

1. Supplementary Sheet for User Manual

1.1 Revision history

This supplementary sheet(s) is/are exclusively valid for

Product:

Product Designation: FlexxPump4 DXXX-OIL (FP4 D-OIL)
Product revision: ---

with the item number(s): 210948, 210949, 210950, 210951, 210952, 210953, 210954, 210955, 210956, 210957, 211471.

The chapters described in this supplementary sheet(s) replace the chapters in
User Manual:

Date of creation: 01.2020
Revision of the User Manual: 0

for the

Product:

Product Designation: FlexxPump4 Direct (FP4 D)
Product revision: ---

Chapters not replaced by this supplementary sheet(s) in the original user manual remain valid without exception. Further supplementary sheets to the original instruction manual are valid in addition to this supplementary sheet.

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The content and technical specifications are subject to change without notice.

3. Description of function

3.1 General information

The FP4 DXXX-OIL is designed as an extremely compact double piston pump for the lubricant oil. The pistons run force-controlled and counter-rotating.

The FP4 DXXX-OIL is available as a version with one, two, three or four lubricant outlets, see Chapter 5. The outlets are secured by an integrated non-return valve. Approx. 0.16 cm³ of lubricant is pumped during each dispensing operation; multiple dispensers can be set one after the other.

The present FlexxPump4 as DXXX-OIL version has to be integrated into an external control (e.g. PLC). The FP4 DXXX-OIL has an electrical interface with which you can control and command the FP4 D. Furthermore, the FP4 DXXX-OIL enables remote monitoring by output signals in order to be able to query the status and possible error messages (e.g. empty cartridge).

By means of various input signals processed by the microelectronics, the FP4 DXXX-OIL is controlled to supply the lubrication point with the ideal amount of lubricant.

① The FP4 DXXX-OIL is equipped from the manufacturer with a special oil cartridge. This must not be replaced. In addition, a floater is installed inside the oil cartridge, which informs the microelectronics of the FP4 DXXX-OIL when the oil cartridge is empty.

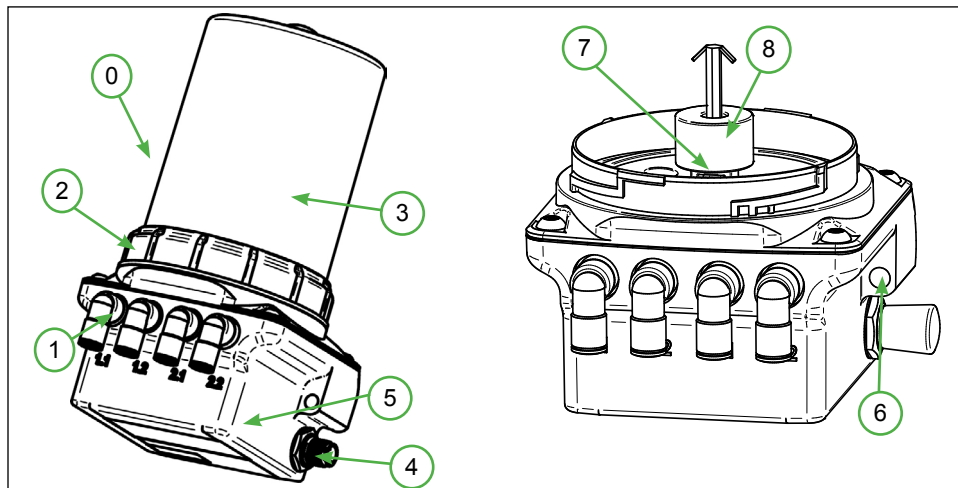


Fig. 1: Overview FP4 DXXX-OIL

Nr.	Description
0	FlexxPump4 DXXX-OIL (FP4 DXXX-OIL)
1	Lubricant outlet, outlets (different versions possible)
2	Retaining ring
3	Housing
4	M12x1 electrical interface
5	Nameplate with designation, CE mark and serial number
6	Through hole for assembly
7	Lubricant inlet with thread for cartridge
8	Oil floater

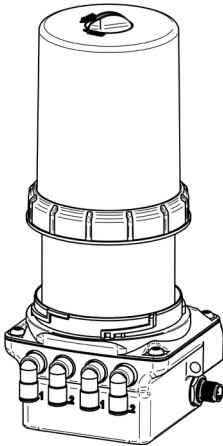
3.4 Technical data

Lubricants and hydraulics		
Volume Cartridge	250 / 400	ml
Lubricant	Oil	

6.2 Assembly

1. Condition as delivered

The FP4 DXXX-OIL is delivered in a cardboard box. Depending on the version ordered, further accessories such as a lubricant cartridge or additional tube connection parts are included.

