ISO 03 / CETOP 3 RELIEF VALVES
(SIDE PORTED SUBPLATE / REAR PORTED SUBPLATE / SIDE PORTED SUBPLATE WITH P AND T IN BASE)

T-10A Cavity
First two subplates shown below are 89.0 mm wide. Third subplate shown below is 76.2 mm wide

PILOT OPERATED

<table>
<thead>
<tr>
<th>Function</th>
<th>Ports</th>
<th>Assembly Model Code*</th>
</tr>
</thead>
<tbody>
<tr>
<td>P to T</td>
<td>A, B, P, T</td>
<td>RPEC-LAN-FSU</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Function</th>
<th>Ports</th>
<th>Assembly Model Code*</th>
</tr>
</thead>
<tbody>
<tr>
<td>P to T</td>
<td>A, B, P, T</td>
<td>RDDA-LAN-FSU</td>
</tr>
</tbody>
</table>

| *Add modifier /S to order SG Iron for pressure rating over 210 bar. |

DIRECT ACTING

<table>
<thead>
<tr>
<th>Function</th>
<th>Ports</th>
<th>Assembly Model Code*</th>
</tr>
</thead>
<tbody>
<tr>
<td>P to T</td>
<td>A, B, P, T</td>
<td>RPEC-LAN-FRU</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Function</th>
<th>Ports</th>
<th>Assembly Model Code*</th>
</tr>
</thead>
<tbody>
<tr>
<td>P to T</td>
<td>A, B, P, T</td>
<td>RDDA-LAN-FRU</td>
</tr>
</tbody>
</table>

| *Add modifier /S to order SG Iron for pressure rating over 210 bar. |

<table>
<thead>
<tr>
<th>Function</th>
<th>Ports</th>
<th>Assembly Model Code*</th>
</tr>
</thead>
<tbody>
<tr>
<td>P to T</td>
<td>A, B, P, T</td>
<td>RPEC-LAN-FVU</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Function</th>
<th>Ports</th>
<th>Assembly Model Code*</th>
</tr>
</thead>
<tbody>
<tr>
<td>P to T</td>
<td>A, B, P, T</td>
<td>RDDA-LAN-FVU</td>
</tr>
</tbody>
</table>

| *Add modifier /S to order SG Iron for pressure rating over 210 bar. |

NOTES: Page 2 for cartridge models RP*C-*** and RD*A-*** show performance curves, technical tips, and options. See Page 140 for technical information about sandwich bodies including ISO interface patterns, mounting instructions, studrods, and studkits. Go to www.sunhydraulics.com for more product information. Model Codes printed in red are Preferred Products and are readily available.
**Sandwich Assemblies**

**ISO 03 / CETOP 3 RELIEF VALVES**

**T-10A Cavity**

PILOT OPERATED

![Diagram of T-10A Cavity]

Assembly Model Code®

RPEC-LAN-FBP/M

*Add modifier /T to order SG Iron for pressure rating over 210 bar.*

DIRECT ACTING

![Diagram of T-10A Cavity]

Assembly Model Code®

RRDA-LAN-FBP/M

*Add modifier /T to order SG Iron for pressure rating over 210 bar.*

Function

P to T

Function

A to T (High Capacity)

B to T (High Capacity)

Function

A to B (High Capacity)

B to A (High Capacity)

Function

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

Function

A and B to T (High Capacity)

NOTES: Page 2 for cartridge models RP*C-*** and RD*A-*** show performance curves, technical tips, and options. See page 140 for technical information about sandwich bodies including ISO interface patterns, mounting instructions, studrods, and studkits. Go to www.sunhydraulics.com for more product information. Model Codes printed in red are Preferred Products and are readily available.
Sandwich Assemblies
ISO 03 / CETOP 3 RELIEF VALVES, VENTED

T-11A Cavity
All sandwich bodies shown below are 44.5 mm wide

PILOT OPERATED

Function
P to T
(Normally Open, Solenoid Vented)

Assembly
Model Code*
XRCO-LAN-HA

*Add modifier /S to order SG Iron for pressure rating over 210 bar.

