

ECP Electrically driven cartridge pump unit

for single-line centralized lubrication systems

Original installation instructions following machinery
directive 2006/42/EC for incomplete machines with
corresponding operating instructions

EN

오



ECP 는
SKF MonoFlex . ECP LM가 가

가 24V DC
가
가 120ml 380ml
0~000 가 20~1500 mm³/s

ECP

PLC

NLGI

장점:

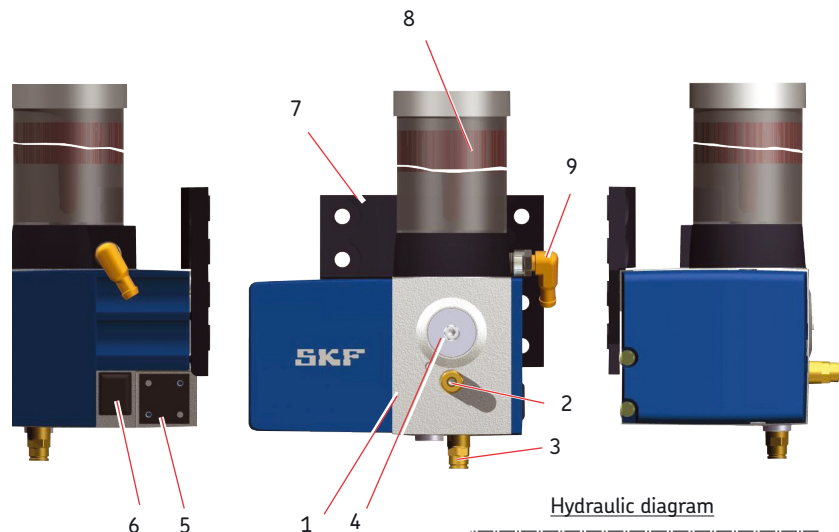
- 높은 비용 효율
- 간편한 작동
- 두 종류의 카트리지 사이즈에 다양한 윤활제
- 다른 종류의 윤활유 주입 및 오염된 윤활유 사용에 대한 위험 최소화
- 신뢰성 상승
- 계획되지 않은 고장 시간 최소화
- 정비 주기 확장
- 효율적인 윤활류 사용으로 환경 보호

