



INSTRUCTIONS 1011-W00 e

Section	1011
Effective	June 2023
Replaces	September 2022

Original instructions

ECS System (Easy Clean System) for SLS 4/8 & FLO 6/8/11/15/25/40/50 pumps



These MOUVEX Instructions provide assistance for installation but there are not, in any circumstances, intended to replace the specific Instructions of the relevant equipment suppliers. Those Instructions must be read before fitting the equipment.

This manual must be used along with following manuals :

- the pump Instructions manual
- NT 1011-S00 Bellows monitoring system C SL FLO Series pumps

WARRANTY :

ECS System for SLS 4/8 & FLO 6/8/11/15/25/40/50 pumps is covered 24 months by warranty within the limits mentioned in our General Sales Conditions. In case of a use other than that mentioned in the Instructions manual, and without preliminary agreement of MOUVEX, warranty will be canceled.



Z.I. La Plaine des Isles - F 89000 AUXERRE - FRANCE
Tel. : +33 (0)3.86.49.86.30 - Fax : +33 (0)3.86.49.87.17
contact.mouvex@psgdover.com - www.mouvex.com

Your distributor :

1. DESCRIPTION

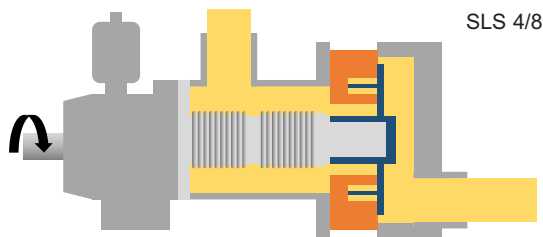
On a SLS 4/8 or FLO 6/8/11/15/25/40/50 pump equipped with ECS, the transmission includes a pressurization capacity destined to be supplied with 4 bar / 58 psi compressed air.

Air supply leads to pump inside opening, allowing full CIP flow rate to cross the pump with a limited pressure drop. As a consequence, external CIP bypass valve and linked piping are no longer necessary.

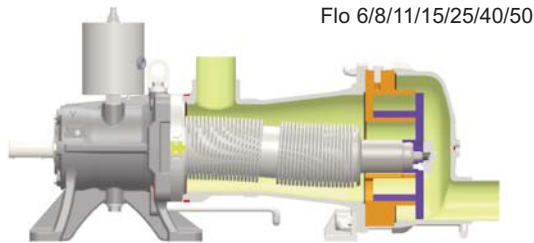
2. OPERATION

2.1 Process operation (Product pumping)

During process operation, transmission is not supplied with air. Disc remains against the cylinder, to allow pumping action.



SLS 4/8

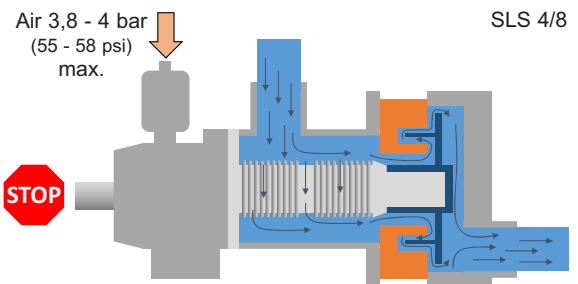


Flo 6/8/11/15/25/40/50

2.2 Cleaning in place or water flush

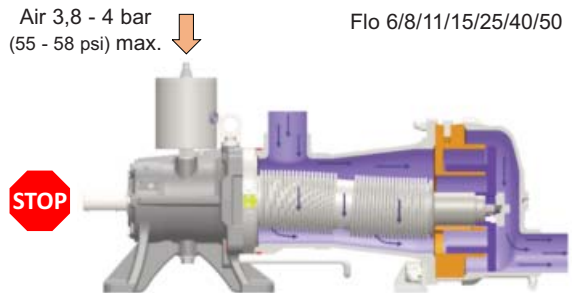
During a CIP or a water flush, the pump is stopped and the transmission is supplied with compressed air. This allows :

- To move disc away from the cylinder, thus letting the full CIP flow rate going through the pump with a limited pressure drop.
- To balance pressures inside and outside the bellows, allowing resistance to pressure and water hammers.



Air 3,8 - 4 bar
(55 - 58 psi)
max.

