Sandwich Assemblies

ISO 05 / CETOP 5 WITH X AND Y RELIEF VALVES (SIDE PORTED SUBPLATE)

### T-10A Cavity

**Function**

- **Pilot Operated**
  
  ![Pilot Operated Diagram]

- **Direct Acting**
  
  ![Direct Acting Diagram]

<table>
<thead>
<tr>
<th>Parts</th>
<th>Assembly Model Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, B, P, T</td>
<td>PPEC-LAN-ZHT</td>
</tr>
<tr>
<td>X, Y</td>
<td>RDDA-LAN-ZHT</td>
</tr>
</tbody>
</table>

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

**Ports**

- A, B, P, T
- X, Y

**Order Retainer and Seal Kits separately. (See page 141)**

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**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, studs, and stud kits.
- Sun ISO 05 X, X, sandwich bodies are furnished with pilot and drain connections. Seal plates are NOT supplied with these bodies, due to the differences in the European and U.S. seal plates. To order seal plates separately see page 141-142.
- Go to [www.sunhydraulics.com](http://www.sunhydraulics.com) for more product information.
Sandwich Assemblies

ISO 05 / CETOP 5 WITH X AND Y RELIEF VALVES

T-3A / T-10A Cavities

All sandwich bodies shown below are 63,5 mm wide

PILOT OPERATED

<table>
<thead>
<tr>
<th>Function</th>
<th>Assembly Model Code*</th>
</tr>
</thead>
<tbody>
<tr>
<td>P to T (High Capacity)</td>
<td>RPQC-LAN-CJP/M</td>
</tr>
<tr>
<td>A to T (High Capacity)</td>
<td>RPQC-LAN-CJA/M</td>
</tr>
<tr>
<td>B to T (High Capacity)</td>
<td>RPQC-LAN-CJB/M</td>
</tr>
<tr>
<td>A and B to T (High Capacity)</td>
<td>RPQC-LAN-CJX</td>
</tr>
<tr>
<td>A to B and B to A (Cross-port)</td>
<td>RPEC-LAN-CJY</td>
</tr>
</tbody>
</table>

DIRECT ACTING

<table>
<thead>
<tr>
<th>Function</th>
<th>Assembly Model Code*</th>
</tr>
</thead>
<tbody>
<tr>
<td>P to T (High Capacity)</td>
<td>RDFA-LAN-CJP/M</td>
</tr>
<tr>
<td>A to T (High Capacity)</td>
<td>RDFA-LAN-CJA/M</td>
</tr>
<tr>
<td>B to T (High Capacity)</td>
<td>RDFA-LAN-CJB/M</td>
</tr>
<tr>
<td>A to B and B to A (Cross-port)</td>
<td>RDFA-LAN-CJY</td>
</tr>
</tbody>
</table>

NOTES: Page 2 for cartridge models R*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. Sun ISO 05 X, Y, sandwich bodies are furnished with pilot and drain connections. Seal plates are NOT supplied with these bodies, due to the differences in the European and U.S. seal plates. To order seal plates separately see page 141-142. Go to www.sunhydraulics.com for more product information. Model Codes printed in red are Preferred Products and are readily available.
**Sandwich Assemblies**

**ISO 05 / CETOP 5 WITH X AND Y SEQUENCE VALVES**

**T-2A Cavity**

All sandwich bodies shown below are 63.5 mm wide

<table>
<thead>
<tr>
<th>Function</th>
<th>PILOT OPERATED</th>
<th>DIRECT ACTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>In to P</td>
<td><img src="image" alt="Assembly Diagram" /></td>
<td><img src="image" alt="Assembly Diagram" /></td>
</tr>
</tbody>
</table>

*Add modifier /T to order 3X Iron for pressure rating over 210 bar.

*Add modifier /S to order 3X Iron for pressure rating over 210 bar.

**NOTES:** Page 20 for cartridge models RS**C*** and SX*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. Sun ISO 05 X, Y, sandwich bodies are furnished with pilot and drain connections. Seal plates are NOT supplied with these bodies, due to the differences in the European and U.S. seal plates. To order seal plates separately see page 141-142. Go to www.sunhydraulics.com for more product information.
Sandwich Assemblies

ISO 05 / CETOP 5 WITH X AND Y REDUCING VALVES

PILOT OPERATED

T-2A Cavity

All sandwich bodies shown below are 63,5 mm wide

Function

On P Drained to T

Assembly

PBFB-LAN-BJP/M

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

Function

On A Drained to B

Assembly

PBFB-LAN-BJA/M

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

Function

On B Drained to A

Assembly

PBFB-LAN-BJB/M

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

Function

On A Drain to T (Reverse Free Flow Check)

Assembly

PBFB-LAN-BJ2

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

Function

On B Drain to T (Reverse Free Flow Check)

Assembly

PBFB-LAN-BJ3

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

NOTES:

Page 34 for cartridge models PB*B-*** and page 102 for CX*A-*** show performance curves, technical tips, and options.