Version 01

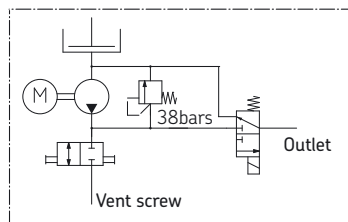


3. Overview

Components of the ECP Fig. 1



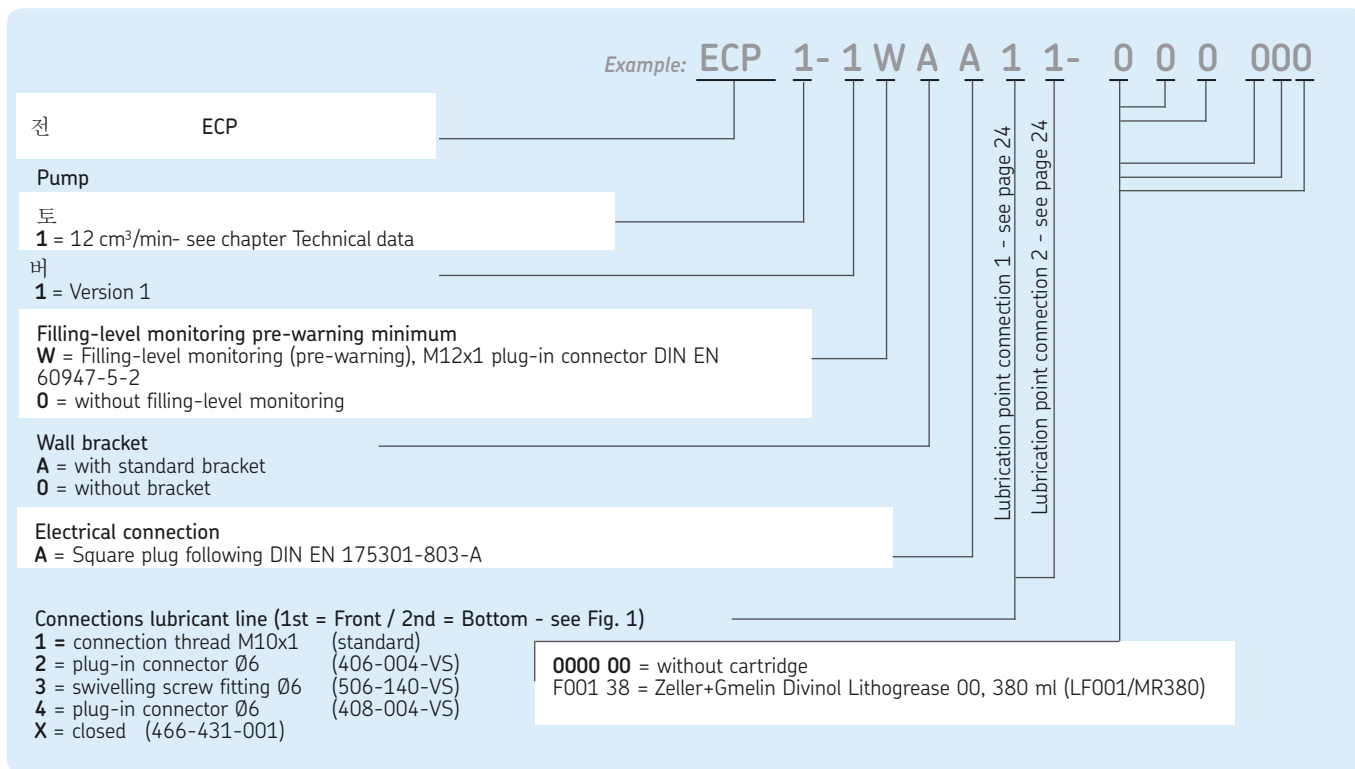
Hydraulic diagram



Components of the ECP

Item	Description
1	ECP Pump body
2	Lubricant outlet 1 with SKF plug-in connector as an option
3	Lubricant outlet 2 with SKF plug-in connector as an option
4	Pump vent/ Vent screw
5	Square plug following DIN EN 175301-803-A for voltage supply of 24 VDC
6	Pushbutton (DK) (pressing and holding function)
7	Mounting flange / wall bracket
8	SKF single- use lubricant cartridge
9	Connecting plug for optional monitoring of the filling level (M12x1)

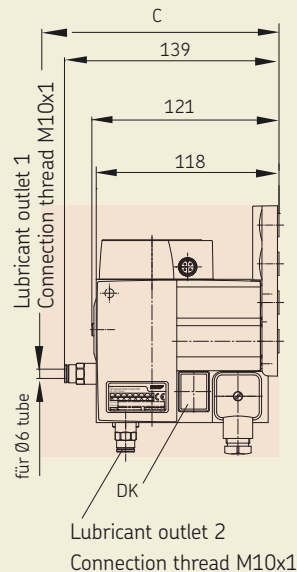
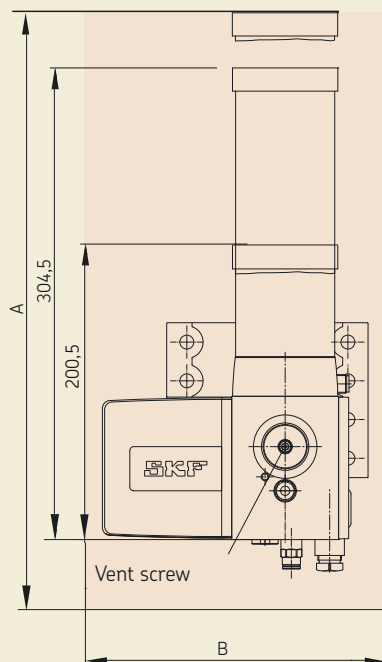
3.1 Product code



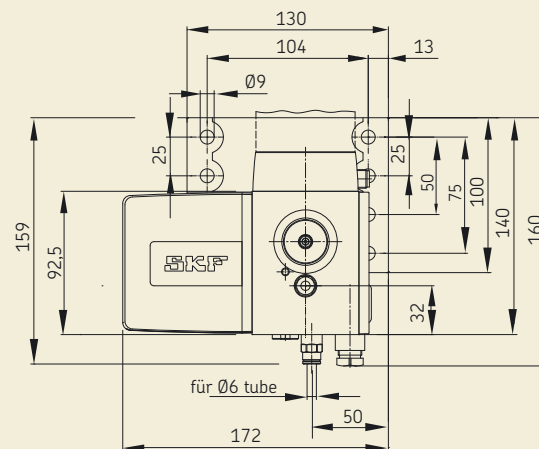
4.3 Connection dimensions, mounting bores and minimum assembly dimensions

ECP Assembly drawing, Fig. 2

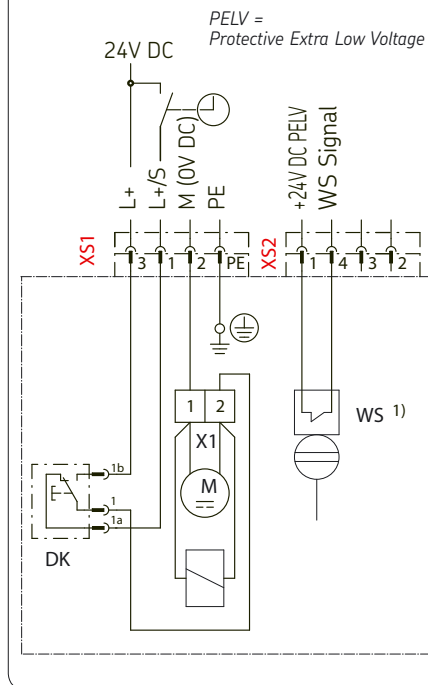
Illustration with optional accessories, see chapter 11