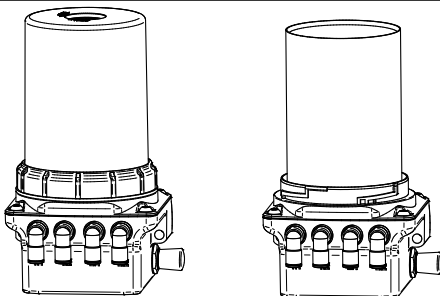


2. Remove the housing from the power unit of the FP4 DXXX-OIL.

- Separate the housing from the power unit by turning the retaining ring counterclockwise.

- Make sure that no dirt, water or foreign bodies enters the lubricant inlet.

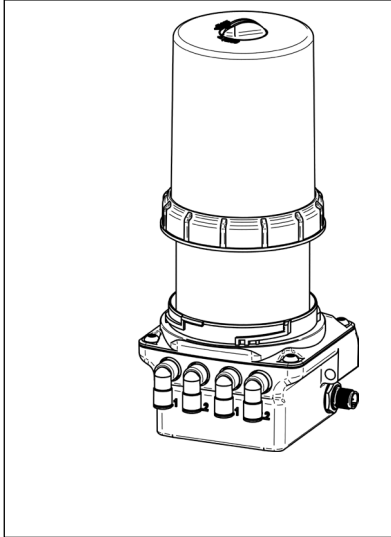
① Alternatively, you can remove the activation and programming key on the upper housing of the FP4 DXXX-OIL to expose the oil reservoir. Turn the action pin to the OPEN position and pull it off.



3. Filling the oil cartridge

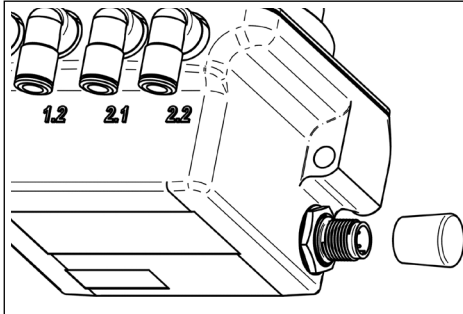
- Fill the cartridge with oil until the mark "max. level" on the oil cartridge is reached

① Pay attention to cleanliness when carrying out the work. It is imperative that dirt and foreign bodies do not enter the cartridge.



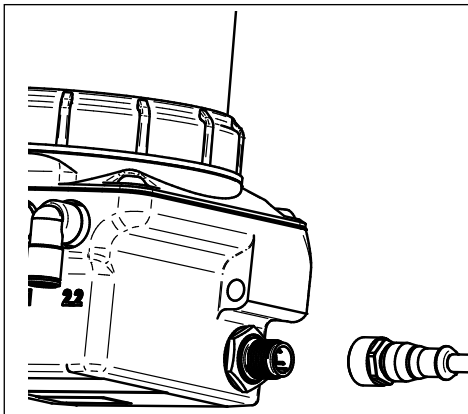
4. Assembling the housing on the power unit of the FP4 DXXX-OIL.

- Place the dismantled housing on the FP4 DXXX-OIL and press it onto the power unit.
 - Fasten the housing to the power unit by turning the retaining ring clockwise.
 - The retaining ring must snap into place when turning and be completely tightened.
- ① If you have only removed the activation and programming key to fill the oil cartridge, remount it in the upper housing of the FP4 DXXX-OIL. Note the CLOSE position.



5. Remove the protective cap on the side of the FP4 DXXX-OIL.

- Remove the black protective cap from the side of the electrical M12x1 interface.