SLS 4/8



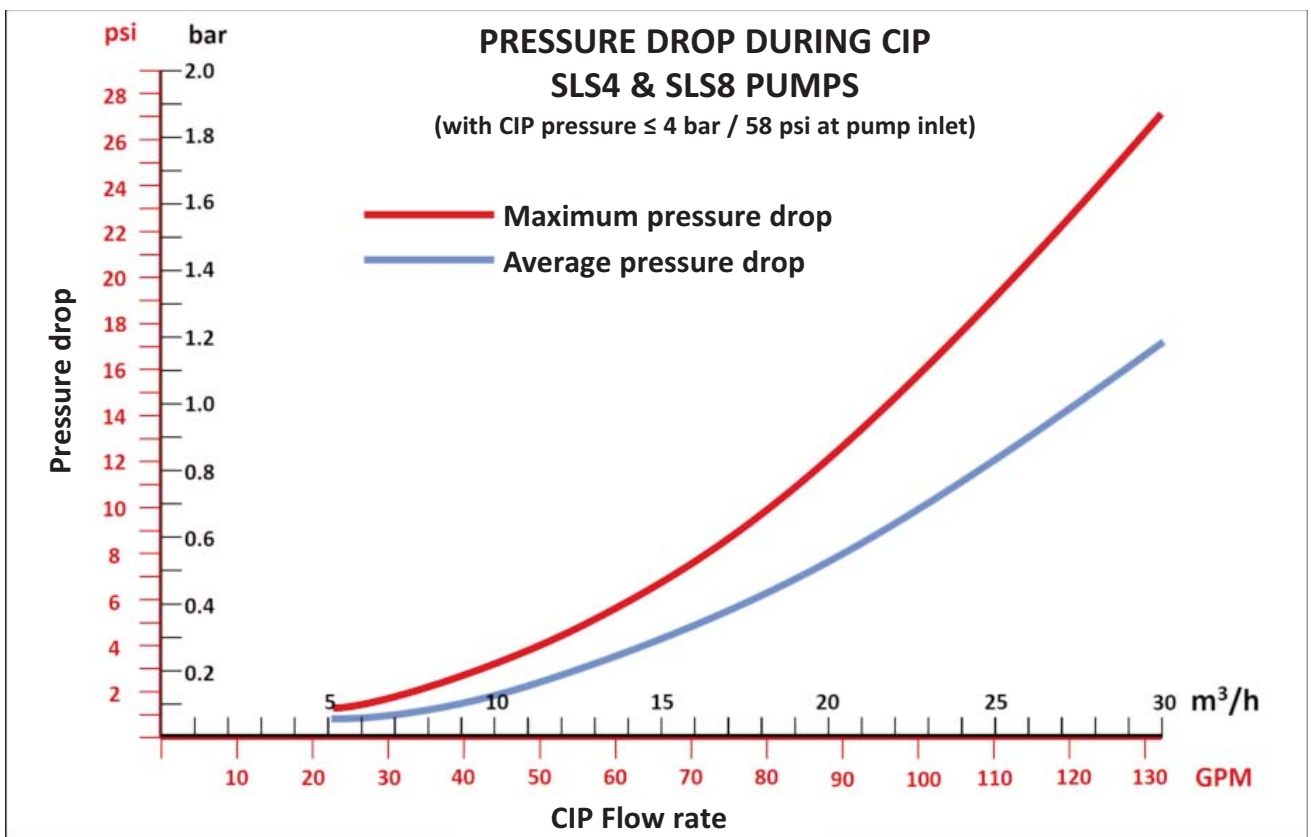
Air 3,8 - 4 bar
(55 - 58 psi) max.

Flo 6/8/11/15/25/40/50

2. OPERATION (continued)

Curve below gives pressure drop inside the opened pump depending on CIP flow rate.

