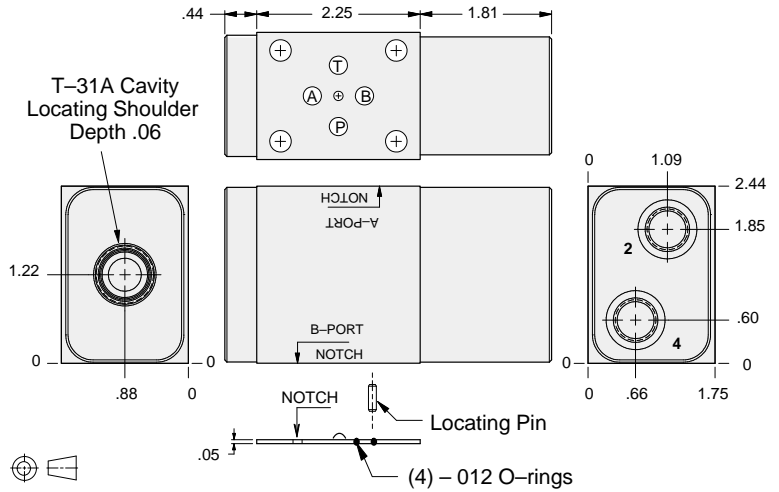
Flow Divider and/or Combiner on A



Flow Divider and/or Combiner on B



Circuit Savers



Ports 2,4	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
SAE-6	MBJ		MBJ/S	
.25 BSPP	MBJ/M		MBJ/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

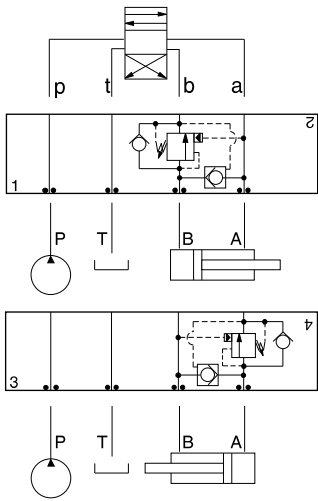
	Flow Divider		High Capacity Flow Divider/Combiner
	FSBD, FSCD Page 7.08		FSCH Page 7.14
	Flow Divider/Combiner		
	FSBA, FSCA Page 7.10		
	Synchronizing Flow Divider/Combiner		
	FSBS, FSCS Page 7.12		
OTHER VALVES:			



ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

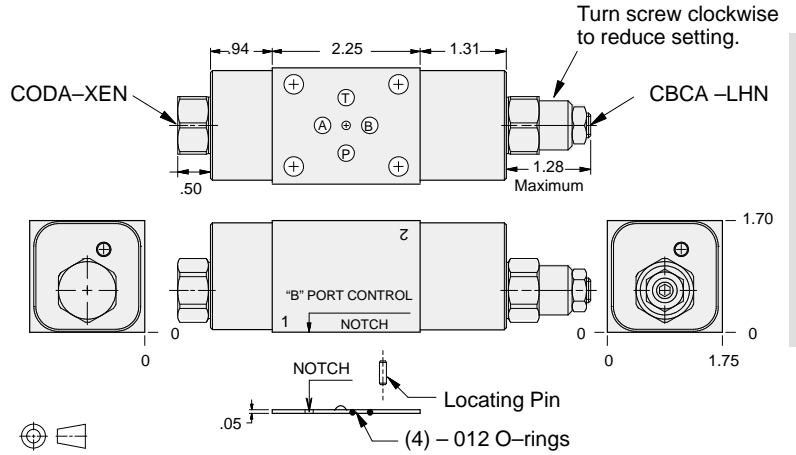


FUNCTION

B to A
Regenerative

A to B
Regenerative

Circuit Savers



03 CIRCUIT SAVER

ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YDCA-LHN-AA		YDCA-LHN-AA/S	

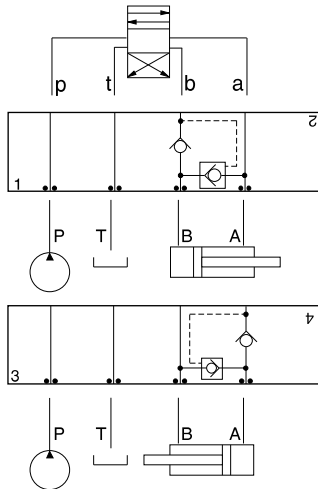


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 CIRCUIT SAVER

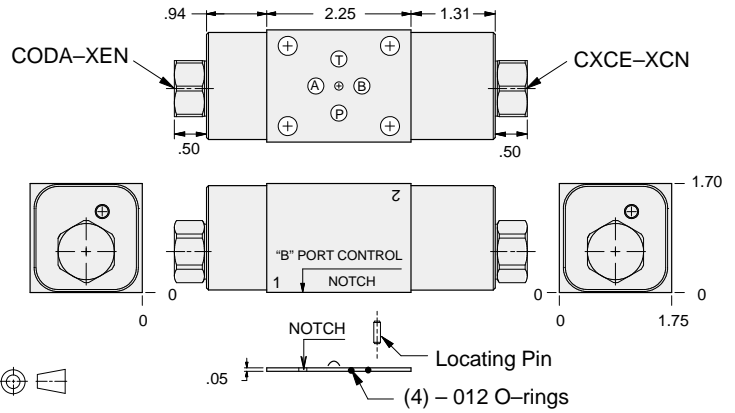


FUNCTION

B to A Regenerative (Full Time)

A to B Regenerative (Full Time)

Circuit Savers



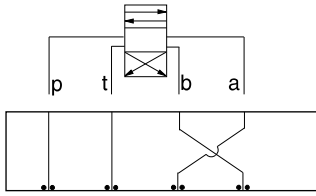
ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
YDCF-XCN-AA		YDCF-XCN-AA/S	



ISO 03 SANDWICH BODIES

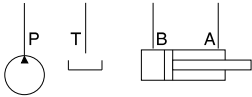


- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

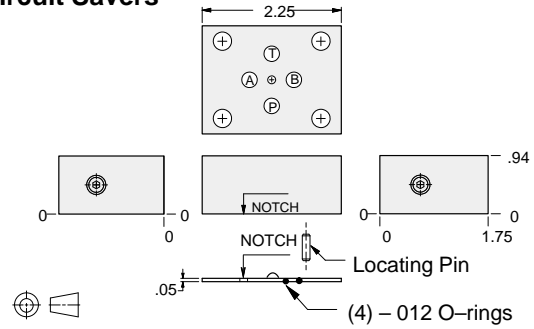


FUNCTION

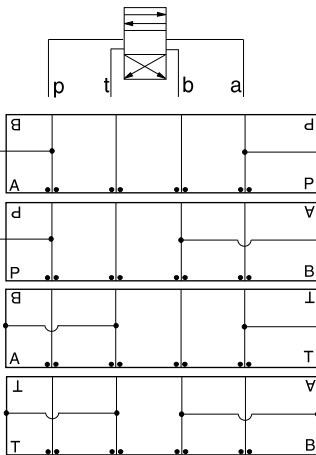
Swap Block
Swaps A and B



Circuit Savers



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
ZKX		ZKX/S	



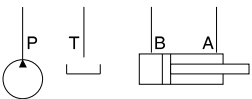
FUNCTION

P and A
Tap in Manifold

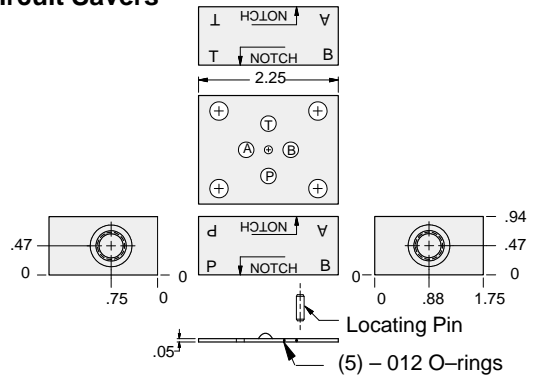
P and B
Tap in Manifold

A and T
Tap in Manifold

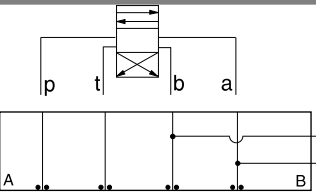
B and T
Tap in Manifold



Circuit Savers

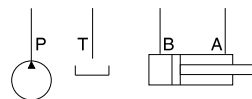


External Port	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	ZWW		ZWW/S	
SAE-4	ZPT		ZPT/S	
.25 BSPP	ZVC		ZVC/S	

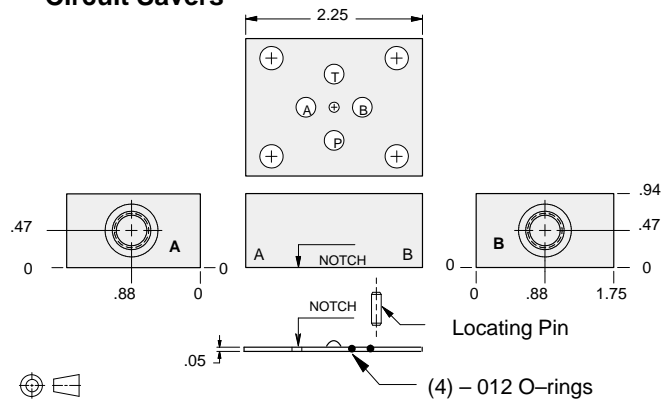


FUNCTION

A and B
Tap in Manifold



Circuit Savers



Ports A, B	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	ZWV		ZWV/S	
SAE-4	ZUO		ZUO/S	
.25 BSPP	ZVB		ZVB/S	

03 CIRCUIT SAVER



ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

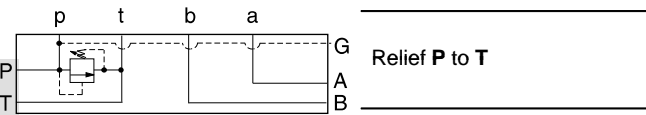
03 SUBPLATE

Side Ported Subplates

Mounting Holes:
.28 diameter through hole.
4 places.

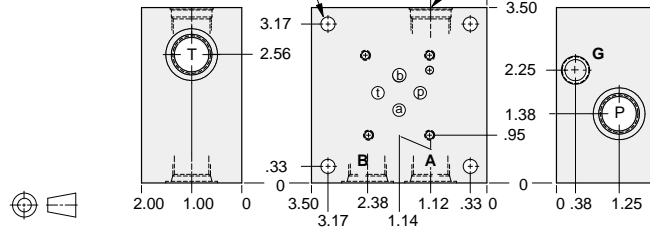
T-10A Cavity
Locating Shoulder
Depth .03

4 Interface Bolt Holes
x .38 deep
Inch: 10-24 UNC
Metric: M5 x 0.8



FUNCTION

Relief P to T



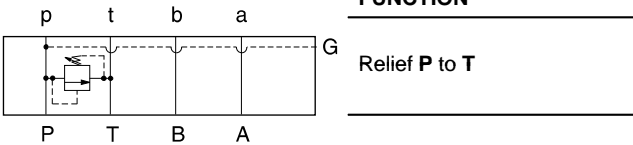
Bolt Hole Interface	Gage Port	Ports A,B,P,T	ALUMINUM		DUCTILE IRON	
			Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	.375 NPTF	FSB		FSB/S	
Inch	.25 NPTF	SAE-8	FSJ		FSJ/S	
Metric	.25 BSPP	.375 BSPP	FSU		FSU/S	

Rear Ported Subplates

Mounting Holes:
.28 diameter through hole.
4 places.

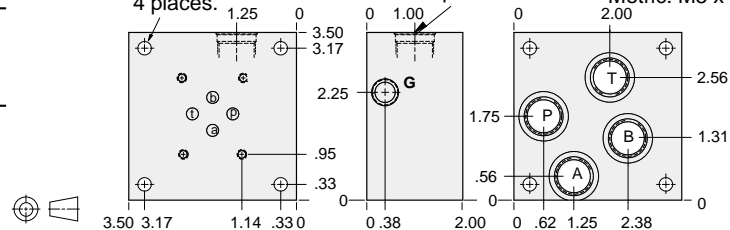
T-10A Cavity
Locating Shoulder
Depth .03

4 Interface Bolt Holes
x .38 deep
Inch: 10-24 UNC
Metric: M5 x 0.8



FUNCTION

Relief P to T



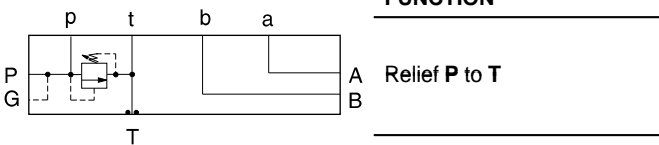
Bolt Hole Interface	Gage Port	Ports A,B,P,T	ALUMINUM		DUCTILE IRON	
			Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	.375 NPTF	FRB		FRB/S	
Inch	.25 NPTF	SAE-8	FRJ		FRJ/S	
Metric	.25 BSPP	.375 BSPP	FRU		FRU/S	

Side Ported Subplates with Gasket Mount Tank Port

4 Interface Bolt Holes
x .38 deep
Inch: 10-24 UNC
Metric: M5 x 0.8

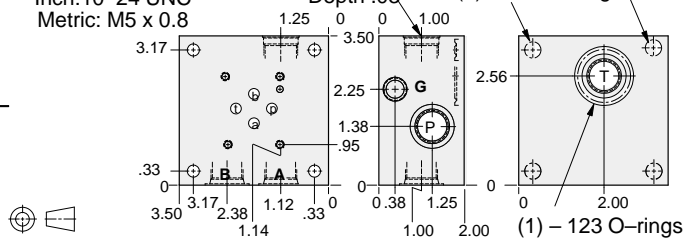
T-10A Cavity
Locating Shoulder
Depth .03

Mounting Holes (Sealed):
.28 diameter through hole.
4 places.



FUNCTION

Relief P to T



Bolt Hole Interface	Gage Port	Ports A,B,P	ALUMINUM		DUCTILE IRON	
			Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	.375 NPTF	FTB		FTB/S	
Inch	.25 NPTF	SAE-8	FTJ		FTJ/S	
Metric	.25 BSPP	.375 BSPP	FTU		FTU/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Pilot Operated "Kick-Down" Relief Valve
	RPEC Page 1.06		RQEB Page 1.12
	Pilot Operated, Rapid Response Relief Valve		Direct Acting Relief Valve
	RPEE Page 1.08		RDDA Page 1.10

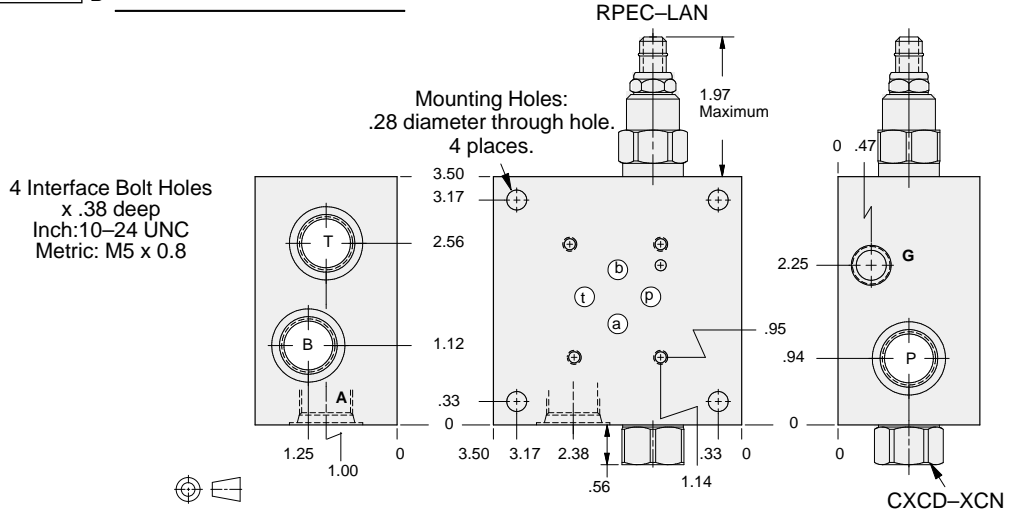
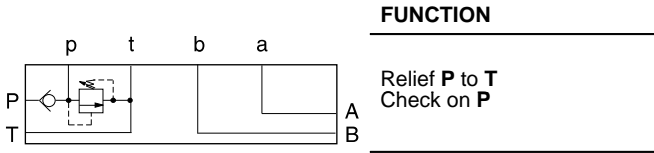


ISO 03 SANDWICH BODIES



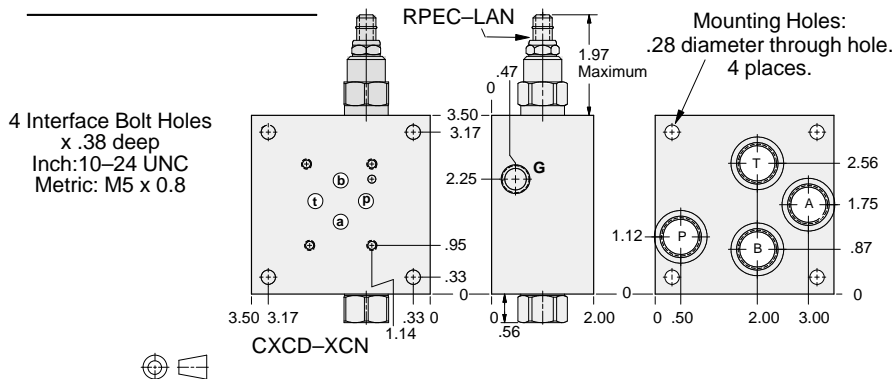
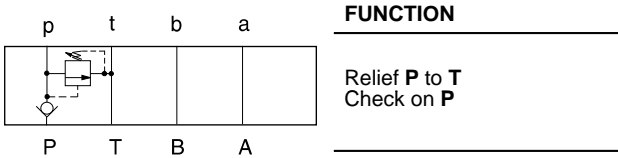
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Side Ported Subplates



Bolt Hole Interface	Gage Port	Port A,B,P,T	ALUMINUM		DUCTILE IRON	
			Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	.375 NPTF	YRCC-LAN-BB		YRCC-LAN-BB/S	
Inch	.25 NPTF	SAE-8	YRCC-LAN-BJ		YRCC-LAN-BJ/S	
Metric	.25 BSPP	.375 BSPP	YRCC-LAN-BU		YRCC-LAN-BU/S	

Rear Ported Subplates



Bolt Hole Interface	Gage Port	Port A,B,P,T	ALUMINUM		DUCTILE IRON	
			Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	.375 NPTF	YRCB-LAN-BB		YRCB-LAN-BB/S	
Inch	.25 NPTF	SAE-8	YRCB-LAN-BJ		YRCB-LAN-BJ/S	
Metric	.25 BSPP	.375 BSPP	YRCB-LAN-BU		YRCB-LAN-BU/S	

03 SUBPLATE



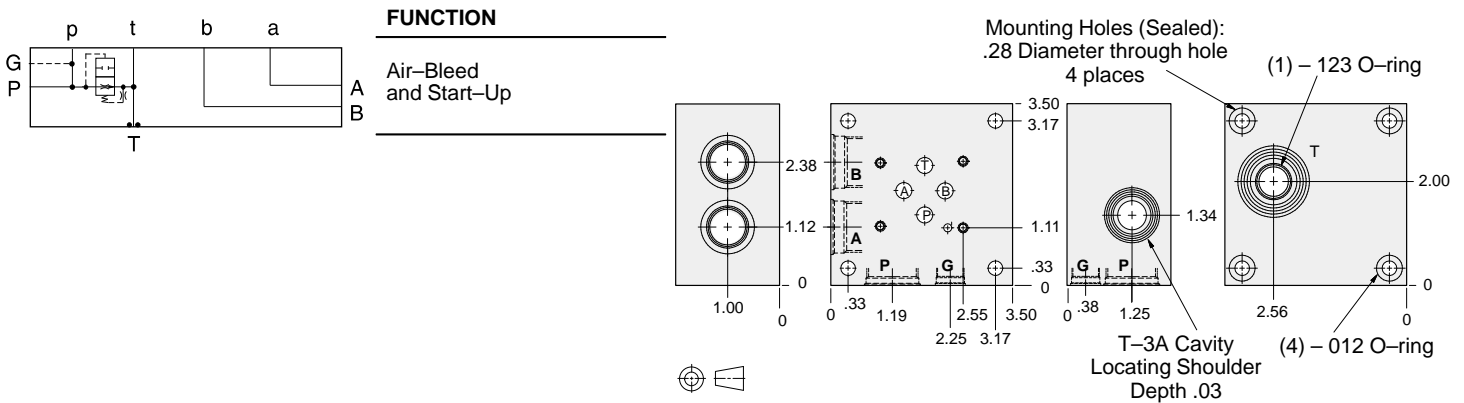
ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 SUBPLATE

Side Ported Subplates with Gasket Mount Tank Port



FUNCTION
Air-Bleed and Start-Up

Bolt Hole Interface	Ports T	Ports A,B,P	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
Inch	.375 NPTF	.375 NPTF	.25 NPTF	CTB		CTB/S	
Inch	.375 NPTF	SAE-8	.25 NPTF	CTJ		CTJ/S	
Metric	.375 BSPP	.375 BSPP	.25 BSPP	CTU		CTU/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Air Bleed and Start-up Valve		
	NQEB Page 10.16		

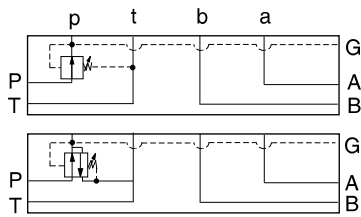


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

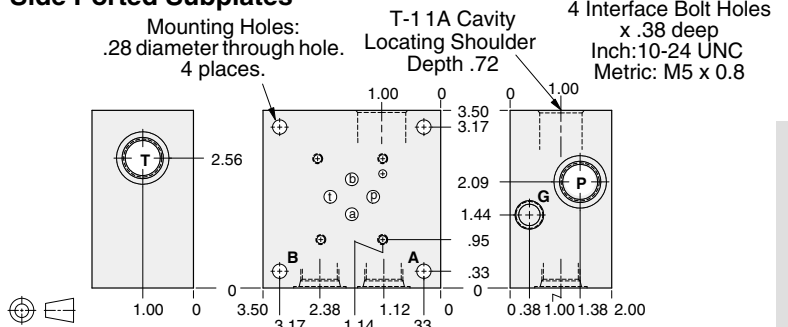
Side Ported Subplates



FUNCTION

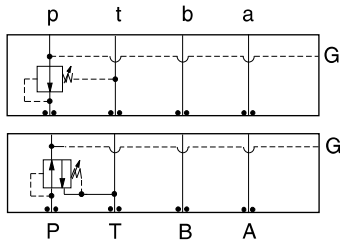
Reducing on P

Reducing/Relieving on P



Bolt Hole Interface	Gage Port	Ports A,B,P,T	ALUMINUM		DUCTILIRON	
			Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	.375 NPTF	ESB		ESB/S	
Inch	.25 NPTF	SAE-8	ESJ		ESJ/S	
Metric	.25 BSPP	.375 BSPP	ESU		ESU/S	

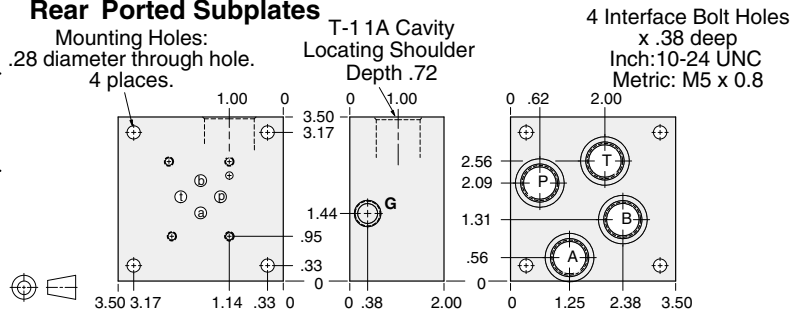
Rear Ported Subplates



FUNCTION

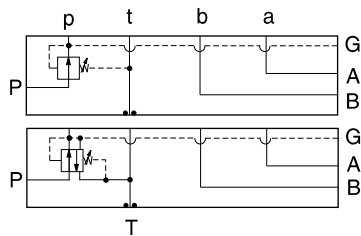
Reducing on P

Reducing/Relieving on P



Bolt Hole Interface	Gage Port	Ports A,B,P,T	ALUMINUM		DUCTILIRON	
			Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	.375 NPTF	ERB		ERB/S	
Inch	.25 NPTF	SAE-8	ERJ		ERJ/S	
Metric	.25 BSPP	.375 BSPP	ERU		ERU/S	

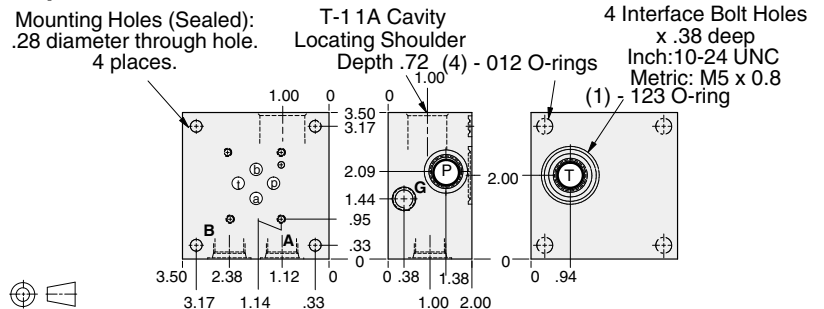
Side Ported Subplates with Gasket Mount Tank Port



FUNCTION

Reducing on P

Reducing/Relieving on P



Bolt Hole Interface	Gage Port	Ports A,B,P,T	ALUMINUM		DUCTILIRON	
			Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	.375 NPTF	ETB		ETB/S	
Inch	.25 NPTF	SAE-8	ETJ		ETJ/S	
Metric	.25 BSPP	.375 BSPP	ETU		ETU/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Reducing Valve PPD# Page 3.06		Pilot Operated Relief Valve PPD# Page 3.10
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03 SUBPLA



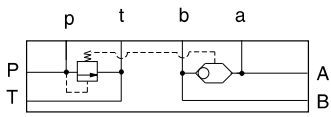
ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 SUBPLATE

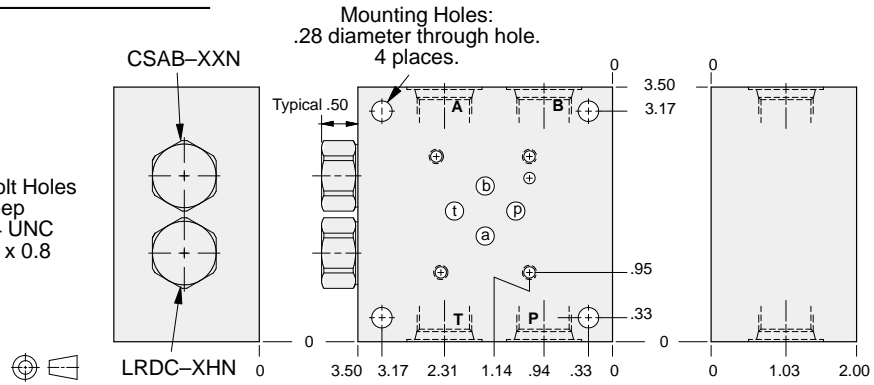
Side Ported Subplates



FUNCTION

Bypass
Compensator
for Proportional
Valves

4 Interface Bolt Holes
x .38 deep
Inch: 10-24 UNC
Metric: M5 x 0.8



Bolt Hole Interface	Port A,B,P,T	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
Inch	.375 NPTF	YFCL-XHN-BB		YFCL-XHN-BB/S	
Inch	SAE-8	YFCL-XHN-BJ		YFCL-XHN-BJ/S	
Metric	.375 BSPP	YFCL-XHN-BU		YFCL-XHN-BU/S	



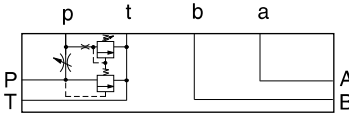
ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

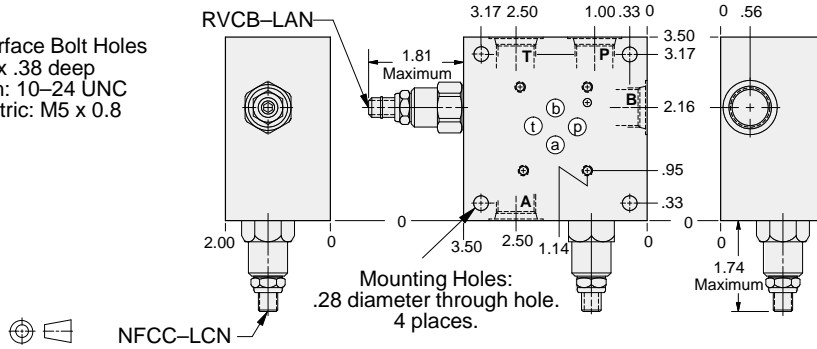
Side Ported Subplates

FUNCTION



Relief P to T
and Bypass
Flow Regulator

4 Interface Bolt Holes
x .38 deep
Inch: 10-24 UNC
Metric: M5 x 0.8



Bolt Hole Interface	Port A,B,P,T	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
Inch	.375 NPTF	YFCS-LCN-BB		YFCS-LCN-BB/S	
Inch	SAE-8	YFCS-LCN-BJ		YFCS-LCN-BJ/S	
Metric	.375 BSPP	YFCS-LCN-BU/M		YFCS-LCN-BU/T	

03 SUBPLATE



ISO 03 SANDWICH BODIES

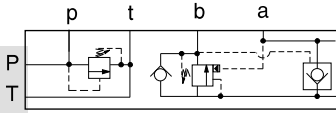


- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Side Ported Subplates

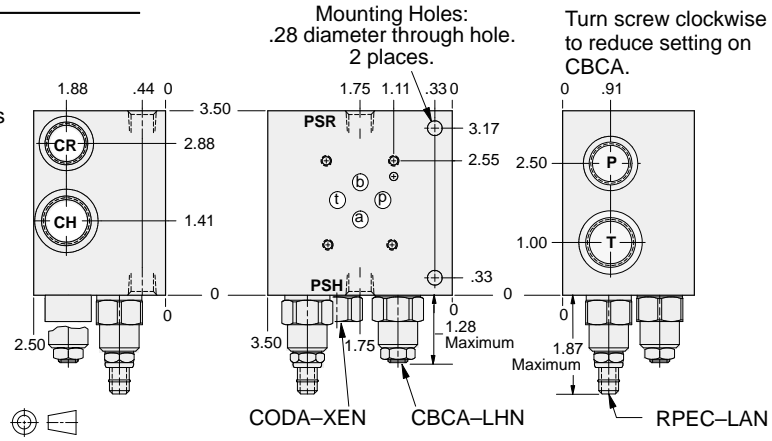
03 SUBPLATE

FUNCTION



A Relief P to T
Regenerative
B to A

4 Interface Bolt Holes
x .38 deep
Inch: 10-24 UNC
Metric: M5 x 0.8



Bolt Holes Interface	Ports T, CH	Ports P, CR	Ports PSH, PSR	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
Inch	.50 NPTF	.375 NPTF	.25 NPTF	YDCG-LHN-BC		YDCG-LHN-BC/S	
Inch	SAE-10	SAE-8	.25 NPTF	YDCG-LHN-BK		YDCG-LHN-BK/S	
Metric	.50 BSPP	.375 BSPP	.25 BSPP	YDCG-LHN-BV		YDCG-LHN-BV/S	

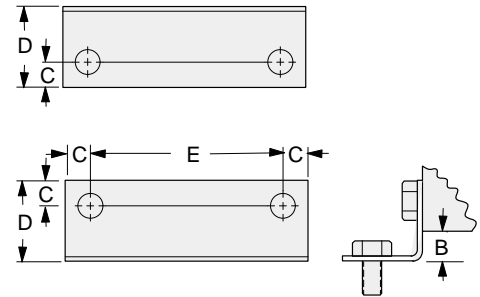


BAR MANIFOLDS



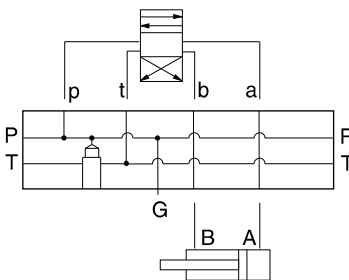
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Some of the bar manifolds offered in this catalogue are manufactured by Daman Products Company, Inc. All bar manifolds are parallel circuit type and contain a cavity for a Sun relief valve, pressure to tank, as well as a gauge port. Mounting kits for all bar manifolds must be ordered separately and contain brackets, bolts and washers. Metric mounting kits are also available.



Manifold Interface	Thread Size	Mounting Bracket Dimensions				Bracket	Bolts	Washer	Model Code
		B	C	D	E				
ISO 03	.312-18UNC x .62 lg.	.37	.31	1.0	2.38	700-020	300-005-001	Washer Head	991-021-001
ISO 03	M8 x 1.25 x 16,0 mm lg.	.37	.31	1.0	2.38	700-020	300-006-001	450-002-001	991-021-002
ISO 05	.312-18UNC x .62 lg.	.37	.31	1.0	2.38	700-020	300-005-001	Washer Head	991-021-003
ISO 05	M8 x 1.25 x 16,0 mm lg.	.37	.31	1.0	2.38	700-020	300-006-001	450-002-001	991-021-004
ISO 05 y	.375-16UNC x .75 lg.	.60	.44	1.38	4.13	700-021	300-005-002	450-001-002	991-021-005
ISO 05 y	M10 x 1.5 x 20,0 mm lg.	.60	.44	1.38	4.13	700-021	300-006-002	450-002-002	991-021-006
ISO 07	.375-16UNC x .75 lg.	.60	.44	1.38	4.13	700-021	300-005-002	450-001-002	991-021-007
ISO 07	M10 x 1.5 x 20,0 mm lg.	.60	.44	1.38	4.13	700-021	300-006-002	450-002-002	991-021-008
ISO 08	.500-13UNC x 1.0 lg.	.60	.44	1.63	4.13	700-022	300-005-003	450-001-003	991-021-009
ISO 08	M12 x 1.75 x 25,0 mm lg.	.60	.44	1.63	4.13	700-022	300-006-003	450-002-003	991-021-010

BAR MANIFOLD

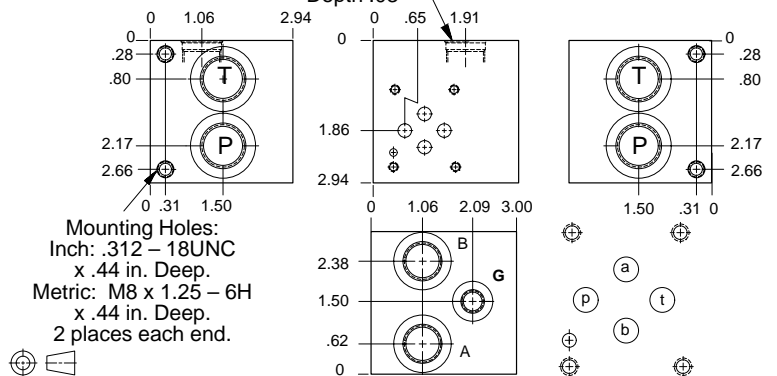


FUNCTION

One Station

ISO 03 Parallel Circuit with Relief Cavity

T-10A Cavity
Locating Shoulder
Depth .03



Mounting Holes	Ports P, T	Ports A, B	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
inch	.50 NPTF	.375 NPTF	.25 NPTF	VSA		VSA/S	
inch	SAE-10	SAE-8	SAE-4	VSL		VSL/S	
metric	.50 BSPP	.375 BSPP	.25 BSPP	VPA		VPAS	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Relief Valve		Direct Acting Relief Valve
	RPEC Page 1.06		RDDA Page 1.10
OTHER VALVES:			



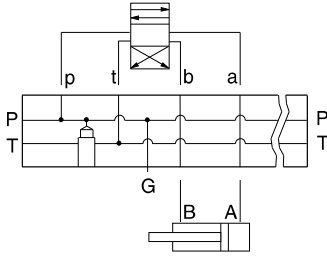
BAR MANIFOLDS



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

BAR MANIFOLD

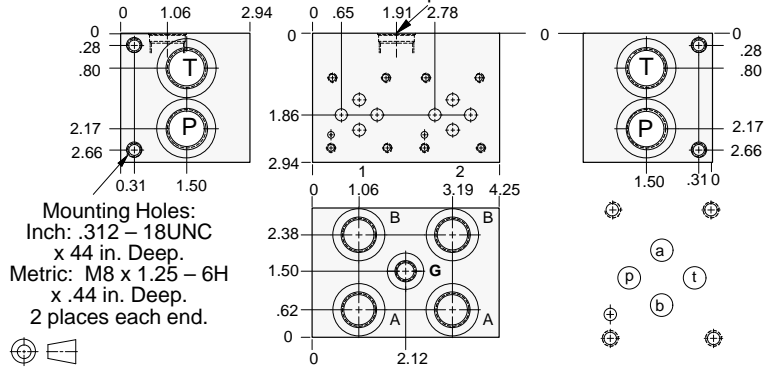
ISO 03 Parallel Circuit with Relief Cavity



FUNCTION

Two Station

T-10A Cavity
Locating Shoulder
Depth .03

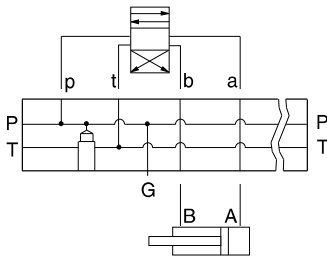


Mounting Holes:
Inch: .312 - 18UNC
x .44 in. Deep.
Metric: M8 x 1.25 - 6H
x .44 in. Deep.
2 places each end.

Mounting Holes	Ports P, T	Ports A, B	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
inch	.50 NPTF	.375 NPTF	.25 NPTF	VSB		VSB/S	
inch	SAE-10	SAE-8	SAE-4	VSM		VSM/S	
metric	.50 BSPP	.375 BSPP	.25 BSPP	VPB		VPB/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

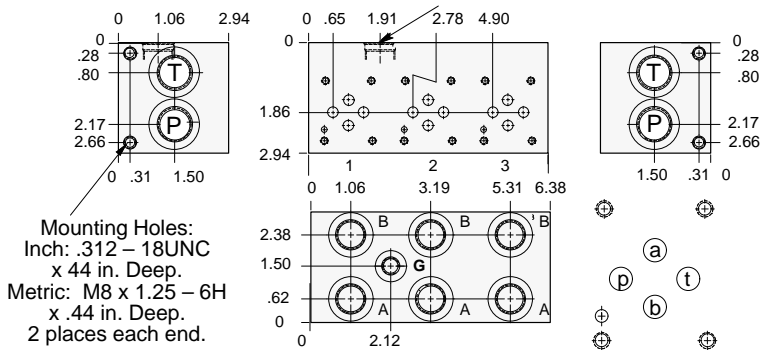
ISO 03 Parallel Circuit with Relief Cavity



FUNCTION

Three Station

T-10A Cavity
Locating Shoulder
Depth .03



Mounting Holes:
Inch: .312 - 18UNC
x .44 in. Deep.
Metric: M8 x 1.25 - 6H
x .44 in. Deep.
2 places each end.

Mounting Holes	Ports P, T	Ports A, B	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
inch	.50 NPTF	.375 NPTF	.25 NPTF	VSC		VSC/S	
inch	SAE-10	SAE-8	SAE-4	VSN		VSN/S	
metric	.50 BSPP	.375 BSPP	.25 BSPP	VPC		VPC/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Direct Acting Relief Valve
	RPEC Page 1.06		RDDA Page 1.10
OTHER VALVES:			

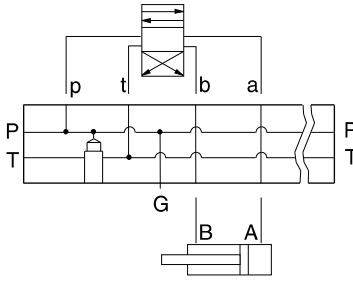


BAR MANIFOLDS



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

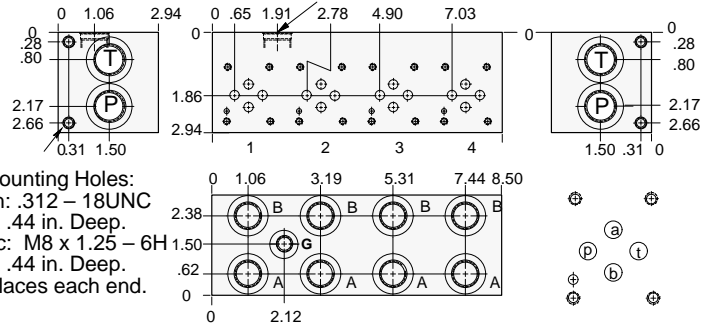
ISO 03 Parallel Circuit with Relief Cavity



FUNCTION

Four Station

T-10A Cavity
Locating Shoulder
Depth .03



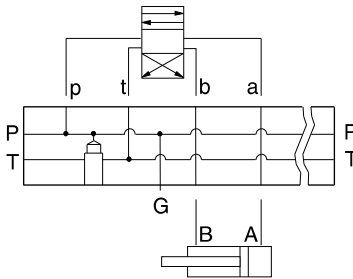
Mounting Holes:
Inch: .312 – 18UNC
x .44 in. Deep.
Metric: M8 x 1.25 – 6H
x .44 in. Deep.
2 places each end.



Mounting Holes	Ports P, T	Ports A, B	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
inch	.50 NPTF	.375 NPTF	.25 NPTF	VSD		VSD/S	
inch	SAE-10	SAE-8	SAE-4	VSP		VSP/S	
metric	.50 BSPP	.375 BSPP	.25 BSPP	VPD		VPD/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

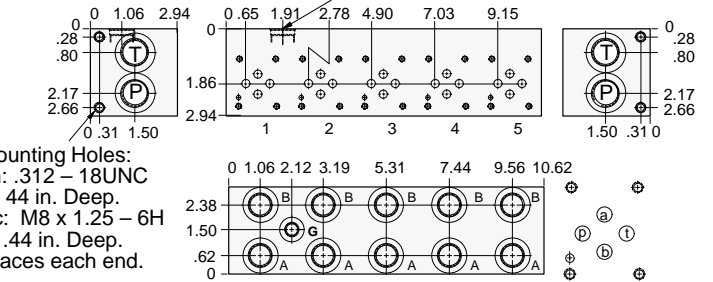
ISO 03 Parallel Circuit with Relief Cavity



FUNCTION

Five Station

T-10A Cavity
Locating Shoulder
Depth .03



Mounting Holes:
Inch: .312 – 18UNC
x .44 in. Deep.
Metric: M8 x 1.25 – 6H
x .44 in. Deep.
2 places each end.



Mounting Holes	Ports P, T	Ports A, B	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
inch	.50 NPTF	.375 NPTF	.25 NPTF	VSE		VSE/S	
inch	SAE-10	SAE-8	SAE-4	VSR		VSR/S	
metric	.50 BSPP	.375 BSPP	.25 BSPP	VPE		VPE/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Direct Acting Relief Valve
	RPEC Page 1.06		RDDA Page 1.10
OTHER VALVES:			

BAR MANIFOLD

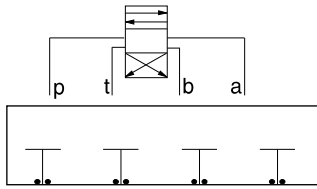


ISO 03 SANDWICH BODIES



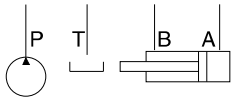
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 COVER PLATE



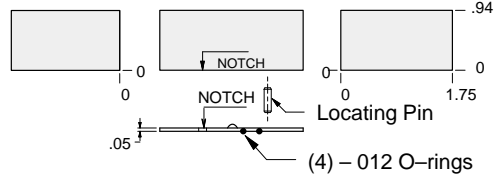
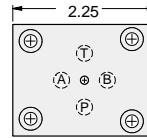
FUNCTION

All Ports Blocked

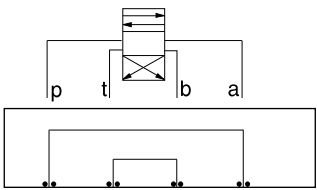


Cover Plates

Mounting Holes:
 .20 diameter through hole.
 Counterbore .36 diameter
 x .50 deep.
 4 places.

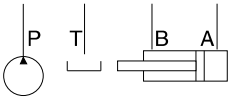


ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
ZJR		ZJR/S	



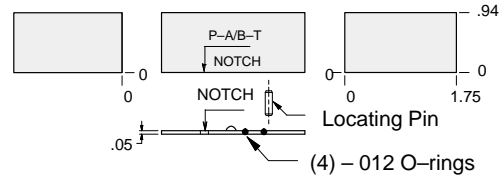
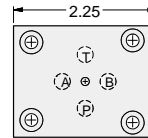
FUNCTION

P to A and
B to T

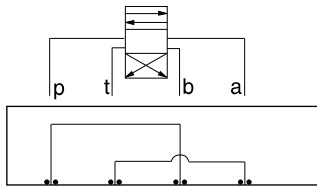


Cover Plates

Mounting Holes:
 .20 diameter through hole.
 Counterbore .36 diameter
 x .50 deep.
 4 places.

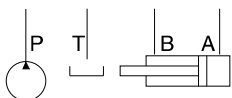


ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
ZJS		ZJS/S	



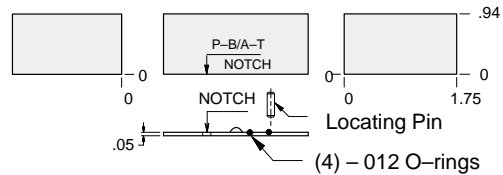
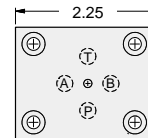
FUNCTION

P to B and
A to T



Cover Plates

Mounting Holes:
 .20 diameter through hole.
 Counterbore .36 diameter
 x .50 deep.
 4 places.



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
ZJT		ZJT/S	

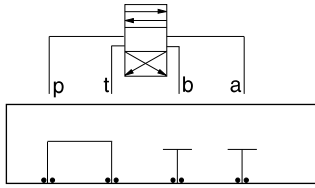


ISO 03 SANDWICH BODIES



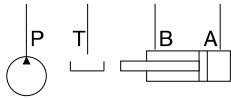
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 COVER PLATE



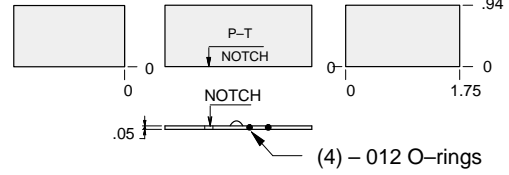
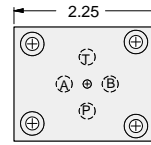
FUNCTION

P to T
A and B blocked

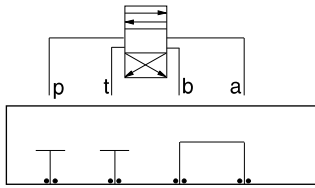


Cover Plates

Mounting Holes:
.20 diameter through hole.
Counterbore .36 diameter
x .50 deep.
4 places.

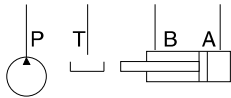


ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
ZJV		ZJVS	



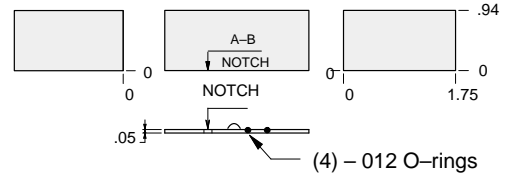
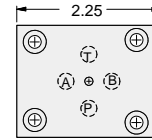
FUNCTION

A to B
P and T blocked

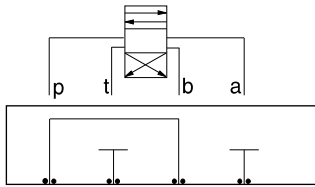


Cover Plates

Mounting Holes:
.20 diameter through hole.
Counterbore .36 diameter
x .50 deep.
4 places.

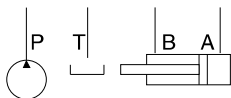


ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
ZJW		ZJWS	



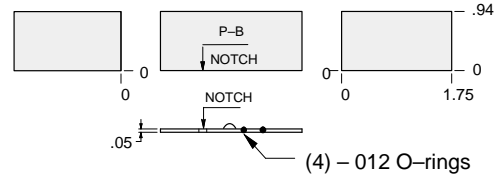
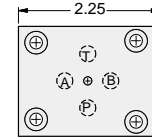
FUNCTION

P to B
A and T blocked



Cover Plates

Mounting Holes:
.20 diameter through hole.
Counterbore .36 diameter
x .50 deep
4 places



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
ZWE		ZWE/S	

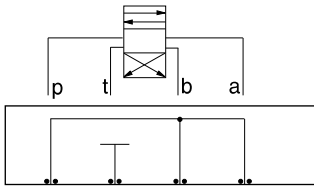


ISO 03 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 COVER PLATE

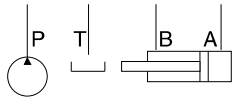
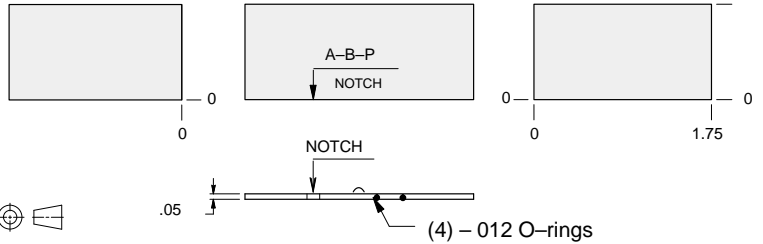
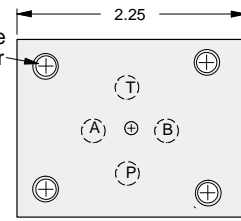


FUNCTION

P to A and B
T blocked

Cover Plates

Mounting Holes:
.20 Diameter through hole
Counterbore .36 diameter
x .50 deep
4 places.



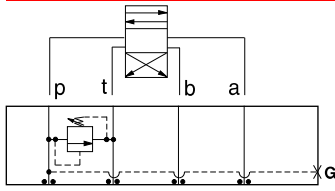
ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
WJG		WJG/S	



ISO 05 SANDWICH BODIES



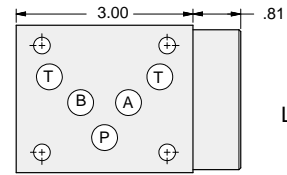
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



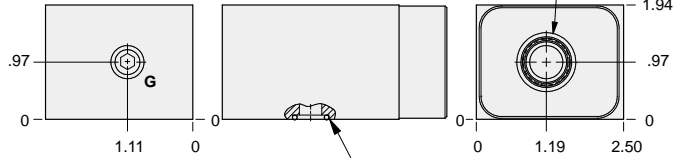
FUNCTION

P to T

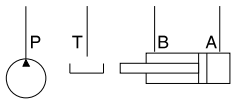
Relief Valves



T-10A Cavity Locating Shoulder Depth .03

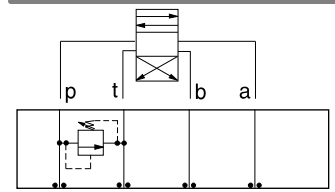


(5) - 014 O-rings



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CBE		CBE/S	
.25 BSPP	CBE/M		CBE/T	

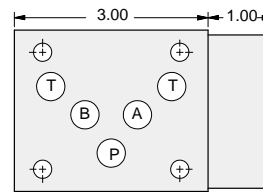
05 RELIEF



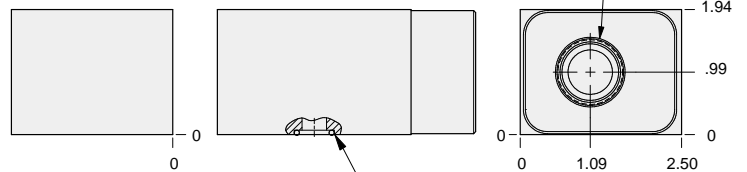
FUNCTION

P to T
(High Capacity)

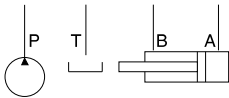
Relief Valves



T-3A Cavity Locating Shoulder Depth .03



(5) - 014 O-rings



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CBP		CBP/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

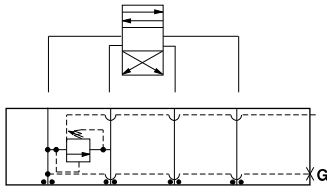
	Pilot Operated Relief Valve		Pilot Operated "Kick-Down" Relief Valve
	RP*C Page 1.06		RQ*B Page 1.12
	Pilot Operated, Rapid Response Relief Valve		Air Controlled, Pilot Operated Relief Valve
	RP*E Page 1.08		RPGD Page 1.14 (use with CBP)
	Direct Acting Relief Valve		
	RD*A Page 1.10		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



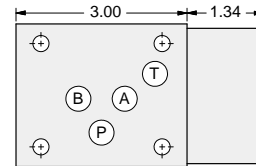
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



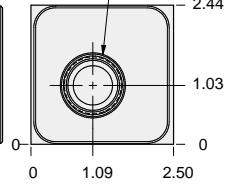
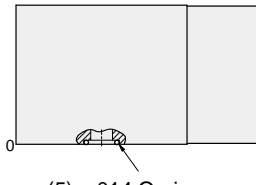
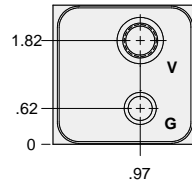
FUNCTION

P to T
Externally Vented

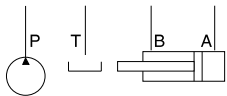
Relief Valves



T-2A Cavity
Locating Shoulder
Depth .72



(5) - 014 O-rings



Gage Port (Plugged)	Vent Port	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
.25 NPTF	SAE-6	BBC		BBC/S	
.25 BSPP	.25 BSPP	BBC/M		BBC/T	

05 RELIEF

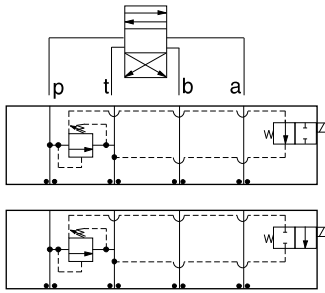
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Vented Relief Valve		
	RVEA Page 1.18		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

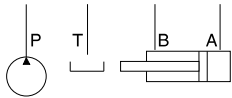
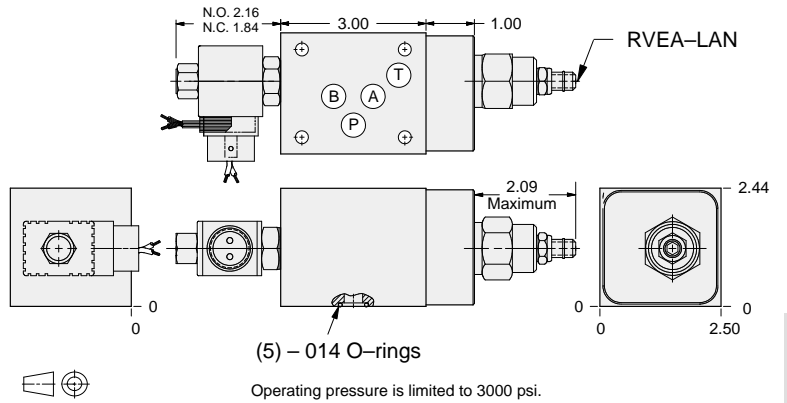


FUNCTION

P to T
N.O. Solenoid
Vented *

P to T
N.C. Solenoid
Vented *

Relief Valves



Solenoid Type	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
N.O.	YREO-LAN-*A		YREO-LAN-*A/S	
N.C.	YREP-LAN-*A		YREP-LAN-*A/S	

* Select solenoid connection/voltage option from page 14.16 and add option price to List Price.

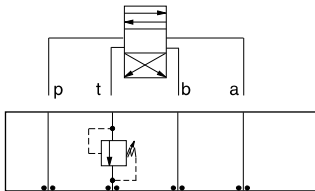


ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

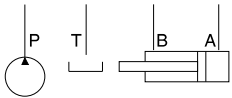
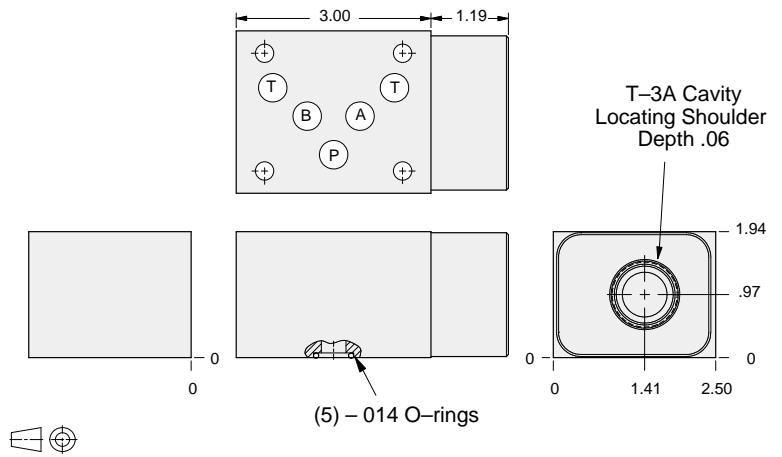
05 RELIEF



FUNCTION

Out of T
(High Capacity)

Relief Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CBT		CBT/S	

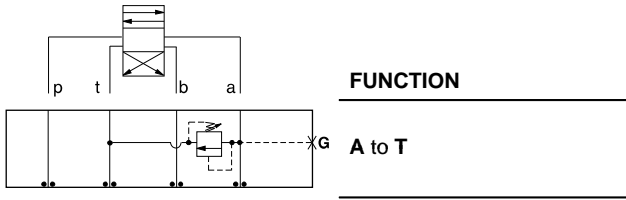
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Relief Valve		Pilot Operated "Kick-Down" Relief Valve
	RPGC Page 1.06		RQGB Page 1.12
	Pilot Operated, Rapid Response Relief Valve		Air Controlled, Pilot Operated Relief Valve
	RPGE Page 1.08		RPGD Page 1.14
	Direct Acting Relief Valve		
	RDFA Page 1.10		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



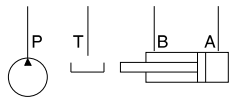
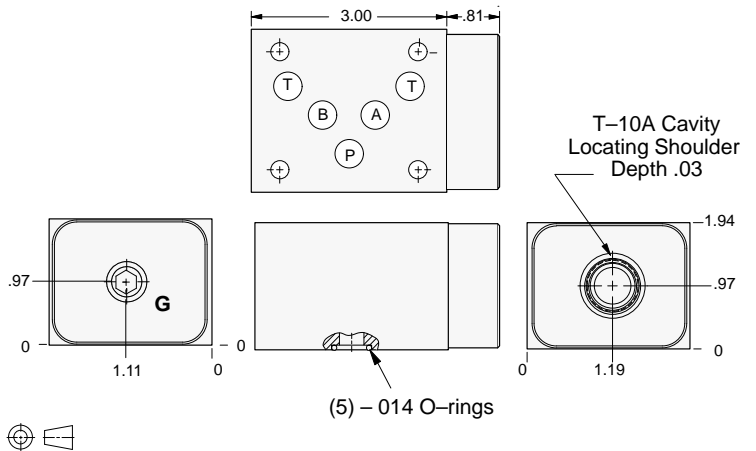
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

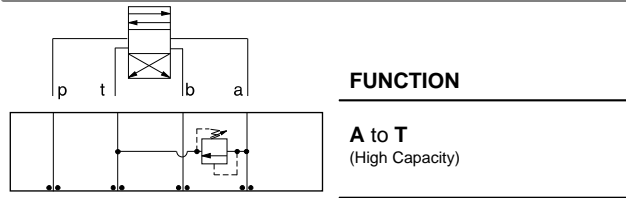
A to T

Relief Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CBF		CBF/S	
.25 BSPP	CBF/M		CBF/T	

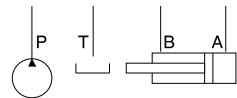
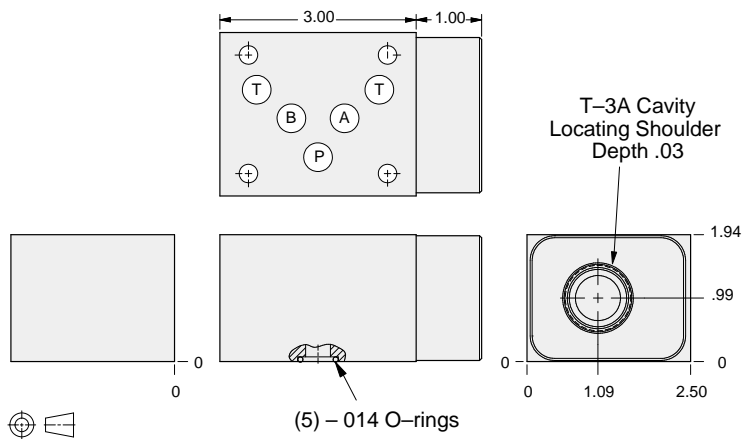
05 RELIEF



FUNCTION

A to T
(High Capacity)

Relief Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CBA		CBA/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

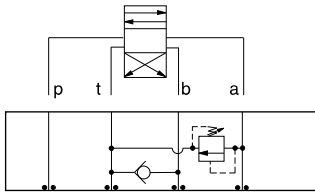
	Pilot Operated Relief Valve RP*C Page 1.06		Pilot Operated "Kick-Down" Relief Valve RQ*B Page 1.12
	Pilot Operated, Rapid Response Relief Valve RP*E Page 1.08		Air Controlled, Pilot Operated Relief Valve RPGD Page 1.14 (use with CBA)
	Direct Acting Relief Valve RD*A Page 1.10		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



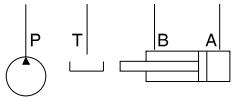
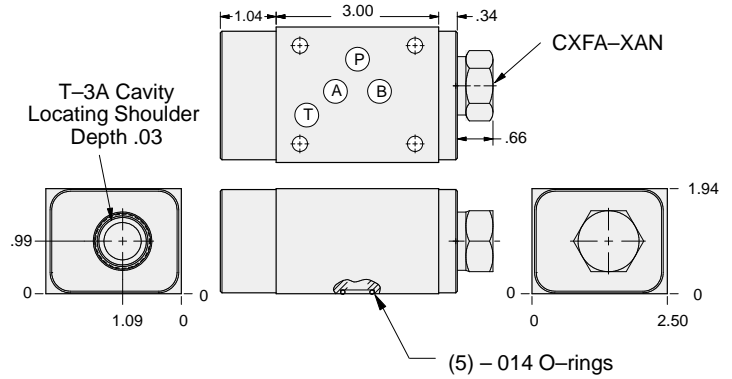
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

A to T
FF Check T to B

Relief Valves



ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
CB2		CB2/S	

05 RELIEF

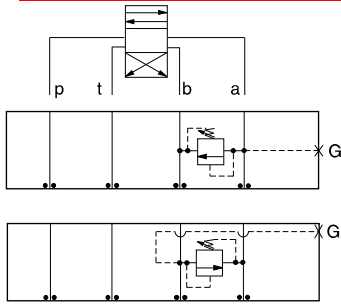
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	<i>Pilot Operated Relief Valve</i>		<i>Pilot Operated "Kick-Down" Relief Valve</i>
	RPGC Page 1.06		RQGB Page 1.12
	<i>Pilot Operated, Rapid Response Relief Valve</i>		<i>Air Controlled, Pilot Operated Relief Valve</i>
	RPGE Page 1.08		RPGD Page 1.14
	<i>Direct Acting Relief Valve</i>		
	RDFA Page 1.10		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

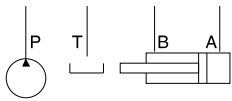
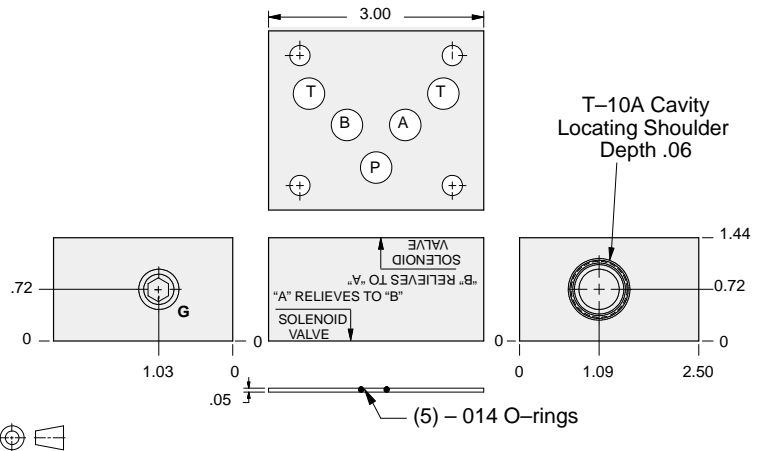


FUNCTION

A to B

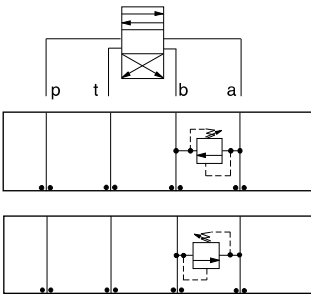
B to A

Relief Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CBH		CBH/S	
.25 BSPP	CBH/M		CBH/T	

05 RELIEF

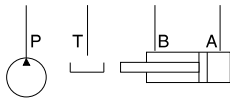
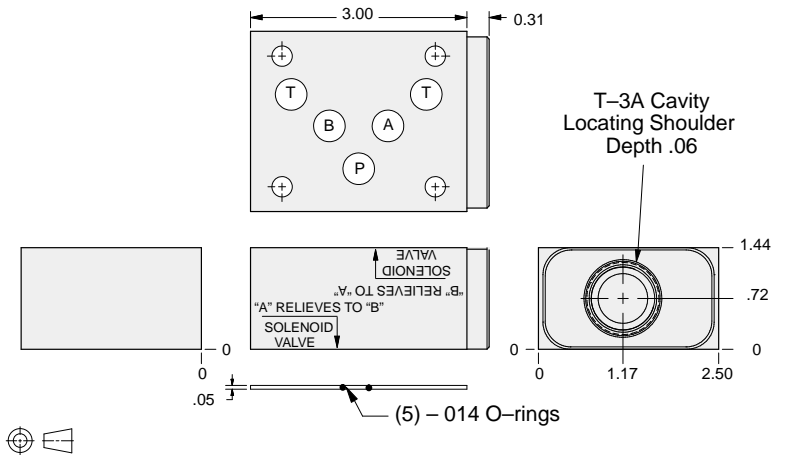


FUNCTION

A to B
(High Capacity)

B to A
(High Capacity)

Relief Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CBC		CBC/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

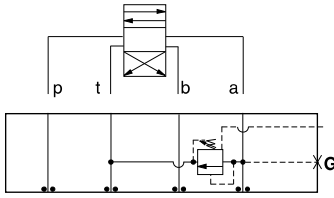
	Pilot Operated Relief Valve		Pilot Operated "Kick-Down" Relief Valve
	RP*C Page 1.06		RQ*B Page 1.12
	Pilot Operated, Rapid Response Relief Valve		Air Controlled, Pilot Operated Relief Valve
	RP*E Page 1.08		RPGD Page 1.14 (use with CBC)
	Direct Acting Relief Valve		
	RD*A Page 1.10		



ISO 05 SANDWICH BODIES



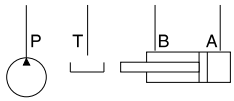
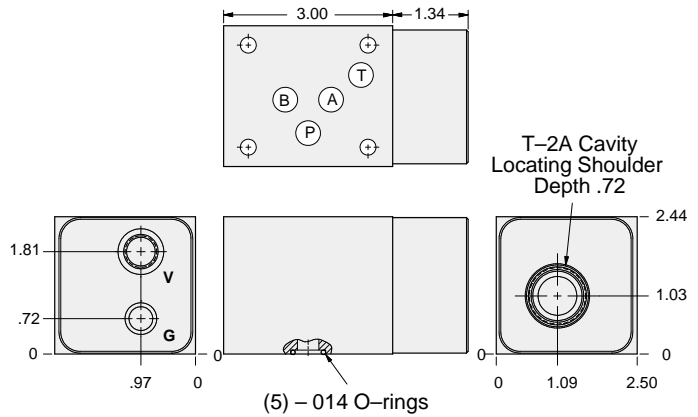
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

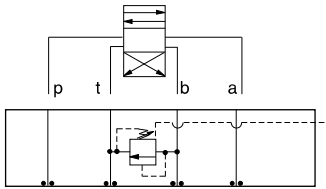
A to T
Externally Vented

Relief Valves



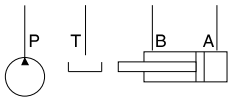
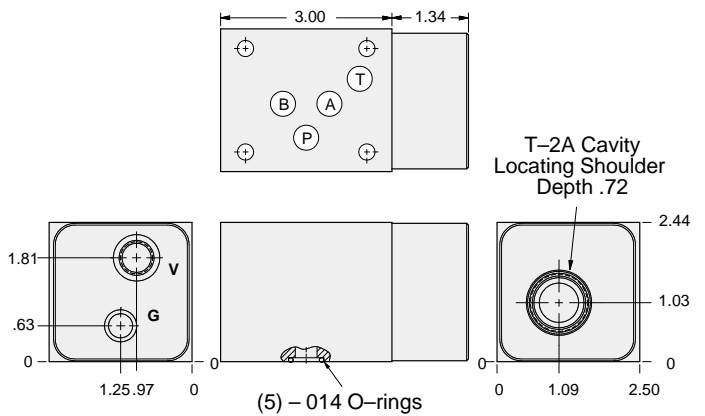
Gage Port (Plugged)	Vent Port	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
.25 NPTF	SAE-6	BBD		BBD/S	
.25 BSPP	.25 BSPP	BBD/M		BBD/T	

Relief Valves



FUNCTION

B to T
Externally Vented



Gage Port (Plugged)	Vent Port	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Part Number	List Price
.25 NPTF	SAE-6	BBE		BBE/S	
.25 BSPP	.25 BSPP	BBE/M		BBE/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Vented Relief Valve		
	RVEA Page 1.18		
OTHER VALVES:			

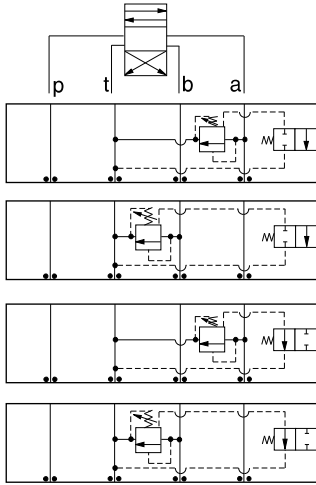


ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Relief Valves



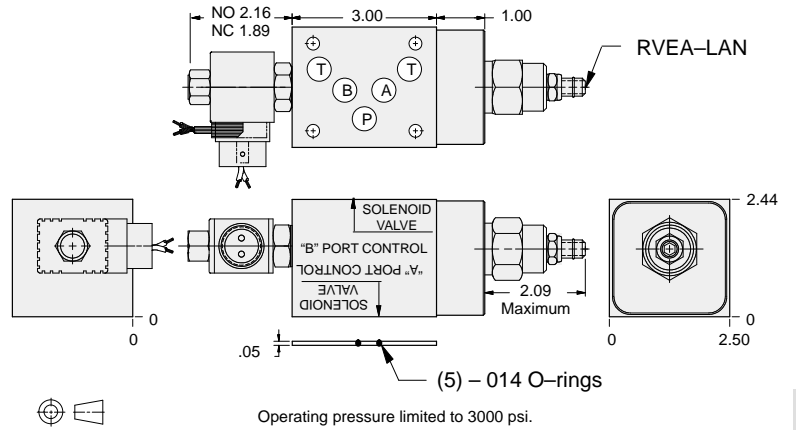
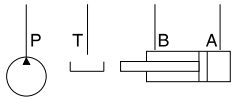
FUNCTION

A to T
N.C. Solenoid
Vented

B to T
N.C. Solenoid Vented

A to T
N.O. Solenoid
Vented

B to T
N.O. Solenoid Vented



Solenoid Type	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
N.C.	YRET-LAN-*A		YRET-LAN-*A/S	
N.O.	YREU-LAN-*A		YREU-LAN-*A/S	

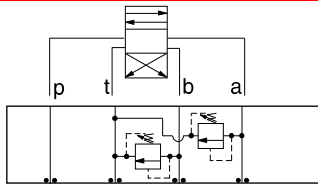
* Select solenoid connection/voltage option from page 14.16 and add option price to List Price.



ISO 05 SANDWICH BODIES



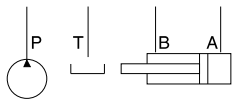
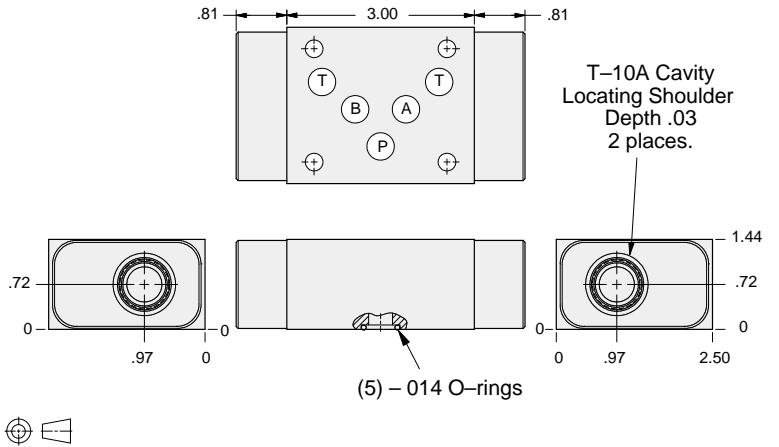
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

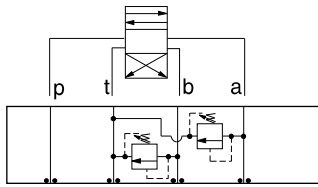
A and B to T

Relief Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CBD		CBD/S	

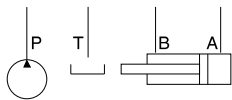
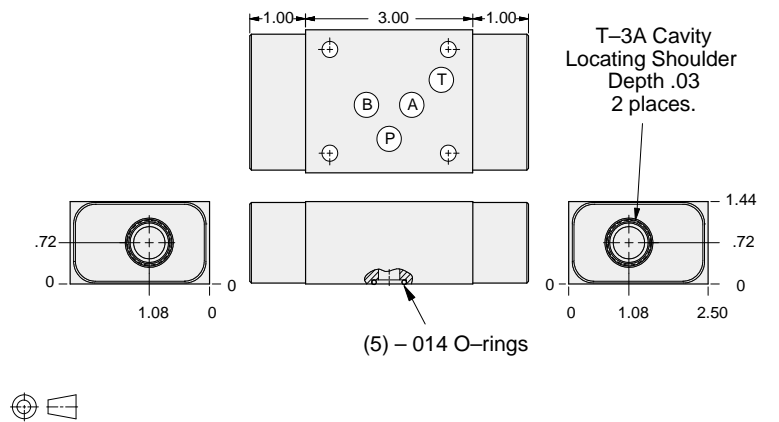
05 RELIEF



FUNCTION

A and B to T
(High Capacity)

Relief Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CBX		CBX/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	<i>Pilot Operated Relief Valve</i> RP*C Page 1.06		<i>Pilot Operated "Kick-Down" Relief Valve</i> RQ*B Page 1.12
	<i>Pilot Operated, Rapid Response Relief Valve</i> RP*E Page 1.08		<i>Air Controlled, Pilot Operated Relief Valve</i> RPGD Page 1.14 (use with CBX)
	<i>Direct Acting Relief Valve</i> RD*A Page 1.10		

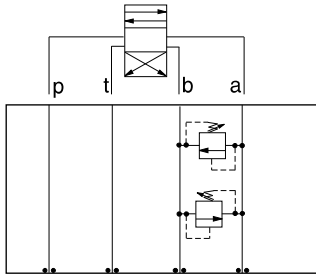


ISO 05 SANDWICH BODIES



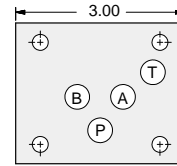
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Relief Valves

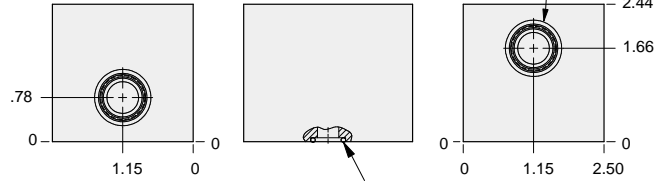


FUNCTION

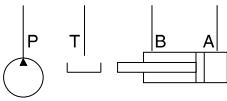
**A to B and
B to A**
(Cross-Port)



T-10A Cavity
Locating Shoulder
Depth .06
2 places.

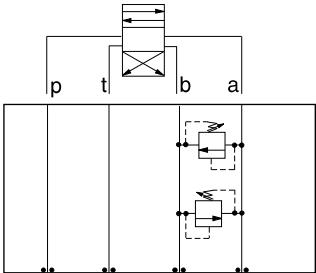


(5) - 014 O-rings



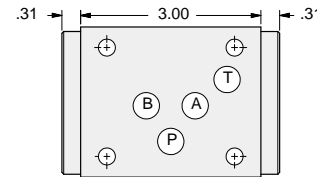
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CBI		CBIS	

Relief Valves

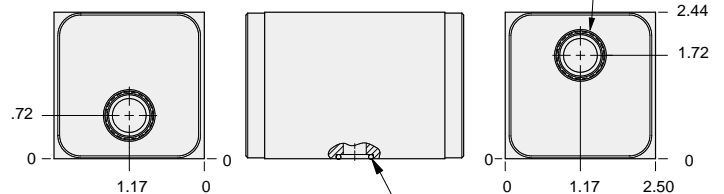


FUNCTION

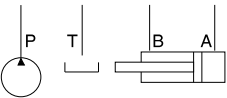
**A to B and
B to A**
(High Capacity)
(Cross-Port)



T-3A Cavity
Locating Shoulder
Depth .06
2 places.



(5) - 014 O-rings



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CBY		CBYS	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Pilot Operated "Kick-Down" Relief Valve
	RP*C Page 1.06		RQ*B Page 1.12
	Pilot Operated, Rapid Response Relief Valve		Air Controlled, Pilot Operated Relief Valve
	RP*E Page 1.08		RPGD Page 1.14 (use with CBY)
	Direct Acting Relief Valve		
	RD*A Page 1.10		

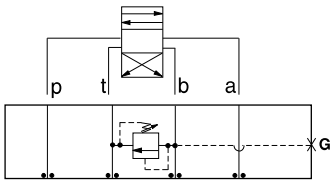
05 RELIEF



ISO 05 SANDWICH BODIES



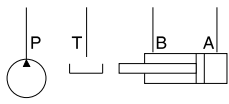
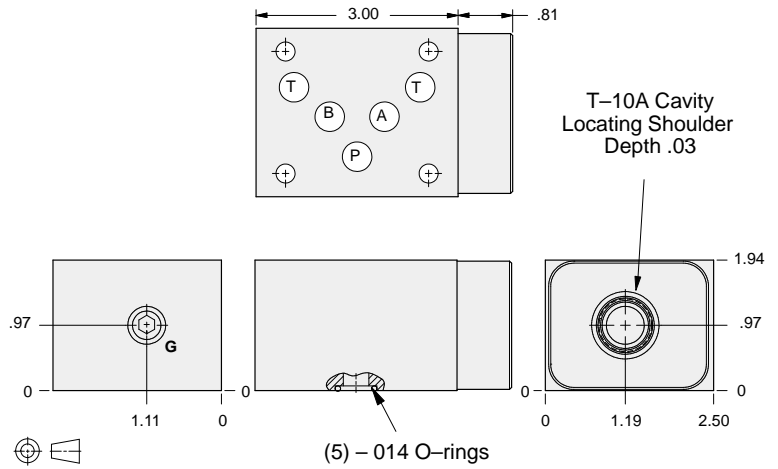
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

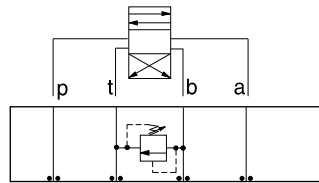
B to T

Relief Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CBG		CBG/S	
.25 BSPP	CBG/M		CBG/T	

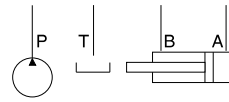
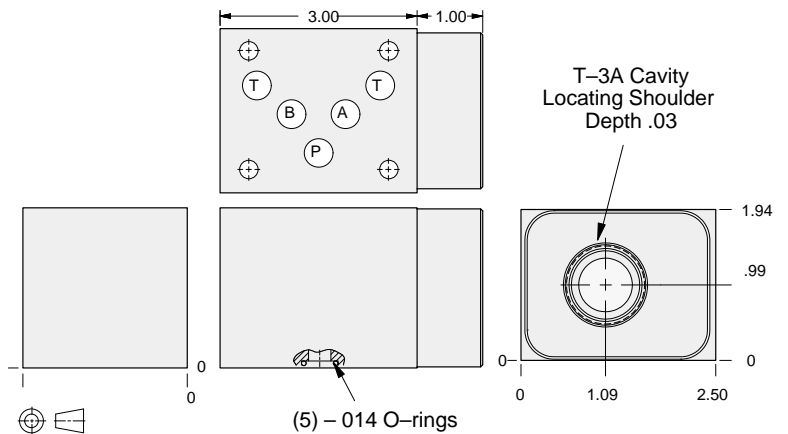
05 RELIEF



FUNCTION

B to T
(High Capacity)

Relief Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CBB		CBB/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	<i>Pilot Operated Relief Valve</i>		<i>Pilot Operated "Kick-Down" Relief Valve</i>
	RP*C Page 1.06		RQ*B Page 1.12
	<i>Pilot Operated, Rapid Response Relief Valve</i>		<i>Air Controlled, Pilot Operated Relief Valve</i>
	RP*E Page 1.08		RP*D Page 1.14 (use with CBB)
	<i>Direct Acting Relief Valve</i>		
	RD*A Page 1.10		

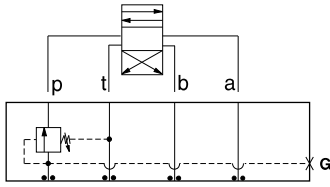


ISO 05 SANDWICH BODIES



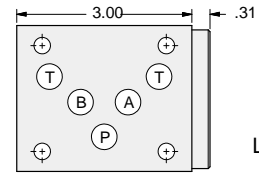
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Sequence Valves

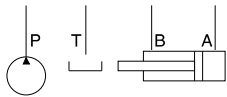
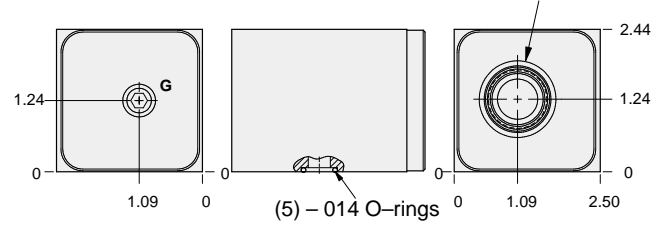


FUNCTION

In to P



T-2A Cavity
Locating Shoulder
Depth .75



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BBW		BBW/S	
.25 BSPP	BBW/M		BBW/T	

05 SEQUENCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	<i>Pilot Operated Sequence Valve</i>		
	RSFC Page 2.06		
	<i>Pilot Operated "Kick-Down" Sequence Valve</i>		
	SQFB Page 2.08		
	<i>Air Controlled, Pilot Operated Sequence Valve</i>		
	RSFE Page 2.10		
OTHER VALVES:	SCEA		

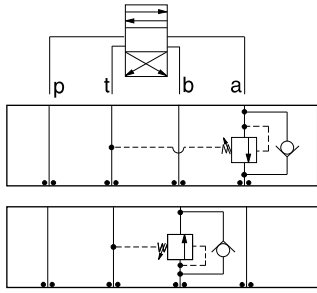


ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

05 SEQUENCE

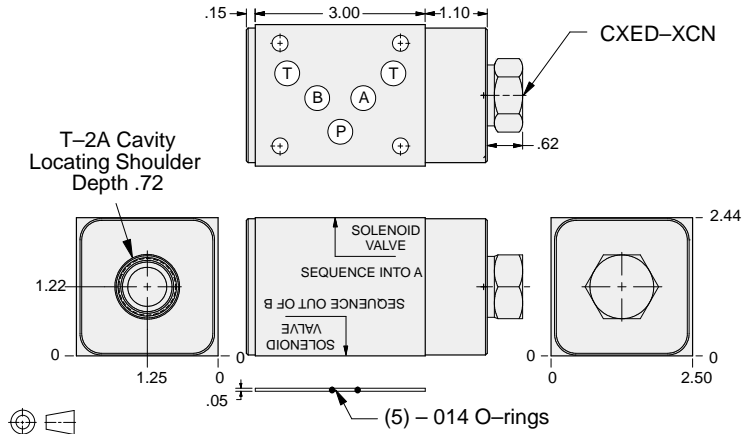


FUNCTION

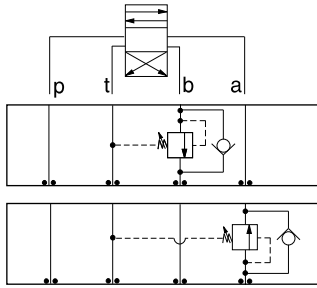
In to A
Reverse FF Check

Out of B
Reverse FF Check

Sequence Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BB4		BB4/S	

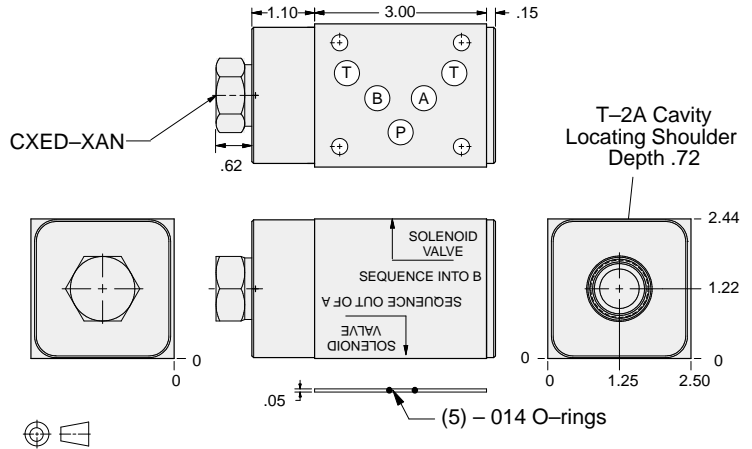


FUNCTION

In to B
Reverse FF Check

Out of A
Reverse FF Check

Sequence Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BB5		BB5/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

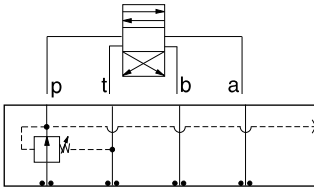
	<i>Pilot Operated Sequence Valve</i>		
	RSFC Page 2.06		
	<i>Pilot Operated "Kick-Down" Sequence Valve</i>		
	SQFB Page 2.08		
	<i>Air Controlled, Pilot Operated Sequence Valve</i>		
	RSFE Page 2.10		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



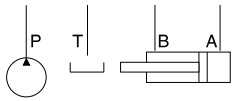
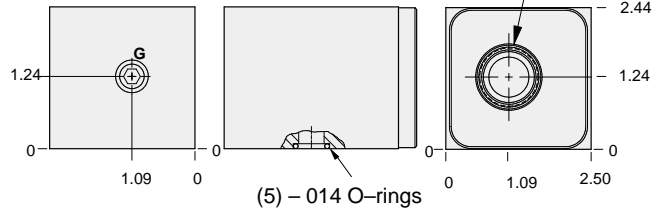
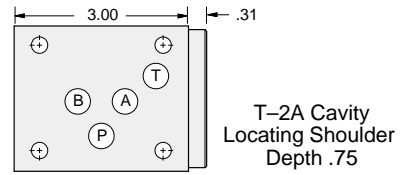
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

G On P
Drained to T

Reducing Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BBP		BBP/S	
.25 BSPP	BBP/M		BBP/T	

05 REDUCING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

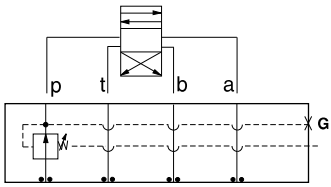
	<i>Pilot Operated Reducing Valve</i>		
	PBFB Page 3.06		
	<i>Air Controlled, Pilot Operated Reducing Valve</i>		
	PBFC Page 3.08		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



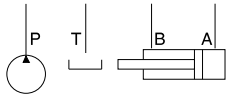
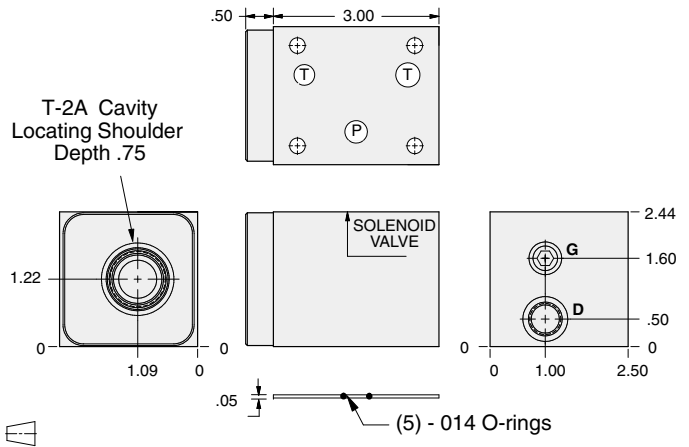
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On P
Drained Externally

Reducing Valves



Gage Port (Plugged)	Drain Port	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
.25 NPTF	SAE-6	BBQ		BBQ/S	
.25 BSPP	.25 BSPP	BBQ/M		BBQ/T	

05 REDUCING

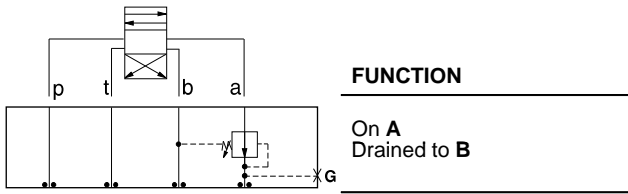
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing Valve		
	PBFB Page 3.06		
	Air Controlled, Pilot Operated Reducing Valve		
	PBFC Page 3.08		
OTHER VALVES:			



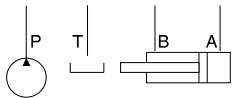
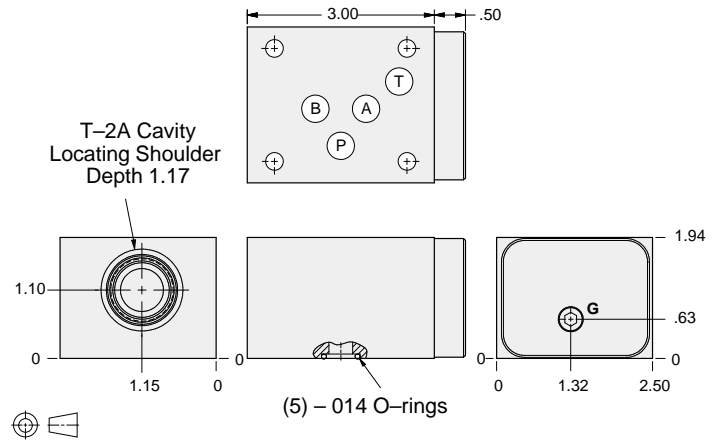
ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



Reducing Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BBA		BBA/S	
.25 BSPP	BBA/M		BBA/T	

05 REDUCING

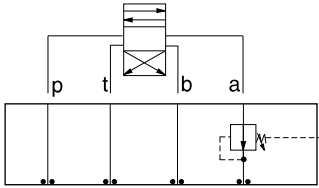
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing Valve		
	PBFB Page 3.06		
	Air Controlled, Pilot Operated Reducing Valve		
	PBFC Page 3.08		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



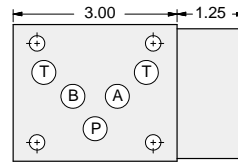
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