Function
P to T
(Normally Closed, Solenoid Vented)

Assembly
Model Code*
XRCO-LAN-CA

*Add modifier /S to order SG Iron for pressure rating over 210 bar.

Function
P to T (Externally Vented)

Ve n t
Port
Assembly
Model Code*
RVCA-LAN-EBC/M

*Add modifier /T to order SG Iron for pressure rating over 210 bar.

NOTES: Page 12 for cartridge model RV*A-*** show performance curves, technical tips, and options.
Select Solenoid Connector Option from Page 248.
See Page 140 for technical information about sandwich bodies including ISO interface patterns, mounting instructions, studrods, and studkits.
Go to www.sunhydraulics.com for more product information.
### Sandwich Assemblies

**ISO 03 / CETOP 3 SEQUENCE VALVES**

#### PILOT OPERATED

<table>
<thead>
<tr>
<th>Assembly Model Code*</th>
<th>Function</th>
<th>Assembly Model Code*</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSDC-LAN-EBWM</td>
<td>In to P</td>
<td>SXCA-LAN-EBWM</td>
</tr>
<tr>
<td>RSDC-LAN-EB4</td>
<td>In to B</td>
<td>SXCA-LAN-EB4</td>
</tr>
<tr>
<td>RSDC-LAN-EB5</td>
<td>In to B</td>
<td>SXCA-LAN-EB5</td>
</tr>
</tbody>
</table>

#### DIRECT ACTING

<table>
<thead>
<tr>
<th>Assembly Model Code*</th>
<th>Function</th>
<th>Assembly Model Code*</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSDC-LAN-EBWM</td>
<td>In to A</td>
<td>SXCA-LAN-EBWM</td>
</tr>
<tr>
<td>RSDC-LAN-EB4</td>
<td>In to B</td>
<td>SXCA-LAN-EB4</td>
</tr>
<tr>
<td>RSDC-LAN-EB5</td>
<td>In to B</td>
<td>SXCA-LAN-EB5</td>
</tr>
</tbody>
</table>

---

### Notes:

- Pages 20 and 29 for cartridge models RS*C-***, SX*A-*** and SC*A-*** show performance curves, technical tips, and options.
- See Page 140 for technical information about sandwich bodies including ISO interface patterns, mounting instructions, studrods, and studkits.
- Go to www.sunhydraulics.com for more product information.
- Model Codes printed in red are Preferred Products and are readily available.
Sandwich Assemblies

ISO 03 / CETOP 3 REDUCING VALVES

T-11A Cavity

PILOT OPERATED

All sandwich bodies shown below are 44.5 mm wide

Assembly

Model Code*

PBDB-LAN-EBP/M

*Add modifier /T to order SG Iron for pressure rating over 210 bar.

Function

On P Drained to T

Assembly

Model Code*

PBDB-LAN-EBA/M

*Add modifier /T to order SG Iron for pressure rating over 210 bar.

Function

On A Drained to B
On B Drained to A

Assembly

Model Code*

PBDB-LAN-EB2

*Add modifier /S to order SG Iron for pressure rating over 210 bar.

Function

On A Drain to T
(Reverse Free Flow Check)

Assembly

Model Code*

PBDB-LAN-EB3

*Add modifier /S to order SG Iron for pressure rating over 210 bar.

Function

On B Drain to T
(Reverse Free Flow Check)

Assembly

Model Code*

PBDB-LAN-EBY

*Add modifier /S to order SG Iron for pressure rating over 210 bar.