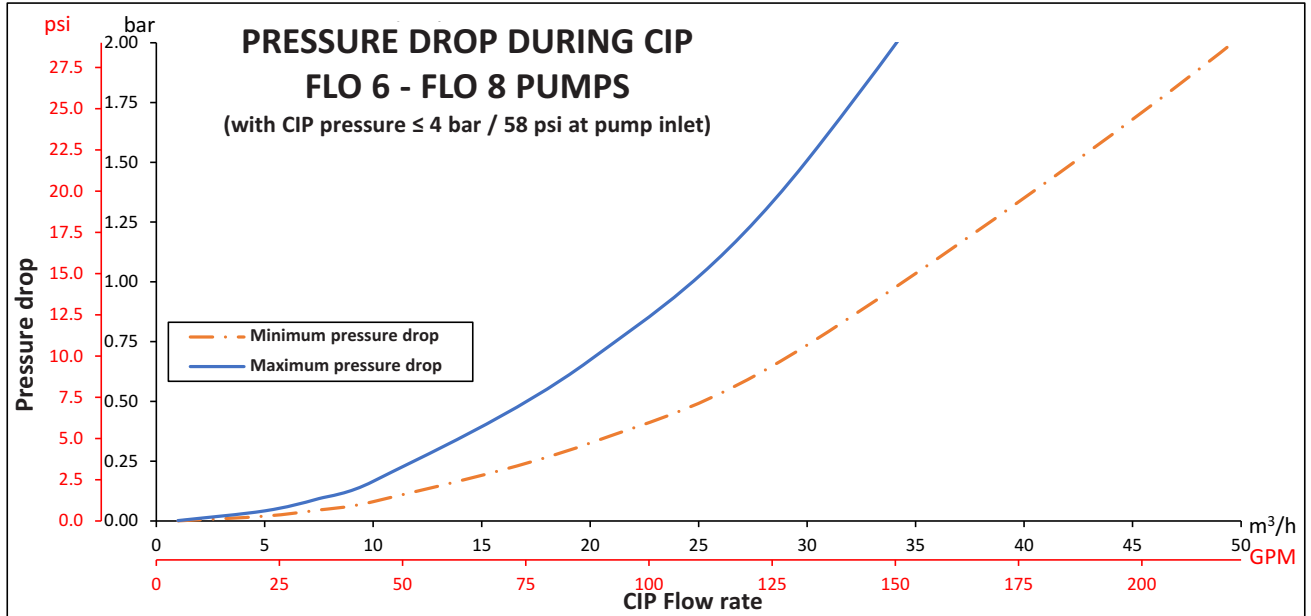
SLS4 - SLS8



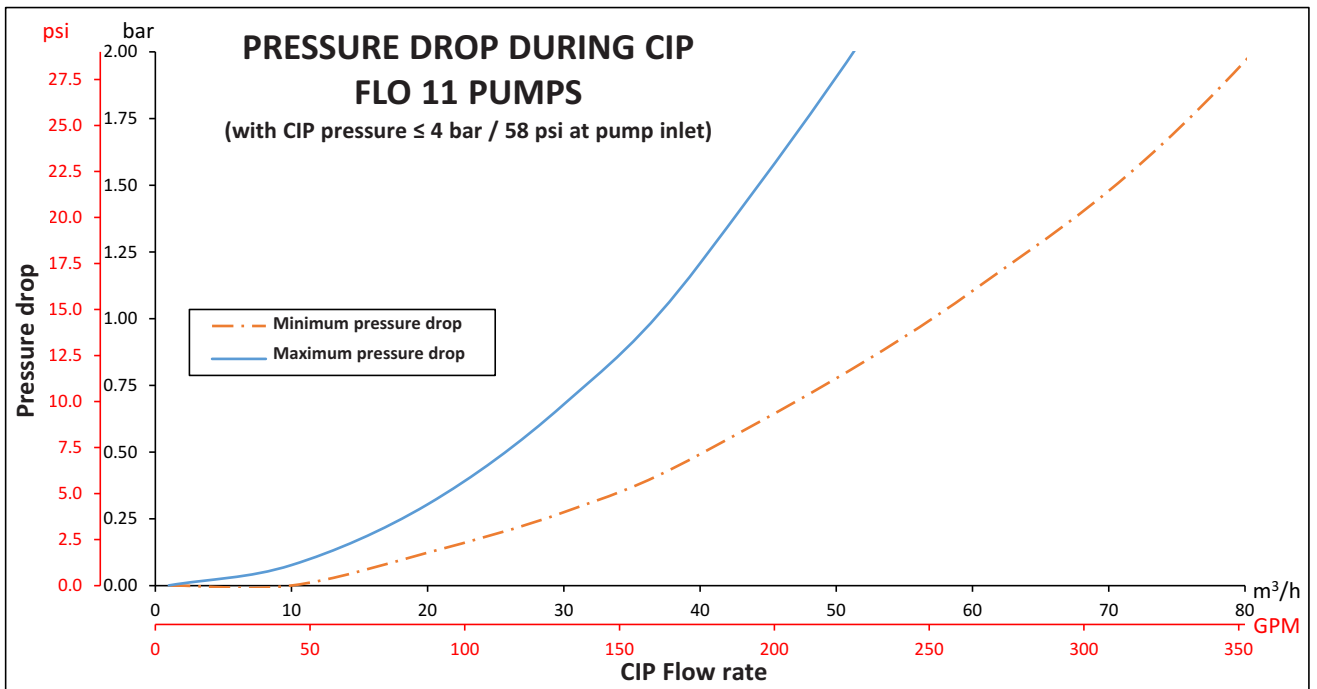
Non-contractual information.

2. OPERATION (continued)

G-FLO - H-FLO

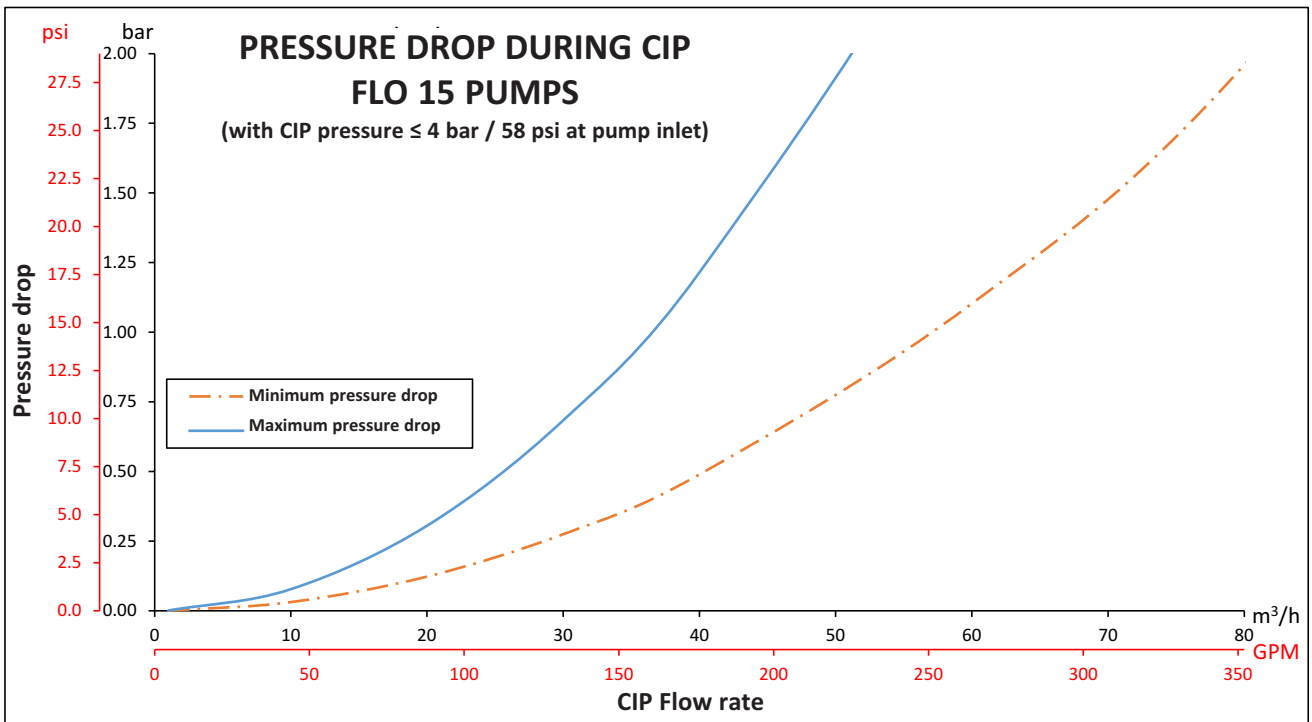


Non-contractual information.