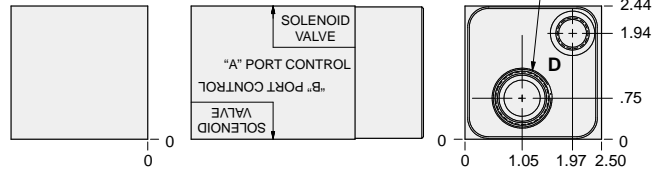
FUNCTION

On **A**
Drained Externally

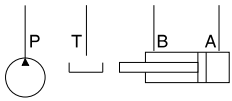
Reducing Valves



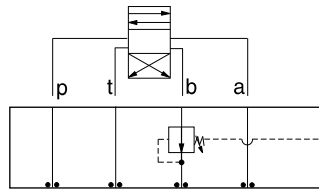
T-2A Cavity
Locating Shoulder
Depth .72



.05 ±
(5) - O14 O-rings



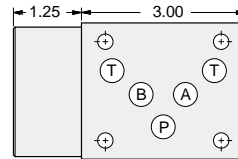
Drain Port	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
SAE-6	BBF		BBF/S	
.25 BSPP	BBF/M		BBF/T	



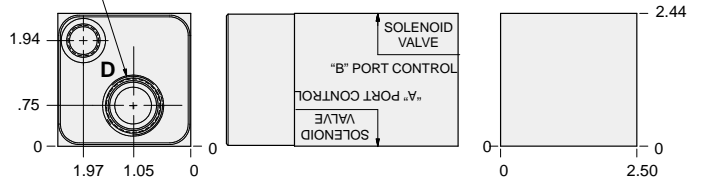
FUNCTION

On **B**
Drained Externally

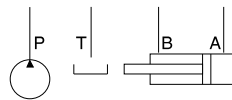
Reducing Valves



T-2A Cavity
Locating Shoulder
Depth .72



.05 ±
(5) - O14 O-rings



Drain Port	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
SAE-6	BBG		BBG/S	
.25 BSPP	BBG/M		BBG/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

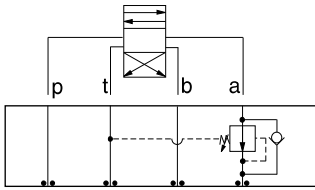
	<i>Pilot Operated Reducing Valve</i>		
	PBFB Page 3.06		
	<i>Air Controlled, Pilot Operated Reducing Valve</i>		
	PBFC Page 3.08		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



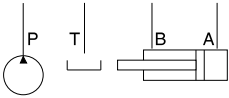
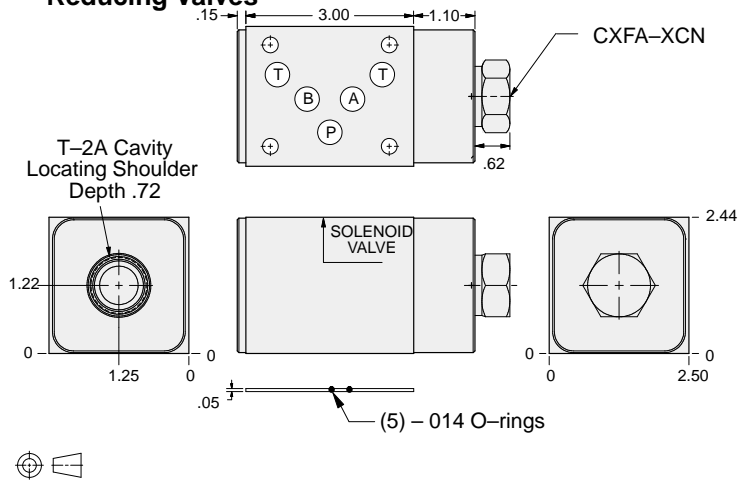
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

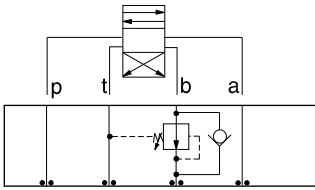
On A Drain to T
Reverse FF Check

Reducing Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BB2		BB2/S	

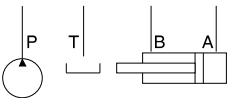
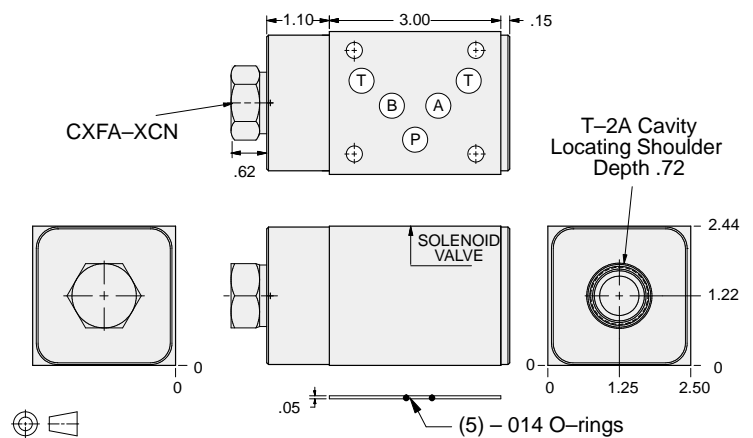
05 REDUCING



FUNCTION

On B Drain to T
Reverse FF Check

Reducing Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Part Number	List Price
BB3		BB3/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

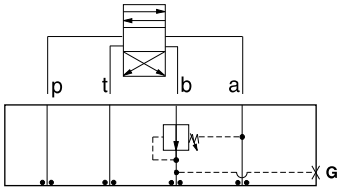
	Pilot Operated Reducing Valve		
	PBFB Page 3.06		
	Air Controlled, Pilot Operated Reducing Valve		
	PBFC Page 3.08		
OTHER VALVES:			



ISO 05 SANDWICH BODIES

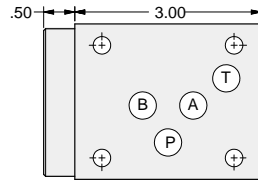


- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

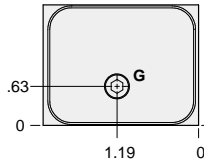


FUNCTION
 On B
 Drained to A

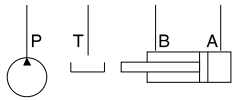
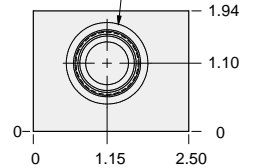
Reducing Valves



T-2A Cavity
 Locating Shoulder
 Depth 1.17



(5) - 014 O-rings



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BBB		BBB/S	
.25 BSPP	BBB/M		BBB/T	

05 REDUCING

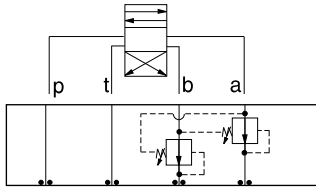
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing Valve		
	PBFB Page 3.06		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



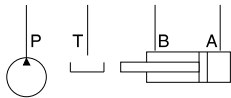
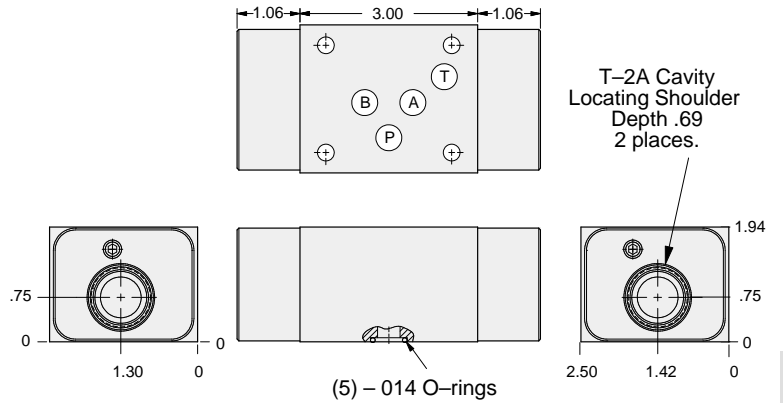
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On A and B
Drains to Opposite Port

Reducing Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BBY		BBY/S	

05 REDUCING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Reducing Valve		
	PBFB Page 3.06		
OTHER VALVES:			

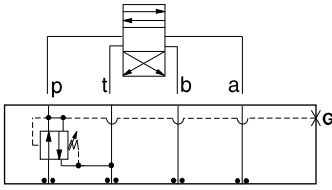


ISO 05 SANDWICH BODIES



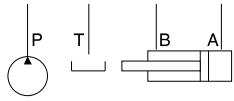
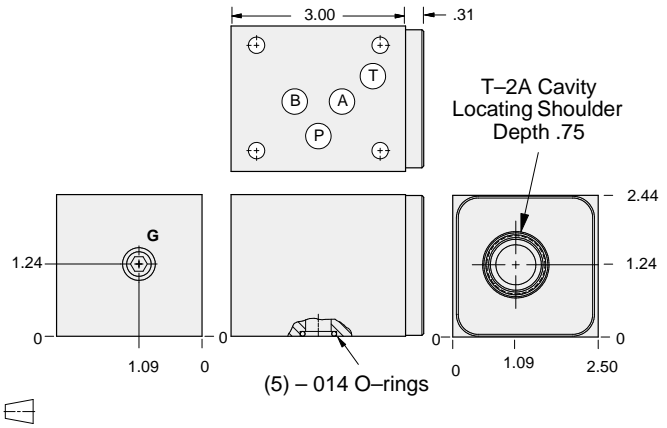
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing/Relieving Valves



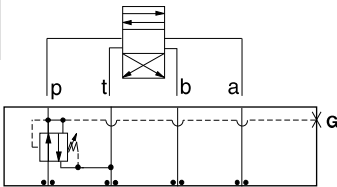
FUNCTION

On P Tank to T
Drained to T



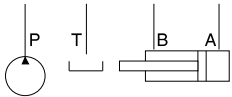
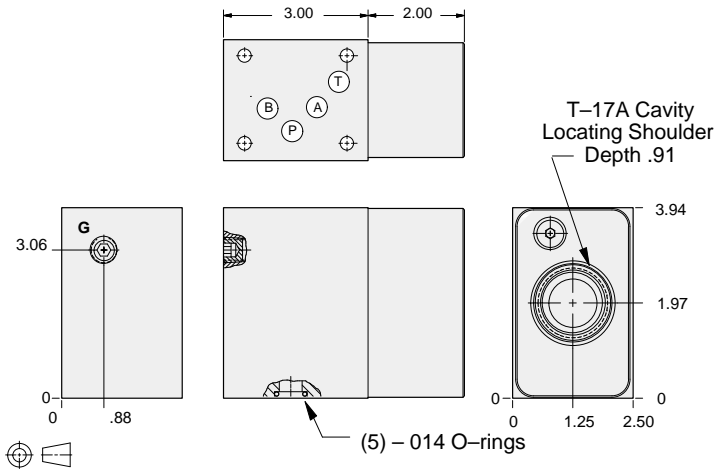
Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BBP		BBP/S	
.25 BSPP	BBP/M		BBP/T	

Reducing/Relieving Valves



FUNCTION

On P Tank to T
Drained to T
(High Capacity)



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	WCC		WCC/S	
.25 BSPP	WCC/M		WCC/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	<i>Pilot Operated Reducing/Relieving Valve</i>		
	PP*B Page 3.10, 3.11		
	<i>Air Controlled, Pilot Operated Reducing/Relieving Valve</i>		
	PP*C Page 3.12, 3.13		
OTHER VALVES:			

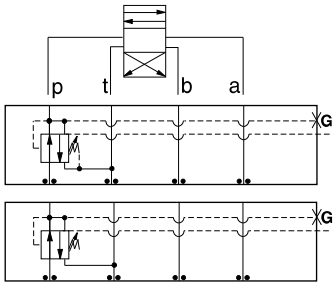


ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

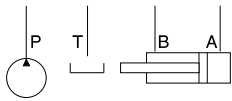
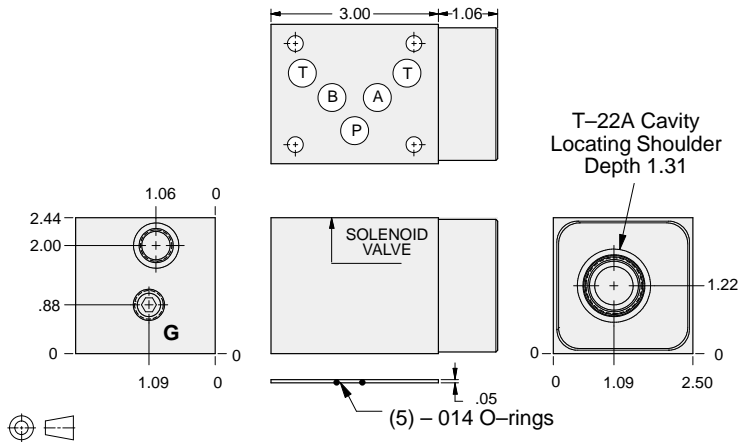
Reducing/Relieving Valves



FUNCTION

On P Tank to T
Vented Externally

On P Tank to T
Drained Externally



Gage Port (Plugged)	External Port	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
.25 NPTF	SAE-6	NBP		NBP/S	
.25 BSPP	.25 BSPP	NBP/M		NBP/T	

05 REDUCING/RELIEVING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

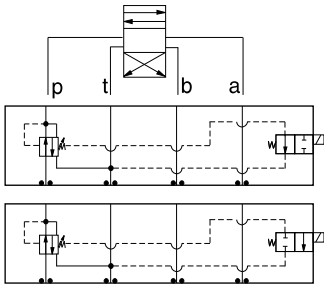
	Pilot Operated Reducing/Relieving Valve with Drain Port		
	PVFA Page 3.14		
	Pilot Operated Reducing/Relieving Valve with Vent Port		
	PVFB Page 3.16		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

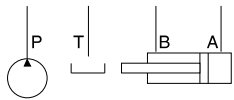
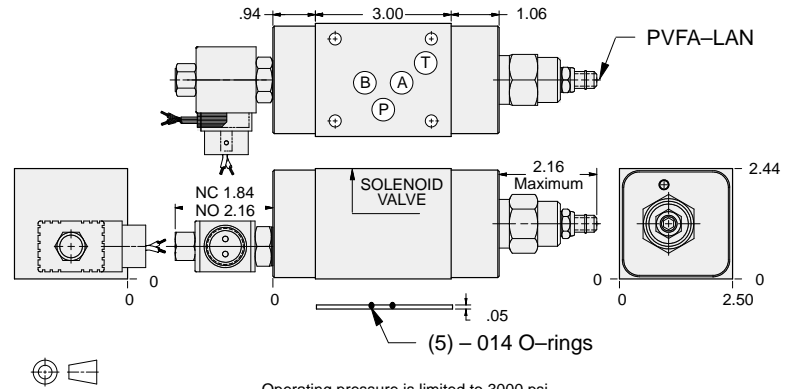


FUNCTION

On P Tank to T
N.O. Solenoid
on Drain *

On P Tank to T
N.C. Solenoid
on Drain *

Reducing/Relieving Valves



Solenoid Type	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
N.O.	YPDG-LAN-*A		YPDG-LAN-*A/S	
N.C.	YPDH-LAN-*A		YPDH-LAN-*A/S	

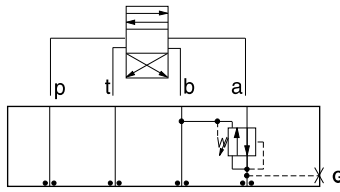
* Select solenoid connection/voltage option from page 14.16 and add option price to List Price.



ISO 05 SANDWICH BODIES



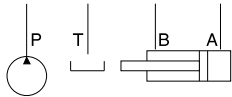
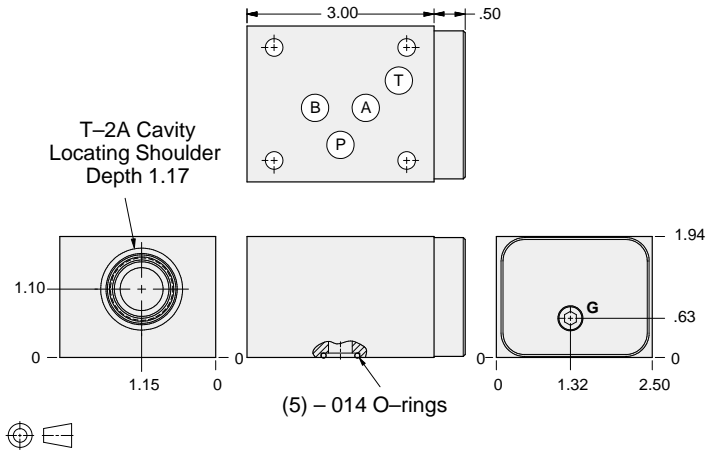
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On A Tank to B
Drained to B

Reducing/Relieving Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BBA		BBA/S	
.25 BSPP	BBA/M		BBA/T	

05 REDUCING/RELIEVING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Reducing/Relieving Valve		
	PPFB Page 3.10		
OTHER VALVES:			



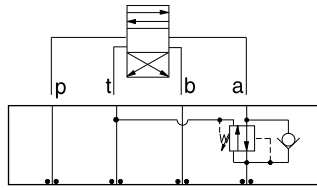
ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

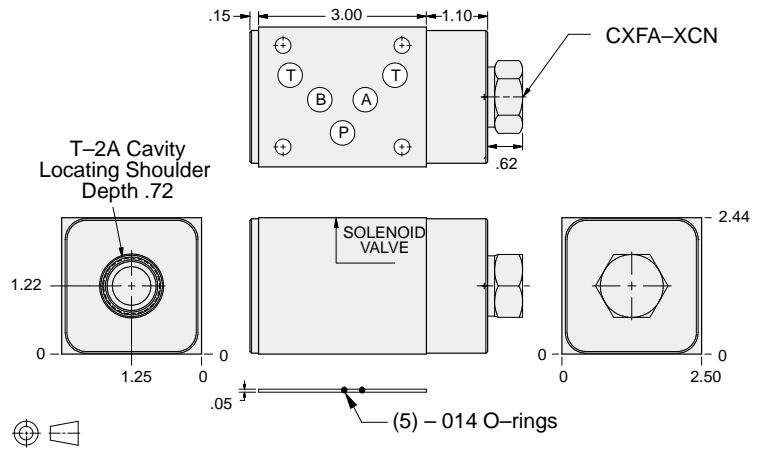
05 REDUCING/RELIEVING

Reducing/Relieving Valves

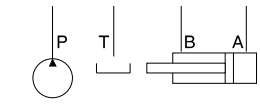


FUNCTION

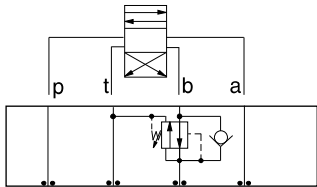
On A Tank to T
Drained to T
Reverse FF Check



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BB2		BB2/S	

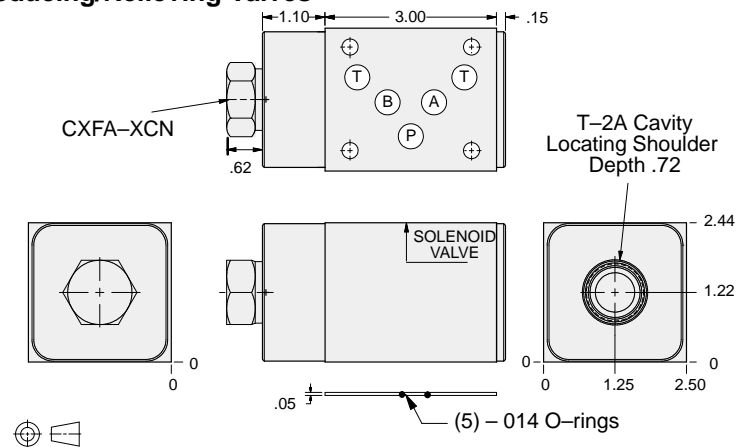


Reducing/Relieving Valves

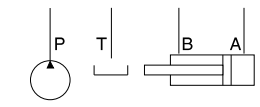


FUNCTION

On B Tank to T
Drained to T
Reverse FF Check



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BB3		BB3/S	



TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Reducing/Relieving Valve		
	PPFB Page 3.10		
	Air Controlled, Pilot Operated Reducing/Relieving Valve		
	PPFC Page 3.12		
OTHER VALVES:			

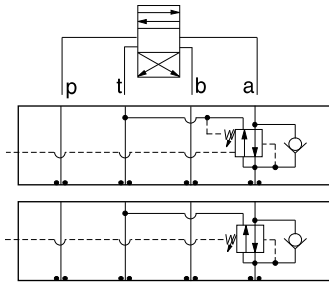


ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

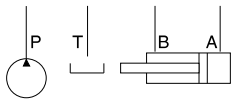
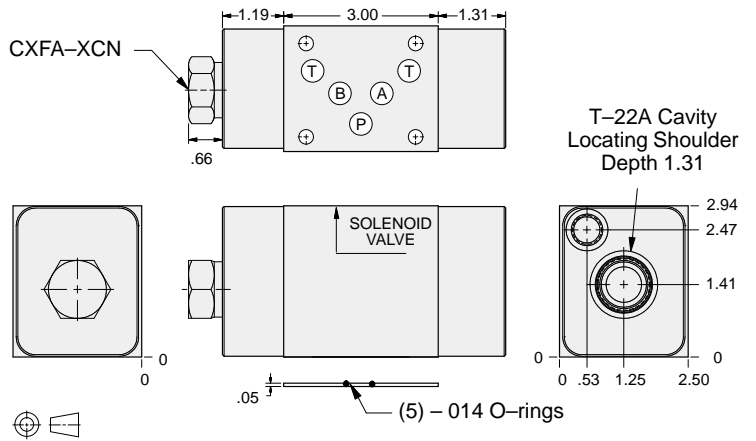
Reducing/Relieving Valves



FUNCTION

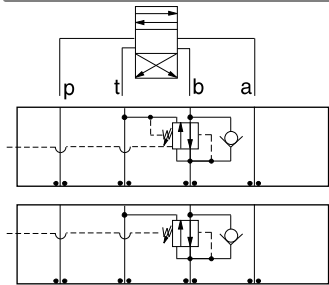
On A tank to T
Vented Externally
Reverse FF Check

On A tank to T
Drained Externally
Reverse FF Check



External Port	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
SAE-6	NB2		NB2/S	
.25 BSPP	NB2/M		NB2/T	

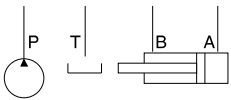
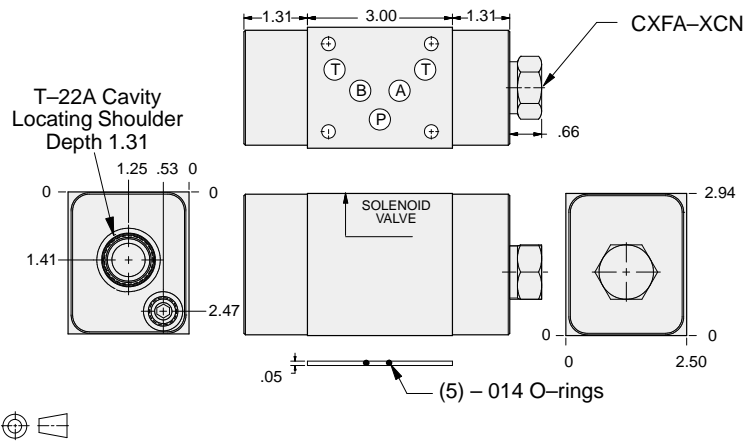
Reducing/Relieving Valves



FUNCTION

On B Tank to T
Vented Externally
Reverse FF Check

On B Tank to T
Drained Externally
Reverse FF Check



External Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
SAE-6	NB3		NB3/S	
.25 BSPP	NB3/M		NB3/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Reducing/Relieving Valve with Drain Port		
	PVFA Page 3.14		
	Pilot Operated Reducing/Relieving Valve with Vent Port		
	PVFB Page 3.16		
OTHER VALVES:			

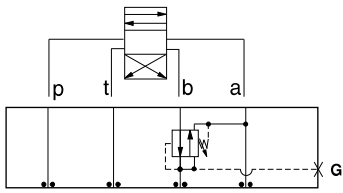
05 REDUCING/RELIEVING



ISO 05 SANDWICH BODIES



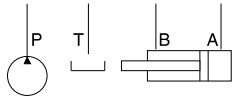
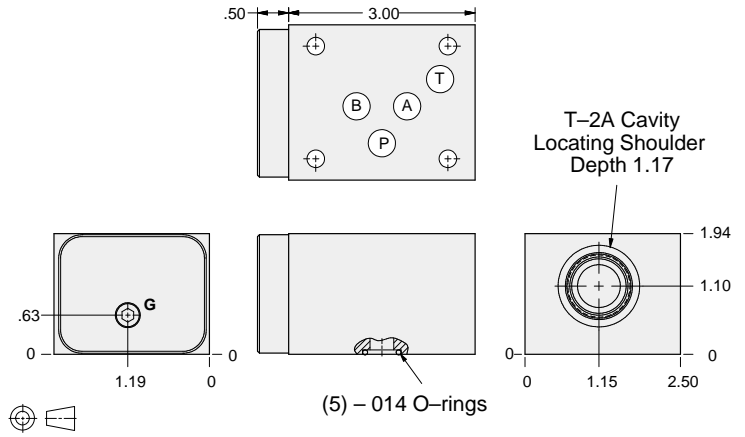
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On **B** Tank to **A**
Drained to **A**

Reducing/Relieving Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BBB		BBB/S	
.25 BSPP	BBB/M		BBB/T	

05 REDUCING/RELIEVING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing/Relieving Valve		
	PPFB Page 3.10		
OTHER VALVES:			

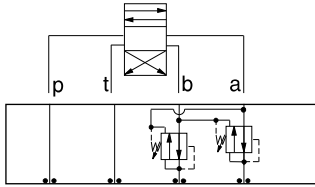


ISO 05 SANDWICH BODIES



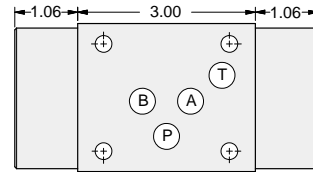
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing/Relieving Valves

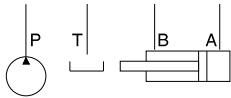
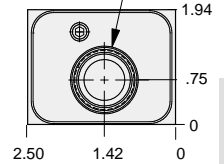
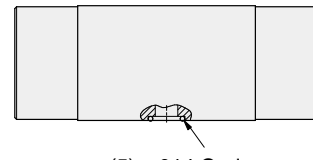
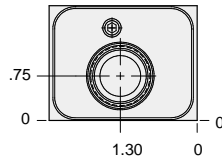


FUNCTION

On **A** and **B**
Tanks and Drains to
Opposite Port



T-2A Cavity
Locating Shoulder
Depth .69
2 places.



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BBY		BBY/S	

05 REDUCING/RELIEVING

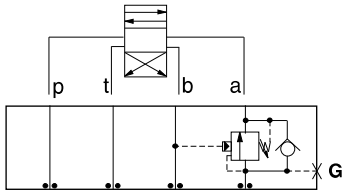
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing/Relieving Valve		
	PPFB Page 3.10		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



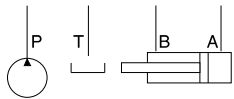
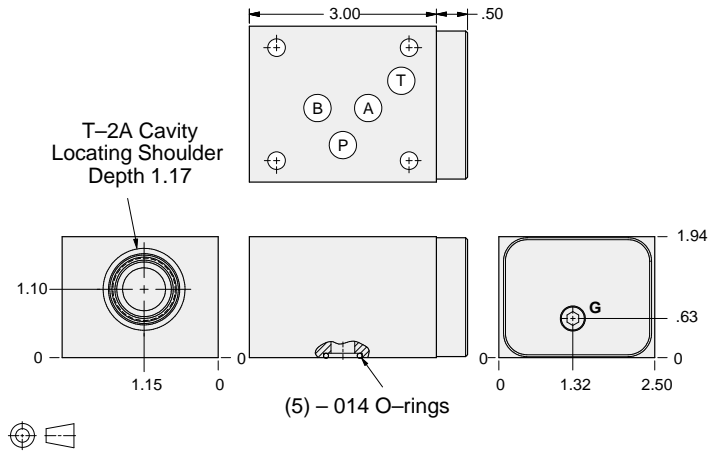
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On A Pilot
from B

Counterbalance Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BBA		BBA/S	
.25 BSPP	BBA/M		BBA/T	

05 COUNTERBALANCE

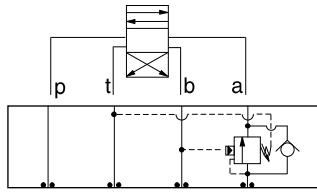
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Counterbalance Valve, 3:1 Pilot Ratio		
	CBEA Page 4.10		
	Counterbalance Valve, 4.5:1 Pilot Ratio		
	CBEG Page 4.12		
	Counterbalance Valve, 10:1 Pilot Ratio		
	CBEH Page 4.14		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



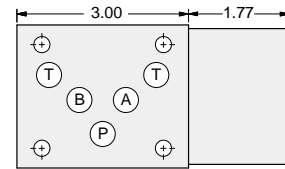
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



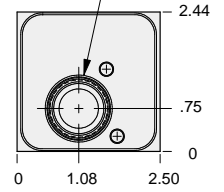
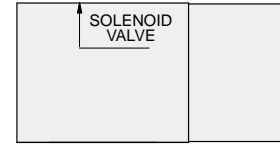
FUNCTION

On **A** Pilot
from **B**
Vent to **T**

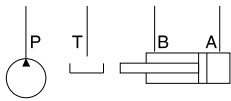
Counterbalance Valves



T-22A Cavity
Locating Shoulder
Depth 1.31

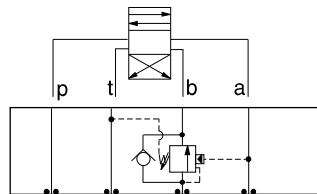


(5) - .014 O-rings



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
NBA		NBA/S	

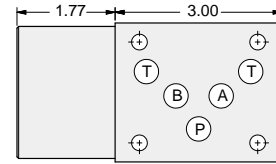
05 COUNTERBALANCE



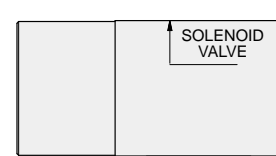
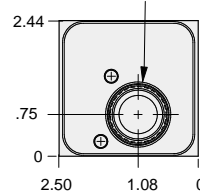
FUNCTION

On **B**
Pilot from **A**
Vent to **T**

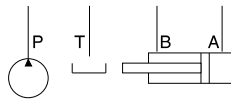
Counterbalance Valves



T-22A Cavity
Locating Shoulder
Depth 1.31



(5) - .014 O-rings



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Part Number	List Price
NBB		NBB/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Vented Counterbalance Valve, 3:1 Pilot Ratio		
	CWEA Page 4.18		
	Vented Counterbalance Valve, 5:1 Pilot Ratio		
	CWEG Page 4.20		
OTHER VALVES:			

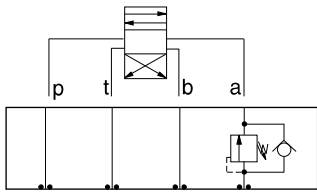


ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

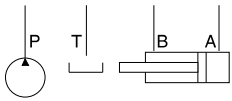
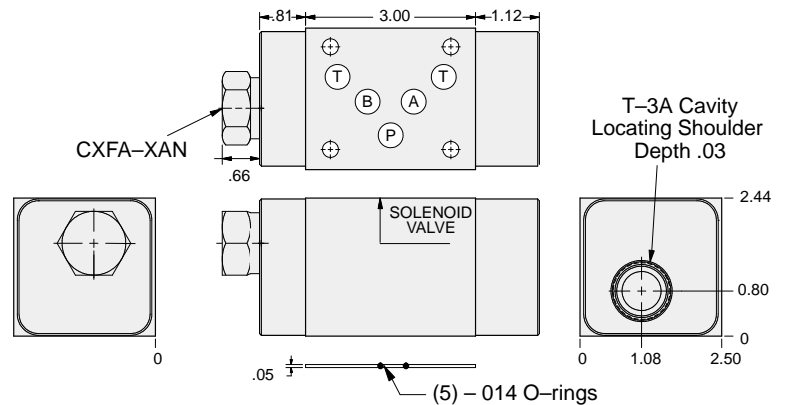
05 COUNTERBALANCE



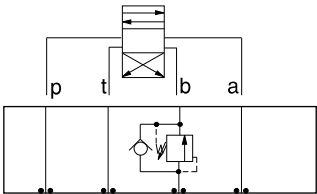
FUNCTION

On A
No Pilot Assist

Counterbalance Valves



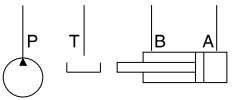
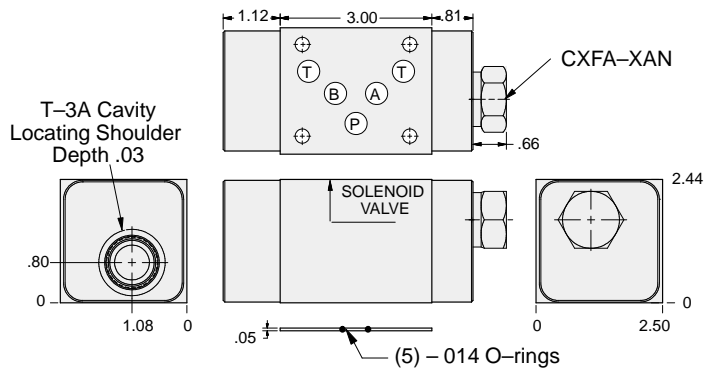
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CB4		CB4/S	



FUNCTION

On B
No Pilot Assist

Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CB5		CB5/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

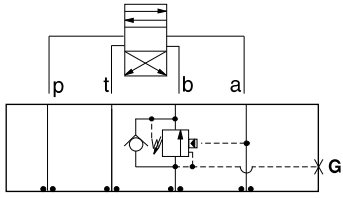
	Direct Acting Relief Valve		
	RDFA Page 1.10		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



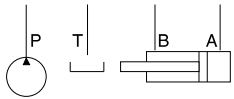
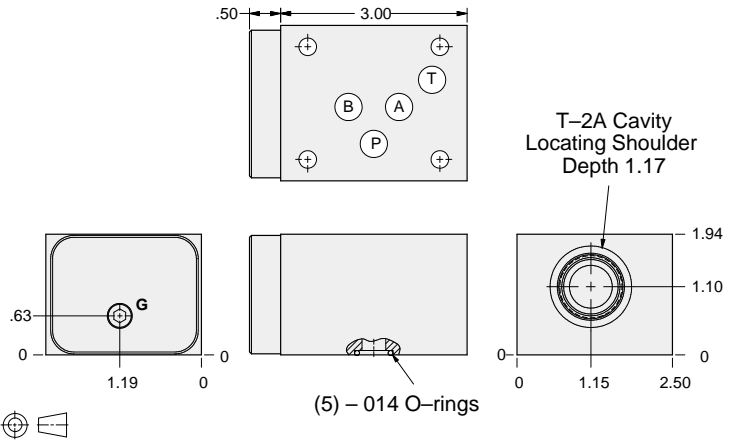
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On **B**
Pilot from **A**

Counterbalance Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BBB		BBB/S	
.25 BSPP	BBB/M		BBB/T	

05 COUNTERBALANCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

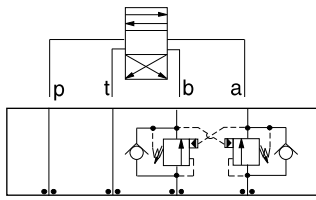
	Counterbalance Valve, 3:1 Pilot Ratio		
	CBEA Page 4.10		
	Counterbalance Valve, 4.5:1 Pilot Ratio		
	CBEG Page 4.12		
	Counterbalance Valve, 10:1 Pilot Ratio		
	CBEH Page 4.14		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



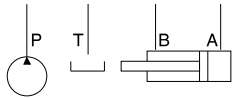
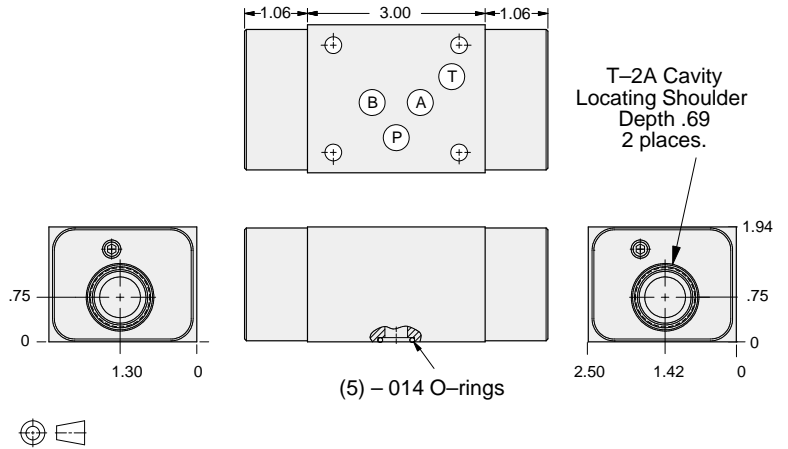
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On **A** and **B**
Cross-Piloted

Counterbalance Valves



ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
BBY		BBY/S	

05 COUNTERBALANCE

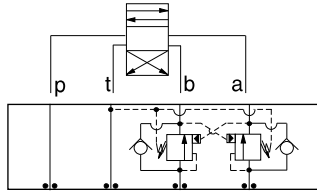
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Counterbalance Valve, 3:1 Pilot Ratio		
	CBEA Page 4.10		
	Counterbalance Valve, 4.5:1 Pilot Ratio		
	CBEG Page 4.12		
	Counterbalance Valve, 10:1 Pilot Ratio		
	CBEH Page 4.14		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



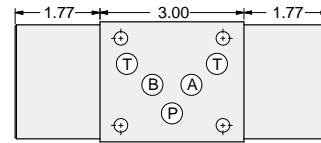
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



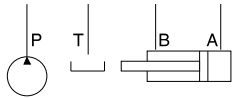
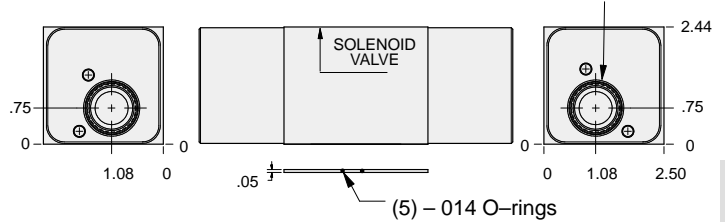
FUNCTION

On **A** and **B**
Cross-Piloted
Vents to **T**

Counterbalance Valves



T-22A Cavity
Locating Shoulder
Depth 1.31
2 places.



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
NBY		NBY/S	

05 COUNTERBALANCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

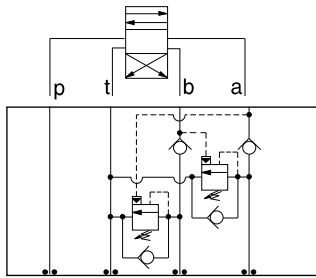
	Vented Counterbalance Valve, 3:1 Pilot Ratio		
	CWEA Page 4.18		
	Vented Counterbalance Valve, 5:1 Pilot Ratio		
	CWEG Page 4.20		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



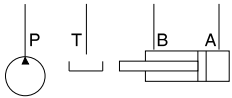
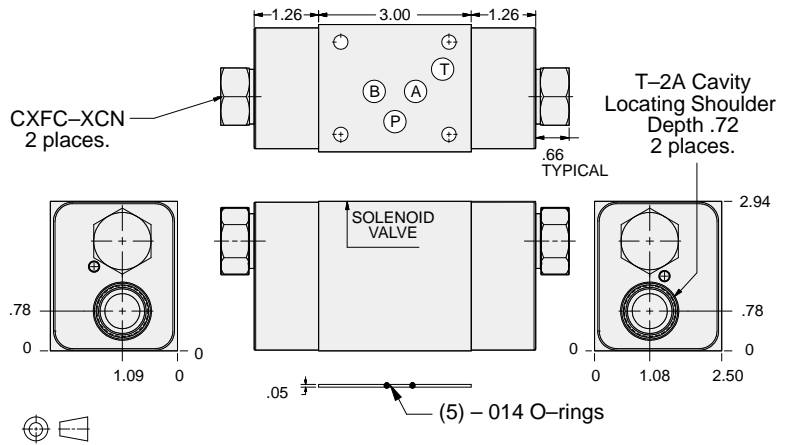
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

Cushion Lock
Circuit
On A and B

Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BB8		BB8/S	

05 COUNTERBALANCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

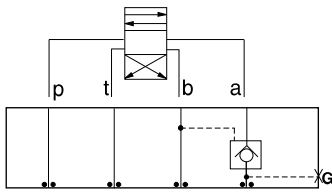
	Counterbalance Valve, 3:1 Pilot Ratio		
	CBEA Page 4.10		
	Counterbalance Valve, 4.5:1 Pilot Ratio		
	CBEG Page 4.12		
	Counterbalance Valve, 10:1 Pilot Ratio		
	CBEH Page 4.14		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



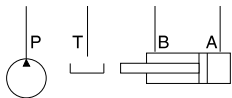
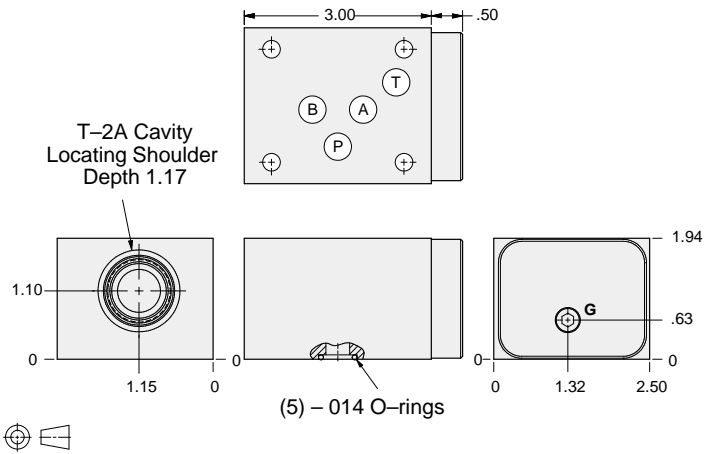
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On A
Pilot from B

Pilot Operated Check Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BBA		BBA/S	
.25 BSPP	BBA/M		BBA/T	

05 P.O. CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	<i>Pilot-to-Open Check Valve, 3:1 Pilot Ratio</i>		
	CKEB Page 4.16		
OTHER VALVES:			

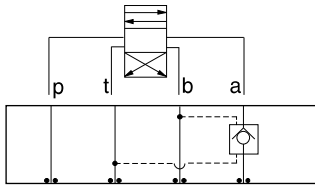


ISO 05 SANDWICH BODIES



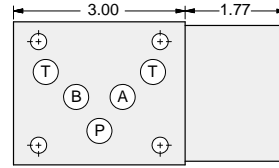
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Pilot Operated Check Valves

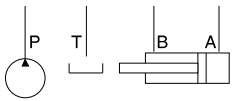
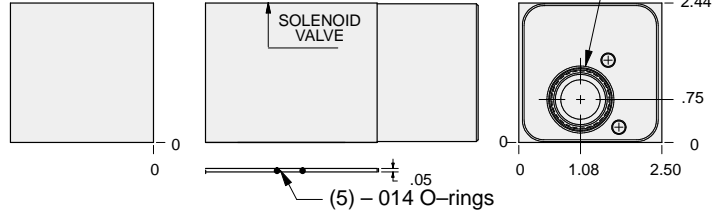


FUNCTION

On **A**
Pilot from **B**
Vent to **T**

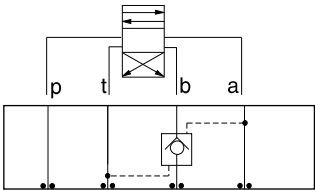


T-22A Cavity
Locating Shoulder
Depth 1.31



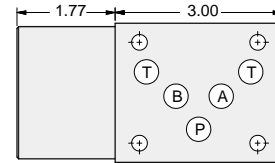
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
NBA		NBA/S	

Pilot Operated Check Valves

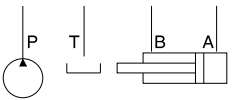
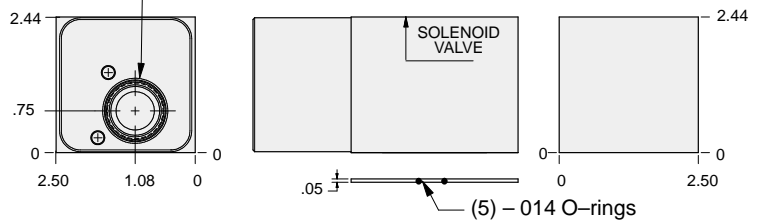


FUNCTION

On **B**
Pilot from **A**
Vent to **T**



T-22A Cavity
Locating Shoulder
Depth 1.31



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
NBB		NBB/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Vented Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CVEV Page 4.22		
OTHER VALVES:			

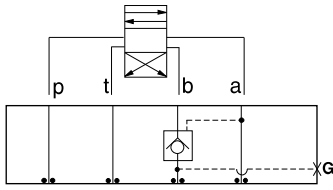


ISO 05 SANDWICH BODIES



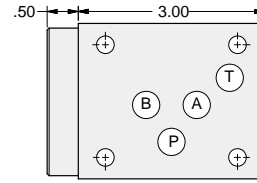
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Pilot Operated Check Valves

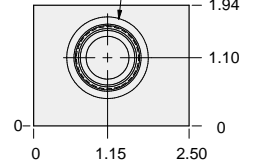
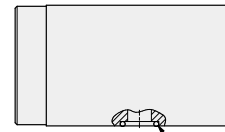
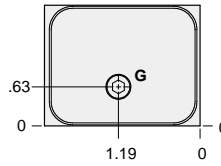


FUNCTION

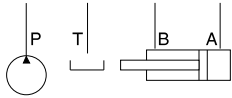
On B
Pilot from A



T-2A Cavity
Locating Shoulder
Depth 1.17



(5) - 014 O-rings



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BBB		BBB/S	
.25 BSPP	BBB/M		BBB/T	

05 P.O. CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	<i>Pilot-to-Open Check Valve, 3:1 Pilot Ratio</i>		
	CKEB Page 4.16		
OTHER VALVES:			

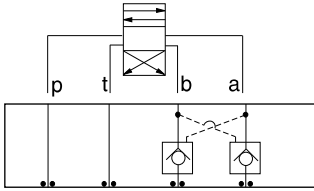


ISO 05 SANDWICH BODIES



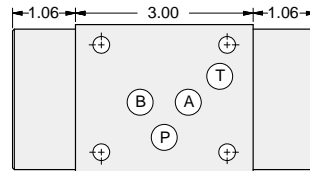
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Pilot Operated Check Valves

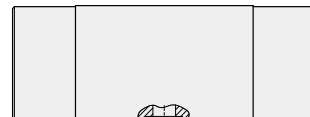
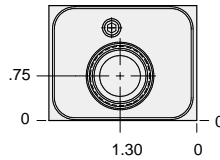


FUNCTION

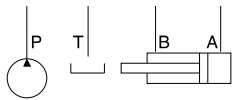
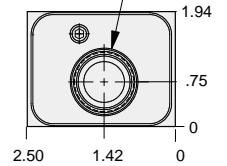
On A and B
Cross-Piloted



T-2A Cavity
Locating Shoulder
Depth .69
2 places.



(5) - 014 O-rings



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BBY		BBY/S	

05 P.O. CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	<i>Pilot-to-Open Check Valve, 3:1 Pilot Ratio</i>		
	CKEB Page 4.16		
OTHER VALVES:			

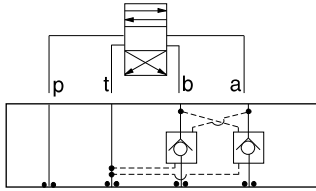


ISO 05 SANDWICH BODIES



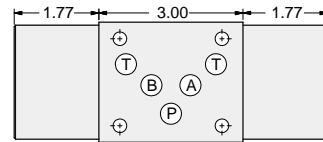
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Pilot Operated Check Valves

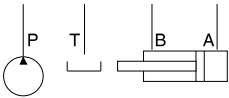
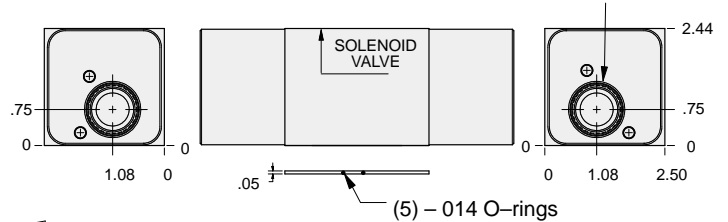


FUNCTION

On **A** and **B**
Cross-Piloted
Vents to **T**



T-22A Cavity
Locating Shoulder
Depth 1.31
2 places.



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
NBY		NBY/S	

05 P.O. CHECK

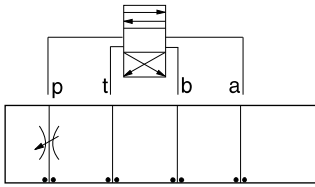
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Vented Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CVEV Page 4.22		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



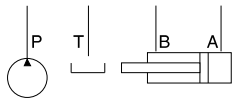
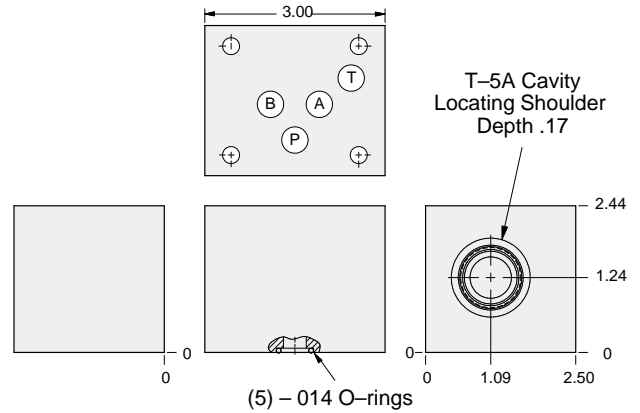
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

Meter-In P

Flow Control Valves



ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
DBP		DBP/S	

05 FLOW CONTROL

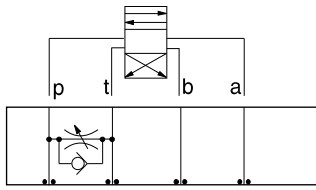
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	<i>Fully Adjustable Needle Valve</i>		
	NFDC Page 5.12		
	<i>Fixed Orifice, Pressure-Compensated Flow Control</i>		
	FXDA Page 5.20		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



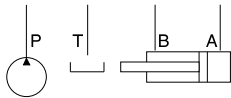
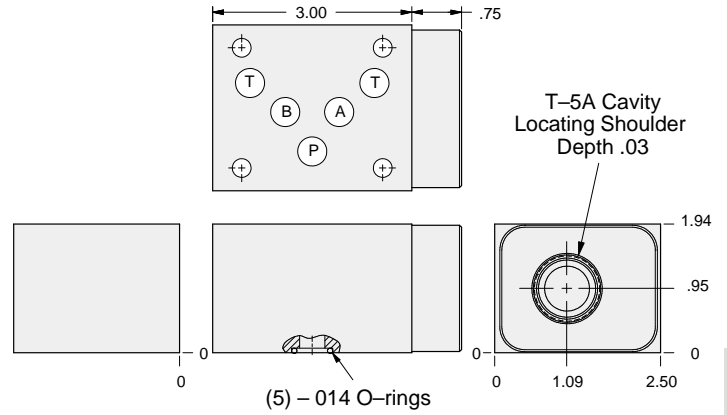
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

Bleed-Off
P to T

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DBQ		DBQ/S	

05 FLOW CONTROL

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

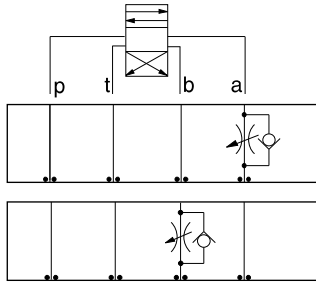
	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NFDC Page 5.12		FXDA Page 5.20
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NCEB Page 5.16		FCDB Page 5.22
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NCEC Page 5.18		FDCB Page 5.24
OTHER VALVES:	CNEC		



ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

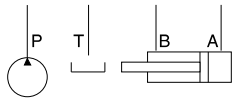
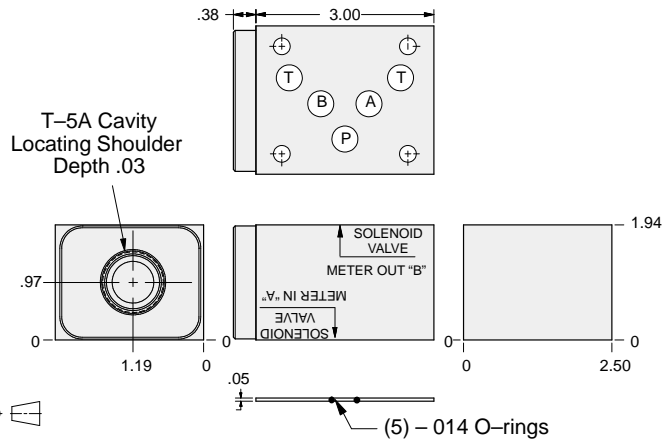


FUNCTION

Meter-In A

Meter-Out B

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DBB		DBB/S	

05 FLOW CONTROL

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

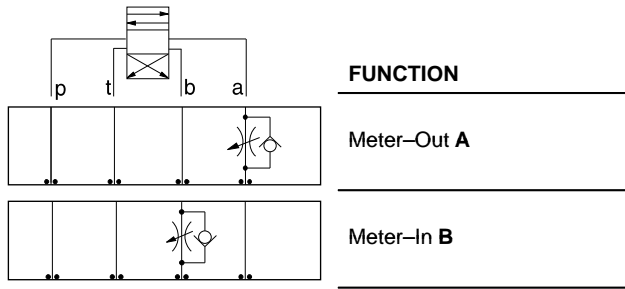
	Fully Adjustable Needle Valve with Reverse Free Flow Check NCEB Page 5.16		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check FDCB Page 5.24
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow NCEC Page 5.18		
	Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check FCDB Page 5.22		
OTHER VALVES:	CNEC		



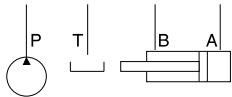
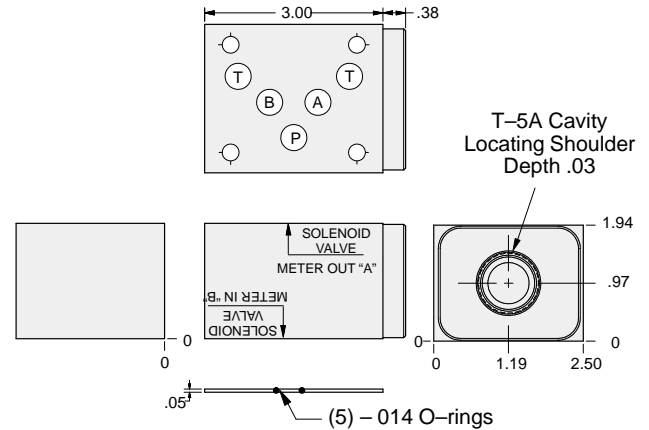
ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DBA		DBA/S	

05 FLOW CONTROL

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Fully Adjustable Needle Valve with Reverse Free Flow Check NCEB Page 5.16		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check FDCB Page 5.24
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow NCEC Page 5.18		
	Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check FCDB Page 5.22		
OTHER VALVES:	CNEC		

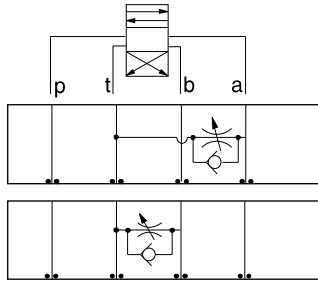


ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

05 FLOW CONTROL

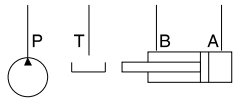
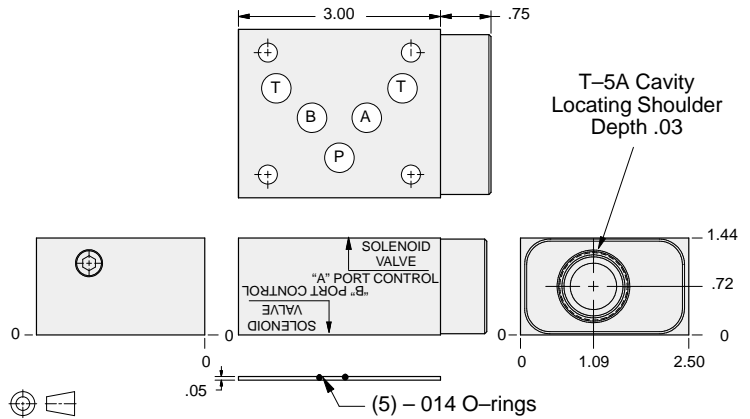


FUNCTION

Bleed-Off
A to T

Bleed-Off
B to T

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DBC		DBC/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

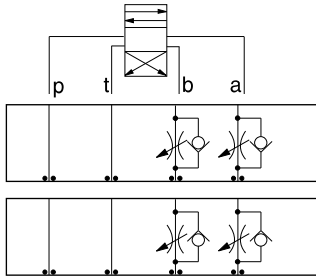
	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NFDC Page 5.12		FXDA Page 5.20
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NCEB Page 5.16		FCDB Page 5.22
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NCEC Page 5.18		FDCB Page 5.24
OTHER VALVES:	CNEC		



ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

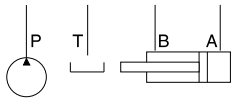
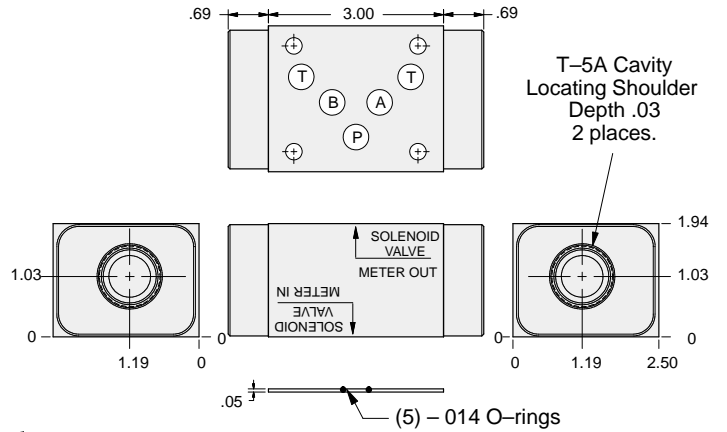


FUNCTION

Meter-In
A and B

Meter-Out
A and B

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DBY		DBY/S	

05 FLOW CONTROL

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

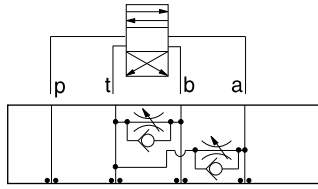
	Fully Adjustable Needle Valve with Reverse Free Flow Check NCEB Page 5.16		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check FDCB Page 5.24
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow NCEC Page 5.18		
	Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check FCDB Page 5.22		
OTHER VALVES:	CNEC		



ISO 05 SANDWICH BODIES



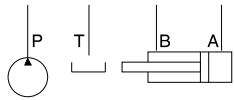
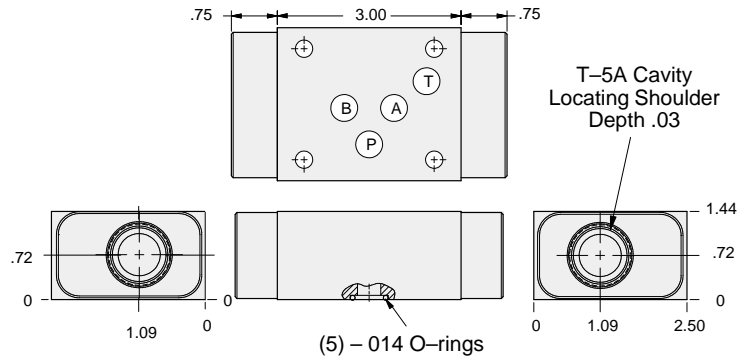
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

Bleed-Off
A and B to T

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DBX		DBX/S	

05 FLOW CONTROL

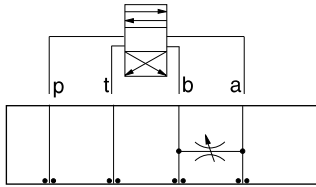
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Fully Adjustable Needle Valve NFDC Page 5.12		Fixed Orifice, Pressure-Compensated Flow Control FXDA Page 5.20
	Fully Adjustable Needle Valve with Reverse Free Flow Check NCEB Page 5.16		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check FCDB Page 5.22
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow NCEC Page 5.18		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check FDCB Page 5.24
OTHER VALVES:	CNEC		



ISO 05 SANDWICH BODIES



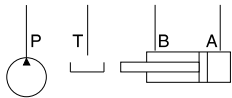
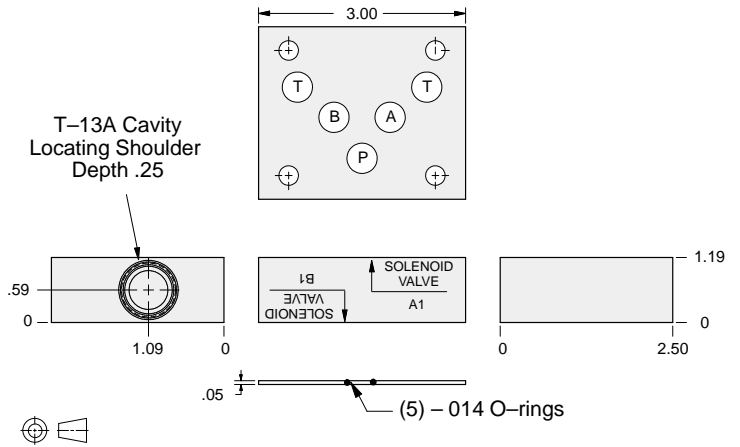
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

Bleed-Off
A to B and
B to A

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DBS		DBS/S	

05 FLOW CONTROL

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

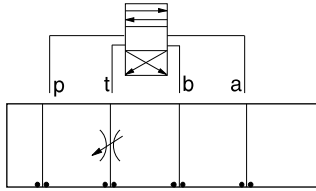
	Fully Adjustable Needle Valve		
	NFDC Page 5.12		
OTHER VALVES:	CNEC		



ISO 05 SANDWICH BODIES

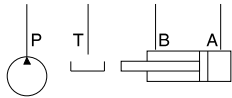
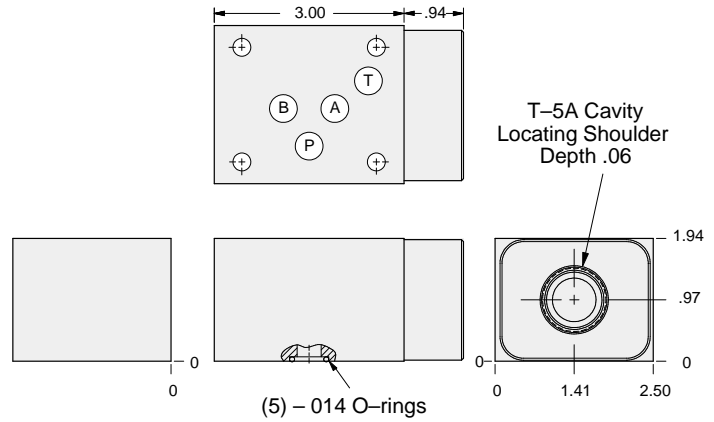


- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION
Meter-Out T

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DBT		DBT/S	

05 FLOW CONTROL

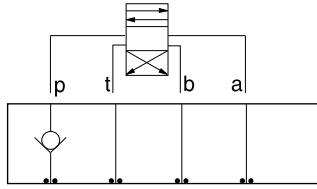
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NFDC Page 5.12		FXDA Page 5.20
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NCEB Page 5.16		FCDB Page 5.22
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NCEC Page 5.18		FDCB Page 5.24
OTHER VALVES:	CNEC		



ISO 05 SANDWICH BODIES



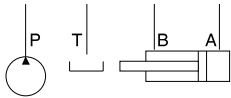
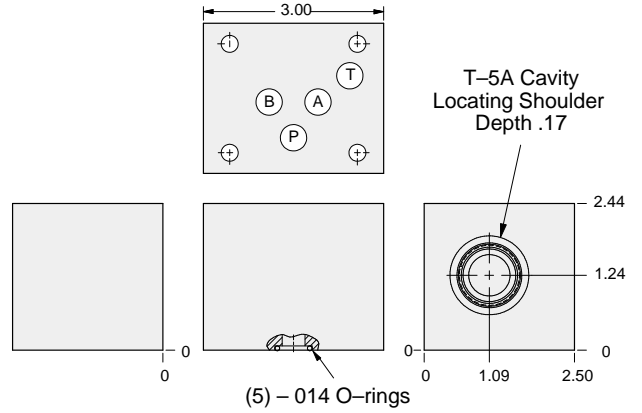
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On P

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DBP		DBP/S	

05 CHECK

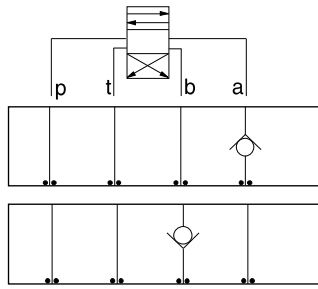
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXFA Page 5.08		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

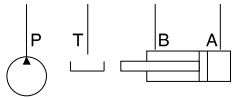
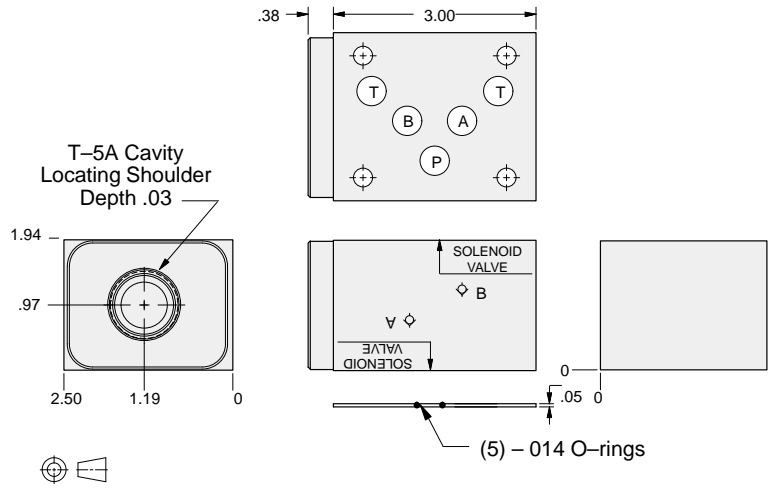


FUNCTION

On A
Free Flow Out
of Valve

On B
Free Flow Into
Valve

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DBK		DBK/S	

05 CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

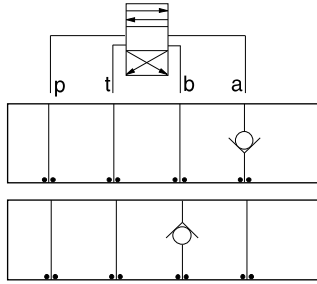
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXFA Page 5.08		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



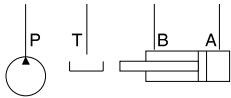
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



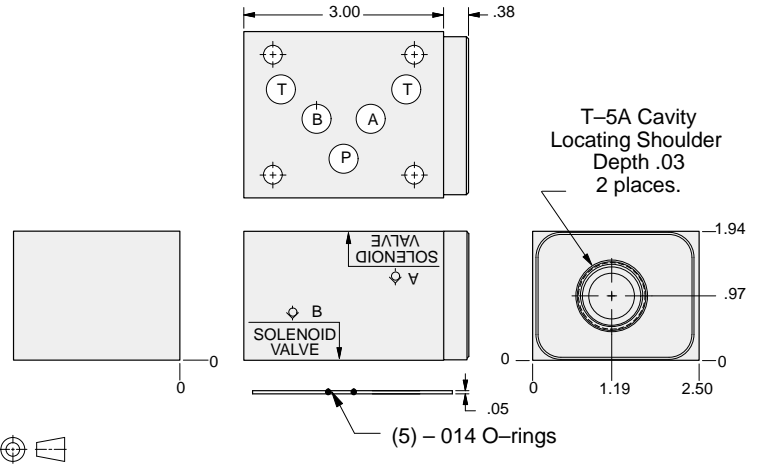
FUNCTION

On A
Free Flow Into
Valve

On B
Free Flow Out
of Valve



Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DBJ		DBJ/S	

05 CHECK

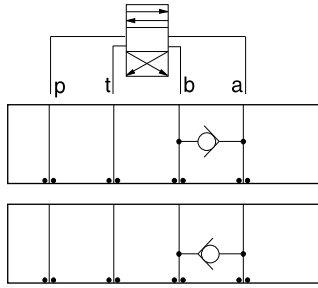
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXFA Page 5.08		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

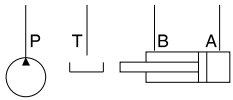
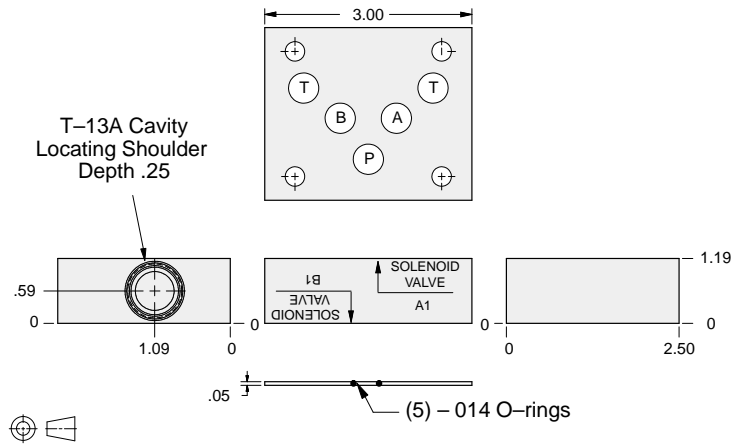


FUNCTION

A to B

B to A

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DBS		DBS/S	

05 CHECK

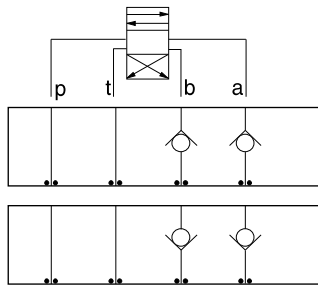
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXDA Page 5.08		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

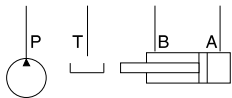
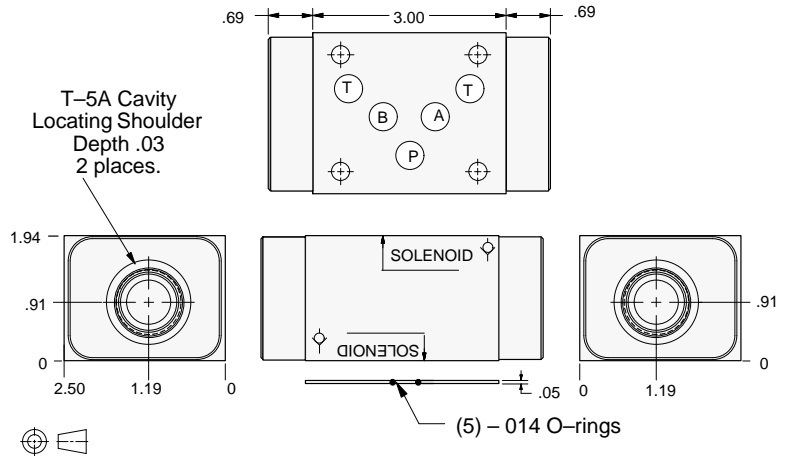


FUNCTION

On **A** and **B**
Free Flow Out
of Valve

On **A** and **B**
Free Flow Into Valve

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DBL		DBL/S	

05 CHECK

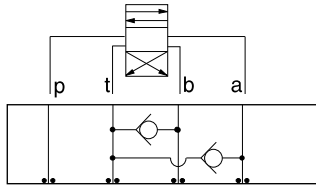
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXFA Page 5.08		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



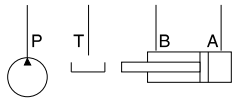
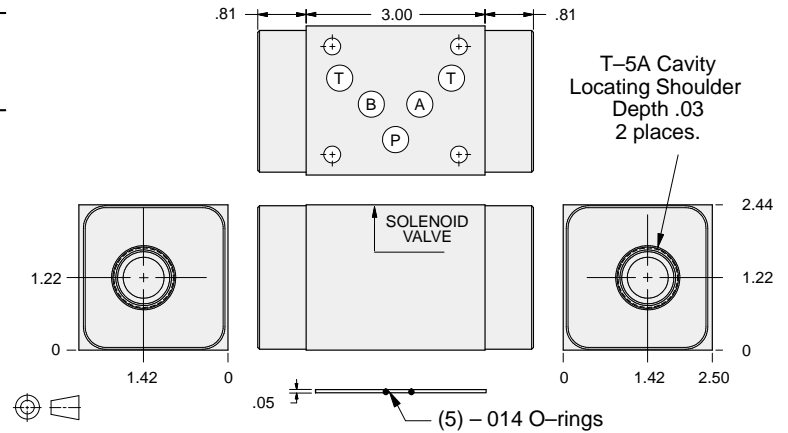
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

T to A and B

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DBW		DBW/S	

05 CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

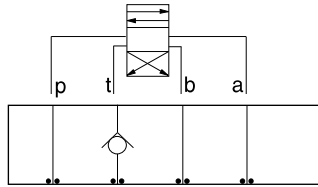
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXFA Page 5.08		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



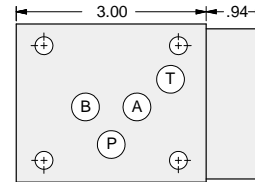
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



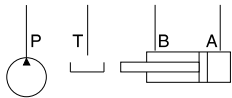
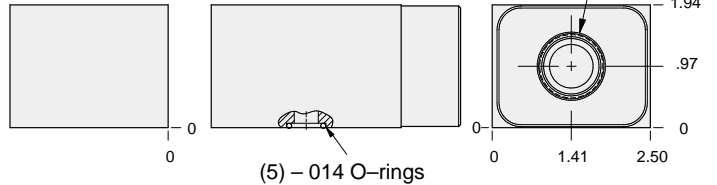
FUNCTION

On T

Check Valves



T-5A Cavity Locating Shoulder Depth .06



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DBT		DBT/S	

05 CHECK

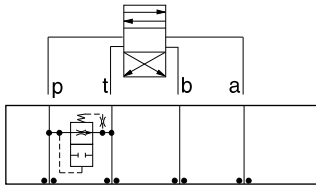
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXFA Page 5.08		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



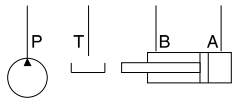
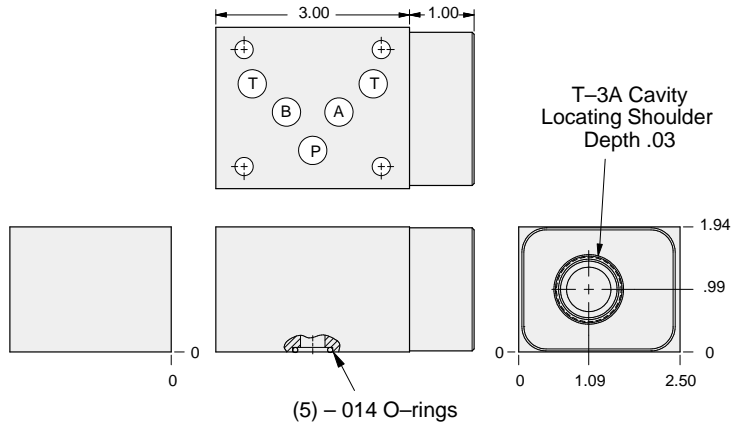
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

Air-Bleed and Start-Up

Circuit Savers



ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
CBP		CBP/S	

05 CIRCUIT SAVER

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

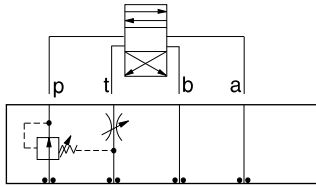
	<i>Air Bleed and Start-up Valve</i>		
	NQEB Page 10.16		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



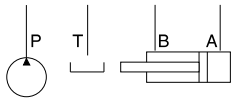
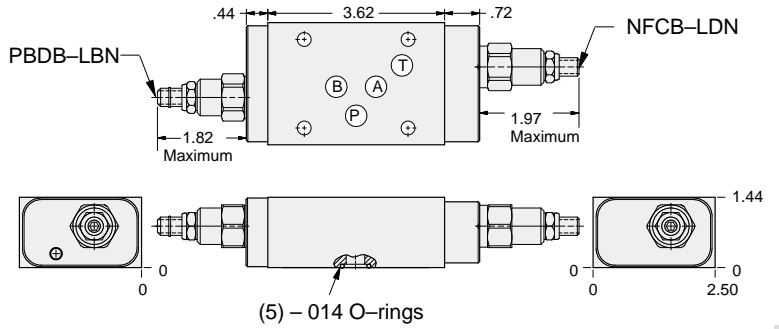
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

Pilot Choke

Circuit Savers



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YNAB-LDN-BA		YNAB-LDN-BA/S	

05 CIRCUIT SAVER

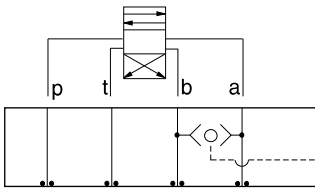


ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

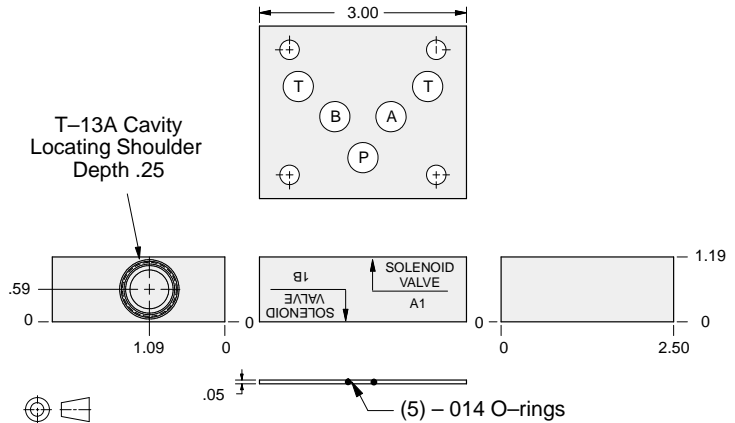
05 CIRCUIT SAVER



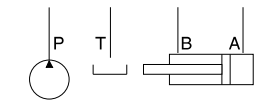
FUNCTION

Shuttle
A and B
Output External

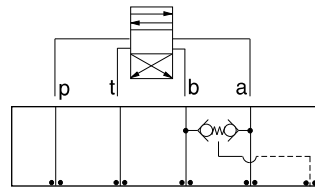
Circuit Savers



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DBS		DBS/S	

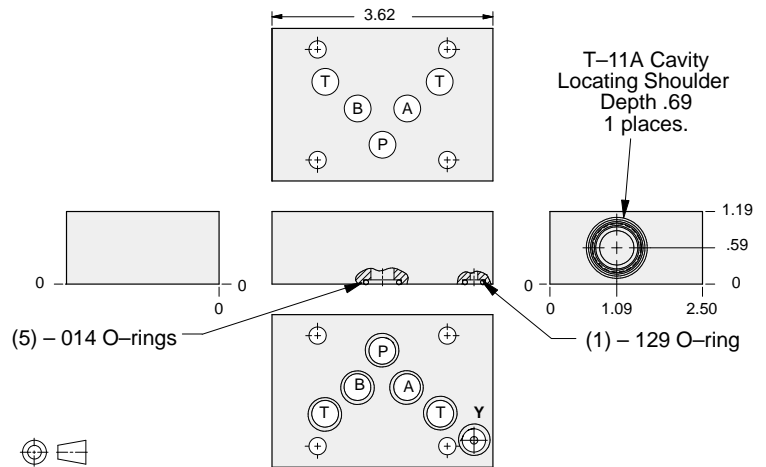


Circuit Savers

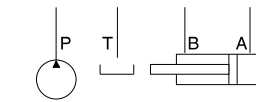


FUNCTION

Checks from
A and B—Adapter
to ISO 05 w/Y Port



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BJS		BJS/S	



TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

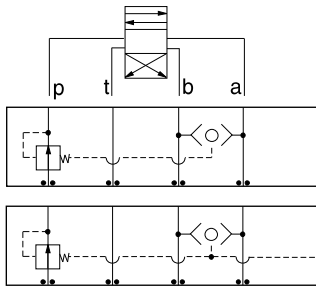
<p>Ext.</p>	2 Port Shuttle Valve, Signal External		
	CSAA Page 10.09 (use with DBS)		
<p>3</p>	3 Port Shuttle Valve, Signal at Port 3		
	CDAB Page 10.10 (use with BJS)		
OTHER VALVES:			



ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

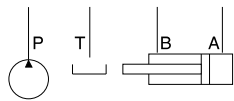
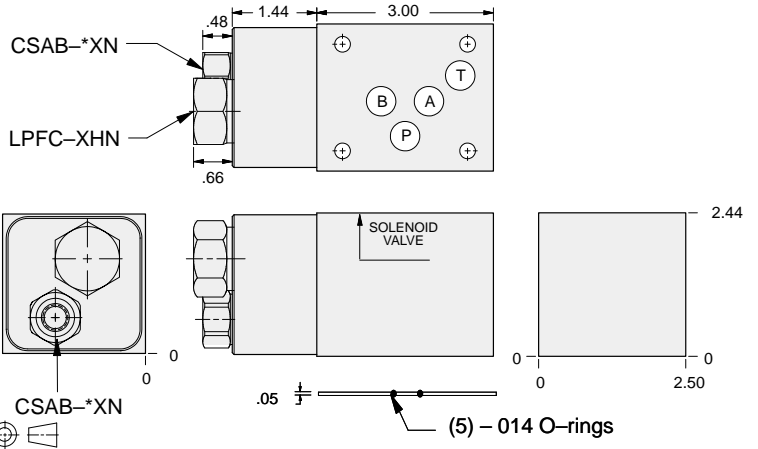


FUNCTION

Pressure Compensator (Restrictive)

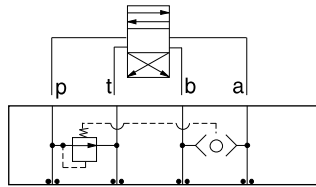
Pressure Compensator (Restrictive) w/Load-Sensing Port

Circuit Savers



Shuttle Cartridge	External Shuttle Port	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
CSAB-XXN	None	YFEJ-XHN-BA		YFEJ-XHN-BA/S	
CSAB-AXN	SAE-4	YFEP-XHN-BA		YFEP-XHN-BA/S	
CSAB-BXN	.25 BSPP	YFEP-XHN-BA/M		YFEP-XHN-BA/T	

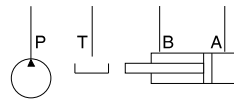
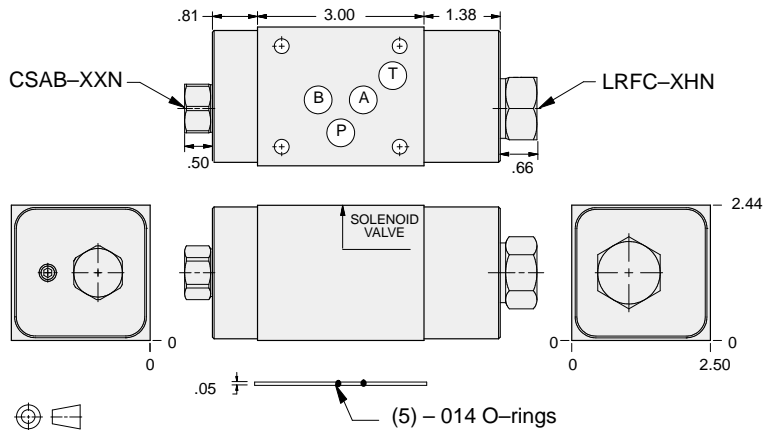
05 CIRCUIT SAVER



FUNCTION

Pressure Compensator (Bypass)

Circuit Savers



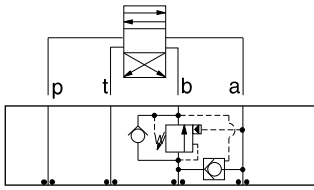
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YFEV-XHN-BA		YFEV-XHN-BA/S	



ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

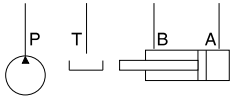
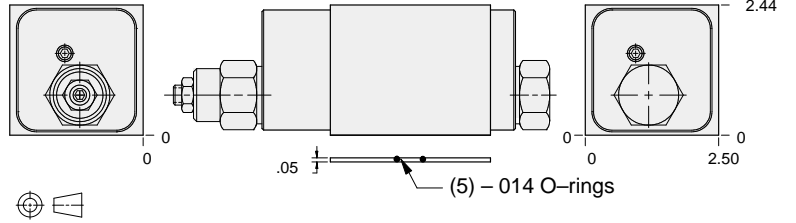
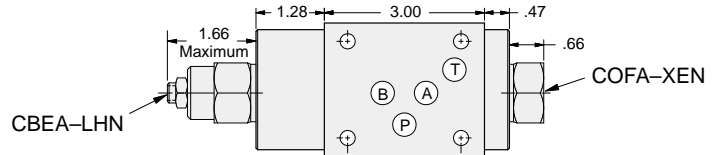


FUNCTION

B to A
Regenerative

Circuit Savers

Turn screw clockwise to reduce setting on CBEA.



ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
YDES-LHN-BA		YDES-LHN-BA/S	

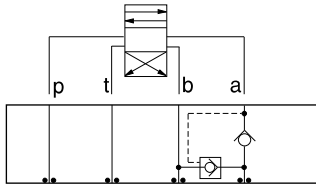
05 CIRCUIT SAVER



ISO 05 SANDWICH BODIES



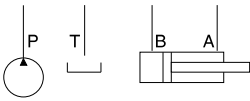
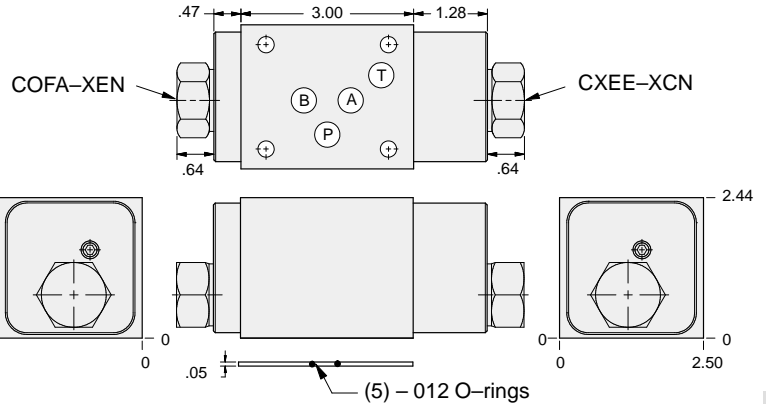
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

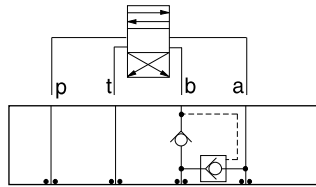
**A to B
Regenerative**
(Full Time)

Circuit Savers



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YDEV-XCN-BA		YDEV-XCN-BA/S	

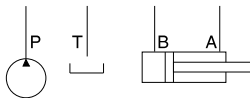
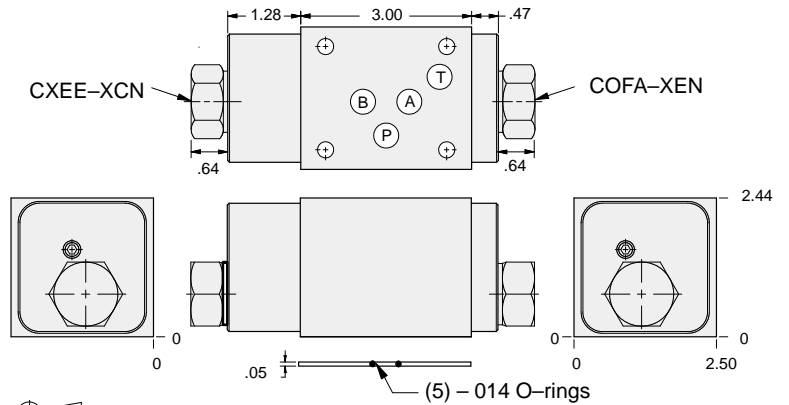
05 CIRCUIT SAVER



FUNCTION

**B to A
Regenerative**
(Full Time)

Circuit Savers



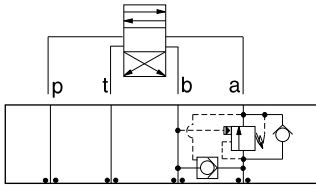
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YDET-XCN-BA		YDET-XCN-BA/S	



ISO 05 SANDWICH BODIES



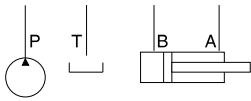
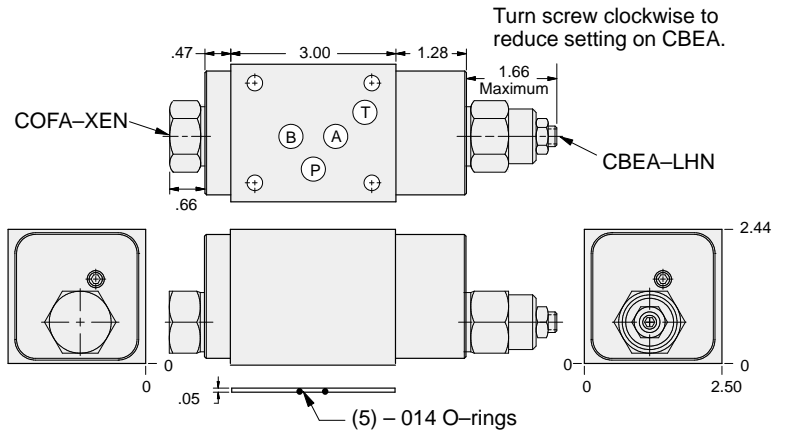
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

A to B
Regenerative

Circuit Savers



ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
YDER-LHN-BA		YDER-LHN-BA/S	

05 CIRCUIT SAVER

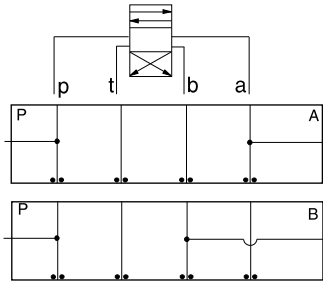


ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

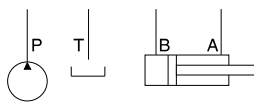
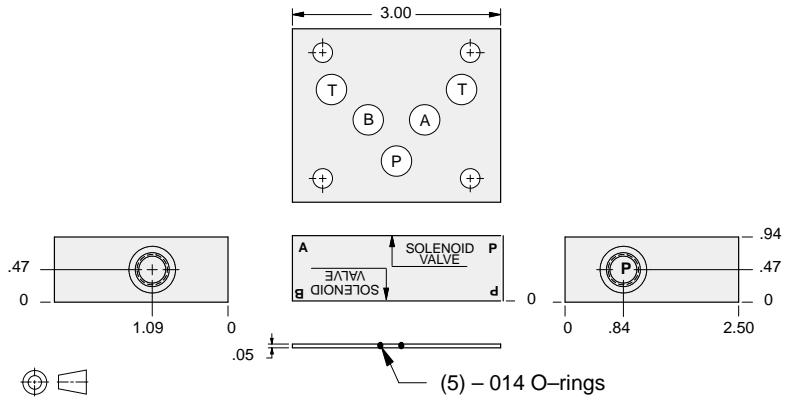
Circuit Savers



FUNCTION

P and A
Tap in Manifold

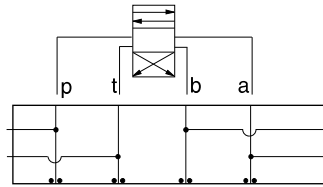
P and B
Tap in Manifold



External Port	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	ZXE		ZXE/S	
SAE-4	ZPS		ZPS/S	
.250 BSPP	ZVE		ZVE/S	

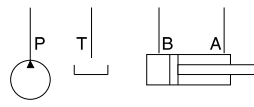
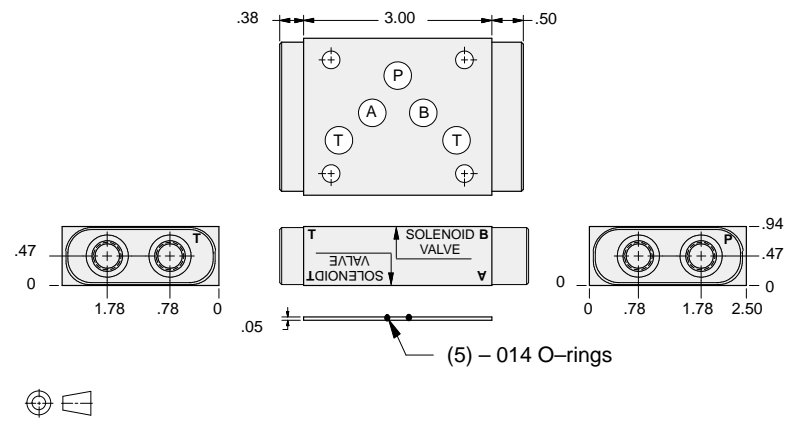
05 CIRCUIT SAVER

Circuit Savers



FUNCTION

P, T, A and B
Tap in Manifold



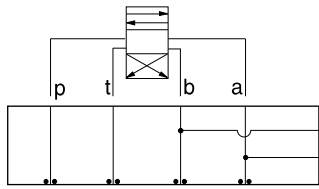
External Port	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	ZKL		ZKL/S	
.250 BSPP	ZKM		ZKM/S	
.250 BSPP	ZKK		ZKK/S	



ISO 05 SANDWICH BODIES



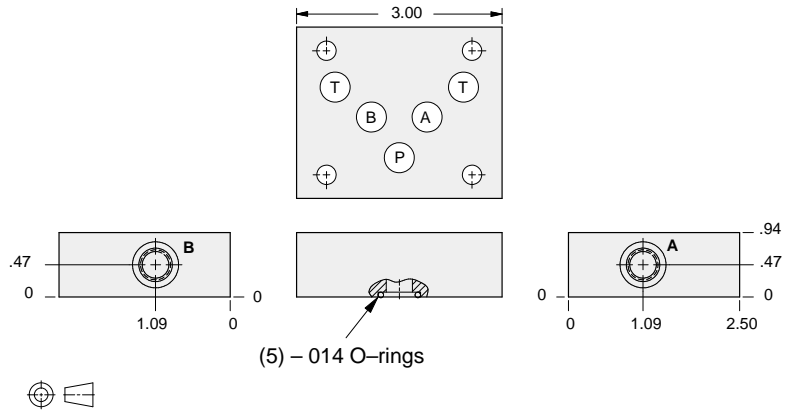
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

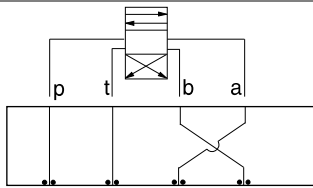
A and B
Tap in Manifold

Circuit Savers



External Ports	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	ZXD		ZXD/S	
SAE-4	ZPR		ZPR/S	
.25 BSPP	ZVD		ZVD/S	

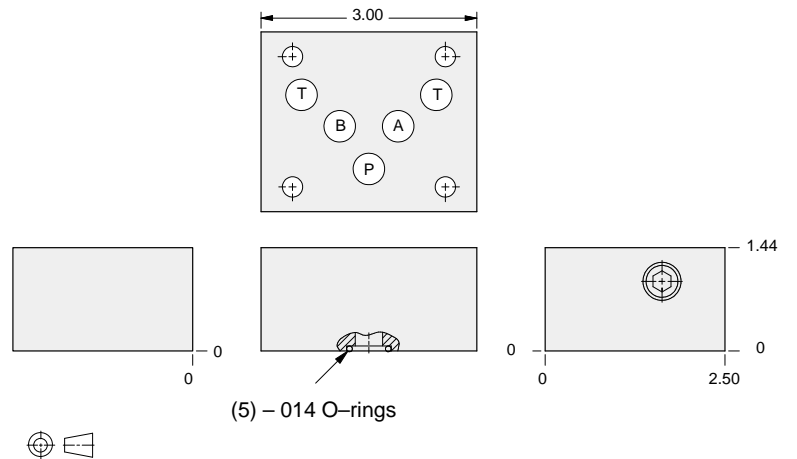
05 CIRCUIT SAVER



FUNCTION

Swap Block
Swaps A and B

Circuit Savers



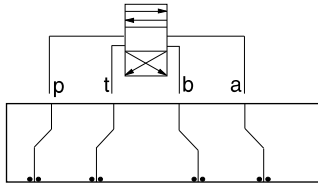
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
ZTB		ZTB/S	



ISO 05 SANDWICH BODIES



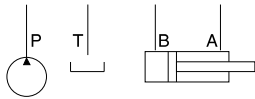
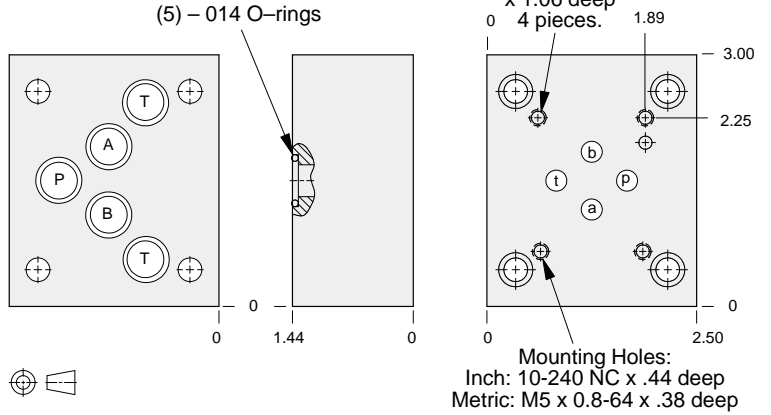
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

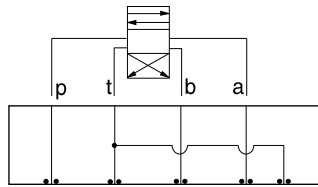
Adapter to Next Smaller Valve Pattern

Circuit Savers



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
ZWU		ZWU/S	
ZWT		ZWT/S	

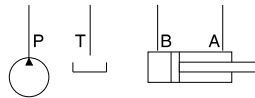
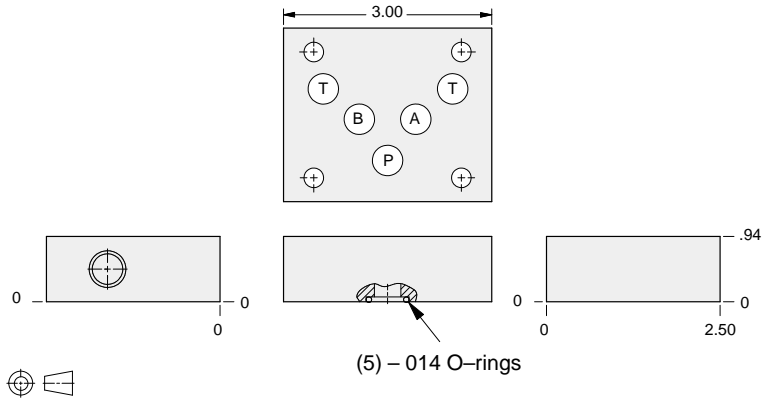
05 CIRCUIT SAVER



FUNCTION

ISO 05 to ISO 05 with Dual Tank Ports

Circuit Savers



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
ZXC		ZXC/S	

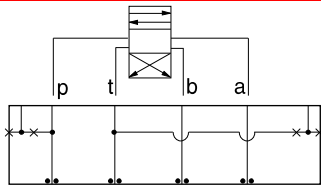


ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

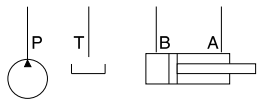
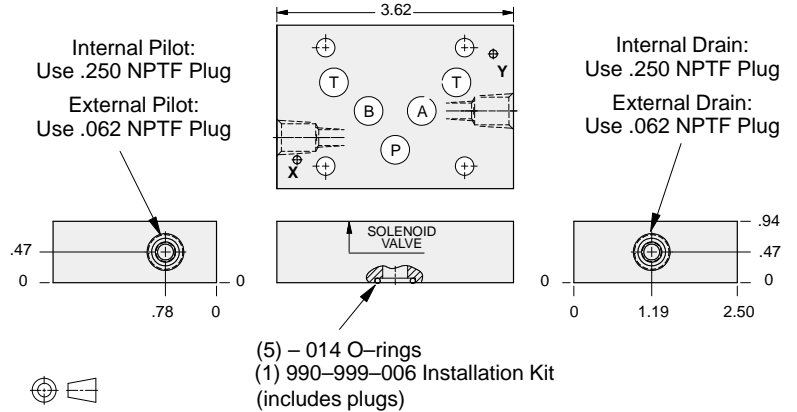
05 CIRCUIT SAVER



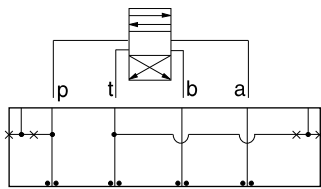
FUNCTION

ISO 05 to ISO 05
with **X** and **Y**
Access to **X** and **Y** (Amer)

Circuit Savers



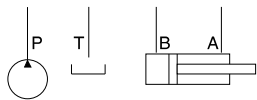
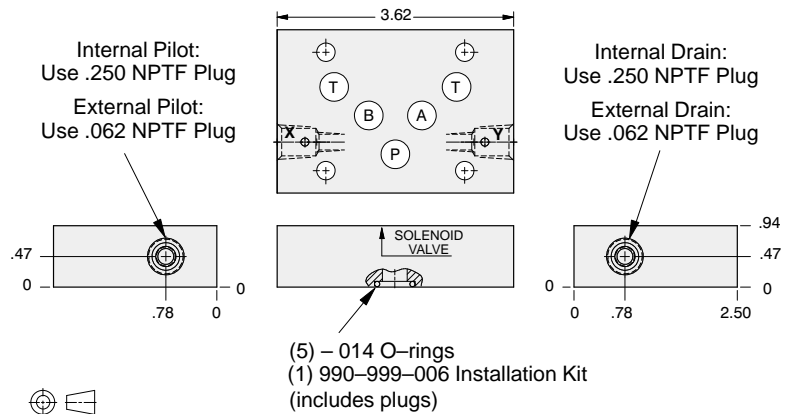
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
ZSV		ZSV/S	



FUNCTION

ISO 05 to ISO 05
with **X** and **Y**
Access to **X** and **Y** (Euro)

Circuit Savers



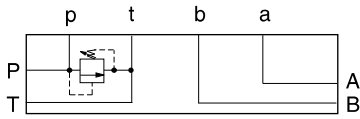
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
ZST		ZST/S	



ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

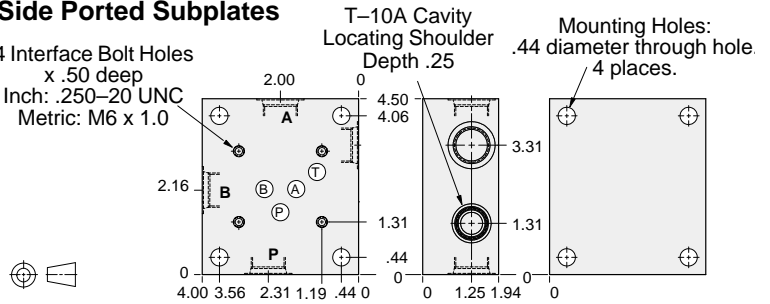


FUNCTION

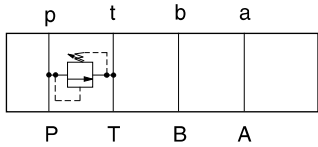
Relief P to T

Side Ported Subplates

4 Interface Bolt Holes
x .50 deep
Inch: .250-20 UNC
Metric: M6 x 1.0



Bolt Hole Interface	Ports A,B,P,T	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
Inch	.50 NPTF	FSC		FSC/S	
Inch	SAE-10	FSK		FSK/S	
Metric	.50 BSPP	FSV		FSV/S	

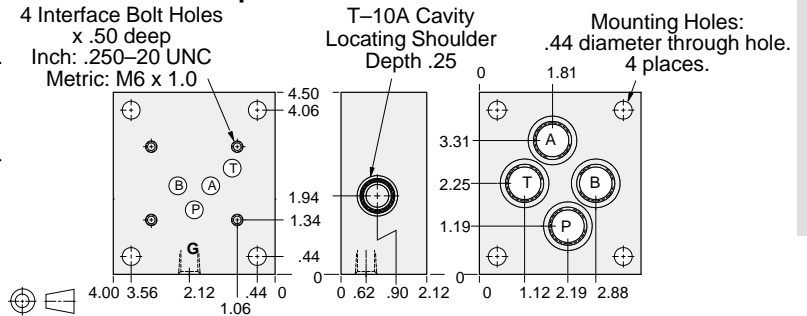


FUNCTION

Relief P to T

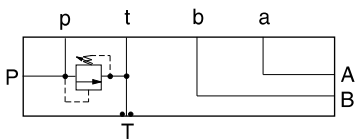
Rear Ported Subplates

4 Interface Bolt Holes
x .50 deep
Inch: .250-20 UNC
Metric: M6 x 1.0



Bolt Hole Interface	Gauge Port	Ports A,B,P,T	ALUMINUM		DUCTILE IRON	
			Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	.50 NPTF	FRC		FRC/S	
Inch	.25 NPTF	SAE-10	FRK		FRK/S	
Metric	.25 BSPP	.50 BSPP	FRV		FRV/S	

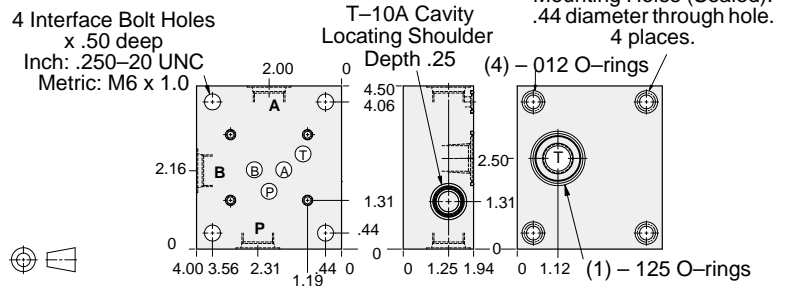
Side Ported Subplates with Gasket Mount Tank Port



FUNCTION

Relief P to T

4 Interface Bolt Holes
x .50 deep
Inch: .250-20 UNC
Metric: M6 x 1.0



Bolt Hole Interface	Ports A,B,P	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
Inch	.50 NPTF	FTC		FTC/S	
Inch	SAE-10	FTK		FTK/S	
Metric	.50 BSPP	FTV		FTV/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve RPEC Page 1.06		Pilot Operated "Kick-Down" Relief Valve RQEB Page 1.12
	Pilot Operated, Rapid Response Relief Valve RPEE Page 1.08		Direct Acting Relief Valve RDDA Page 1.10

05 SUBPLATE



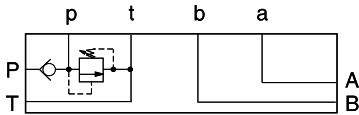
ISO 05 SANDWICH BODIES



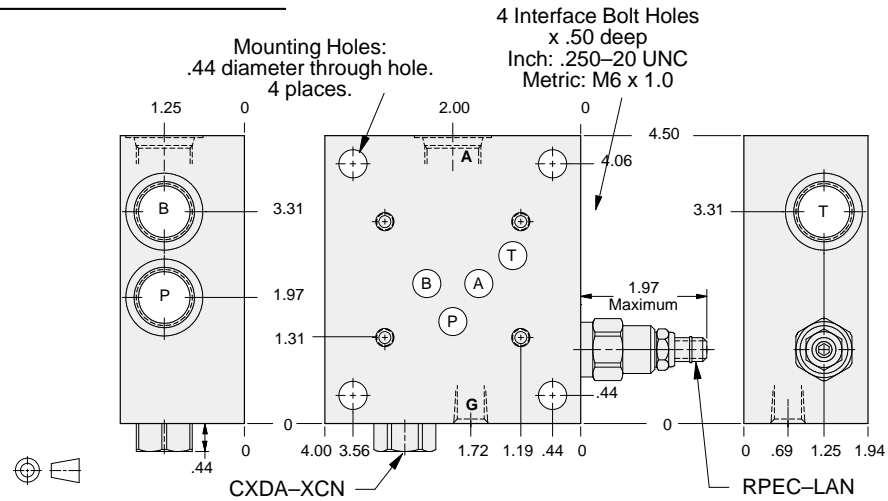
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Side Ported Subplates

FUNCTION



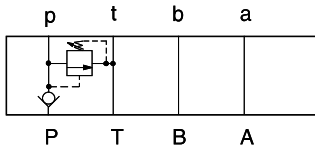
Relief P to T
Check on P



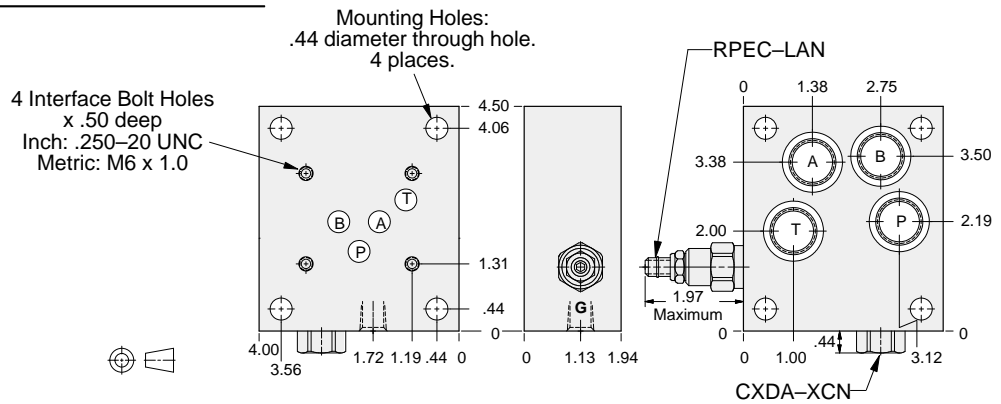
Bolt Hole Interface	Gage Port	Ports A,B,P,T	ALUMINUM		DUCTILE IRON	
			Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	.50 NPTF	YREJ-LAN-BC		YREJ-LAN-BC/S	
Inch	.25 NPTF	SAE-10	YREJ-LAN-BK		YREJ-LAN-BK/S	
Metric	.25 BSPP	.50 BSPP	YREJ-LAN-BV		YREJ-LAN-BV/S	

Rear Ported Subplates

FUNCTION



Relief P to T
Check on P



Bolt Hole Interface	Gage Port	Ports A,B,P,T	ALUMINUM		DUCTILE IRON	
			Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	.50 NPTF	YREQ-LAN-BC		YREQ-LAN-BC/S	
Inch	.25 NPTF	SAE-10	YREQ-LAN-BK		YREQ-LAN-BK/S	
Metric	.25 BSPP	.50 BSPP	YREQ-LAN-BV		YREQ-LAN-BV/S	

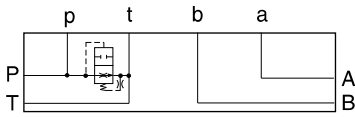


ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

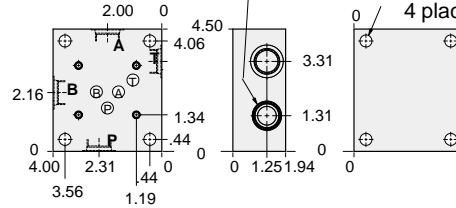
Side Ported Subplates



FUNCTION

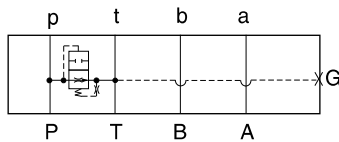
Air-Bleed and Start-Up

T-3A Cavity
Locating Shoulder
Depth .03
Mounting Holes:
.44 diameter through hole.
4 places.



Bolt Hole Interface	Ports A,B,P,T	ALUMINIUM		SG IRON	
		Model Code	List Price	Model Code	List Price
Inch	.50 NPTF	CSC		CSC/S	
Inch	SAE-10	CSK		CSK/S	
Metric	.50 BSPP	CSV		CSV/S	

Rear Ported Subplates



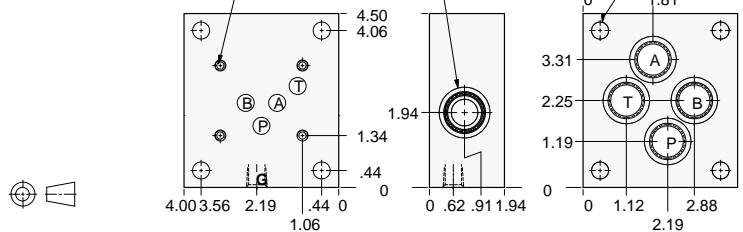
FUNCTION

Air-Bleed and Start-Up

4 Interface Bolt Holes
x .50 deep
Inch: .250-20 UNC
Metric: M6 x 1.0

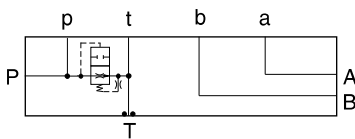
T-3A Cavity
Locating Shoulder
Depth .03

Mounting Holes:
.44 diameter through hole.
4 places.



Bolt Hole Interface	Gage Port	Ports A,B,P,T	ALUMINIUM		SG IRON	
			Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	.50 NPTF	CRC		CRC/S	
Inch	.25 NPTF	SAE-10	CRK		CRK/S	
Metric	.25 BSPP	.50 BSPP	CRV		CRV/S	

Side Ported Subplates with Gasket Mount Tank Port



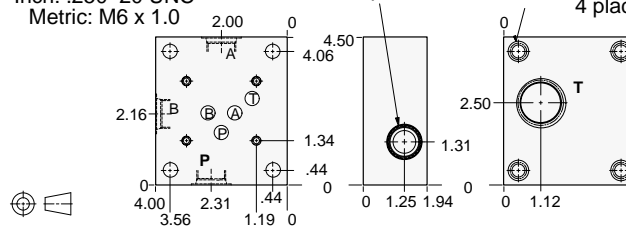
FUNCTION

Air-Bleed and Start-Up

4 Interface Bolt Holes
x .50 deep
Inch: .250-20 UNC
Metric: M6 x 1.0

T-3A Cavity
Locating Shoulder
Depth .03

Mounting Holes:
.44 diameter through hole.
4 places.



Bolt Hole Interface	Ports P, A, B	Port T	ALUMINIUM		SG IRON	
			Model Code	List Price	Model Code	List Price
Inch	.50 NPTF	.50 NPTF	CTC		CTC/S	
Inch	SAE-10	.50 NPTF	CTK		CTK/S	
Metric	.50 BSPP	.50 BSPP	CTV		CTV/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Air Bleed and Start-up Valve		
	NQEB Page 10.16		

05 SUBPLATE



ISO 05 SANDWICH BODIES



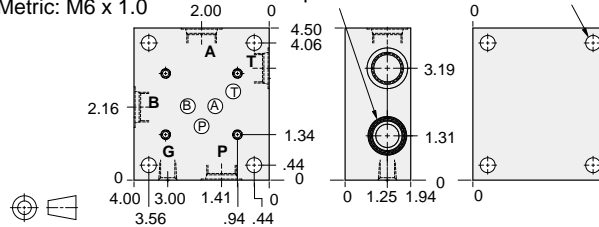
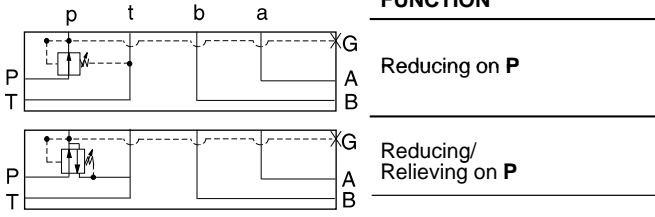
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Side Ported Subplates

4 Interface Bolt Holes
x .50 deep
Inch: .250-20 UNC
Metric: M6 x 1.0

T-2A Cavity
Locating Shoulder
Depth .72

Mounting Holes:
.44 diameter through hole.
4 places.



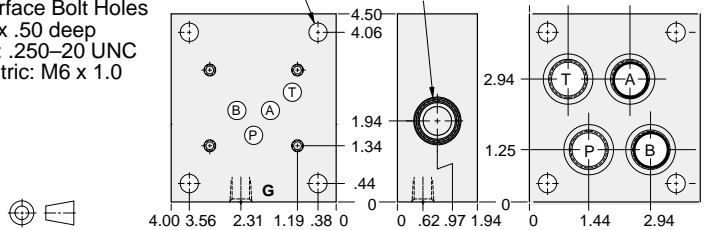
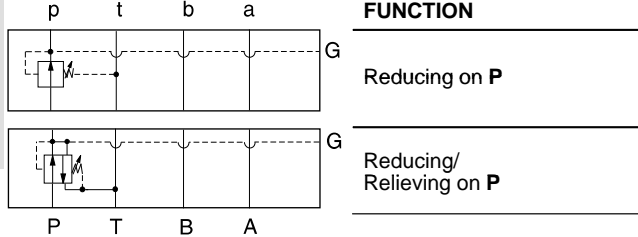
Gage Port (Plugged)	Gage Port	Ports A,B,P,T	ALUMINUM		DUCTILE IRON	
			Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	.50 NPTF	BSC		BSC/S	
Inch	.25 NPTF	SAE-10	BSK		BSK/S	
Metric	.25 BSPP	.50 BSPP	BSV		BSV/S	

Rear Ported Subplates

Mounting Holes:
.44 diameter through hole.
4 places.

T-2A Cavity
Locating Shoulder
Depth .72

4 Interface Bolt Holes
x .50 deep
Inch: .250-20 UNC
Metric: M6 x 1.0



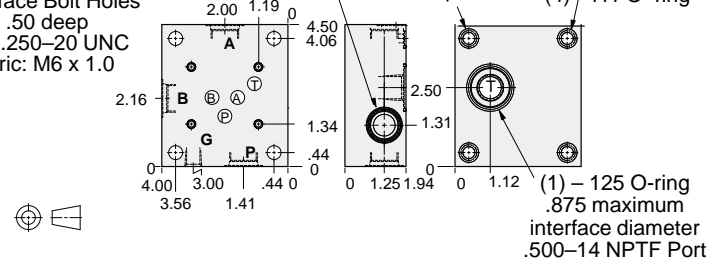
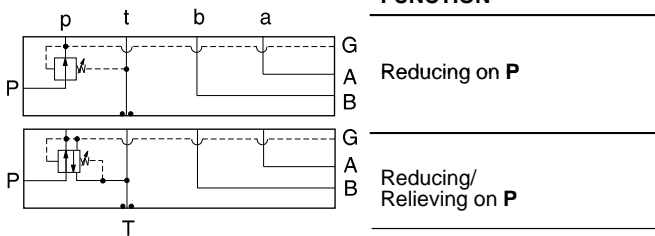
Gage Port (Plugged)	Gage Port	Ports A,B,P,T	ALUMINUM		DUCTILE IRON	
			Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	.50 NPTF	BRC		BRC/S	
Inch	.25 NPTF	SAE-10	BRK		BRK/S	
Metric	.25 BSPP	.50 BSPP	BRV		BRV/S	

Side Ported Subplates with Gasket Mount Tank Port

T-2A Cavity
Locating Shoulder
Depth .72

Mounting Holes (Sealed):
.44 diameter through hole.
4 places. (4) -111 O-ring

4 Interface Bolt Holes
x .50 deep
Inch: .250-20 UNC
Metric: M6 x 1.0



Gage Port (Plugged)	Gage Port	Ports A,B,P	ALUMINUM		DUCTILE IRON	
			Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	.50 NPTF	BTC		BTC/S	
Inch	.25 NPTF	SAE-10	BTK		BTK/S	
Metric	.25 BSPP	.50 BSPP	BTV		BTV/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Reducing Valve PBFB Page 3.06		Pilot Operated Reducing/Relieving Valve PPFB Page 3.10
--	-------------------------------------------------	--	-----------------------------------------------------------



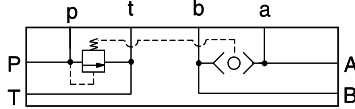
ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

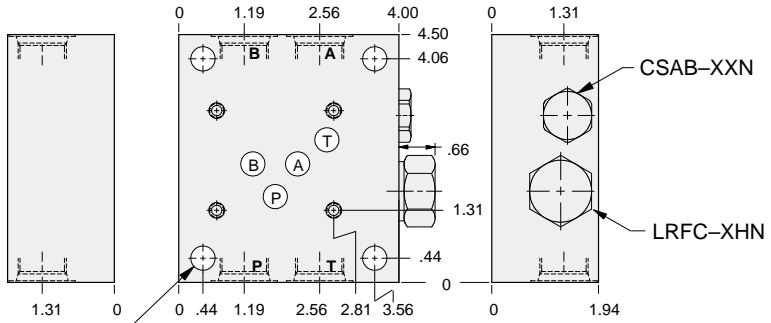
Side Ported Subplates

FUNCTION



Bypass
Compensator
for Proportional
Valves

4 Interface Bolt Holes
x .50 deep
Inch: .250-20 UNC
Metric: M6 x 1.0



Mounting Holes:
.44 diameter through hole.
4 places.

Bolt Hole Interface	Ports A,B,P,T	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
Inch	.50 NPTF	YFES-XHN-BC		YFES-XHN-BC/S	
Inch	SAE-10	YFES-XHN-BK		YFES-XHN-BK/S	
Metric	.50 BSPP	YFES-XHN-BV		YFES-XHN-BV/S	

05 SUBPLATE



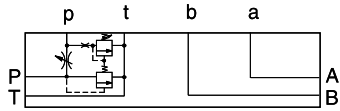
ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

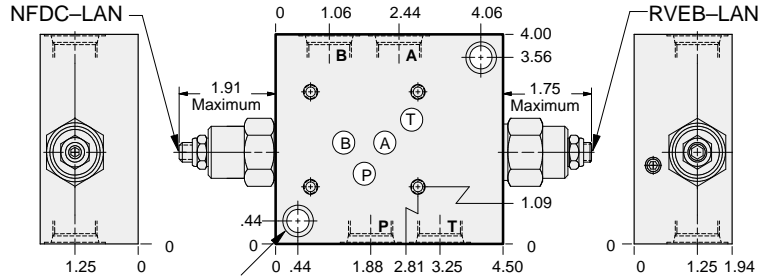
Side Ported Subplates

FUNCTION



Relief P to T
and Bypass
Flow Regulator

4 Interface Bolt Holes
x .50 deep
Inch: .250-20 UNC
Metric: M6 x 1.0



Mounting Holes:
.47 diameter through hole.
Counterbore .69 diameter x .44 in. deep.
2 places.



Bolt Hole Interface	Ports A,B,P,T	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
Inch	.50 NPTF	YFED-LAN-BC		YFED-LAN-BC/S	
Inch	SAE-10	YFED-LAN-BK		YFED-LAN-BK/S	
Metric	.50 BSPP	YFED-LAN-BV		YFED-LAN-BV/S	

05 SUBPLATE



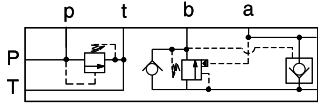
ISO 05 SANDWICH BODIES



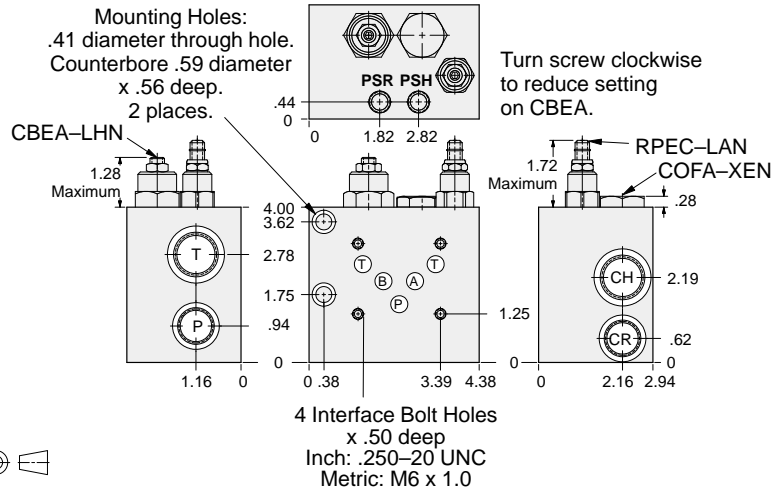
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Side Ported Subplates

FUNCTION



A Relief P to T
Regenerative
B to A



Bolt Hole Interface	Ports			ALUMINUM		DUCTILE IRON	
	P,CR	T,CH	PSH,PSR	Model Code	List Price	Model Code	List Price
Inch	.50 NPTF	.75 NPTF	.25 NPTF	YDEM-LHN-BD		YDEM-LHN-BD/S	
Inch	SAE-10	SAE-12	.25 NPTF	YDEM-LHN-BL		YDEM-LHN-BL/S	
Metric	.50 BSPP	.75 BSPP	.25 BSPP	YDEM-LHN-BW		YDEM-LHN-BW/S	

05 SUBPLATE

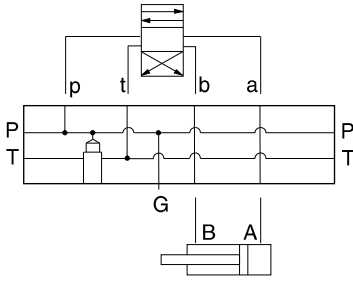


BAR MANIFOLDS



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

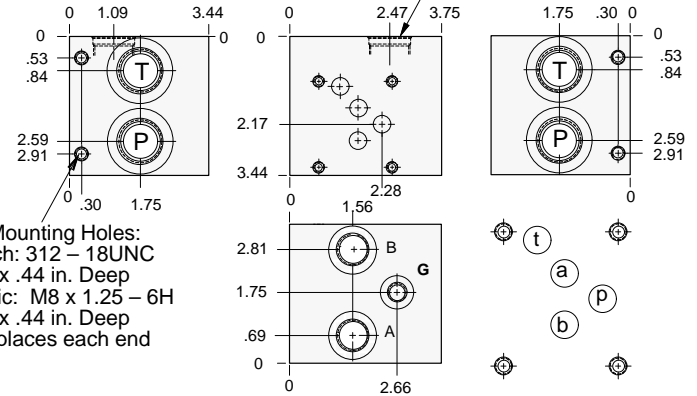
ISO 05 Parallel Circuit with Relief Cavity



FUNCTION

One Station

T-3A Cavity
Locating Shoulder
Depth .03



Mounting Holes:
Inch: 312 - 18UNC
x .44 in. Deep
Metric: M8 x 1.25 - 6H
x .44 in. Deep
2 places each end

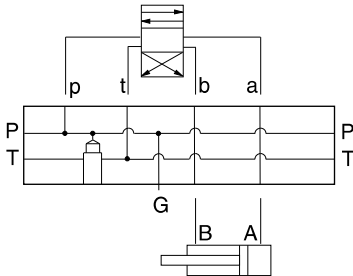


Mounting Holes	Ports P, T	Ports A, B	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
inch	.75 NPTF	.50 NPTF	.25 NPTF	VPL		VPL/S	
inch	SAE-12	SAE-8	SAE-4	VPT		VPT/S	
metric	.75 BSPP	.50 BSPP	.25 BSPP	VNA		VNA/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

BARMANIFOLD

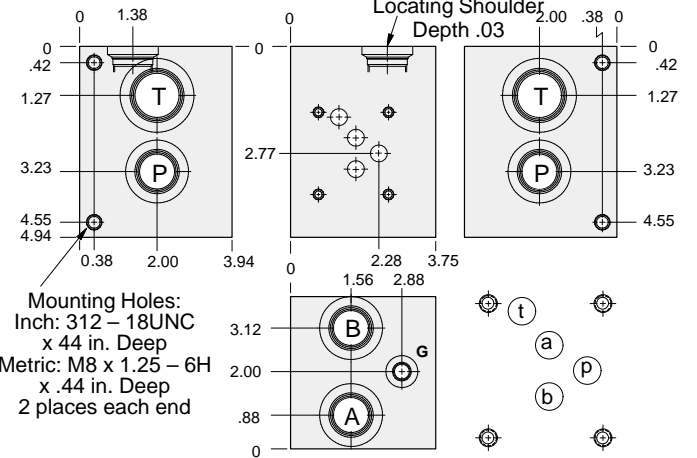
ISO 05 Parallel Circuit with Relief Cavity



FUNCTION

One Station
(High Capacity)

T-3A Cavity
Locating Shoulder
Depth .03



Mounting Holes:
Inch: 312 - 18UNC
x .44 in. Deep
Metric: M8 x 1.25 - 6H
x .44 in. Deep
2 places each end



Mounting Holes	Port T	Ports A, B, P	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	VNG		VNG/S	
inch	SAE-16	SAE-12	SAE-4	VNN		VNN/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	VNW		VNW/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Direct Acting Relief Valve
	RPGC Page 1.06		RDFA Page 1.10
OTHER VALVES:			

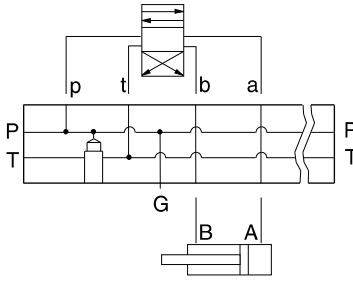


BAR MANIFOLDS



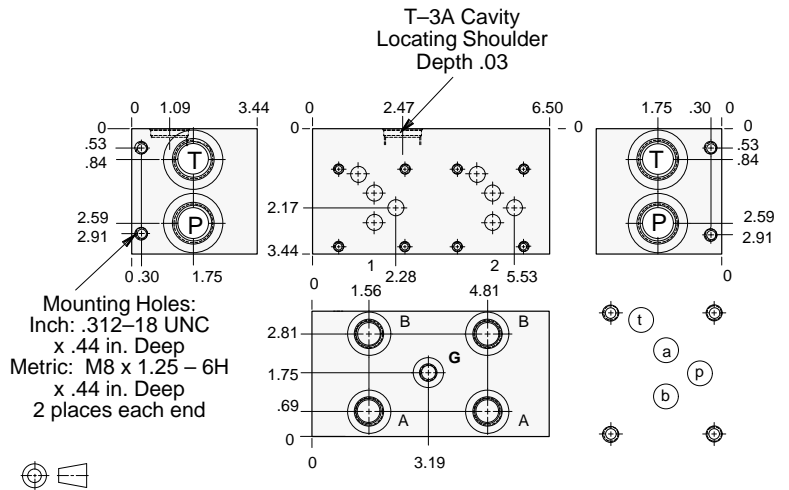
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

ISO 05 Parallel Circuit with Relief Cavity



FUNCTION

Two Station

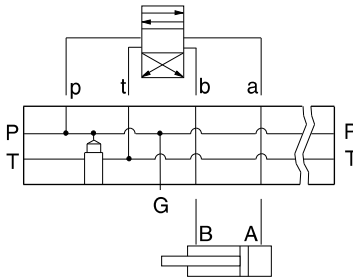


Mounting Holes	Ports P, T	Ports A, B	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
inch	.75 NPTF	.50 NPTF	.25 NPTF	VPM		VPM/S	
inch	SAE-12	SAE-8	SAE-4	VPV		VPV/S	
metric	.75 BSPP	.50 BSPP	.25 BSPP	VNB		VNB/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

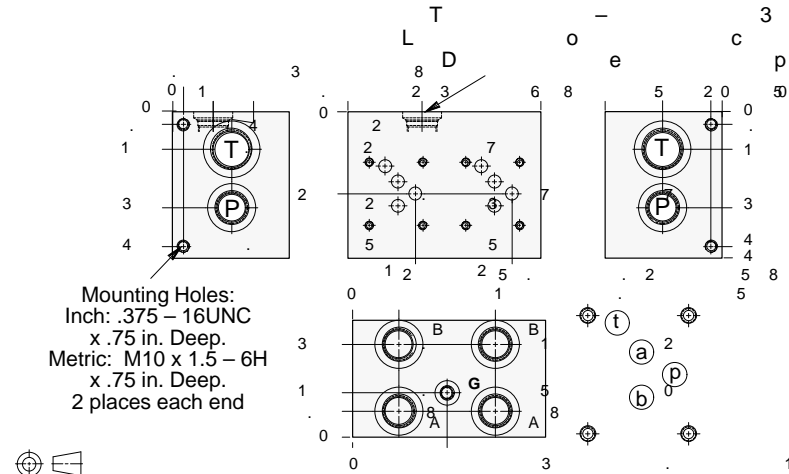
BARMANIFOLD

ISO 05 Parallel Circuit with Relief Cavity



FUNCTION

Two Station
(High Capacity)



Mounting Holes	Port T	Ports A, B, P	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	VNH		VNH/S	
inch	SAE-16	SAE-12	SAE-4	VNP		VNP/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	VNX		VNX/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Direct Acting Relief Valve
	RPGC Page 1.06		RDFA Page 1.10
OTHER VALVES:			

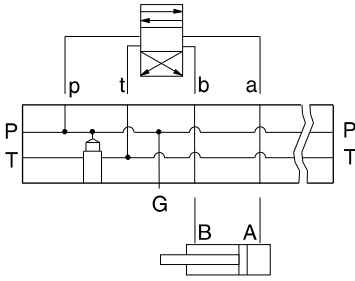


BAR MANIFOLDS



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

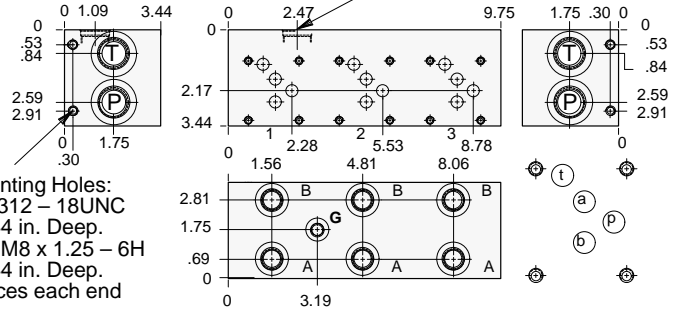
ISO 05 Parallel Circuit with Relief Cavity



FUNCTION

Three Station

T-3A Cavity
Locating Shoulder
Depth .03



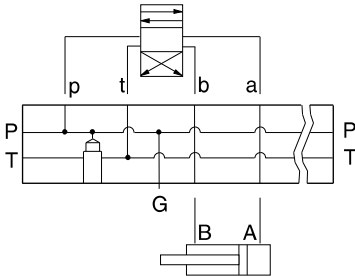
Mounting Holes:
Inch: 312 - 18UNC
x .44 in. Deep.
Metric: M8 x 1.25 - 6H
x .44 in. Deep.
2 places each end



Mounting Holes	Ports P, T	Ports A, B	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
inch	.75 NPTF	.50 NPTF	.25 NPTF	VPN		VPN/S	
inch	SAE-12	SAE-8	SAE-4	VPW		VPW/S	
metric	.75 BSPP	.50 BSPP	.25 BSPP	VNC		VNC/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

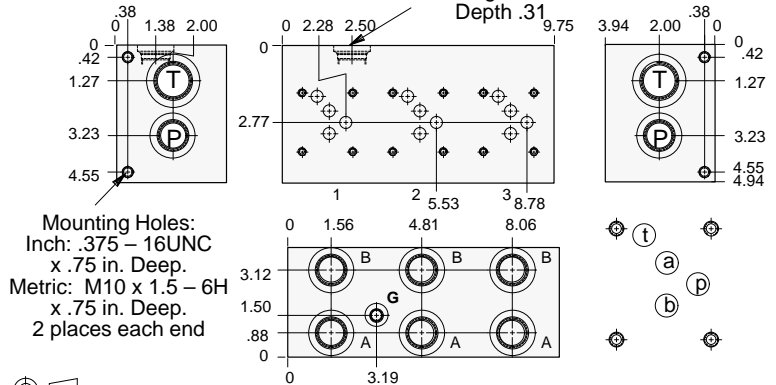
ISO 05 Parallel Circuit with Relief Cavity



FUNCTION

Three Station
(High Capacity)

T-3A Cavity
Locating Shoulder
Depth .31



Mounting Holes:
Inch: .375 - 16UNC
x .75 in. Deep.
Metric: M10 x 1.5 - 6H
x .75 in. Deep.
2 places each end



Mounting Holes	Port T	Ports A, B, P	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	VNJ		VNJ/S	
inch	SAE-16	SAE-12	SAE-4	VNR		VNR/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	VNY		VNY/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Direct Acting Relief Valve
	RPGC Page 1.06		RDFA Page 1.10
OTHER VALVES:			

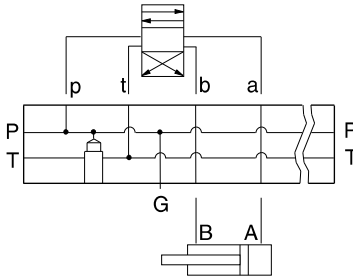


BAR MANIFOLDS



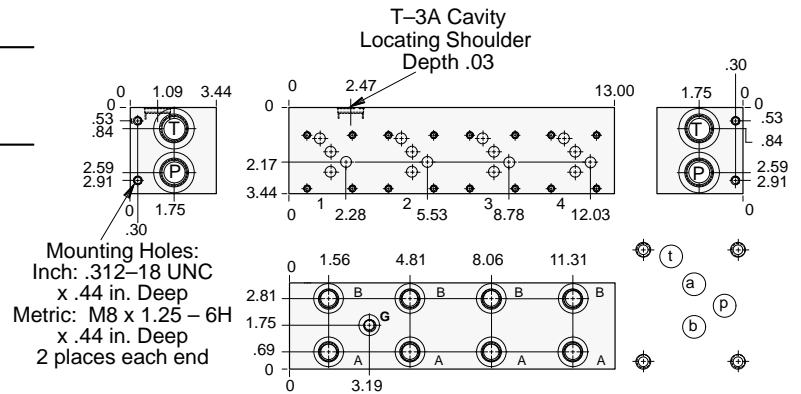
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

ISO 05 Parallel Circuit with Relief Cavity



FUNCTION

Four Station

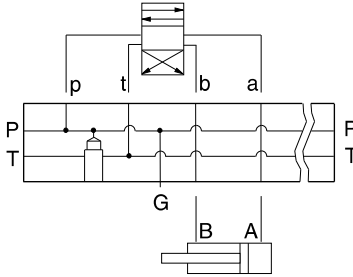


Mounting Holes	Ports P, T	Ports A, B	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
inch	.75 NPTF	.50 NPTF	.25 NPTF	VPP		VPP/S	
inch	SAE-12	SAE-8	SAE-4	VPX		VPX/S	
metric	.75 BSPP	.50 BSPP	.25 BSPP	VND		VND/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

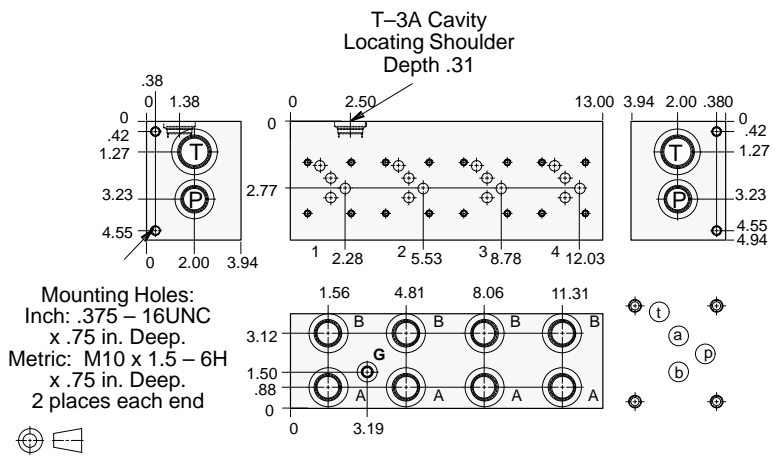
BARMANIFOLD

ISO 05 Parallel Circuit with Relief Cavity



FUNCTION

Four Station
(High Capacity)



Mounting Holes	Port T	Ports A, B, P	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	VNK		VNK/S	
inch	SAE-16	SAE-12	SAE-4	VNS		VNS/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	VNZ		VNZ/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

OTHER VALVES:	Pilot Operated Relief Valve	Direct Acting Relief Valve
	RPGC Page 1.06	RDFA Page 1.10

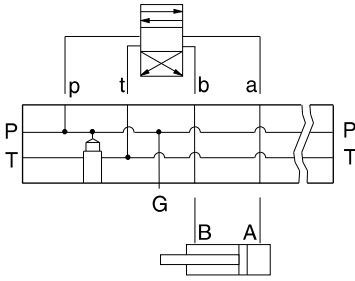


BAR MANIFOLDS



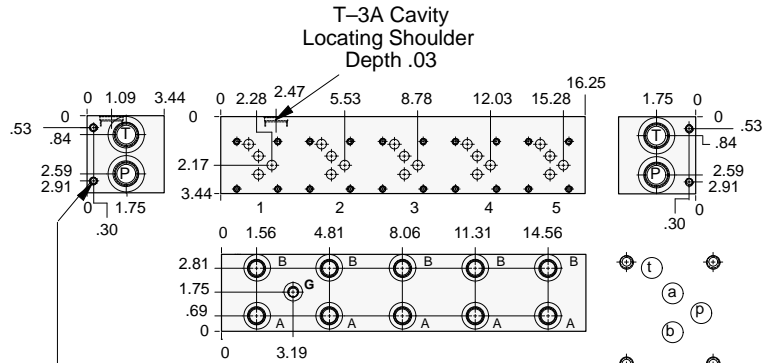
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

ISO 05 Parallel Circuit with Relief Cavity



FUNCTION

Five Station



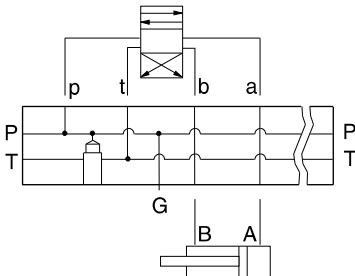
Mounting Holes:
 Inch: .312-18 UNC x .44 in. Deep
 Metric: M8 x 1.25 - 6H x .44 in. Deep
 2 places each end



Mounting Holes	Ports P, T	Ports A, B	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
inch	.75 NPTF	.50 NPTF	.25 NPTF	VPR		VPR/S	
inch	SAE-12	SAE-8	SAE-4	VPY		VPY/S	
metric	.75 BSPP	.50 BSPP	.25 BSPP	VNE		VNE/S	

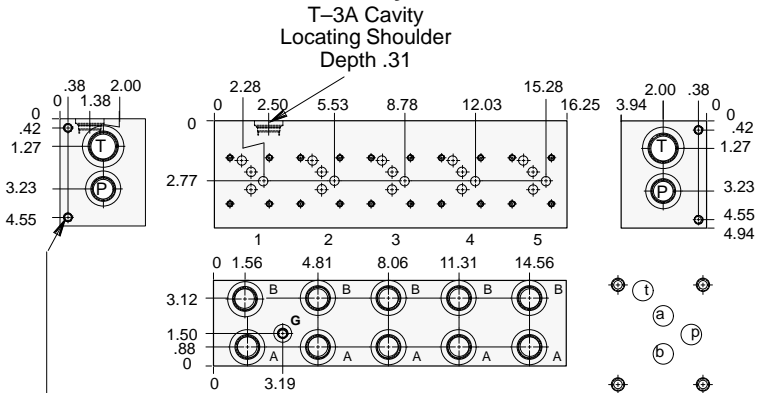
Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

ISO 05 Parallel Circuit with Relief Cavity



FUNCTION

Five Station
(High Capacity)



Mounting Holes:
 Inch: .375 - 16UNC x .75 in. Deep.
 Metric: M10 x 1.5 - 6H x .75 in. Deep.
 2 places each end



Mounting Holes	Port T	Ports A, B, P	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	VNL		VNL/S	
inch	SAE-16	SAE-12	SAE-4	VNT		VNT/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	VMA		VMA/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

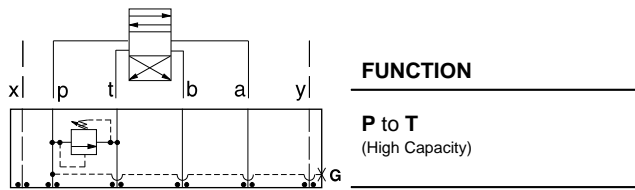
	Pilot Operated Relief Valve RPGC Page 1.06		Direct Acting Relief Valve RDFA Page 1.10
OTHER VALVES:			



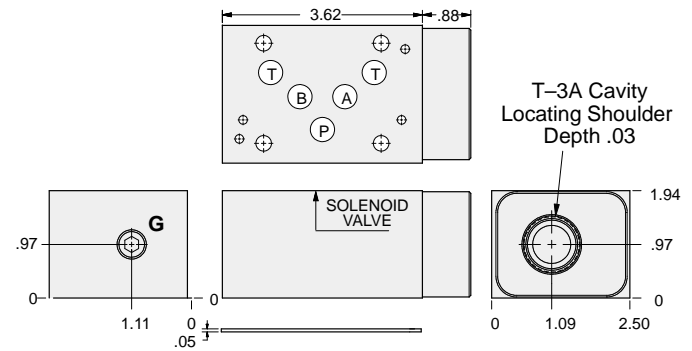
ISO 05 X,Y SANDWICH BODIES



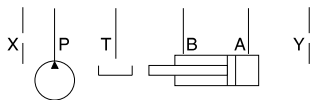
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



Relief Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CJP		CJP/S	
.25 BSPP	CJP/M		CJP/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Pilot Operated "Kick-Down" Relief Valve
	RPGC Page 1.06		RQGB Page 1.12
	Pilot Operated, Rapid Response Relief Valve		Air Controlled, Pilot Operated Relief Valve
	RPGE Page 1.08		RPGD Page 1.14
	Direct Acting Relief Valve		
	RDFA Page 1.10		
OTHER VALVES:			

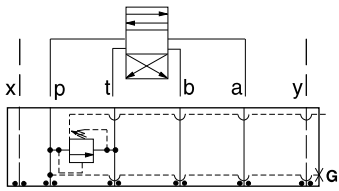
05xy RELIEF



ISO 05 X,Y SANDWICH BODIES



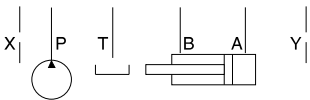
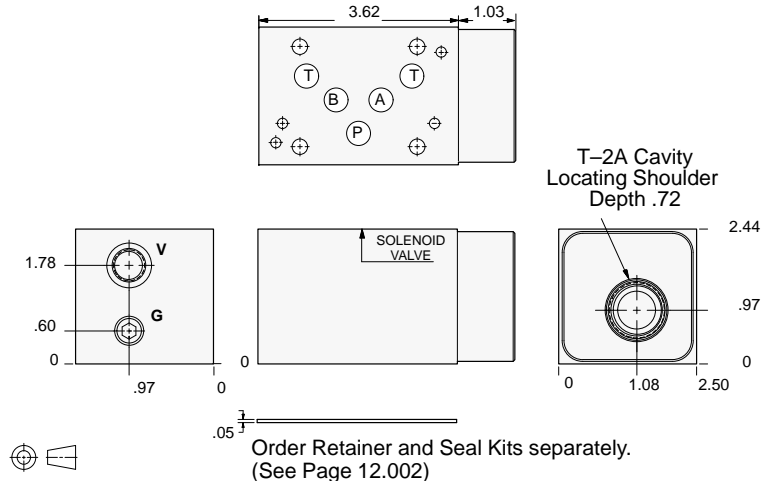
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

P to T
Externally Vented

Relief Valves



Gage Port (Plugged)	Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
.25 NPTF	SAE-6	BJC		BJC/S	
.25 BSPP	.25 BSPP	BJC/M		BJC/T	

05xy RELIEF

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

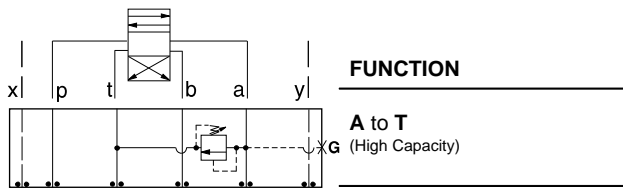
	<i>Pilot Operated Vented Relief Valve</i>		
	RVEA Page 1.18		
OTHER VALVES:			



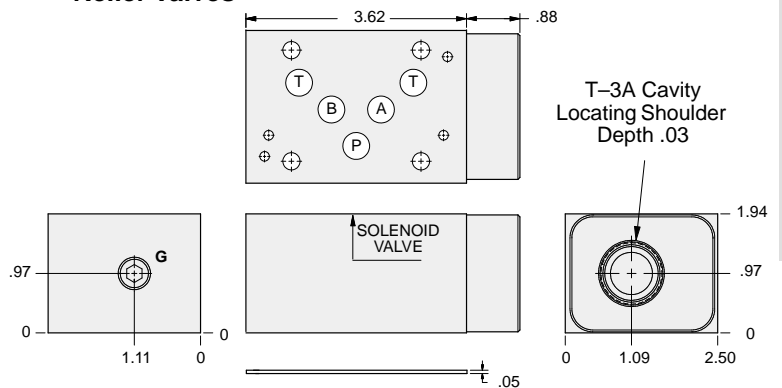
ISO 05 X,Y SANDWICH BODIES



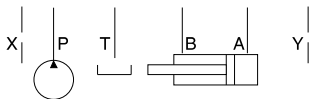
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



Relief Valves



05xy RELIEF



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Part Number	List Price
.25 NPTF	CJA		CJA/S	
.25 BSPP	CJA/M		CJA/T	

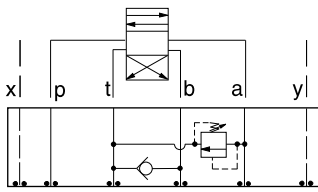
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Relief Valve RPGC Page 1.06		Pilot Operated "Kick-Down" Relief Valve RQGB Page 1.12
	Pilot Operated, Rapid Response Relief Valve RPGE Page 1.08		Air Controlled, Pilot Operated Relief Valve RPGD Page 1.14
	Direct Acting Relief Valve RDFA Page 1.10		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



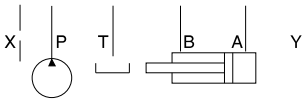
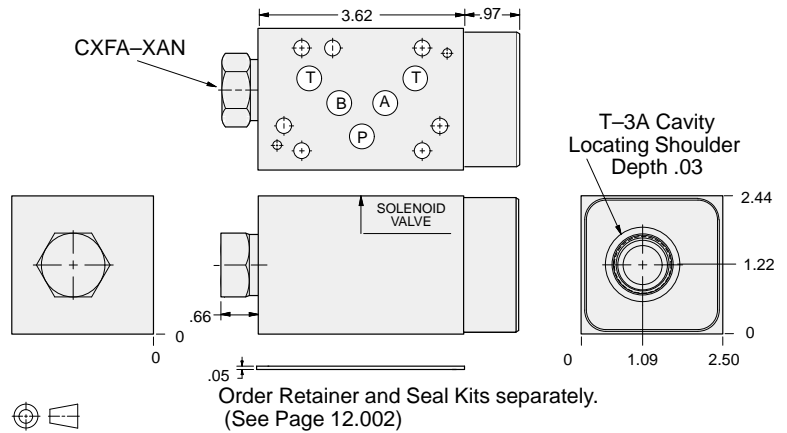
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

A to T
FF Check T to B

Relief Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CJ2		CJ2/S	

05xy RELIEF

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

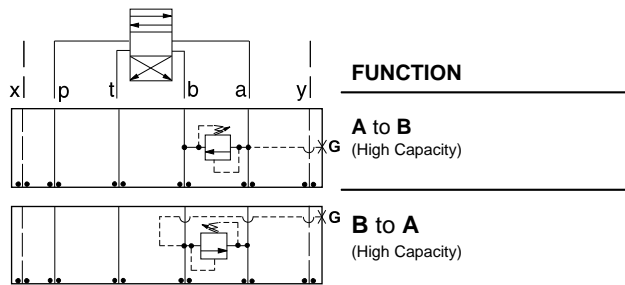
	<i>Pilot Operated Relief Valve</i>		<i>Pilot Operated "Kick-Down" Relief Valve</i>
	RPGC Page 1.06		RQGB Page 1.12
	<i>Pilot Operated, Rapid Response Relief Valve</i>		<i>Air Controlled, Pilot Operated Relief Valve</i>
	RPGE Page 1.08		RPGD Page 1.14
	<i>Direct Acting Relief Valve</i>		
	RDFA Page 1.10		
OTHER VALVES:			



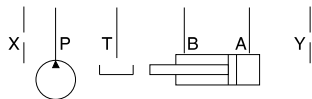
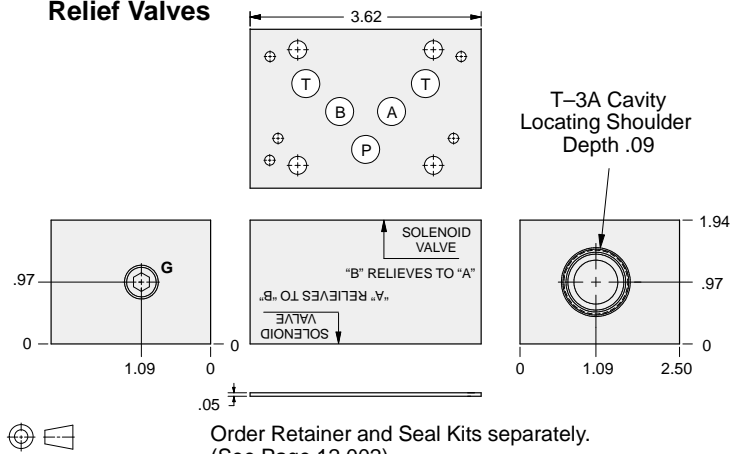
ISO 05 X,Y SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



Relief Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CJC		CJC/S	
.25 BSPP	CJC/M		CJC/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve RPGC Page 1.06		Pilot Operated "Kick-Down" Relief Valve RQGB Page 1.12
	Pilot Operated, Rapid Response Relief Valve RPGE Page 1.08		Air Controlled, Pilot Operated Relief Valve RPGD Page 1.14
	Direct Acting Relief Valve RDFA Page 1.10		
OTHER VALVES:			

05xy RELIEF

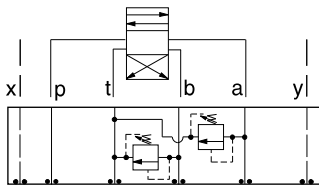


ISO 05 X,Y SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

05xy RELIEF

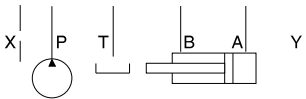
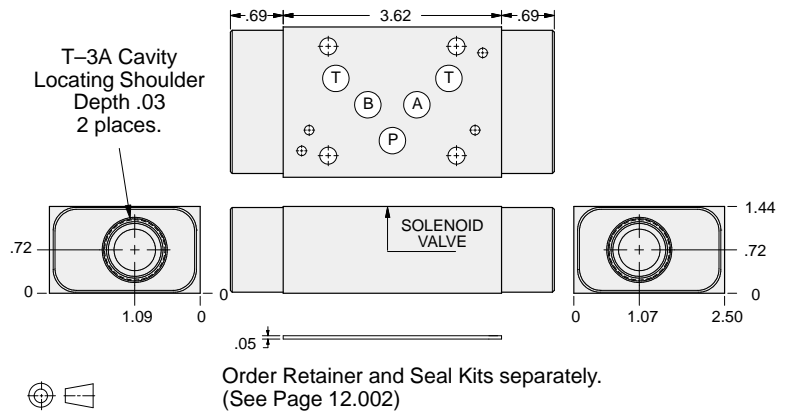


FUNCTION

A and B to T
(High Capacity)

Relief Valves

T-3A Cavity
Locating Shoulder
Depth .03
2 places.



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CJX		CJX/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

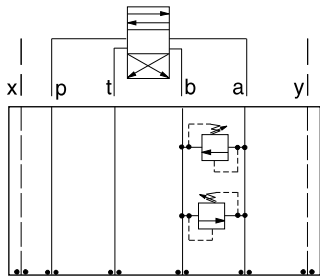
	<i>Pilot Operated Relief Valve</i> RPGC Page 1.06		<i>Pilot Operated "Kick-Down" Relief Valve</i> RQGB Page 1.12
	<i>Pilot Operated, Rapid Response Relief Valve</i> RPGE Page 1.08		<i>Air Controlled, Pilot Operated Relief Valve</i> RPGD Page 1.14
	<i>Direct Acting Relief Valve</i> RDFA Page 1.10		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

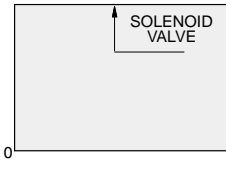
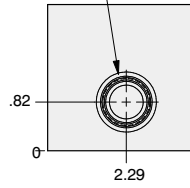
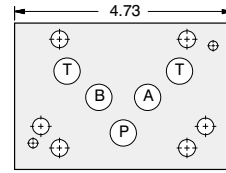


FUNCTION

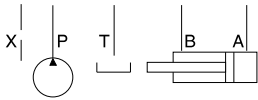
A to B and B to A
(Cross-Port)

Relief Valves

T-10A Cavity
Locating Shoulder
Depth .38
2 places.



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CJY		CJY/S	

05xy RELIEF

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	<i>Pilot Operated Relief Valve</i>		<i>Pilot Operated "Kick-Down" Relief Valve</i>
	RPEC Page 1.06		RQEB Page 1.12
	<i>Pilot Operated, Rapid Response Relief Valve</i>		
	RPEE Page 1.08		
	<i>Direct Acting Relief Valve</i>		
	RDDA Page 1.10		
OTHER VALVES:			

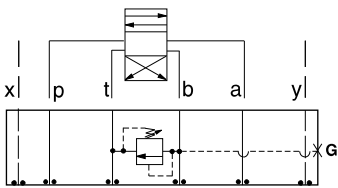


ISO 05 X,Y SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

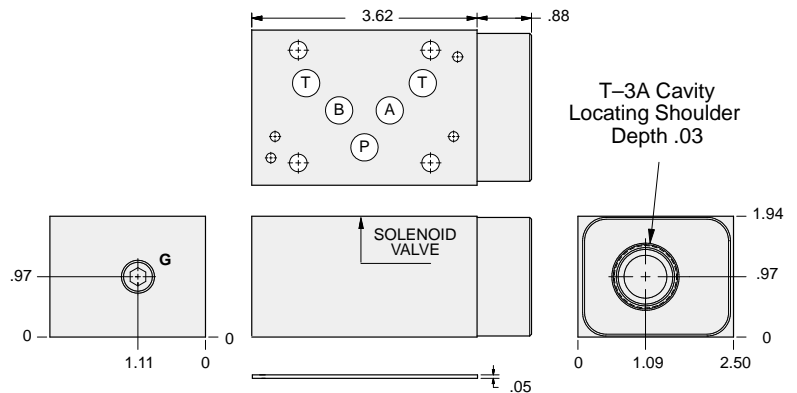
05xy RELIEF



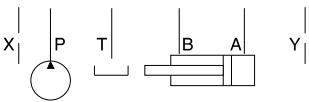
FUNCTION

B to T
(High Capacity)

Relief Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CJB		CJB/S	
.25 BSPP	CJB/M		CJB/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Relief Valve RPGC Page 1.06		Pilot Operated "Kick-Down" Relief Valve RQGB Page 1.12
	Pilot Operated, Rapid Response Relief Valve RPGE Page 1.08		Air Controlled, Pilot Operated Relief Valve RPGD Page 1.14
	Direct Acting Relief Valve RDFA Page 1.10		
OTHER VALVES:			

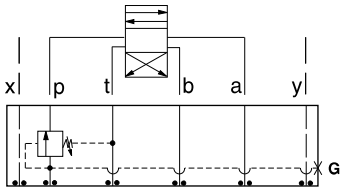




ISO 05 X,Y SANDWICH BODIES



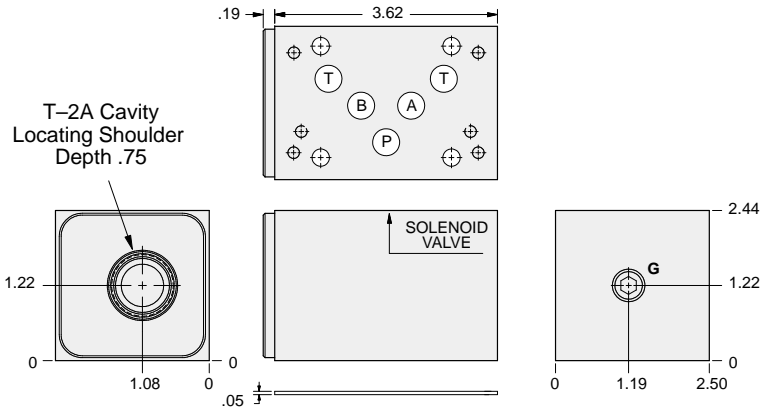
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



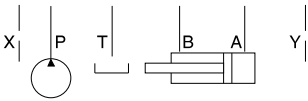
FUNCTION

In to P

Sequence Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BJW		BJW/S	
.25 BSPP	BJW/M		BJW/T	

05_{xy} SEQUENCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	<i>Pilot Operated Sequence Valve</i>		<i>Direct Acting Sequence Valve with Reverse Free Flow Check</i>
	RSFC Page 2.06		SCEA Page 2.12
	<i>Pilot Operated "Kick-Down" Sequence Valve</i>		
	SQFB Page 2.08		
	<i>Air Controlled, Pilot Operated Sequence Valve</i>		
	RSFE Page 2.10		
OTHER VALVES:			

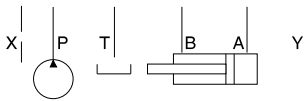
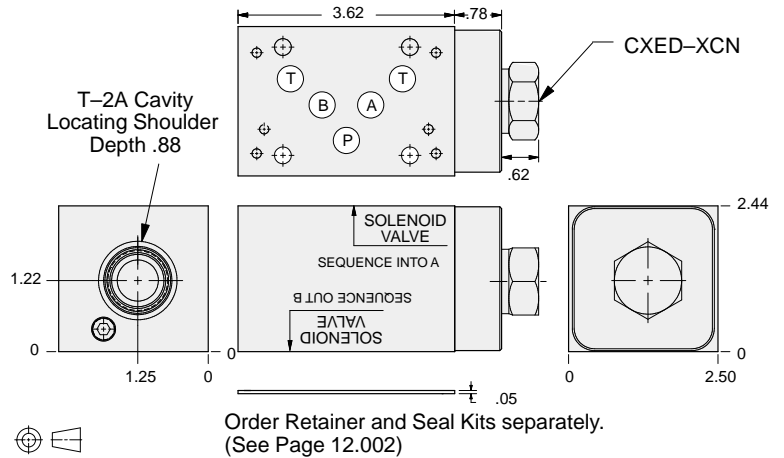
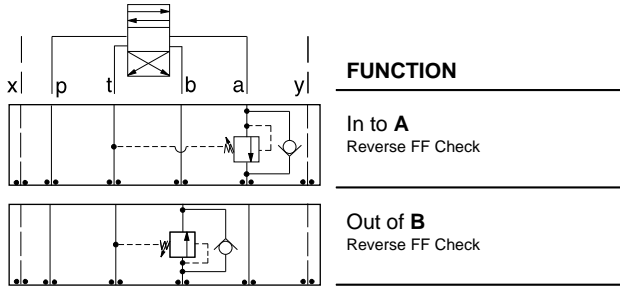


ISO 05 X,Y SANDWICH BODIES



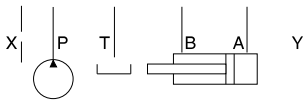
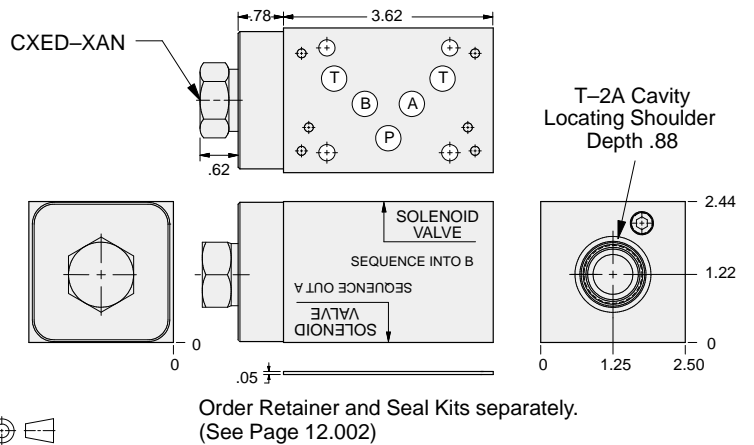
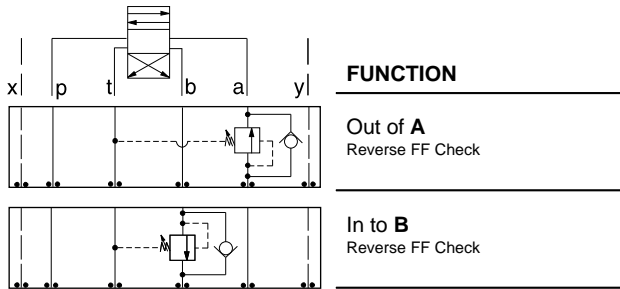
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Sequence Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BJ4		BJ4/S	

Sequence Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BJ5		BJ5/S	

05xy SEQUENCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Sequence Valve		
	RSFC Page 2.06		
	Pilot Operated "Kick-Down" Sequence Valve		
	SQFB Page 2.08		
	Air Controlled, Pilot Operated Sequence Valve		
	RSFE Page 2.10		
OTHER VALVES:			

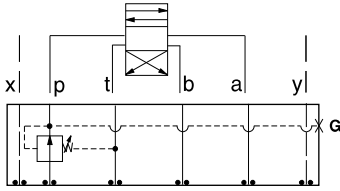


ISO 05 X,Y SANDWICH BODIES



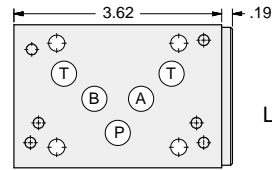
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing Valves

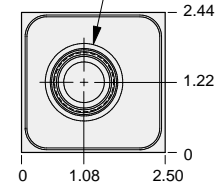
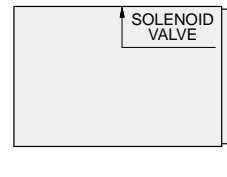
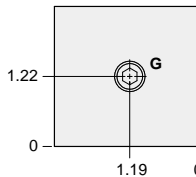


FUNCTION

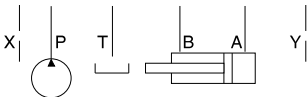
On P
Drained to T



T-2A Cavity
Locating Shoulder
Depth .75



Order Retainer and Seal Kits separately.
(See Page 12.002)



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BJP		BJP/S	
.25 BSPP	BJP/M		BJP/T	

05xy REDUCING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

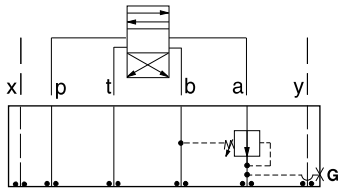
	<i>Pilot Operated Reducing Valve</i>		
	PBFB Page 3.06		
	<i>Air Controlled, Pilot Operated Reducing Valve</i>		
	PBFC Page 3.08		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



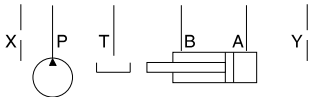
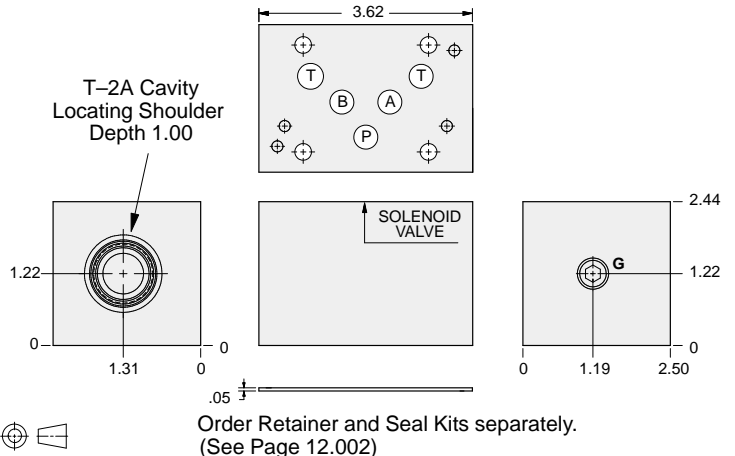
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On A
Drained to B

Reducing Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BJA		BJA/S	
.25 BSPP	BJA/M		BJA/T	

05xy REDUCING

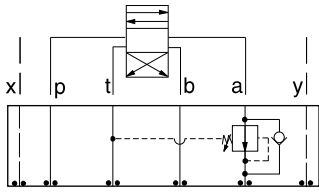
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing Valve		
	PBFB Page 3.06		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



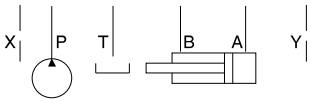
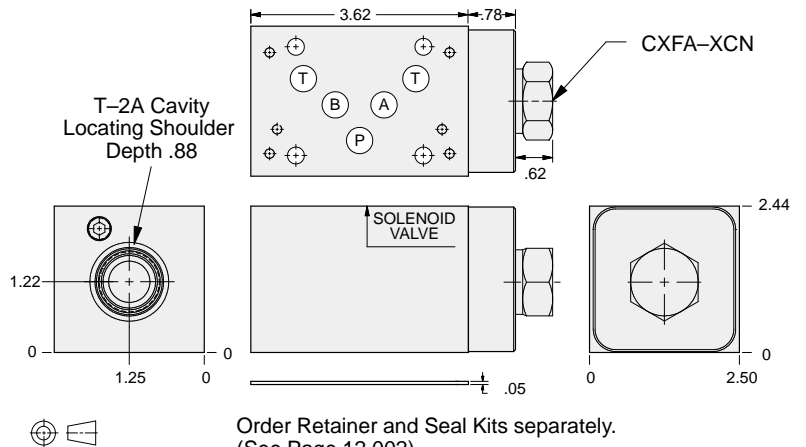
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



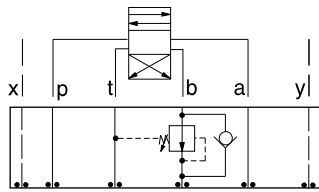
FUNCTION

On A Drain to T
Reverse FF Check

Reducing Valves



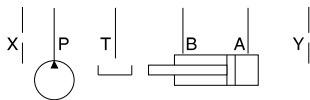
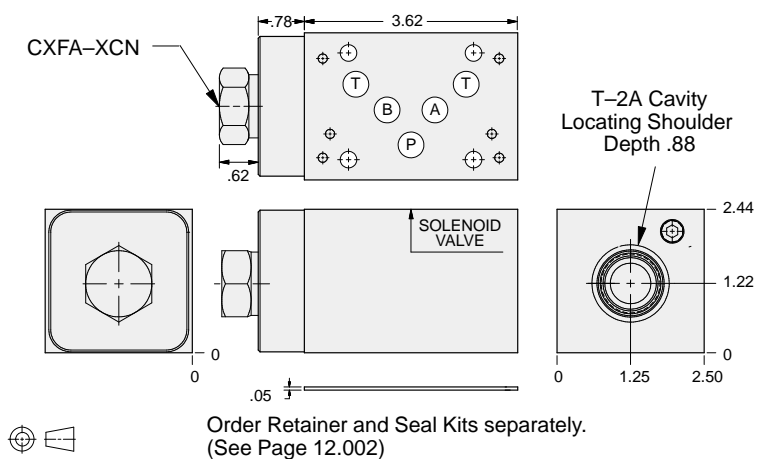
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BJ2		BJ2/S	



FUNCTION

On B Drain to T
Reverse FF Check

Reducing Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BJ3		BJ3/S	

05xy REDUCING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

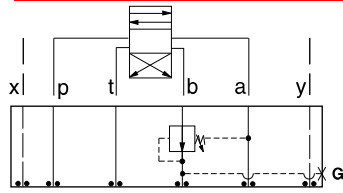
	Pilot Operated Reducing Valve		
	PBFB Page 3.06		
	Air Controlled, Pilot Operated Reducing/Relieving Valve		
	PBFC Page 3.08		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



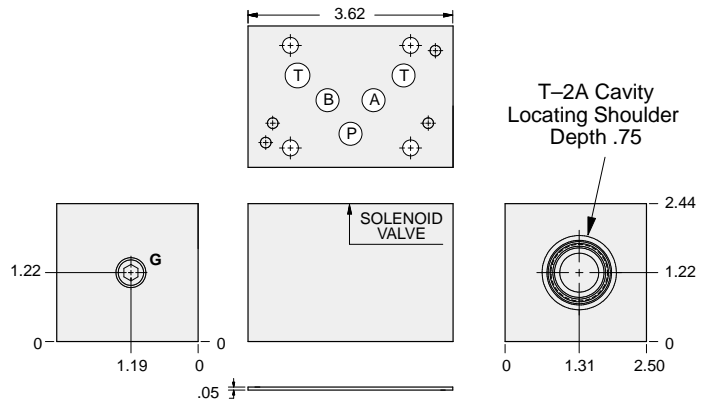
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



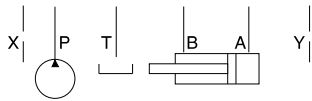
FUNCTION

On B
Drained to A

Reducing Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BJB		BJB/S	
.25 BSPP	BJB/M		BJB/T	

05xy REDUCING

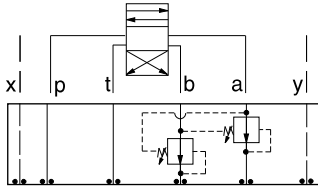
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing Valve		
	PBFB Page 3.06		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

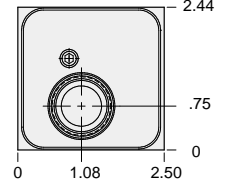
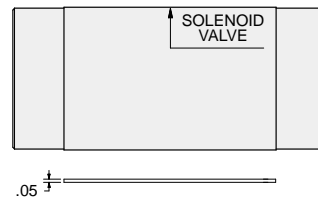
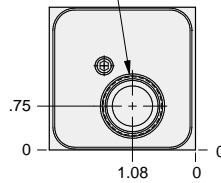
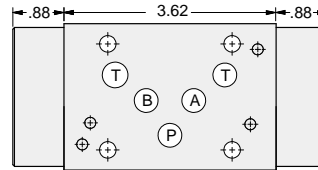


FUNCTION

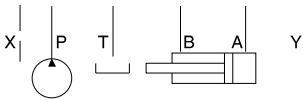
On **A** and **B**
Drains to Opposite Port

Reducing Valves

T-2A Cavity
Locating Shoulder
Depth .73
2 places.



