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SAUER DANFOSS

# OLSP
# Priority valve

## Tech Note

# Priority valve type OLSP
# Tech Note
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Front cover illustrations: F301084,
Drawing: 152-179

# Priority valve type OLSP
# Tech Note
# Introduction and function

## INTRODUKTION

Sauer-Danfoss introduce a new priority valve for flanging on gear pumps.

### Use and function

The priority valve OLSP 80 is to be used in connection with e.g. Sauer-Danfoss gear pumps type SNP and steering units type OSPC LS, OSPF LS, OSPD LS and OSPQ LS in load sensing steering systems, where maximum oil flow doesn't exceed 80 l/min.

OLSP priority valves are to be flanged on gear pumps with outlet ports square flange type 40.

### Versions

*Load sensing static priority valves*

Load sensing static steering units require load sensing static priority valves. Load sensing static steering systems have no oil flow in the LS connection when the steering unit is in neutral position.

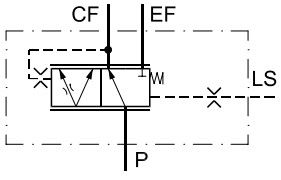
*Load sensing dynamic priority valves*

Load sensing dynamic steering units require load sensing dynamic priority valves. Load sensing dynamic steering systems have a constant oil flow in the LS connection from the priority valve to the steering unit even when the steering unit is in neutral position.

Ports:

P = pump
CF = controlled flow (priority oil flow)
EF = excess flow
LS = load sensing

*OLSP static*

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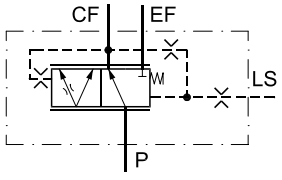
*OLSP dynamic*

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# Priority valve type OLSP
# Tech Note
# Technical data, Code numbers and weights

## TECHNICAL DATA

*Max. pressure on connections*

| Priority valve | Rated flow to P connection | Max. pressure on connections | | | | | |
|---|---|---|---|---|---|---|---|
| | | P, EF | | CF | | LS | |
| | | bar | [psi] | bar | [psi] | bar | [psi] |
| OLSP 80 | 80 | 250 | [ 3626] | 210 | [ 3045] | 210 | [ 3045] |

## CODE NUMBERS AND WEIGHTS

*OLSP 80*

| Priority valve | Code Numbers | Control spring pressure | | Weight | |
|---|---|---|---|---|---|
| | * Connections European version LS: G 1/4 CF: G 3/8 EF: G 1/2 | bar | [psi] | kg | [lb] |
| OLSP 80 Static | 152B5002 | 4 | [58] | 1.0 | [2.20] |
| OLSP 80 Dynamic | 152B5200 | 7 | [101.5] | 1.0 | [2.20] |
| OLSP 80 Dynamic for OSPF | 152B5201 | 7 | [101.5] | 1.0 | [2.20] |

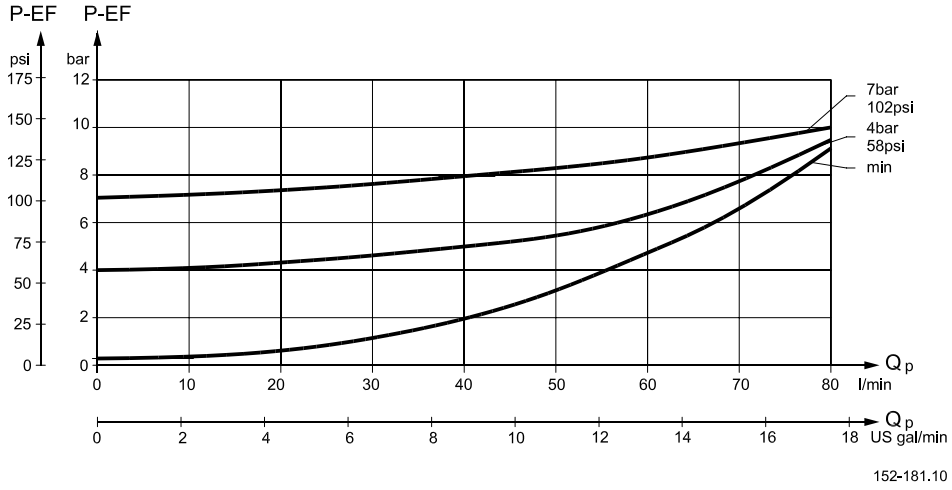
Please contact the Sauer-Danfoss Sales Organization for OLSP priority valves with other specifications.
* OLSP is also available with metric threads.