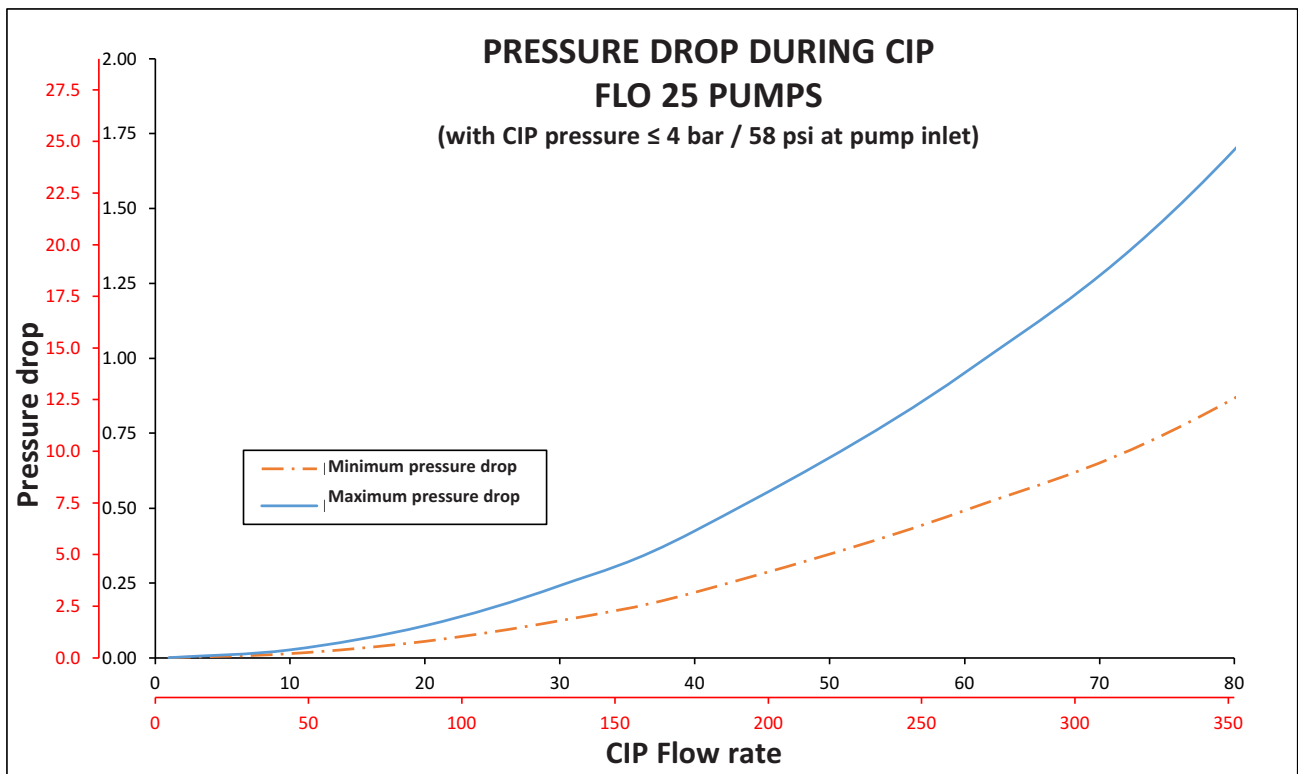


Non-contractual information.

2. OPERATION (continued)

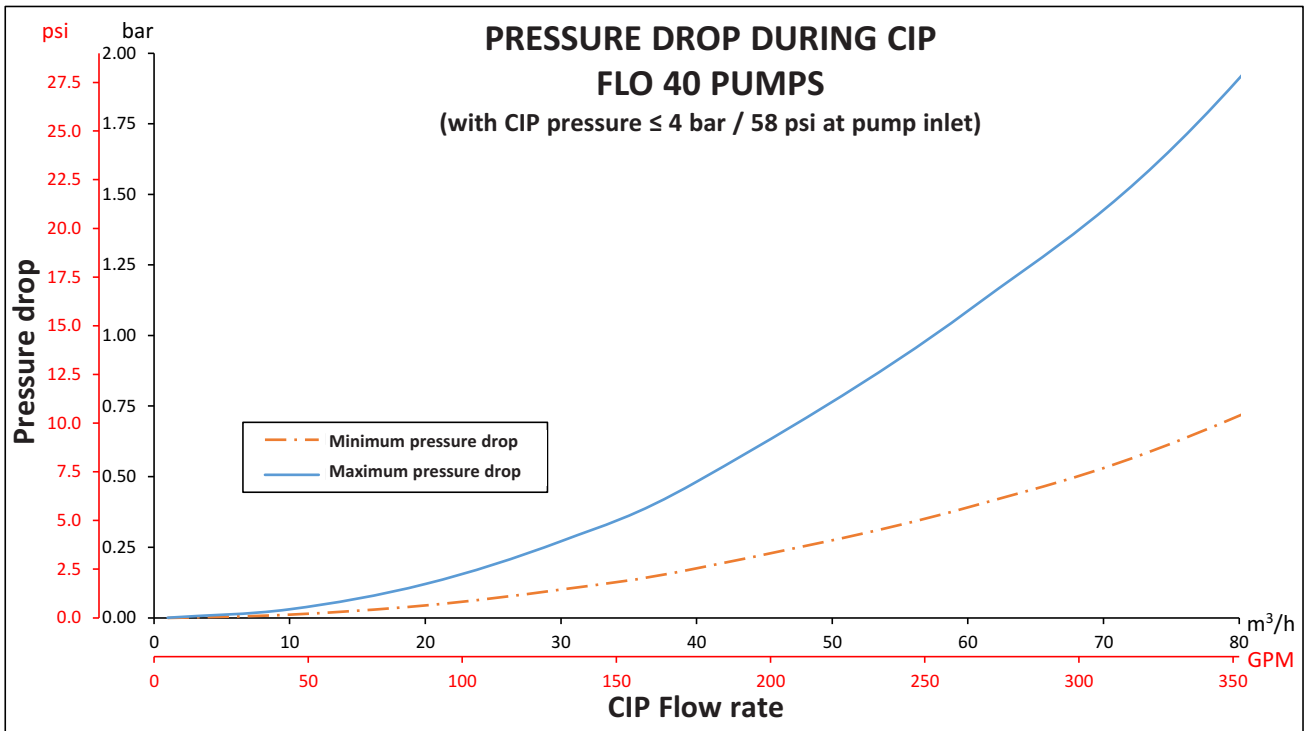


Non-contractual information.