6. Connect the electrical interface

- Connect the FP4 DXXX-OIL to the external power supply or controller via the M12x1 interface on the side of the FP4 DXXX-OIL using a suitable connecting cable.
- Depending on the application, both connection cables with straight or angled sockets can be used.
- Please refer to chapter 8.1 for the condition of the connection cable.



DANGER

Defective or faulty electrical connections or unauthorized live components can lead to serious injuries or even death.

- Have all electrical connection work carried out by qualified personnel only.
- Replace damaged cables or plugs immediately.
- Before carrying out any electrical installation work, observe the five safety rules of electrical engineering:
 - Unlocking
 - Secure against unintentional restarting.
 - Check that there is no voltage.
 - Ground and short-circuit.
 - Cover adjacent live parts.

7. Operation and settings

7.1 General information

What you should know about operating and setting the FP4 DXXX-OIL:

✓ For operation, the FP4 DXXX-OIL must be integrated into a control system (PLC) and must be commanded and controlled via the PLC. The FP4 DXXX-OIL delivers one or more strokes (one stroke = 0.16 cm³) depending on the signals of the external control (PLC). Depending on the internal status of the FP4 DXXX-OIL (e.g. cartridge empty), different output signals are issued by the FP4 DXXX-OIL.

✓ If you have any questions about your application and the correct settings for FP4 DXXX-OIL, please contact the manufacturer (chapter I.II).

● Make sure that your PLC program is correct for your application and that the lubrication point is supplied with the correct amount of lubricant per time unit.

If this is the case, you can operate the FP4 DXXX-OIL.

If this is not the case, change your PLC program accordingly.

① To use the FP4 DXXX-OIL, it first has to be properly mounted and installed. The installation is very simple and described in detail in chapter 6.2.

9.1 Maintenance schedule

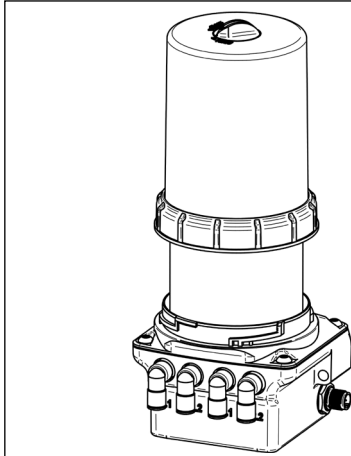
The following maintenance schedule for the FP4 DXXX-OIL must be observed:

Maintenance	Commis- sioning	After 500 hours or after 3 months	Every year	If required
Cleaning	x	x	x	x*
Visual check	x	x	x	x*
Oil refill			x**	x*

* Depending on operating conditions and lubricant consumption

** Recommendation after 2 years at the latest

9.2 Oil Refilling

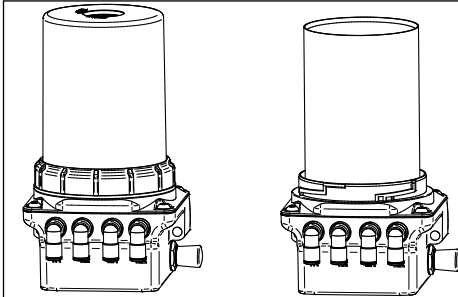


1. Remove the housing from the power unit of the FP4 DXXX-OIL.

- Separate the housing from the power unit by turning the retaining ring counterclockwise.

- Make sure that no dirt, water or foreign bodies enters the lubricant inlet.

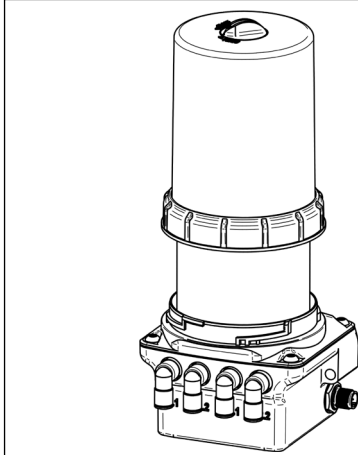
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2. Filling the oil cartridge

- Fill the cartridge with oil until the mark "max. level" on the oil cartridge is reached

① Pay attention to cleanliness when carrying out the work. It is imperative that dirt and foreign bodies do not enter the cartridge.



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- Place the dismantled housing on the FP4 DXXX-OIL and press it onto the power unit.

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