Minimum assembly dimensions	
A = height:	440 mm
B = width:	240 mm
C = depth:	210 mm



Electrical connection, Fig. 6



Legend of Fig. 6

Plug XS1 (Voltage supply)

Pin	Assignment
1	Switching signal L+/S
2	Mass
3	Voltage supply 24 V DC
PE	Protective earth PE

Plug XS2 (Filling level switch WS) ¹⁾

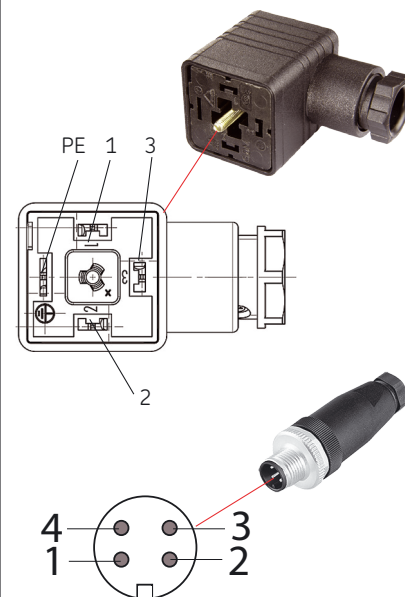
Pin	Assignment
1	Voltage supply 24 V DC
4	Signal filling level switch (WS) Pre-warning minimum filling level

Pushbutton DK (additional lubrication)

Pin	Internal assignment
1 a	Switching signal L+/S
1b	Voltage supply 24 V DC
1b	Voltage of electric motor

1) Opener (NC) (opens in case of minimum filling level)

Electrical connection, Fig. 7



1) Accessories, see chapter 11

4.7.2 Electrical characteristics, version 24 V DC

ATTENTION

The specified supply voltage is 24 V DC.
Verify proper protection of the electric circuit.
Use only original fuses with the specified current rating.

Electrical characteristics, 24 V DC version

Type of protection following EN 60529 IP 54

Motor

Operating voltage	24 VDC
Operating mode following recommended line protection	S3 15% ED according to DIN EN 60034-1 ¹⁾ according to DIN EN 60898 B 6A or C4 A

Filling level switch

Switching capacity	3 W/VA max.
Switching voltage	100 V max.
Switching current	0.3 A max.
Volume resistance	150 mOhm
Response behaviour	30 to 35 AW
Fall-back behaviour	>15 AW
Function	Opener (NC) (opens in case of approximation of solenoid)

1) Temporarily and occasionally the cartridge pump unit may be operated beyond the designated operating mode S3 15% ED, for example, to fill the lubrication lines or to vent the cartridge pump unit (after changing the cartridge). To do so a temporary and occasional operating mode S1 100% ED is admitted, whereby the maximum pump run time must not exceed 15 minutes. After a temporary operating mode S1 100% ED a pause time of at least 10 minutes must be provided (cooling down of the electrical pump components) always.
Permanent operation is triggered via the pushbutton on the cartridge pump unit or by a corresponding filling program (recommended) of the PLC control of the machine of the cartridge pump unit.

4.8 Vent centralized lubrication system

☞ see Fig. 7

Temporarily and occasionally the cartridge pump unit may be operated beyond the designated operating mode S3 15% ED, for example, to fill the lubrication lines or to vent the cartridge pump unit (after changing the cartridge). To do so a temporary and occasional operating mode S1 100% ED is admitted, whereby the maximum pump run time must not exceed 15 minutes. After a temporary operating mode S1 100% ED a pause time of at least 10 minutes must be provided (cooling down of the electrical pump components) always. For the venting procedure of the centralized lubrication system it is helpful:

- o to prime longer tube line sections before connecting them to the lubrication point.

Prerequisites:

The ECP cartridge pump unit (1) must be mounted according to the description.

- Prime lubricant lines with lubricant
- Mount the lubricant lines (5/6) towards the metering devices; **do not connect** the lubricant line (5) to the cartridge pump unit yet.
- Screw lubricant cartridge (2) into the ECP (see chapter 6.3)
- Loosen vent screw (3) (SW4) by one turn
- Press and hold pushbutton DK (4) until lubricant leaks from the vent screw (3) free from bubbles
- Tighten vent screw (3)
- Clean outlet, dispose of leaked lubricant
- Connect lubricant line (5) to the ECP (1)
- Loosen lubricant line (6) at the first metering device (seen from the pump outlet)
- Press and hold pushbutton DK (4) until lubricant leaks from the lubricant line free from bubbles.
- Connect lubricant line (6)
- Repeat venting procedure at the second metering device (seen from the pump outlet)
- Then the following steps must be carried out for all metering devices:
- Loosen lubricant lines from the lubrication points
- Press and hold pushbutton DK (4) until lubricant leaks from the lubricant lines free from bubbles.
- Connect lubricant lines

Single-line centralized lubrication system, Fig. 7