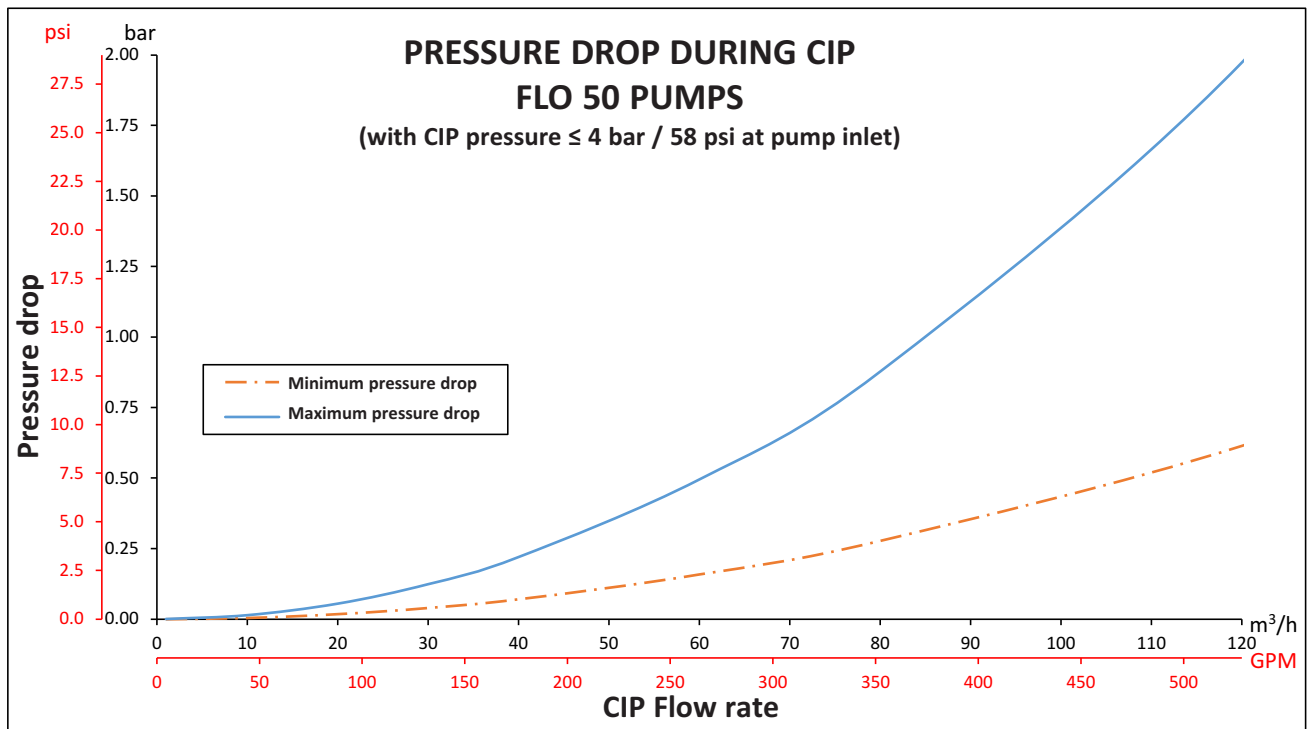


Non-contractual information.

2. OPERATION (continued)



Non-contractual information.



Non-contractual information.

3. INSTALLATION

Pumping set must be installed according to recommendations mentioned in pump Instructions.

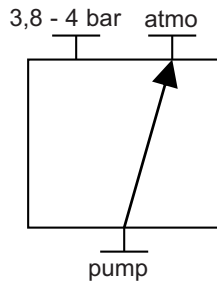
3.1 Air connection

Connect air supply to pressurization capacity and **check that pressure is between 3.8 and 4 bar (55 and 58 psi)**. Use a pressure reducer if necessary. Drive air supply with a 3-ways solenoid valve allowing either to put transmission inside at atmospheric pressure of 3,8 - 4 bar (55 - 58 psi). Solenoid valve can be similar to the ones used on butterfly/ball valves pneumatic actuators.

4. OPERATION

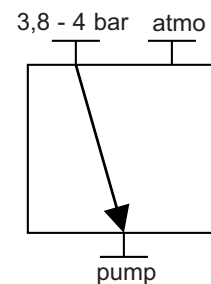
4.1 Process operation (product pumping)

Drive solenoid valve to put transmission inside to atmospheric pressure. Pressurizing transmission with ECS while pump is rotating will lead to **total flow rate loss** and can **damage the transmission**.



4.2 CIP or water flush

Pump must **absolutely** be **stopped** before pressurizing the transmission. Drive solenoid valve to put transmission inside at 3,8 - 4 bar (55 - 58 psi) pressure.



Cycle for any CIP or water flush will be as follows :

1. Pump stop.
2. Pump inside opening of the pump by driving solenoid valve (Compressed air 4 bar / 58 psi max).
3. CIP or water flush start.
4. CIP or water flush end.
5. Pump inside closing of the pump by driving solenoid valve (connection to atmosphere).
6. Pump ready for a new process phase.

Maximum pressure at pump inlet during CIP: 6 bar g / 90 psi g.

CAUTION ! INJURIES RISKS !

Transmission must never be pressurized alone (not mounted in a pump). Bellows tightness must never be controlled by introducing compressed air in the oil filling port.

For any operation on pump and transmission, **pump Instructions must be read.**

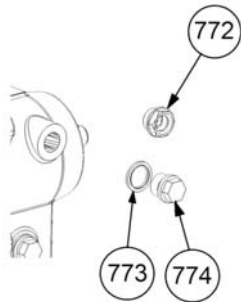
5. MOUNTING OF ECS KIT ON EXISTING TRANSMISSION

5.1 SLS4 - SLS8

Attach transmission bearing case to the work surface with a clamp or else, to keep transmission horizontal.