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BJY		BJY/S	

05_{xy} REDUCING

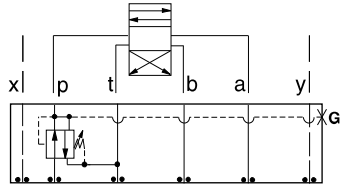
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	<i>Pilot Operated Reducing Valve</i>		
	PBFB Page 3.06		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES

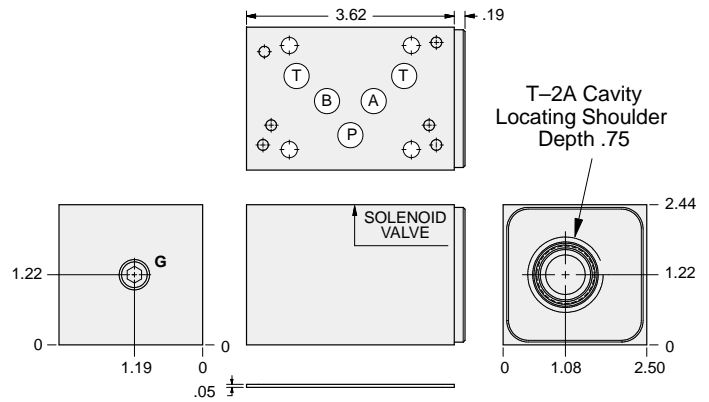


- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

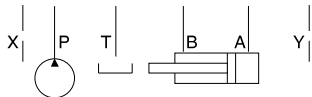


FUNCTION
 On P Tank to T
 Drained to T

Reducing/Relieving Valves



Order Retainer and Seal Kits separately.
 (See Page 12.002)



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BJP		BJP/S	
.25 BSPP	BJP/M		BJP/T	

05xy REDUCING/RELIEVING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing/Relieving Valve		
	PPFB Page 3.10		
	Air Controlled, Pilot Operated Reducing/Relieving Valve		
	PPFC Page 3.12		
OTHER VALVES:			

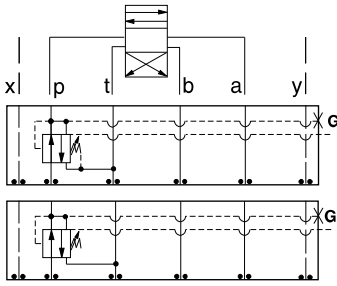


ISO 05 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

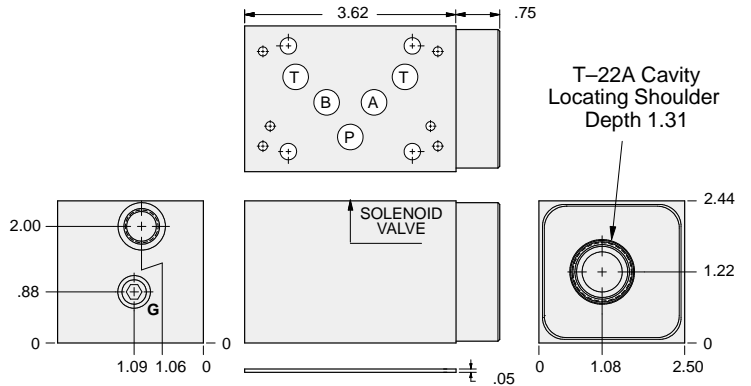
Reducing/Relieving Valves



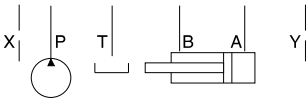
FUNCTION

On P Tank to T
Vented Externally

On P Tank to T
Drained Externally



Order Retainer and Seal Kits separately.
(See Page 12.002)



External Port	Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
SAE-6	.25 NPTF	NJP		NJP/S	
.25 BSPP	.25 BSPP	NJP/M		NJP/T	

05xyREDUCING/RELIEVING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Reducing/Relieving Valve with Drain Port		
	PVFA Page 3.14		
	Pilot Operated Reducing/Relieving Valve with Vent Port		
	PVFB Page 3.16		
OTHER VALVES:			

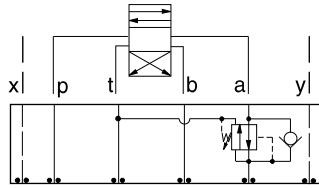


ISO 05 X,Y SANDWICH BODIES



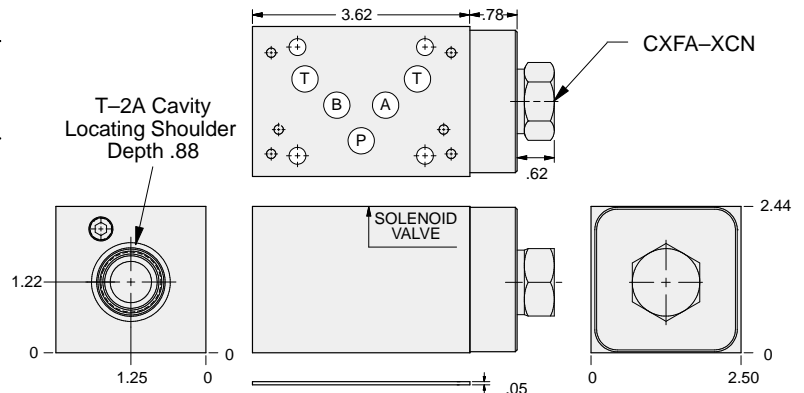
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing/Relieving Valves

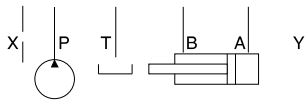


FUNCTION

On **A** Tank to **T**
Drained to **T**
Reverse FF Check

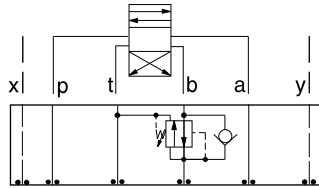


Order Retainer and Seal Kits separately.
(See Page 12.002)



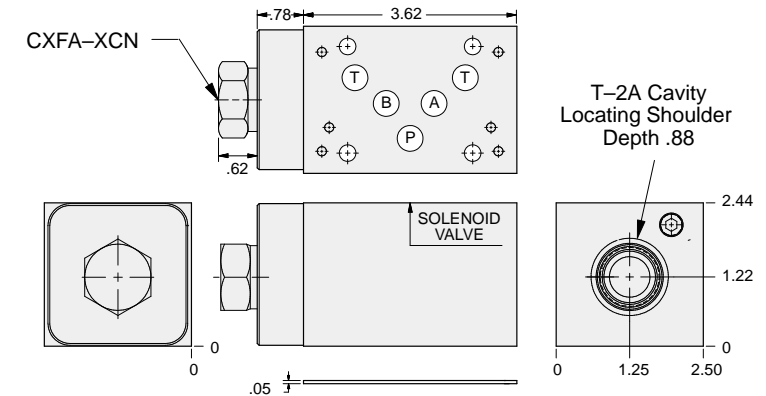
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BJ2		BJ2/S	

Reducing/Relieving Valves

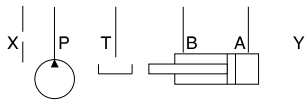


FUNCTION

On **B** Tank to **T**
Drained to **T**
Reverse FF Check



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BJ3		BJ3/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

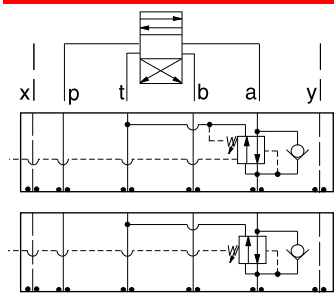
	Pilot Operated Reducing/Relieving Valve		
	PPFB Page 3.10		
	Air Controlled, Pilot Operated Reducing/Relieving Valve		
	PPFC Page 3.12		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

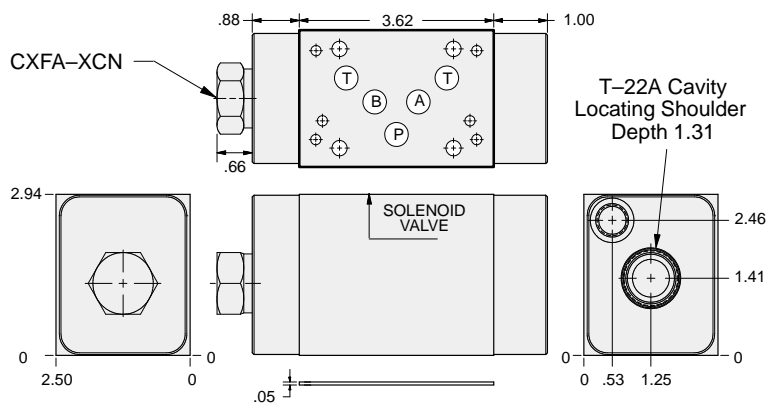


FUNCTION

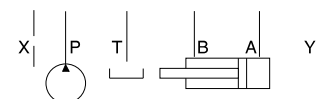
On A tank to T
Vented Externally
Reverse FF Check

On A tank to T
Drained Externally
Reverse FF Check

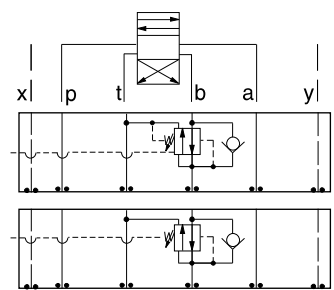
Reducing/Relieving Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



External Port	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
SAE-6	NJ2		NJ2/S	
.25 BSPP	NJ2/M		NJ2/T	

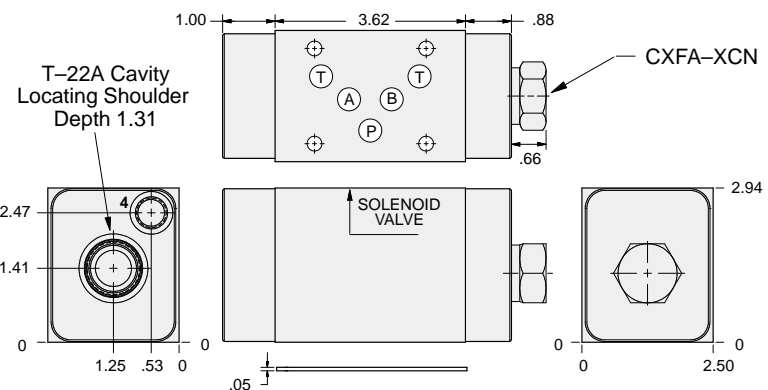


FUNCTION

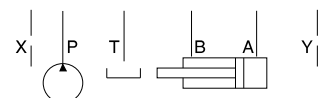
On B Tank to T
Vented Externally
Reverse FF Check

On B Tank to T
Drained Externally
Reverse FF Check

Reducing/Relieving Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



Mounting Holes	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
SAE-6	NJ3		NJ3/S	
.25 BSPP	NJ3/M		NJ3/T	

05xy REDUCING/RELIEVING

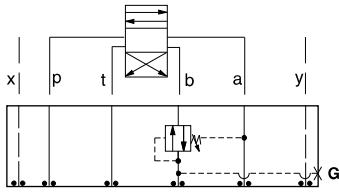
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing/Relieving Valve with Drain Port		
	PVFA Page 3.14		
	Pilot Operated Reducing/Relieving Valve with Vent Port		
	PVFB Page 3.16		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



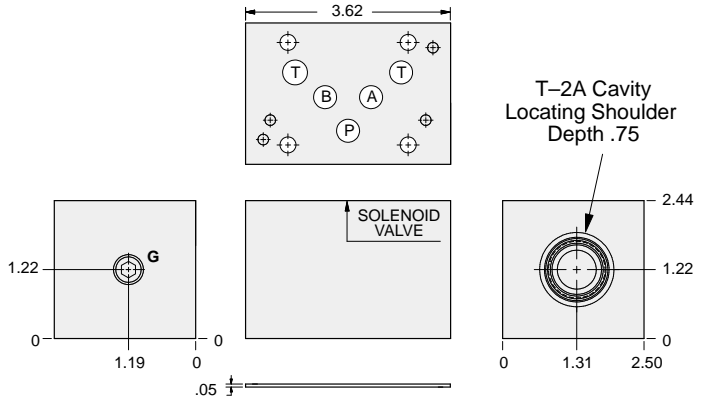
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



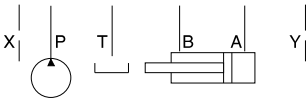
FUNCTION

On **B** Tank to **A**
Drained to **A**

Reducing/Relieving Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BJB		BJB/S	
.25 BSPP	BJB/M		BJB/T	

05xyREDUCING/RELIEVING

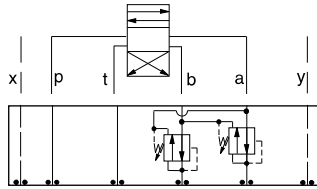
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing/Relieving Valve		
	PPFB Page 3.10		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



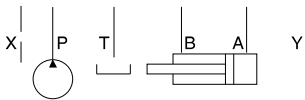
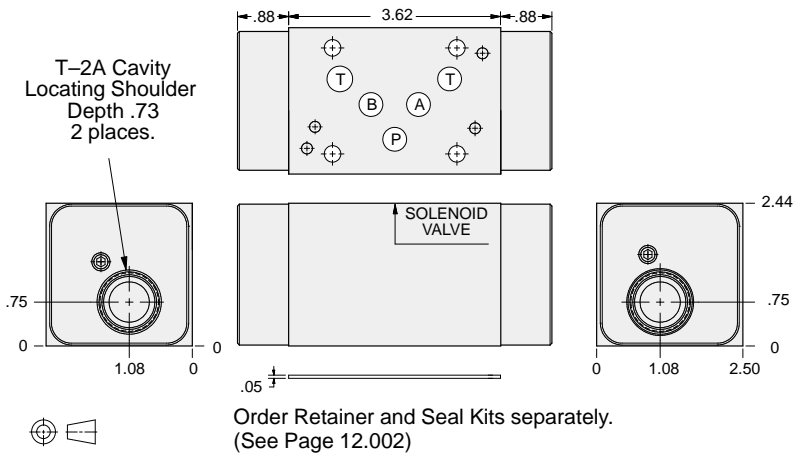
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On **A** and **B**
Tanks and Drains to
Opposite Port

Reducing/Relieving Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BJY		BJY/S	

05xy REDUCING/RELIEVING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing/Relieving Valve		
	PPFB Page 3.10		
OTHER VALVES:			

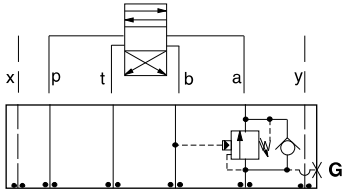


ISO 05 X,Y SANDWICH BODIES



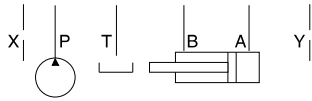
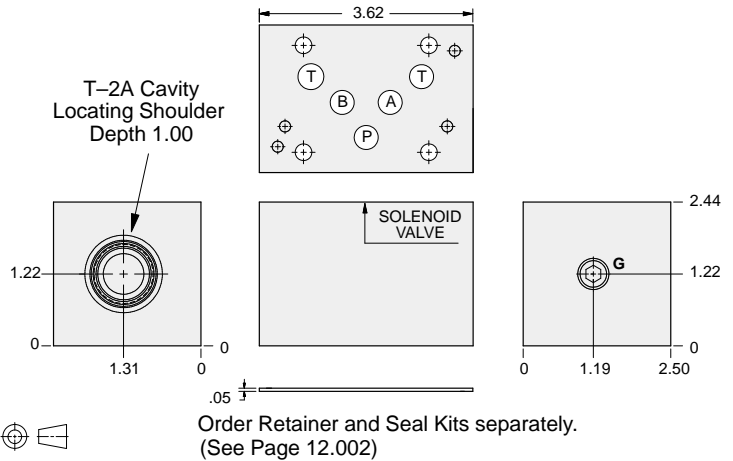
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Counterbalance Valves



FUNCTION

On A Pilot
from B



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BJA		BJA/S	
.25 BSPP	BJA/M		BJA/T	

05xy COUNTERBALANCE

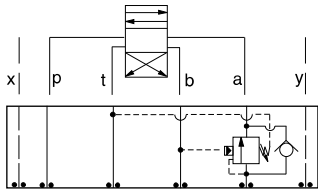
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Counterbalance Valve, 3:1 Pilot Ratio		
	CBEA Page 4.10		
	Counterbalance Valve, 4.5:1 Pilot Ratio		
	CBEG Page 4.12		
	Counterbalance Valve, 10:1 Pilot Ratio		
	CBEH Page 4.14		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



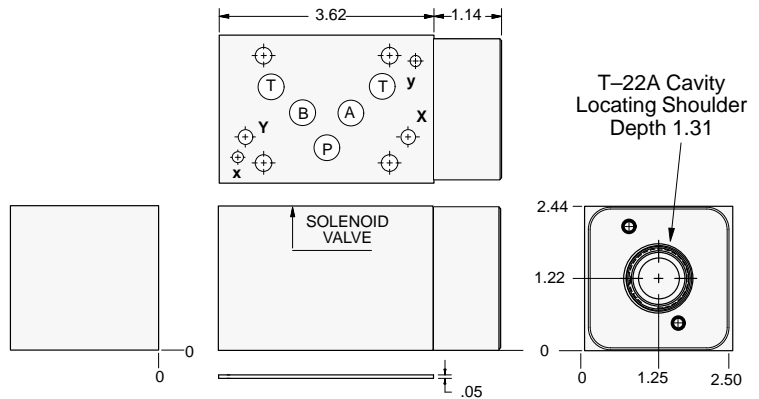
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



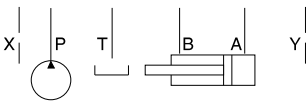
FUNCTION

On A Pilot
from B
Vent to T

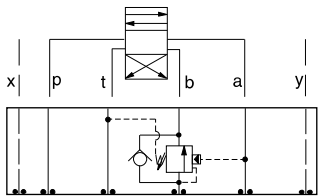
Counterbalance Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



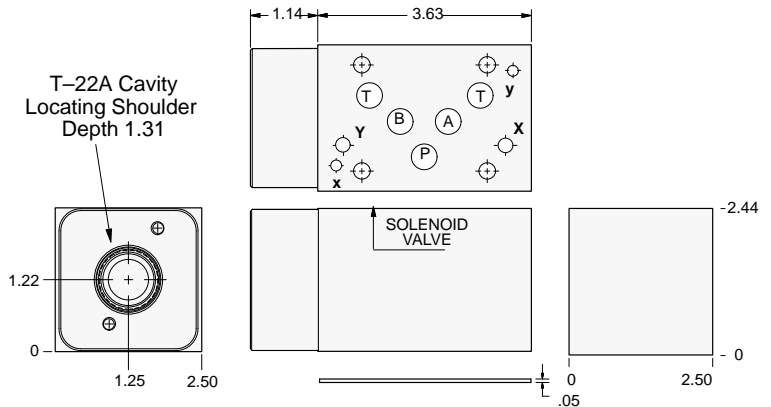
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
NJA		NJA/S	



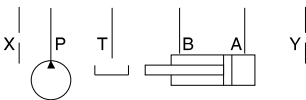
FUNCTION

On B Pilot from A
Vent to T

Counterbalance Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
NJB		NJB/S	

05xy COUNTERBALANCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

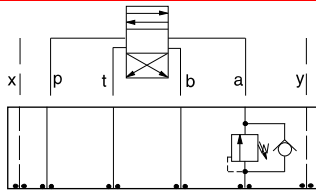
	Vented Counterbalance Valve, 3:1 Pilot Ratio		
	CWEA Page 4.18		
	Vented Counterbalance Valve, 5:1 Pilot Ratio		
	CWEG Page 4.20		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



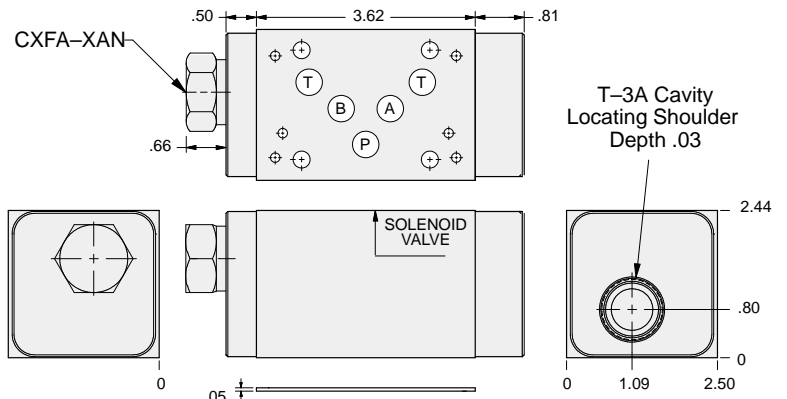
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



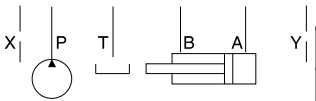
FUNCTION

On A
No Pilot Assist

Counterbalance Valves

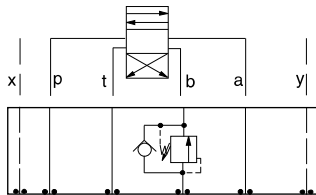


Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CJ4		CJ4/S	

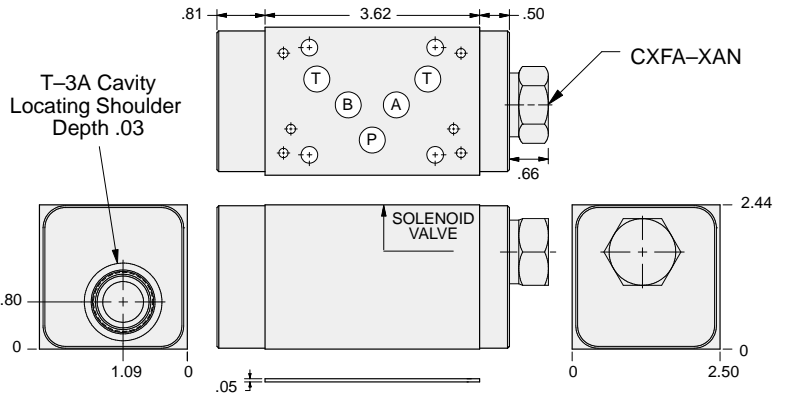
05xy COUNTERBALANCE



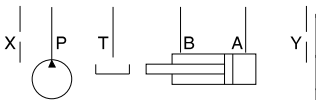
FUNCTION

On B
No pilot assist

Counterbalance Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CJ5		CJ5/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Direct Acting Relief Valve		
	RDFA Page 1.10		
OTHER VALVES:			

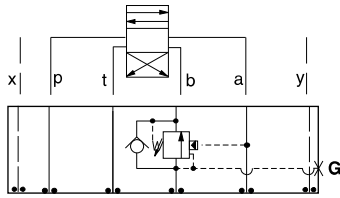


ISO 05 X,Y SANDWICH BODIES



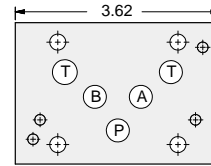
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Counterbalance Valves

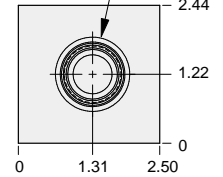
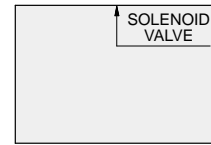
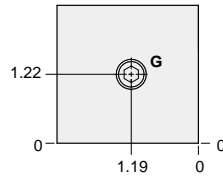


FUNCTION

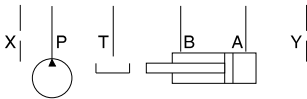
On **B**
Pilot from **A**



T-2A Cavity
Locating Shoulder
Depth 1.00



Order Retainer and Seal Kits separately.
(See Page 12.002)



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BJB		BJB/S	
.25 BSPP	BJB/M		BJB/T	

05_{xy} COUNTERBALANCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

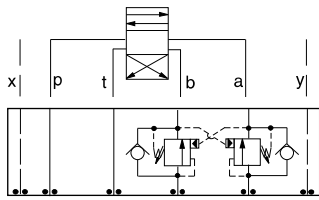
	Counterbalance Valve, 3:1 Pilot Ratio		
	CBEA Page 4.10		
	Counterbalance Valve, 4.5:1 Pilot Ratio		
	CBEG Page 4.12		
	Counterbalance Valve, 10:1 Pilot Ratio		
	CBEH Page 4.14		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

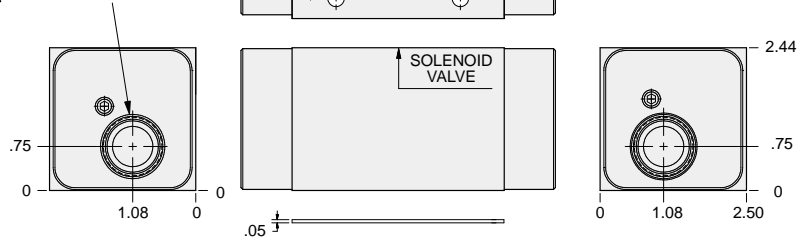


FUNCTION

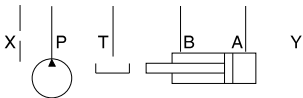
On **A** and **B**
Cross-Piloted

Counterbalance Valves

T-2A Cavity
Locating Shoulder
Depth .73
2 places.



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
BJY		BJY/S	

05xy COUNTERBALANCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

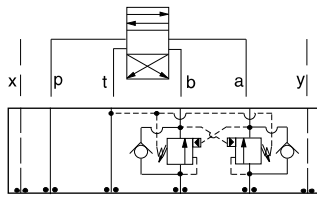
	<i>Counterbalance Valve, 3:1 Pilot Ratio</i>		
	CBEA Page 4.10		
	<i>Counterbalance Valve, 4.5:1 Pilot Ratio</i>		
	CBEG Page 4.12		
	<i>Counterbalance Valve, 10:1 Pilot Ratio</i>		
	CBEH Page 4.14		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



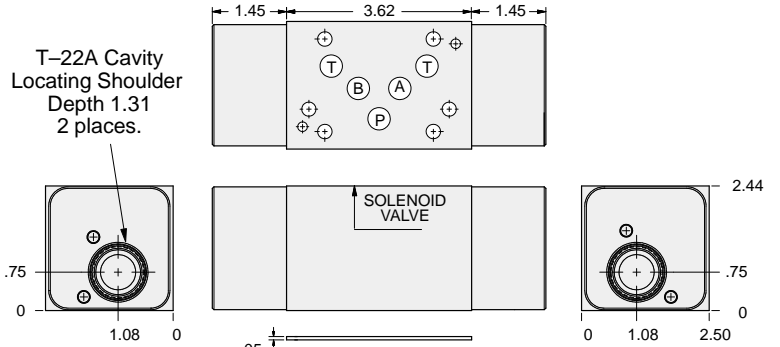
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



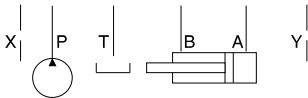
FUNCTION

On **A** and **B**
Cross-Piloted
Vents to **T**

Counterbalance Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
NJY		NJY/S	

05xy COUNTERBALANCE

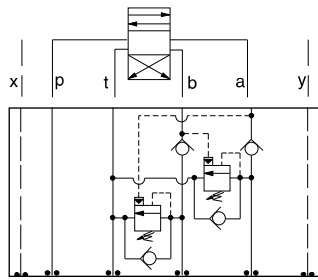
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Vented Counterbalance Valve, 3:1 Pilot Ratio		
	CWEA Page 4.18		
	Vented Counterbalance Valve, 5:1 Pilot Ratio		
	CWEG Page 4.20		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



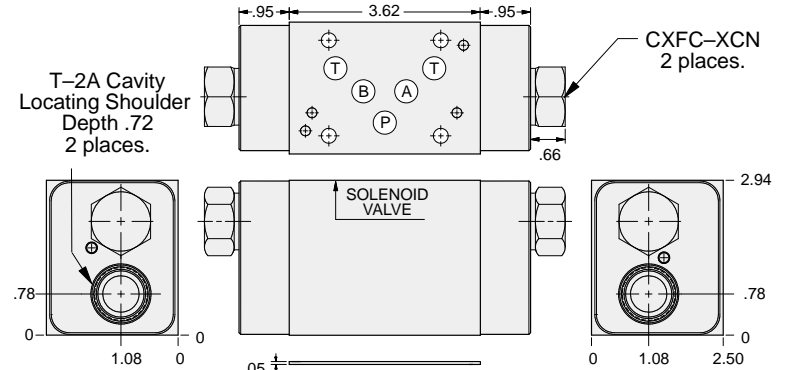
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



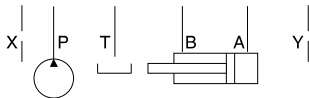
FUNCTION

Cushion Lock
Circuit
On **A** and **B**

Counterbalance Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BJ8		BJ8/S	

05xy COUNTERBALANCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Counterbalance Valve, 3:1 Pilot Ratio		
	CBEA Page 4.10		
	Counterbalance Valve, 4.5:1 Pilot Ratio		
	CBEG Page 4.12		
	Counterbalance Valve, 10:1 Pilot Ratio		
	CBEH Page 4.14		
OTHER VALVES:			

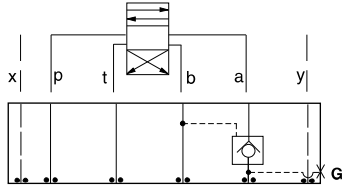


ISO 05 X,Y SANDWICH BODIES



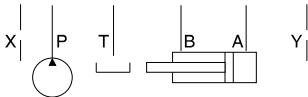
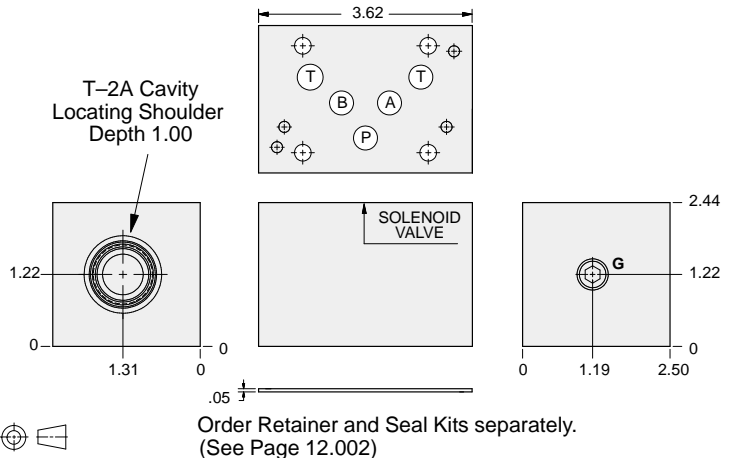
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Pilot Operated Check Valves



FUNCTION

On A
Pilot from B



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BJA		BJA/S	
.25 BSPP	BJA/M		BJA/T	

05xy P.O. CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CKEB Page 4.16		
OTHER VALVES:			

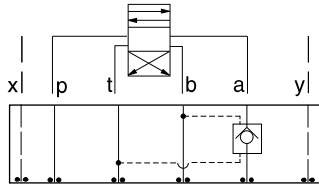


ISO 05 X,Y SANDWICH BODIES



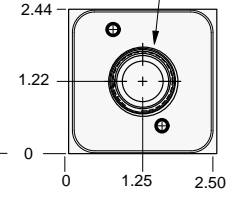
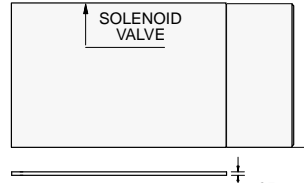
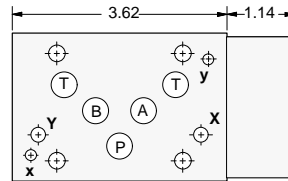
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Pilot Operated Check Valves

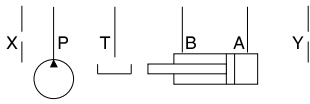


FUNCTION

On **A**
Pilot from **B**
Vent to **T**

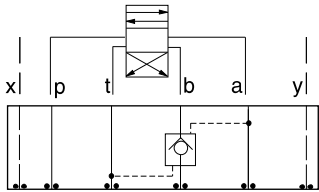


Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
NJA		NJA/S	

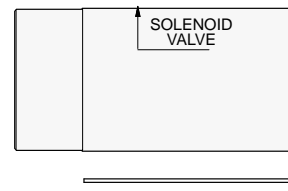
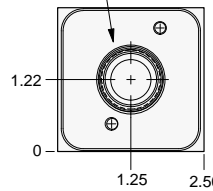
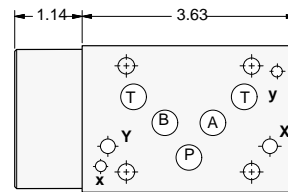
Pilot Operated Check Valves



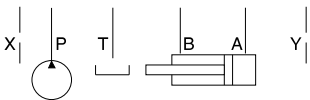
FUNCTION

On **B**
Pilot from **A**
Vent to **T**

T-22A Cavity
Locating Shoulder
Depth 1.31



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
NJB		NJB/S	

05xy P.O. CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Vented Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CVEV Page 4.22		
OTHER VALVES:			

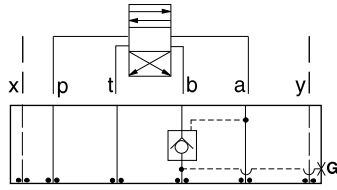


ISO 05 X,Y SANDWICH BODIES



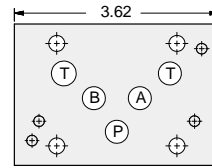
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Pilot Operated Check Valves

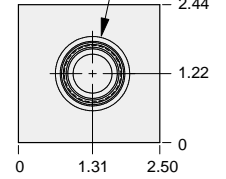
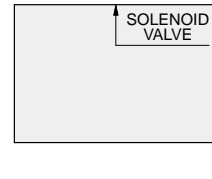
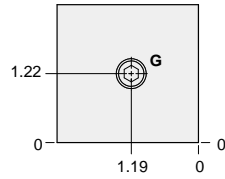


FUNCTION

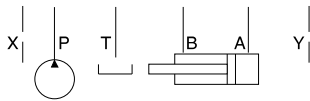
On **B**
Pilot from **A**



T-2A Cavity
Locating Shoulder
Depth 1.00



Order Retainer and Seal Kits separately.
(See Page 12.002)



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BJB		BJB/S	
.25 BSPP	BJB/M		BJB/T	

05xy P.O. CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	<i>Pilot-to-Open Check Valve, 3:1 Pilot Ratio</i>		
	CKEB Page 4.16		
OTHER VALVES:			

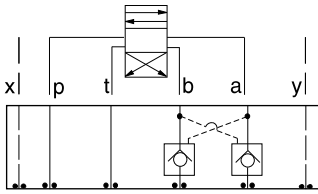


ISO 05 X,Y SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

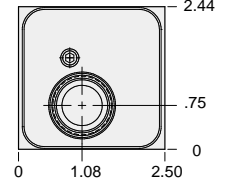
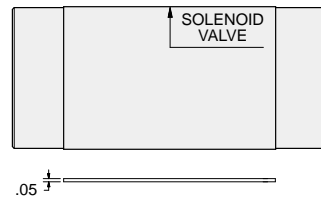
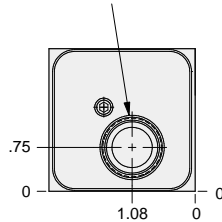
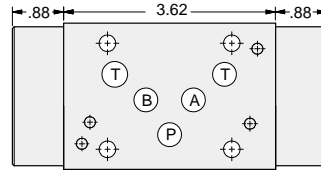
Pilot Operated Check Valves



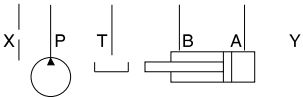
FUNCTION

On A and B
Cross-Piloted

T-2A Cavity
Locating Shoulder
Depth .73
2 places.



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BJY		BJY/S	

05xy P.O. CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CKEB Page 3.16		
OTHER VALVES:			

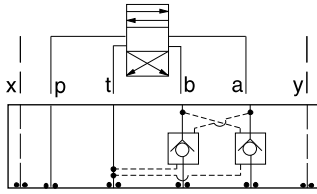


ISO 05 X,Y SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

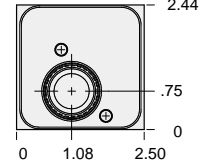
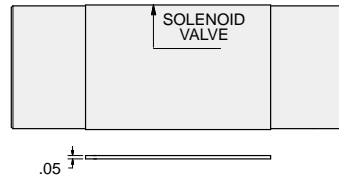
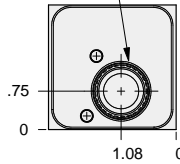
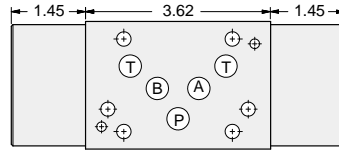
Pilot Operated Check Valves



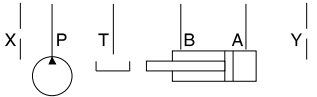
FUNCTION

On **A** and **B**
Cross-Piloted
Vents to **T**

T-22A Cavity
Locating Shoulder
Depth 1.31
2 places.



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
NJY		NJY/S	

05xy P.O. CHECK

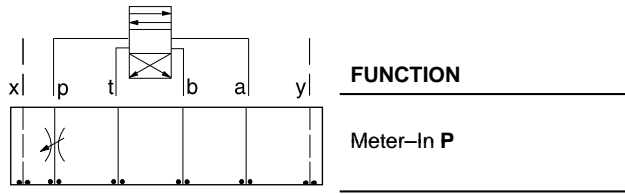
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Vented Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CVEV Page 4.22		
OTHER VALVES:			



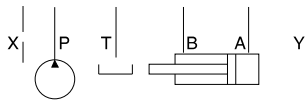
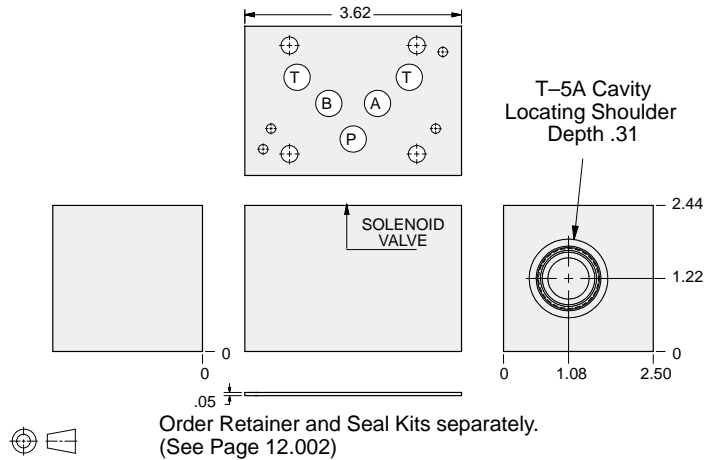
ISO 05 X,Y SANDWICH BODIES



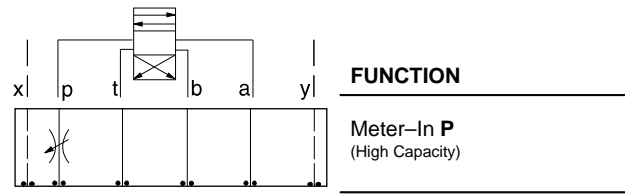
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



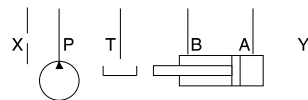
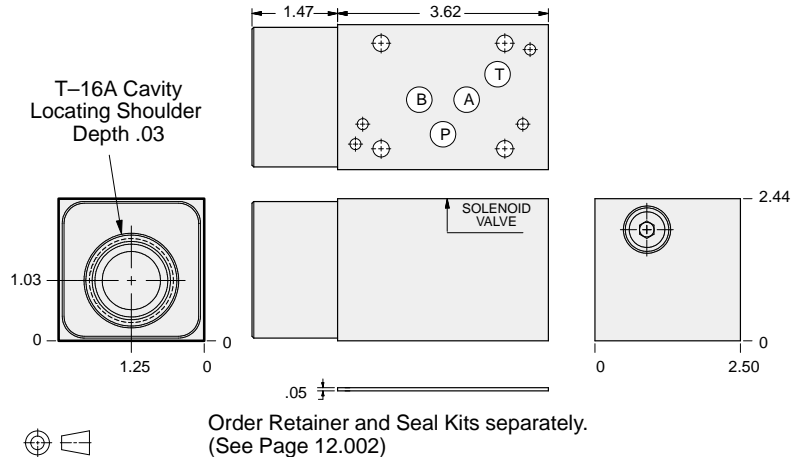
Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJP		DJP/S	



Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJO		DJO/S	

05xy FLOW CONTROL

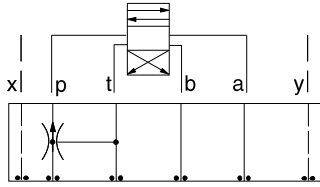
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Fully Adjustable Needle Valve		
	NF*C Page 5.12, 5.13		
	Fixed Orifice, Pressure-Compensated Flow Control		
	FX*A Page 5.20, 5.21		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



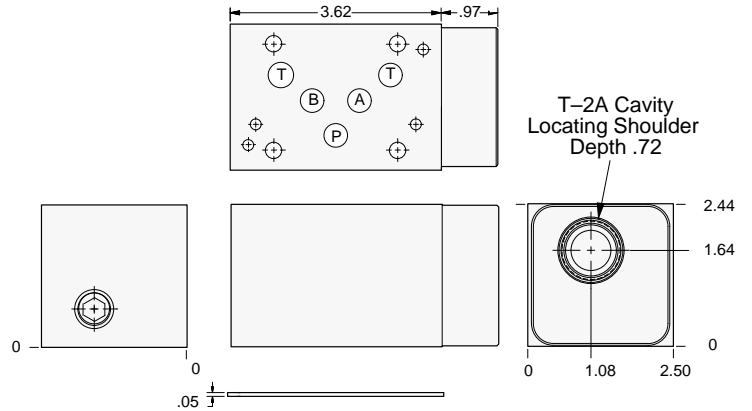
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



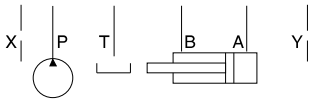
FUNCTION

Priority Flow on P

Flow Control Valves



Order Retainer and Seal Kits separately. (See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJN		DJN/S	

05xy FLOW CONTROL

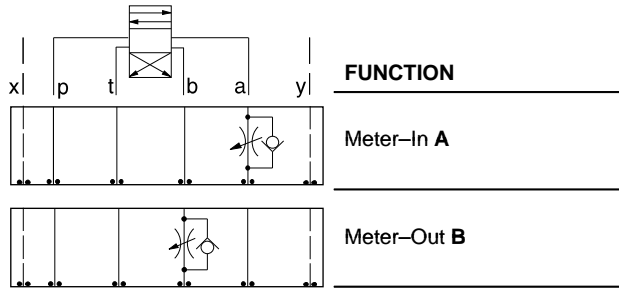
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Priority Flow Control, Bypass/Restrictive, Fixed Orifice		
	FRDA Page 6.02		
OTHER VALVES:			



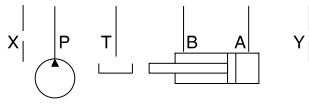
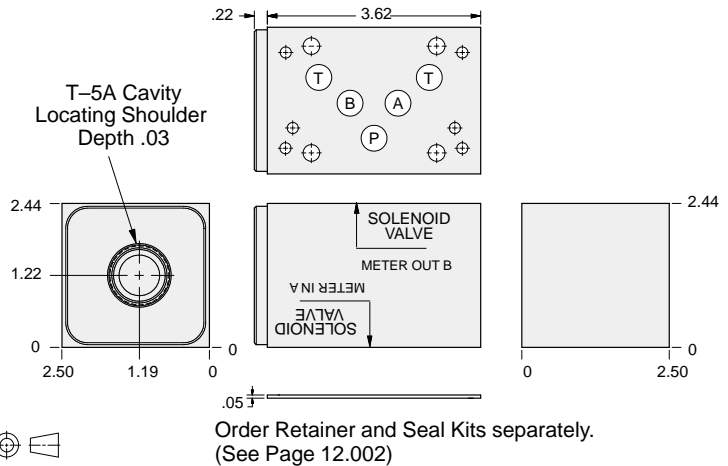
ISO 05 X,Y SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

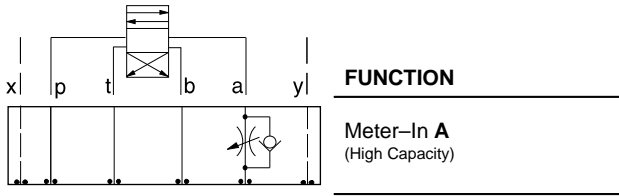


Flow Control Valves

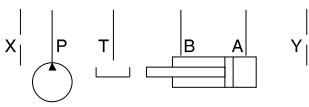
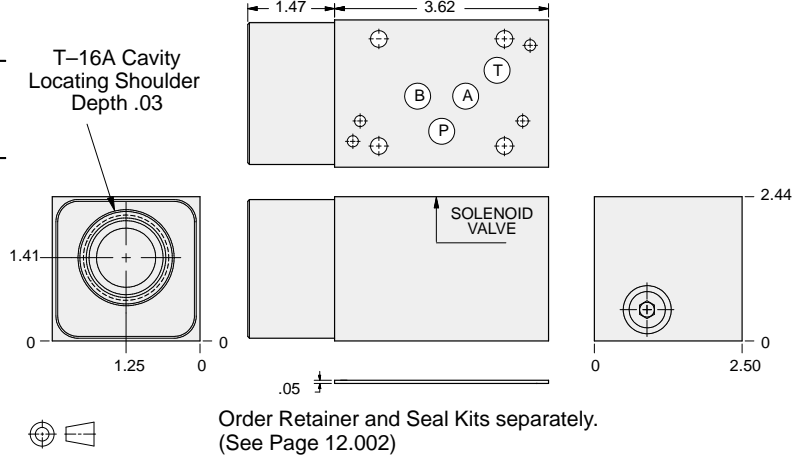


ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJB		DJB/S	

05xy FLOW CONTROL



Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJC		DJC/S	

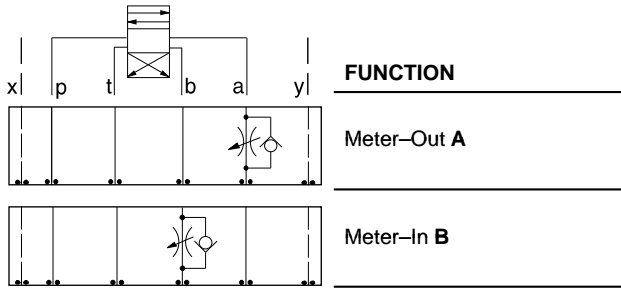
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Fully Adjustable Needle Valve NF*C Page 5.12, 5.13		Fixed Orifice, Pressure-Compensated Flow Control FX*A Page 5.20, 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check NC*B Page 5.16, 5.17		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check FC*B Page 5.22, 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow NC*C Page 5.18, 5.19		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check FDCB Page 5.24, FDEA Page 5.25
OTHER VALVES:	CNEC, CNGC		



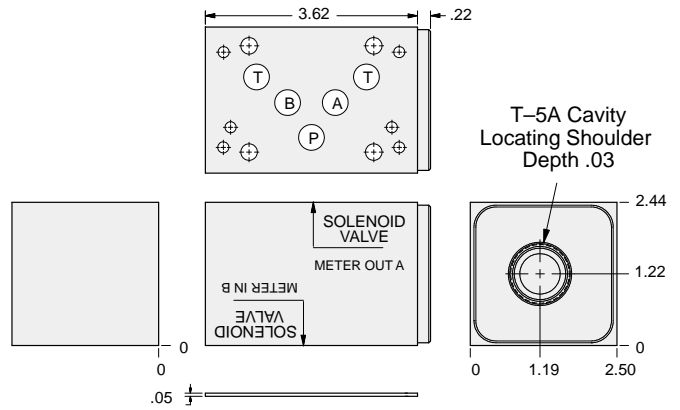
ISO 05 X,Y SANDWICH BODIES



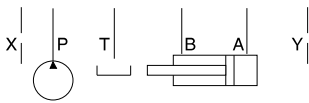
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



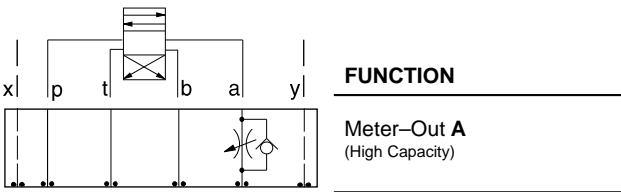
Flow Control Valves



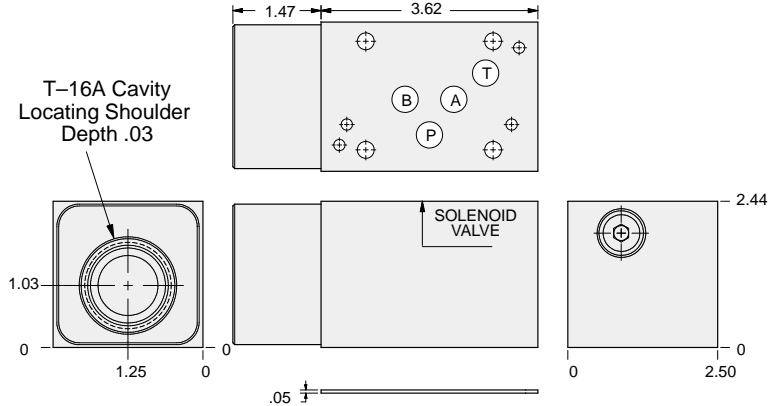
Order Retainer and Seal Kits separately.
(See Page 12.002)



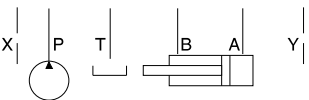
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJA		DJA/S	



Flow Control Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJD		DJD/S	

05xy FLOW CONTROL

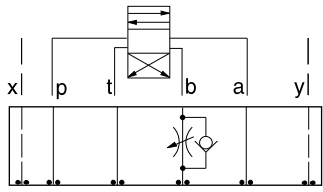
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Fully Adjustable Needle Valve NF*C Page 5.12, 5.13		Fixed Orifice, Pressure-Compensated Flow Control FX*A Page 5.20, 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check NC*B Page 5.16, 5.17		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check FC*B Page 5.22, 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow NC*C Page 5.18, 5.19		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check FDCB Page 5.24, FDEA Page 5.25
OTHER VALVES:	CNEC, CNGC		



ISO 05 X,Y SANDWICH BODIES



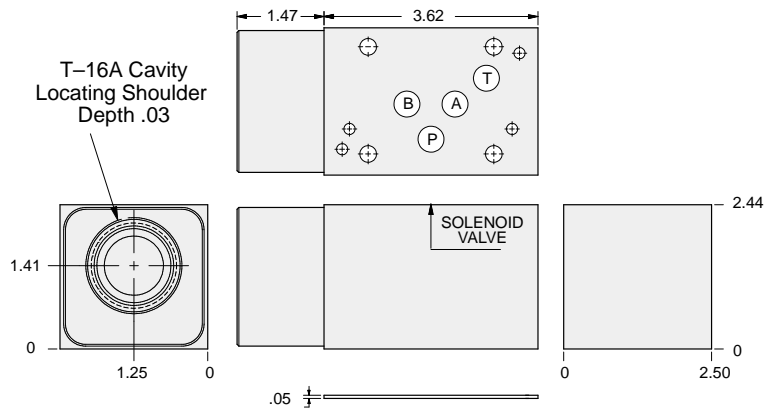
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



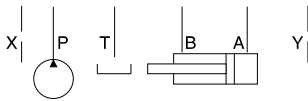
FUNCTION

Meter-In B
(High Capacity)

Flow Control Valves

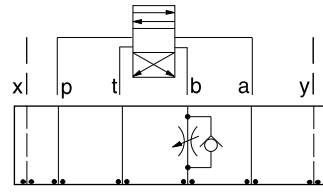


Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJE		DJE/S	

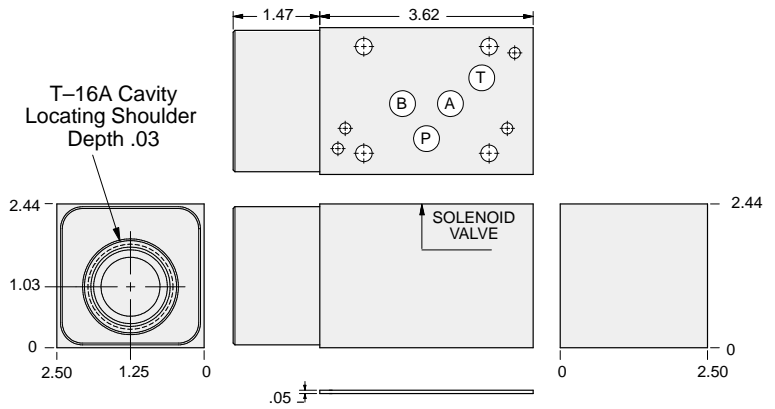
05xy FLOW CONTROL



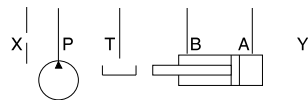
FUNCTION

Meter-Out B
(High Capacity)

Flow Control Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJF		DJF/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

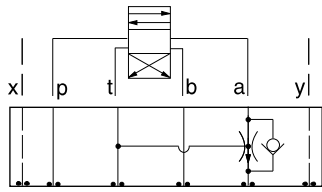
	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NFEC Page 5.13		FXEA Page 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NCFB Page 5.17		FCEB Page 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NCFC Page 5.19		FDEA Page 5.25
OTHER VALVES:	CNGC		



ISO 05 X,Y SANDWICH BODIES



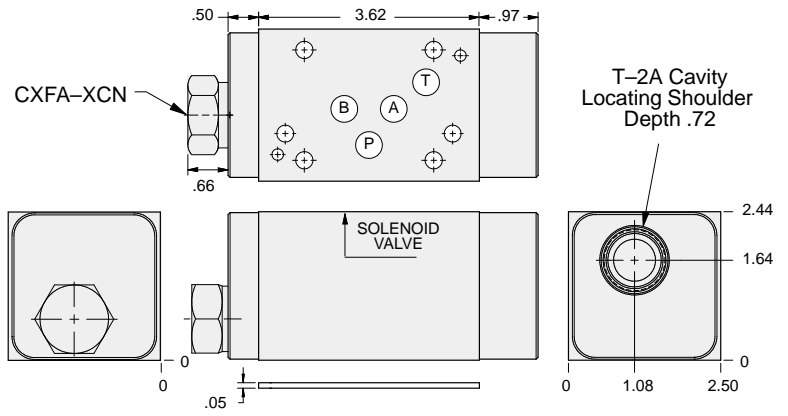
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



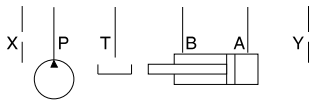
FUNCTION

Priority Flow
On A, Bypass to T
Reverse FF Check

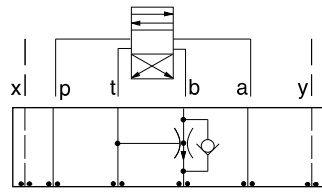
Flow Control Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



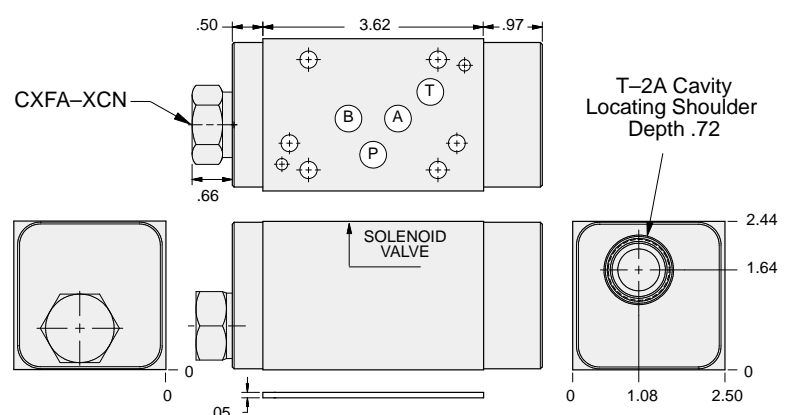
ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
WHY		WHY/S	



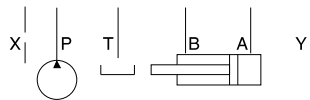
FUNCTION

Priority Flow
On B, Bypass to T
Reverse FF Check

Flow Control Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
WHZ		WHZ/S	

05xy FLOW CONTROL

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

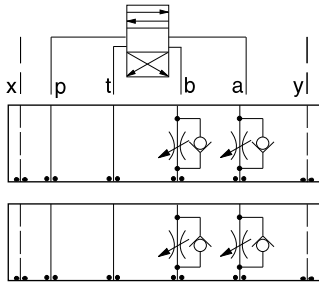
	Priority Flow Control, Bypass/Restrictive, Fixed Orifice		
	FRDA Page 6.02		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

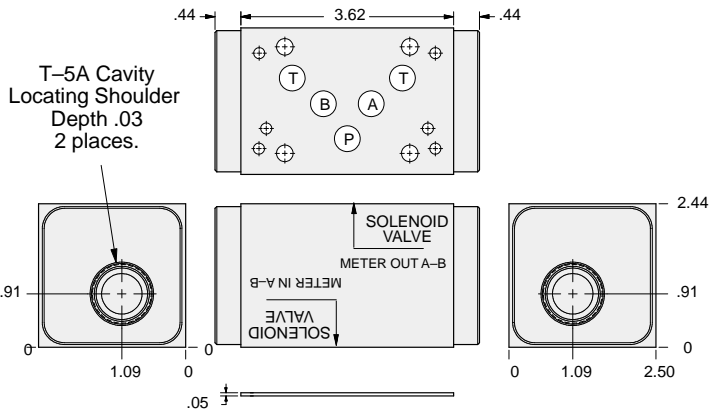


FUNCTION

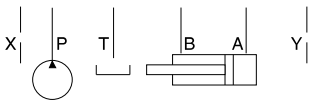
Meter-In
A and B

Meter-Out
A and B

Flow Control Valves

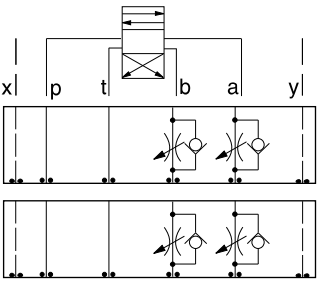


Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJY		DJY/S	

05xy FLOW CONTROL

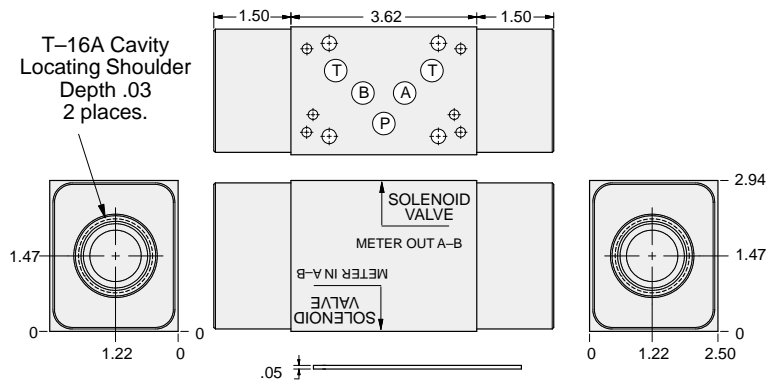


FUNCTION

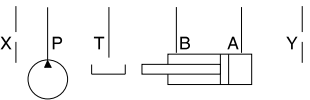
Meter-In
A and B
(High Capacity)

Meter-Out
A and B
(High Capacity)

Flow Control Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJZ		DJZ/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

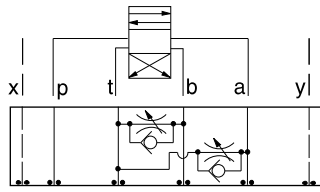
	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NF*C Page 5.12, 5.13		FX*A Page 5.20, 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*B Page 5.16, 5.17		FC*B Page 5.22, 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*C Page 5.18, 5.19		FDCB Page 5.24, FDEA Page 5.25
OTHER VALVES:	CNEC, CNGC		



ISO 05 X,Y SANDWICH BODIES



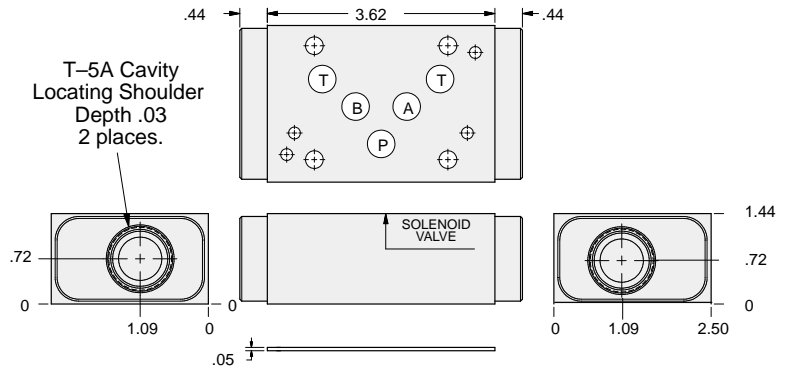
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



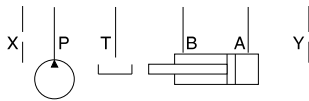
FUNCTION

Bleed-Off
A and B to T

Flow Control Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJX		DJX/S	

05xy FLOW CONTROL

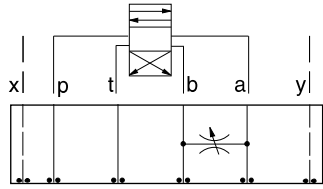
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NFDC Page 5.12		FXDA Page 5.20
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NCEB Page 5.16		FCDB Page 5.22
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NCEC Page 5.18		FDCB Page 5.24
OTHER VALVES:	CNEC, CNGC		



ISO 05 X,Y SANDWICH BODIES



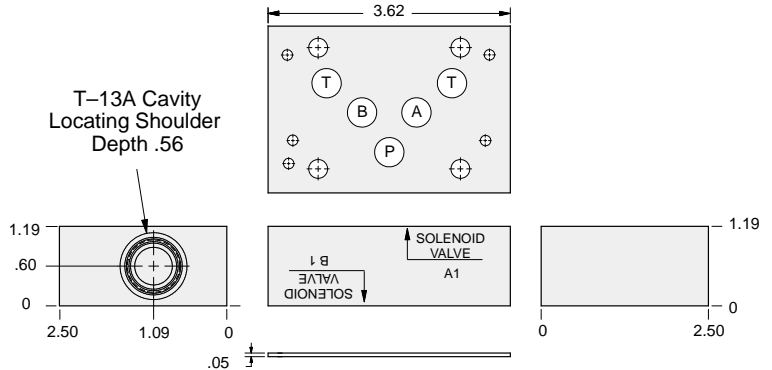
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



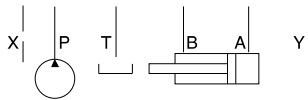
FUNCTION

Bleed-Off
A to B and
B to A

Flow Control Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJS		DJS/S	

05xy FLOW CONTROL

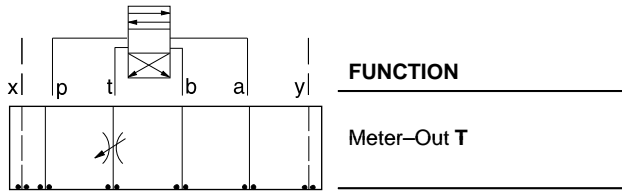
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Fixed Orifice Restrictor Valve with Reverse Free Flow Check NFCC Page 5.12		Fixed Orifice, Pressure-Compensated Flow Control FXCA Page 5.20
	Fully Adjustable Needle Valve with Reverse Free Flow Check NCCB Page 5.16		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check FCCB Page 5.22
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow NCCC Page 5.18		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check FDCA Page 5.24
OTHER VALVES:	CNEC, CNGC		



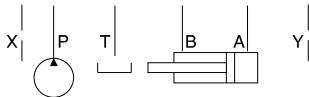
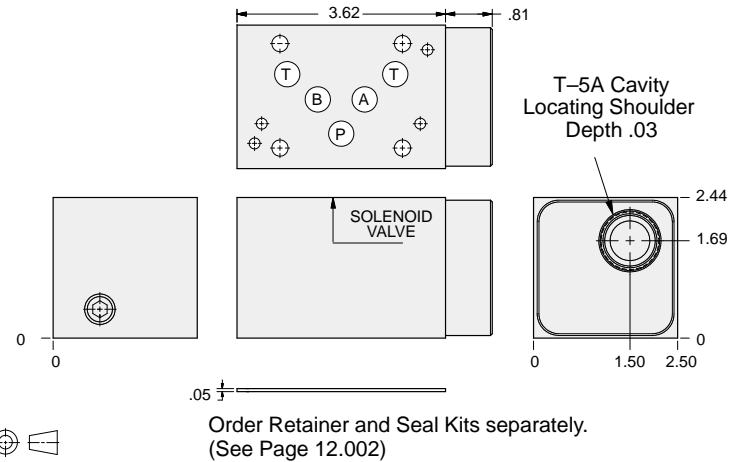
ISO 05 X,Y SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJT		DJT/S	

05xy FLOW CONTROL

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Fully Adjustable Needle Valve NFDC Page 5.12		Fixed Orifice, Pressure-Compensated Flow Control FXDA Page 5.20
	Fully Adjustable Needle Valve with Reverse Free Flow Check NCEB Page 5.16		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check FCDB Page 5.22
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow NCEC Page 5.18		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check FDCB Page 5.24
OTHER VALVES:	CNEC		

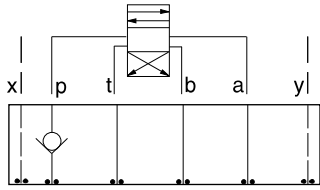




ISO 05 X,Y SANDWICH BODIES



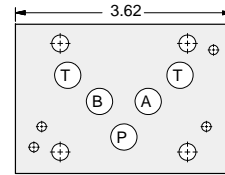
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



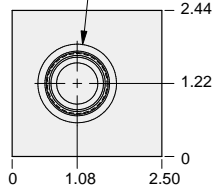
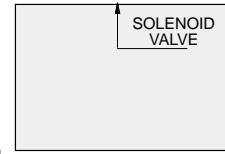
FUNCTION

On P

Check Valves



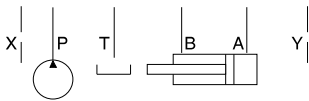
T-5A Cavity Locating Shoulder Depth .31



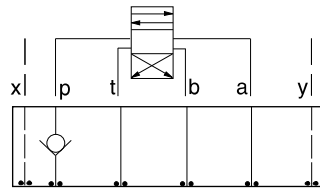
.05 $\frac{1}{32}$



Order Retainer and Seal Kits separately. (See Page 12.002)



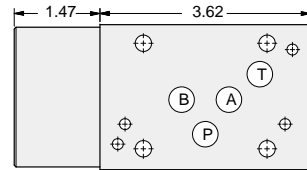
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJP		DJP/S	



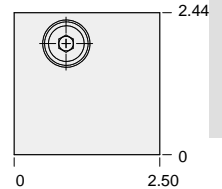
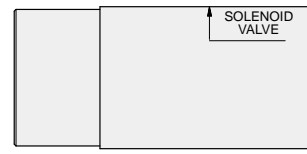
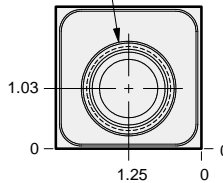
FUNCTION

On P
(High Capacity)

Check Valves



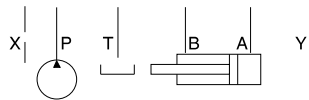
T-16A Cavity Locating Shoulder Depth .03



.05 $\frac{1}{32}$



Order Retainer and Seal Kits separately. (See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJO		DJO/S	

05xy CHECK

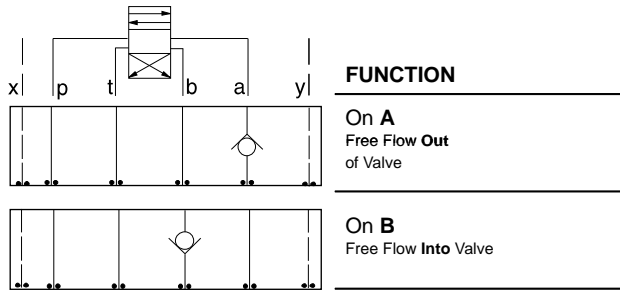
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXFA Page 5.08 (use with DJP)		
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXHA Page 5.09 (use with DJO)		
OTHER VALVES:			



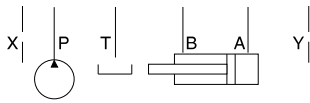
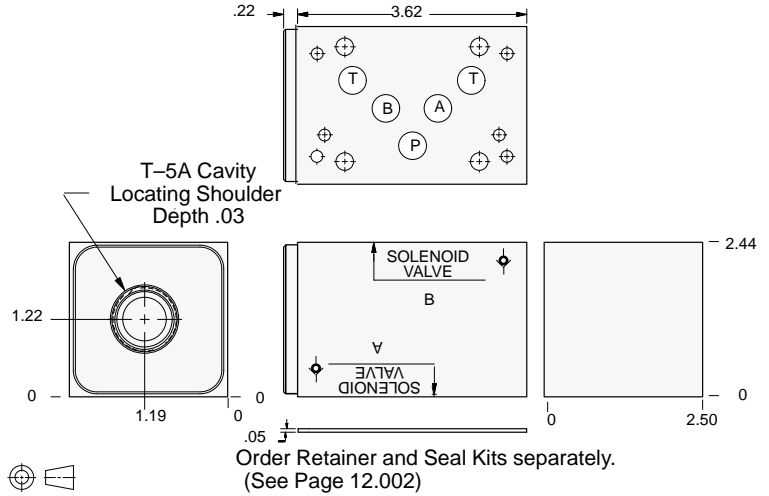
ISO 05 X,Y SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

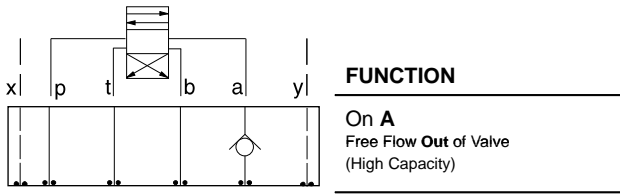


Check Valves

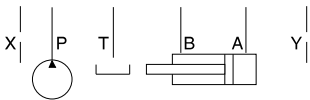
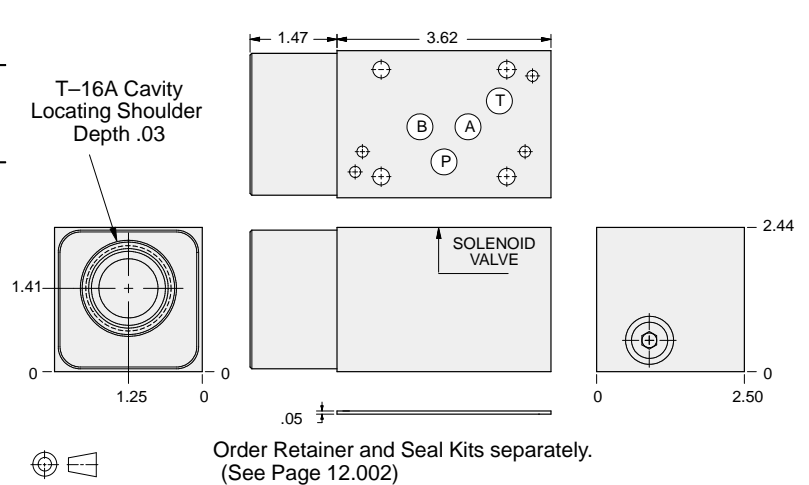


ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJK		DJK/S	

05xy CHECK



Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJC		DJC/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

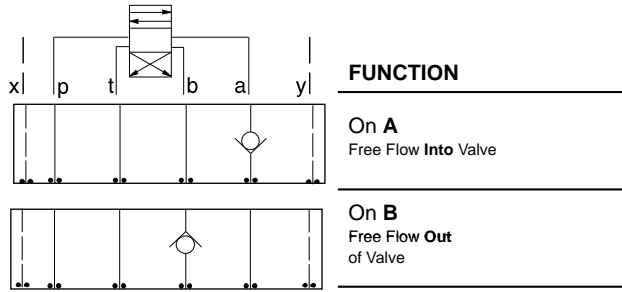
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXFA Page 5.08, (use with DJK)		
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXHA Page 5.09 (use with DJC)		
OTHER VALVES:			



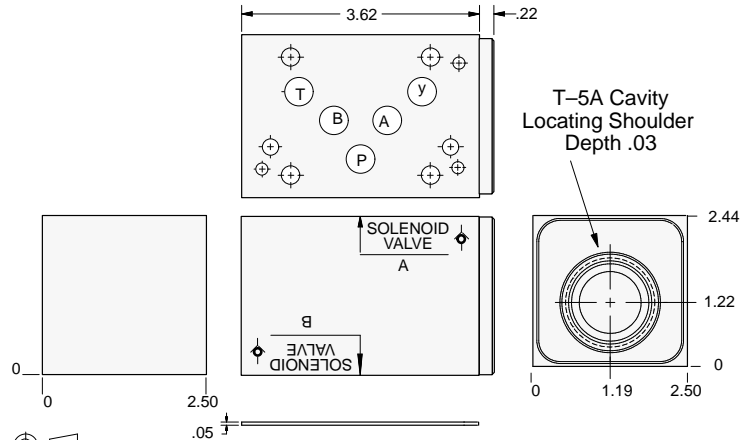
ISO 05 X,Y SANDWICH BODIES



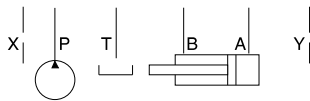
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



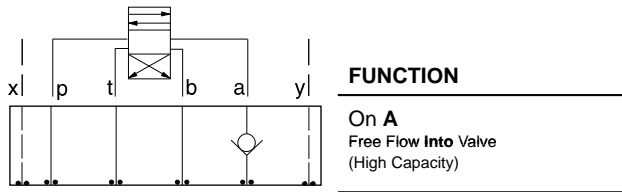
Check Valves



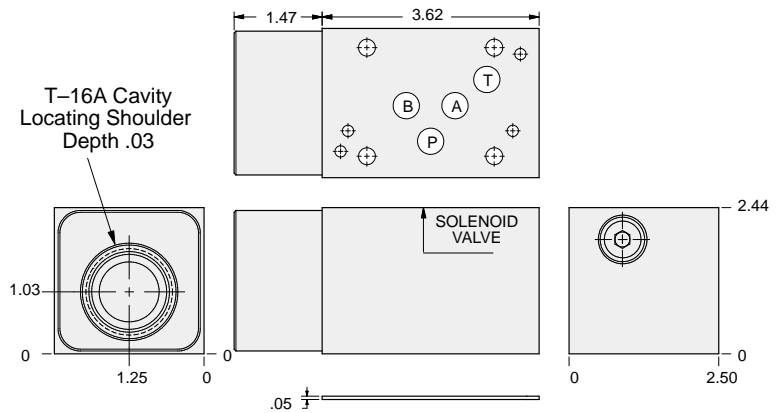
Order Retainer and Seal Kits separately.
(See Page 12.002)



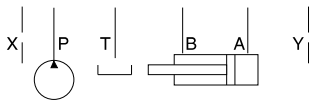
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJJ		DJJ/S	



Check Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJD		DJD/S	

05xy CHECK

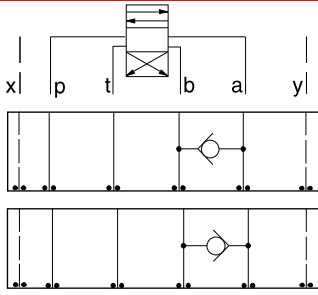
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXFA Page 5.08 (use with DJJ)		
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXHA Page 5.09 (use with DJD)		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

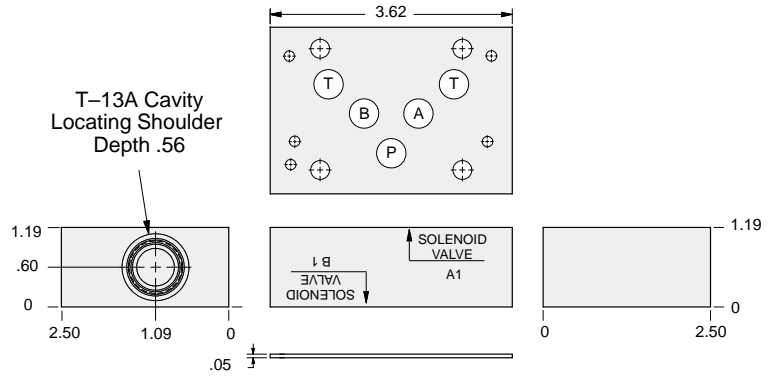


FUNCTION

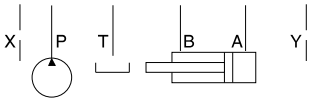
B to A

A to B

Check Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
DJS		DJS/S	

05_{xy} CHECK

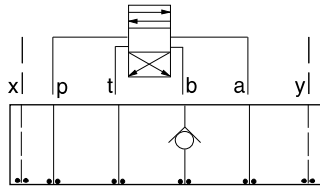
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXDA Page 3.08		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



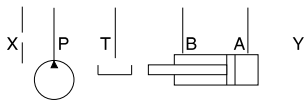
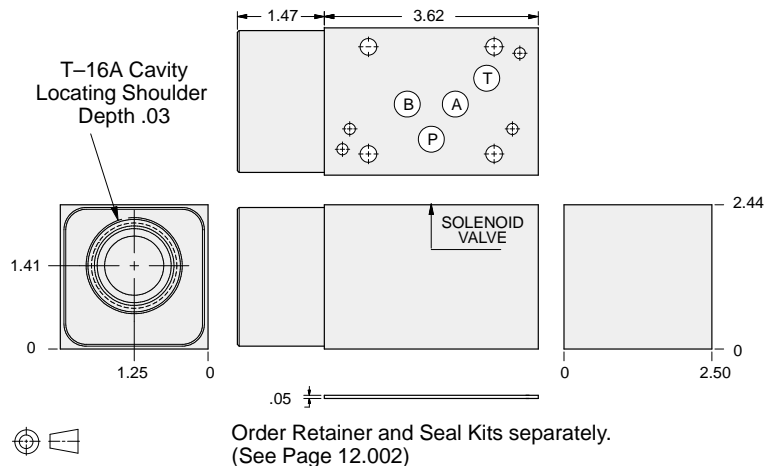
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



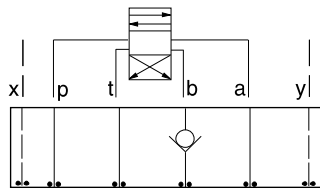
FUNCTION

On B
Free Flow Out of Valve
(High Capacity)

Check Valves



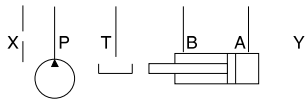
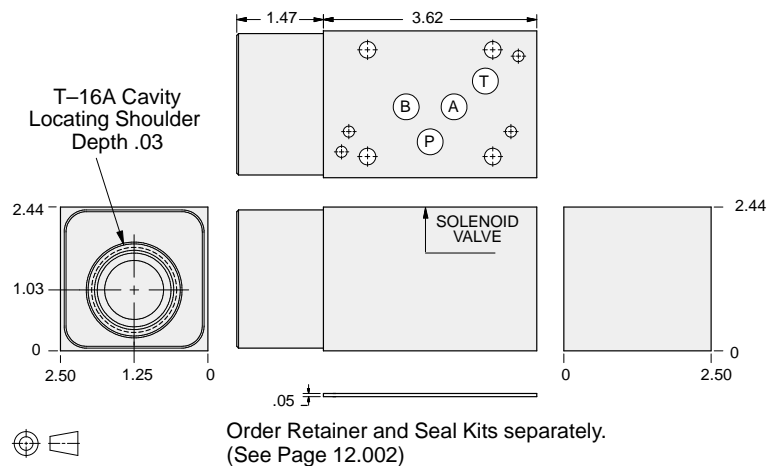
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJE		DJE/S	



FUNCTION

On B
Free Flow Into Valve
(High Capacity)

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJF		DJF/S	

05xy CHECK

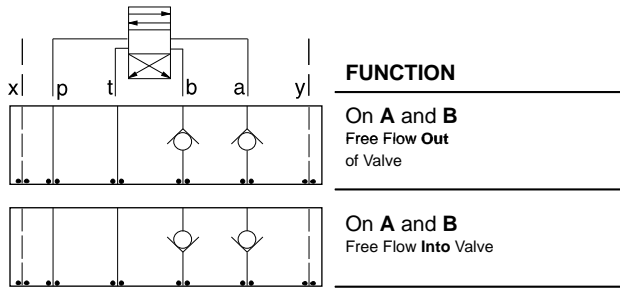
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXHA Page 5.09		
OTHER VALVES:			



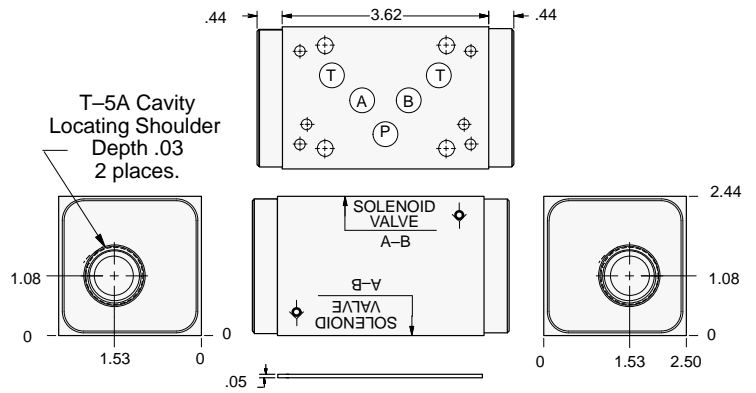
ISO 05 X,Y SANDWICH BODIES



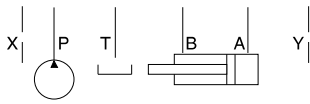
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



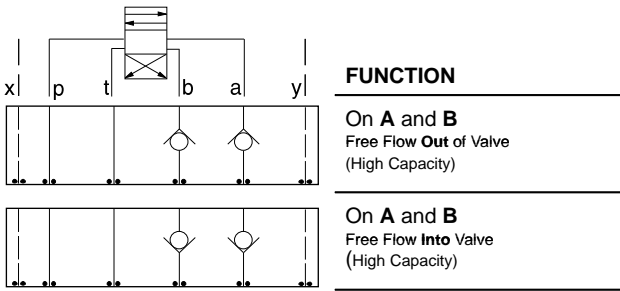
Check Valves



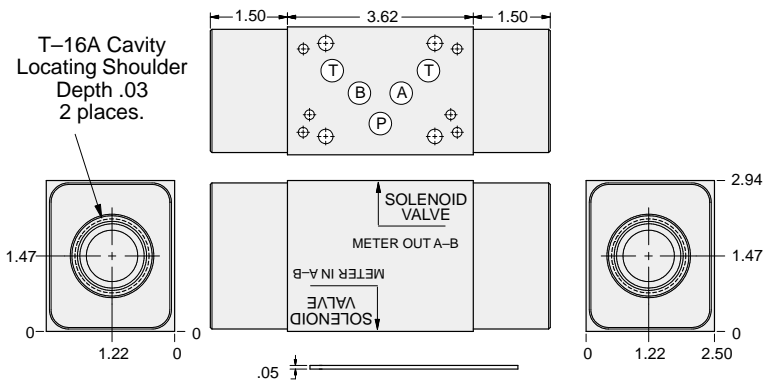
Order Retainer and Seal Kits separately.
(See Page 12.002)



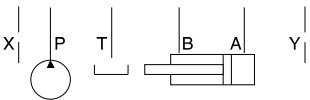
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJL		DJL/S	



Check Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJZ		DJZ/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

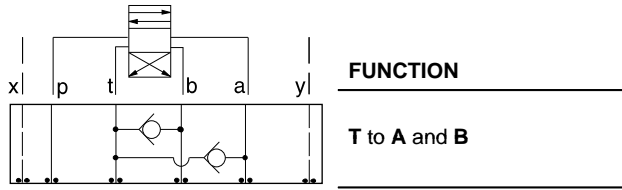
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXFA Page 5.08 (use with DJL)		
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXHA Page 5.09 (use with DJZ)		
OTHER VALVES:	NFEC, FXEA		



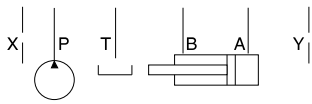
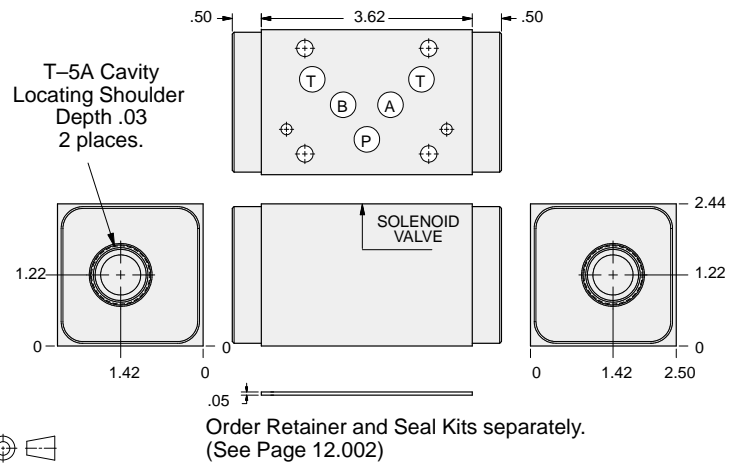
ISO 05 X,Y SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJW		DJW/S	

05_{xy} CHECK

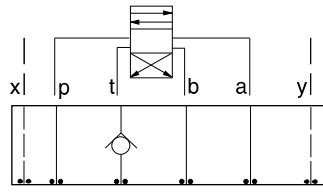
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXFA Page 5.08		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



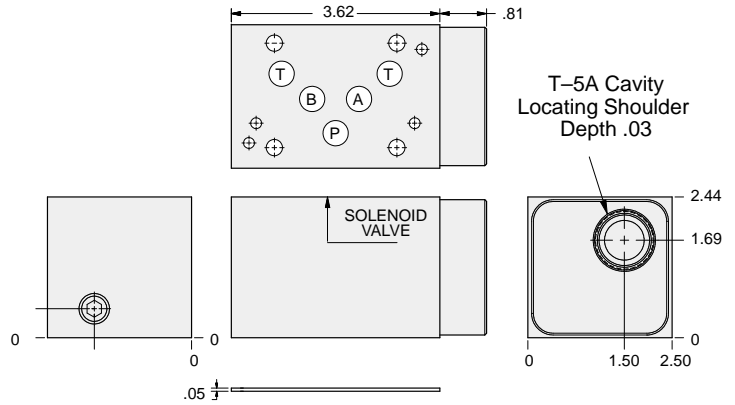
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



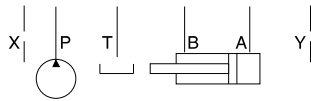
FUNCTION

On T

Check Valves



Order Retainer and Seal Kits separately.
(See Page 12.002)



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	DJT		DJT/S	
.25 BSPP	DJT/M		DJT/T	

05xy CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXFA Page 5.08		
OTHER VALVES:			

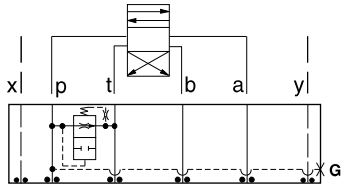




ISO 05 X,Y SANDWICH BODIES



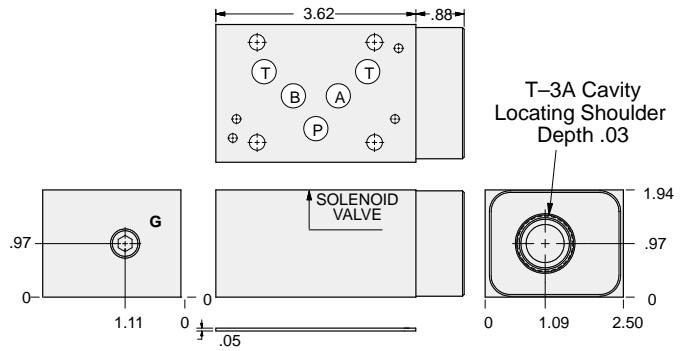
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



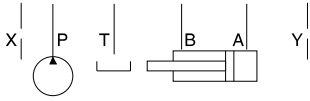
FUNCTION

Air-Bleed and Start-Up

Circuit Savers



Order Retainer and Seal Kits separately.
(See Page 12.002)



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CJP		CJP/S	
.25 BSPP	CJP/M		CJP/T	

05_{xy} CIRCUIT SAVER

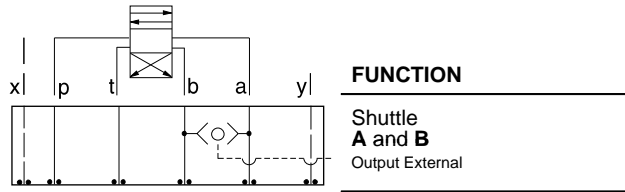
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Air Bleed and Start-up Valve		
	NQEB Page 10.16		
OTHER VALVES:			



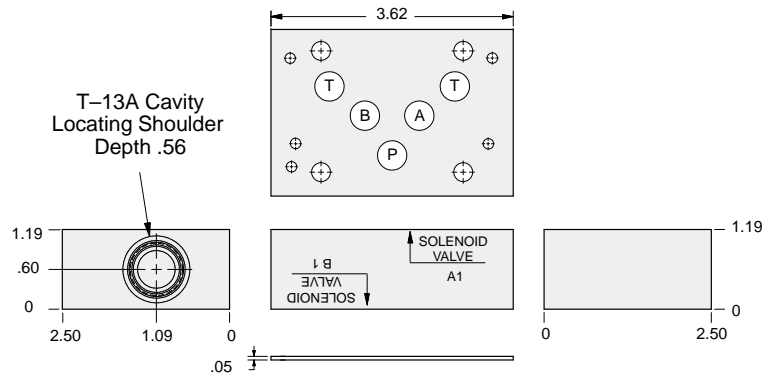
ISO 05 X,Y SANDWICH BODIES



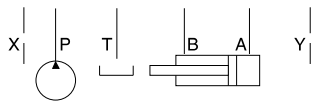
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



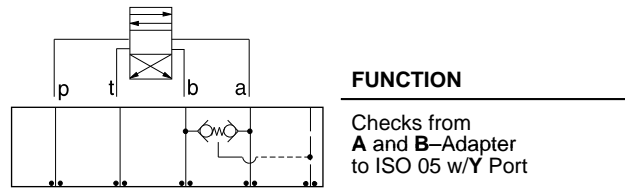
Circuit Savers



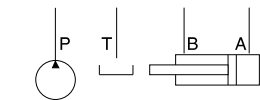
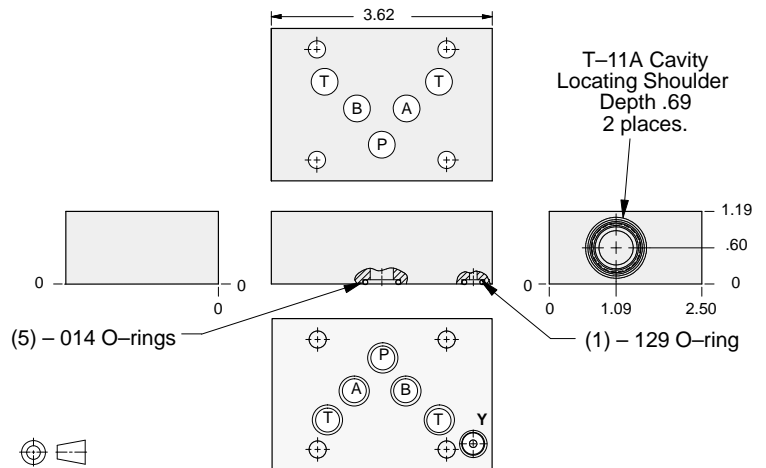
Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DJS		DJS/S	



Circuit Savers



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BJS		BJS/S	

05xy CIRCUIT SAVER

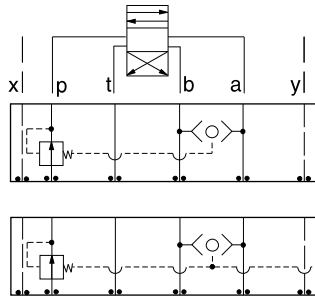
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
 1-2 Ext.	2 Port Shuttle Valve, Signal External		
	CSAA Page 10.09 (use with DJS)		
 1-2 3	3 Port Back-to-Back Check Valve, Signal at Port 3		
	CDAB Page 10.10 (use with BJS)		
OTHER VALVES:			



ISO 05 X,Y SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

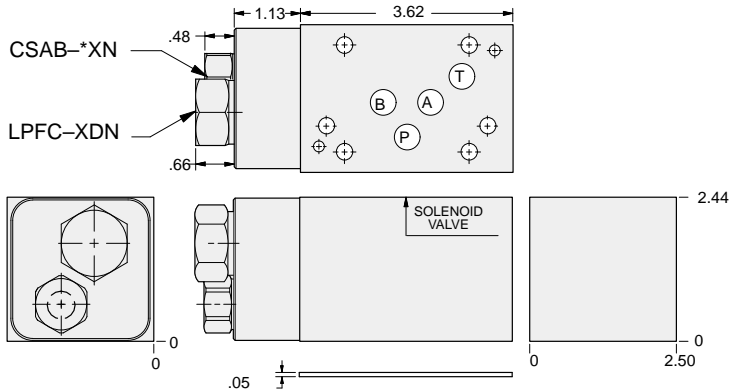


FUNCTION

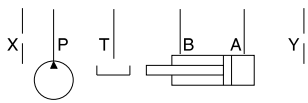
Pressure Compensator (Restrictive)

Pressure Compensator (Restrictive) w/Load-Sensing Port

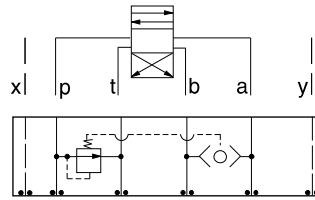
Circuit Savers



Order Retainer and Seal Kits separately. (See Page 12.002)



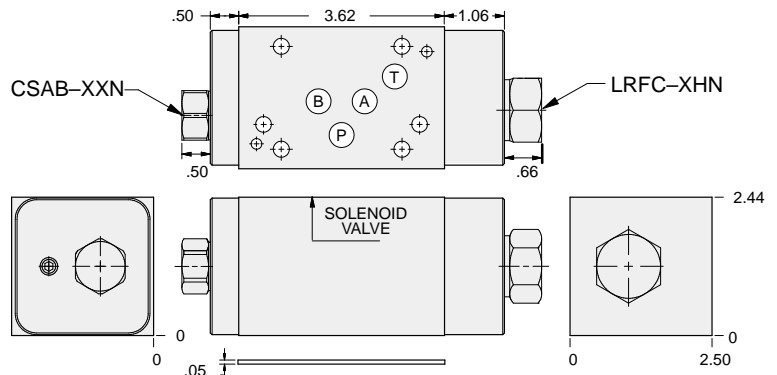
Shuttle Cartridge	Load-Sensing Port in Shuttle	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
CSAB-XXN	None	YFEK-XHN-BB		YFEK-XHN-BB/S	
CSAB-AXN	SAE-4	YFEQ-XHN-BB		YFEQ-XHN-BB/S	
CSAB-BXN	.25 BSPP	YFEQ-XHN-BB/M		YFEQ-XHN-BB/T	



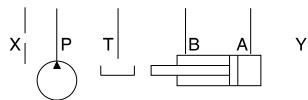
FUNCTION

Pressure Compensator (Bypass)

Circuit Savers



Order Retainer and Seal Kits separately. (See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YFEW-XHN-BB		YFEW-XHN-BB/S	

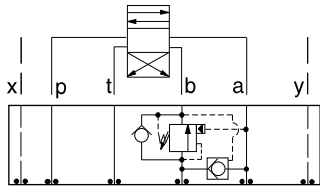
05_{xy} CIRCUIT SAVER



ISO 05 X,Y SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

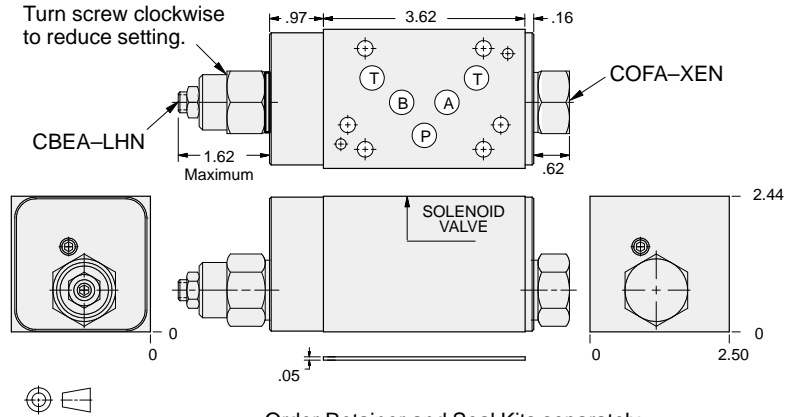


FUNCTION

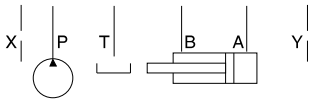
B to A
Regenerative

Circuit Savers

Turn screw clockwise to reduce setting.



Order Retainer and Seal Kits separately.
(See Page 12.002)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YDEL-LHN-BB		YDEL-LHN-BB/S	

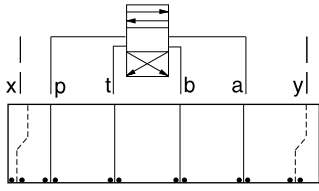
05_{xy} CIRCUIT SAVER



ISO 05 X,Y SANDWICH BODIES



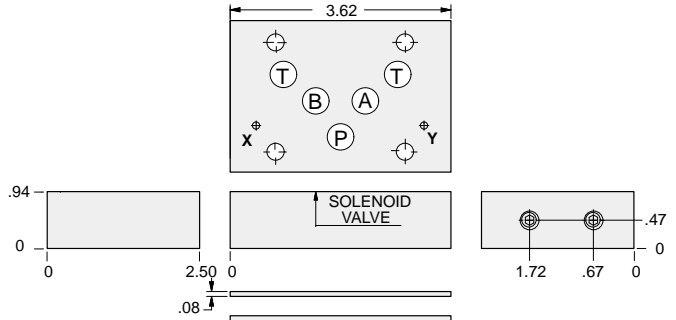
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



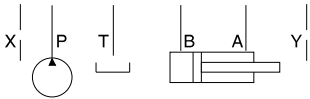
FUNCTION

ISO 05 with X and Y
Amer to Euro

Circuit Savers

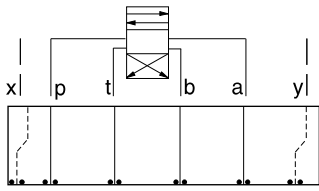


Order Seal Kit
#990-120-009
separately.



ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
ZSX		ZSX/S	

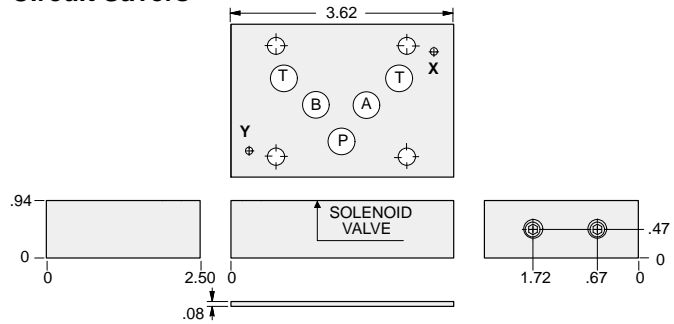
05_{xy} CIRCUIT SAVER



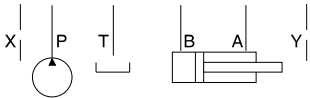
FUNCTION

ISO 05 with X and Y
Euro to Amer

Circuit Savers



Order Seal Kit
#990-120-012
separately.