See page 140 for technical information about sandwich bodies including ISO interface patterns, mounting instructions, and standards.

Sun ISO 05 X, Y, sandwich bodies are furnished with pilot and drain connections. Seal plates are NOT supplied with these bodies, due to the differences in the European and U.S. seal plates. To order seal plates separately see page 141-142.

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

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

ISO 05 / CETOP 5 WITH X AND Y REDUCING / RELIEVING VALVES

T-2A Cavity

All sandwich bodies shown below are 63,5 mm wide

PILOT OPERATED

<table>
<thead>
<tr>
<th>Assembly Model Code*</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPFB-LAN-BJP/M</td>
<td>On P Tank to T Drained to T</td>
</tr>
</tbody>
</table>

DIRECT ACTING

<table>
<thead>
<tr>
<th>Assembly Model Code*</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRFB-LAN-BJP/M</td>
<td>On A Tank to B</td>
</tr>
</tbody>
</table>

NOTES:

1. Page 34 for cartridge models PPFB-*** and PRFB-***, and page 102 for C*FA-*** show performance curves, technical tips, and options.
2. See page 140 for technical information about sandwich bodies including ISO interface patterns, mounting instructions, studrods, and studkits.
3. Sun ISO 05 X, Y, sandwich bodies are furnished with pilot and drain connections. Seal plates are NOT supplied with these bodies, due to the differences in the European and U.S. seal plates. To order seal plates separately see page 141-142.
5. Model Codes printed in red are Preferred Products and are readily available.
Sandwich Assemblies

ISO 05 / CETOP 5 WITH X AND Y COUNTERBALANCE VALVES

T-2A Cavity

All sandwich bodies shown below are 63.5 mm wide

PILOT RATIOS
3:1, 1.5:1 and 2:1

Function
On A Pilot from B

PILOT RATIOS
2.3:1, 4.5:1 and 10:1

Assembly Model Code

CBE*-LHN-BJA/M

*The 4th digit of the Model Code must be entered to specify counterbalance pilot ratio. Add modifier /T to order SG Iron for pressure rating over 210 bar.

Assembly Model Code

CBE*-LJN-BJA/M

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

Assembly Model Code

CBE*-LHN-BJB/M

*The 4th digit of the Model Code must be entered to specify counterbalance pilot ratio. Add modifier /T to order SG Iron for pressure rating over 210 bar.

Assembly Model Code

CBE*-LJN-BJB/M

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

Assembly Model Code

CBE*-LHN-BJY

*The 4th digit of the Model Code must be entered to specify counterbalance pilot ratio. Add modifier /S to order SG Iron for pressure rating over 210 bar.

Assembly Model Code

CBE*-LJN-BJY

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

Assembly Model Code

CBE*-LHN-BJS

*The 4th digit of the Model Code must be entered to specify counterbalance pilot ratio. Add modifier /S to order SG Iron for pressure rating over 210 bar.

Assembly Model Code

CBE*-LJN-BJS

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

Function
Cushion Lock Circuit
On A and B

NOTES:
Page 50 for cartridge model CBE*-*** 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.
Sun ISO O5 X, Y, sandwich bodies are furnished with pilot and drain connections. Seal plates are NOT supplied with these bodies, due to the differences in the European and U.S. seal plates. To order seal plates separately see page 141-142.
Go to www.sunhydraulics.com for more product information.
Model Codes printed in red are Preferred Products and are readily available.
Sandwich Assemblies
ISO 05 / CETOP 5 WITH X AND Y PILOT-TO-OPEN CHECK VALVES

T-2A Cavity
All sandwich bodies shown below are 63,5 mm wide

PILOT OPERATED

Function
On A Pilot from B

Assembly
Model Code*
CKEB-XCN-BJA/M
*Add modifier /T to order SG Iron for pressure rating over 210 bar.

Function
On B Pilot from A

Assembly
Model Code*
CKEB-XCN-BJB/M
*Add modifier /T to order SG Iron for pressure rating over 210 bar.