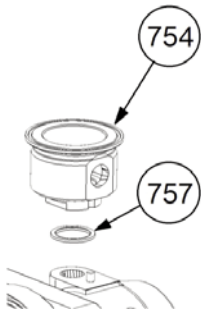
Drain transmission oil (see pump Instructions).

If transmission or pump were delivered before January 2018, change shaft lip seals (see pump Instructions). Use kit AUX316243.



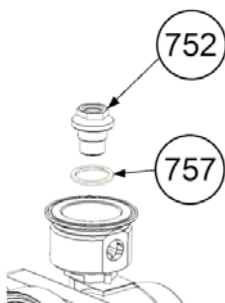
Remove oil level indicator 772.

Place and tighten a plug 773 with its gasket 774 in place of the oil level indicator.



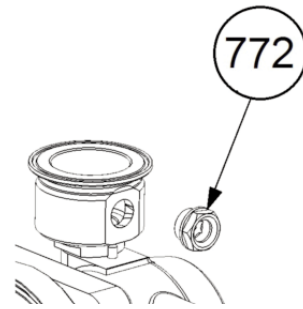
Place a ring 757 on the oil filling port.

Place lower half reservoir 754.



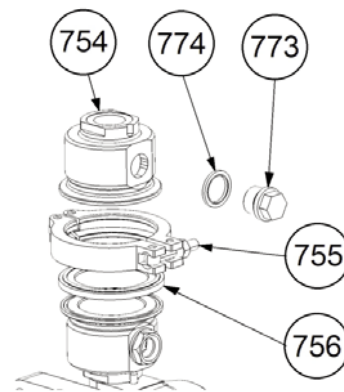
Place a ring 757 in the bottom of lower half reservoir 754.

Place and tighten nipple 752.



Place and tighten oil level indicator 772 on the lower half reservoir 754.

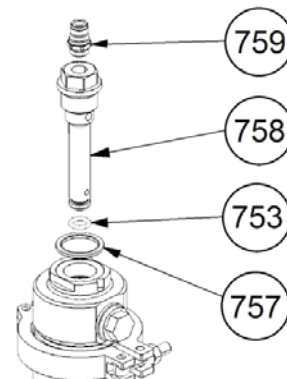
Fill up transmission with Movex CS05 oil until level exceeds totally level indicator level. Wait for possible air bubbles coming out and adjust level if necessary.



Place gasket 756 and upper half reservoir 754.

Put and tighten clamp collar 755.

Place and tighten a plug 773 with its gasket 774 on the upper half reservoir 754.



Put O-ring 753 at the end of restrictor 758.

Place a ring 757 on top of the upper half reservoir 754.

Place and tighten restrictor 758 and its O-ring 753 in the reservoir assembly.

Place and tighten air connection 759.

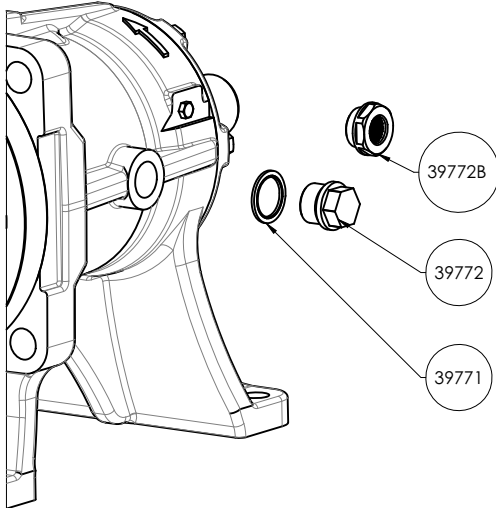
5. MOUNTING OF ECS KIT ON EXISTING TRANSMISSION (continued)

5.2 FLO 6/8/11/15/25/40/50

Mounting the ECS is possible on a pump without having to remove the transmission.

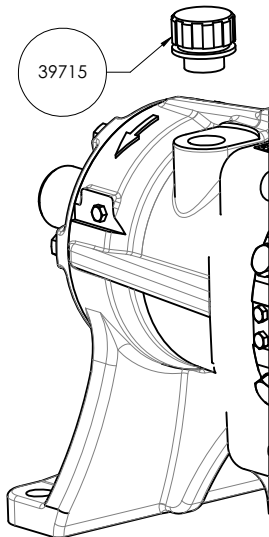
Attach transmission bearing case to the work surface with a clamp or else, to keep transmission horizontal.

Drain transmission oil (see pump Instructions).

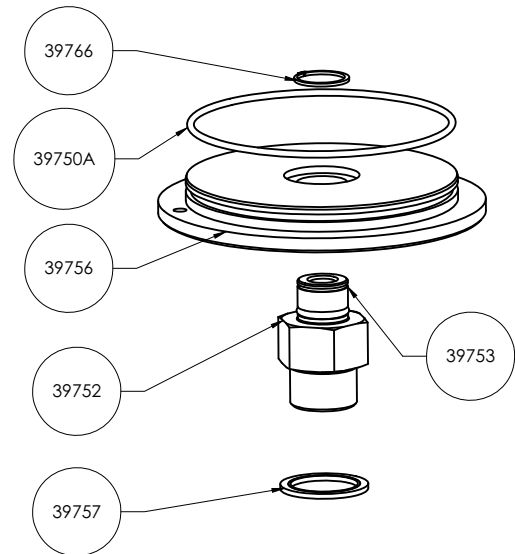


Remove oil level indicator 39772B.

Fit plug 39772 and tighten it with its ring 39771 at the location of the oil level indicator. Assembly torque 40 N.m.