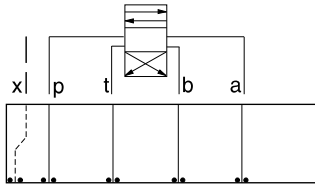
ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
ZSW		ZSW/S	



ISO 05 X,Y SANDWICH BODIES



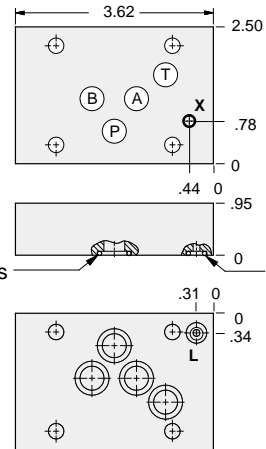
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

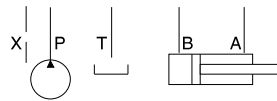
Bosch L Port to ISO 05 X Port (European)

Circuit Savers

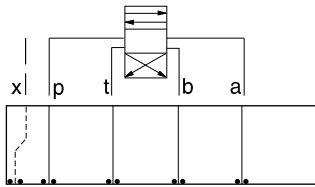


(4) – 014 O-rings

(1) – 010 O-ring



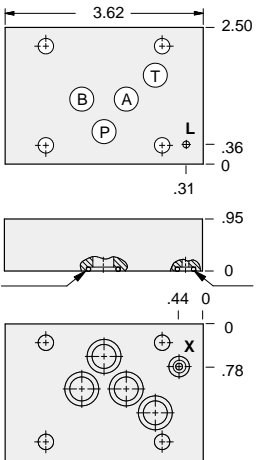
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
ZJA		ZJA/S	



FUNCTION

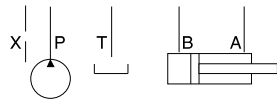
ISO 05 X Port (European) to Bosch L Port

Circuit Savers



(4) – 014 O-rings

(1) – 010 O-ring



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
ZJB		ZJB/S	

05_{xy} CIRCUIT SAVER

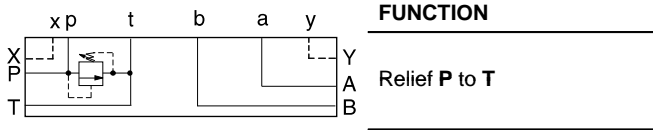


ISO 05 X,Y SANDWICH BODIES

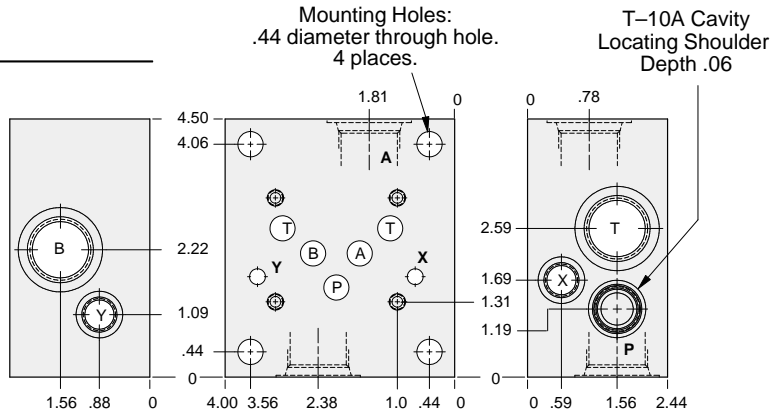


- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Side Ported Subplates

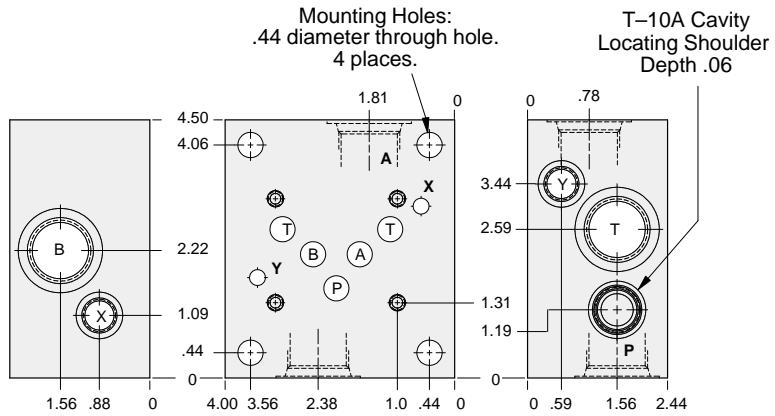


4 Interface Bolt Holes
x .50 deep
Inch: .250-20 UNC
Metric: M6 x 1.0



CETOP VERSION

4 Interface Bolt Holes
x .50 deep
Inch: .250-20 UNC
Metric: M6 x 1.0



U.S. VERSION

05xy SUBPLATE

Bolt Hole Interface	Port A,B,P,T	Port X,Y	ALUMINUM			DUCTILE IRON		
			Model Code U.S.	Model Code CETOP	List Price	Model Code U.S.	Model Code CETOP	List Price
Inch	.50 NPTF	.25 NPTF	ZHH	ZHP		ZHH/S	ZHP/S	
Inch	.75 NPTF	.25 NPTF	ZHJ	ZHQ		ZHJ/S	ZHQ/S	
Inch	SAE-10	SAE-6	ZHK	ZHR		ZHK/S	ZHR/S	
Inch	SAE-12	SAE-6	ZHL	ZHS		ZHL/S	ZHS/S	
Metric	.50 BSPP	.25 BSPP	ZHM	ZHT		ZHM/S	ZHT/S	
Metric	.75 BSPP	.25 BSPP	ZHN	ZHV		ZHN/S	ZHV/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Direct Acting Relief Valve
	RPEC Page 1.06		RDDA Page 1.10
	Pilot Operated, Rapid Response Relief Valve		Pilot Operated "Kick-Down" Relief Valve
	RPEE Page 1.08		RQEB Page 1.12

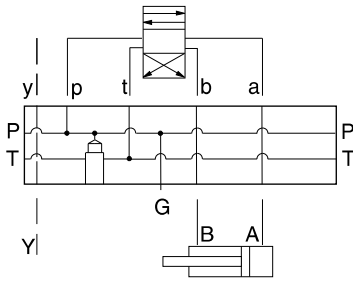


BAR MANIFOLDS



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

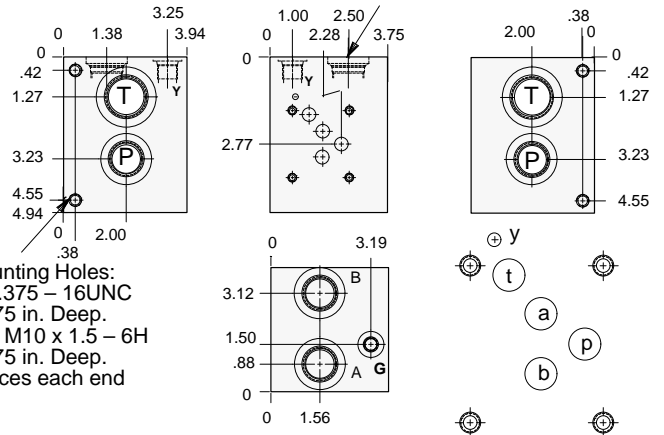
D05 H (U.S.) Parallel Circuit with Relief Cavity and Y Port



FUNCTION

One Station
(U.S. Version)

T-3A Cavity
Locating Shoulder
Depth .31

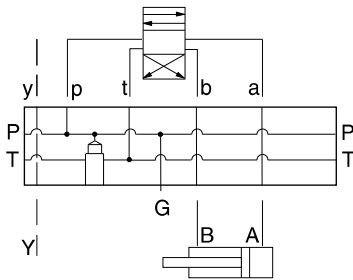


Mounting Holes:
Inch: .375 - 16UNC
x .75 in. Deep.
Metric: M10 x 1.5 - 6H
x .75 in. Deep.
2 places each end

Mounting Holes	Port T	Ports A, B, P	Port Y	Gage Port	ALUMINUM		DUCTILE IRON	
					Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	.25 NPTF	VMC		VMC/S	
inch	SAE-16	SAE-12	SAE-6	SAE-4	VMJ		VMJ/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	.25 BSPP	VMR		VMR/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

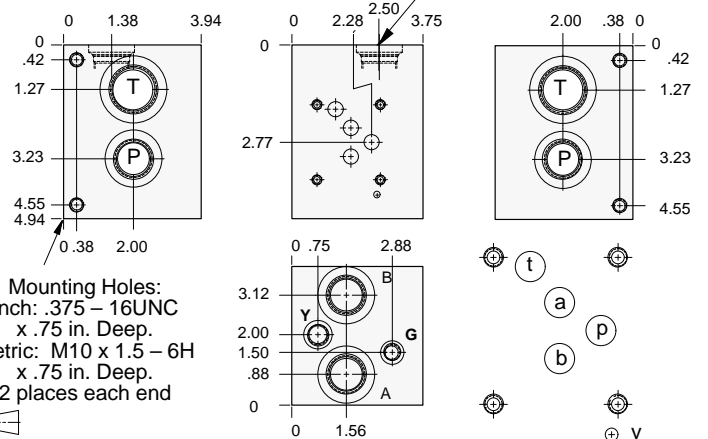
D05 H (CETOP) Parallel Circuit with Relief Cavity and Y Port



FUNCTION

One Station
(CETOP Version)

T-3A Cavity
Locating Shoulder
Depth .31



Mounting Holes:
Inch: .375 - 16UNC
x .75 in. Deep.
Metric: M10 x 1.5 - 6H
x .75 in. Deep.
2 places each end

Mounting Holes	Port T	Ports A, B, P	Port Y	Gage Port	ALUMINUM		DUCTILE IRON	
					Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	.25 NPTF	VRE		VRE/S	
inch	SAE-16	SAE-12	SAE-6	SAE-4	VRL		VRL/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	.25 BSPP	VRT		VRT/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Direct Acting Relief Valve
	RPGCPage 1.06		RDFA Page 1.10
OTHER VALVES:			

BAR MANIFOLDS

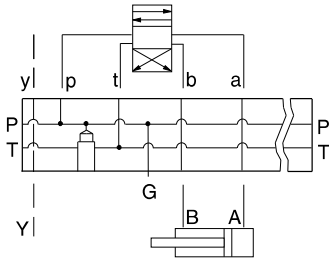


BAR MANIFOLDS



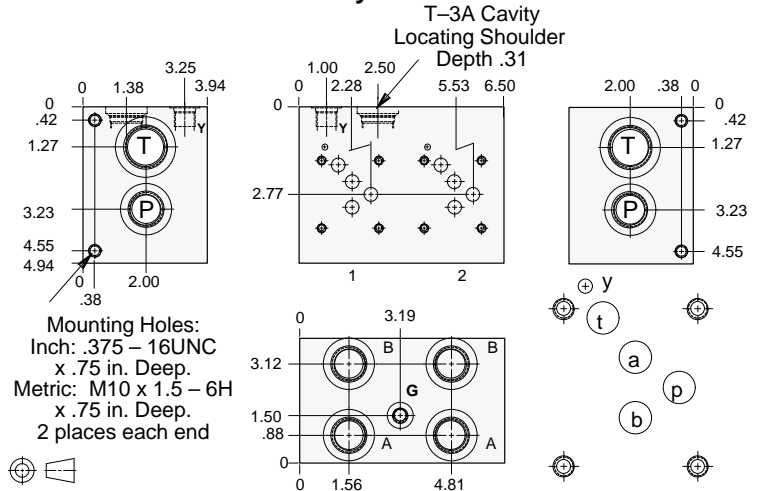
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

D05 H (U.S.) Parallel Circuit with Relief Cavity and Y Port



FUNCTION

Two Station
(U.S. Version)

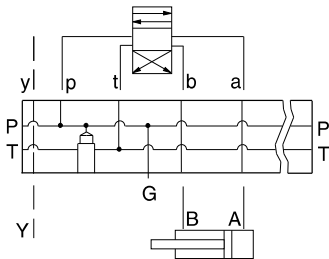


Mounting Holes	Port T	Ports A, B, P	Port Y	Gage Port	ALUMINUM		DUCTILE IRON	
					Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	.25 NPTF	VMD		VMD/S	
inch	SAE-16	SAE-12	SAE-6	SAE-4	VMK		VMK/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	.25 BSPP	VMT		VMT/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

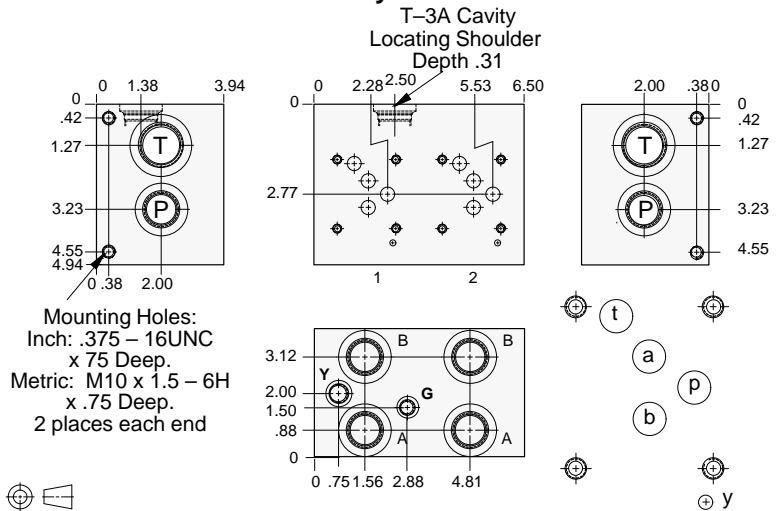
BAR MANIFOLDS

D05 H (CETOP) Parallel Circuit with Relief Cavity and Y Port



FUNCTION

Two Station
(CETOP Version)



Mounting Holes	Port T	Ports A, B, P	Port Y	Gage Port	ALUMINUM		DUCTILE IRON	
					Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	.25 NPTF	VRF		VRF/S	
inch	SAE-16	SAE-12	SAE-6	SAE-4	VRM		VRM/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	.25 BSPP	VRV		VRV/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Direct Acting Relief Valve
	RPGC Page 1.06		RDFA Page 1.10
OTHER VALVES:			

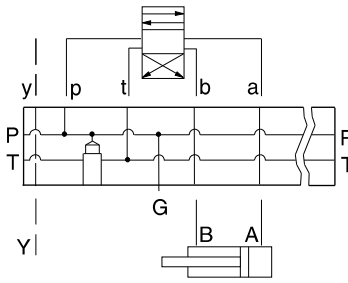


BAR MANIFOLDS



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

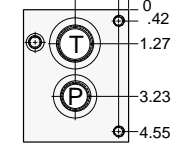
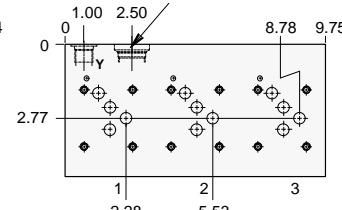
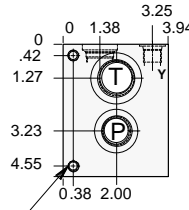
D05 H (U.S.) Parallel Circuit with Relief Cavity and Y Port



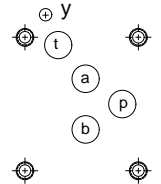
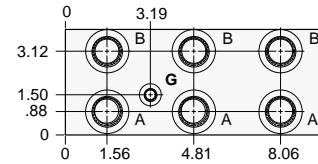
FUNCTION

Three Station
(U.S. Version)

T-3A Cavity
Locating Shoulder
Depth .31



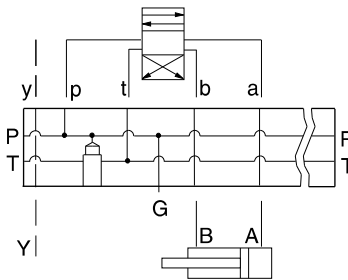
Mounting Holes:
Inch: .375 - 16UNC
x .75 in. Deep.
Metric: M10 x 1.5 - 6H
x .75 in. Deep.
2 places each end



Mounting Holes	Port T	Ports A, B, P	Port Y	Gage Port	ALUMINUM		DUCTILE IRON	
					Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	.25 NPTF	VME		VME/S	
inch	SAE-16	SAE-12	SAE-6	SAE-4	VML		VML/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	.25 BSPP	VMW		VMW/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

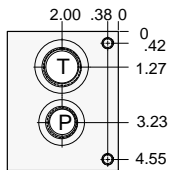
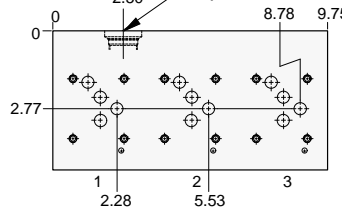
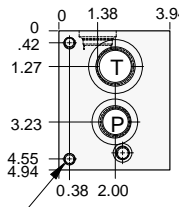
D05 H (CETOP) Parallel Circuit with Relief Cavity and Y Port



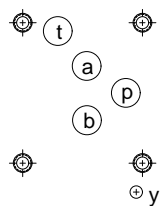
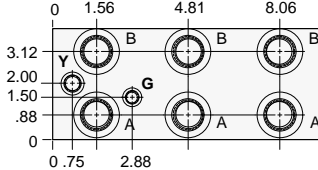
FUNCTION

Three Station
(CETOP Version)

T-3A Cavity
Locating Shoulder
Depth .31



Mounting Holes:
Inch: .375 - 16UNC
x .75 Deep.
Metric: M10 x 1.5 - 6H
x .75 Deep.
2 places each end



Mounting Holes	Port T	Ports A, B, P	Port Y	Gage Port	ALUMINUM		DUCTILE IRON	
					Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	.25 NPTF	VRG		VRG/S	
inch	SAE-16	SAE-12	SAE-6	SAE-4	VRN		VRN/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	.25 BSPP	VRW		VRW/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Direct Acting Relief Valve
	RPGC Page 1.06		RDFA Page 1.10
OTHER VALVES:			

BAR MANIFOLDS

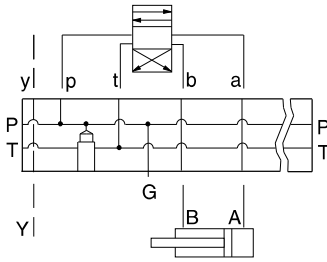


BAR MANIFOLDS



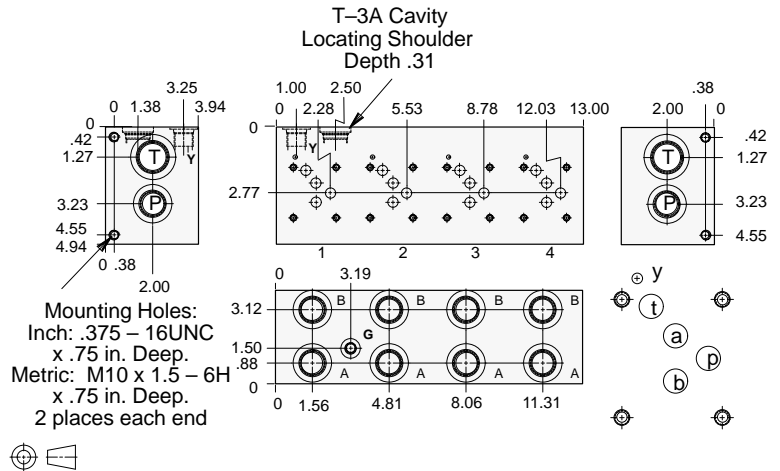
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

D05 H (U.S.) Parallel Circuit with Relief Cavity and Y Port



FUNCTION

Four Station
(U.S. Version)

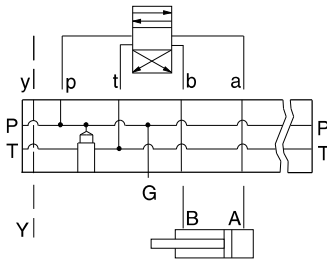


Mounting Holes	Port T	Ports A, B, P	Port Y	Gage Port	ALUMINUM		DUCTILE IRON	
					Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	.25 NPTF	VMF		VMF/S	
inch	SAE-16	SAE-12	SAE-6	SAE-4	VMM		VMM/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	.25 BSPP	VMX		VMX/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

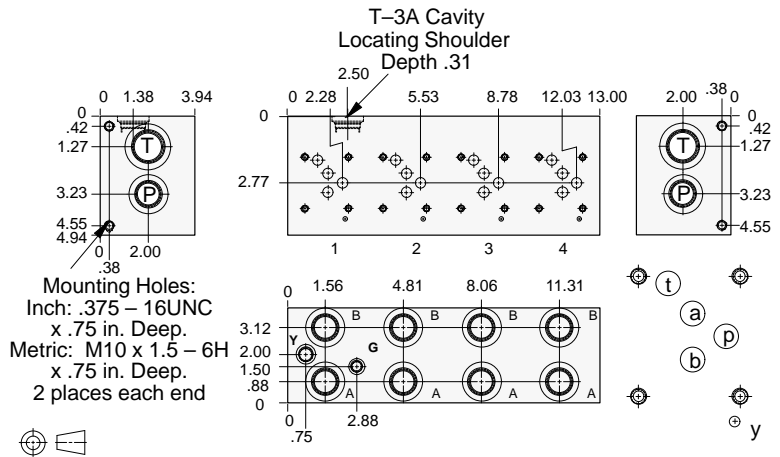
BAR MANIFOLDS

D05 H (CETOP) Parallel Circuit with Relief Cavity and Y Port



FUNCTION

Four Station
(CETOP Version)



Mounting Holes	Port T	Ports A, B, P	Port Y	Gage Port	ALUMINUM		DUCTILE IRON	
					Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	.25 NPTF	VRH		VRH/S	
inch	SAE-16	SAE-12	SAE-6	SAE-4	VRP		VRP/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	.25 BSPP	VRX		VRX/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Direct Acting Relief Valve
	RPGC Page 1.06		RDFA Page 1.10
OTHER VALVES:			

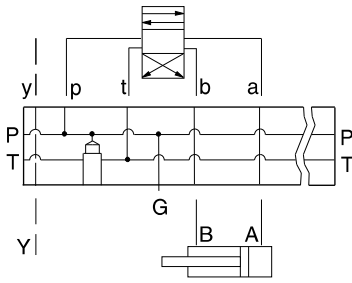


BAR MANIFOLDS



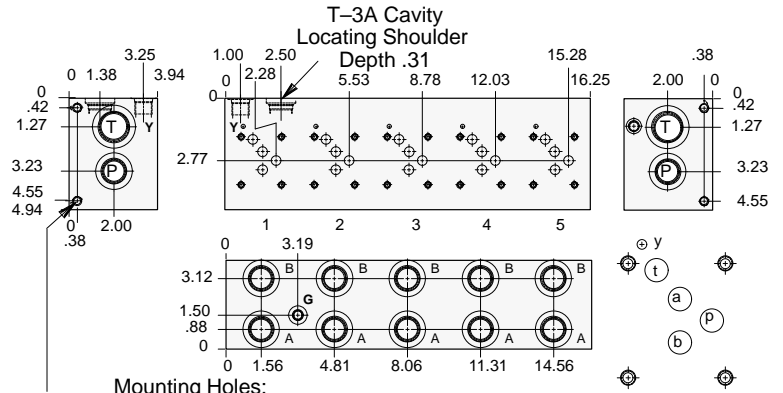
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

D05 H (U.S.) Parallel Circuit with Relief Cavity and Y Port



FUNCTION

Five Station
(U.S. Version)

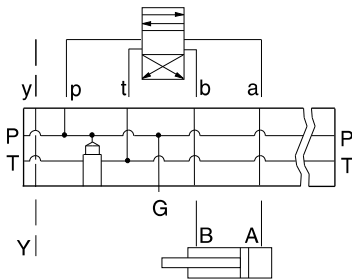


Mounting Holes:
Inch: .375 – 16UNC x .75 in. Deep.
Metric: M10 x 1.5 – 6H x .75 in. Deep.
2 places each end

Mounting Holes	Port T	Ports A, B, P	Port Y	Gage Port	ALUMINUM		DUCTILE IRON	
					Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	.25 NPTF	VMG		VMG/S	
inch	SAE-16	SAE-12	SAE-6	SAE-4	VMN		VMN/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	.25 BSPP	VMY		VMY/S	

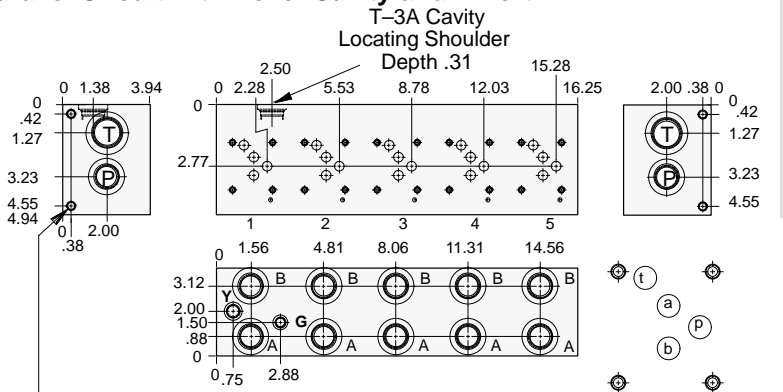
Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

D05 H (CETOP) Parallel Circuit with Relief Cavity and Y Port



FUNCTION

Five Station
(CETOP Version)



Mounting Holes:
Inch: .375 – 16UNC x .75 in. Deep.
Metric: M10 x 1.5 – 6H x .75 in. Deep.
2 places each end

Mounting Holes	Port T	Ports A, B, P	Port Y	Gage Port	ALUMINUM		DUCTILE IRON	
					Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	.25 NPTF	VRJ		VRJ/S	
inch	SAE-16	SAE-12	SAE-6	SAE-4	VRR		VRR/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	.25 BSPP	VRY		VRY/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Direct Acting Relief Valve
	RPGC Page 1.06		RDFA Page 1.10
OTHER VALVES:			

BAR MANIFOLDS



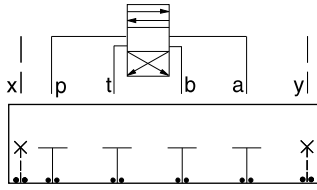


ISO 05 X,Y SANDWICH BODIES



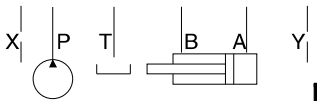
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Cover Plates



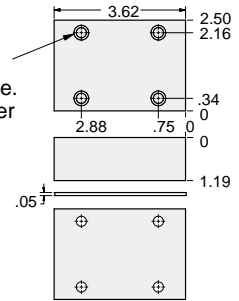
FUNCTION

All Ports Blocked



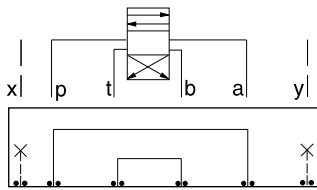
Mounting Holes:
 .28 diameter through hole.
 Counterbore .41 diameter
 x .81 deep.
 4 places.

Order retainer and seals separately.
 See page 12.003



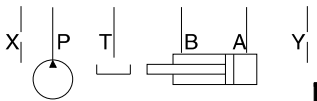
ALUMINIUM		SG IRON	
Model Code	List Price	Model Code	List Price
ZJP		ZJP/S	

Cover Plates



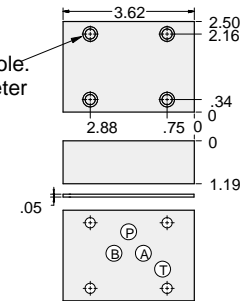
FUNCTION

P to A and B to T



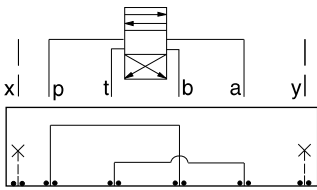
Mounting Holes:
 .28 diameter through hole.
 Counterbore .41 diameter
 x .81 deep.
 4 places.

Order retainer and seals separately.
 See page 12.003



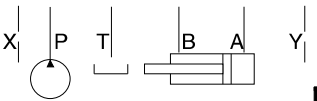
ALUMINIUM		SG IRON	
Model Code	List Price	Model Code	List Price
ZJM		ZJM/S	

Cover Plates



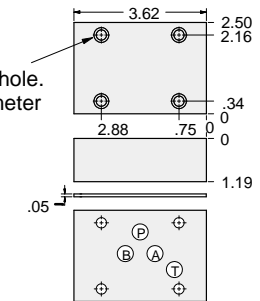
FUNCTION

P to B and A to T



Mounting Holes:
 .28 diameter through hole.
 Counterbore .41 diameter
 x .81 deep.
 4 places.

Order retainer and seals separately.
 See page 12.003



ALUMINIUM		SG IRON	
Model Code	List Price	Model Code	List Price
ZJJ		ZJJ/S	

05xy COVER PLATE

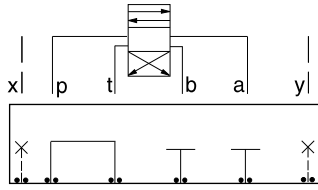


ISO 05 X,Y SANDWICH BODIES



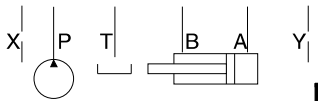
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Cover Plates



FUNCTION

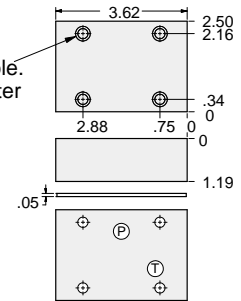
P to T
A and B blocked



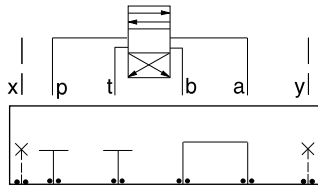
ALUMINIUM		SG IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
ZJN		ZJNS	

Mounting Holes:
.28 diameter through hole.
Counterbore .41 diameter
x .81 deep.
4 places.

Order retainer and
seals separately.
See page 12.003

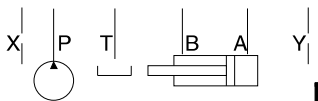


Cover Plates



FUNCTION

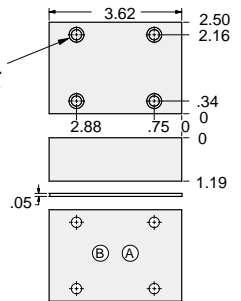
A to B
P and T blocked



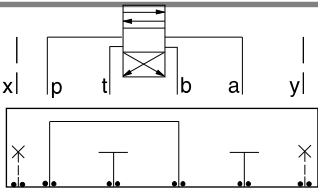
ALUMINIUM		SG IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
ZJL		ZJLS	

Mounting Holes:
.28 diameter through hole.
Counterbore .41 diameter
x .81 deep.
4 places.

Order retainer and
seals separately.
See page 12.003

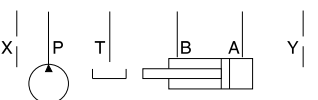


Cover Plates



FUNCTION

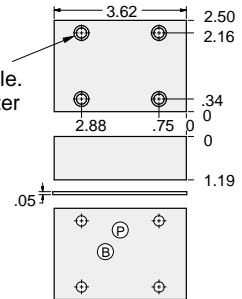
P to B
A and T blocked



ALUMINIUM		SG IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
ZJK		ZJKS	

Mounting Holes:
.28 diameter through hole.
Counterbore .41 diameter
x .81 deep.
4 places.

Order retainer and
seals separately.
See page 12.003



05xy COVER PLATE

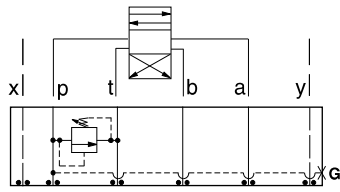




ISO 07 SANDWICH BODIES



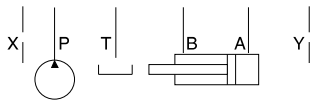
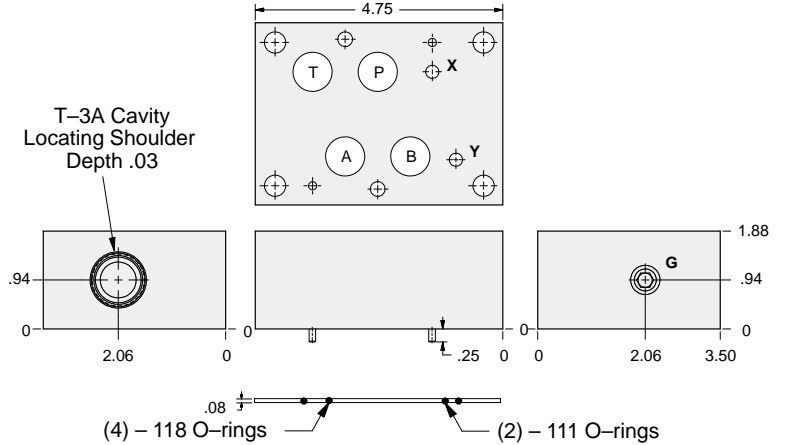
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

P to T

Relief Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CKP		CKP/S	
.25 BSPP	CKP/M		CKP/T	

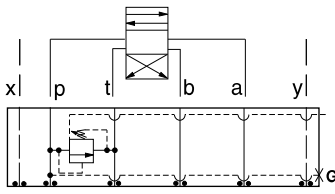
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Relief Valve		Pilot Operated "Kick-Down" Relief Valve
	RPGC Page 1.06		RQGB Page 1.12
	Pilot Operated, Rapid Response Relief Valve		Air Controlled, Pilot Operated Relief Valve
	RPGE Page 1.08		RPGD Page 1.14
	Direct Acting Relief Valve		
	RDFA Page 1.10		
OTHER VALVES:			



ISO 07 SANDWICH BODIES



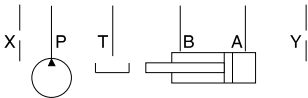
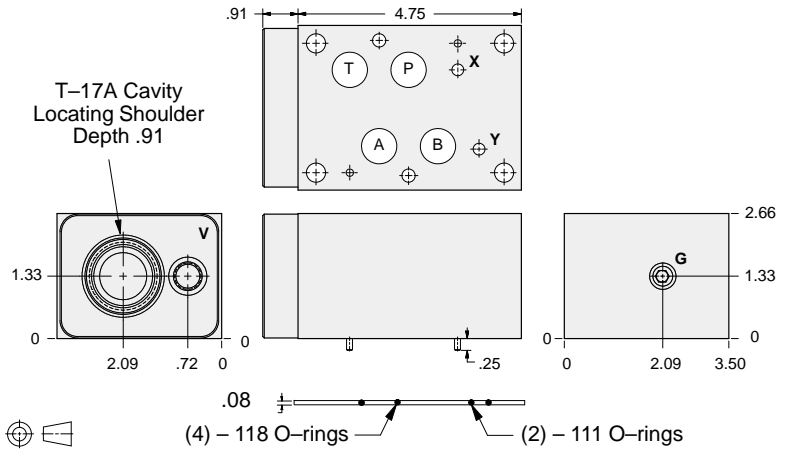
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

P to T
Externally Vented

Relief Valves



Vent Port	Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
SAE-6	.25 NPTF	CKQ		CKQ/S	
.25 BSPP	.25 BSPP	CKQ/M		CKQ/T	

07 RELIEF

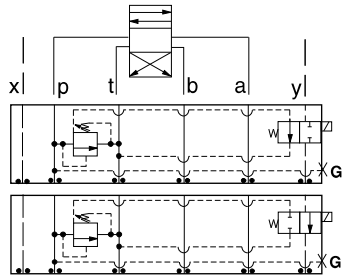
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	<i>Pilot Operated Vented Relief Valve</i>		
	RVGA Page 1.19		
OTHER VALVES:			



ISO 07 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

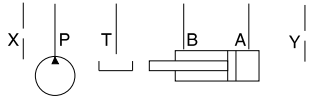
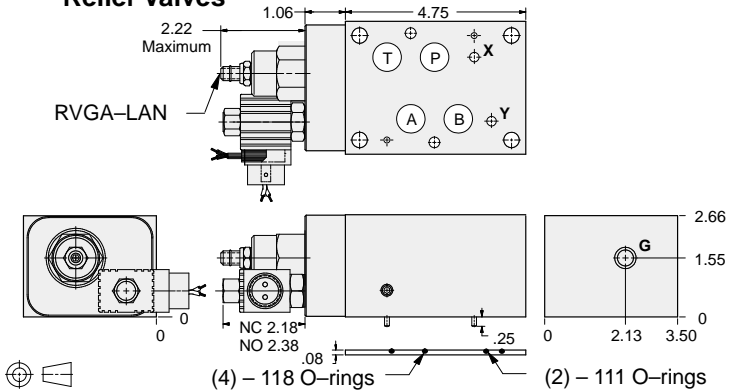


FUNCTION

P to T
N.O. Solenoid
Vented *

P to T
N.C. Solenoid
Vented *

Relief Valves



Solenoid Type	Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
N.O.	.25 NPTF	YRFI-LAN-*B		YRFI-LAN-*B/S	
N.O.	.25 BSPP	YRFI-LAN-*B/M		YRFI-LAN-*B/T	
N.C.	.25 NPTF	YRFJ-LAN-*B		YRFJ-LAN-*B/S	
N.C.	.25 BSPP	YRFJ-LAN-*B/M		YRFJ-LAN-*B/T	

* Select solenoid connection/voltage option from page 14.16 and add option price to List Price.

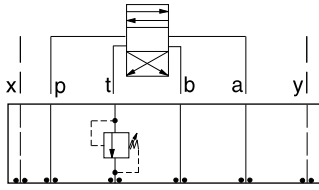


ISO 07 SANDWICH BODIES



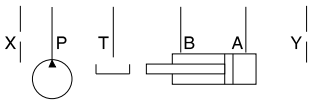
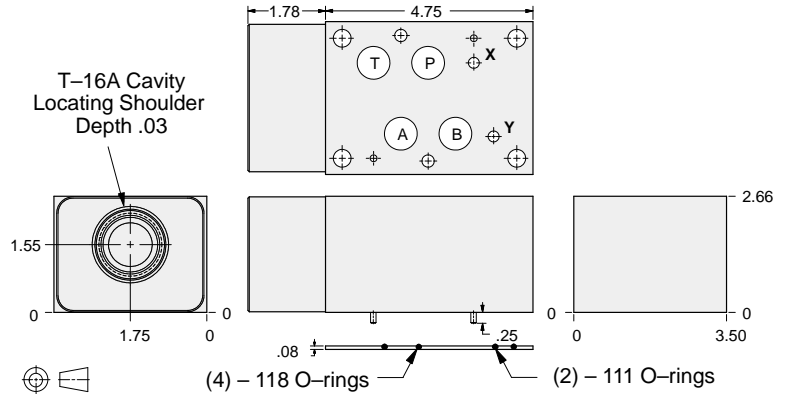
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Relief Valves



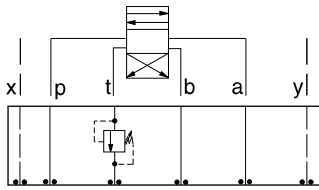
FUNCTION

Out of T



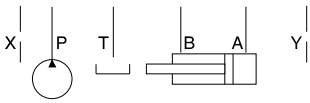
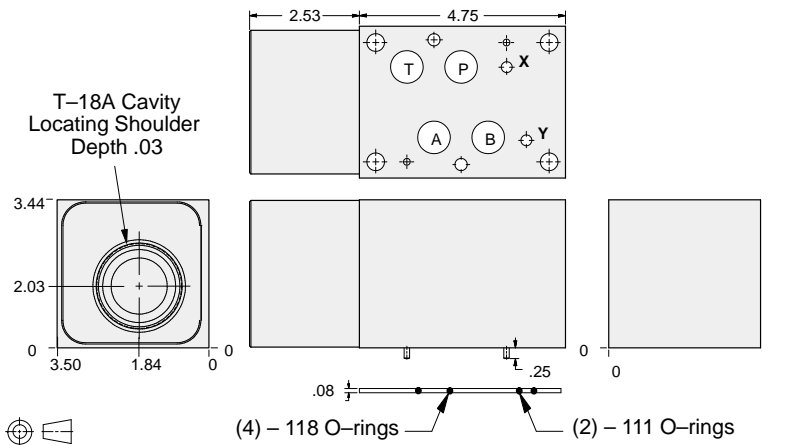
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKT		DKT/S	

Relief Valves



FUNCTION

Out of T
(High Capacity)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKV		DKV/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

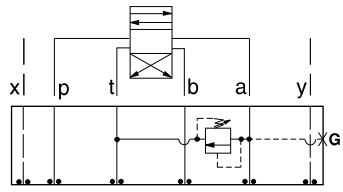
	Pilot Operated Relief Valve RP*C Page 1.07		Pilot Operated "Kick-Down" Relief Valve RQ*B Page 1.13
	Pilot Operated, Rapid Response Relief Valve RP*E Page 1.09		Air Controlled, Pilot Operated Relief Valve RP*D Page 1.15
	Direct Acting Relief Valve RD*A Page 1.11		
OTHER VALVES:			



ISO 07 SANDWICH BODIES

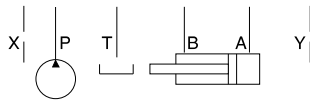
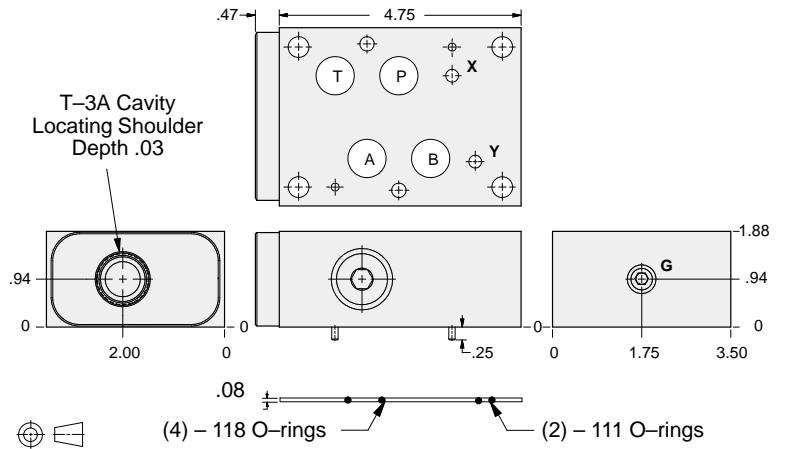


- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION
A to T

Relief Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CKA		CKA/S	
.25 BSPP	CKA/M		CKA/T	

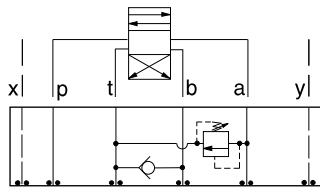
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Relief Valve RPGC Page 1.06		Pilot Operated "Kick-Down" Relief Valve RQGB Page 1.12
	Pilot Operated, Rapid Response Relief Valve RPGE Page 1.08		Air Controlled, Pilot Operated Relief Valve RPGD Page 1.14
	Direct Acting Relief Valve RDFA Page 1.10		
OTHER VALVES:			



ISO 07 SANDWICH BODIES



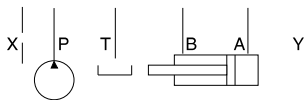
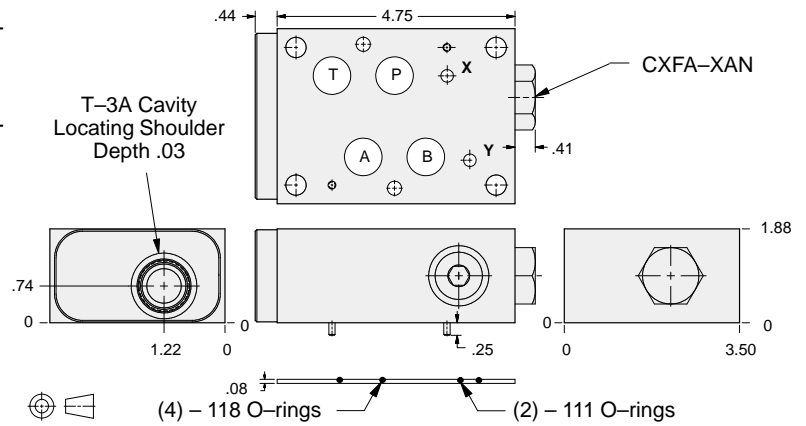
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

A to T
FF Check T to B

Relief Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CKJ		CKJ/S	

07 RELIEF

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

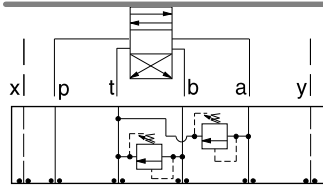
	<i>Pilot Operated Relief Valve</i> RPGC Page 1.06		<i>Pilot Operated "Kick-Down" Relief Valve</i> RQGB Page 1.12
	<i>Pilot Operated, Rapid Response Relief Valve</i> RPGE Page 1.08		<i>Air Controlled, Pilot Operated Relief Valve</i> RPGD Page 1.14
	<i>Direct Acting Relief Valve</i> R DFA Page 1.10		
OTHER VALVES:			



ISO 07 SANDWICH BODIES



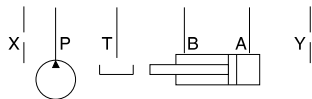
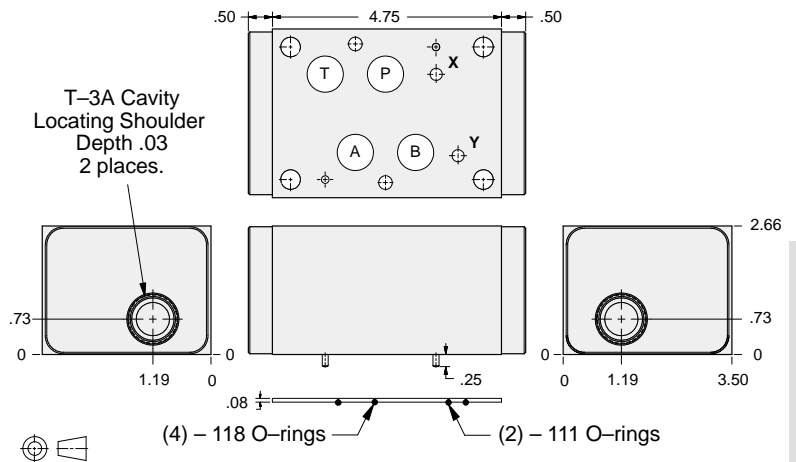
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

A and B to T
(High Capacity)

Relief Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CKX		CKX/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

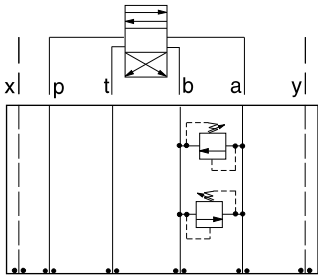
	Pilot Operated Relief Valve RPGC Page 1.06		Pilot Operated "Kick-Down" Relief Valve RQGB Page 1.12
	Pilot Operated, Rapid Response Relief Valve RPGE Page 1.08		Air Controlled, Pilot Operated Relief Valve RPGD Page 1.14
	Direct Acting Relief Valve RDFA Page 1.10		
OTHER VALVES:			



ISO 07 SANDWICH BODIES



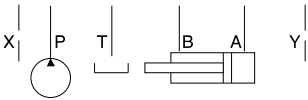
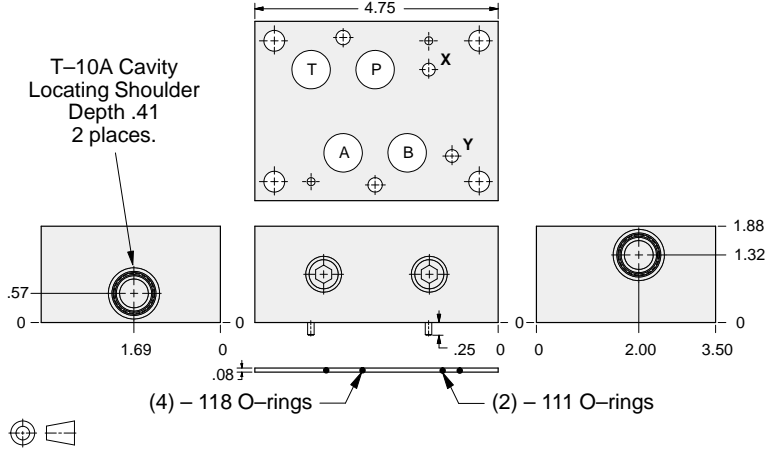
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

A to B and B to A
(Cross-Port)

Relief Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CKY		CKY/S	

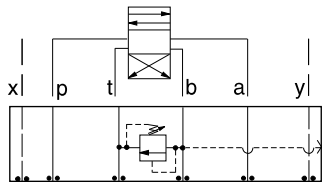
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	<i>Pilot Operated Relief Valve</i>		<i>Pilot Operated "Kick-Down" Relief Valve</i>
	RPEC Page 1.06		RQEB Page 1.12
	<i>Pilot Operated, Rapid Response Relief Valve</i>		
	RPEE Page 1.08		
	<i>Direct Acting Relief Valve</i>		
	RDDA Page 1.10		
OTHER VALVES:			



ISO 07 SANDWICH BODIES

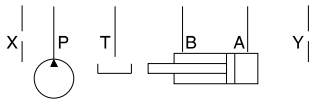
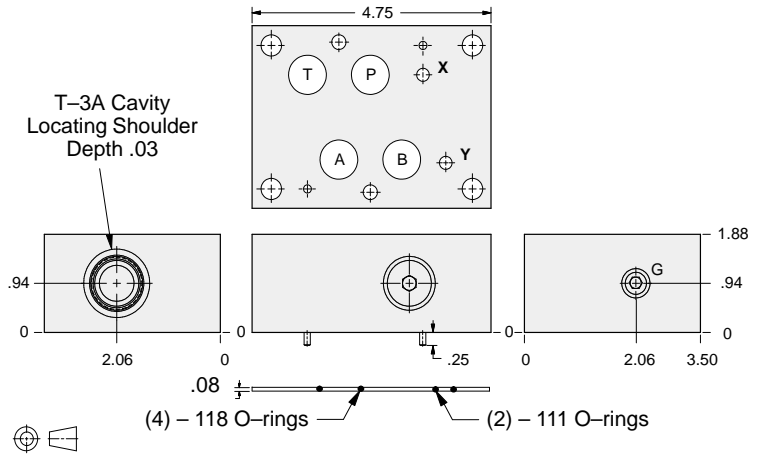


- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION
B to T

Relief Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CKB		CKB/S	
.25 BSPP	CKB/M		CKB/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Relief Valve RPGC Page 1.06		Pilot Operated "Kick-Down" Relief Valve RQGB Page 1.12
	Pilot Operated, Rapid Response Relief Valve RPGE Page 1.08		Air Controlled, Pilot Operated Relief Valve RPGD Page 1.14
	Direct Acting Relief Valve RDFA Page 1.10		
OTHER VALVES:			

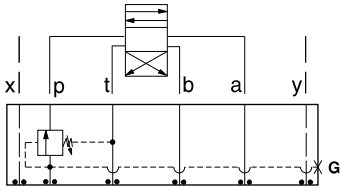


ISO 07 SANDWICH BODIES

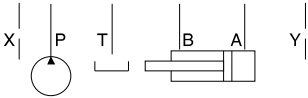
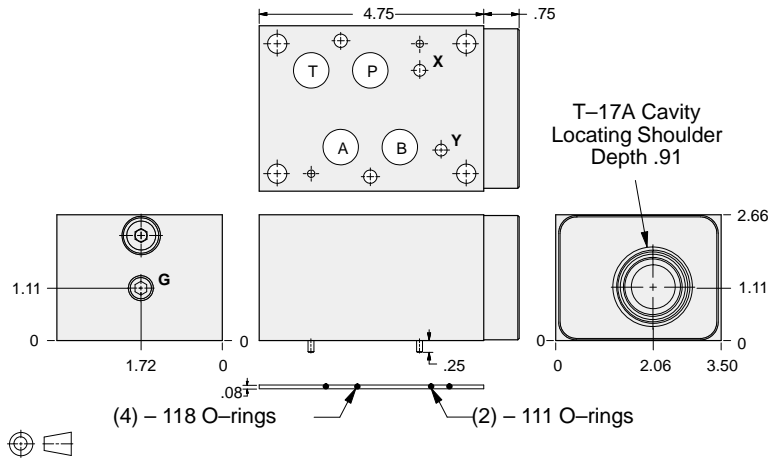


- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Sequence Valves



FUNCTION
In to P



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BKW		BKW/S	
.25 BSPP	BKW/M		BKW/T	

07 SEQUENCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

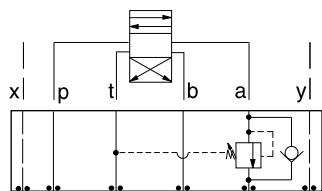
	<i>Pilot Operated Sequence Valve</i>		
	RSHC Page 2.07		
	<i>Pilot Operated "Kick-Down" Sequence Valve</i>		
	SQHB Page 2.09		
	<i>Air Controlled, Pilot Operated Sequence Valve</i>		
	RSHE Page 2.11		
OTHER VALVES:			



ISO 07 SANDWICH BODIES



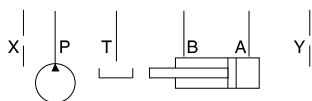
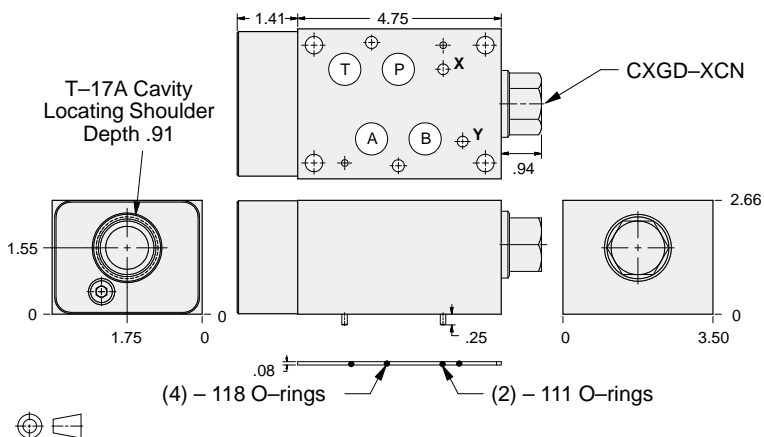
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



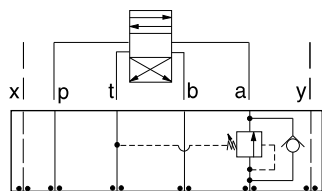
FUNCTION

In to A
Reverse FF Check

Sequence Valves



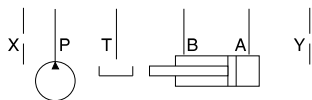
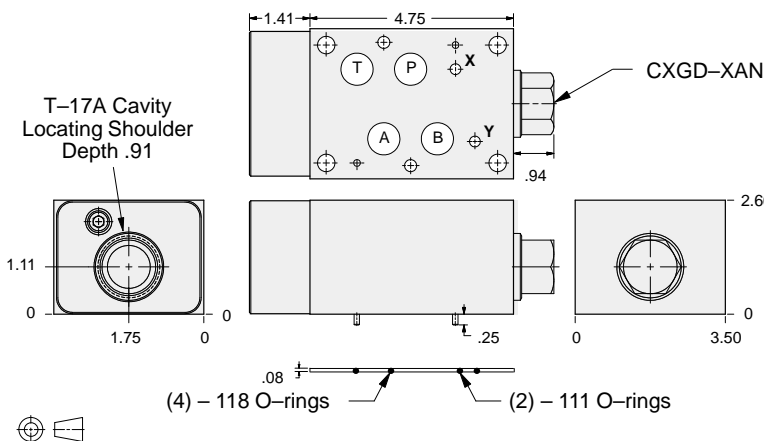
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BK4		BK4/S	



FUNCTION

Out of A
Reverse FF Check

Sequence Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BK6		BK6/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

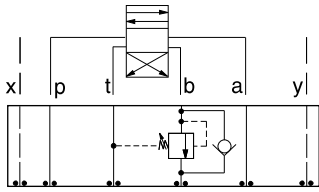
	Pilot Operated Sequence Valve		
	RSHC Page 2.07		
	Pilot Operated "Kick-Down" Sequence Valve		
	SQHB Page 2.09		
	Air Controlled, Pilot Operated Sequence Valve		
	RSHE Page 2.11		
OTHER VALVES:			



ISO 07 SANDWICH BODIES



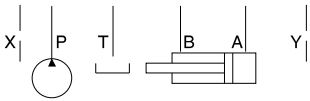
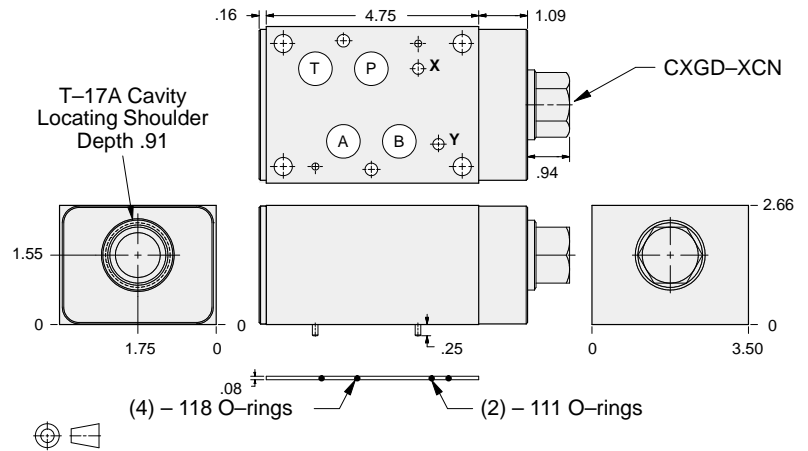
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



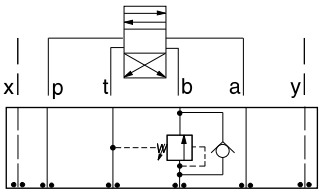
FUNCTION

In to B
Reverse FF Check

Sequence Valves



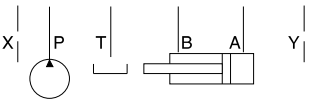
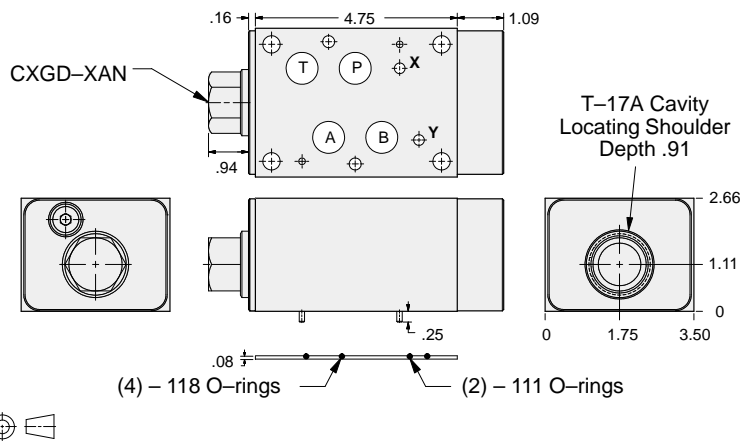
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BK5		BK5/S	



FUNCTION

Out of B
Reverse FF Check

Sequence Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BK7		BK7/S	

07 REDUCING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	<i>Pilot Operated Sequence Valve</i>		
	RSHC Page 2.07		
	<i>Pilot Operated "Kick-Down" Sequence Valve</i>		
	SQHB Page 2.09		
	<i>Air Controlled, Pilot Operated Sequence Valve</i>		
	RSHE Page 2.11		
OTHER VALVES:			

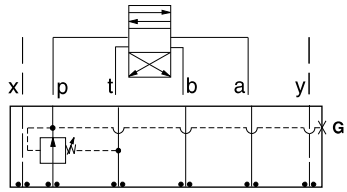


ISO 07 SANDWICH BODIES



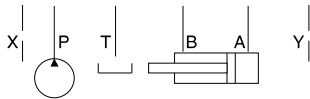
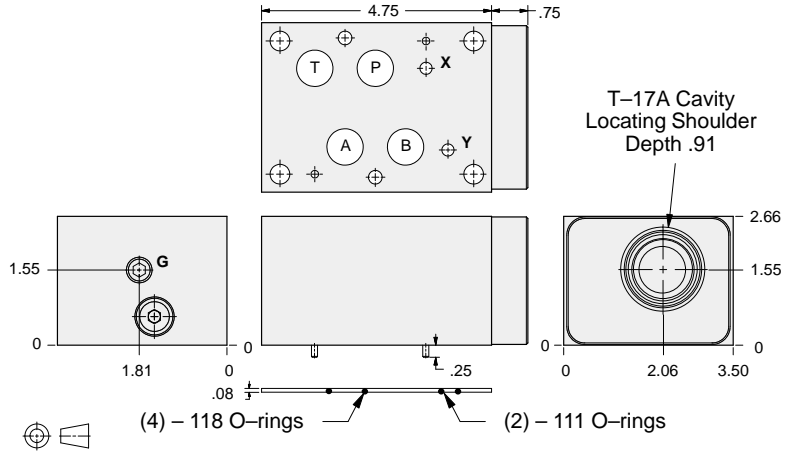
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing Valves



FUNCTION

On P
Drained to T



Gauge Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BKP		BKP/S	
.25 BSPP	BKP/M		BKP/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Reducing Valve		
	PBHB Page 3.07		
	Air Controlled, Pilot Operated Reducing Valve		
	PBHC Page 3.09		
OTHER VALVES:			

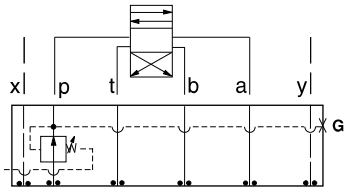


ISO 07 SANDWICH BODIES



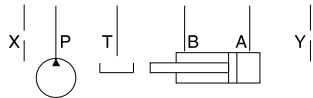
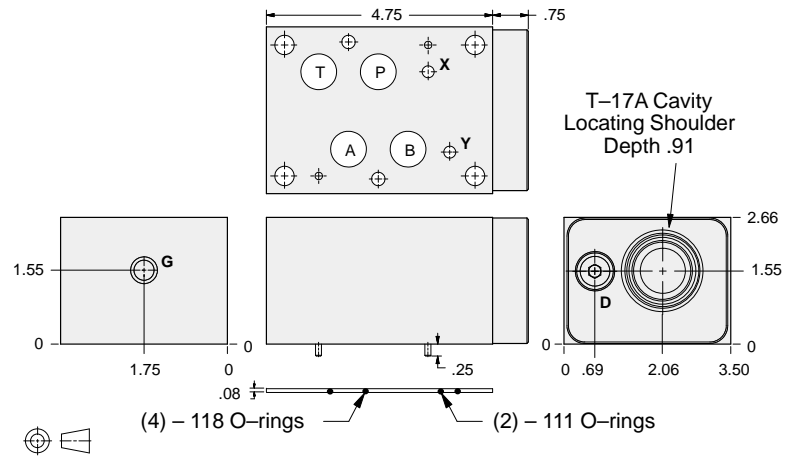
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing Valves



FUNCTION

On P
Drained Externally



Gauge Port (Plugged)	Drain Port	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
.25 NPTF	SAE-6	BKQ		BKQ/S	
.25 BSPP	.25 BSPP	BKQ/M		BKQ/T	

07 REDUCING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

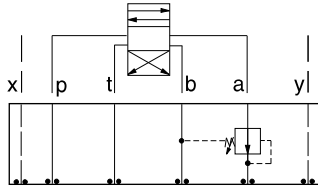
	<i>Pilot Operated Reducing Valve</i>		
	PBHP Page 3.07		
	<i>Air Controlled, Pilot Operated Reducing Valve</i>		
	PBHQ Page 3.09		
OTHER VALVES:			



ISO 07 SANDWICH BODIES



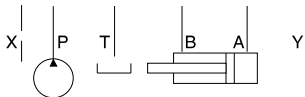
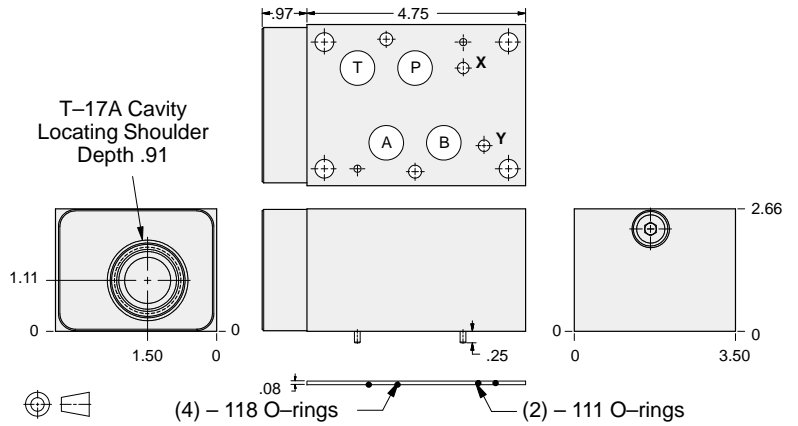
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On A
Drained to B

Reducing Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BKA		BKA/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing Valve		
	PBHB Page 3.07		
OTHER VALVES:			

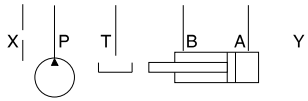
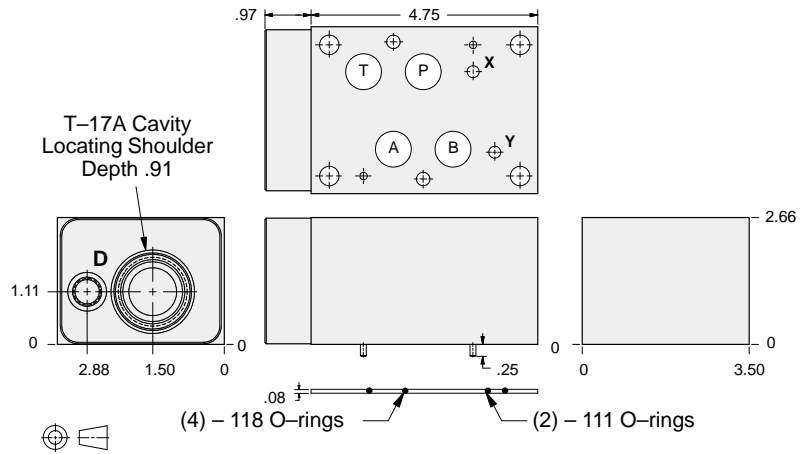
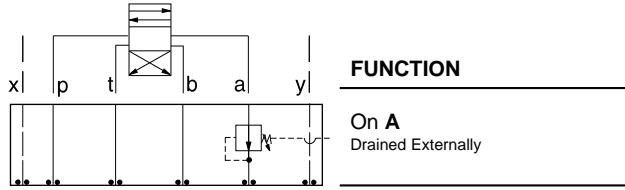


ISO 07 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing Valves



Drain Port	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
SAE-6	BKC		BKC/S	
.25 BSPP	BKC/M		BKC/T	

07 REDUCING

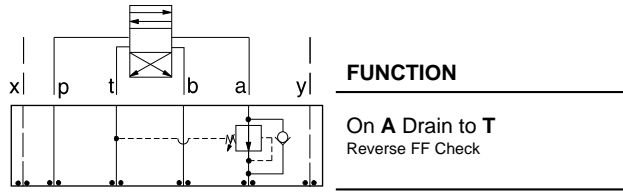
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing Valve		
	PBHB Page 3.07		
	Air Controlled, Pilot Operated Reducing Valve		
	PBHC Page 3.09		
OTHER VALVES:			



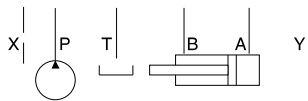
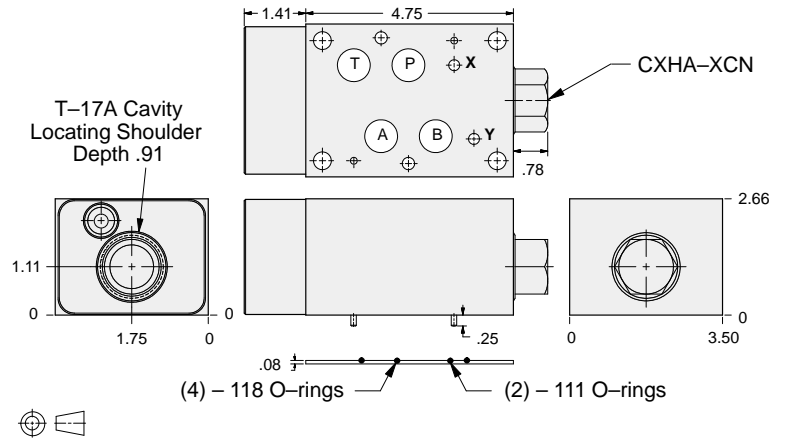
ISO 07 SANDWICH BODIES



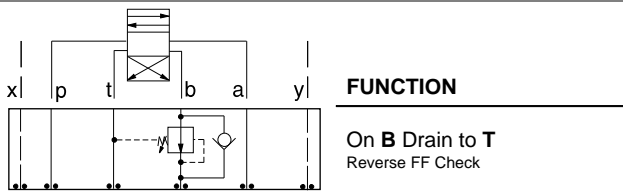
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



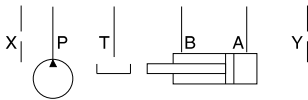
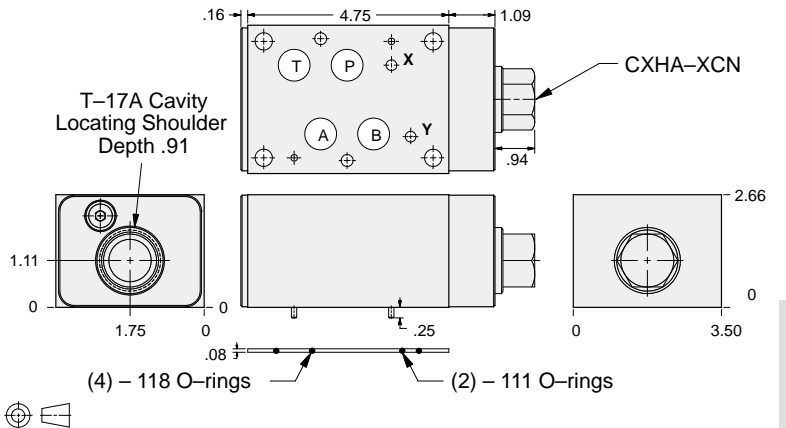
Reducing Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BK2		BK2/S	



Reducing Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BKJ		BKJ/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

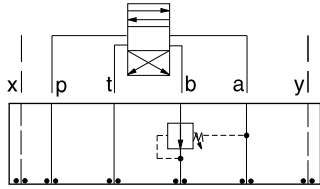
	Pilot Operated Reducing Valve		
	PBHB Page 3.07		
	Air Controlled, Pilot Operated Reducing Valve		
	PBHC Page 3.09		
OTHER VALVES:			



ISO 07 SANDWICH BODIES



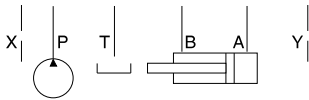
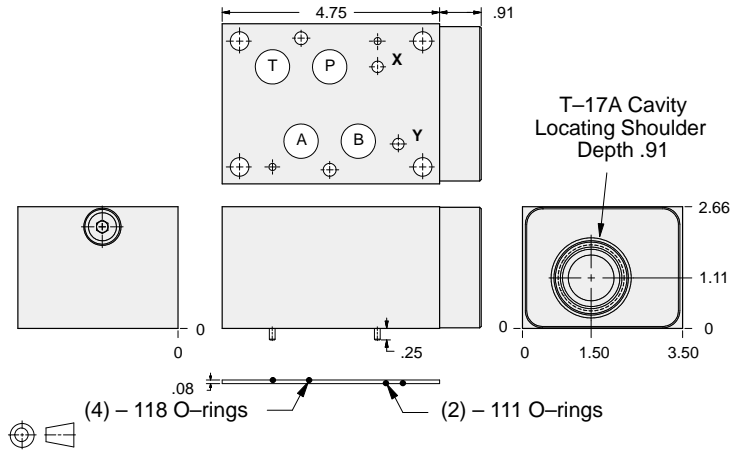
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On **B**
Drained to **A**

Reducing Valves



ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
BKB		BKB/S	

07 REDUCING

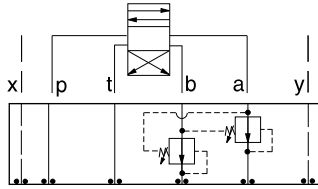
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	<i>Pilot Operated Reducing Valve</i>		
	PBHB Page 3.07		
OTHER VALVES:			



ISO 07 SANDWICH BODIES



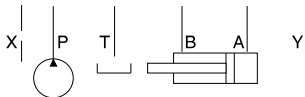
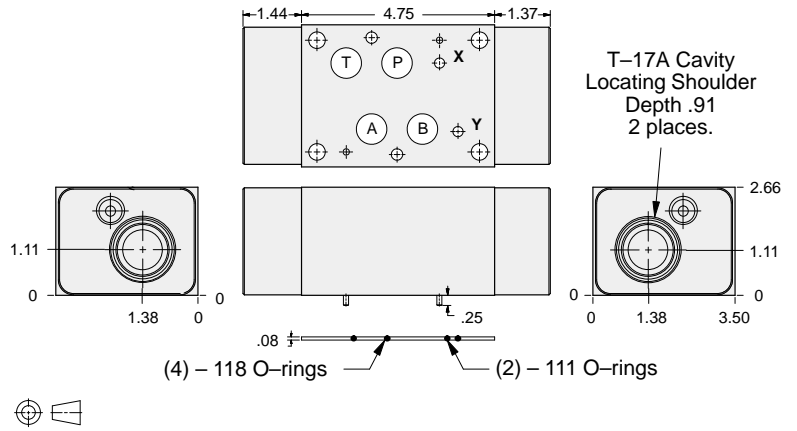
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On A and B
Drains to Opposite Port

Reducing Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BKY		BKY/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing Valve		
	PBHB Page 3.07		
OTHER VALVES:			

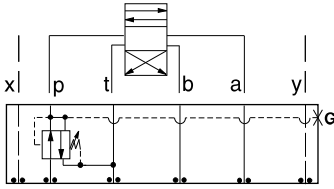


ISO 07 SANDWICH BODIES



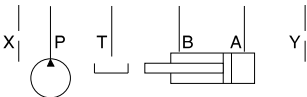
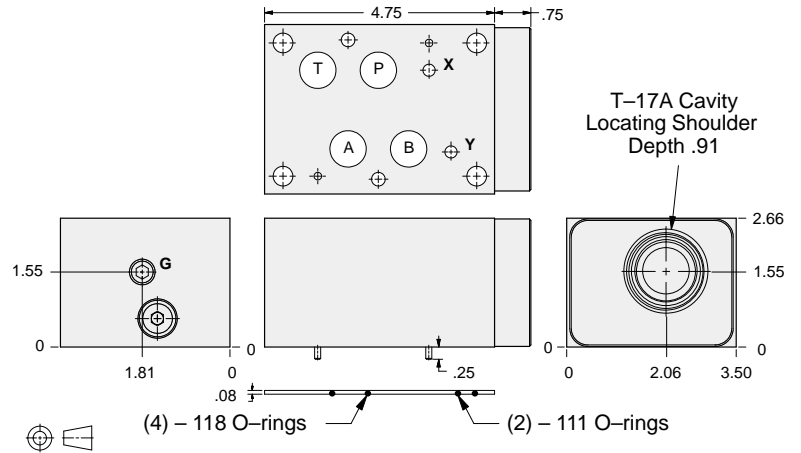
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing/Relieving Valves



FUNCTION

On P Tank to T
Drained to T



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	BKP		BKP/S	
.25 BSPP	BKP/M		BKP/T	

07 REDUCING/RELIEVING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing/Relieving Valve		
	PPHB Page 3.11		
	Air Controlled, Pilot Operated Reducing/Relieving Valve		
	PPHC Page 3.13		
OTHER VALVES:			

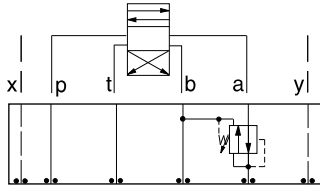


ISO 07 SANDWICH BODIES



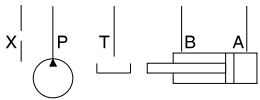
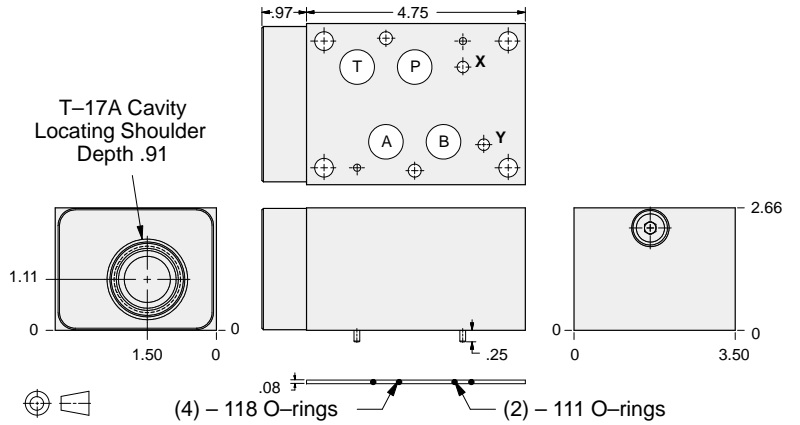
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing/Relieving Valves



FUNCTION

On A Tank to B
Drained to B



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BJA		BJA/S	

07 REDUCING/RELIEVING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	<i>Pilot Operated Reducing/Relieving Valve</i>		
	PPHB Page 3.11		
OTHER VALVES:			

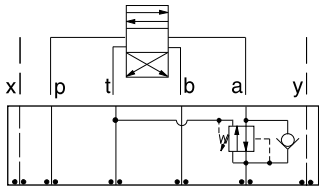


ISO 07 SANDWICH BODIES



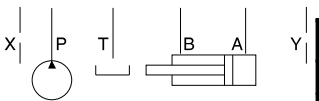
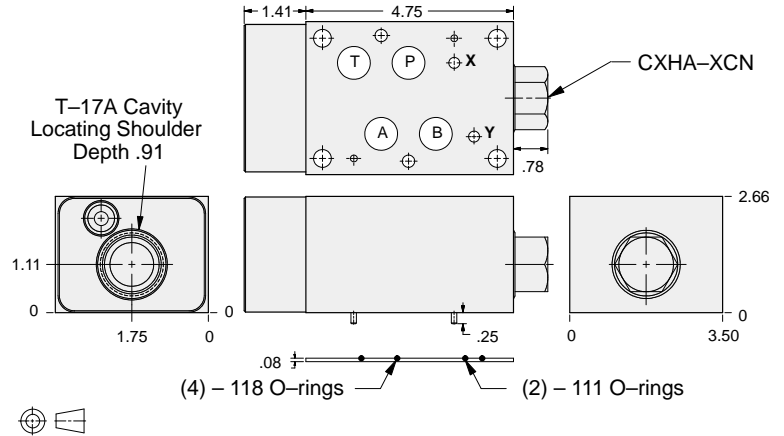
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing/Relieving Valves



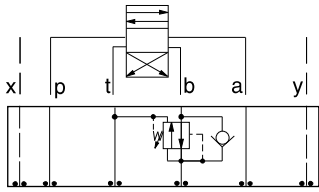
FUNCTION

On A Tank to T
Drained to T
Reverse FF Check



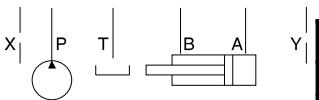
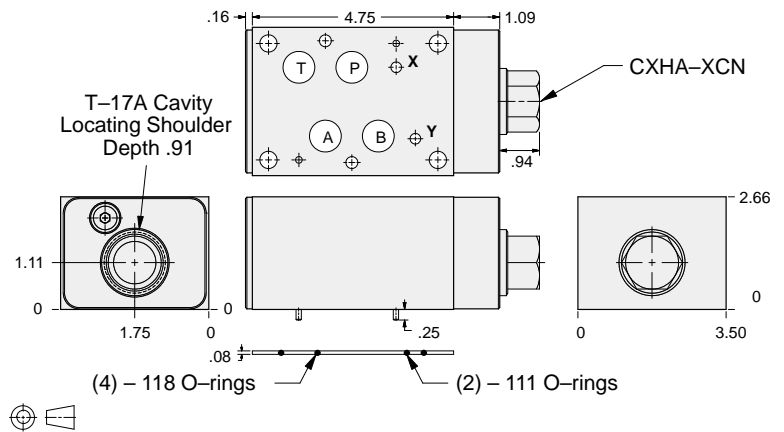
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BK2		BK2/S	

Reducing/Relieving Valves



FUNCTION

On B Tank to T
Drained to T
Reverse FF Check



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BKJ		BKJ/S	

07 REDUCING/RELIEVING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Reducing/Relieving Valve		
	PPHB Page 3.11		
	Air Controlled, Pilot Operated Reducing/Relieving Valve		
	PPHC Page 3.13		
OTHER VALVES:			

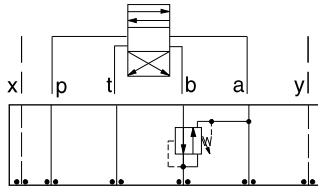


ISO 07 SANDWICH BODIES



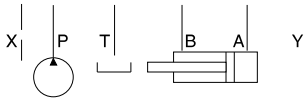
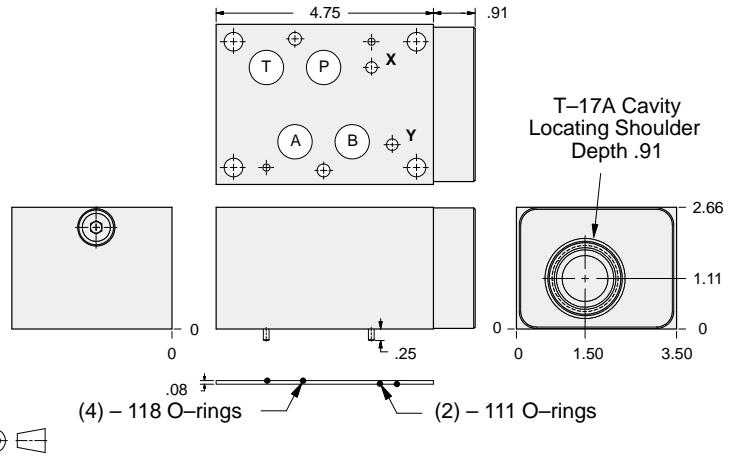
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing/Relieving Valves



FUNCTION

On B Tank to A
Drained to A



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BKB		BKB/S	

07 REDUCING/RELIEVING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing/Relieving Valve		
	PPHB Page 3.11		
OTHER VALVES:			

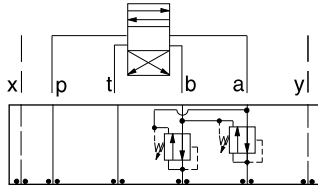


ISO 07 SANDWICH BODIES



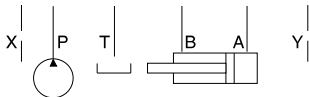
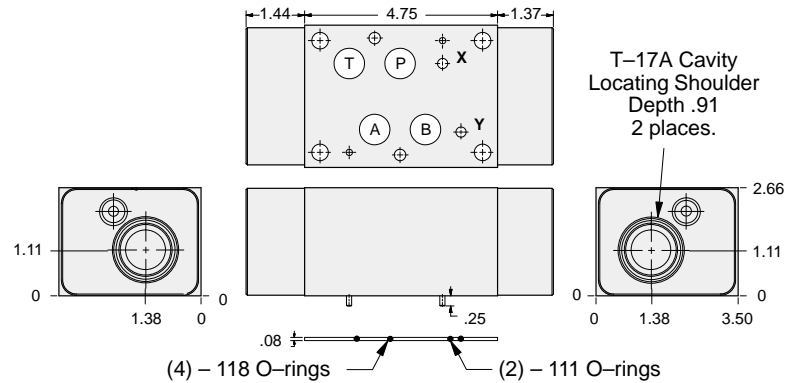
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing/Relieving Valves



FUNCTION

On **A** and **B**
Tanks and Drains to
Opposite Port



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BKY		BKY/S	

07 REDUCING/RELIEVING

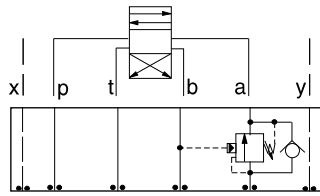
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing/Relieving Valve		
	PPHB Page 3.11		
OTHER VALVES:			



ISO 07 SANDWICH BODIES



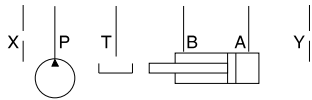
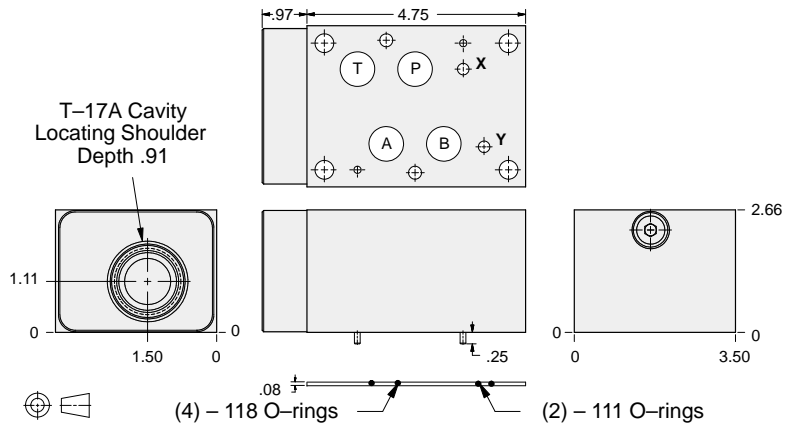
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On A Pilot from B

Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BJA		BJA/S	

07 COUNTERBALANCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Counterbalance Valve, 3:1 Pilot Ratio		
	CBGA Page 4.11		
	Counterbalance Valve, 4.5:1 Pilot Ratio		
	CBGG Page 4.13		
	Counterbalance Valve, 10:1 Pilot Ratio		
	CBGHP Page 4.15		
OTHER VALVES:			

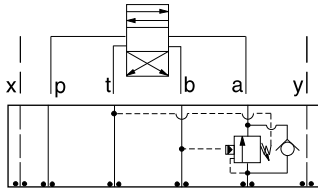


ISO 07 SANDWICH BODIES



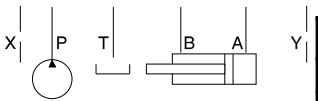
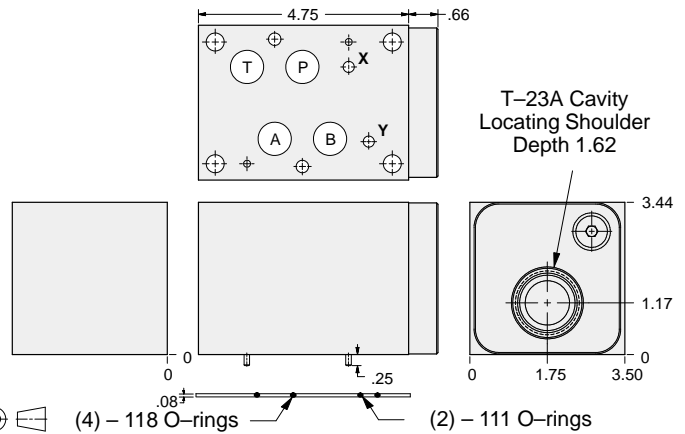
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Counterbalance Valves



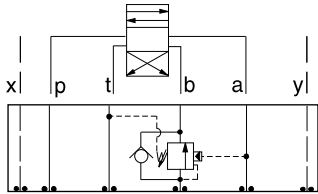
FUNCTION

On A Pilot
from B
Vent to T



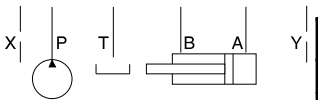
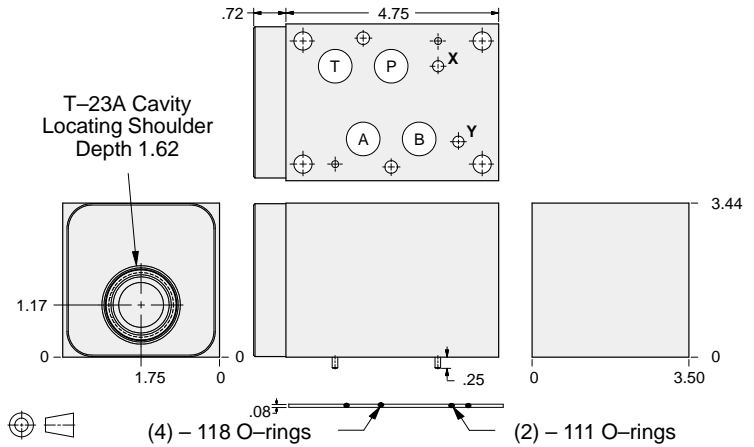
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
NKA		NKA/S	

Counterbalance Valves



FUNCTION

On B Pilot
from A
Vent to T



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
NKB		NKB/S	

07 COUNTERBALANCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

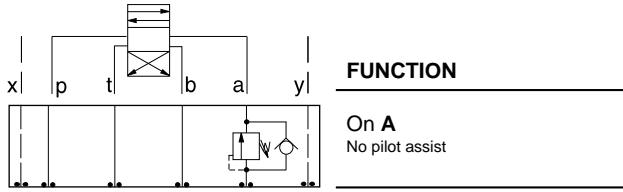
	Vented Counterbalance Valve, 3:1 Pilot Ratio		
	CWGA Page 4.19		
	Vented Counterbalance Valve, 5:1 Pilot Ratio		
	CWGG Page 4.21		
OTHER VALVES:			



ISO 07 SANDWICH BODIES



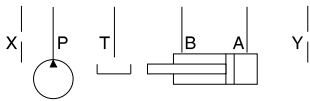
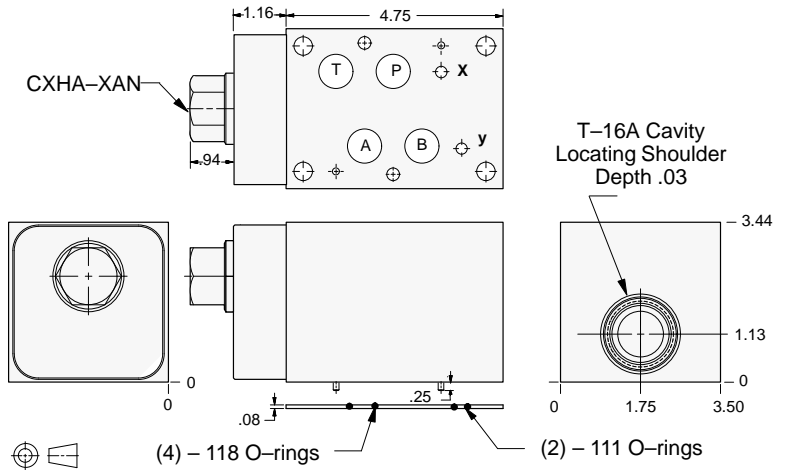
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



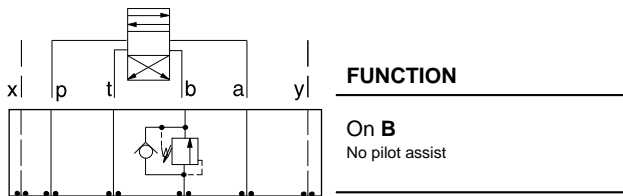
FUNCTION

On A
No pilot assist

Counterbalance Valves



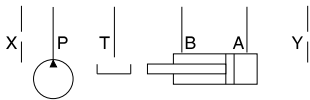
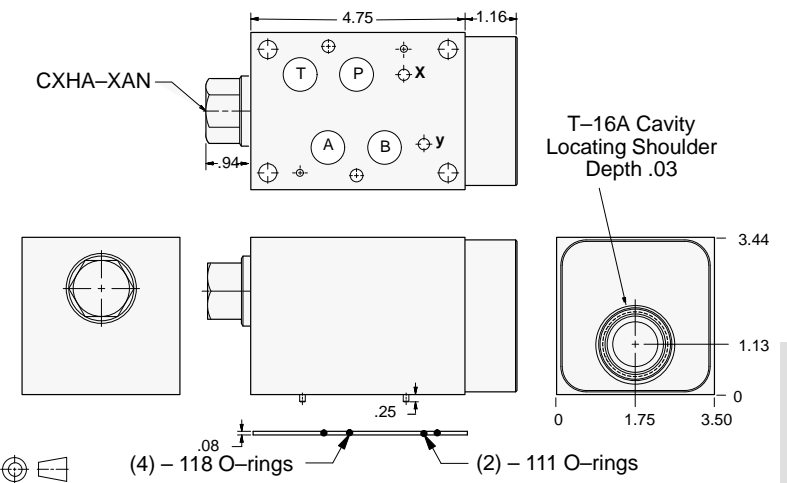
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CK4		CK4/S	



FUNCTION

On B
No pilot assist

Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Part Number	List Price
CK5		CK5/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Direct Acting Relief Valve		
	RDHA Page 1.11		
OTHER VALVES:			

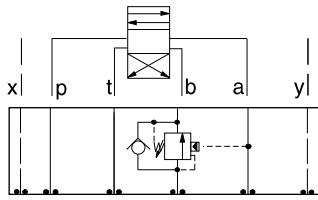
07 COUNTERBALANCE



ISO 07 SANDWICH BODIES



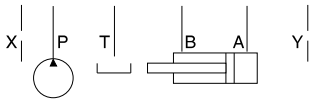
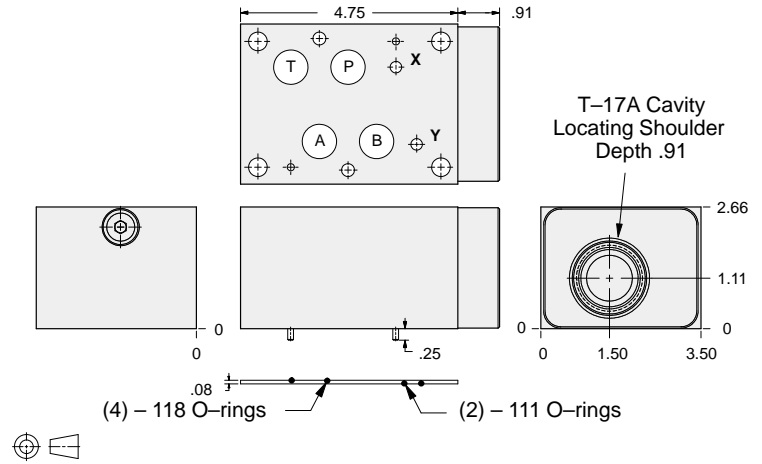
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On B
Pilot from A

Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BKB		BKB/S	

07 COUNTERBALANCE

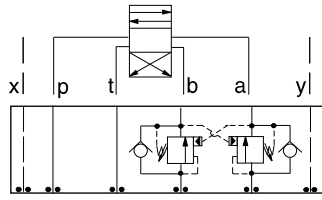
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Counterbalance Valve, 3:1 Pilot Ratio		
	CBG Page 4.11		
	Counterbalance Valve, 4.5:1 Pilot Ratio		
	CBGG Page 4.13		
	Counterbalance Valve, 10:1 Pilot Ratio		
	CBGHP Page 4.15		
OTHER VALVES:			