Function

On A and B
(Drains to Opposite Port)

NOTES: Page 34 for cartridge model PB*B-*** show performance curves, technical tips, and options. See Page 140 for technical information about sandwich bodies including ISO interface patterns, mounting instructions, studrods, and studkits. Go to www.sunhydraulics.com for more product information. Model Codes printed in red are Preferred Products and are readily available.
Sandwich Assemblies

ISO 03 / CETOP 3 REDUCING / RELIEVING VALVES

T-11A Cavity

All sandwich bodies shown below are 44.5 mm wide

PILOT OPERATED

<table>
<thead>
<tr>
<th>Assembly Model Code</th>
<th>Function</th>
<th>On P Tank to T, Drained at T</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPDB-LAN-EBP/M</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Add modifier /T to order SG Iron for pressure rating over 210 bar.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assembly Model Code</th>
<th>Function</th>
<th>On A Tank to B, (Reverse Free Flow Check)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRDB-LAN-EB2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Add modifier /S to order SG Iron for pressure rating over 210 bar.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assembly Model Code</th>
<th>Function</th>
<th>On B Tank to T, Drained to T, (Reverse Free Flow Check)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRDB-LAN-EB3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Add modifier /S to order SG Iron for pressure rating over 210 bar.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assembly Model Code</th>
<th>Function</th>
<th>On A and B Tanks and Drains to Opposite Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRDB-LAN-EBY</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Add modifier /S to order SG Iron for pressure rating over 210 bar.</td>
<td></td>
</tr>
</tbody>
</table>

NOTES:
Page 42 for cartridge models PP*B-*** and PR*B-*** show performance curves, technical tips, and options.
See Page 140 for technical information about sandwich bodies including ISO interface patterns, mounting instructions, studrods, and studkits.
Go to www.sunhydraulics.com for more product information.
Model Codes printed in red are Preferred Products and are readily available.
**Sandwich Assemblies**

**ISO 03 / CETOP 3 COUNTERBALANCE / VENTED COUNTERBALANCE VALVES**

**T-11A / T21A Cavity**

All sandwich bodies shown below are 44.5 mm wide

---

**PILOT RATIOS 3:1 and 1.5:1 (CB**) and 3:1 and 1:1 (CW**)**

---

**STANDARD**

<table>
<thead>
<tr>
<th>Assembly Model Code*</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBC*-LHN-EBAM</td>
<td>On A Pilot from B</td>
</tr>
<tr>
<td>CBC*-LHN-EBY</td>
<td>On B Pilot from A</td>
</tr>
</tbody>
</table>

---

**PILOT RATIOS 2.3:1, 4.5:1 and 10:1 (CB**) and 5:1 and 2:1 (CW**)**

---

**VENTED**

<table>
<thead>
<tr>
<th>Assembly Model Code*</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBC*-LHN-MBA</td>
<td>On A Pilot from B, Vent to T</td>
</tr>
<tr>
<td>CBC*-LHN-MBB</td>
<td>On B Pilot from A, Vent to T</td>
</tr>
<tr>
<td>CBC*-LHN-MBY</td>
<td>On A and B (Cross-Piloted, vents to T)</td>
</tr>
</tbody>
</table>

---

**NOTES:** Page 50 for cartridge model CB**-*** and page 70 for cartridge model CW**-*** show performance curves, technical tips, and options. See Page 140 for technical information about sandwich bodies including ISO interface patterns, mounting instructions, studrods, and studkits. Go to www.sunhydraulics.com for more product information. Model Codes printed in red are Preferred Products and are readily available.
# Sandwich Assemblies

## ISO 03 / CETOP 3 PILOT-TO-OPEN CHECK VALVES

### T-11A / T-21A Cavity

<table>
<thead>
<tr>
<th>PILOT OPERATED</th>
<th>STANDARD</th>
<th>VENTED</th>
</tr>
</thead>
</table>

#### Assembly Model Code

**CKCB-XCN-EBY**

*Add modifier /S to order SG Iron for pressure rating over 210 bar.*

#### Assembly Model Code

**CKCB-XCN-EBA/M**

*Add modifier /T to order SG Iron for pressure rating over 210 bar.*

---

### NOTES:

- Page 78 for cartridge models CK**,*** and page 94 for cartridge model CV**,*** show performance curves, technical tips, and options.
- See Page 140 for technical information about sandwich bodies including ISO interface patterns, mounting instructions, studrods, and studkits.
- Go to www.sunhydraulics.com for more product information.
- Model Codes printed in red are Preferred Products and are readily available.
Sandwich Assemblies