# Priority valve type OLSP
# Tech Note
# Pressure drop

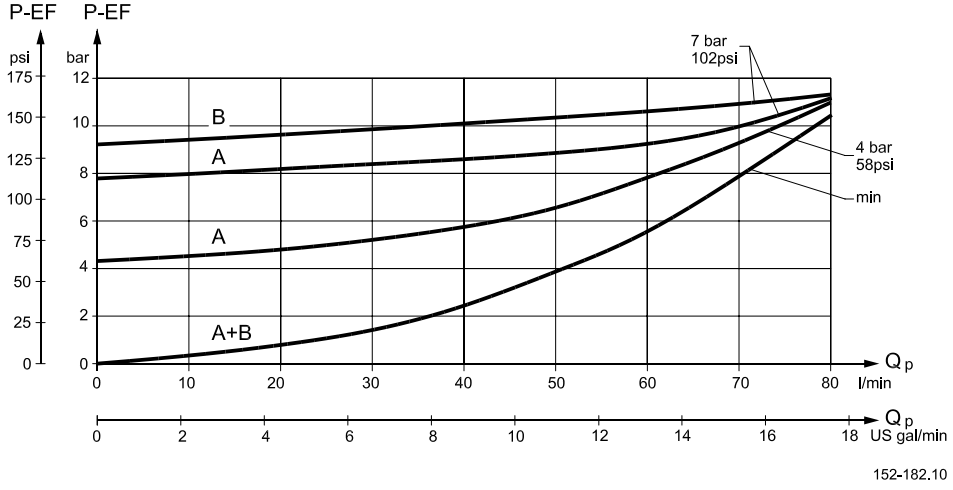
## PRESSURE DROP

This data comes from measurements on a representative sample of priority valves from production. Oil with viscosity of 21 $mm^2/s$ at 50 °C was used during measuring. Measurement made when pressure on the LS connection is zero (steering unit in neutral position). The minimum curves apply when the pressure on the EF connection is higher than the actual control spring pressure. The curves for control spring pressure of 4 bar or 7 bar apply when pressure on the EF connection is zero.

*Pressure drop P-EF for Sauer-Danfoss OLSP static priority valves*




*Pressure drop P-EF for Sauer-Danfoss OLSP dynamic priority valves*




A: OLSP 80 dynamic for OSPB, OSPC, OSPD, OSPQ LS dynamic
B: OLSP 80 dynamic for OSPF LS dynamic

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# Priority valve type OLSP
# Tech Note
# Dimensions

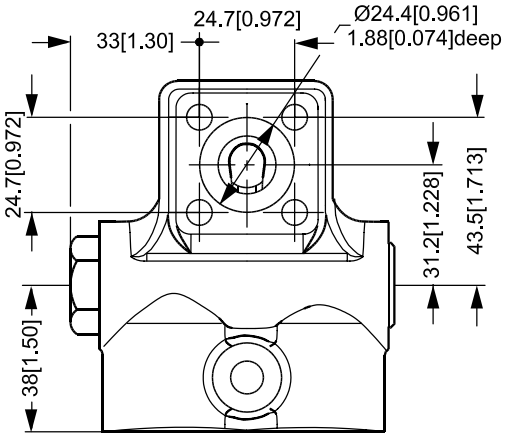
## DIMENSIONS

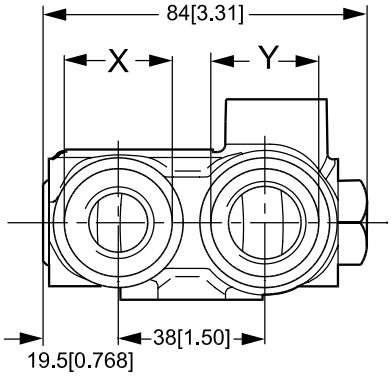
*OLSP 80:*

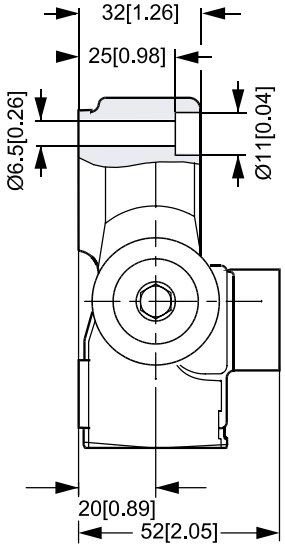
CF:
- G 3/8 w. spot face
- 15 mm (0.59 in) deep
- x = ø28, max 1.5 mm deep
- or
- M18 x 1.5 ISO 6149
- 15 mm (0.59 in) deep,
- y = ø29, max 1.5 mm deep

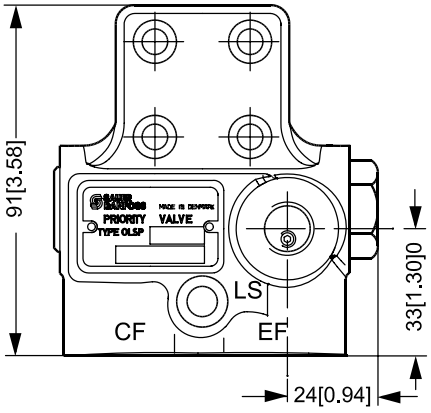
EF:
- G 1/2 w. spot face
- 15 mm deep
- y = ø34, max 1.5 mm deep
- or
- M22 x 1.5 ISO 6149
- 15 mm deep,
- x = ø34, max 1.5 mm deep

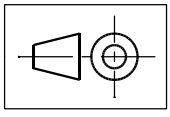
LS:
- G 1/4 w. spot face
- 12.5 mm deep
- or
- M12 x 1.5 ISO 6149
- 12,5 mm deep



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