ISO 07 SANDWICH BODIES



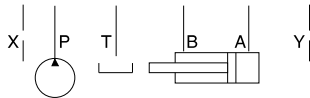
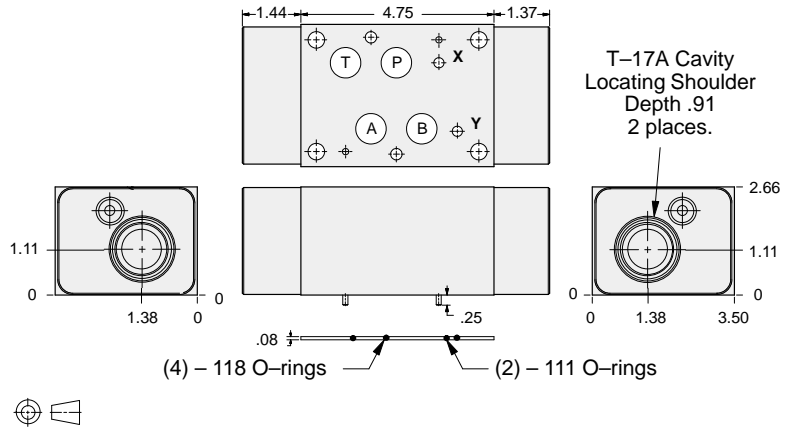
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On A and B
Cross-Piloted

Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BKY		BKY/S	

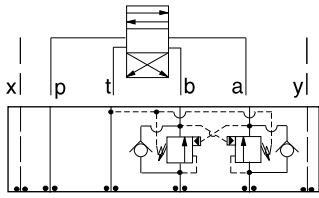
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Counterbalance Valve, 3:1 Pilot Ratio		
	CBGAP Page 4.11		
	Counterbalance Valve, 4.5:1 Pilot Ratio		
	CBGG Page 4.13		
	Counterbalance Valve, 10:1 Pilot Ratio		
	CBGHP Page 4.15		
OTHER VALVES:			



ISO 07 SANDWICH BODIES



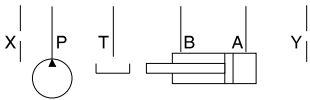
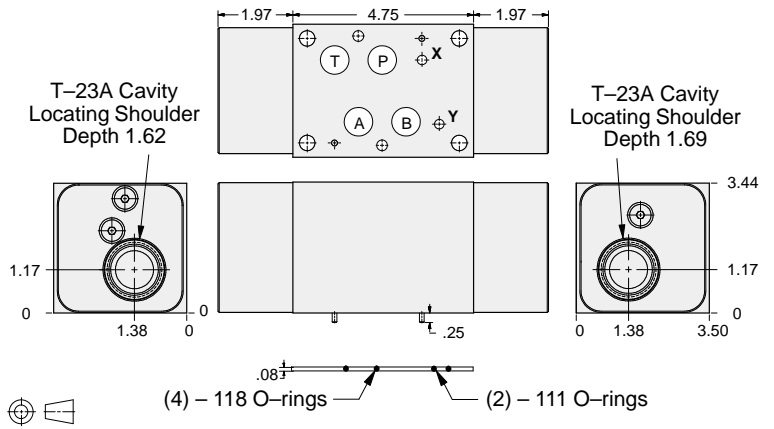
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On **A** and **B**
Cross-Piloted
Vents to **T**

Counterbalance Valves



ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
NKY		NKY/S	

07 COUNTERBALANCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Vented Counterbalance Valve, 3:1 Pilot Ratio		
	CWGA Page 4.19		
	Vented Counterbalance Valve, 5:1 Pilot Ratio		
	CWGG Page 4.21		
OTHER VALVES:			

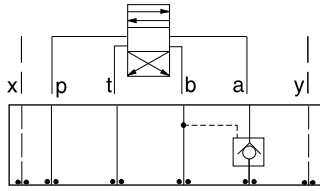


ISO 07 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

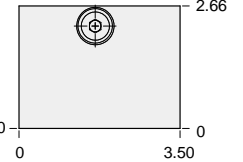
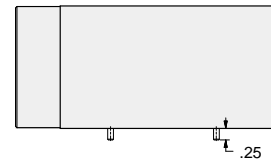
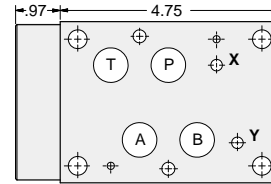
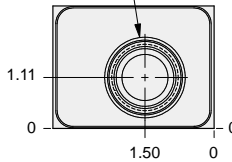
Pilot Operated Check Valves



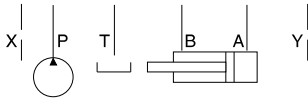
FUNCTION

On A
Pilot from B

T-17A Cavity
Locating Shoulder
Depth .91



(4) - 118 O-rings (2) - 111 O-rings



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BKA		BKA/S	

07 P.O. CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	<i>Pilot-to-Open Check Valve, 3:1 Pilot Ratio</i>		
	CKGB Page 4.17		
OTHER VALVES:			

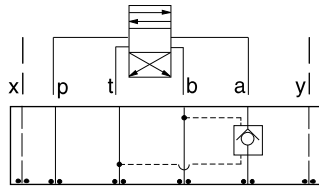


ISO 07 SANDWICH BODIES



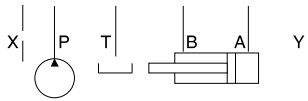
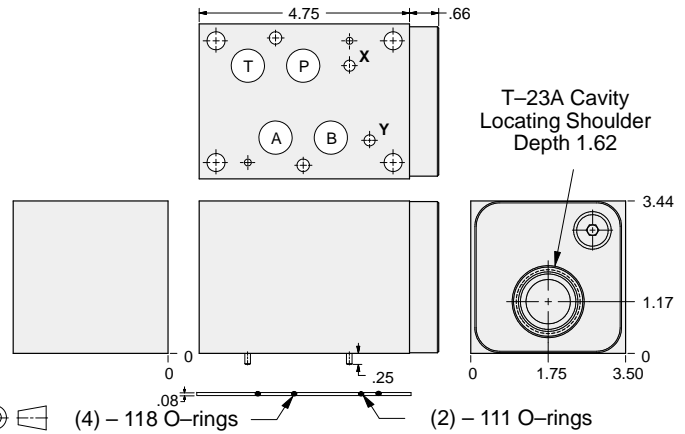
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Pilot Operated Check Valves



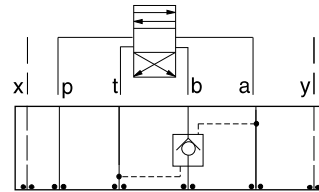
FUNCTION

On **A**
Pilot from **B**
Vent to **T**



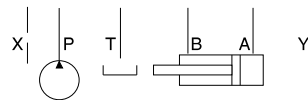
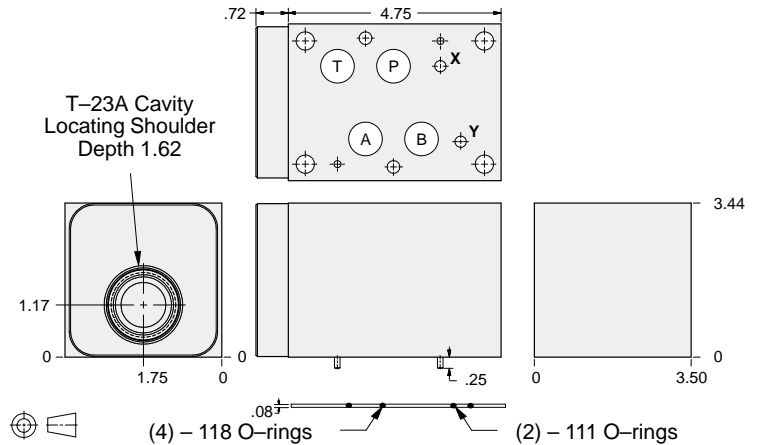
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
NKA		NKA/S	

Pilot Operated Check Valves



FUNCTION

On **B**
Pilot from **A**
Vent to **T**



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
NKB		NKB/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Vented Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CVGV Page 4.23		
OTHER VALVES:			

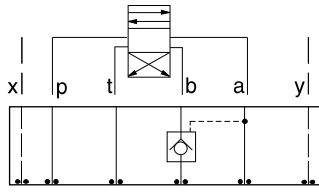


ISO 07 SANDWICH BODIES



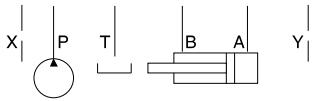
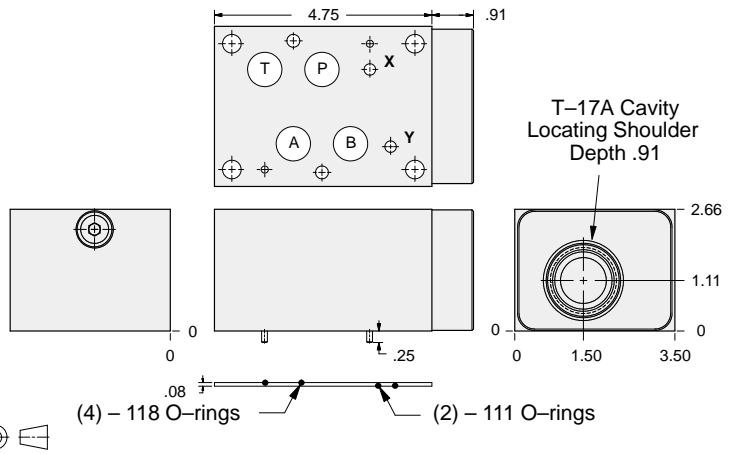
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Pilot Operated Check Valves



FUNCTION

On B
Pilot from A



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BKB		BKB/S	

07 P.O. CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CKGBPage 4.17		
OTHER VALVES:			

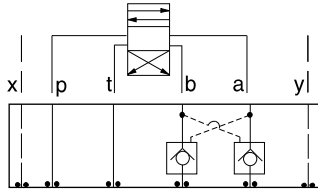


ISO 07 SANDWICH BODIES



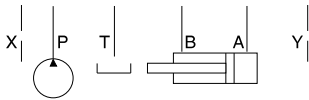
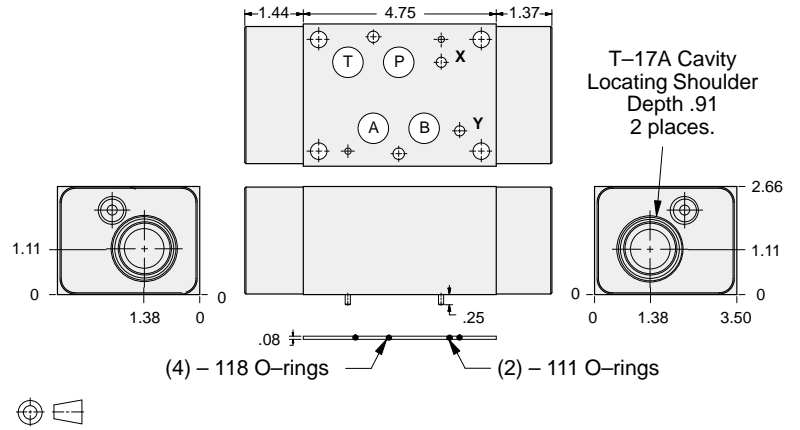
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Pilot Operated Check Valves



FUNCTION

On A and B
Cross-Piloted



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BKY		BKY/S	

07 P.O. CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	<i>Pilot-to-Open Check Valve, 3:1 Pilot Ratio</i>		
	CKGB Page 4.17		
OTHER VALVES:			

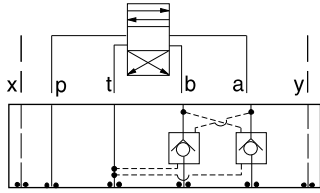


ISO 07 SANDWICH BODIES



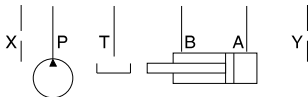
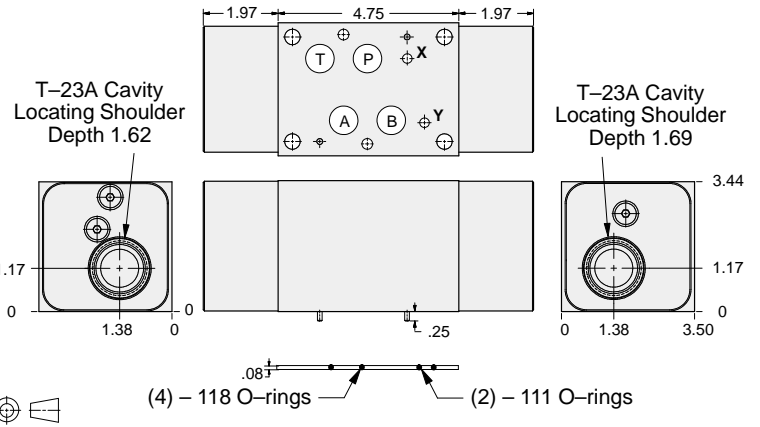
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Pilot Operated Check Valves



FUNCTION

On **A** and **B**
Cross-Piloted
Vents to **T**



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
NKY		NKY/S	

07 P.O. CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Vented Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CVGV Page 4.23		
OTHER VALVES:			

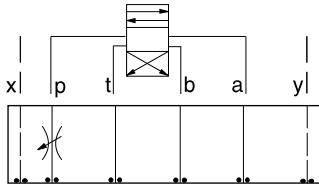


ISO 07 SANDWICH BODIES

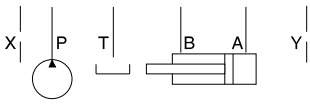
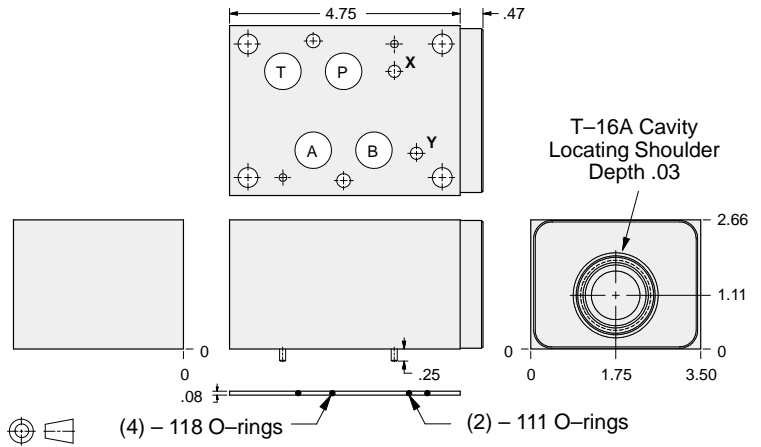


- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Flow Control Valves

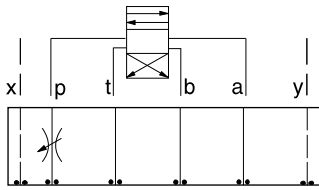


FUNCTION
Meter-In P

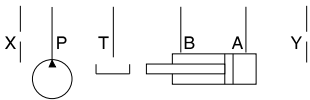
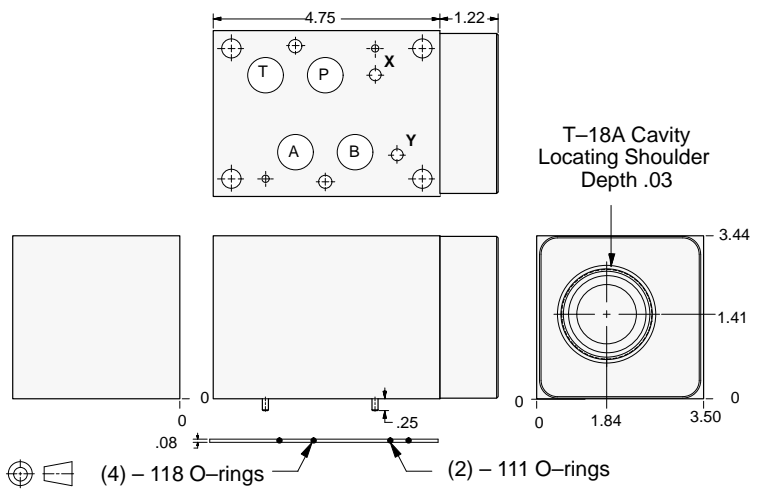


ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKP		DKP/S	

Flow Control Valves



FUNCTION
Meter-In P
(High Capacity)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKO		DKO/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

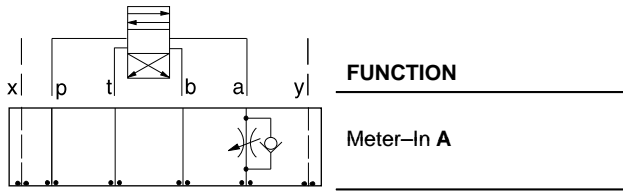
	Fully Adjustable Needle Valve		
	NF*C Page 5.13		
	Fixed Orifice, Pressure-Compensated Flow Control		
	FX*A Page 5.21		
OTHER VALVES:			



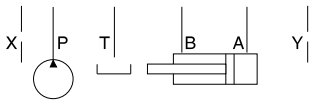
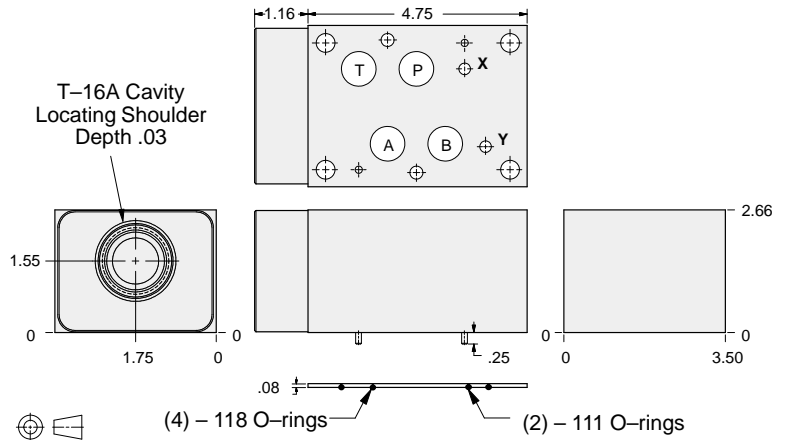
ISO 07 SANDWICH BODIES



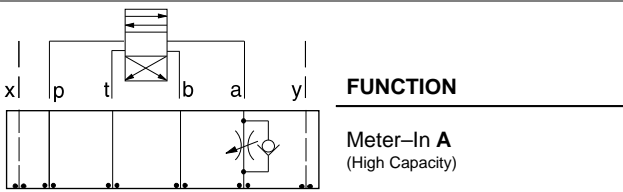
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



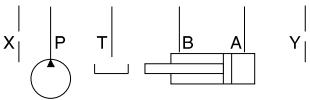
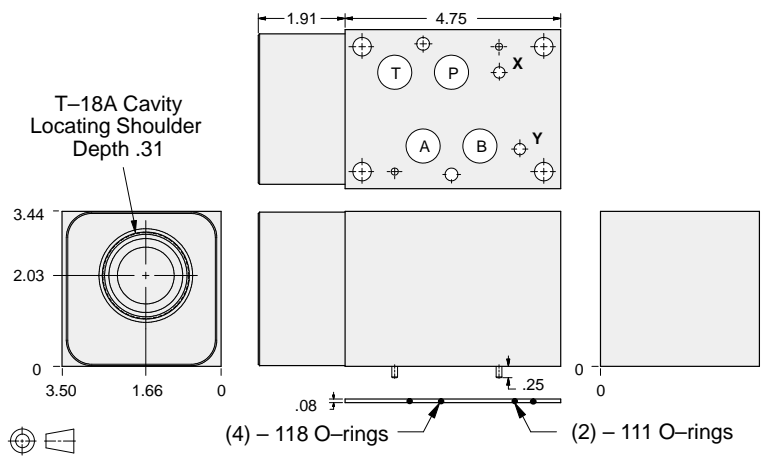
Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKC		DKC/S	



Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKG		DKG/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Fully Adjustable Needle Valve NF*C Page 5.13		Fixed Orifice, Pressure-Compensated Flow Control FX*A Page 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check NC*B Page 5.17		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check FC*B Page 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow NC*C Page 5.19		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check FD*A Page 5.25
OTHER VALVES:	CN*C		

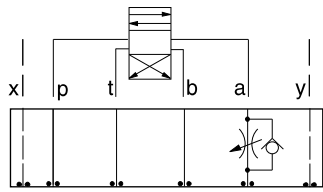
07 FLOW CONTROL



ISO 07 SANDWICH BODIES



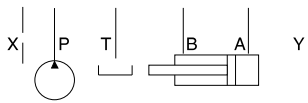
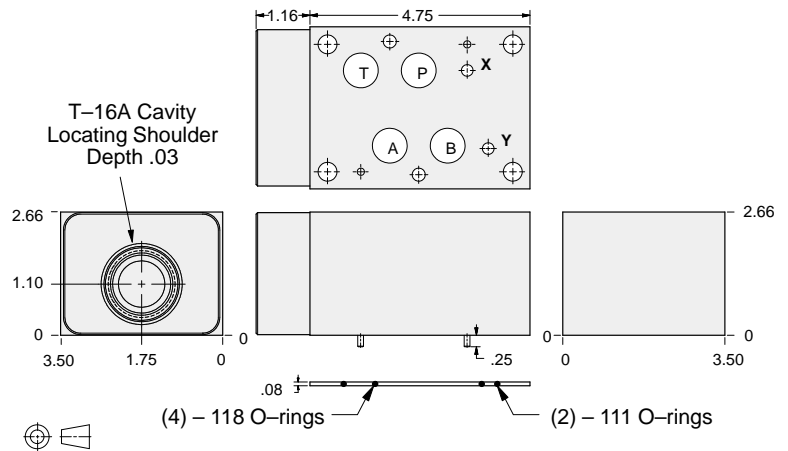
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



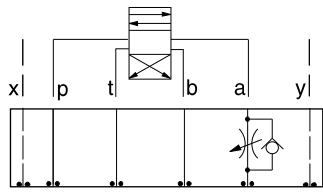
FUNCTION

Meter-Out A

Flow Control Valves



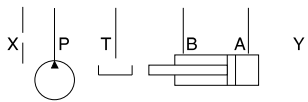
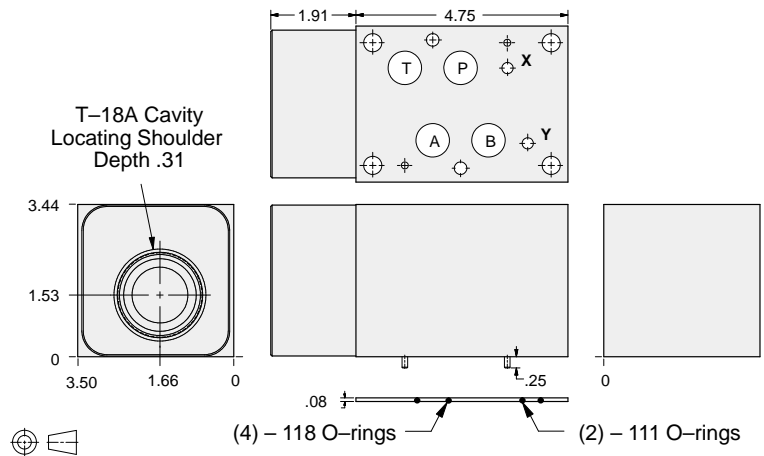
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKA		DKA/S	



FUNCTION

Meter-Out A
(High Capacity)

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKE		DKE/S	

07 FLOW CONTROL

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

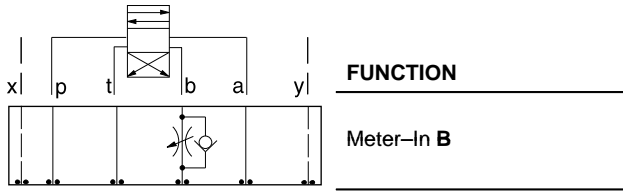
	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NF*C Page 5.13		FX*A Page 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*B Page 5.17		FC*B Page 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*C Page 5.19		FD*A Page 5.25
OTHER VALVES:	CN*C		



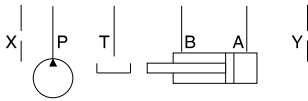
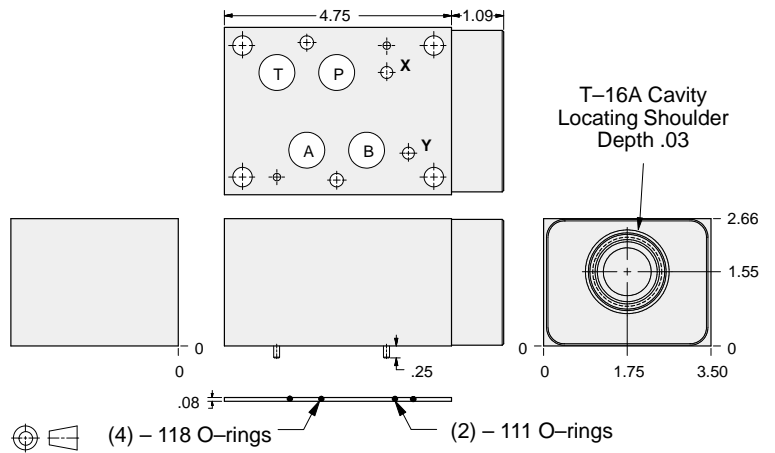
ISO 07 SANDWICH BODIES



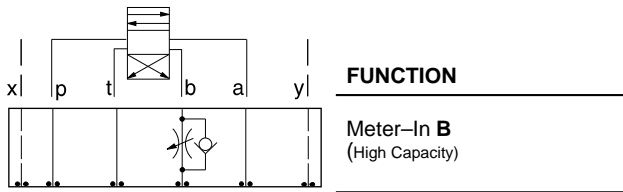
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



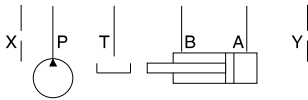
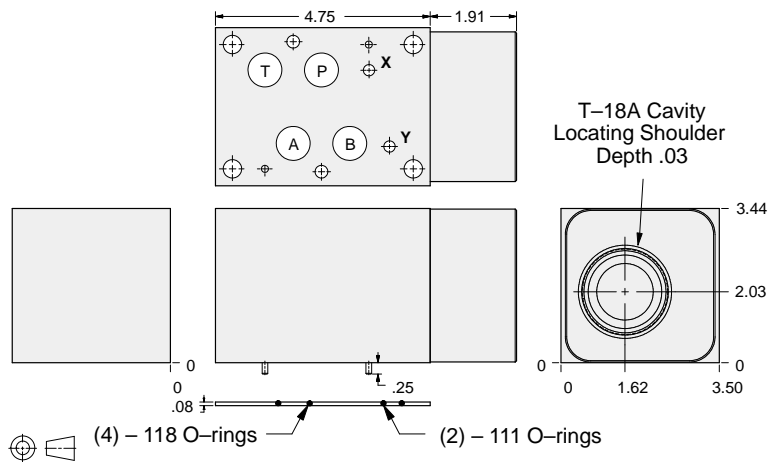
Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKD		DKD/S	



Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKI		DKI/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NF*C Page 5.13		FX*A Page 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*B Page 5.17		FC*B Page 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*C Page 5.19		FD*A Page 5.25
OTHER VALVES:	CN*C		

07 FLOW CONTROL

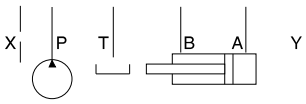
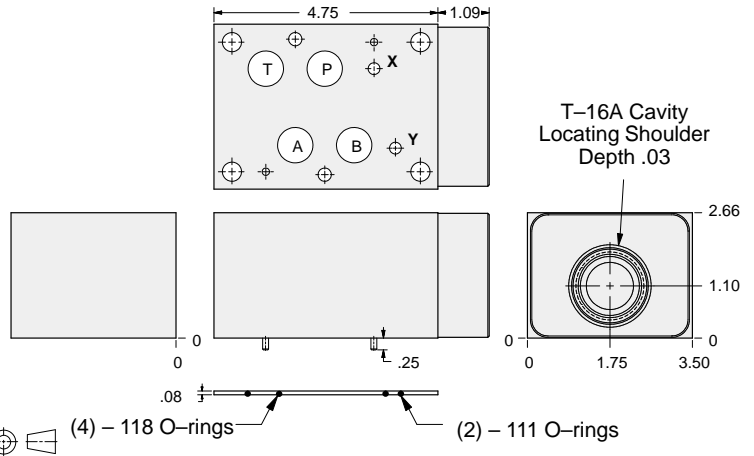
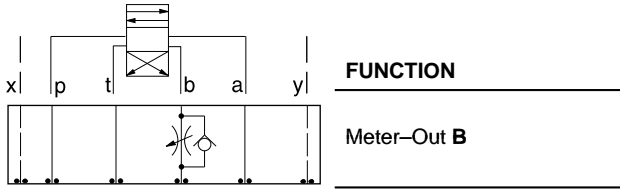


ISO 07 SANDWICH BODIES



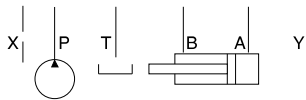
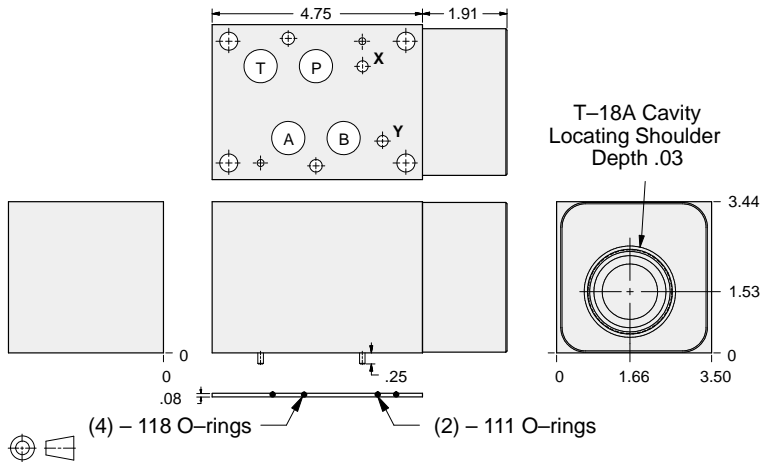
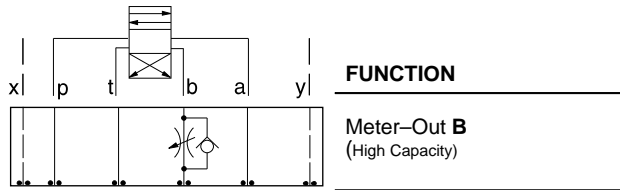
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKB		DKB/S	

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKF		DKF/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

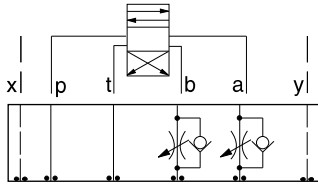
	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NF*C Page 5.13		FX*A Page 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*B Page 5.17		FC*B Page 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*C Page 5.19		FD*A Page 5.25
OTHER VALVES:	CN*C		



ISO 07 SANDWICH BODIES



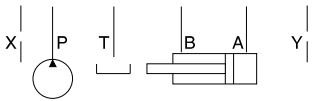
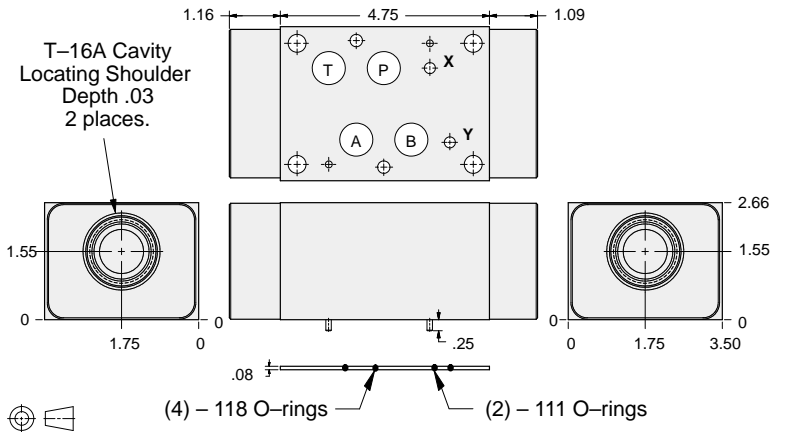
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



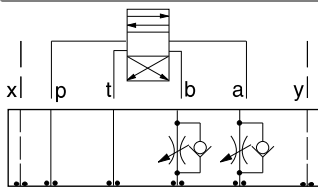
FUNCTION

Meter-In
A and B

Flow Control Valves



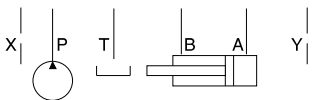
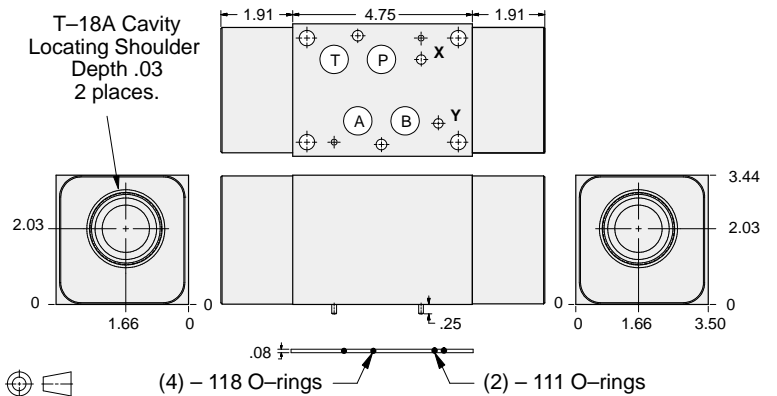
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKZ		DKZ/S	



FUNCTION

Meter-In
A and B
(High Capacity)

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKU		DKU/S	

07 FLOW CONTROL

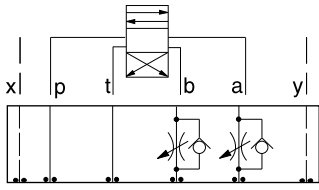
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NF*C Page 5.13		FX*A Page 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*B Page 5.17		FC*B Page 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*C Page 5.19		FD*A Page 5.25
OTHER VALVES:	CNGC, CNIC		



ISO 07 SANDWICH BODIES



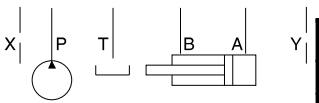
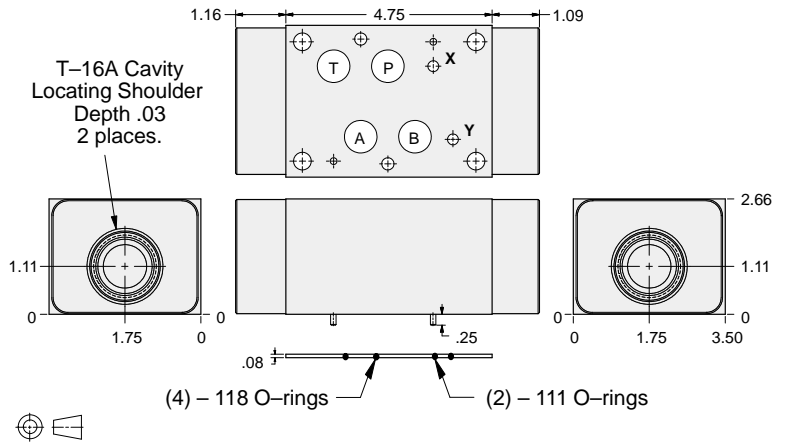
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

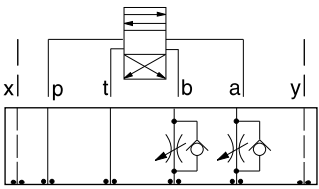
Meter-Out
A and B

Flow Control Valves



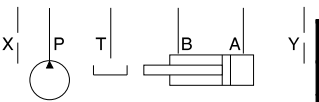
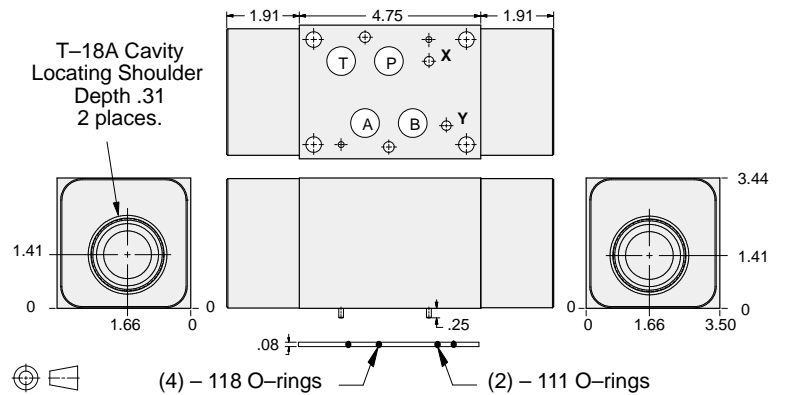
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKY		DKY/S	

Flow Control Valves



FUNCTION

Meter-Out
A and B
(High Capacity)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKW		DKW/S	

07 FLOW CONTROL

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

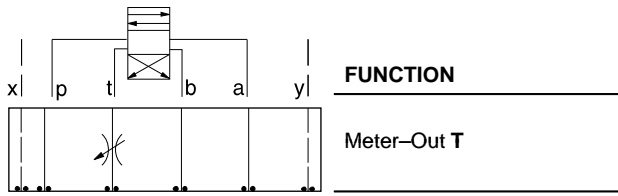
	Fully Adjustable Needle Valve NF*C Page 5.13		Fixed Orifice, Pressure-Compensated Flow Control FX*A Page 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check NC*B Page 5.17		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check FC*B Page 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow NC*C Page 5.19		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check FD*A Page 5.25
OTHER VALVES:	CN*C		



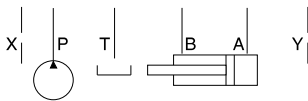
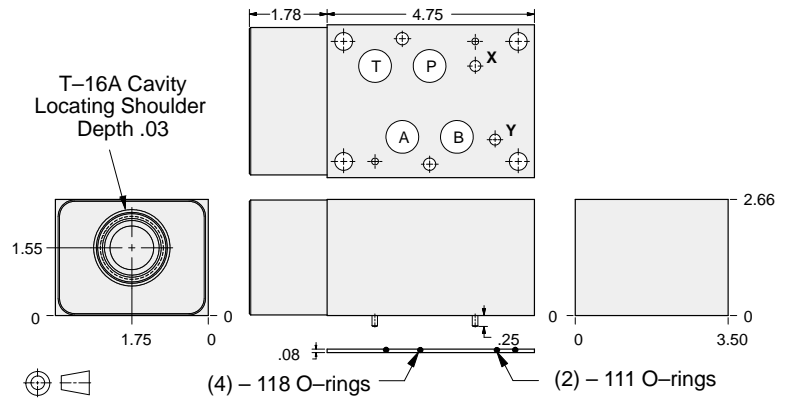
ISO 07 SANDWICH BODIES



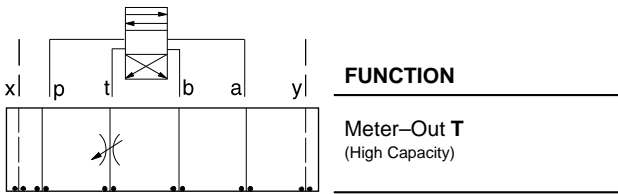
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



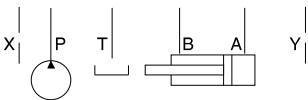
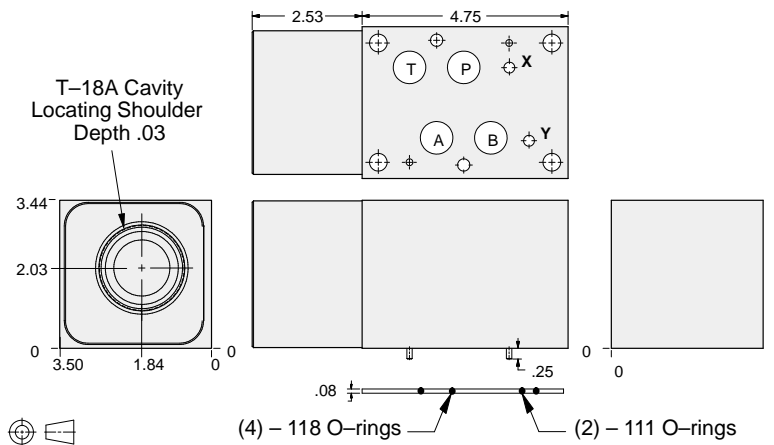
Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKT		DKT/S	



Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKV		DKV/S	

07 FLOW CONTROL

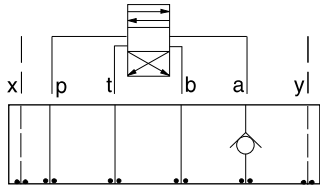
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Fully Adjustable Needle Valve NF*C Page 5.13		Fixed Orifice, Pressure-Compensated Flow Control FX*A Page 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check NC*B Page 5.17		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check FC*B Page 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow NC*C Page 5.19		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check FD*A Page 5.25
OTHER VALVES:	CN*C		



ISO 07 SANDWICH BODIES



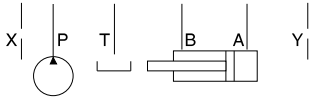
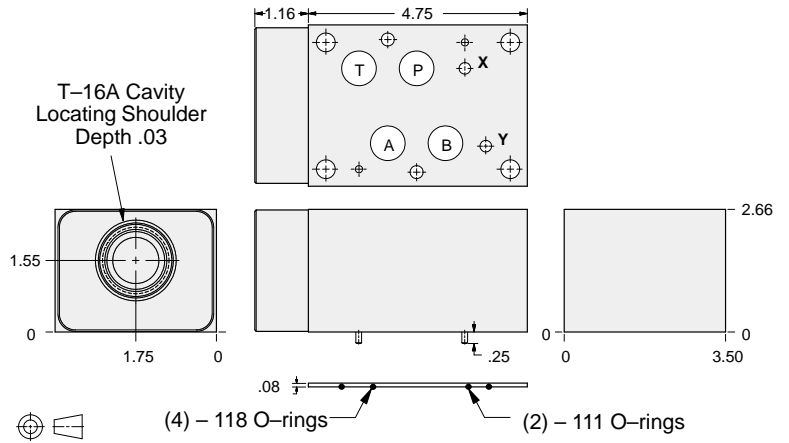
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



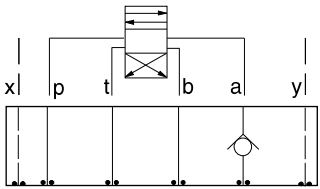
FUNCTION

On A
Free Flow Out
of Valve

Check Valves



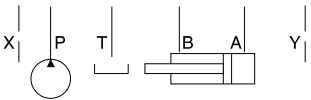
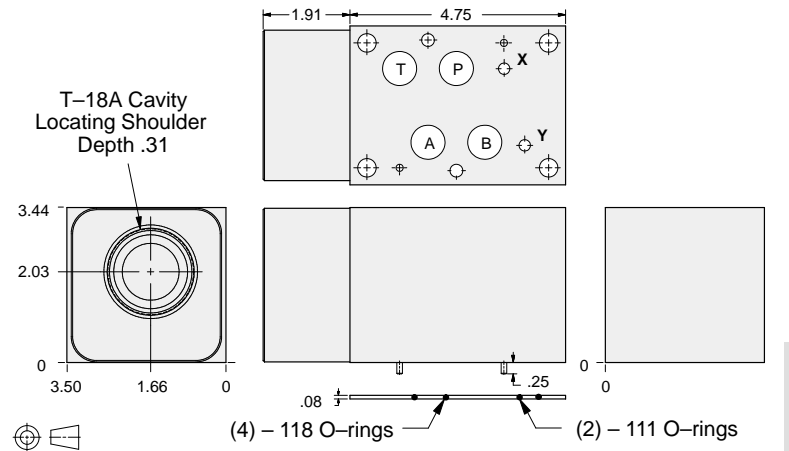
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKC		DKC/S	



FUNCTION

On A
Free Flow Out
of Valve (High Capacity)

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKG		DKG/S	

07 CHECK

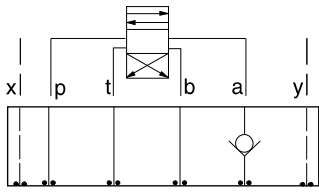
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CX*A Page 5.09		
OTHER VALVES:			



ISO 07 SANDWICH BODIES



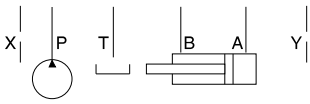
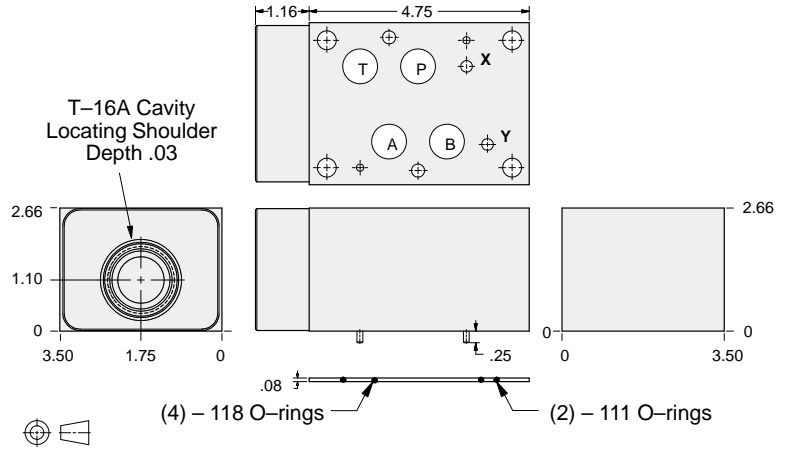
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



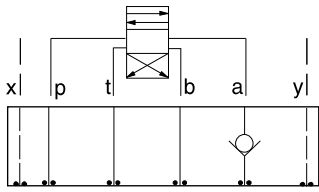
FUNCTION

On A
Free Flow Into Valve

Check Valves



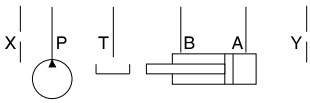
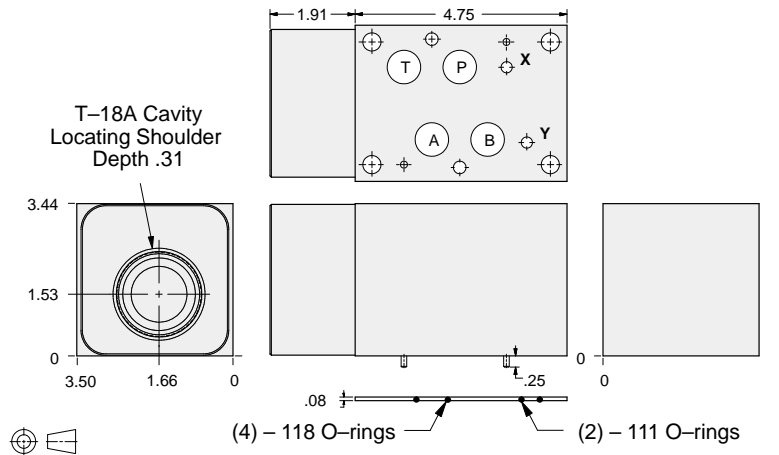
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKA		DKA/S	



FUNCTION

On A
Free Flow Into Valve
(High Capacity)

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKE		DKE/S	

07 CHECK

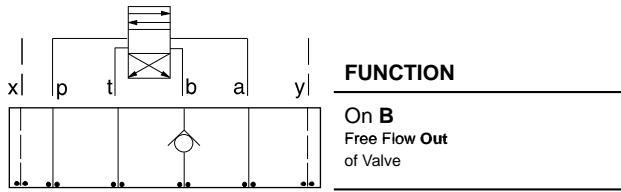
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CX*A Page 5.09		
OTHER VALVES:			



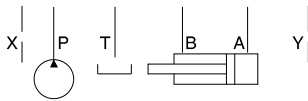
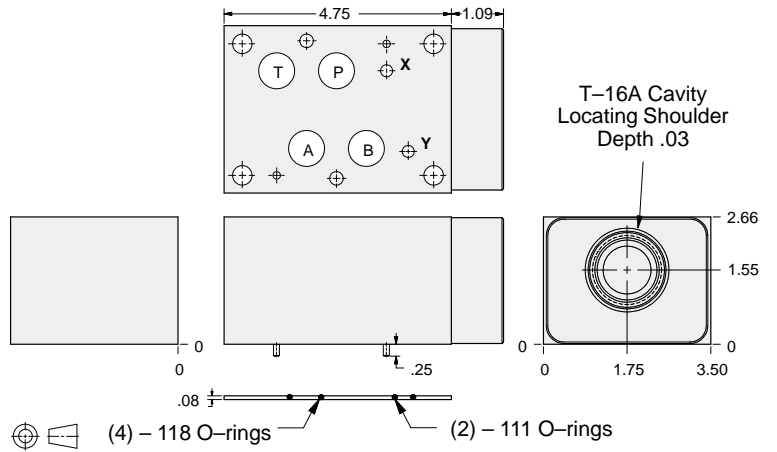
ISO 07 SANDWICH BODIES



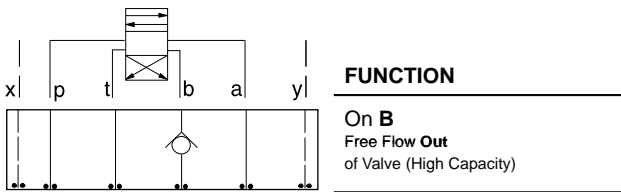
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



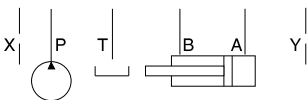
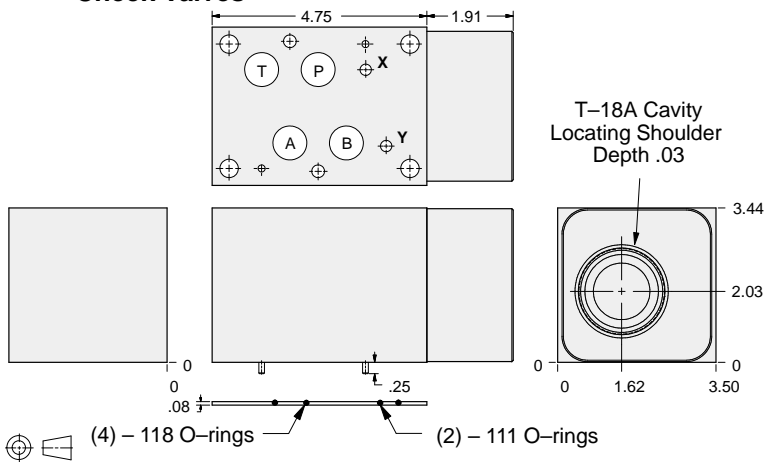
Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKD		DKD/S	



Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKI		DKI/S	

07 CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CX*A Page 5.09		
OTHER VALVES:			

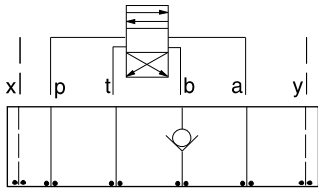


ISO 07 SANDWICH BODIES



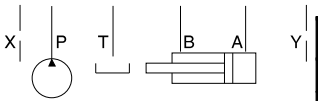
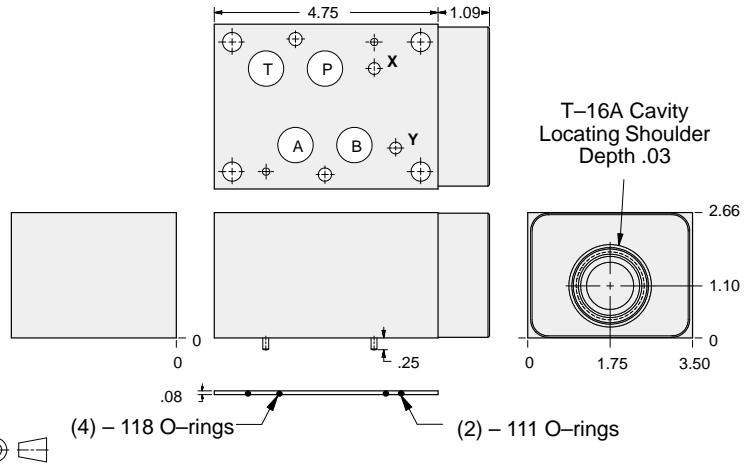
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Check Valves



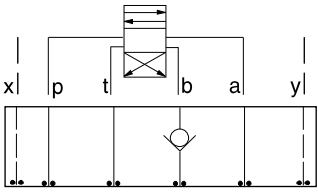
FUNCTION

On B
Free Flow Into Valve



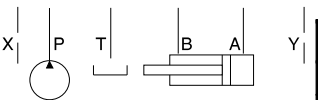
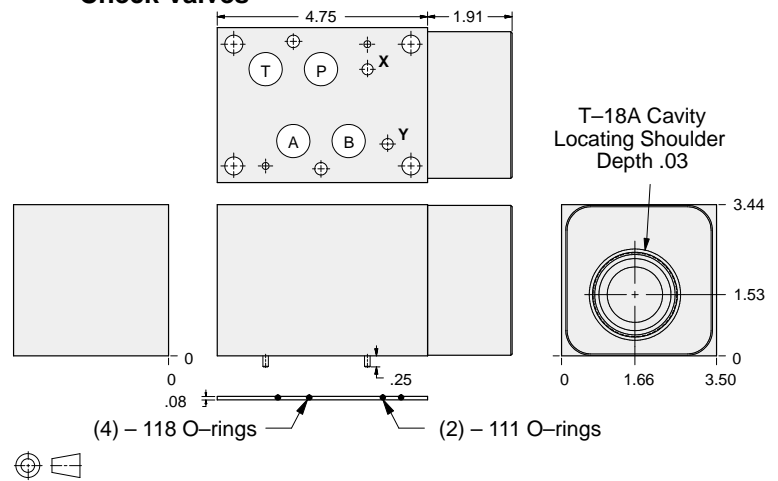
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKB		DKB/S	

Check Valves



FUNCTION

On B
Free Flow Into Valve
(High Capacity)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKF		DKF/S	

07 CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

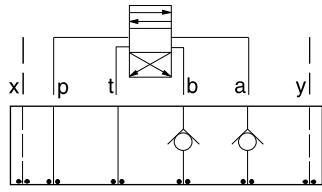
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CX*A Page 5.09		
OTHER VALVES:			



ISO 07 SANDWICH BODIES



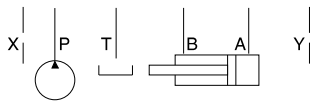
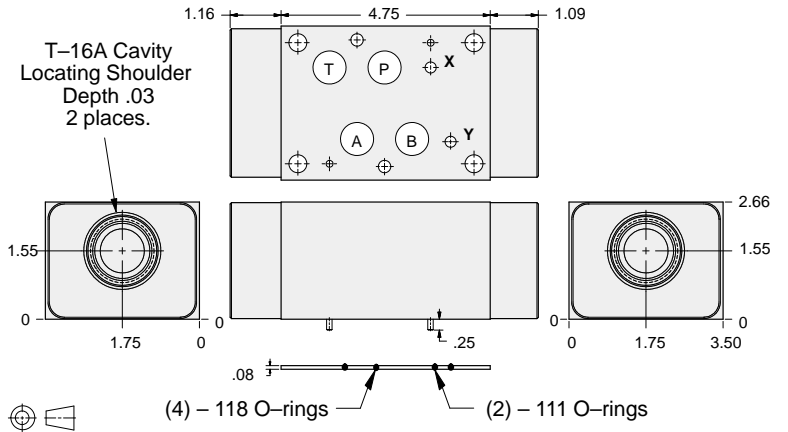
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



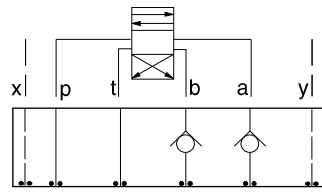
FUNCTION

On **A** and **B**
Free Flow Out
of Valve

Check Valves



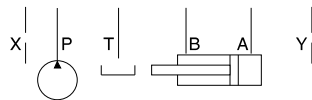
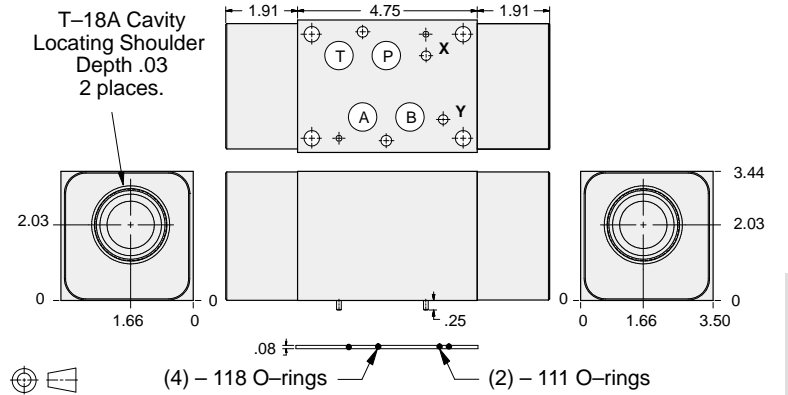
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKZ		DKZ/S	



FUNCTION

On **A** and **B**
Free Flow Out
of Valve (High Capacity)

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKU		DKU/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CX*A Page 5.09		
OTHER VALVES:			

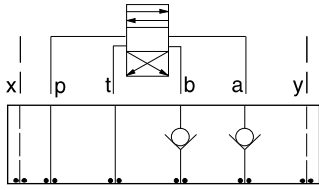
07 CHECK



ISO 07 SANDWICH BODIES



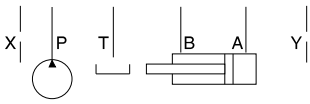
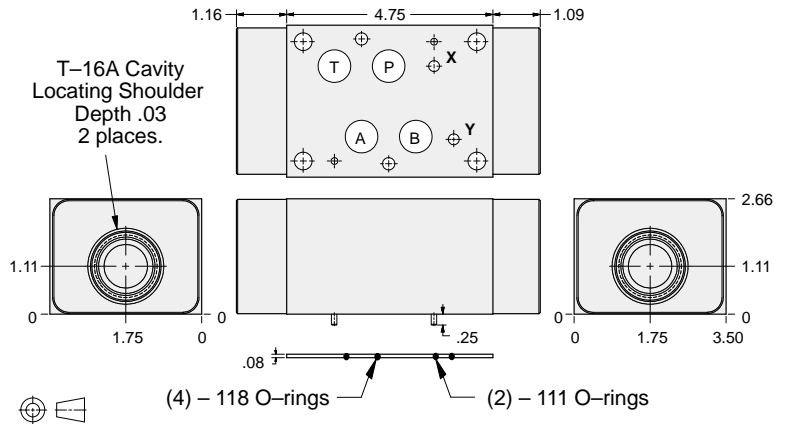
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



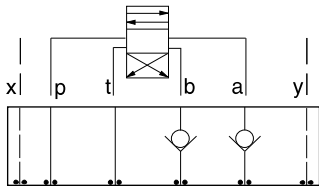
FUNCTION

On **A** and **B**
Free Flow Into Valve

Check Valves



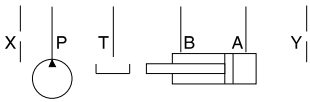
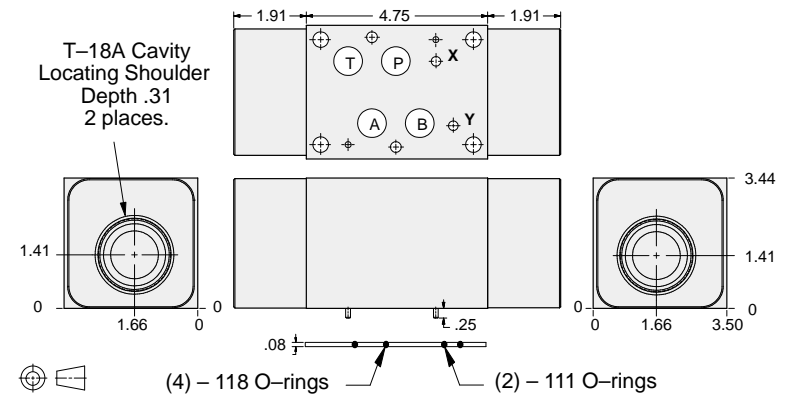
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKY		DKY/S	



FUNCTION

On **A** and **B**
Free Flow Into Valve
(High Capacity)

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKW		DKW/S	

07 CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CX*A Page 5.09		
OTHER VALVES:			

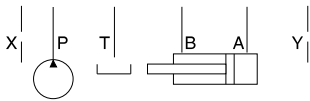
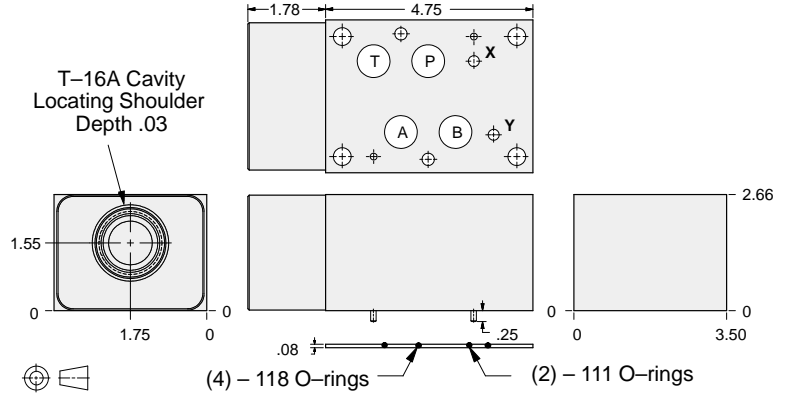
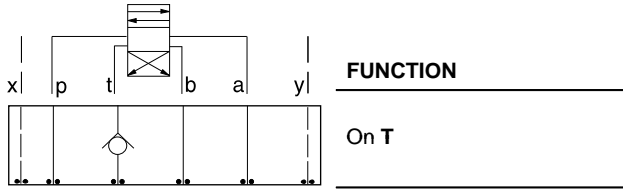


ISO 07 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKT		DKT/S	

07 CHECK

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CXHA Page 5.09		
OTHER VALVES:			

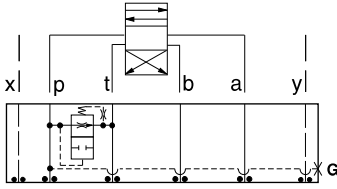


ISO 07 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

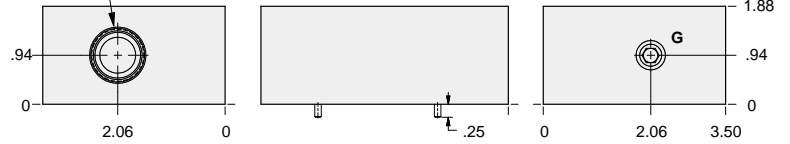
Circuit Savers



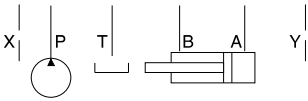
FUNCTION

Air-Bleed and Start-Up

T-3A Cavity Locating Shoulder Depth .03



(4) - 118 O-rings (2) - 111 O-rings



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CKP		CKP/S	
.25 BSPP	CKP/M		CKP/T	

07 CIRCUIT SAVER

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Air Bleed and Start-up Valve		
	NQEB Page 10.16		
OTHER VALVES:			

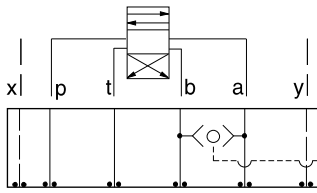


ISO 07 SANDWICH BODIES



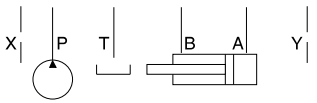
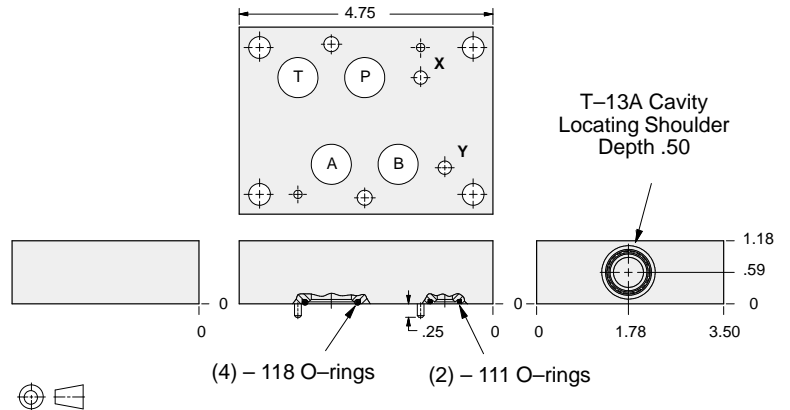
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Circuit Savers



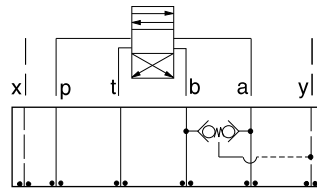
FUNCTION

Shuttle
A and B
Output External



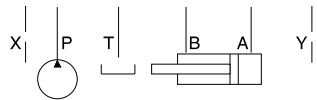
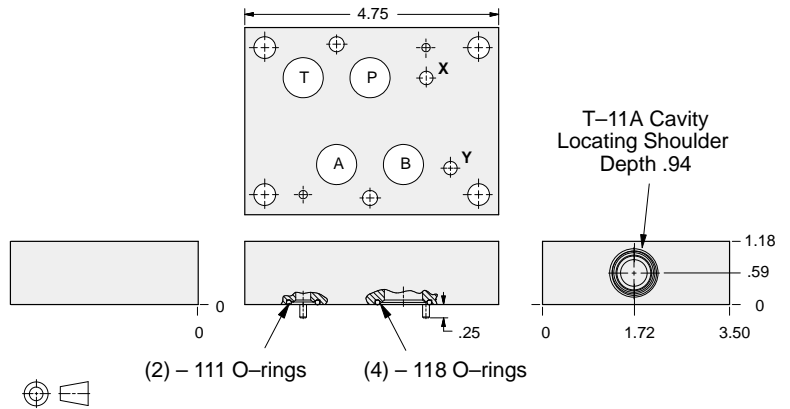
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
DKS		DKS/S	

Circuit Savers



FUNCTION

Checks from
A and B
Output to Y Port



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
BKS		BKS/S	

07 CIRCUIT SAVER

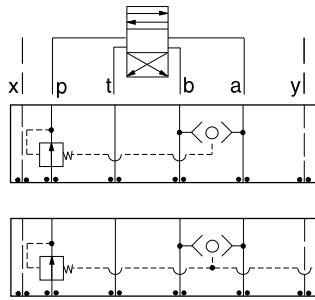
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
<p>1— 2 Ext.</p>	2 Port Shuttle Valve, Signal External		
	CSAA Page 10.09 (use with DKS)		
<p>1— 2 3</p>	3 Port Back-to-Back Check Valve, Signal at Port 3		
	CDAB Page 10.10 (use with BKS)		
OTHER VALVES:			



ISO 07 SANDWICH BODIES



ω Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
 ω See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

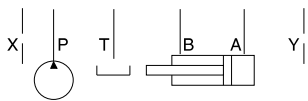
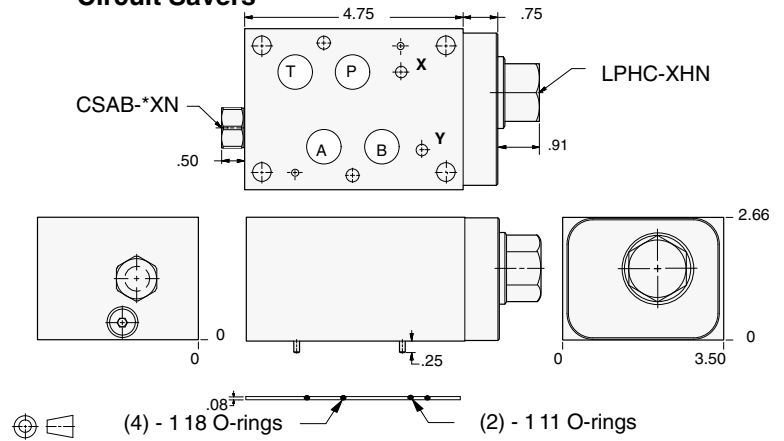


FUNCTION

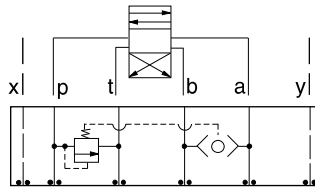
Pressure Compensator (Restrictive)

Pressure Compensator (Restrictive) w/Load-Sensing Port

Circuit Savers



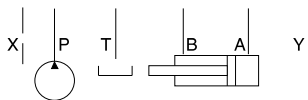
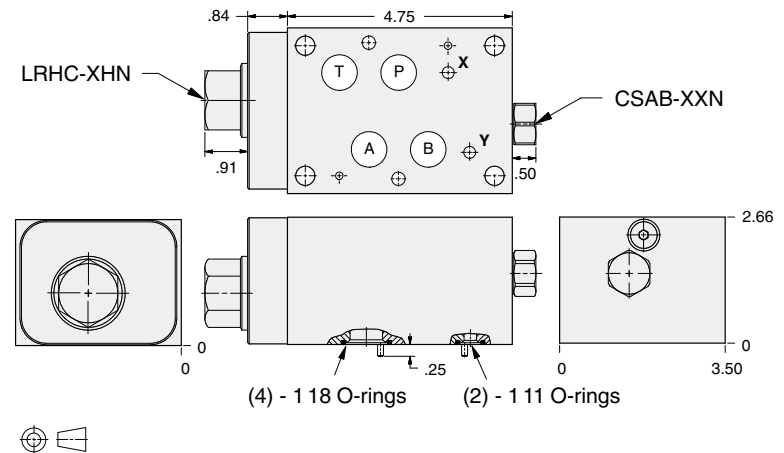
Shuttle Cartridge	External Shuttle Port	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
CSAB-XXN	None	YFFE-XHN-AB		YFFE-XHN-AB/S	
CSAB-AXN	SAE-4	YFFF-XHN-AB		YFFF-XHN-AB/S	
CSAB-BXN	.25 BSPP	YFFF-XHN-AB/M		YFFF-XHN-AB/T	



FUNCTION

Pressure Compensator (Bypass)

Circuit Savers



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YFFG-XHN-AB		YFFG-XHN-AB/S	

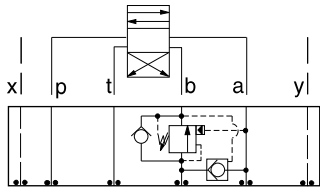
07 CIRCUIT SAVER



ISO 07 SANDWICH BODIES



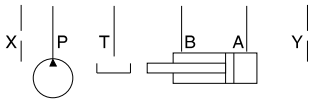
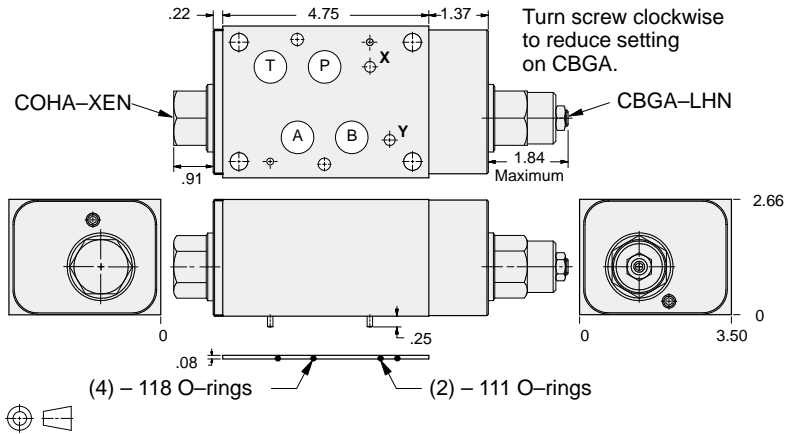
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

B to A
Regenerative

Circuit Savers



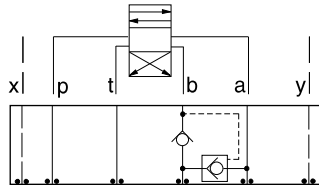
ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
YDFG-LHN-AB		YDFG-LHN-AB/S	



ISO 07 SANDWICH BODIES



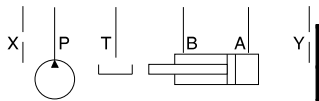
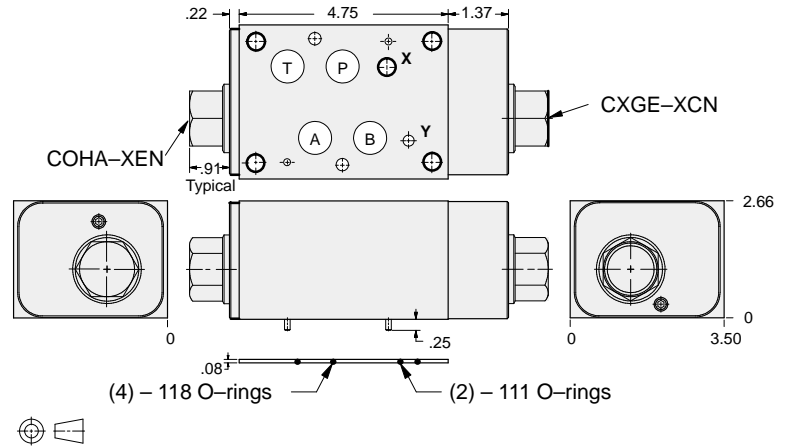
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



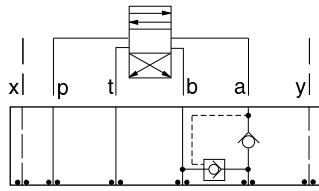
FUNCTION

**B to A
Regenerative
(Full Time)**

Circuit Savers



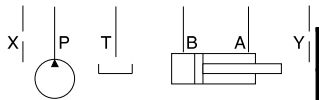
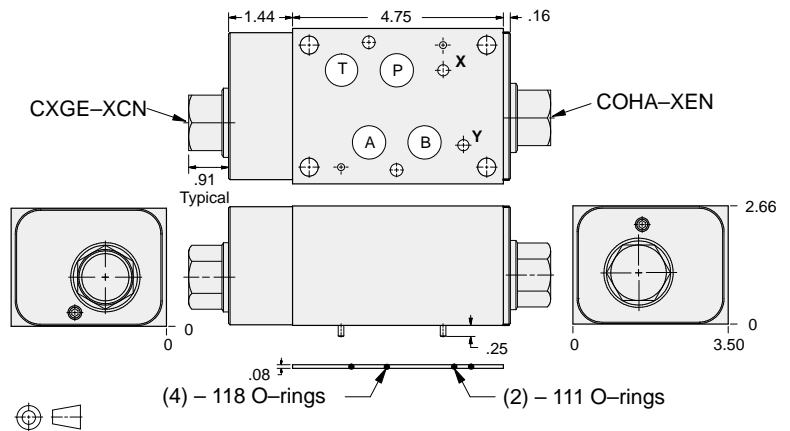
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YDFH-XCN-AB		YDFH-XCN-AB/S	



FUNCTION

**A to B
Regenerative
(Full Time)**

Circuit Savers



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YDFI-XCN-AB		YDFI-XCN-AB/S	

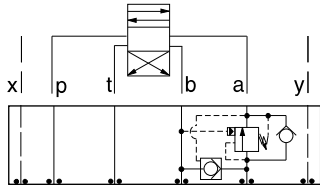
07 CIRCUIT SAVER



ISO 07 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

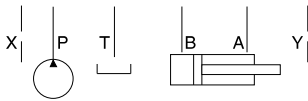
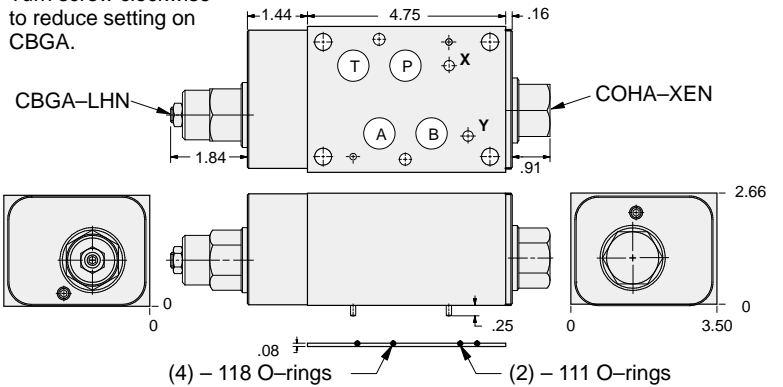


FUNCTION

A to B
Regenerative

Circuit Savers

Turn screw clockwise to reduce setting on CBGA.



ALUMINUM		DUCTILE IRON	
<i>Model Code</i>	<i>List Price</i>	<i>Model Code</i>	<i>List Price</i>
YDFE-LHN-AB		YDFE-LHN-AB/S	

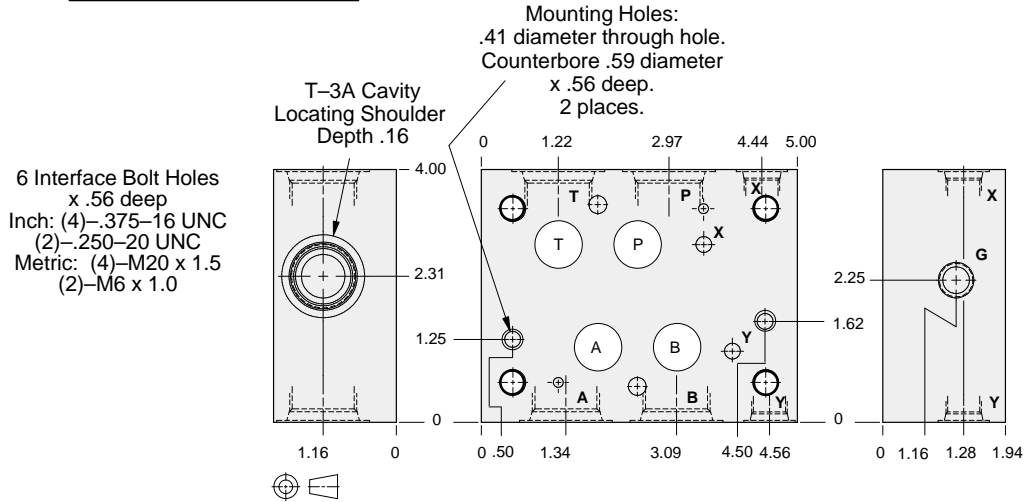
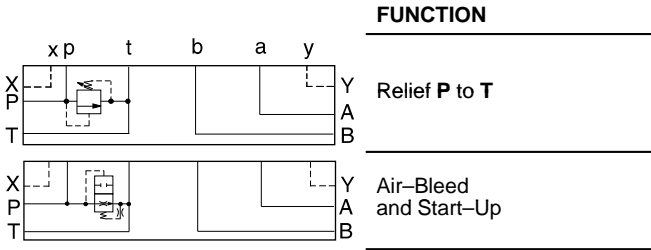


ISO 07 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Side Ported Subplates



Bolt Hole Interface	Gage Port (Plugged)	Port P,T,A,B	Port X,Y	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	.75 NPTF	.25 NFPT	ZLW		ZLW/S	
Inch	.25 NPTF	SAE-12	SAE-6	ZLX		ZLX/S	
Metric	.25 BSPP	.75 BSPP	.25 BSPP	ZLZ		ZLZ/S	

07 SUBPLATE

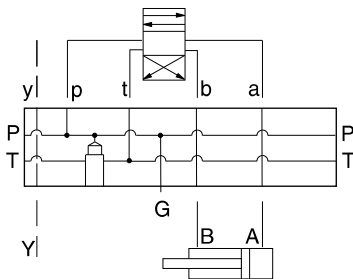
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Relief Valve RPGC Page 1.06		Pilot Operated "Kick-Down" Relief Valve RQGB Page 1.12
	Pilot Operated, Rapid Response Relief Valve RPGE Page 1.08		Air Controlled, Pilot Operated Relief Valve RPGD Page 1.14
	Direct Acting Relief Valve RDFA Page 1.10		Air Bleed and Start-up Valve NQEB Page 10.16
OTHER VALVES:			



BAR MANIFOLDS



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

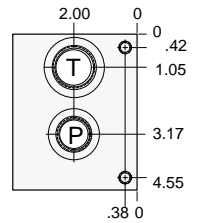
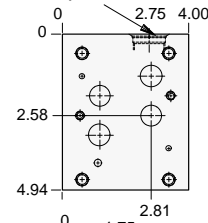
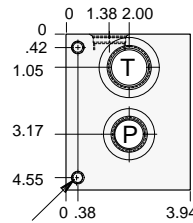


ISO 07 Parallel Circuit with Relief Cavity and Y Port

FUNCTION

One Station

T-3A Cavity
Locating Shoulder
Depth .09



Mounting Holes:
Inch: .375 - 16UNC
x .75 in. Deep.
Metric: M10 x 1.5 - 6H
x .75 in. Deep.
2 places each end



Mounting Holes	Port T	Ports A, B, P	Port Y	Gage Port	ALUMINUM		DUCTILE IRON	
					Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	.25 NPTF	VLA		VLA/S	
inch	SAE-16	SAE-12	SAE-6	SAE-4	VLE		VLE/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	.25 BSPP	VLJ		VLJ/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Direct Acting Relief Valve
	RPGC Page 1.06		RDFA Page 1.10
OTHER VALVES:			

BAR MANIFOLDS

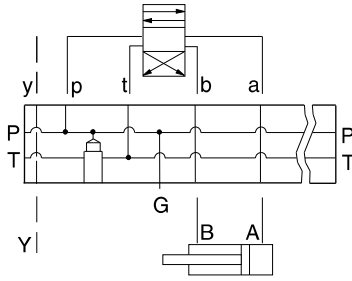


BAR MANIFOLDS



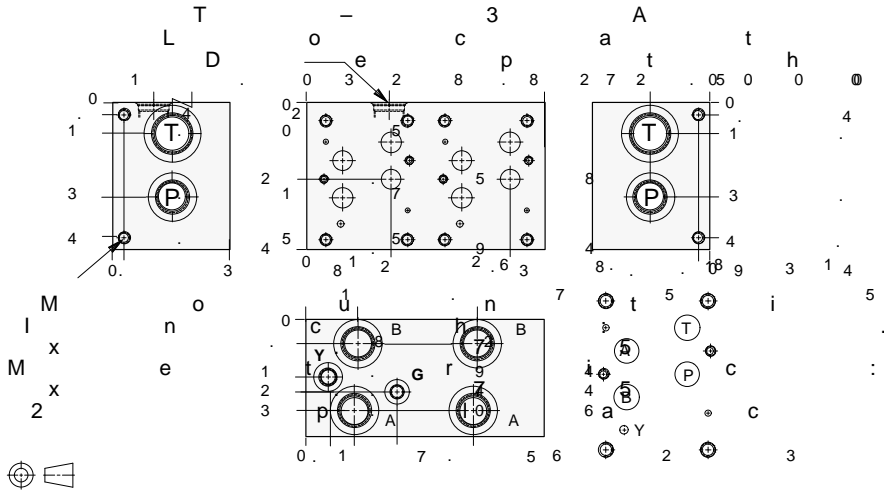
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

ISO 07 Parallel Circuit with Relief Cavity and Y Port



FUNCTION

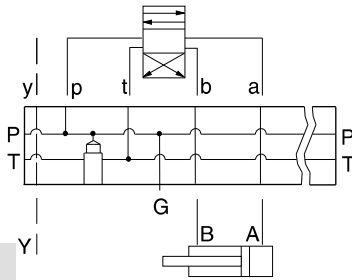
Two Station



Mounting Holes	Port T	Ports A, B, P	Port Y	Gage Port	ALUMINUM		DUCTILE IRON	
					Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	.25 NPTF	VLB		VLB/S	
inch	SAE-16	SAE-12	SAE-6	SAE-4	VLF		VLF/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	.25 BSPP	VLK		VLK/S	

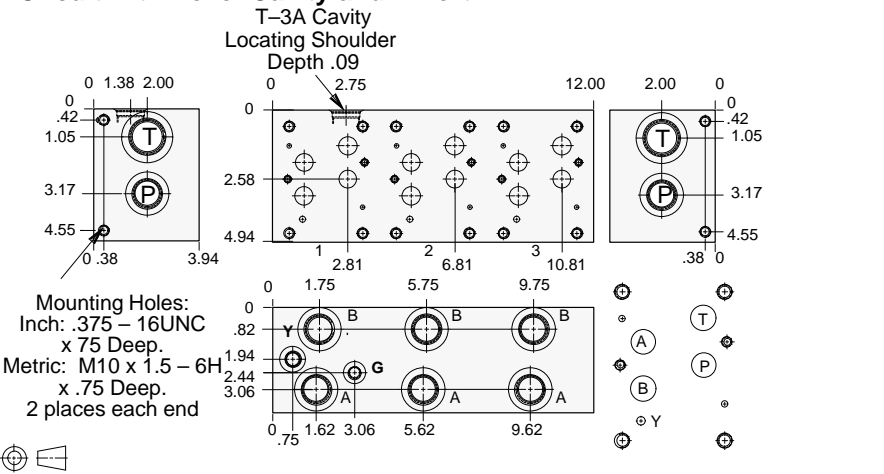
Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

ISO 07 Parallel Circuit with Relief Cavity and Y Port



FUNCTION

Three Station



Mounting Holes:
 Inch: .375 - 16UNC
 x .75 Deep.
 Metric: M10 x 1.5 - 6H
 x .75 Deep.
 2 places each end

Mounting Holes	Port T	Ports A, B, P	Port Y	Gage Port	ALUMINUM		DUCTILE IRON	
					Model Code	List Price	Model Code	List Price
inch	1.00 NPTF	.75 NPTF	.25 NPTF	.25 NPTF	VLC		VLC/S	
inch	SAE-16	SAE-12	SAE-6	SAE-4	VLG		VLG/S	
metric	1.00 BSPP	.75 BSPP	.25 BSPP	.25 BSPP	VLL		VLL/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

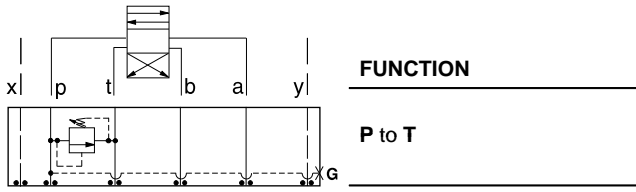
	Pilot Operated Relief Valve		Direct Acting Relief Valve
	RPGC Page 1.06		RDFA Page 1.10
OTHER VALVES:			



ISO 08 SANDWICH BODIES



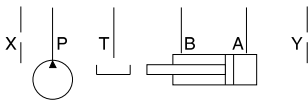
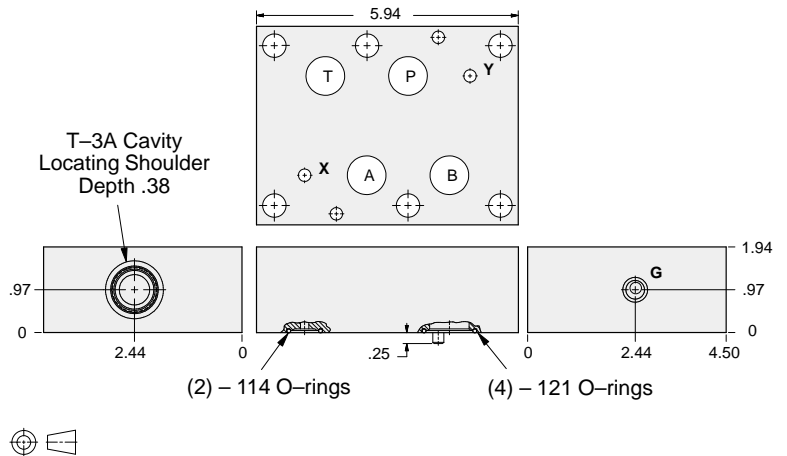
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



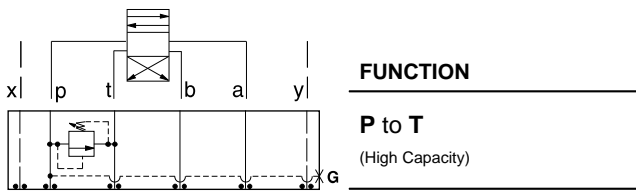
FUNCTION

P to T

Relief Valves



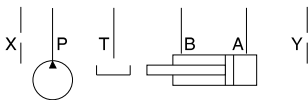
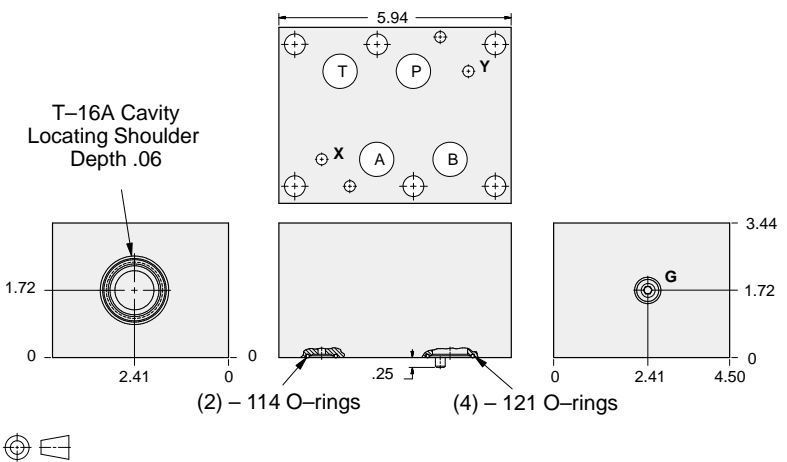
Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CDP		CDP/S	
.25 BSPP	CDP/M		CDP/T	



FUNCTION

P to T
(High Capacity)

Relief Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CDO		CDO/S	
.25 BSPP	CDO/M		CDO/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	<i>Pilot Operated Relief Valve</i> RP*C Page 1.06, 1.07		<i>Pilot Operated "Kick-Down" Relief Valve</i> RQ*B Page 1.12, 1.13
	<i>Pilot Operated, Rapid Response Relief Valve</i> RP*E Page 1.08, 1.09		<i>Air Controlled, Pilot Operated Relief Valve</i> RP*D Page 1.14, 1.15
	<i>Direct Acting Relief Valve</i> RD*A Page 1.10, 1.11		
OTHER VALVES:			

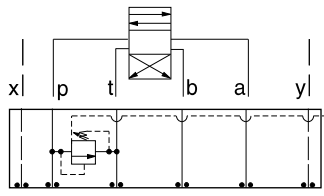
08 RELIEF



ISO 08 SANDWICH BODIES



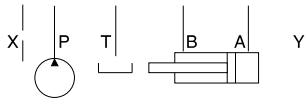
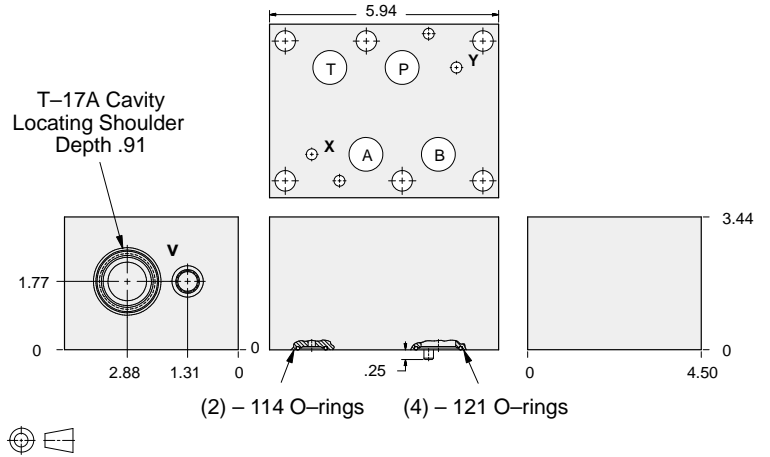
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

P to T
Externally Vented

Relief Valves



Vent Port	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
SAE-6	HBV		HBV/S	
.25 BSPP	HBV/M		HBV/T	

08 RELIEF

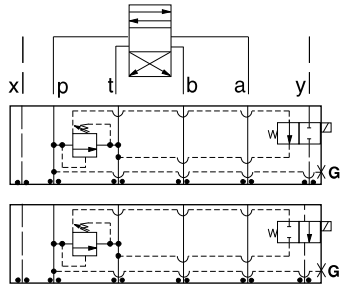
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Vented Relief Valve		
	RVGA Page 1.19		
OTHER VALVES:			



ISO 08 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

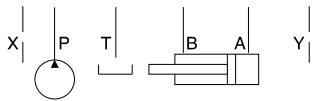
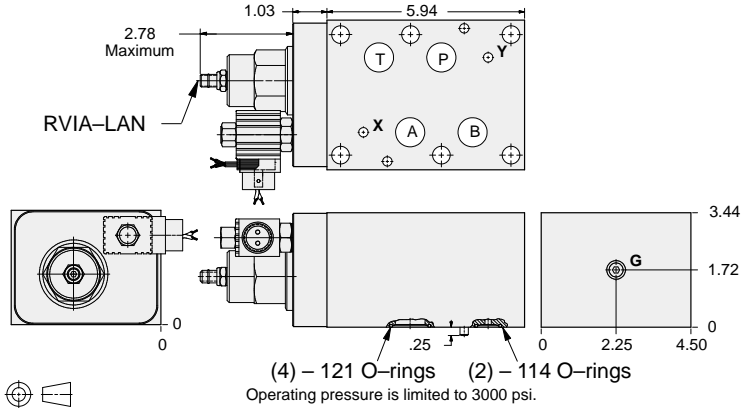


FUNCTION

P to T
N.O. Solenoid
Vented*

P to T
N.C. Solenoid
Vented*

Relief Valves



Solenoid Type	Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
N.O.	.25 NPTF	YRHI-LAN-*A		YRHI-LAN-*A/S	
N.O.	.25 BSPP	YRHI-LAN-*A/M		YRHI-LAN-*A/T	
N.C.	.25 NPTF	YRHJ-LAN-*A		YRHJ-LAN-*A/S	
N.C.	.25 BSPP	YRHJ-LAN-*A/M		YRHJ-LAN-*A/T	

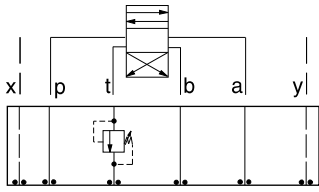
* Select solenoid connection/voltage option from page 14.16 and add option price to List Price.