ISO 03 / CETOP 3 CHECK VALVES

T-13A / T-5A Cavity

FREE FLOW PORT 1 TO 2

Assembly Model Code:
CXDA-XCN-GDP

Function
On P
On T

Assembly Model Code:
CXDA-XCN-GDA

Function
On A Free Flow Into Valve
On A Free Flow Out Valve
On B Free Flow Into Valve
On B Free Flow Out Valve

Assembly Model Code:
CXDA-XCN-GDY

Function
On A and B, Free Flow Out of Valve
On A and B, Free Flow Into Valve

Assembly Model Code:
CXFA-XAN-GDF

Function
T to A and B (High Capacity)

Assembly Model Code:
CXFA-XAN-GDW

Function
T to A
T to B

NOTES:
Page 110 for cartridge models CX/A-*** and CX/D-*** show performance curves, technical tips, and options.
See Page 140 for technical information about sandwich bodies including ISO interface patterns, mounting instructions, studrods, and studkits.
Go to www.sunhydraulics.com for more product information.
Model Codes printed in red are Preferred Products and are readily available.
Sandwich Assemblies

ISO 03 / CETOP 3 FLOW CONTROL / PRIORITY FLOW CONTROL VALVES

T-13A / T-11A Cavity

All sandwich bodies shown below are 44.5 mm wide

FULLY ADJUSTABLE NEEDLE

Pressure Compensated With Reverse Free Flow Check

Function

Meter-In P

Meter-Out T

PRIORITY FLOW CONTROL

FIXED ORIFICE

Function

Priority Flow on P, Bypass to T

NOTES: Page 110 for cartridge model NF*C-***, page 126 for FD*A-***, and page 134 for FR*A-*** show performance curves, technical tips, and options.

See Page 140 for technical information about sandwich bodies including ISO interface patterns, mounting instructions, studrods, and studkits.

Go to www.sunhydraulics.com for more product information.

Model Codes printed in red are Preferred Products and are readily available.

**Customer must specify priority flow.

**Add modifier /S to order SG Iron for pressure rating over 210 bar.

**Add modifier /S to order SG Iron for pressure rating over 210 bar.

**Add modifier /S to order SG Iron for pressure rating over 210 bar.

**Add modifier /S to order SG Iron for pressure rating over 210 bar.
Sandwich Assemblies

ISO 03 / CETOP 3 FLOW CONTROL VALVES

T-13A Cavity

**FULLY ADJUSTABLE NEEDLE WITH REVERSE FREE FLOW CHECK**

<table>
<thead>
<tr>
<th>Assembly Model Code*</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCCB-22GBA</td>
<td>Meter-In A</td>
</tr>
<tr>
<td></td>
<td>Meter-Out A</td>
</tr>
<tr>
<td></td>
<td>Meter-In B</td>
</tr>
<tr>
<td></td>
<td>Meter-Out B</td>
</tr>
</tbody>
</table>

**FULLY ADJUSTABLE, PRESSURE COMPENSATED WITH FREE FLOW CHECK**

<table>
<thead>
<tr>
<th>Assembly Model Code*</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDBA-LG-GBA</td>
<td>Meter-In A and B</td>
</tr>
<tr>
<td></td>
<td>Meter-Out A and B</td>
</tr>
</tbody>
</table>

**NOTES:** Page 110 for cartridge model NC*B-*** and page 126 for FD*A-*** show performance curves, technical tips, and options. See Page 140 for technical information about sandwich bodies including ISO interface patterns, mounting instructions, studrods, and studkits. Go to www.sunhydraulics.com for more product information. Model Codes printed in red are Preferred Products and are readily available.
Sandwich Assemblies