Function
On A and B (Cross-Piloted)

Assembly
Model Code*
CKEB-XCN-BJY
*Add modifier /S to order SG Iron for pressure rating over 210 bar.

NOTES: Page 78 for cartridge models CK**,-*** 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.
Sun ISO 05 X, Y, sandwich bodies are furnished with pilot and drain connections. Seal plates are NOT supplied with these bodies, due to the differences in the European and U.S. seal plates. To order seal plates separately see page 141-142.
Go to www.sunhydraulics.com for more product information.
Model Codes printed in red are Preferred Products and are readily available.
## Sandwich Assemblies

### ISO 05 / CETOP 5 WITH X AND Y CHECK VALVES

#### T-5A Cavity

All sandwich bodies shown below are 63.5 mm wide.

<table>
<thead>
<tr>
<th>CHECK VALVES</th>
<th>Function</th>
<th>Assembly Model Code*</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Diagram" /></td>
<td>On P</td>
<td>CXFA-XCN-DJP</td>
</tr>
<tr>
<td><img src="image2" alt="Diagram" /></td>
<td>On A Free Flow Out of Valve</td>
<td>CXFA-XCN-DJK</td>
</tr>
<tr>
<td><img src="image3" alt="Diagram" /></td>
<td>On A Free Flow Into Valve</td>
<td>CXFA-XCN-DJJ</td>
</tr>
<tr>
<td><img src="image4" alt="Diagram" /></td>
<td>T to A and B</td>
<td>CXFA-XAN-DJW</td>
</tr>
</tbody>
</table>

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

**Order Retainer and Seal Kits separately. (See page 141)**

### Function Notes
- **On** A Free Flow Out of Valve
- **On** B Free Flow Into Valve
- **T** to A and B

### NOTEs:
- Page 102 for cartridge models CX*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.
- Sun ISO 05 X, Y, sandwich bodies are furnished with pilot and drain connections. Seal plates are NOT supplied with these bodies, due to the differences in the European and U.S. seal plates. To order seal plates separately see page 141-142.
- Go to www.sunhydraulics.com for more product information.
- Model Codes printed in red are Preferred Products and are readily available.
Sandwich Assemblies

ISO 05 / CETOP 5 WITH X AND Y FLOW CONTROL VALVES

T-5A Cavity

All sandwich bodies shown below are 63.5 mm wide

FULLY ADJUSTABLE NEEDLE

<table>
<thead>
<tr>
<th>Assembly Model Code*</th>
<th>T-5A Cavity</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFDC-LAN-DJP</td>
<td></td>
</tr>
</tbody>
</table>

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

FULLY ADJUSTABLE PRESSURE COMPENSATED WITH FREE FLOW CHECK

<table>
<thead>
<tr>
<th>Function</th>
<th>Meter-In P</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Assembly Model Code*</th>
<th>T-5A Cavity</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDCB-LAN-DJP</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Function</th>
<th>Meter-Out A</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Assembly Model Code*</th>
<th>T-5A Cavity</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCEB-LCN-DJA</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Function</th>
<th>Meter-In B</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Assembly Model Code*</th>
<th>T-5A Cavity</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDCB-LAN-DJB</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Function</th>
<th>Meter-In A and B</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Assembly Model Code*</th>
<th>T-5A Cavity</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDCB-LAN-DJY</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Function</th>
<th>Meter-Out A and B</th>
</tr>
</thead>
</table>

NOTES: Page 110 for cartridge models NF*C-*** and NC*B-***, and page 126 for FD**-*** 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. Sun ISO 05 X, Y, sandwich bodies are furnished with pilot and drain connections. Seal plates are NOT supplied with these bodies, due to the differences in the European and U.S. seal plates. To order seal plates separately see page 141-142. Go to www.sunhydraulics.com for more product information. Model Codes printed in red are Preferred Products and are readily available.
Sandwich Assemblies

ISO 05 / CETOP 5 WITH X AND Y FLOW CONTROL VALVES

T-13A Cavity

FULLY ADJUSTABLE NEEDLE

Function

Meter A to B and B to A

Assembly Model Code

NFCC-LCN-DJS

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

NOTES:

Page 110 for cartridge model NF*C*** 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.

Sun ISO 05 X, Y, sandwich bodies are furnished with pilot and drain connections. Seal plates are NOT supplied with these bodies, due to the differences in the European and U.S. seal plates. To order seal plates separately see page 141-142.

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