ISO 08 SANDWICH BODIES



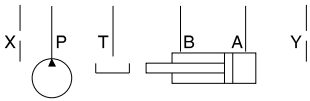
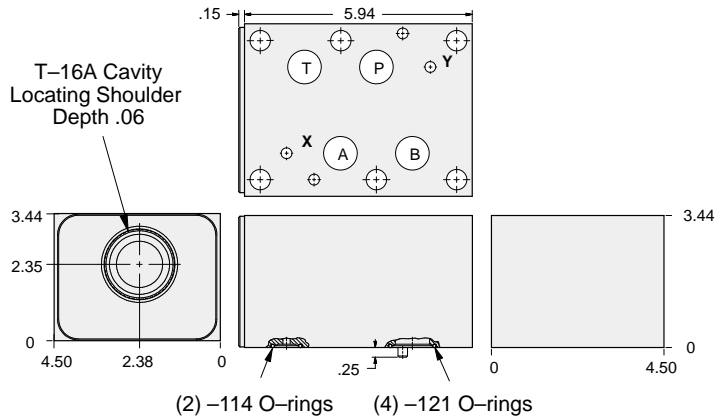
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



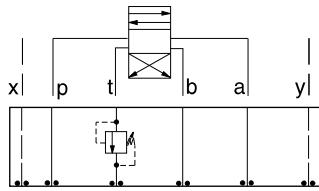
FUNCTION

Out of T

Relief Valves



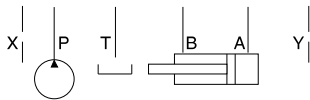
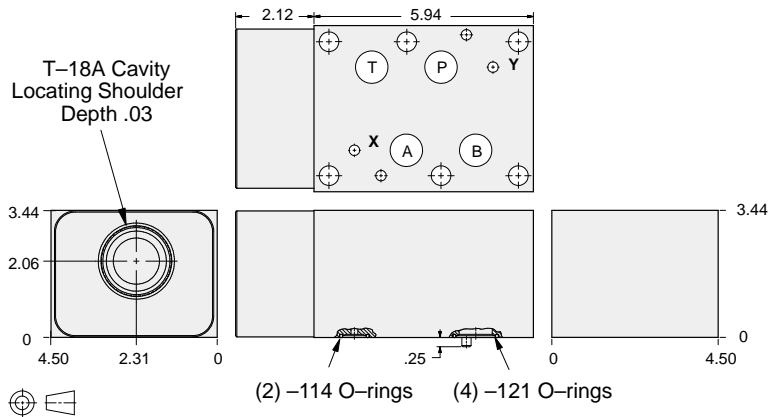
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBT		IBT/S	



FUNCTION

Out of T
(High Capacity)

Relief Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBV		IBV/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

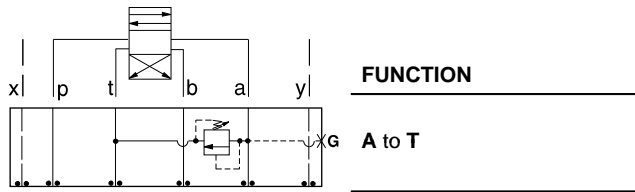
	Pilot Operated Relief Valve		Pilot Operated "Kick-Down" Relief Valve
	RP*C Page 1.07		RQ*B Page 1.13
	Pilot Operated, Rapid Response Relief Valve		Air Controlled, Pilot Operated Relief Valve
	RP*E Page 1.09		RP*D Page 1.15
	Direct Acting Relief Valve		
	RD*A Page 1.11		
OTHER VALVES:			



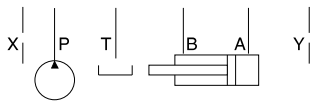
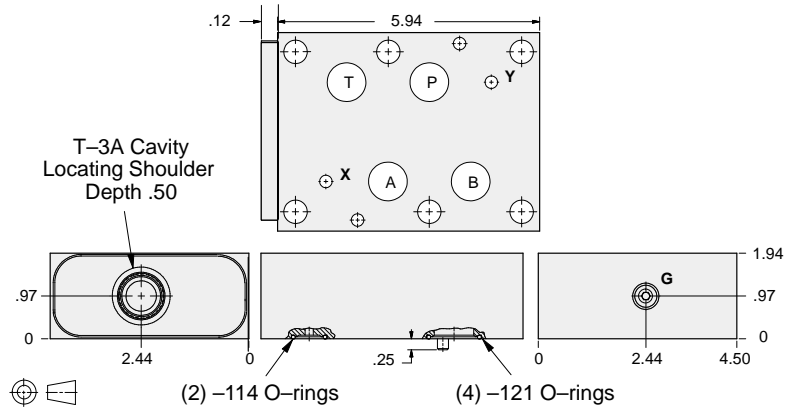
ISO 08 SANDWICH BODIES



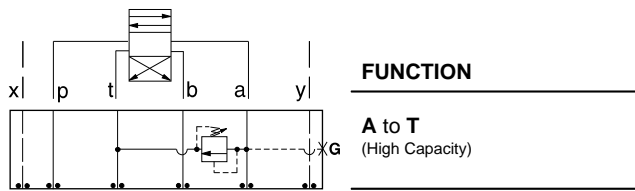
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



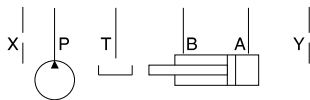
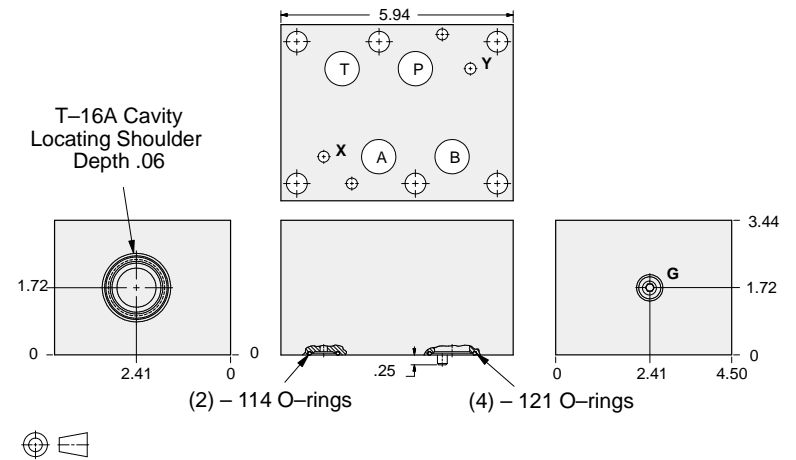
Relief Valves



Gauge Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CDA		CDA/S	
.25 BSPP	CDA/M		CDA/T	



Relief Valves



Gauge Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CDC		CDC/S	
.25 BSPP	CDC/M		CDC/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

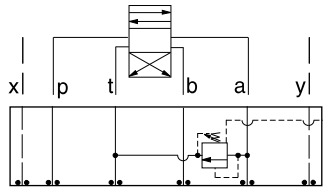
	Pilot Operated Relief Valve RP*C Page 1.06, 1.07		Pilot Operated "Kick-Down" Relief Valve RQ*B Page 1.12, 1.13
	Pilot Operated, Rapid Response Relief Valve RP*E Page 1.08, 1.09		Air Controlled, Pilot Operated Relief Valve RP*D Page 1.14, 1.15
	Direct Acting Relief Valve RD*A Page 1.10, 1.11		
OTHER VALVES:			



ISO 08 SANDWICH BODIES



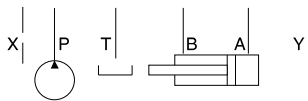
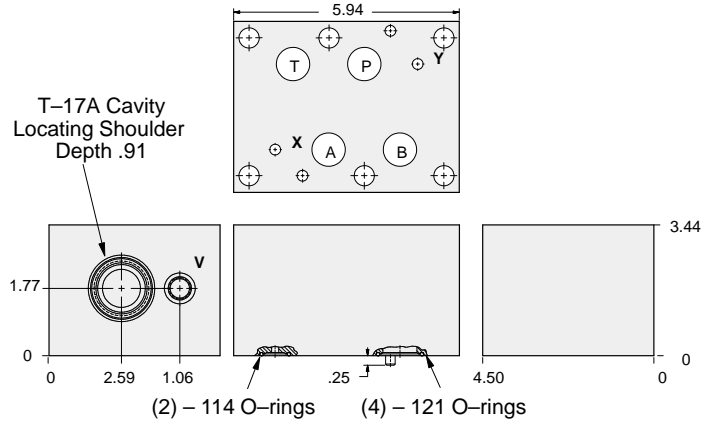
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



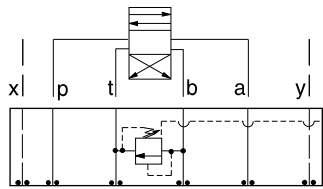
FUNCTION

A to T
Externally Vented

Relief Valves



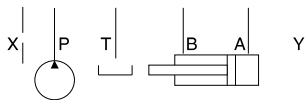
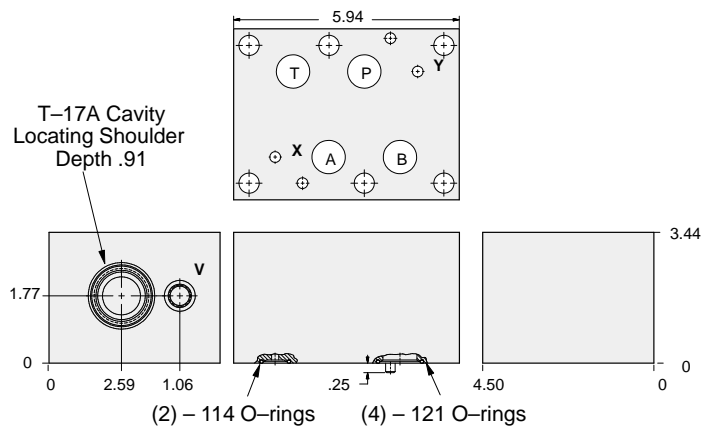
Vent Port	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
SAE-6	HBE		HBE/S	
.25 BSPP	HBE/M		HBE/T	



FUNCTION

B to T
Externally Vented

Relief Valves



Vent Port	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Part Number	List Price
SAE-6	HBF		HBF/S	
.25 BSPP	HBF/M		HBF/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

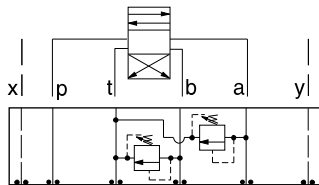
	Pilot Operated Vented Relief Valve		
	RVGA Page 1.19		
OTHER VALVES:			



ISO 08 SANDWICH BODIES



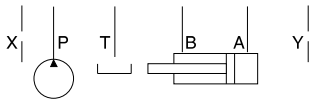
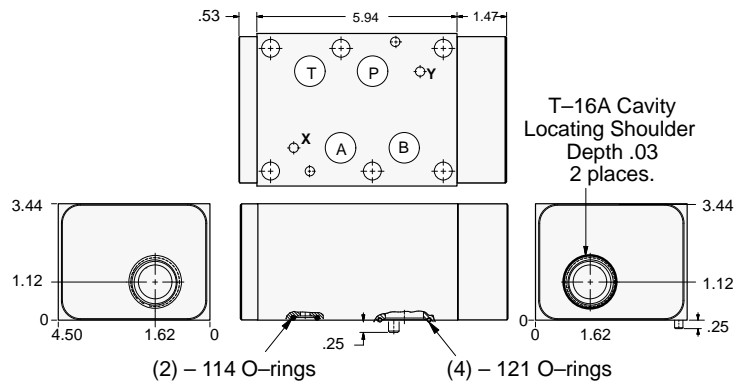
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

A and B to T
(High Capacity)

Relief Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CDZ		CDZ/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Relief Valve		Pilot Operated "Kick-Down" Relief Valve
	RPIC Page 1.07		RQIB Page 1.13
	Pilot Operated, Rapid Response Relief Valve		Air Controlled, Pilot Operated Relief Valve
	RPIE Page 1.09		RPID Page 1.15
	Direct Acting Relief Valve		
	RDHA Page 1.11		
OTHER VALVES:			

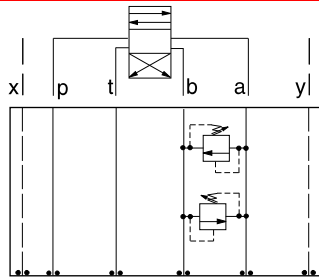
08 RELIEF



ISO 08 SANDWICH BODIES



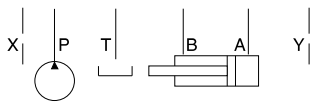
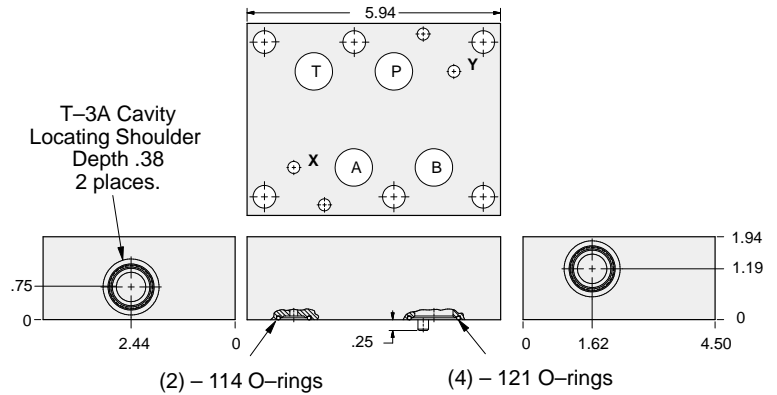
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



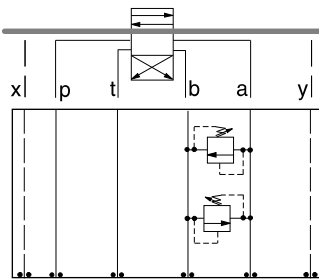
FUNCTION

A to B and B to A
(Cross-Port)

Relief Valves



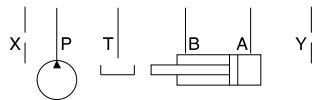
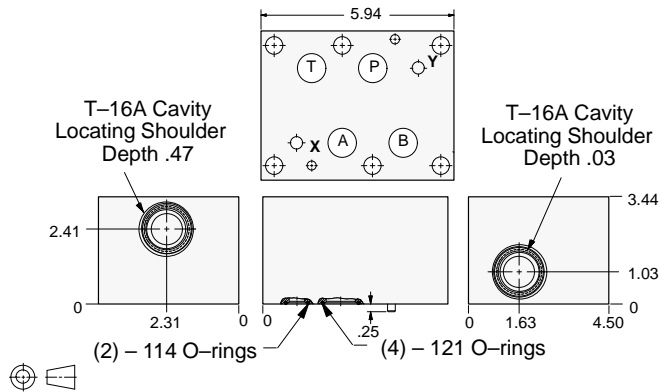
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CDY		CDYS	



FUNCTION

A to B and B to A
(High Capacity)
(Cross-Port)

Relief Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CDW		CDWS	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

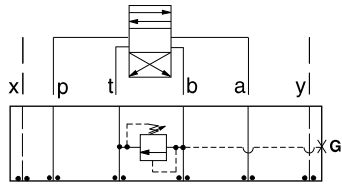
	<i>Pilot Operated Relief Valve</i>		<i>Pilot Operated "Kick-Down" Relief Valve</i>
	RP*C Page 1.06, 1.07		RQ*B Page 1.12, 1.13
	<i>Pilot Operated, Rapid Response Relief Valve</i>		<i>Air Controlled, Pilot Operated Relief Valve</i>
	RP*E Page 1.08, 1.09		RP*D Page 1.14, 1.15
	<i>Direct Acting Relief Valve</i>		
	RD*A Page 1.10, 1.11		
OTHER VALVES:			



ISO 08 SANDWICH BODIES



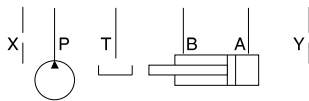
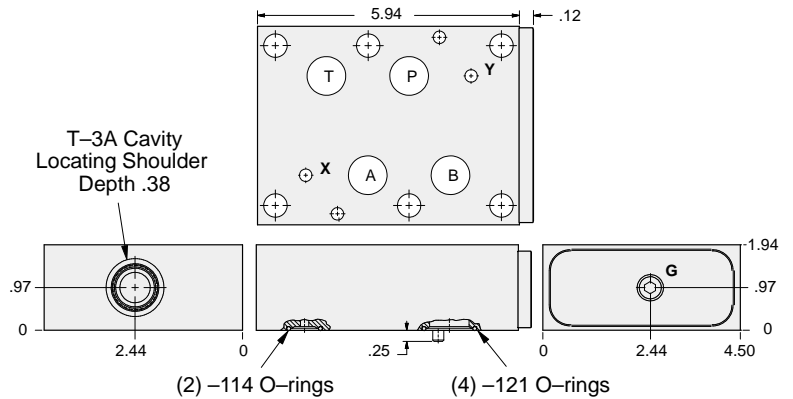
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

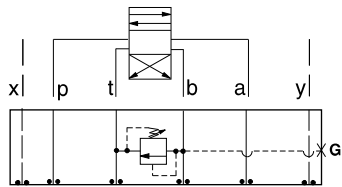
B to T

Relief Valves



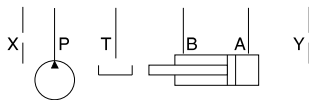
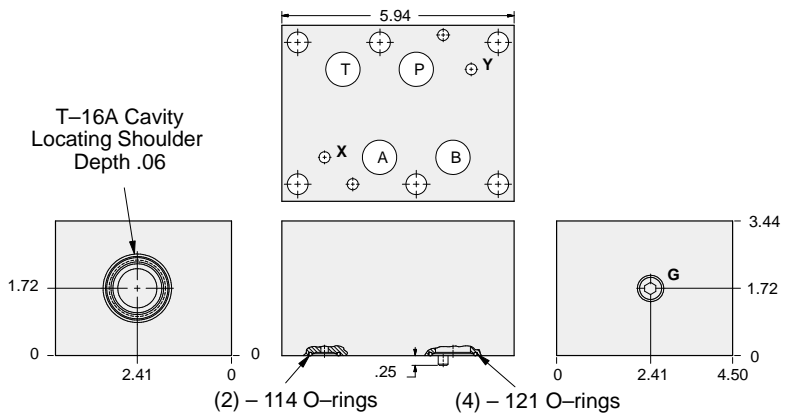
Gauge Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CDB		CDB/S	
.25 BSPP	CDB/M		CDB/T	

Relief Valves



FUNCTION

B to T
(High Capacity)



Gauge Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CDD		CDD/S	
.25 BSPP	CDD/M		CDD/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve RP*C Page 1.06, 1.07		Pilot Operated "Kick-Down" Relief Valve RQ*B Page 1.12, 1.13
	Pilot Operated, Rapid Response Relief Valve RP*E Page 1.08, 1.09		Air Controlled, Pilot Operated Relief Valve RP*D Page 1.14, 1.15
	Direct Acting Relief Valve RD*A Page 1.10, 1.11		
OTHER VALVES:			

08 RELIEF

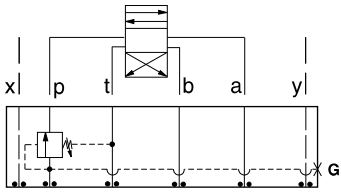


ISO 08 SANDWICH BODIES



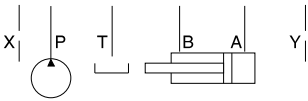
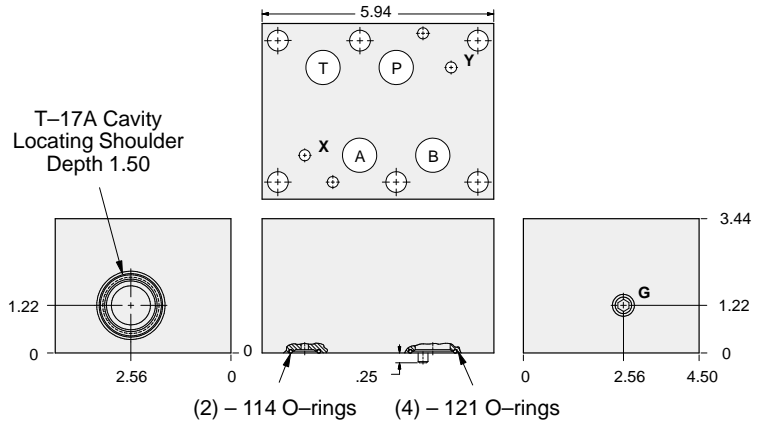
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Sequence Valves



FUNCTION

In to P



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	HBW		HBW/S	
.25 BSPP	HBW/M		HBW/T	

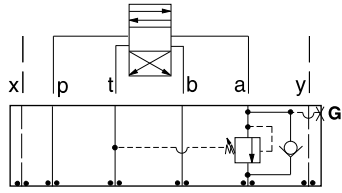
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	<i>Pilot Operated Sequence Valve</i>		<i>Direct Acting Sequence Valve with Reverse Free Flow Check</i>
	RSHC Page 2.07		SCGA Page 2.13
	<i>Pilot Operated "Kick-Down" Sequence Valve</i>		
	SQHB Page 2.09		
	<i>Air Controlled, Pilot Operated Sequence Valve</i>		
	RSHE Page 2.11		
OTHER VALVES:			



ISO 08 SANDWICH BODIES



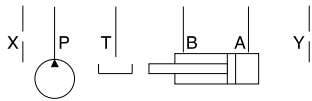
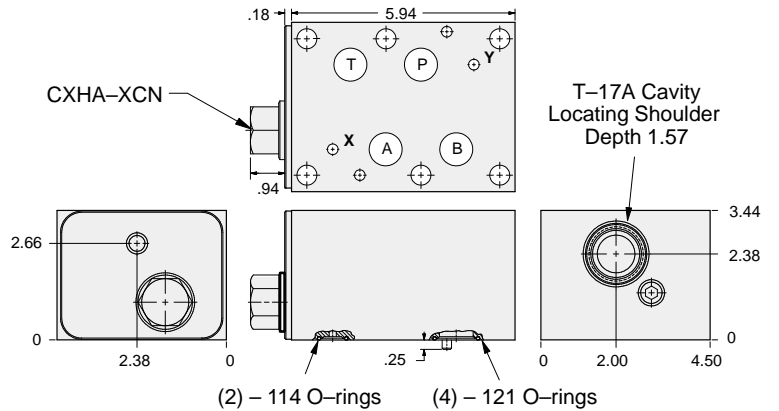
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

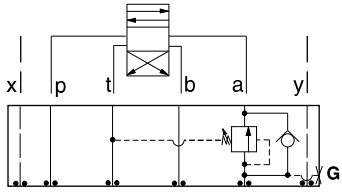
In to A
Reverse FF Check

Sequence Valves



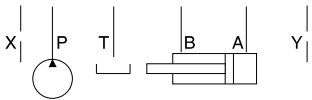
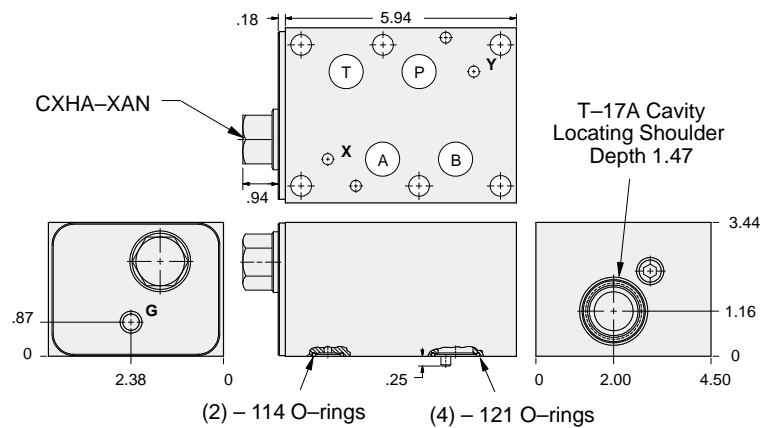
Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	HB4		HB4/S	
.25 BSPP	HB4/M		HB4/T	

Sequence Valves



FUNCTION

Out of A
Reverse FF Check



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	HB6		HB6/S	
.25 BSPP	HB6/M		HB6/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

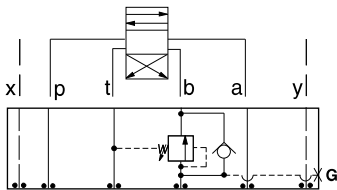
	Pilot Operated Sequence Valve		
	RSHC Page 2.07		
	Pilot Operated "Kick-Down" Sequence Valve		
	SQHB Page 2.09		
	Air Controlled, Pilot Operated Sequence Valve		
	RSHE Page 2.11		
OTHER VALVES:			



ISO 08 SANDWICH BODIES



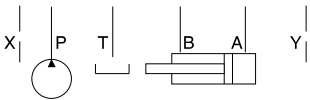
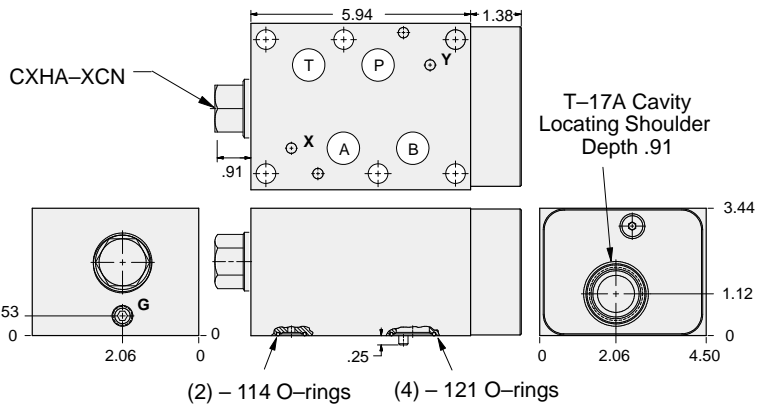
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

Out of **B**
Reverse FF Check

Sequence Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	HB7		HB7/S	
.25 BSPP	HB7/M		HB7/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

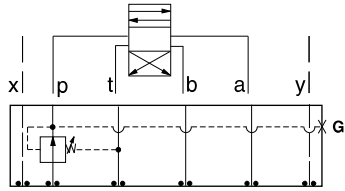
	Pilot Operated Sequence Valve		
	RSHC Page 2.07		
	Pilot Operated "Kick-Down" Sequence Valve		
	SQHB Page 2.09		
	Air Controlled, Pilot Operated Sequence Valve		
	RSHE Page 2.11		
OTHER VALVES:			



ISO 08 SANDWICH BODIES



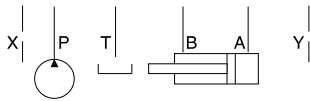
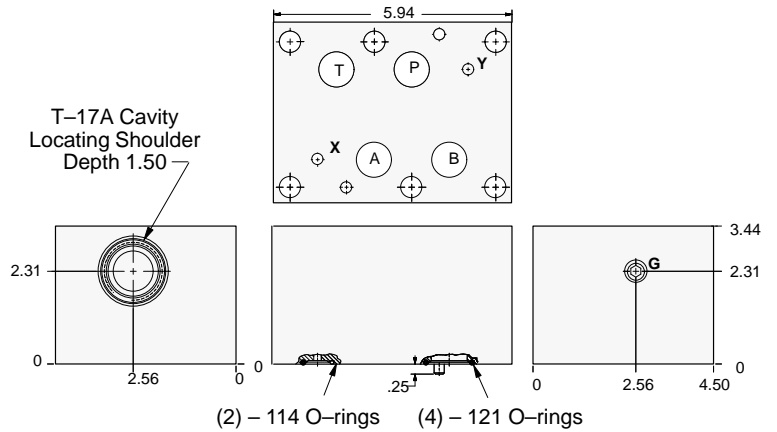
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



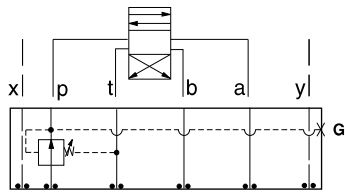
FUNCTION

On P
Drained to T

Reducing Valves



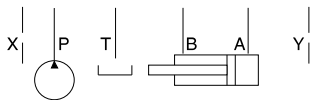
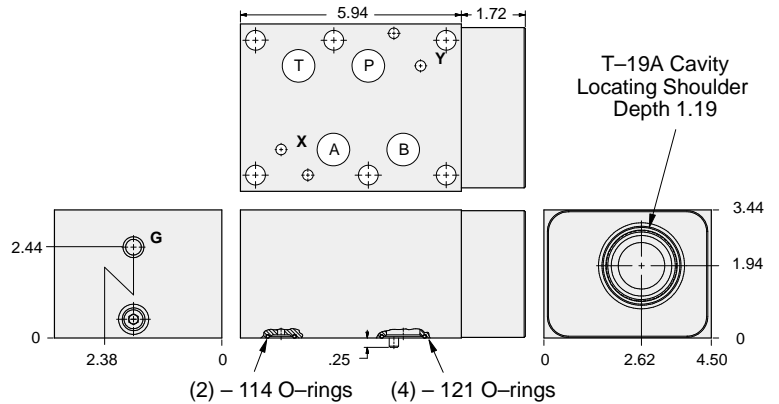
Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	HBP		HBP/S	
.25 BSPP	HBP/M		HBP/T	



FUNCTION

On P
Drained to T
(High Capacity)

Reducing Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	HBO		HBO/S	
.25 BSPP	HBO/M		HBO/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Reducing Valve		
	PB*B Page 3.07		
	Air Controlled, Pilot Operated Reducing Valve		
	PB*C Page 3.09		
OTHER VALVES:			

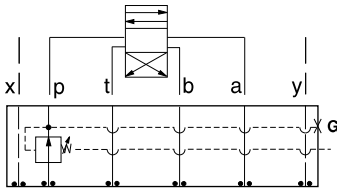


ISO 08 SANDWICH BODIES



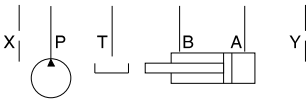
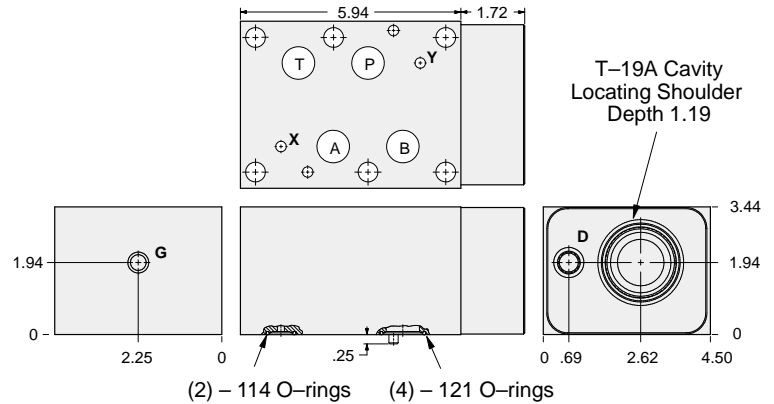
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing Valves



FUNCTION

On P
Drained Externally



Drain Port	Gage Port	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
SAE-6	.25 NPTF	HBQ		HBQ/S	
.25 BSPP	.25 BSPP	HBQ/M		HBQ/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

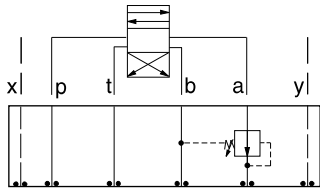
	<i>Pilot Operated Reducing Valve</i>		
	PBJB Page 3.07		
	<i>Air Controlled, Pilot Operated Reducing Valve</i>		
	PBJC Page 3.09		
OTHER VALVES:			



ISO 08 SANDWICH BODIES



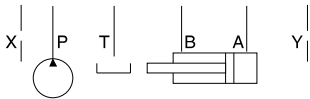
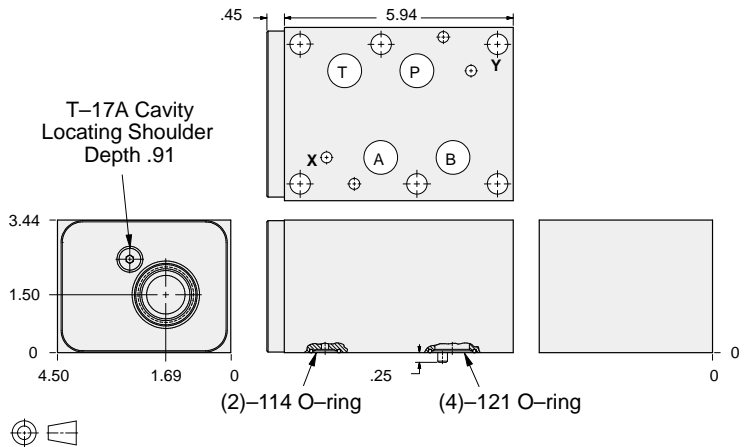
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



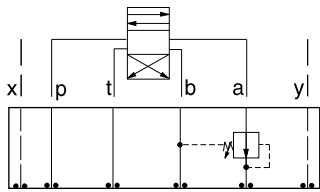
FUNCTION

On A
Drained to B

Reducing Valves



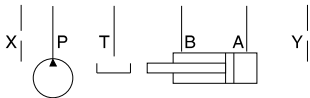
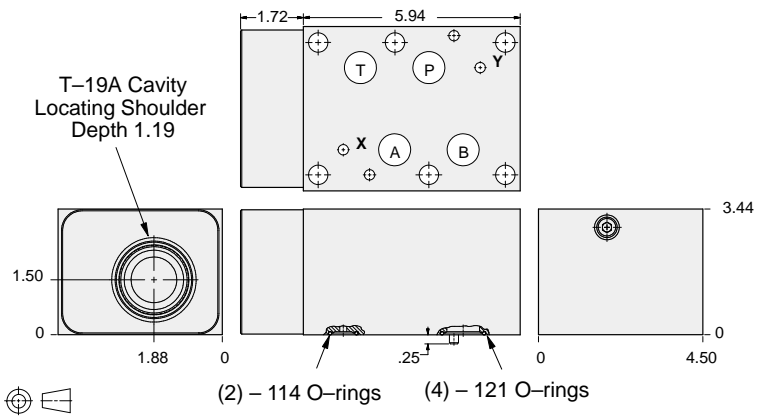
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBL		HBL/S	



FUNCTION

On A
Drained to B
(High Capacity)

Reducing Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBA		HBA/S	

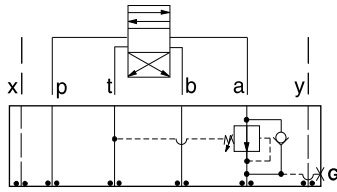
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing Valve		
	PB*B Page 3.07		
OTHER VALVES:			



ISO 08 SANDWICH BODIES



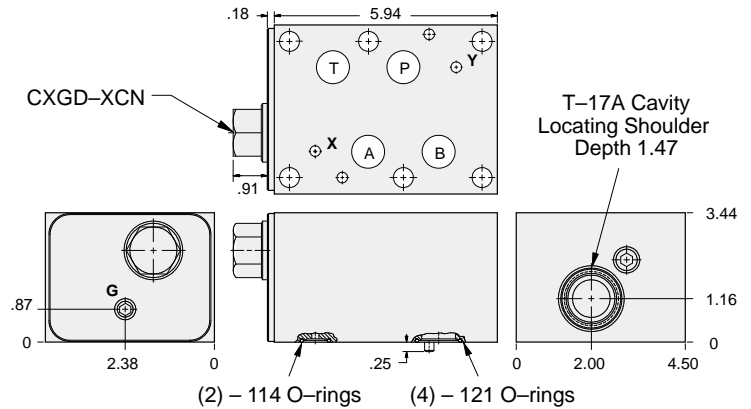
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



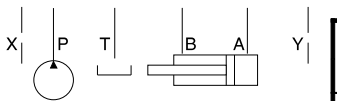
FUNCTION

On A Drain to T
Reverse FF Check

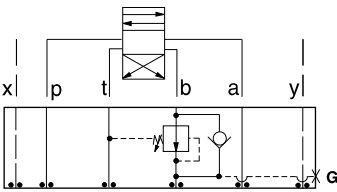
Reducing Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	HBK		HBK/S	
.25 BSPP	HBK/M		HBK/T	

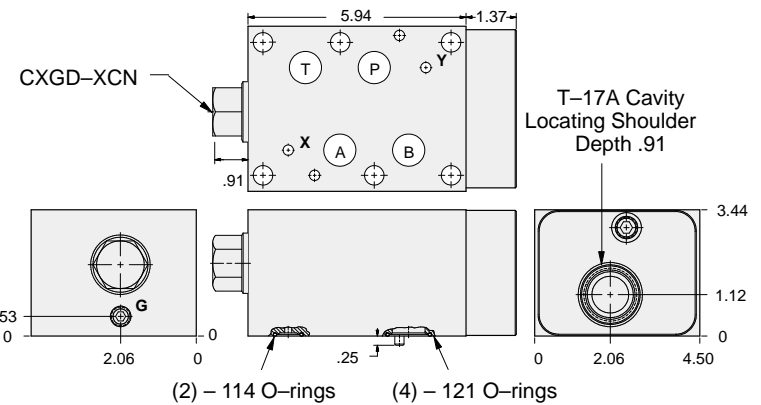


Reducing Valves

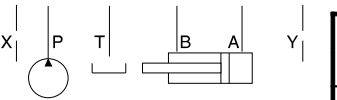


FUNCTION

On B Drain to T
Reverse FF Check



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	HBJ		HBJ/S	
.25 BSPP	HBJ/M		HBJ/T	



TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Reducing Valve		
	PBHB Page 3.07		
	Air Controlled, Pilot Operated Reducing Valve		
	PBHC Page 3.09		
OTHER VALVES:			

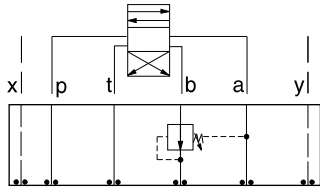


ISO 08 SANDWICH BODIES



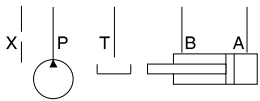
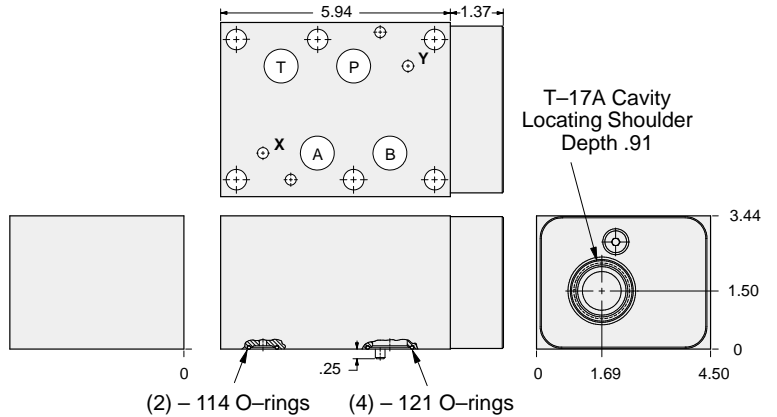
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing Valves



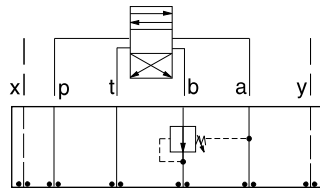
FUNCTION

On B
Drained to A



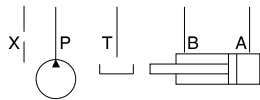
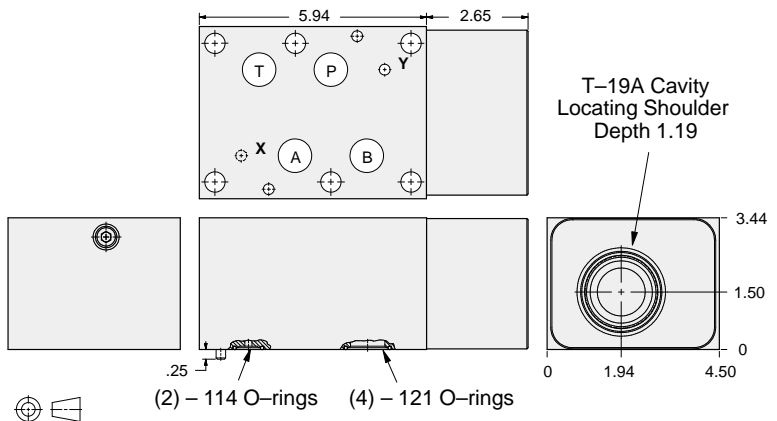
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBM		HBM/S	

Reducing Valves



FUNCTION

On B
Drained to A
(High Capacity)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBB		HBB/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

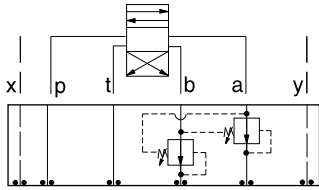
	Pilot Operated Reducing Valve		
	PB*B Page 3.07		
OTHER VALVES:			



ISO 08 SANDWICH BODIES



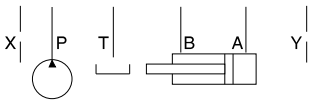
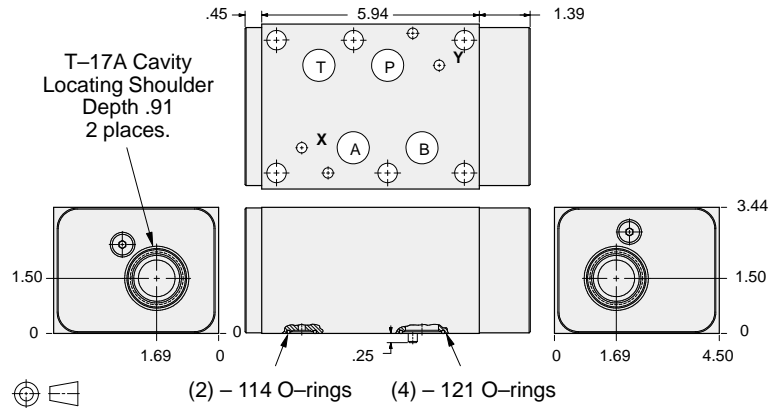
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



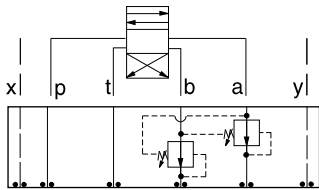
FUNCTION

On **A** and **B**
Drains to Opposite Port

Reducing Valves



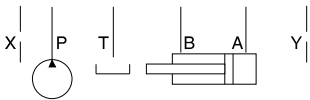
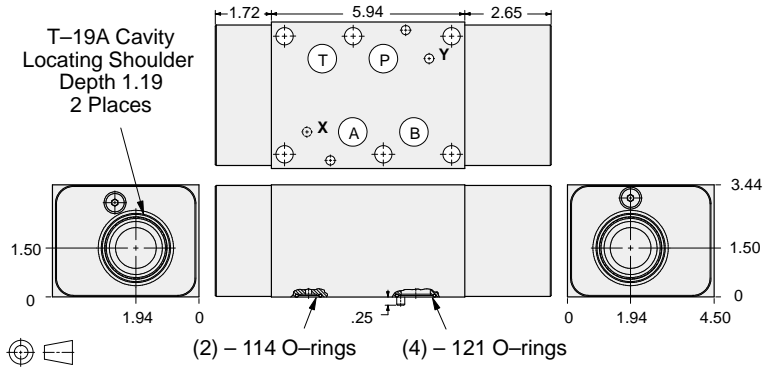
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBN		HBNS	



FUNCTION

On **A** and **B**
Drains to Opposite Port
(High Capacity)

Reducing Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBV		HBVS	

08 REDUCING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing Valve		
	PB*B Page 3.07		
OTHER VALVES:			

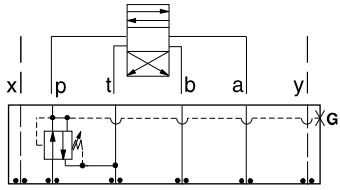


ISO 08 SANDWICH BODIES



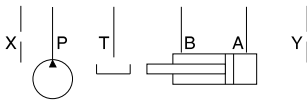
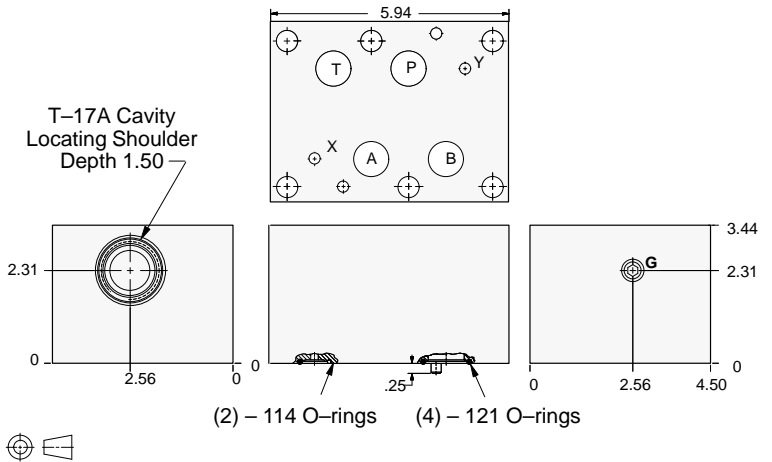
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing/Relieving Valves



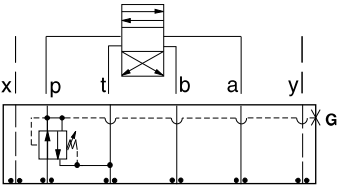
FUNCTION

On P Tank to T
Drained to T



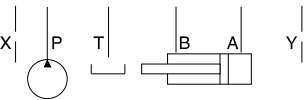
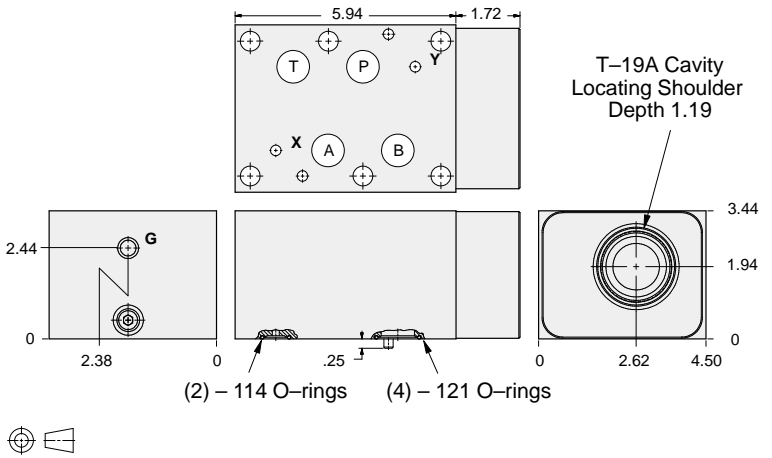
Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	HBP		HBP/S	
.25 BSPP	HBP/M		HBP/T	

Reducing/Relieving Valves



FUNCTION

On P Tank to T
Drained to T
(High Capacity)



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	HBO		HBO/S	
.25 BSPP	HBO/M		HBO/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	<i>Pilot Operated Reducing/Relieving Valve</i>		
	PP*B Page 3.11		
	<i>Air Controlled, Pilot Operated Reducing/Relieving Valve</i>		
	PP*C Page 3.13		
OTHER VALVES:			

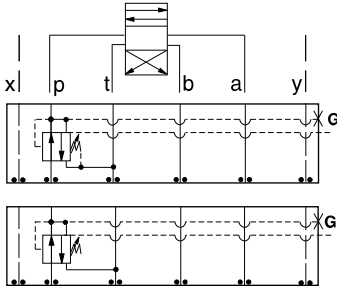


ISO 08 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing/Relieving Valves

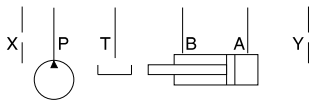
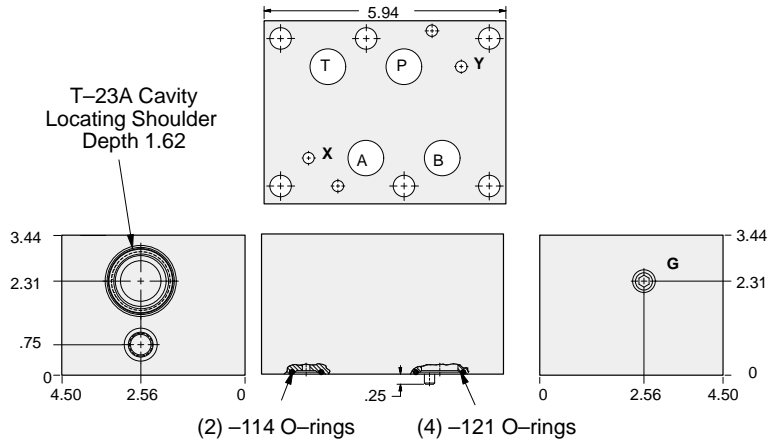


FUNCTION

On P Tank to T
Vented Externally

On P Tank to T
Drained Externally

T-23A Cavity
Locating Shoulder
Depth 1.62



External Port	Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
SAE-6	.25 NPTF	PBP		PBP/S	
.25 BSPP	.25 BSPP			PBP/T	

08 REDUCING/RELIEVING

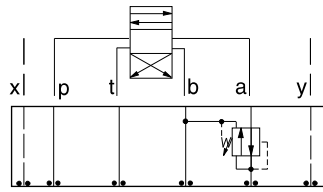
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Pilot Operated Reducing/Relieving Valve with Drain Port		
	PVHA Page 3.15		
	Pilot Operated Reducing/Relieving Valve with Vent Port		
	PVHB Page 3.17		
OTHER VALVES:			



ISO 08 SANDWICH BODIES



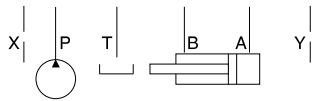
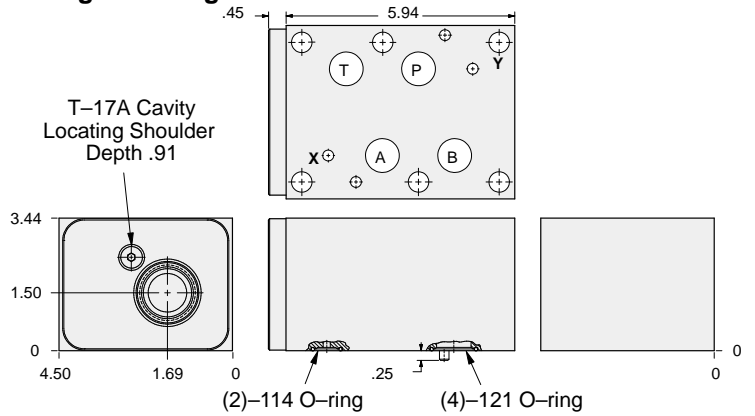
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



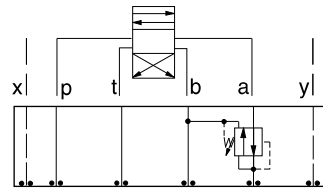
FUNCTION

On A Tank to B
Drained to B

Reducing/Relieving Valves



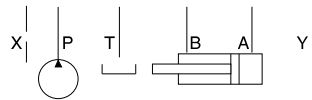
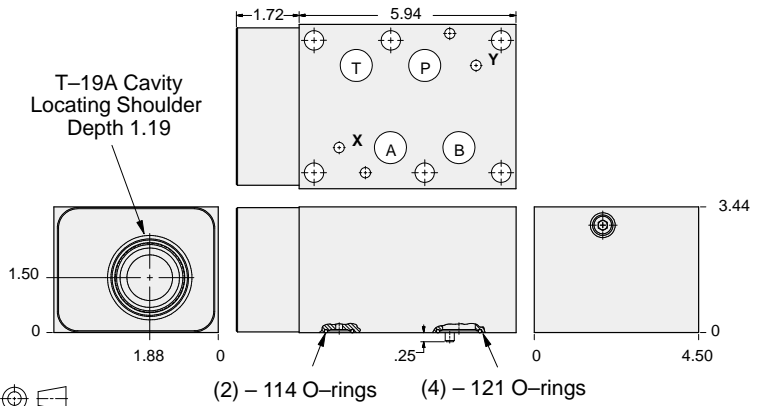
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBL		HBL/S	



FUNCTION

On A Tank to B
Drained to B
(High Capacity)

Reducing/Relieving Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBA		HBA/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Reducing/Relieving Valve		
	PP*B Page 3.11		
OTHER VALVES:			

08 REDUCING/RELIEVING

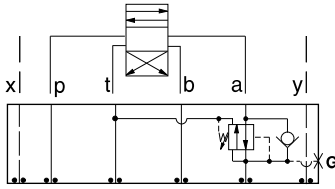


ISO 08 SANDWICH BODIES



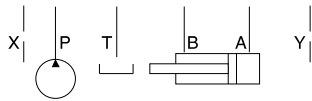
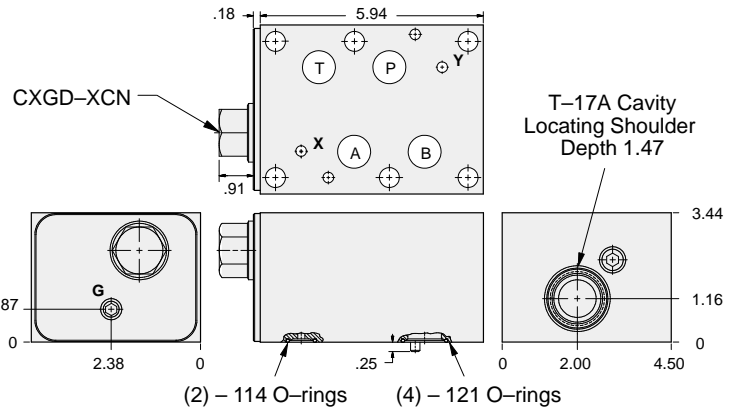
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing/Relieving Valves



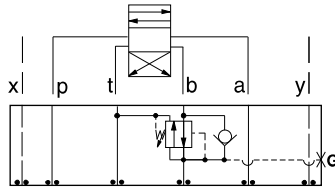
FUNCTION

On **A** Tank to **T**
Drained to **T**
Reverse FF Check



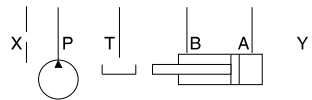
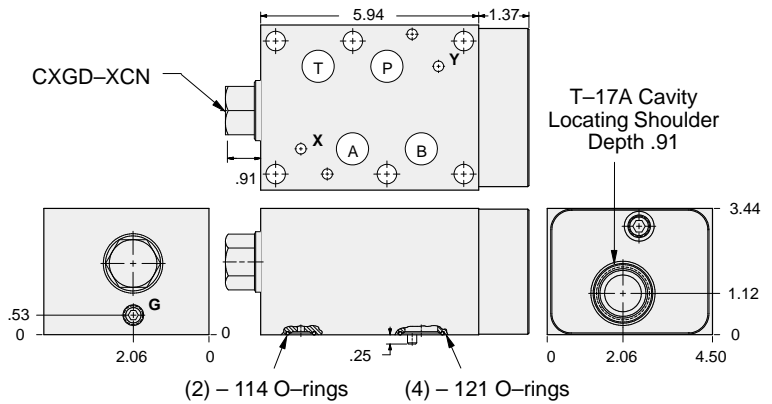
Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	HBK		HBK/S	
.25 BSPP	HBK/M		HBK/T	

Reducing/Relieving Valves



FUNCTION

On **B** Tank to **T**
Drained to **T**
Reverse FF Check



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	HBJ		HBJ/S	
.25 BSPP	HBJ/M		HBJ/T	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Reducing/Relieving Valve PPHB Page 3.11		
	Air Controlled, Pilot Operated Reducing/Relieving Valve PPHC Page 3.13		
OTHER VALVES:			

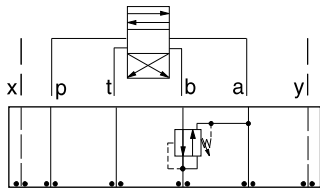


ISO 08 SANDWICH BODIES



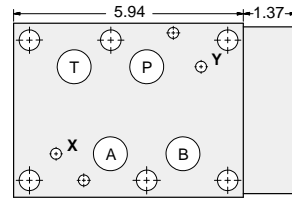
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing/Relieving Valves

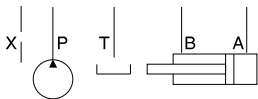
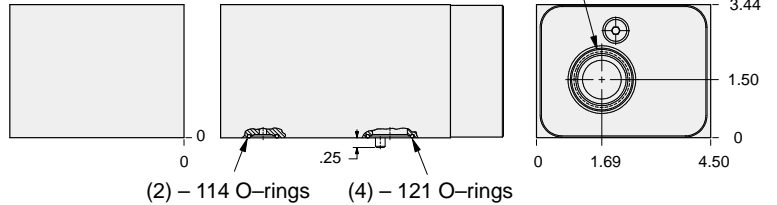


FUNCTION

On B Tank to A
Drained to A

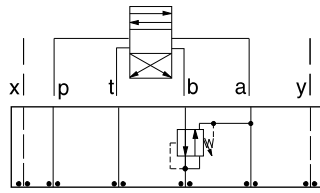


T-17A Cavity
Locating Shoulder
Depth .91



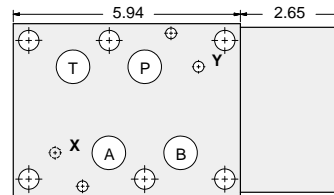
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBM		HBM/S	

Reducing/Relieving Valves

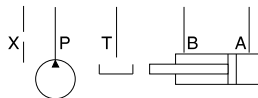
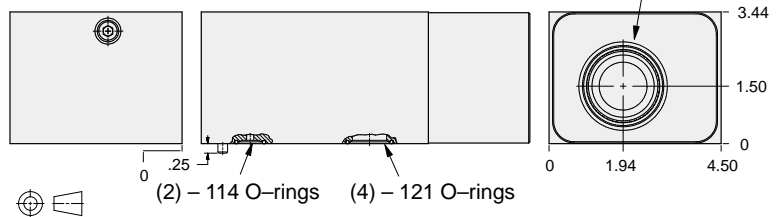


FUNCTION

On B Tank to A
(High Capacity)
Drained to A



T-19A Cavity
Locating Shoulder
Depth 1.19



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBB		HBB/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Reducing/Relieving Valve		
	PP*B Page 3.11		
OTHER VALVES:			

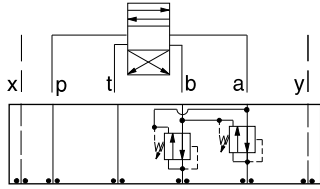


ISO 08 SANDWICH BODIES



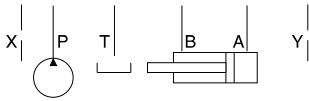
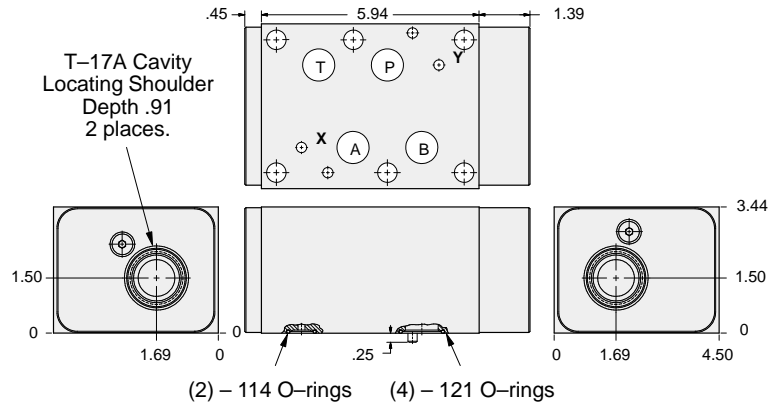
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Reducing/Relieving Valves



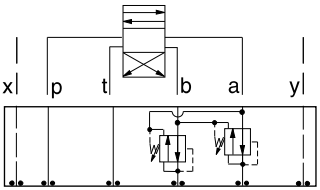
FUNCTION

On **A** and **B**
Tanks and Drains to
Opposite Port



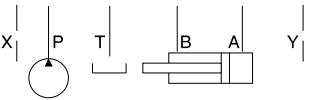
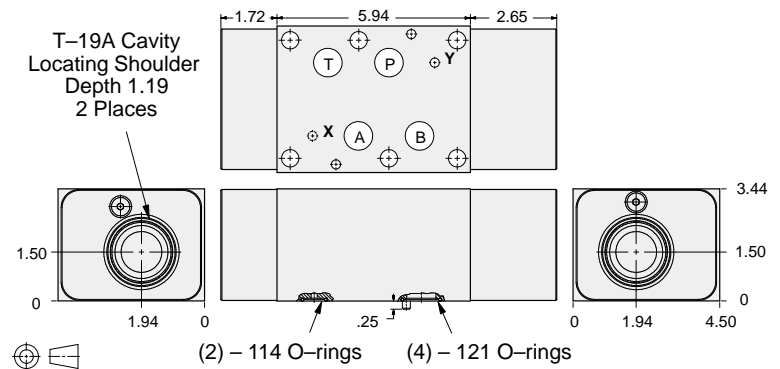
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBN		HBNS	

Reducing/Relieving Valves



FUNCTION

On **A** and **B**
Tanks and Drains to
Opposite Port
(High Capacity)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBV		HBVS	

08 REDUCING/RELIEVING

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

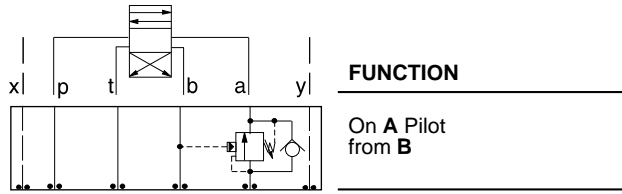
	Pilot Operated Reducing/Relieving Valve		
	PP*B Page 3.11		
OTHER VALVES:			



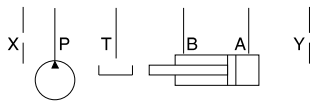
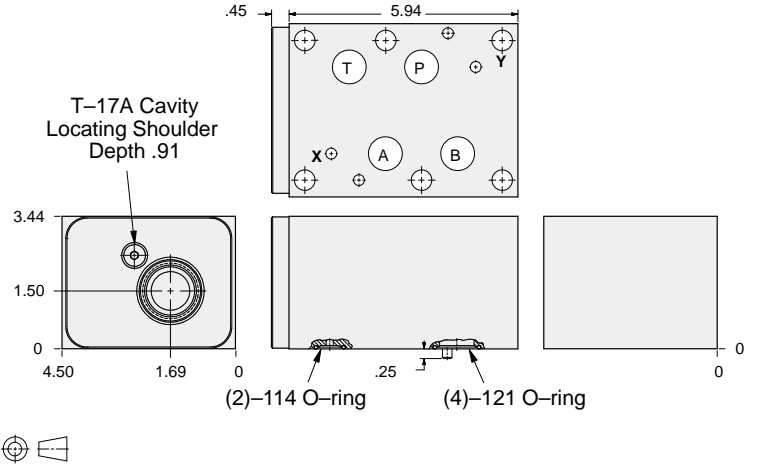
ISO 08 SANDWICH BODIES



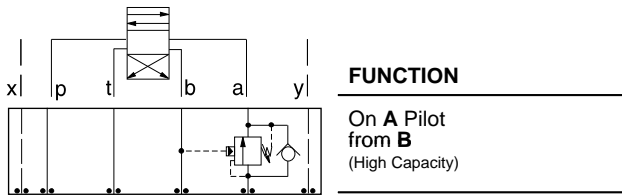
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



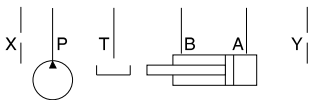
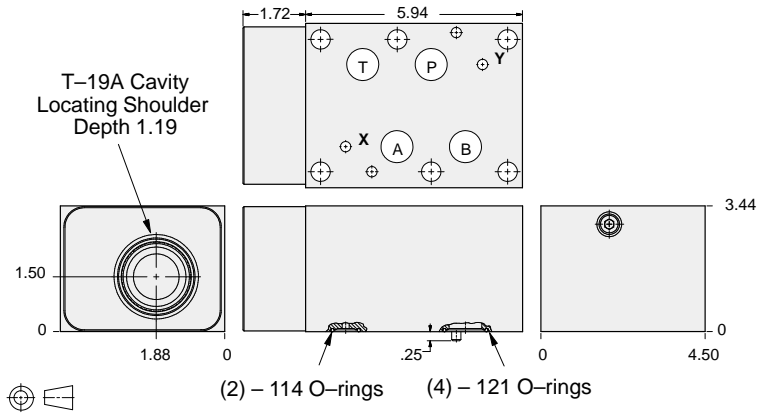
Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBL		HBL/S	



Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBA		HBA/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

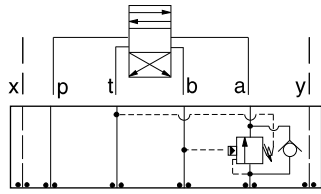
	Counterbalance Valve, 3:1 Pilot Ratio		
	CB*A Page 4.11		
	Counterbalance Valve, 4.5:1 Pilot Ratio		
	CB*G Page 4.13		
	Counterbalance Valve, 10:1 Pilot Ratio		
	CB*H Page 4.15		
OTHER VALVES:			



ISO 08 SANDWICH BODIES



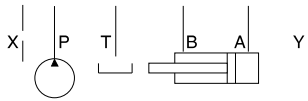
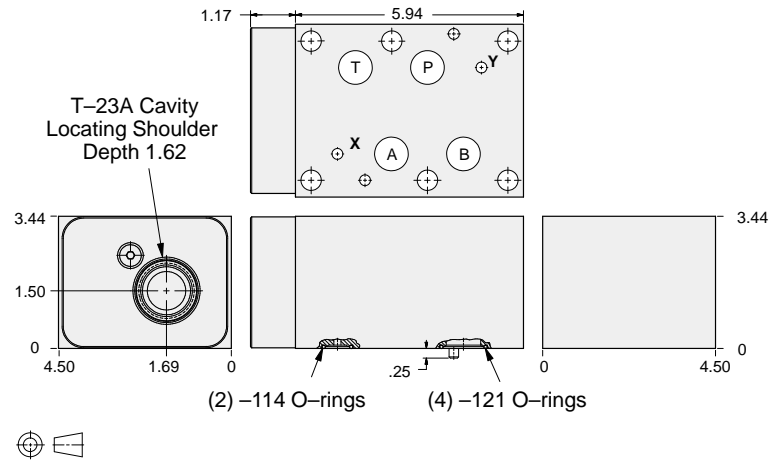
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



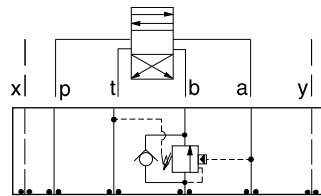
FUNCTION

On A Pilot
from B
Vent to T

Counterbalance Valves



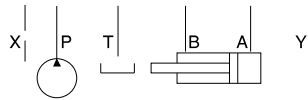
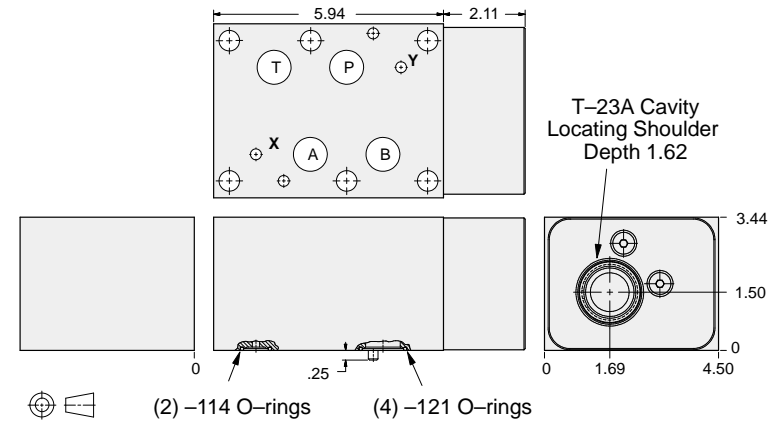
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
PBA		PBA/S	



FUNCTION

On B Pilot
from A
Vent to T

Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
PBB		PBB/S	

08 COUNTERBALANCE

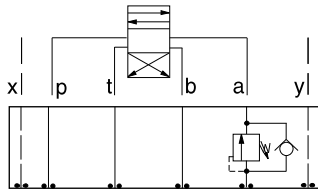
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Vented Counterbalance Valve, 3:1 Pilot Ratio		
	CWGA Page 4.19		
	Vented Counterbalance Valve, 5:1 Pilot Ratio		
	CWGG Page 4.21		
OTHER VALVES:			



ISO 08 SANDWICH BODIES



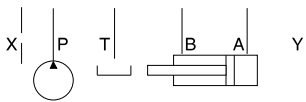
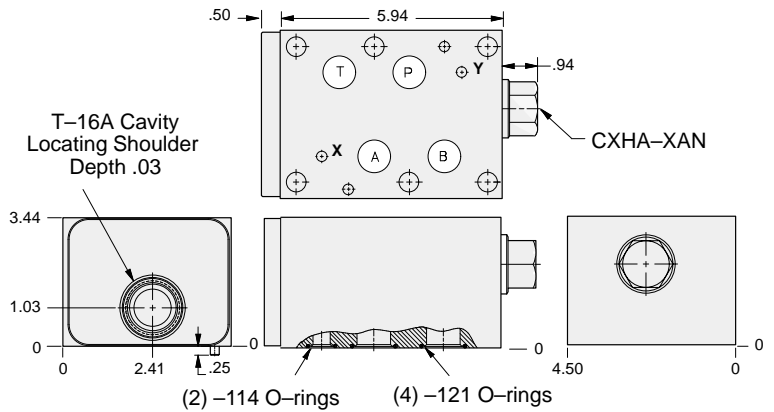
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On A
No pilot assist

Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CD4		CD4/S	

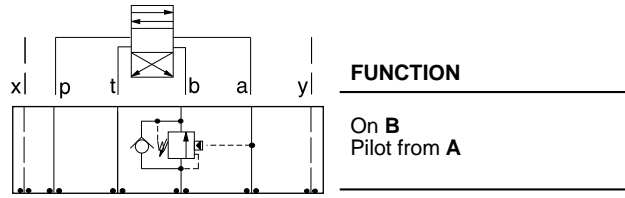
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Direct Acting Relief Valve		
	RDHA Page 1.09		
OTHER VALVES:			



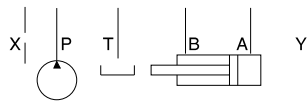
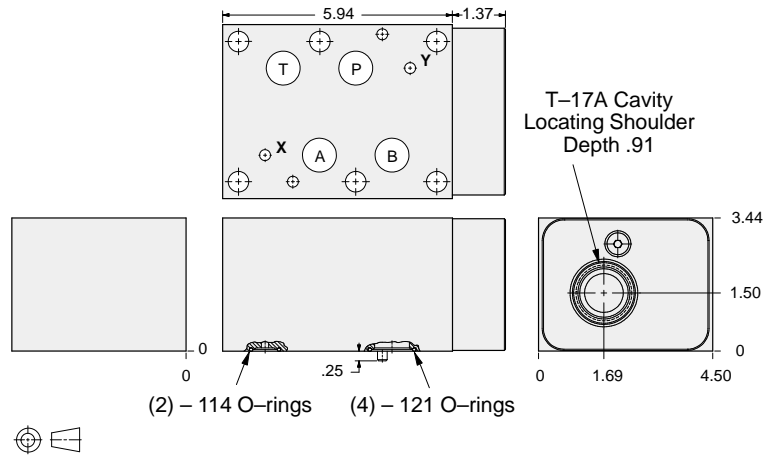
ISO 08 SANDWICH BODIES



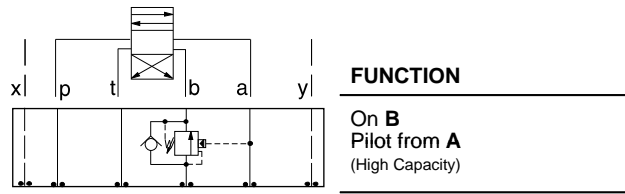
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



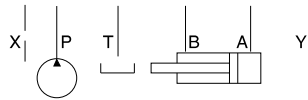
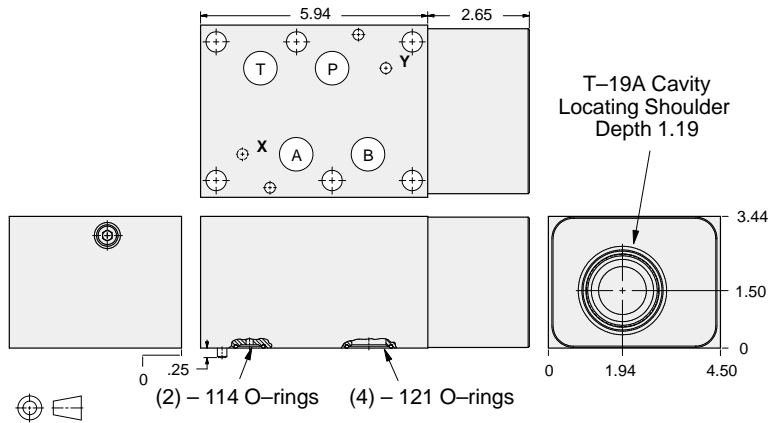
Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBM		HBM/S	



Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBB		HBB/S	

08 COUNTERBALANCE

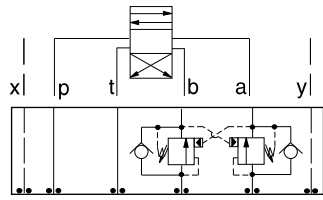
TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Counterbalance Valve, 3:1 Pilot Ratio CB*A Page 4.11		
	Counterbalance Valve, 4.5:1 Pilot Ratio CB*G Page 4.13		
	Counterbalance Valve, 10:1 Pilot Ratio CB*H Page 4.15		
OTHER VALVES:			



ISO 08 SANDWICH BODIES



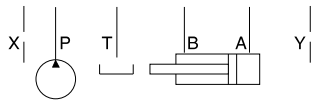
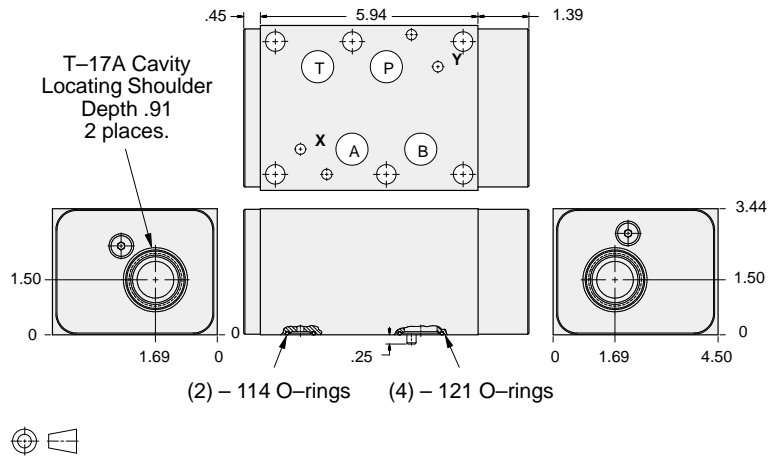
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



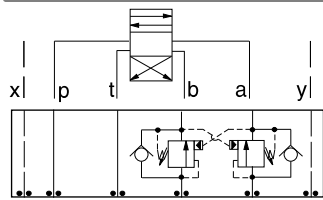
FUNCTION

On A and B
Cross-Piloted

Counterbalance Valves



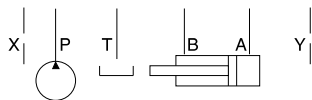
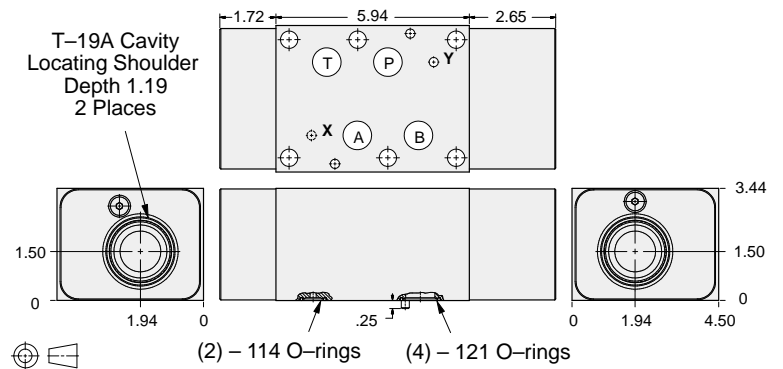
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBN		HBN/S	



FUNCTION

On A and B
Cross-Piloted
(High Capacity)

Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBY		HBY/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Counterbalance Valve, 3:1 Pilot Ratio		
	CB*A Page 4.11		
	Counterbalance Valve, 4.5:1 Pilot Ratio		
	CB*G Page 4.13		
	Counterbalance Valve, 10:1 Pilot Ratio		
	CB*H Page 4.15		
OTHER VALVES:			

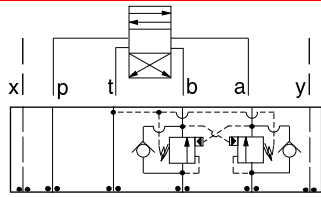
08 COUNTERBALANCE



ISO 08 SANDWICH BODIES



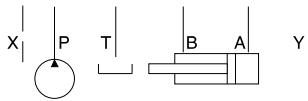
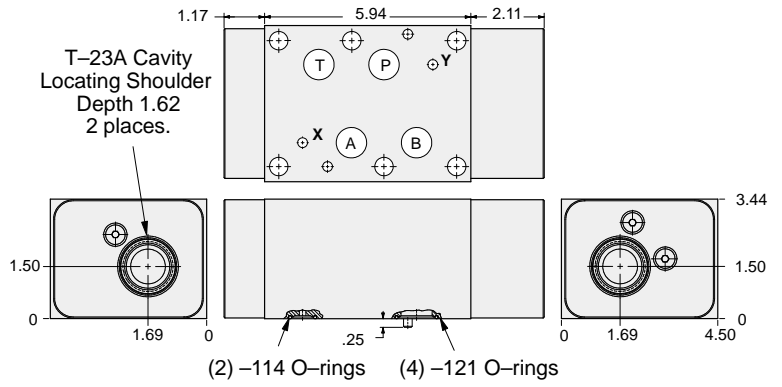
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

On **A** and **B**
Cross-Piloted
Vents to **T**

Counterbalance Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
PBY		PBY/S	

08 COUNTERBALANCE

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Vented Counterbalance Valve, 3:1 Pilot Ratio		
	CWGA Page 4.19		
	Vented Counterbalance Valve, 5:1 Pilot Ratio		
	CWGG Page 4.21		
OTHER VALVES:			

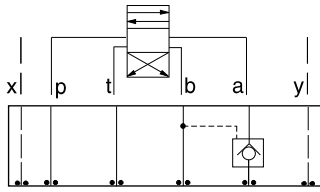


ISO 08 SANDWICH BODIES



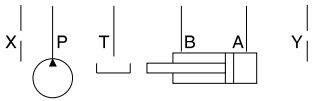
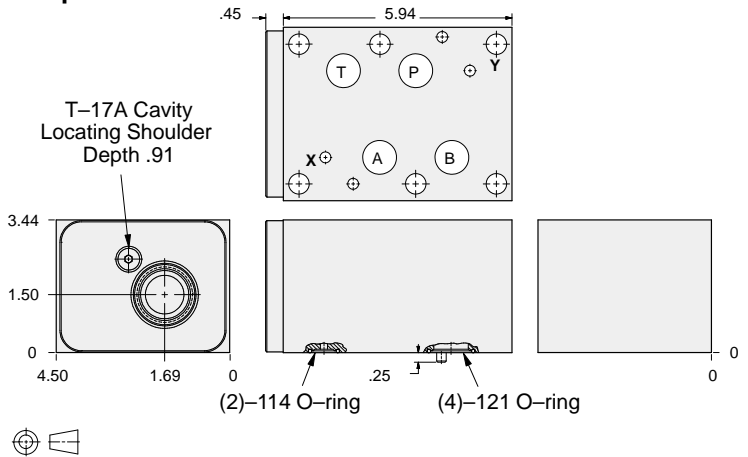
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Pilot Operated Check Valves



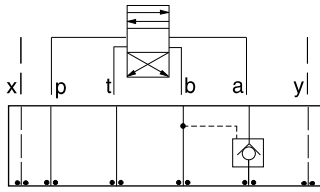
FUNCTION

On A
Pilot from B



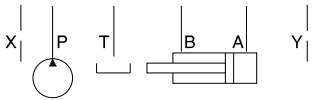
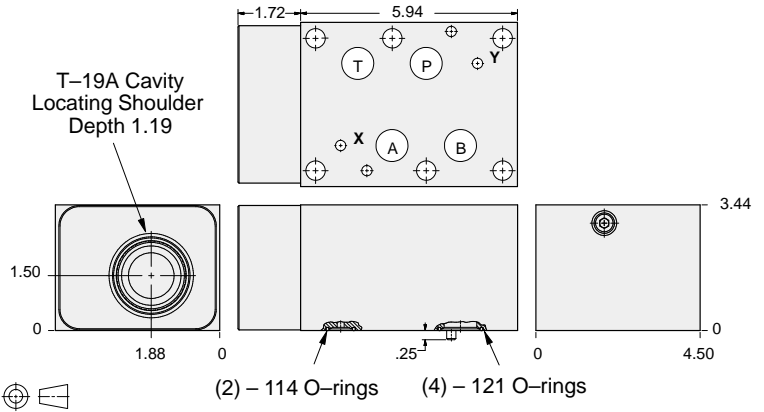
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBL		HBL/S	

Pilot Operated Check Valves



FUNCTION

On A
Pilot from B
(High Capacity)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBA		HBA/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CK*B Page 4.17		
OTHER VALVES:			

08 P.O. CHECK

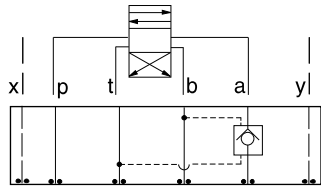


ISO 08 SANDWICH BODIES



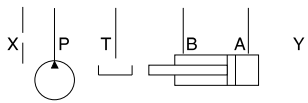
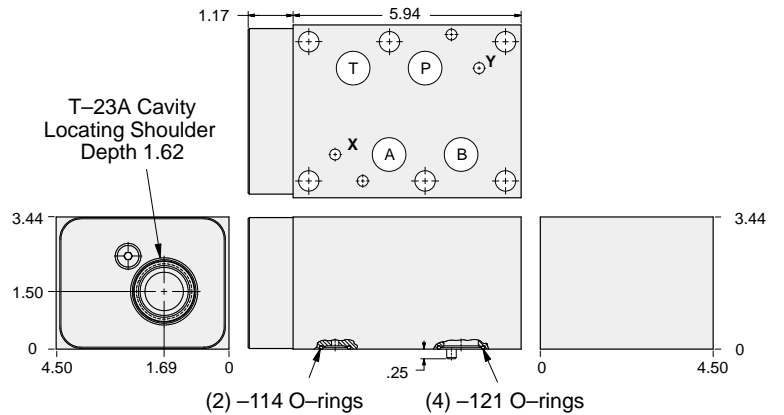
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Pilot Operated Check Valves



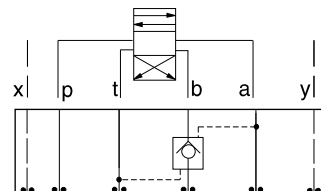
FUNCTION

On **A**
Pilot from **B**
Vent to **T**



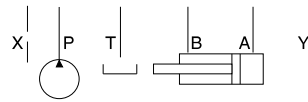
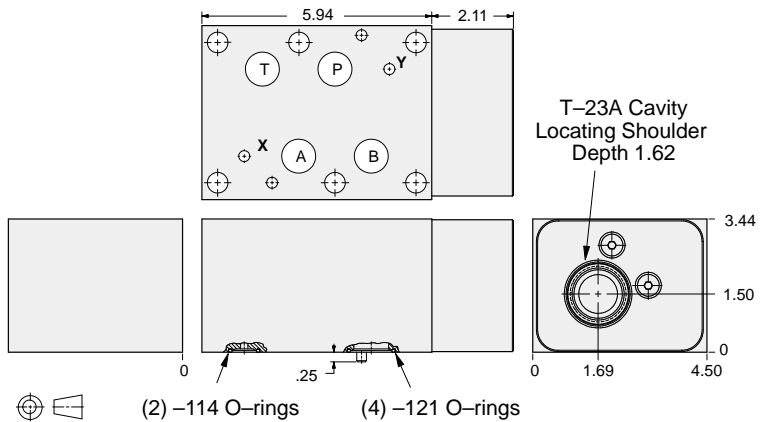
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
PBA		PBA/S	

Pilot Operated Check Valves



FUNCTION

On **B**
Pilot from **A**
Vent to **T**



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
PBB		PBB/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Vented Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CVGV Page 4.23		
OTHER VALVES:			

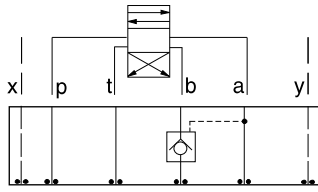


ISO 08 SANDWICH BODIES



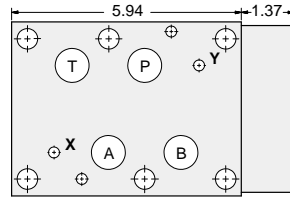
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Pilot Operated Check Valves

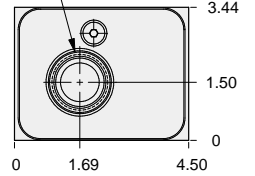
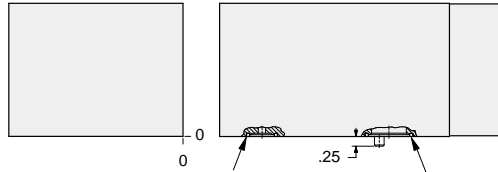


FUNCTION

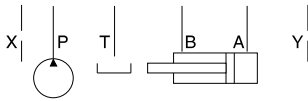
On B
Pilot from A



T-17A Cavity
Locating Shoulder
Depth .91

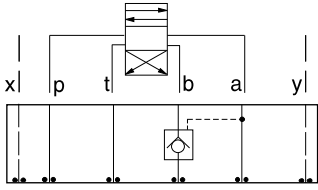


(2) - 114 O-rings (4) - 121 O-rings



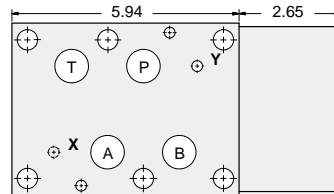
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBM		HBM/S	

Pilot Operated Check Valves

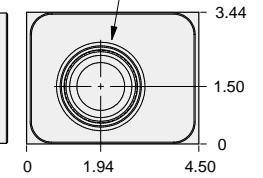
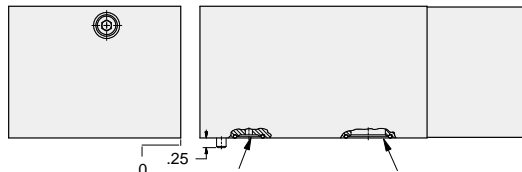


FUNCTION

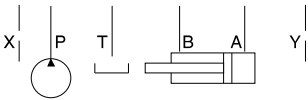
On B
Pilot from A
(High Capacity)



T-19A Cavity
Locating Shoulder
Depth 1.19



(2) - 114 O-rings (4) - 121 O-rings



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBB		HBB/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CK*B Page 4.17		
OTHER VALVES:			

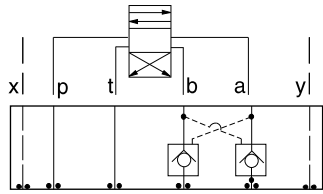


ISO 08 SANDWICH BODIES



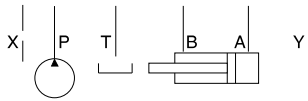
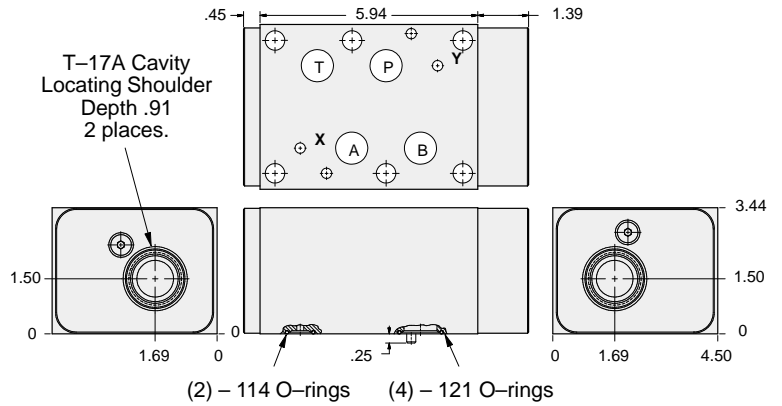
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Pilot Operated Check Valves



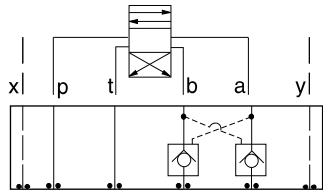
FUNCTION

On A and B
Cross-Piloted



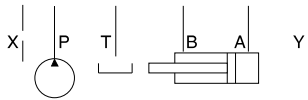
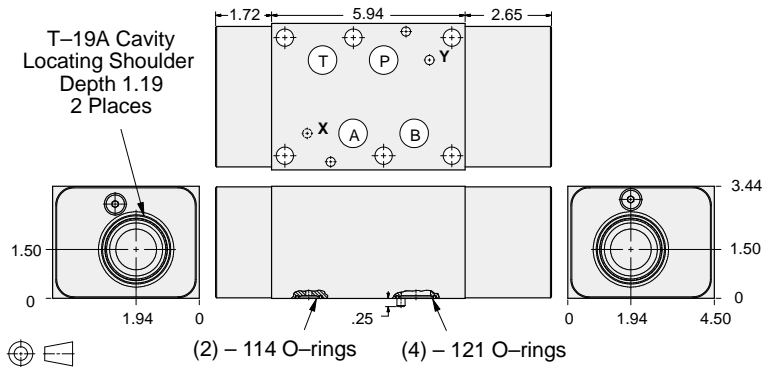
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBN		HBNS	

Pilot Operated Check Valves



FUNCTION

On A and B
Cross-Piloted
(High Capacity)



ALUMINUM		DUCTILE IRON	
Model Code	List Price	model Code	List Price
HBV		HBVS	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CK*B Page 4.17		
OTHER VALVES:			

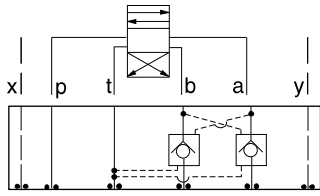


ISO 08 SANDWICH BODIES



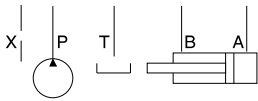
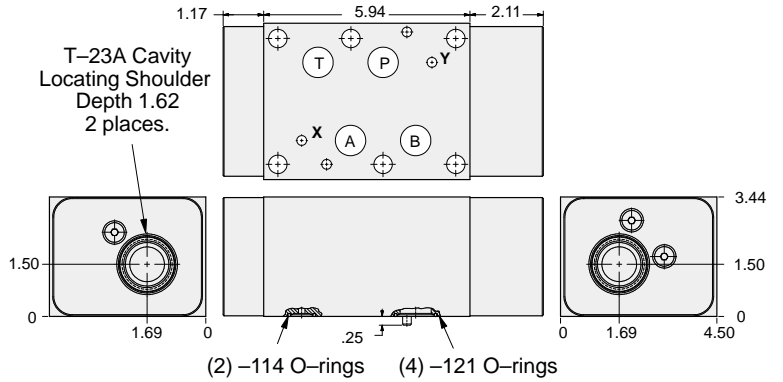
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Pilot Operated Check Valves