**ISO 03 / CETOP 3 FLOW CONTROL VALVES**
(RAPID ADVANCE - FINE FEED)

**T-13A Cavity**

All sandwich bodies shown below are 44.5 mm wide

<table>
<thead>
<tr>
<th>Function</th>
<th>Meter-In P, Solenoid Normally Closed</th>
<th>Meter-Out T, Solenoid Normally Closed</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Assembly</th>
<th>Model Code*</th>
<th>X2CD-LAN-CA</th>
<th>X2CD-LAN-CA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*Add modifier /S to order SG Iron for pressure rating over 210 bar.</td>
<td>*Add modifier /S to order SG Iron for pressure rating over 210 bar.</td>
<td></td>
</tr>
</tbody>
</table>

Coil must be selected separately. See page 248.

Sandwich Assemblies

ISO 03 / CETOP 3 FLOW CONTROL VALVES
(RAPID ADVANCE - FINE FEED)

T-13A Cavity

All sandwich bodies shown below are 44.5 mm wide

Function

- Meter-In A, Solenoid Normally Closed
- Meter-Out A, Solenoid Normally Closed
- Meter-In B, Solenoid Normally Closed
- Meter-Out B, Solenoid Normally Closed

Assembly

X4CD-LAN-CA

Coil must be selected separately. See page 248.

Notes:

*Add modifier /S to order SG Iron for pressure rating over 210 bar.

UK Selected Assemblies Catalogue #999-901-191

157
### Sandwich Assemblies

#### ISO 03 / CETOP 3 CIRCUIT SAVERS
(PRESSURE COMPENSATOR / REGENERATIVE / LOAD SENSING / PILOT CHOKE PACK)

<table>
<thead>
<tr>
<th>Function</th>
<th>Model Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shuttle A and B (Output External)</td>
<td>CSAA-BXN-GBS</td>
</tr>
<tr>
<td>B to A Pressure Sensing Regenerative Circuit</td>
<td>YDCA-LHN-AA</td>
</tr>
<tr>
<td>A to B Pressure Sensing Regenerative Circuit</td>
<td>YNAA-LDN-AA</td>
</tr>
<tr>
<td>Pilot Choke Pack</td>
<td>(Used typically to control main stage shift time on pilot operated ISO/CETOP directional valves.)</td>
</tr>
</tbody>
</table>

**Function**

- **YFCG**: Pressure Compensator (Restrictive), 14 bar
- **YFCJ**: Pressure Compensator (Restrictive), 14 bar
- **with external Load-Sensing Port**

**External Shuttle Port**

- **None**

**Assembly Model Code**

<table>
<thead>
<tr>
<th>Model Code*</th>
<th>External Port</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>YFCG-XHN-AA/M</td>
<td>1/4&quot; BSPP</td>
<td>30,2</td>
</tr>
<tr>
<td>YFCJ-XHN-AA/M</td>
<td>1/4&quot; BSPP</td>
<td>30,2</td>
</tr>
</tbody>
</table>

*Add modifier /T to order SG Iron for pressure rating over 210 bar.

**NOTES:**

- See Page 140 for technical information about sandwich bodies including ISO interface patterns, mounting instructions, studrods, and studkits.
- Go to www.sunhydraulics.com for more product information.
- Model Codes printed in red are Preferred Products and are readily available.
Sandwich Assemblies

ISO 03 / CETOP 3 CIRCUIT SAVERS
(TAP IN MANIFOLD / ADAPTOR PLATE / COVER PLATE)

All sandwich bodies shown below are 44.5 mm wide

**Function**

A and B Tap in Manifold

**Function**

P and A Tap in Manifold

**Function**

T and B Tap in Manifold

**Function**

Adaptor from ISO 05 to ISO 03.

**Function**

Cover Plate with All Ports Blocked

NOTE: See Page 140 for technical information about sandwich bodies including ISO interface patterns, mounting instructions, studrods, and studkits. Go to www.sunhydraulics.com for more product information. Model Codes printed in red are Preferred Products and are readily available.