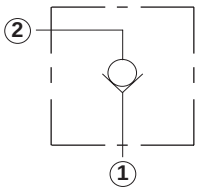
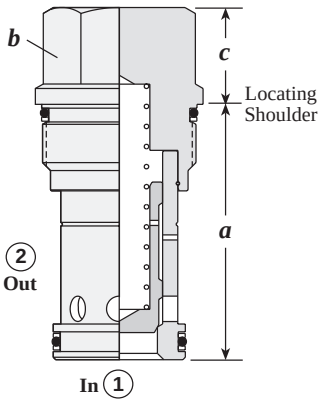
Check Valves

1 TO 2 FREE FLOW



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions a	b	c X	Installation Torque (lb. ft.)
10 GPM	CXBA – XCN	T - 162A	1.22	3/4”	.82	25/30
20 GPM	CXDA – XCN	T - 13A	1.38	7/8”	.75	30/35
40 GPM	CXFA – XCN	T - 5A	1.62	1 1/8”	.69	45/50
80 GPM	CXHA – XCN	T - 16A	2.44	1 1/4”	.97	150/160
160 GPM	CXJA – XCN	T - 18A	3.13	1 5/8”	1.19	350/375

OPTION ORDERING INFORMATION

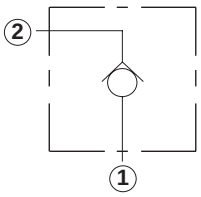


CX ★ A – ★ ★ ★

Nominal Capacity	Control**	Cracking Pressure	Seal
B 10 GPM	X Non-adjustable	A 4 psi	N Buna-N
D 20 GPM		B 15 psi	V Viton
F 40 GPM		C 30 psi	
H 80 GPM		D 50 psi	
J 160 GPM		E 75 psi	
		F 100 psi	

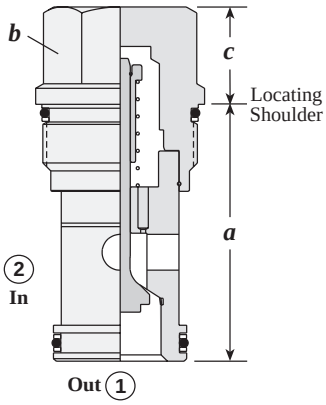
*** See page 244 for information on Control Options*

2 TO 1 FREE FLOW



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions a	b	c X	Installation Torque (lb. ft.)
7.5 GPM	CXAD – XCN	T - 162A	1.22	3/4”	.82	25/30
15 GPM	CXCD – XCN	T - 13A	1.38	7/8”	.75	30/35
30 GPM	CXED – XCN	T - 5A	1.62	1 1/8”	.69	45/50
60 GPM	CXGD – XCN	T - 16A	2.44	1 1/4”	.97	150/160
120 GPM	CXID – XCN	T - 18A	3.13	1 5/8”	1.19	350/375

OPTION ORDERING INFORMATION



CX ★ D – ★ ★ ★

Nominal Capacity	Control**	Cracking Pressure	Seal
A* 7.5 GPM	X Non-adjustable	A 4 psi	N Buna-N
C 15 GPM		B 15 psi	V Viton
E 30 GPM		C 30 psi	
G 60 GPM		D 50 psi	
I 120 GPM		E 75 psi	
		F 100 psi	

*** See page 244 for information on Control Options*

**CXAD available with A,C,E Cracking Pressures Only.*

TECHNICAL TIPS / PERFORMANCE CURVES

Check Valves, Free Flow, Port 1 to 2

Applications

Check valves are used to provide free flow in one direction and blocked flow in the opposite direction. The preferred check CX*A-X*N (free flow 1 to 2) should be used wherever possible.

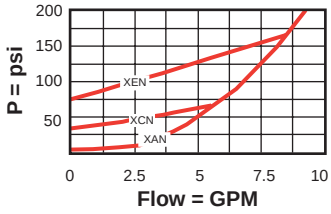
Design Concepts and Features

- Hardened and lapped sealing surfaces provide low leakage (less than 1 drop / min.) and long life.
- Extensive range of spring options.
- Available in five frame sizes with operating pressures to 5000 psi.

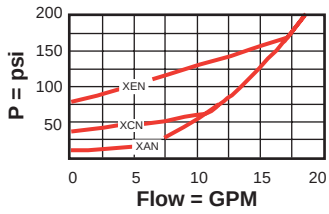
Performance Curves

Typical Pressure Rise

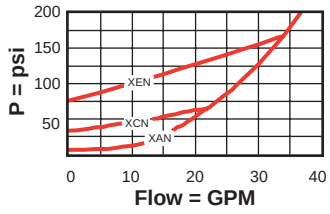
CXBA-X*N



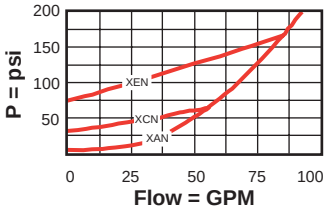
CXDA-X*N



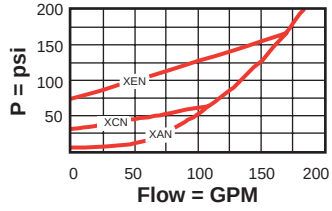
CXFA-X*N



CXHA-X*N



CXJA-X*N



Check Valves, Free Flow, Port 2 to 1

Applications

The CX*D-X*N non-preferred check (free flow 2 to 1) should only be used to simplify complex manifold designs.

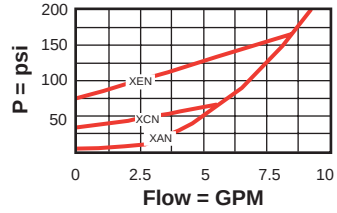
Design Concepts and Features

- Hardened and lapped sealing surfaces provide low leakage (less than 1 drop / min.) and long life.
- Extensive range of spring options.
- Available in five frame sizes with operating pressures to 5000 psi.

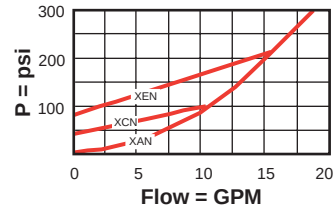
Performance Curves

Typical Pressure Rise

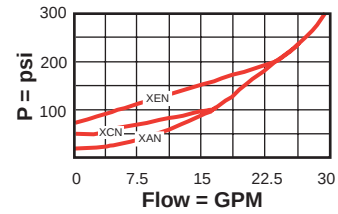
CXAD-X*N



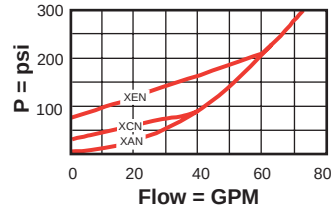
CXCD-X*N



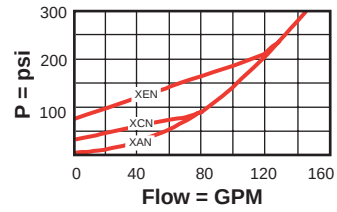
CXED-X*N



CXGD-X*N



CXID-X*N



General Application Requirements

- Operating Temperature Range: Buna-N seals -50° F to 200° F, Viton seals 0° F to 250° F.
- Viscosity Range: 60-3000 SUS.
- Fluid Contamination Level: ISO 4406 18/15 or better; Recommend $\beta_{10} \geq 75$ to achieve ISO 18/15 or better in most systems.
- Factory Pressure Setting for cartridge is established at a crack flow rate.