FUNCTION

On A and B
Cross-Piloted
Vents to T



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
PBY		PBY/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Vented Pilot-to-Open Check Valve, 3:1 Pilot Ratio		
	CVGV Page 4.23		
OTHER VALVES:			

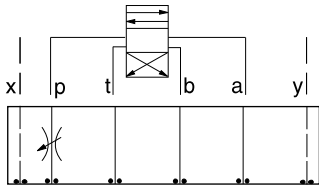
08 P.O. CHECK



ISO 08 SANDWICH BODIES



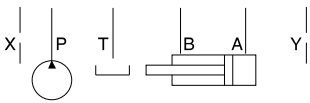
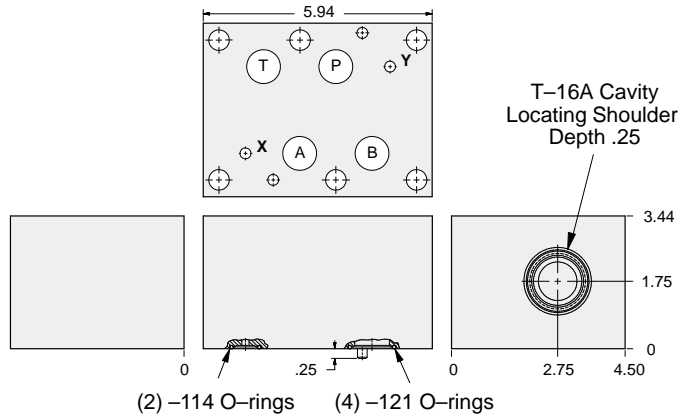
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



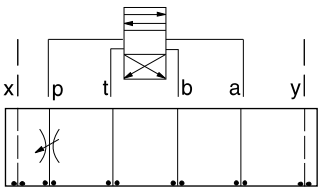
FUNCTION

Meter-In P

Flow Control Valves



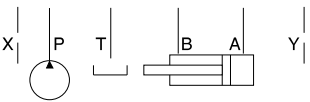
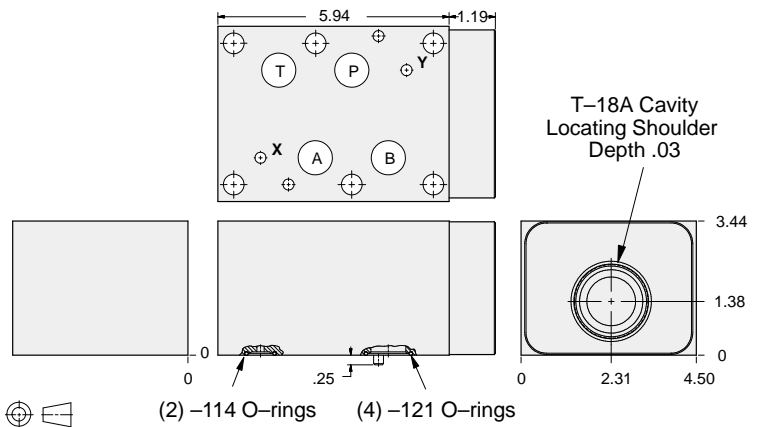
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBP		IBP/S	



FUNCTION

Meter-In P
(High Capacity)

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBO		IBO/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

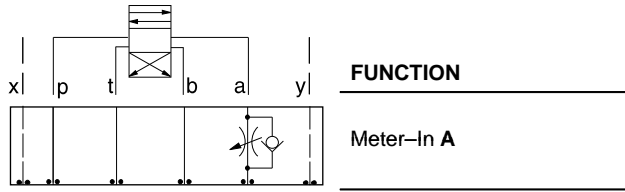
	Fully Adjustable Needle Valve		
	NF*C Page 5.13		
	Fixed Orifice, Pressure-Compensated Flow Control		
	FX*A Page 5.21		
OTHER VALVES:			



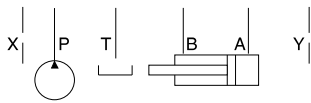
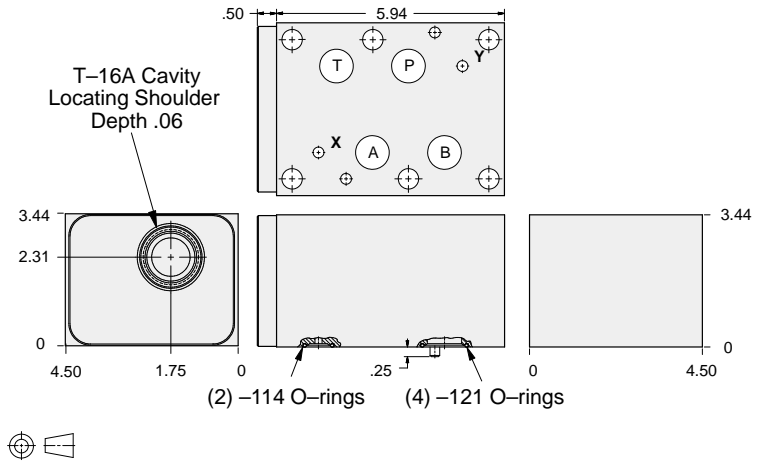
ISO 08 SANDWICH BODIES



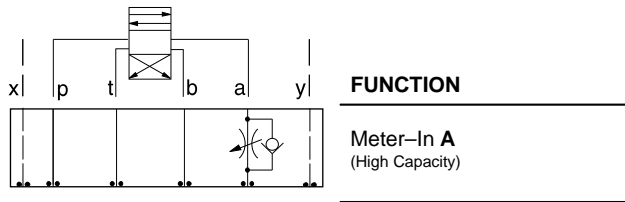
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



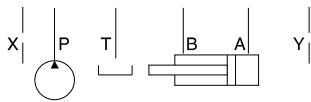
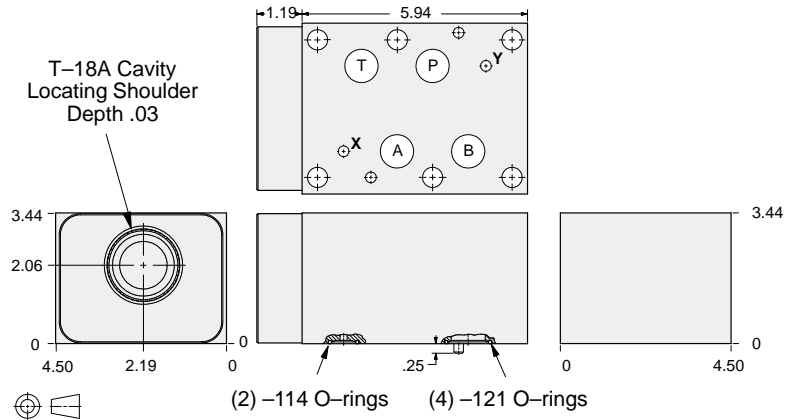
Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBC		IBC/S	



Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBG		IBG/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

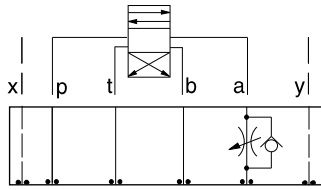
	Fully Adjustable Needle Valve NF*C Page 5.13		Fixed Orifice, Pressure-Compensated Flow Control FX*A Page 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check NC*B Page 5.17		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check FC*B Page 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow NC*C Page 5.19		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check FD*A Page 5.25
OTHER VALVES:	CN*C		



ISO 08 SANDWICH BODIES



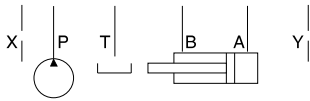
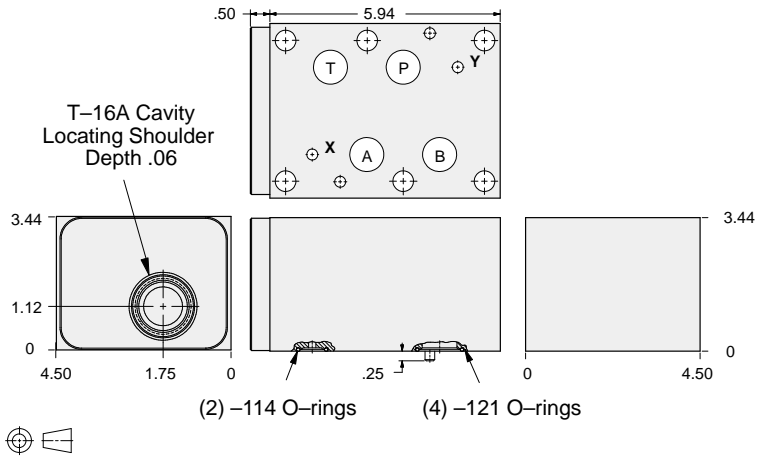
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



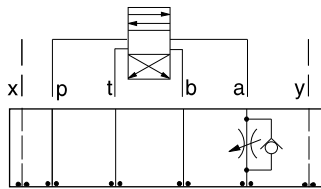
FUNCTION

Meter-Out A

Flow Control Valves



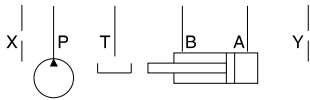
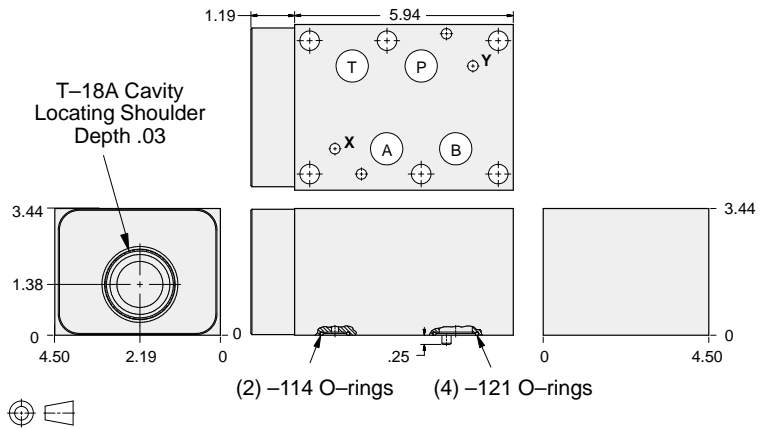
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBA		IBA/S	



FUNCTION

Meter-Out A
(High Capacity)

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBE		IBE/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Fully Adjustable Needle Valve NF*C Page 5.13		Fixed Orifice, Pressure-Compensated Flow Control FX*A Page 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check NC*B Page 5.17		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check FC*B Page 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow NC*C Page 5.19		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check FD*A Page 5.25
OTHER VALVES:	CN*C		

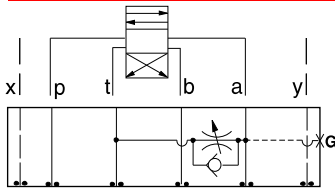
08 FLOW CONTROL



ISO 08 SANDWICH BODIES



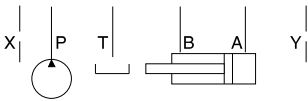
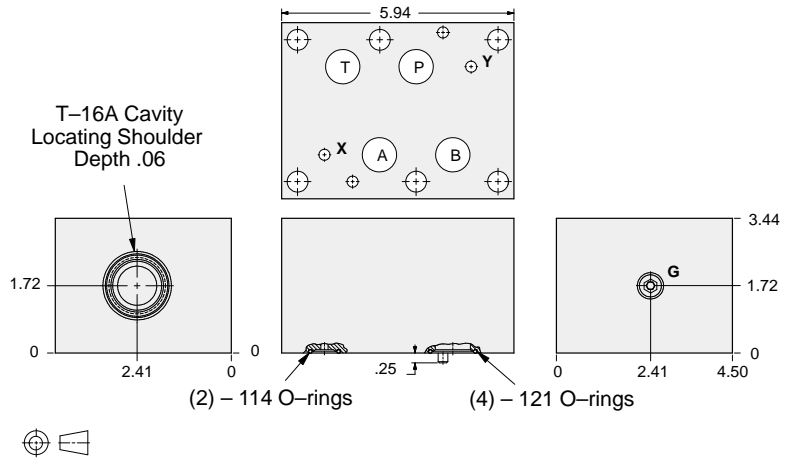
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

Bleed-Off
A to T

Flow Control Valves



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CDC		CDC/S	
.25 BSPP	CDC/M		CDC/T	

08 FLOW CONTROL

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Fully Adjustable Needle Valve NFEC Page 5.13		Fixed Orifice, Pressure-Compensated Flow Control FXEA Page 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check NCFB Page 5.17		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check FCEB Page 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow NCFC Page 5.19		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check FDEA Page 5.25
OTHER VALVES:	CNGC		

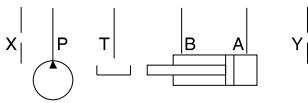
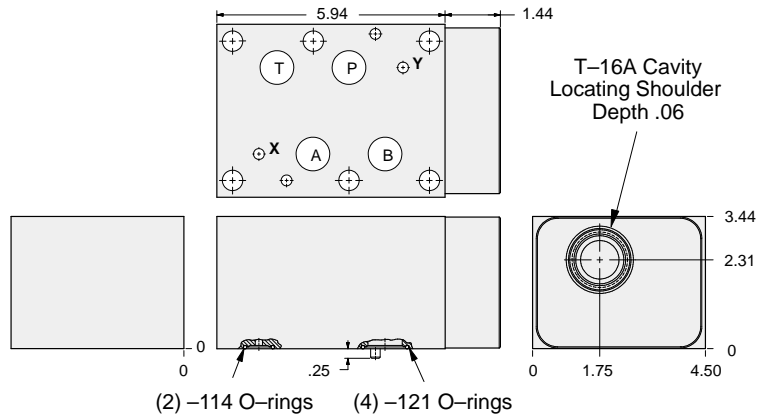
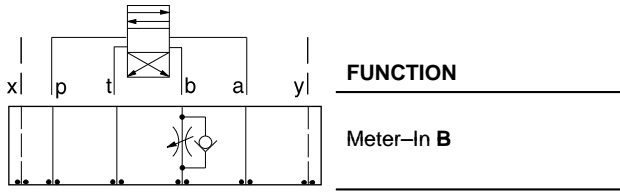


ISO 08 SANDWICH BODIES



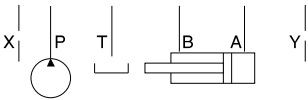
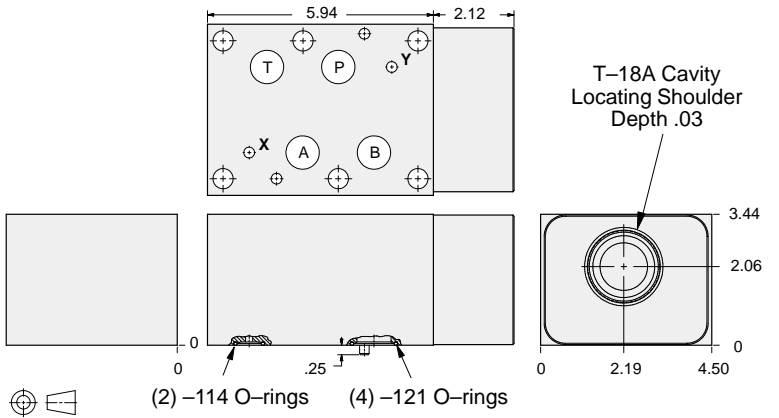
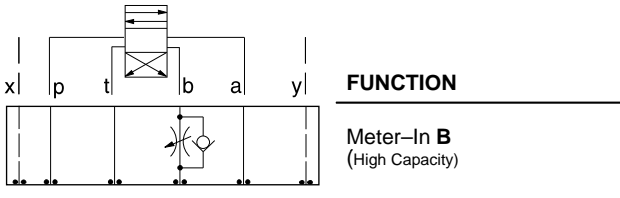
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBD		IBD/S	

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBH		IBH/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NF*C Page 5.13		FX*A Page 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*B Page 5.17		FC*B Page 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*C Page 5.19		FD*A Page 5.25
OTHER VALVES:	CN*C		

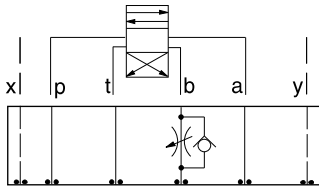
08 FLOW CONTROL



ISO 08 SANDWICH BODIES



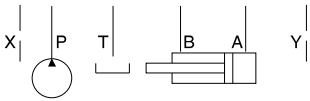
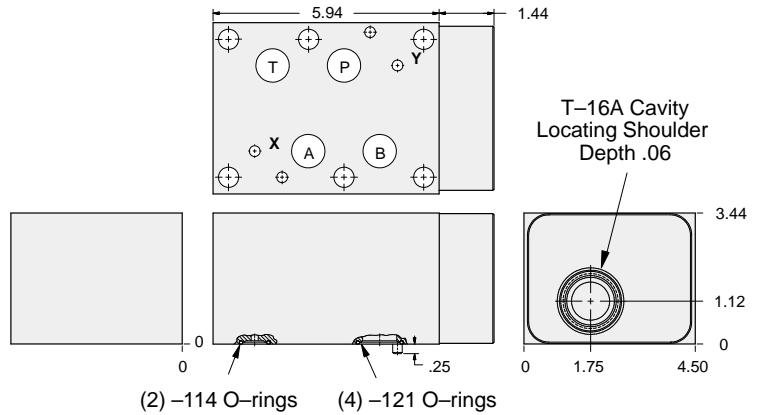
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



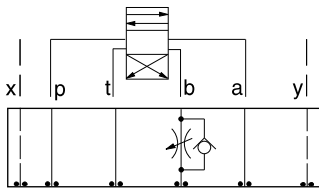
FUNCTION

Meter-Out B

Flow Control Valves



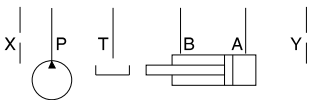
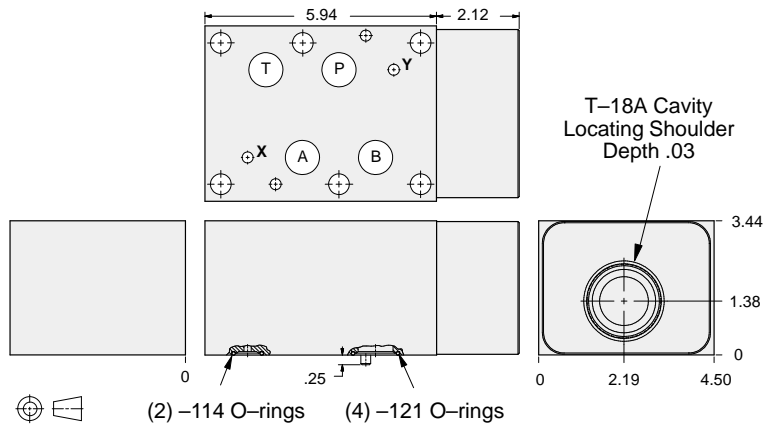
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBB		IBB/S	



FUNCTION

Meter-Out B
(High Capacity)

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBF		IBF/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NF*C Page 5.13		FX*A Page 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*B Page 5.17		FC*B Page 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*C Page 5.19		FD*A Page 5.25
OTHER VALVES:	CN*C		

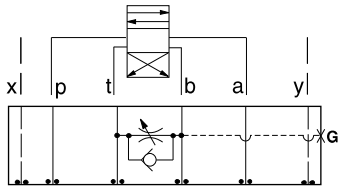


ISO 08 SANDWICH BODIES



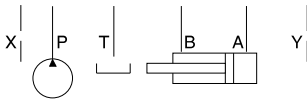
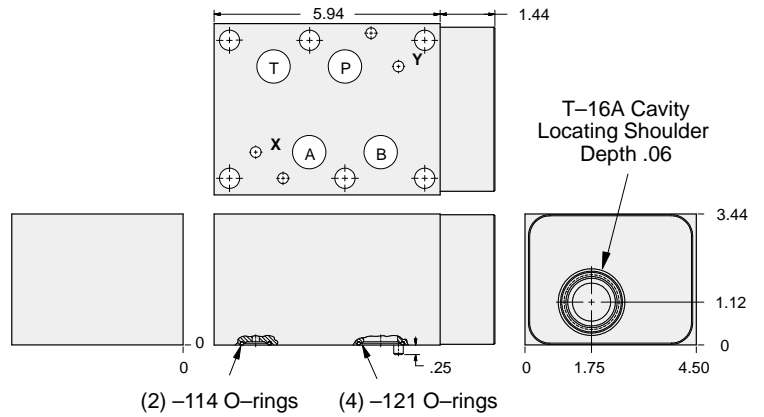
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Flow Control Valves



FUNCTION

Meter-Out B



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CDD		CDD/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	<i>Fully Adjustable Needle Valve</i>		<i>Fixed Orifice, Pressure-Compensated Flow Control</i>
	NF*C Page 5.13		FX*A Page 5.21
	<i>Fully Adjustable Needle Valve with Reverse Free Flow Check</i>		<i>Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check</i>
	NC*B Page 5.17		FC*B Page 5.23
	<i>Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow</i>		<i>Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check</i>
	NC*C Page 5.19		FD*A Page 5.25
OTHER VALVES:	CN*C		

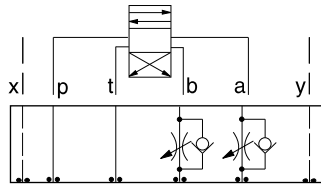
08 FLOW CONTROL



ISO 08 SANDWICH BODIES



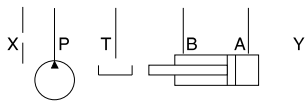
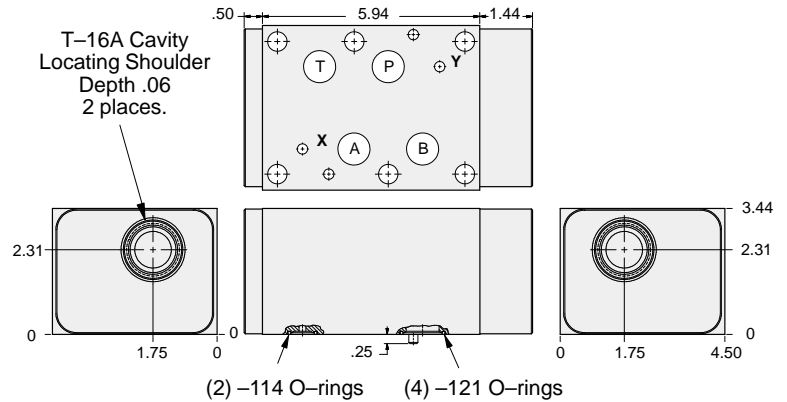
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



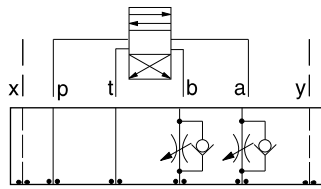
FUNCTION

Meter-In
A and B

Flow Control Valves



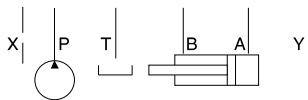
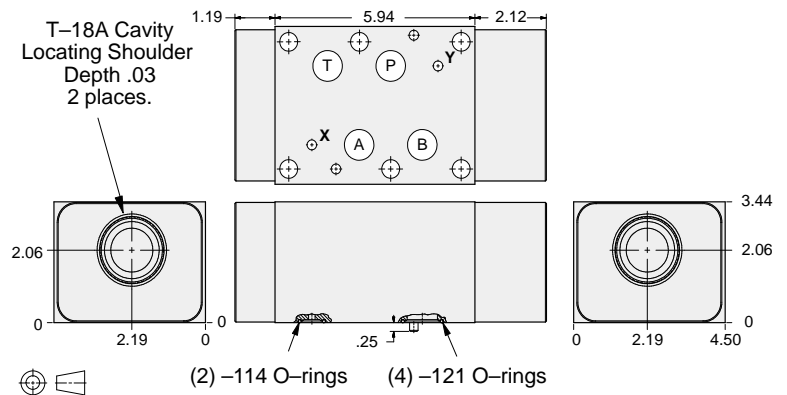
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBX		IBX/S	



FUNCTION

Meter-In
A and B
(High Capacity)

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBZ		IBZ/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

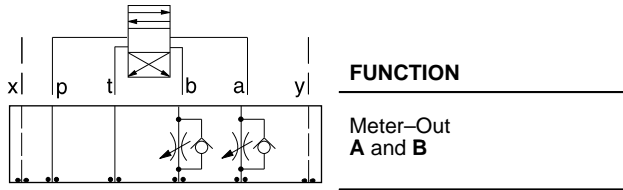
	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NF*C Page 5.13		FX*A Page 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*B Page 5.17		FC*B Page 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*C Page 5.19		FD*A Page 5.25
OTHER VALVES:	CN*C		



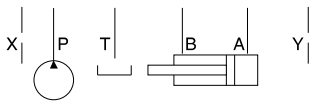
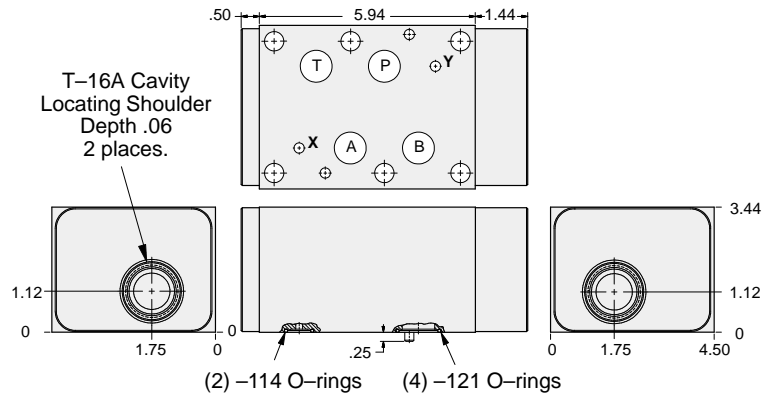
ISO 08 SANDWICH BODIES



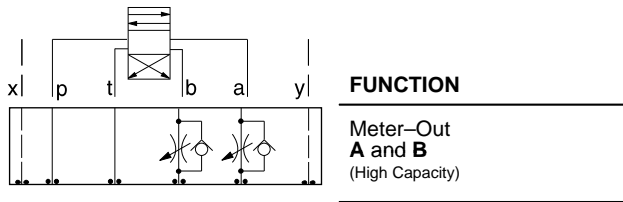
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



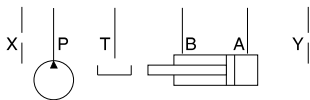
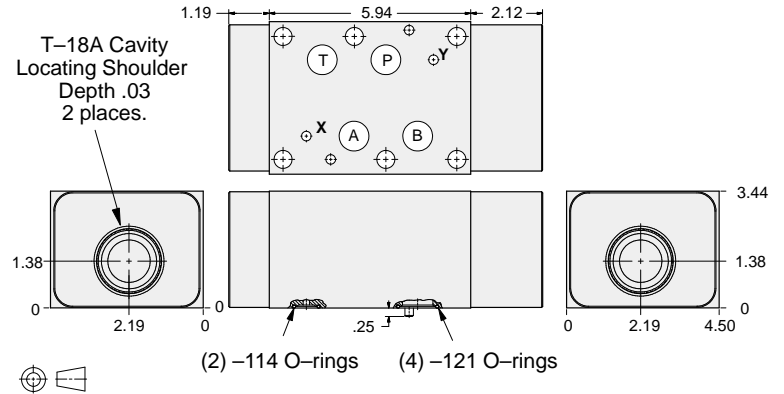
Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBW		IBW/S	



Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBY		IBY/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NF*C Page 5.13		FX*A Page 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*B Page 5.17		FC*B Page 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*C Page 5.19		FD*A Page 5.25
OTHER VALVES:	CN*C		

08 FLOW CONTROL

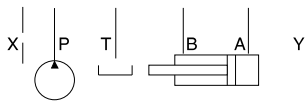
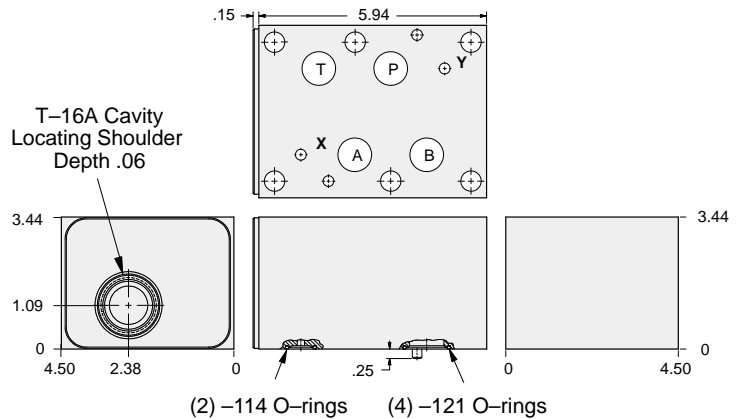
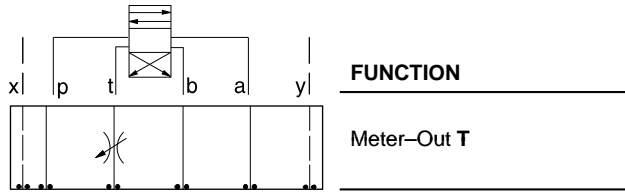


ISO 08 SANDWICH BODIES



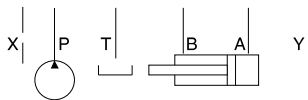
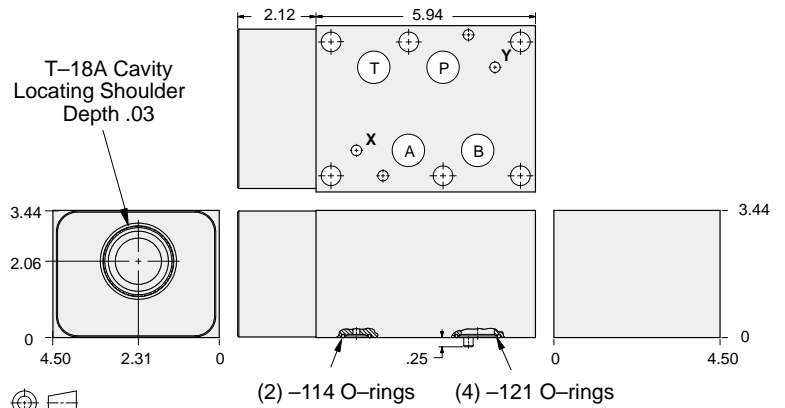
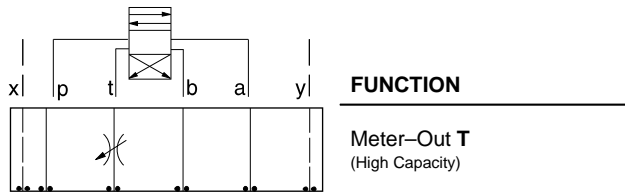
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBT		IBT/S	

Flow Control Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBV		IBV/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

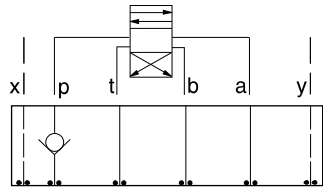
	Fully Adjustable Needle Valve		Fixed Orifice, Pressure-Compensated Flow Control
	NF*C Page 5.13		FX*A Page 5.21
	Fully Adjustable Needle Valve with Reverse Free Flow Check		Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*B Page 5.17		FC*B Page 5.23
	Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow		Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check
	NC*C Page 5.19		FD*A Page 5.25
OTHER VALVES:	CN*C		



ISO 08 SANDWICH BODIES



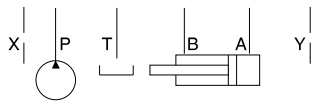
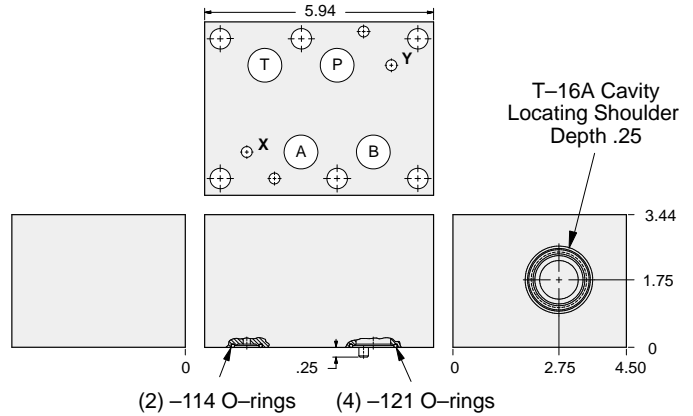
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



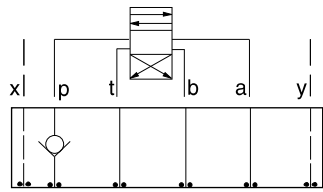
FUNCTION

On P

Check Valves



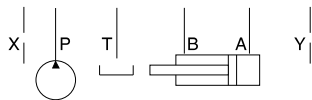
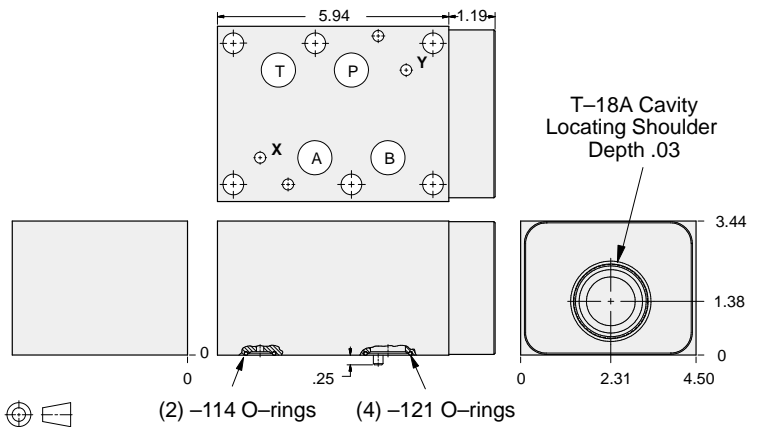
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBP		IBP/S	



FUNCTION

On P
(High Capacity)

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBO		IBO/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CX*A Page 5.09		
OTHER VALVES:			

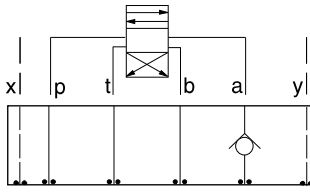
08 CHECK



ISO 08 SANDWICH BODIES



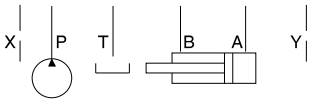
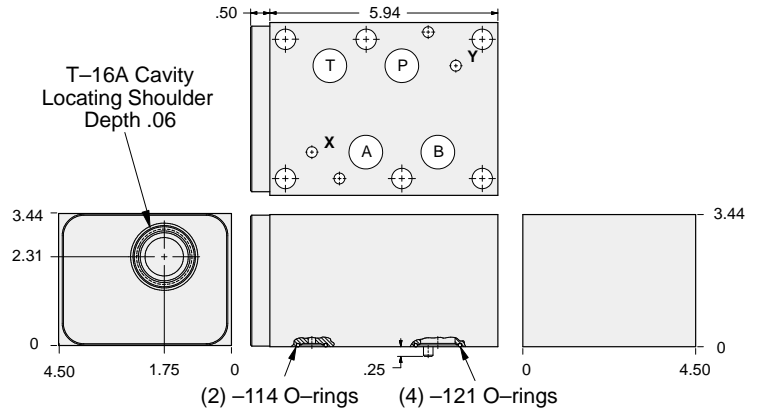
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



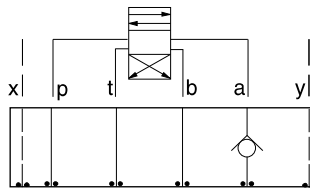
FUNCTION

On A
Free Flow Out
of Valve

Check Valves



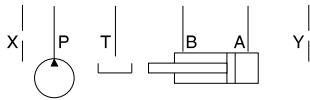
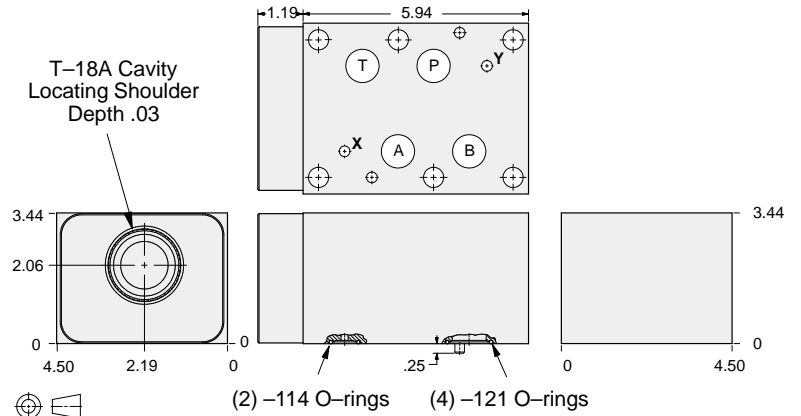
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBC		IBC/S	



FUNCTION

On A
Free Flow Out
of Valve (High Capacity)

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBG		IBG/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CX*A Page 5.09		
OTHER VALVES:			

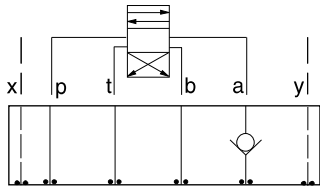
08 CHECK



ISO 08 SANDWICH BODIES



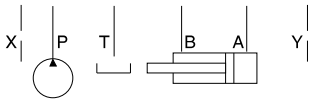
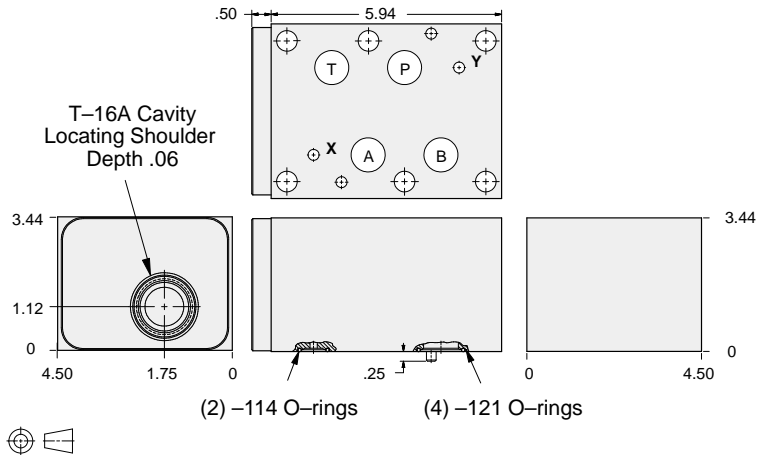
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



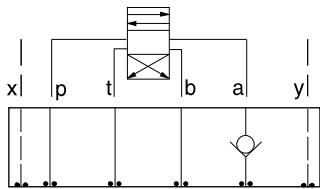
FUNCTION

On A
Free Flow Into Valve

Check Valves



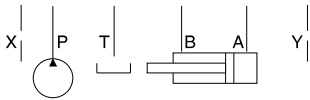
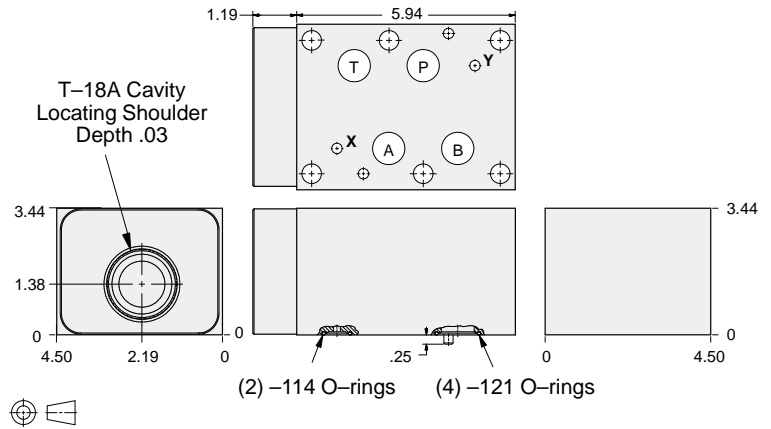
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBA		IBA/S	



FUNCTION

On A
Free Flow Into Valve
(High Capacity)

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBE		IBE/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CX*A Page 5.09		
OTHER VALVES:			

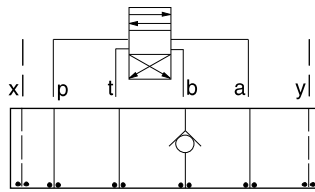
08 CHECK



ISO 08 SANDWICH BODIES



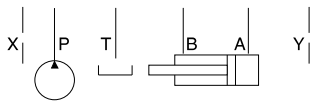
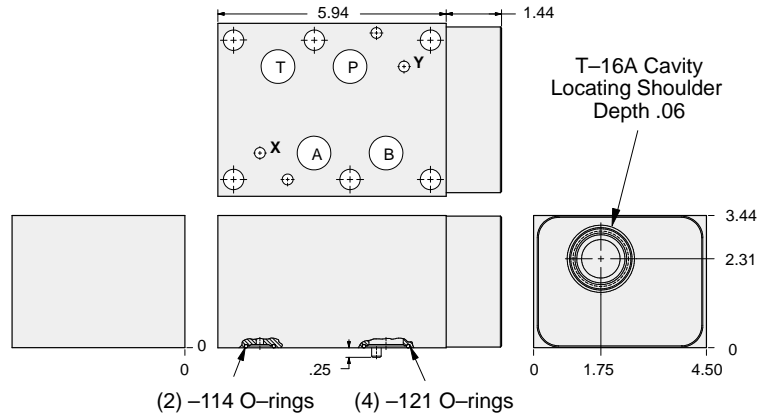
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



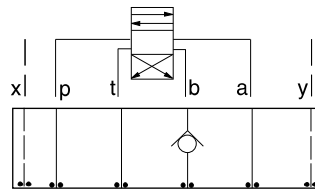
FUNCTION

On B
Free Flow Out
of Valve

Check Valves



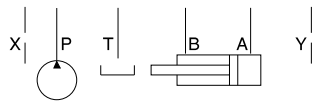
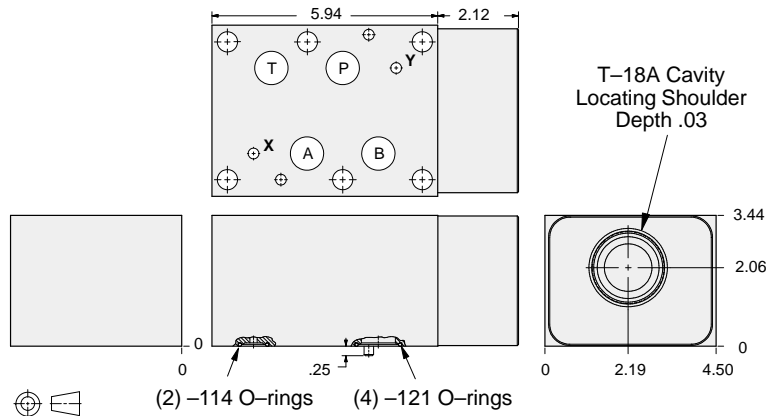
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBD		IBD/S	



FUNCTION

On B
Free Flow Out
of Valve (High Capacity)

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBH		IBH/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

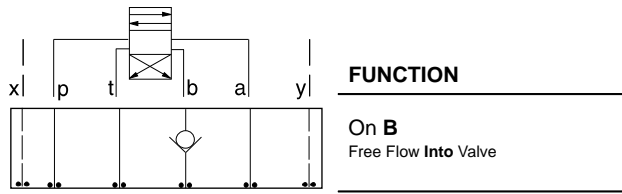
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CX*A Page 5.09		
OTHER VALVES:			



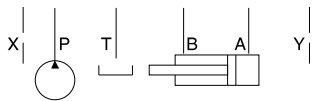
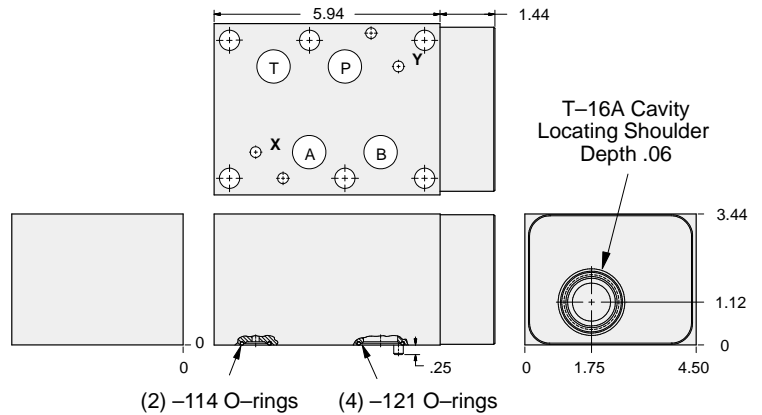
ISO 08 SANDWICH BODIES



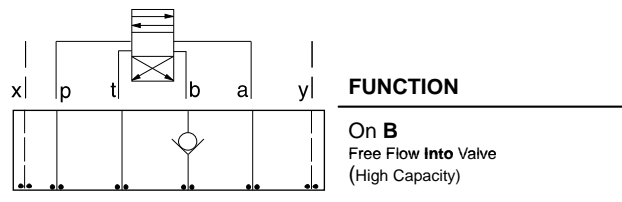
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



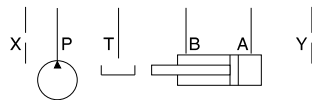
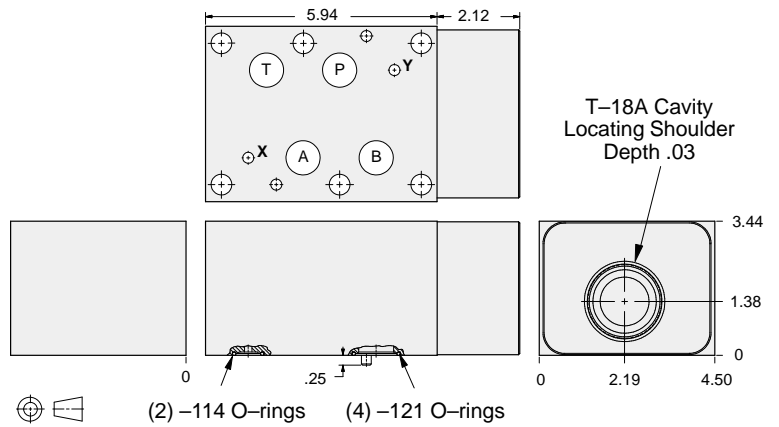
Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBB		IBB/S	



Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBF		IBF/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CX*A Page 5.09		
OTHER VALVES:			

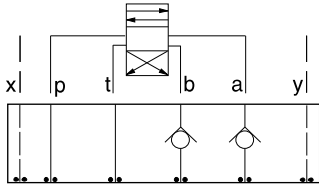
08 CHECK



ISO 08 SANDWICH BODIES



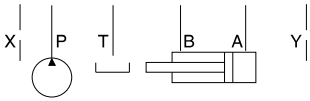
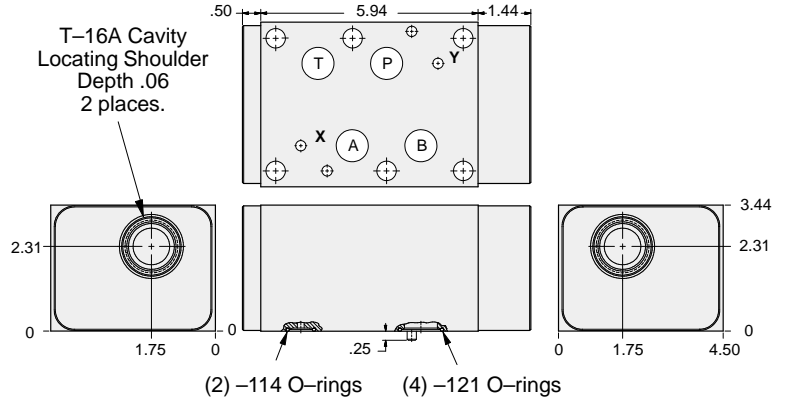
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



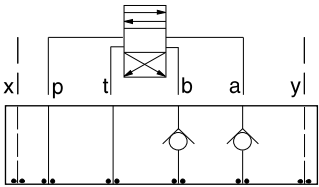
FUNCTION

On **A** and **B**
Free Flow Out
of Valve

Check Valves



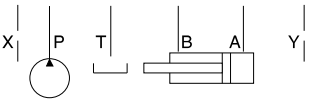
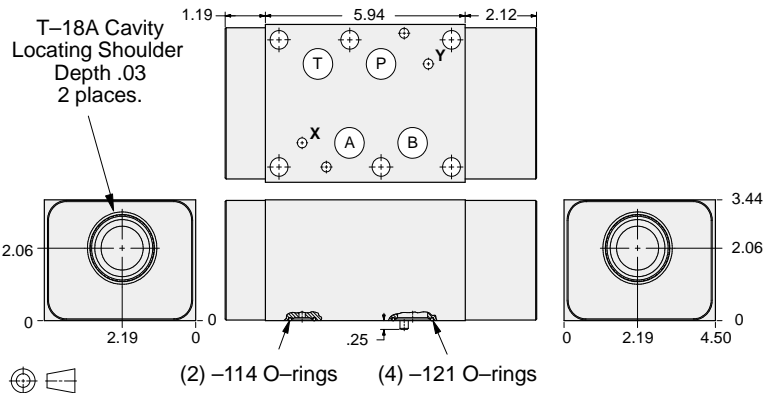
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBX		IBX/S	



FUNCTION

On **A** and **B**
Free Flow Out
of Valve (High Capacity)

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBZ		IBZ/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CX*A Page 5.09		
OTHER VALVES:			

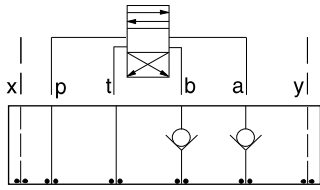
08 CHECK



ISO 08 SANDWICH BODIES



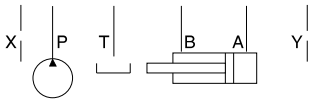
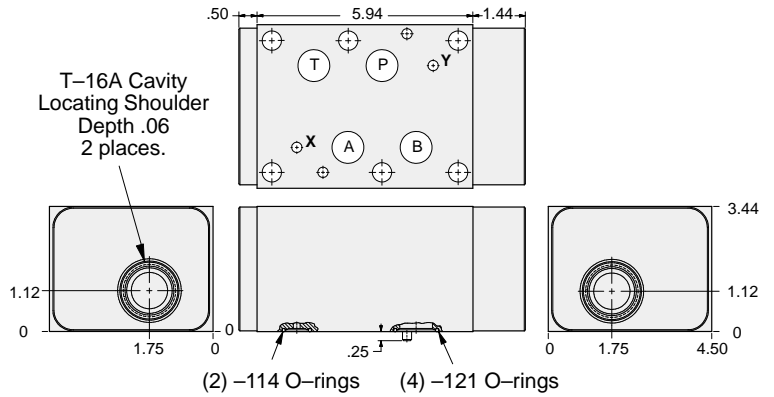
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



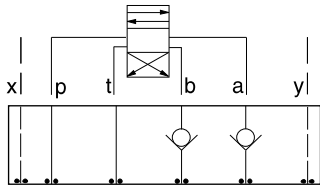
FUNCTION

On **A** and **B**
Free Flow Into Valve

Check Valves



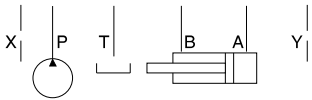
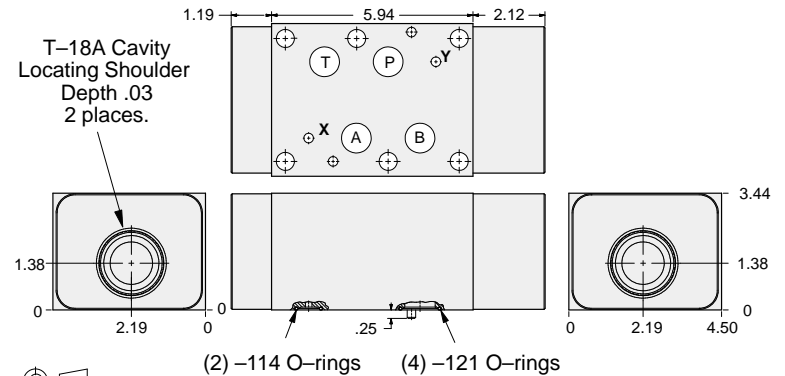
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBW		IBW/S	



FUNCTION

On **A**
Free Flow Into Valve
(High Capacity)

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBY		IBY/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CX*A Page 5.09		
OTHER VALVES:			

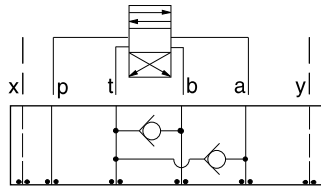
08 CHECK



ISO 08 SANDWICH BODIES



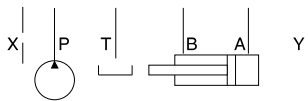
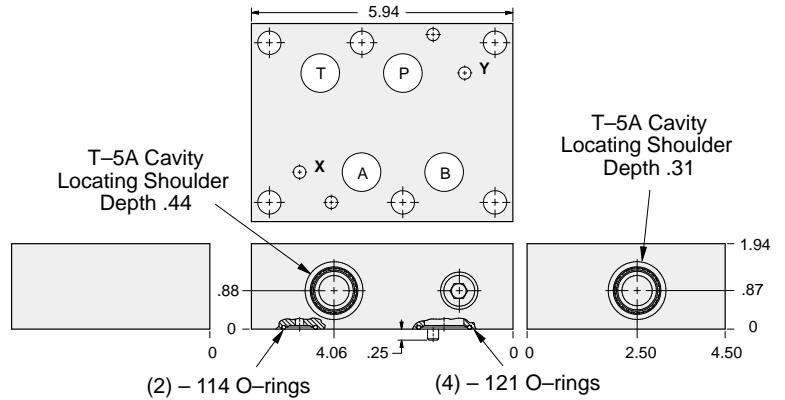
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



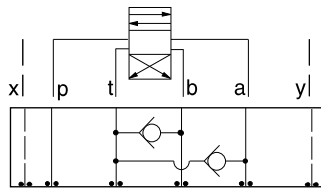
FUNCTION

T to A and B

Check Valves



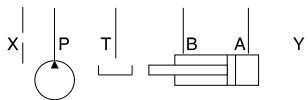
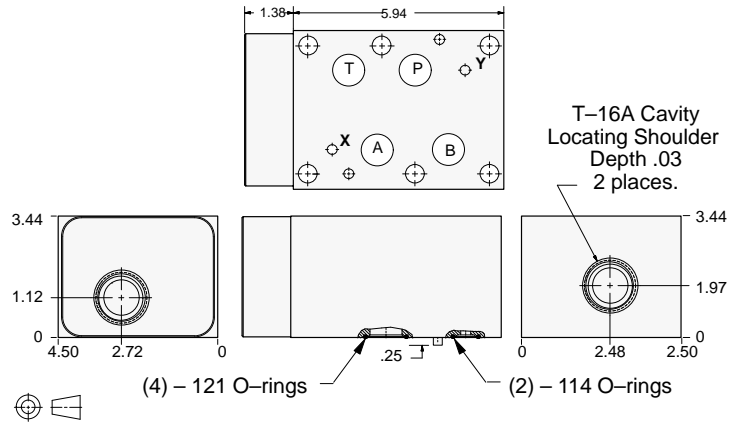
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CDX		CDX/S	



FUNCTION

T to A and B
(High Capacity)

Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
CDV		CDV/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CX*A Page 5.08, 5.09		
OTHER VALVES:			

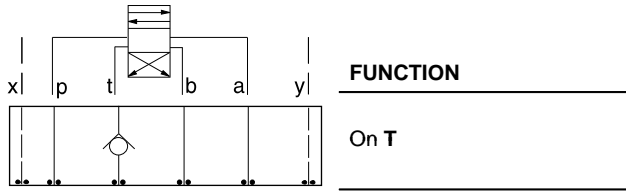
08 CHECK



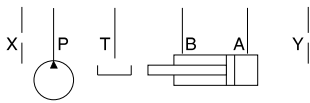
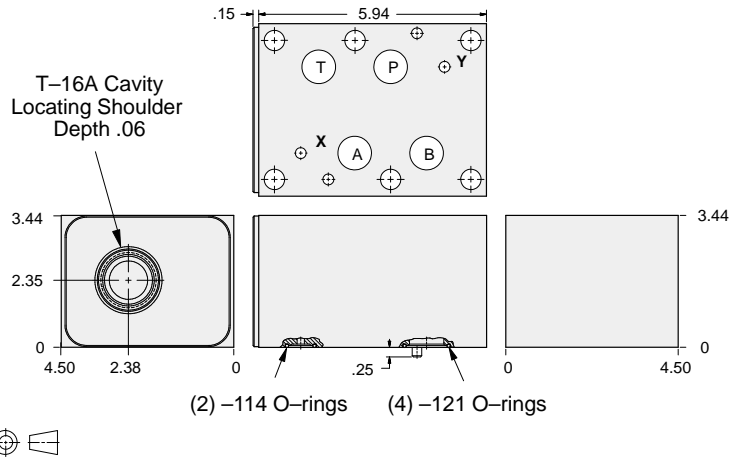
ISO 08 SANDWICH BODIES



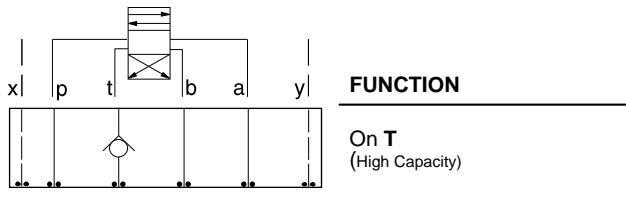
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



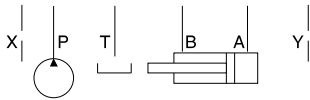
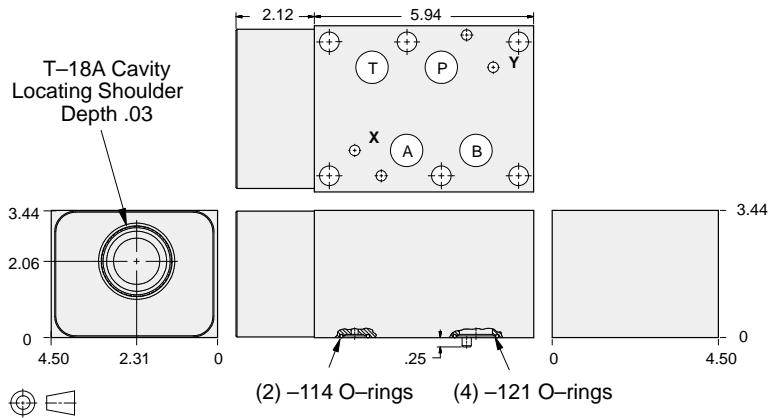
Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBT		IBT/S	



Check Valves



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBV		IBV/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side)		
	CX*A Page 5.09		
OTHER VALVES:			

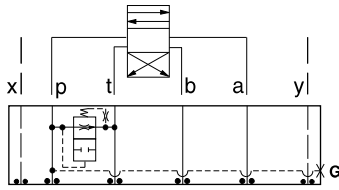
08 CHECK



ISO 08 SANDWICH BODIES



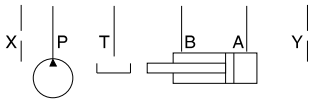
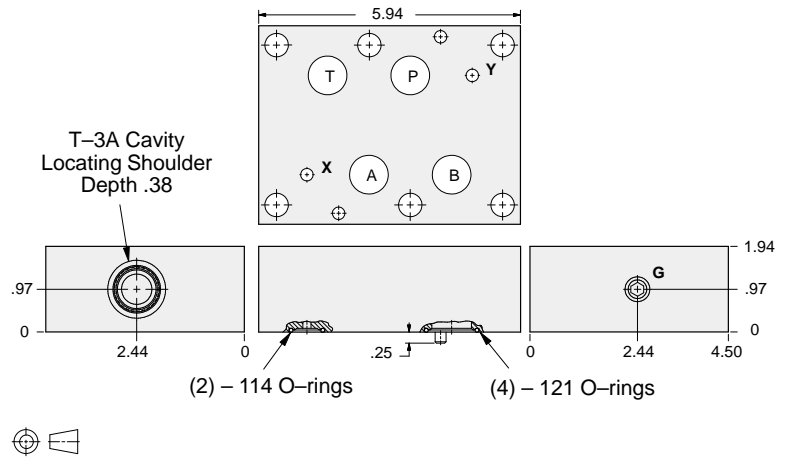
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



FUNCTION

Air-Bleed and Start-Up

Circuit Savers



Gage Port (Plugged)	ALUMINUM		DUCTILE IRON	
	Model Code	List Price	Model Code	List Price
.25 NPTF	CDP		CDP/S	
.25 BSPP	CDP/M		CDP/T	

08 CIRCUIT SAVER

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
	Air Bleed and Start-up Valve		
	NQEB Page 10.16		

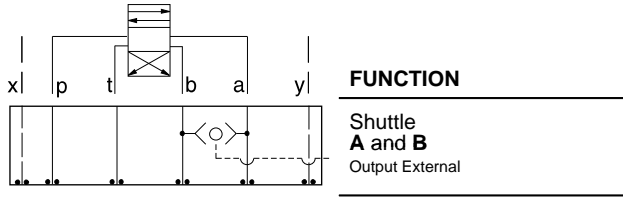
OTHER VALVES:



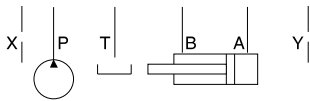
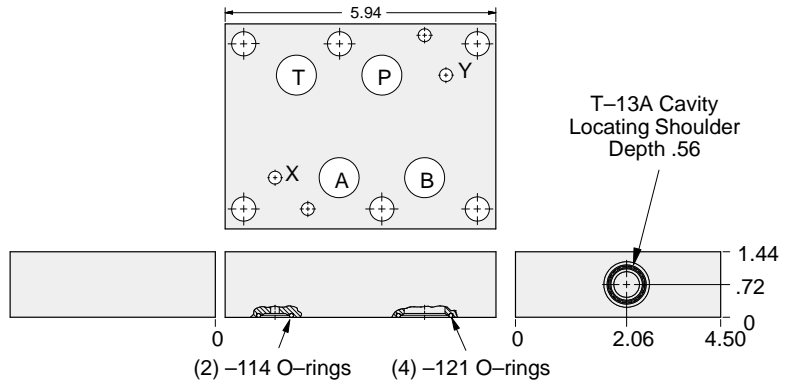
ISO 08 SANDWICH BODIES



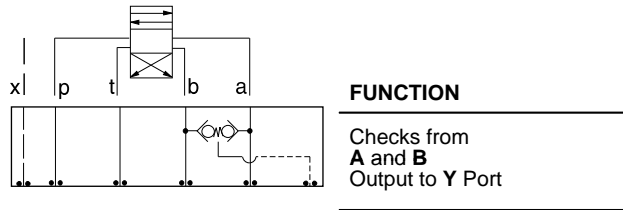
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



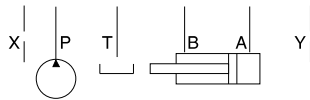
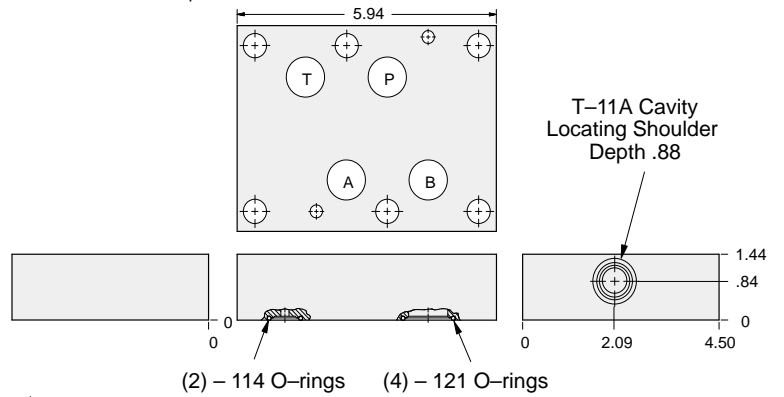
Circuit Savers



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
IBS		IBS/S	



Circuit Savers



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
HBS		HBS/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE			
<p>1-2 Ext.</p>	2 Port Shuttle Valve, Signal External		
	CSAA Page 10.09, (use with IBS)		
<p>1-3 2</p>	3 Port Back-to-Back Check Valve, Signal at Port 3		
	CDAB Page 10.10 (use with HBS)		
OTHER VALVES:			

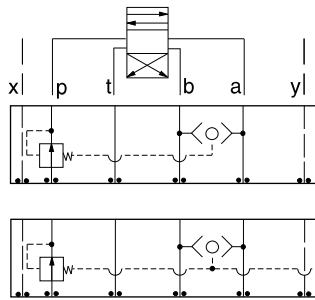
08 CIRCUIT SAVER



ISO 08 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

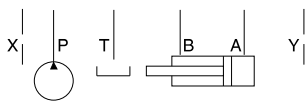
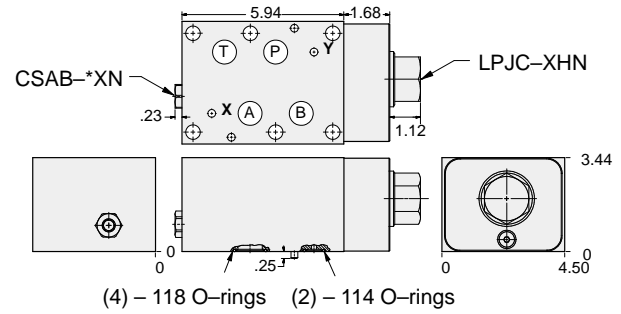


FUNCTION

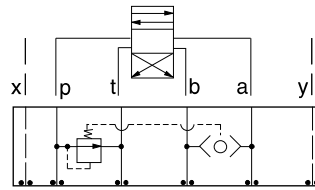
Pressure Compensator (Restrictive)

Pressure Compensator (Restrictive) w/Load-Sensing Port

Circuit Savers



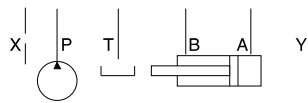
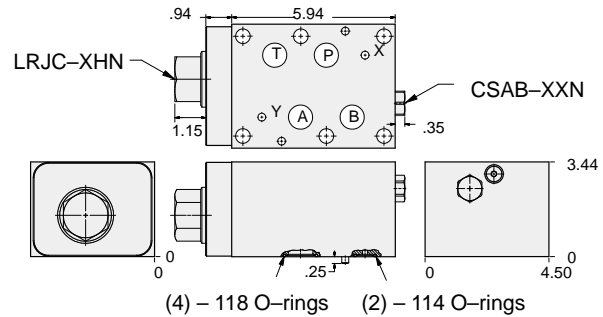
Shuttle Cartridge	External Shuttle Port	ALUMINUM		DUCTILE IRON	
		Model Code	List Price	Model Code	List Price
CSAB-XXN	None	YFIA-XHN-CA		YFIA-XHN-CA/S	
CSAB-AXN	SAE-4	YFIB-XHN-CA		YFIB-XHN-CA/S	
CSAB-BXN	.25 BSPP	YFIB-XHN-CA/M		YFIB-XHN-CA/T	



FUNCTION

Pressure Compensator (Bypass)

Circuit Savers



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YFIC-XHN-CA		YFIC-XHN-CA/S	

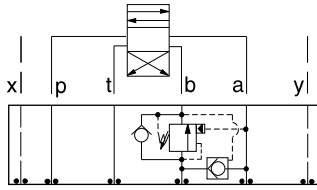


ISO 08 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

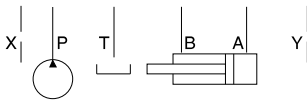
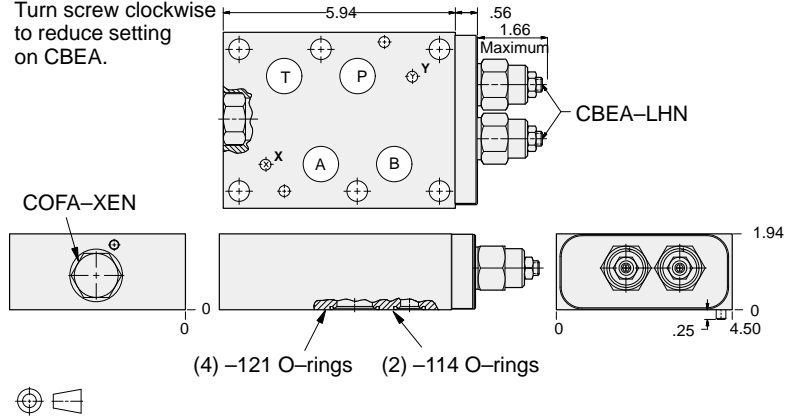
Circuit Savers



FUNCTION

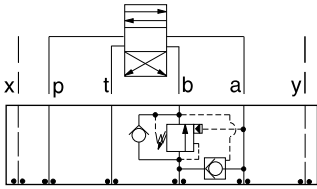
B to A
Regenerative

Turn screw clockwise to reduce setting on CBEA.



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YDFF-LHN-CA		YDFF-LHN-CA/S	

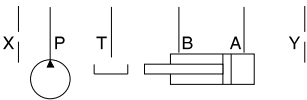
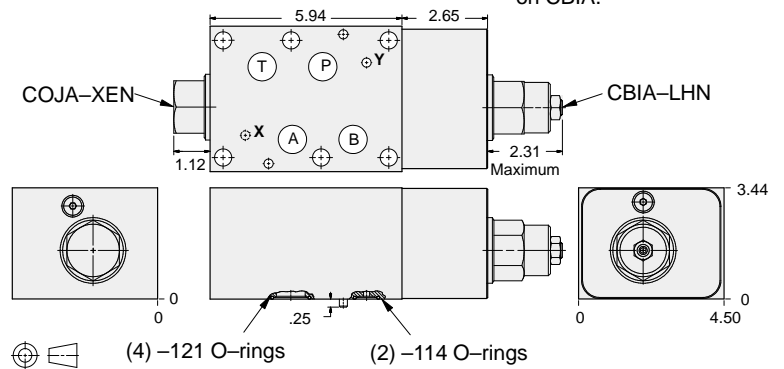
Circuit Savers



FUNCTION

B to A
Regenerative
(High Capacity)

Turn screw clockwise to reduce setting on CBIA.



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YDGF-LHN-CA		YDGF-LHN-CA/S	

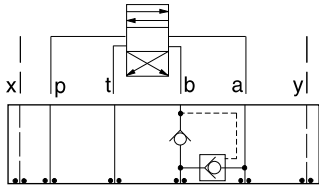
08 CIRCUIT SAVER



ISO 08 SANDWICH BODIES



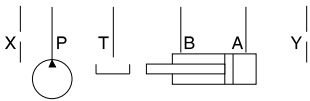
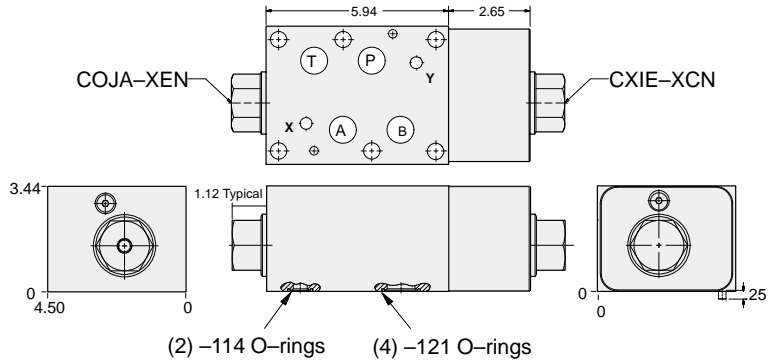
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



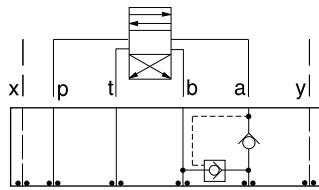
FUNCTION

B to A
Regenerative
(Full Time)

Circuit Savers



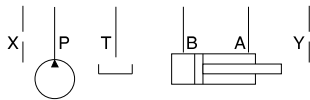
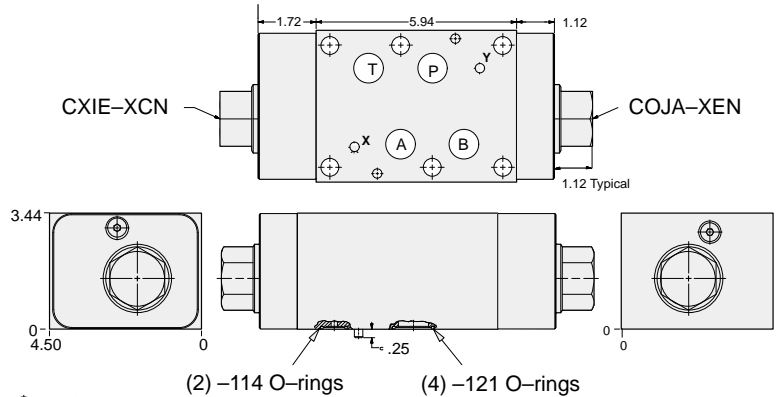
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YDGH-XCN-CA		YDGH-XCN-CA/S	



FUNCTION

A to B
Regenerative
(Full Time)

Circuit Savers



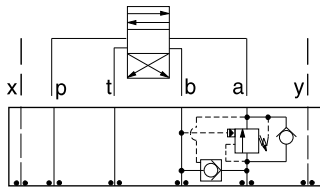
ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YDGI-XCN-CA		YDGI-XCN-CA/S	



ISO 08 SANDWICH BODIES



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

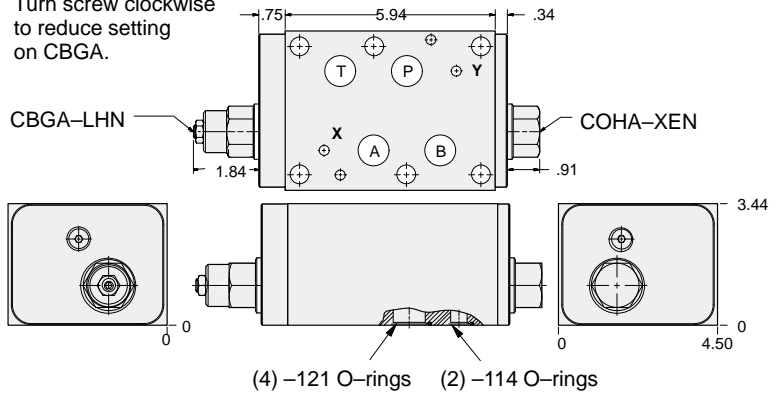


FUNCTION

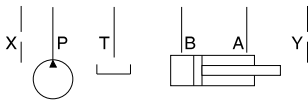
A to B
Regenerative

Circuit Savers

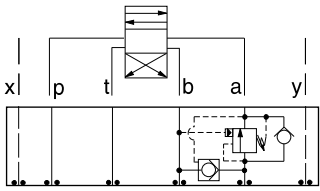
Turn screw clockwise to reduce setting on CBGA.



(4) -121 O-rings (2) -114 O-rings



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YDFJ-LHN-CA		YDFJ-LHN-CA/S	

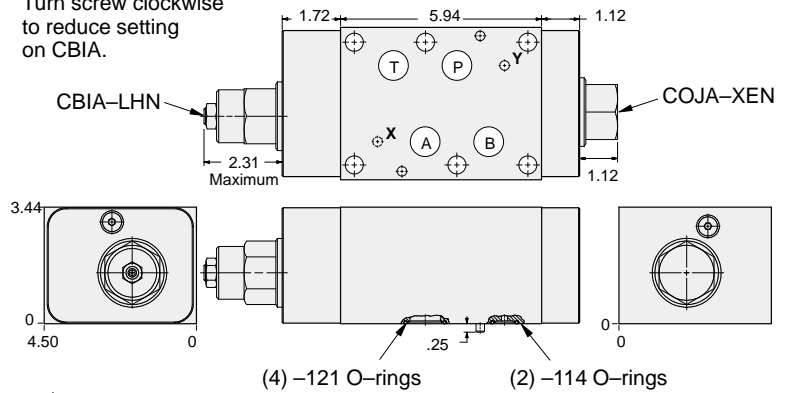


FUNCTION

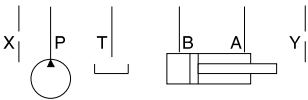
A to B
Regenerative
(High Capacity)

Circuit Savers

Turn screw clockwise to reduce setting on CBIA.



(4) -121 O-rings (2) -114 O-rings



ALUMINUM		DUCTILE IRON	
Model Code	List Price	Model Code	List Price
YDGE-LHN-CA		YDGE-LHN-CA/S	

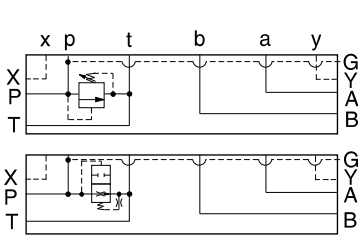


ISO 08 SANDWICH BODIES

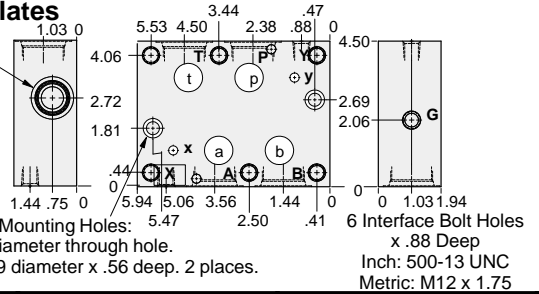


- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Side Ported Subplates

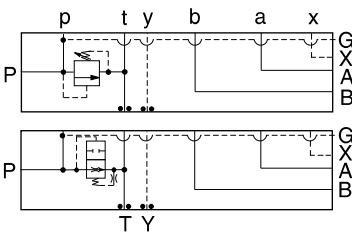


T-3A Cavity
Locating Shoulder
Depth .48

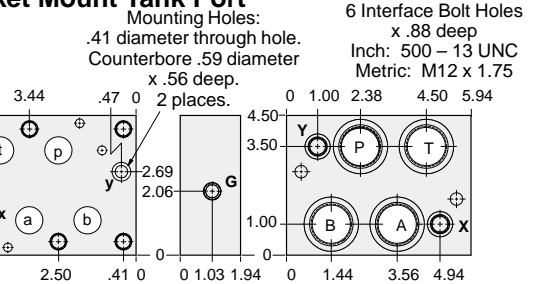


Bolt Hole Interface	Port P,T,A,B	Port X,Y	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
Inch	1.00 NPTF	.25 NPTF	.25 NPTF	CSE		CSE/S	
Inch	SAE-16	SAE-6	.25 NPTF	CSM		CSM/S	
Metric	1.00 BSPP	.25 BSPP	.25 BSPP	CSX		CSX/S	

Side Ported Subplates with Gasket Mount Tank Port

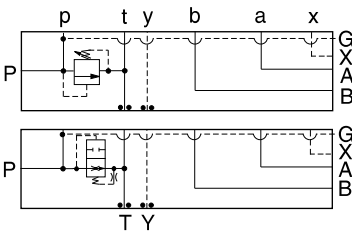


T-3A Cavity
Locating Shoulder
Depth .48

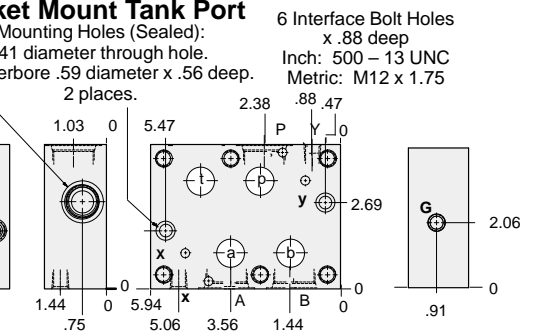


Bolt Hole Interface	Port P,T,A,B	Port X,Y	Gage Port	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
Inch	1.00 NPTF	.25 NPTF	.25 NPTF	CRE		CRE/S	
Inch	SAE-16	SAE-6	.25 NPTF	CRM		CRM/S	
Metric	1.00 BSPP	.25 BSPP	.25 BSPP	CRX		CRX/S	

Side Ported Subplates with Gasket Mount Tank Port



T-3A Cavity
Locating Shoulder
Depth .48



Bolt Hole Interface	Ports A, B, P	Port T	Port X, Y	Gage Port	ALUMINUM		DUCTILE IRON	
					Model Code	List Price	Model Code	List Price
Inch	1.00 NPTF	1.00 NPTF	.25 NPTF	.25 NPTF	CTE		CTE/S	
Inch	SAE-16	1.00 NPTF	SAE-6	.25 NPTF	CTM		CTM/S	
Metric	1.00 BSPP	1.00 BSPP	.25 BSPP	.25 BSPP	CTS		CTS/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Direct Acting Relief Valve
	RPGC Page 1.06		RDFA Page 1.10
	Pilot Operated, Rapid Response Relief Valve		Air Bleed and Start-up Valve
	RPGE Page 1.08		NQEB Page 10.16

OTHER VALVES:

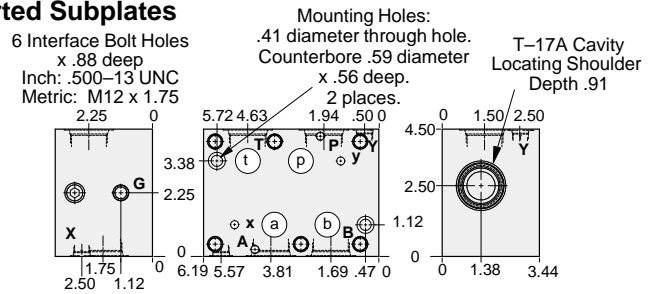
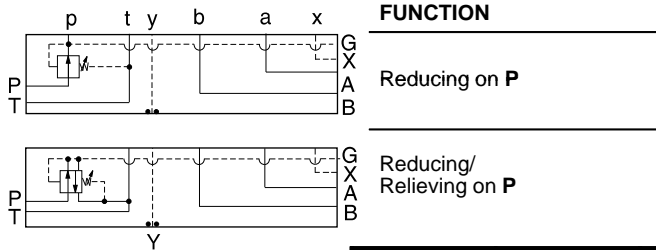


ISO 08 SANDWICH BODIES



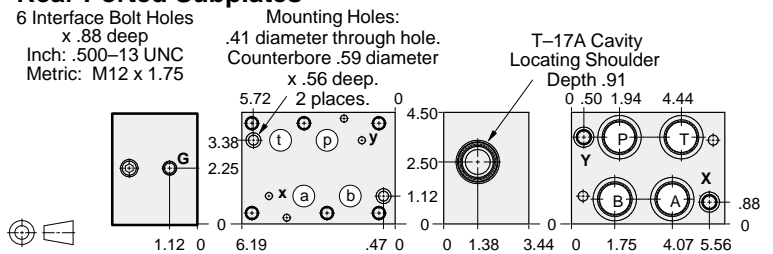
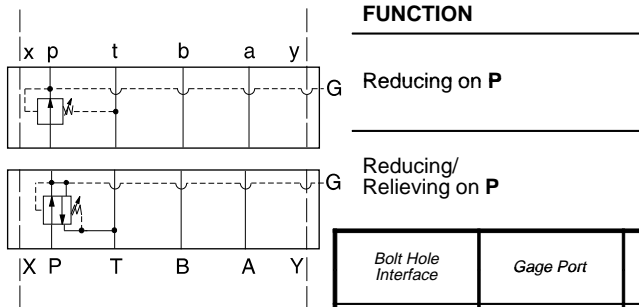
- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Side Ported Subplates



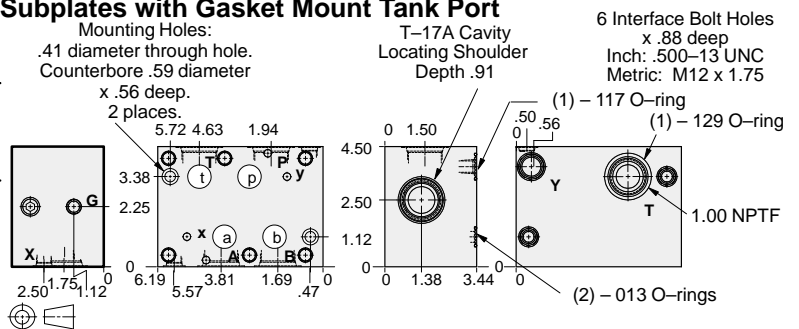
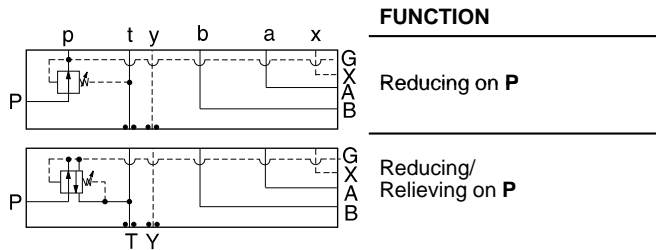
Bolt Hole Interface	Gage Port	Ports A,B,P,T	Ports X,Y	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	1.00 NPTF	.25 NPTF	HSE		HSE/S	
Inch	.25 NPTF	SAE-16	SAE-6	HSM		HSM/S	
Metric	.25 BSPP	1.00 BSPP	.25 BSPP	HSX		HSX/S	

Rear Ported Subplates



Bolt Hole Interface	Gage Port	Ports A,B,P,T	Ports X,Y	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	1.00 NPTF	.25 NPTF	HRE		HRM/S	
Inch	.25 NPTF	SAE-16	SAE-6	HRM		HRM/S	
Metric	.25 BSPP	1.00 BSPP	.25 BSPP	HRX		HRX/S	

Side Ported Subplates with Gasket Mount Tank Port



Bolt Hole Interface	Gage Port	Ports A,B,P	Ports X, Y	ALUMINUM		DUCTILE IRON	
				Model Code	List Price	Model Code	List Price
Inch	.25 NPTF	1.00 NPTF	.25 NPTF	HTE		HTE/S	
Inch	.25 NPTF	SAE-16	SAE-6	HTM		HTM/S	
Metric	.25 BSPP	1.00 BSPP	.25 BSPP	HTX		HTX/S	

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

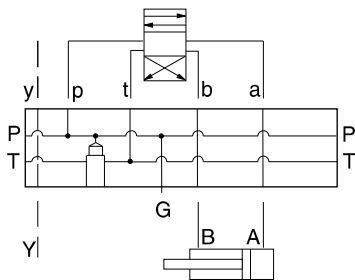
	Pilot Operated Reducing Valve PBHB Page 3.07		Pilot Operated Reducing/Relieving Valve PPHB Page 3.11
	Air Controlled, Pilot Operated Reducing Valve PBHC Page 3.09		Air Controlled, Pilot Operated Reducing/Relieving Valve PPHC Page 3.13



BAR MANIFOLDS



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

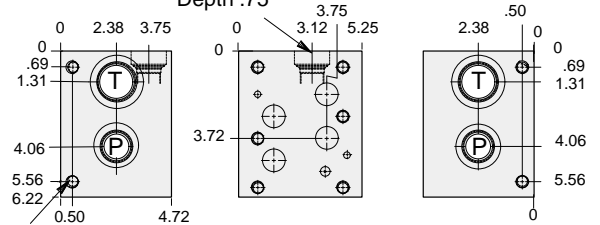


FUNCTION

One Station

ISO 08 Parallel Circuit with Relief Cavity and Y Port

T-3A Cavity
Locating Shoulder
Depth .75



Mounting Holes:
Inch: 500 – 13UNC
x .88 in. Deep.
Metric: M12 x 1.75 – 6H
x .88 in. Deep.
2 places each end



Mounting Holes	Port T	Ports A, B, P	Port Y	Gage Port	ALUMINUM		DUCTILE IRON	
					Model Code	List Price	Model Code	List Price
inch	1.25 NPTF	1.00 NPTF	.375 NPTF	.25 NPTF	VLN		VLN/S	
inch	SAE-20	SAE-16	SAE-8	SAE-4	VLT		VLT/S	
metric	1.25 BSPP	1.00 BSPP	.375 BSPP	.25 BSPP	VLX		VLX/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Direct Acting Relief Valve
	RPGC Page 1.06		RDFA Page 1.10
OTHER VALVES:			

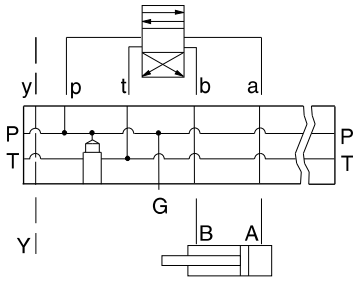


BAR MANIFOLDS



- Aluminum rated to 3000 psi and Ductile Iron rated to 5000 psi.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

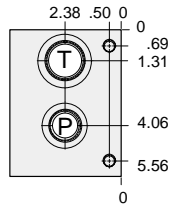
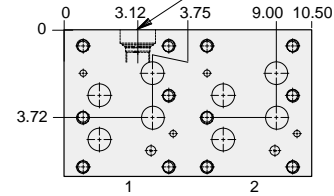
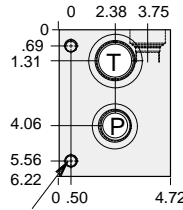
ISO 08 Parallel Circuit with Relief Cavity and Y Port



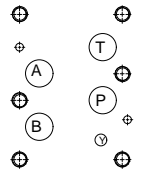
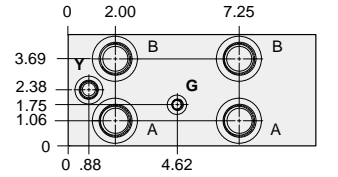
FUNCTION

Two Station

T-3A Cavity
Locating Shoulder
Depth .75



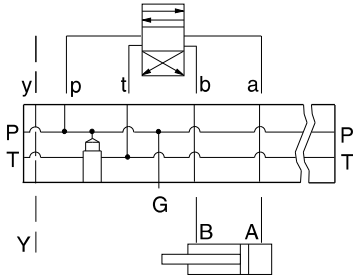
Mounting Holes:
Inch: .500 – 13UNC
x .88 in. deep
Metric: M12 x 1.75–6H
x .88 in. deep.
2 places each end



Mounting Holes	Port T	Ports A, B, P	Port Y	Gage Port	ALUMINUM		DUCTILE IRON	
					Model Code	List Price	Model Code	List Price
inch	1.25 NPTF	1.00 NPTF	.375 NPTF	.25 NPTF	VLP		VLP/S	
inch	SAE-20	SAE-16	SAE-8	SAE-4	VLV		VLV/S	
metric	1.25 BSPP	1.00 BSPP	.375 BSPP	.25 BSPP	VLY		VLY/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

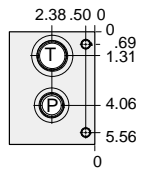
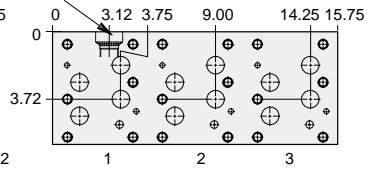
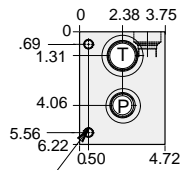
ISO 08 Parallel Circuit with Relief Cavity and Y Port



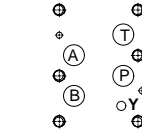
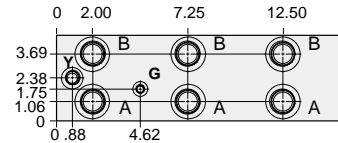
FUNCTION

Three Station

T-3A Cavity
Locating Shoulder
Depth .75



Mounting Holes:
Inch: .500 – 13UNC
x .88 in. deep
Metric: M12 x 1.75–6H
x .88 in. deep.
2 places each end



Mounting Holes	Port T	Ports A, B, P	Port Y	Gage Port	ALUMINUM		DUCTILE IRON	
					Model Code	List Price	Model Code	List Price
inch	1.25 NPTF	1.00 NPTF	.375 NPTF	.25 NPTF	VLR		VLR/S	
inch	SAE-20	SAE-16	SAE-8	SAE-4	VLW		VLW/S	
metric	1.25 BSPP	1.00 BSPP	.375 BSPP	.25 BSPP	VLZ		VLZ/S	

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

	Pilot Operated Relief Valve		Direct Acting Relief Valve
	RPGC Page 1.06		RDFA Page 1.10
OTHER VALVES:			

BAR MANIFOLDS