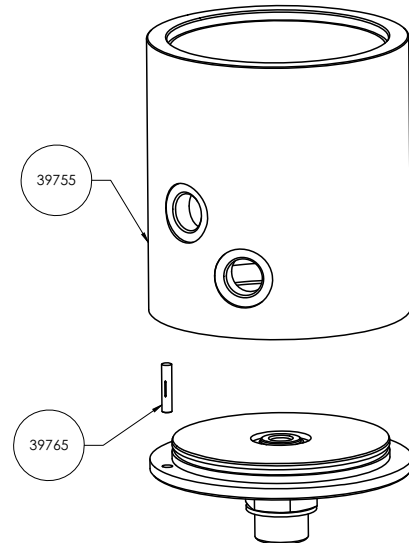


Remove breather 39715.



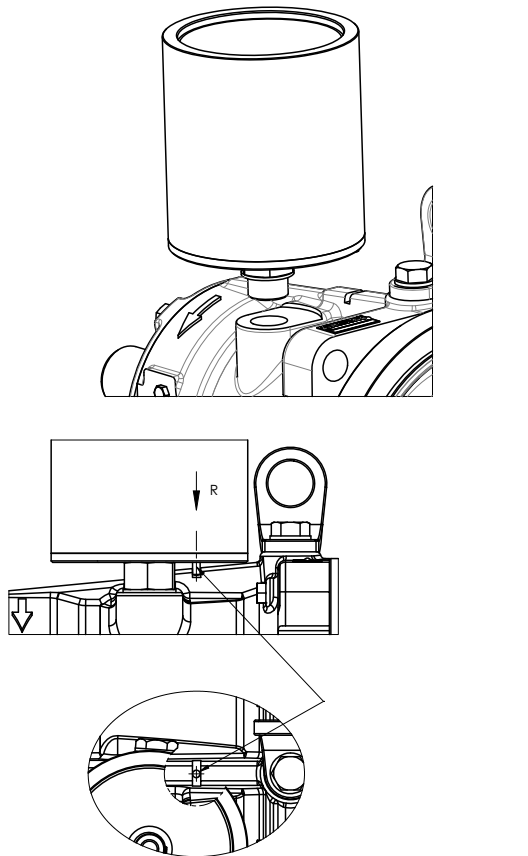
Fit the nipple 39752 and insert the sealing ring 39757. Assembly torque 40 N.m. Lubricate and fit the seal 39753.

Fit the O-ring 39750A (Ø 101,3 mm) on the cover 39756. Position the circlip 39766 in its location.

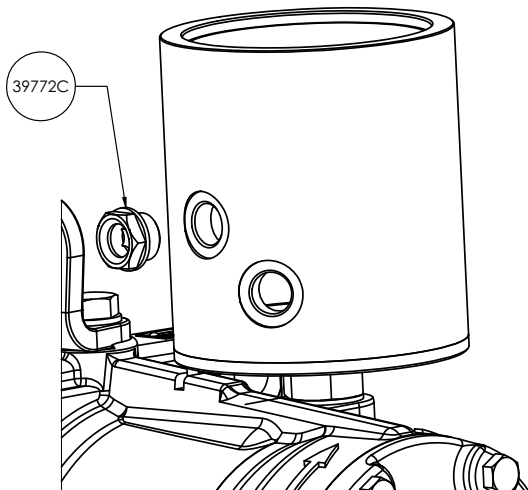


Assemble the reservoir 39755 and the cover 39756 using the pin 39765. Cover and reservoir may need to be fitted with a mallet or press.

5. MOUNTING OF ECS KIT ON EXISTING TRANSMISSION (continued)

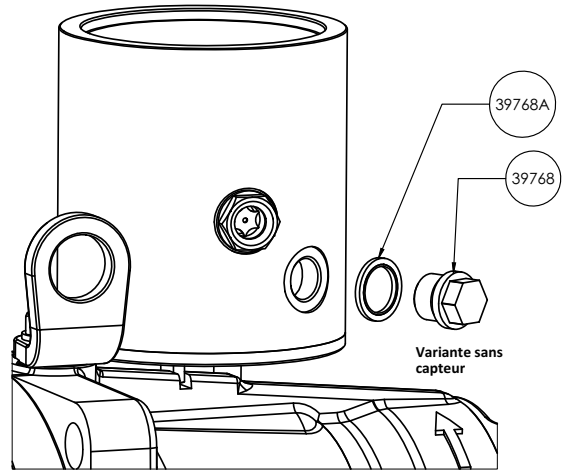


Fit the reservoir by locating the pin 39765 on the groove.



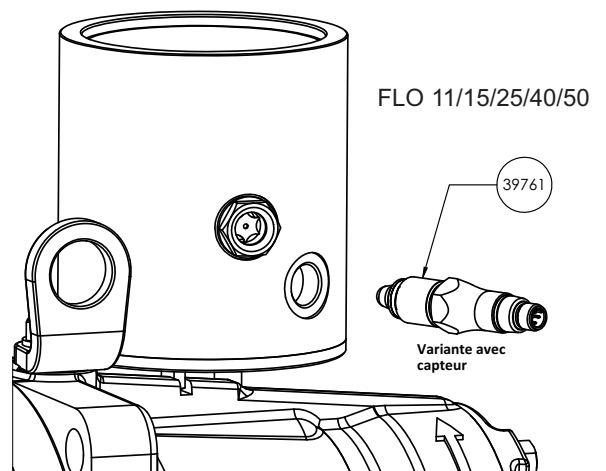
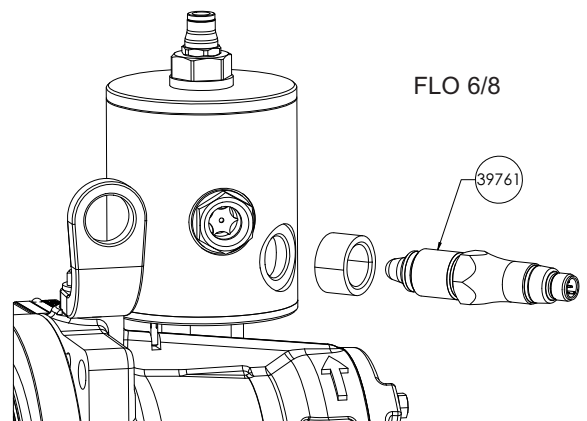
Place and tighten the oil level indicator 39772C on the reservoir assembly. Assembly torque 7 N.m.

Variant without sensor



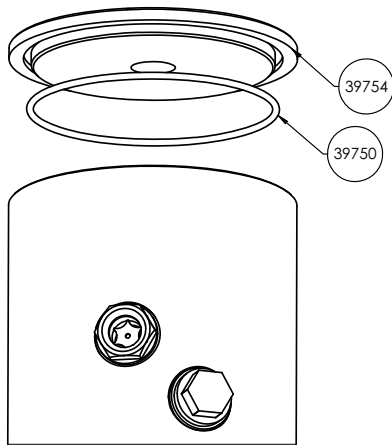
Fit bushing 39768A and plug 39768. Assembly torque 15 N.m.

Variant with sensor



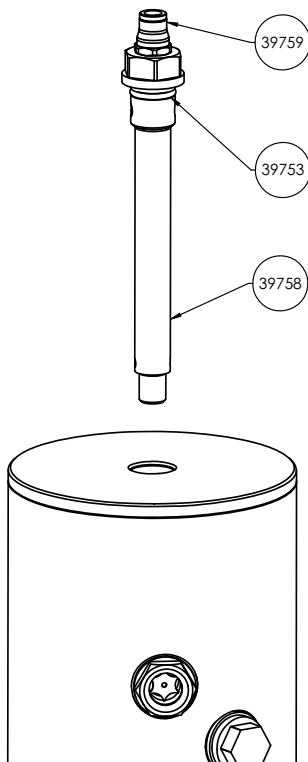
Mount the sensor 39761 by applying PTFE tape on the thread. Assembly torque 20 N.m.

5. MOUNTING OF ECS KIT ON EXISTING TRANSMISSION (continued)



Place the O-ring 39750 (\varnothing 108 mm) in the groove of the cover 39754. Mount the assembly on the reservoir 39755.

Fill up transmission with Movex CS05 oil until oil level is in the middle of the indicator. Wait for possible air bubbles coming out and adjust level if necessary.



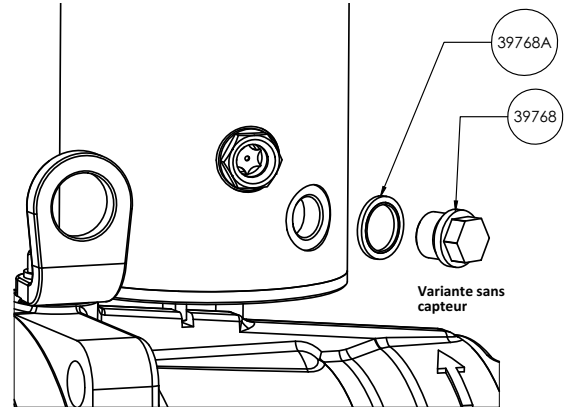
Lubricate and place the O-ring 39753 in the groove of the restrictor 39758.

Place and tighten the restrictor 39758 and its O-ring 39753 in the reservoir assembly. Assembly torque 25 N.m.

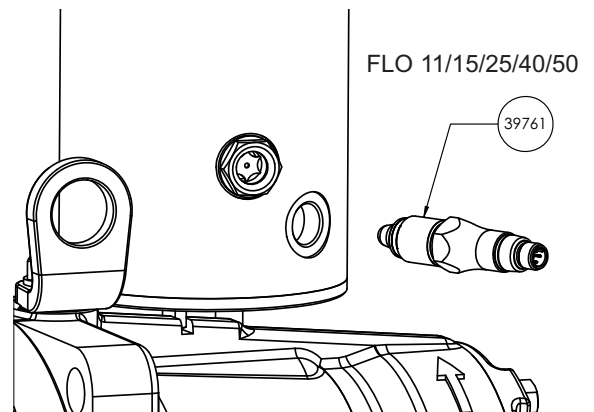
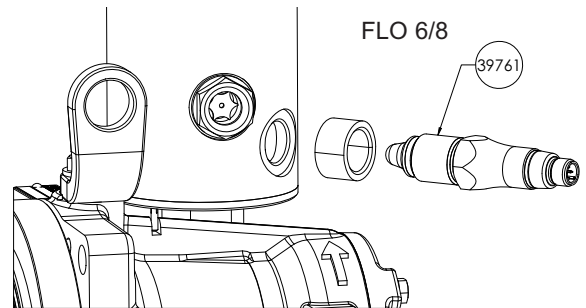
Place and tighten air connection 39759. Assembly torque 12 N.m.

Modification version without sensor to version with sensor

Drain transmission oil (see pump Instructions).



Remove plug 39768 and bushing 39768A.



Mount the sensor 39761 by applying PTFE tape on the thread. Assembly torque 20 N.m.

Fill up transmission with Movex CS05 oil until oil level is in the middle of the indicator. Wait for possible air bubbles coming out and adjust level if necessary.

6. INSTALLING THE OIL LEVEL SENSOR

6.1 Electrical connection

- ✓ A voltage supply of 12 V to 30 V DC is provided.
- ▶ Switch off supply voltage.
- ▶ Connect sensor in accordance with the pin assignment.

Terminal assignment



Housing dimensions available only for a plug connector in stainless steel

Output type	Equivalent circuit	Function	M12-A 4-pin	Cable outlet
PNP		+ Vs	1	brown
		SW1 (NO)	4	black
		SW1 (NC)	2	white
		GND (0 V)	3	blue
NPN		+ Vs	1	brown
		SW1 (NO)	4	black
		SW1 (NC)	2	white
		GND (0 V)	3	blue

Other information and connections: refer to the manufacturer's instructions :

www.baumer.com

BAUMER CleverLevel® LBFS