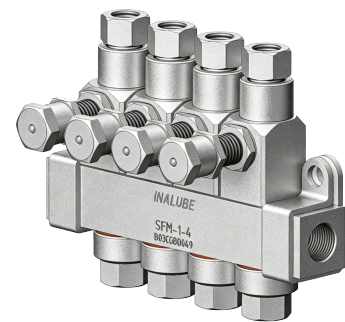
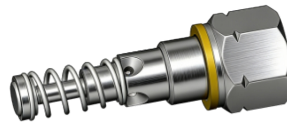




LUBE^{lite}[™] Rotating Lubrication System

■ LEP Rotating Lubrication Pump Unit



✧ Product Description

LUBelite™ rotating pump unit is a kind of special-designed and rotate-able pump unit which is mainly focusing on wind turbo generator applications. It also can be used in other segment if chasing better grease flow capability.

This pump unit has a max. operating pressure of 350 bar. Hence, the applicable lubricant viscosity can be as high as NLGI 2 grease.

Each lubrication pump can have up to 6 pump elements installed simultaneously, forming 6 separate progressive lubrication systems.

The outlets of pump unit is able to install solenoid valve and pressure switch to serve single-line lubrication system too.

✧ Product Features

1. Strong and stable power: BLDC motor or AC motor.
2. Suitable for harsh working conditions: maximum working pressure up to 350 bar.
3. Higher protection class: IP 66.
4. High-performance plastics plus die-cast aluminum alloy pump body: reduces overall weight but increases the pump strength.
5. The wider temperature tolerance range improves the pump's operating capability.

✧ Technical Data

Power Supply			DC 24 V	Working Pressure	Max. 350 bar
			AC 230V/50 Hz	Tank Capacity	4, 8, 10, 15, 20, 25 L
Rated Power			< 100 W	Refilling Port	DIN 71412 A
Power Socket			DIN 43650 A	Lubricant	NLGI 0, 1, 2
Pump Element Mounting Port	Standard Rotating		6 outlets, M20x1.5	Working Temperature	-41°C ~ +70°C
	Rotating & Single-line	Pump Delivery	6.0 cm ³ /min	IP Class	IP 66
		Outlet Thread	1 x G 1/4	Mounting	Any position

■ LEP Rotating Lubrication Pump Part Number

LEP21 15 S GL C0 01 D24 - 000020 / 000010 R

LUBelite 21 series pump station _____

Tank capacity _____

2: 4L 3: 8L 10: 10L 15: 15L 20: 20L 25: 25L

Pump type ¹⁾ _____

S: Standard rotating pump unit

MS: Rotating & single-line pump unit

Low level alarm _____

GL: DC 24V GN: No

Controller type _____

C0: No controller integrated

CH: Controller integrated, unit of interval time is Hour

CM: Controller integrated, unit of interval time is Minute

Signal and cable code _____

Refer to below table

Power supply _____

D24: DC 24V, power socket (DIN 43650A)

D24V: DC 24V, power socket (DIN 43650A), with 5m cable

A23: AC 230V / 50Hz, power socket (DIN 43650A)

A23V: AC 230V / 50Hz, power socket (DIN 43650A), with 5m cable

Pump element ^{2) 3)} _____

0: No 1: 3.3 cm³/min 2: 6.0 cm³/min

Safety valve ^{2) 3)} _____

0: No

1: Safety valve installed with ferrule connector of Ø6

2: Safety valve installed with ferrule connector of Ø8

3: Safety valve installed with ferrule connector of Ø10

Safety valve with function of grease return to tank ⁴⁾ _____

Blank: No R: Yes

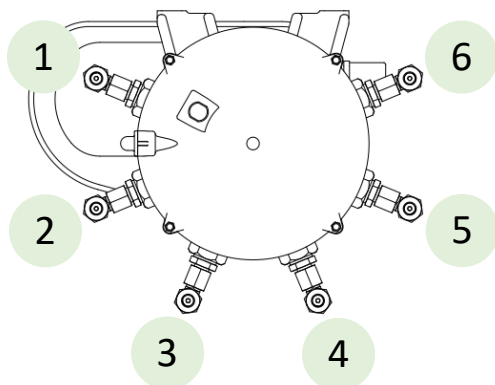
1) When selecting "MS" as pump type, "C0" code of controller type is not available.

2) The sequence is counterclockwise based on the pump top view.

3) When selecting "MS" as pump type, the codes of pump element and safety valve related don't need to input.

4) When selecting the grease return function code of "R", only 5 pump elements can be installed at most.

Pump element and safety valve positioning



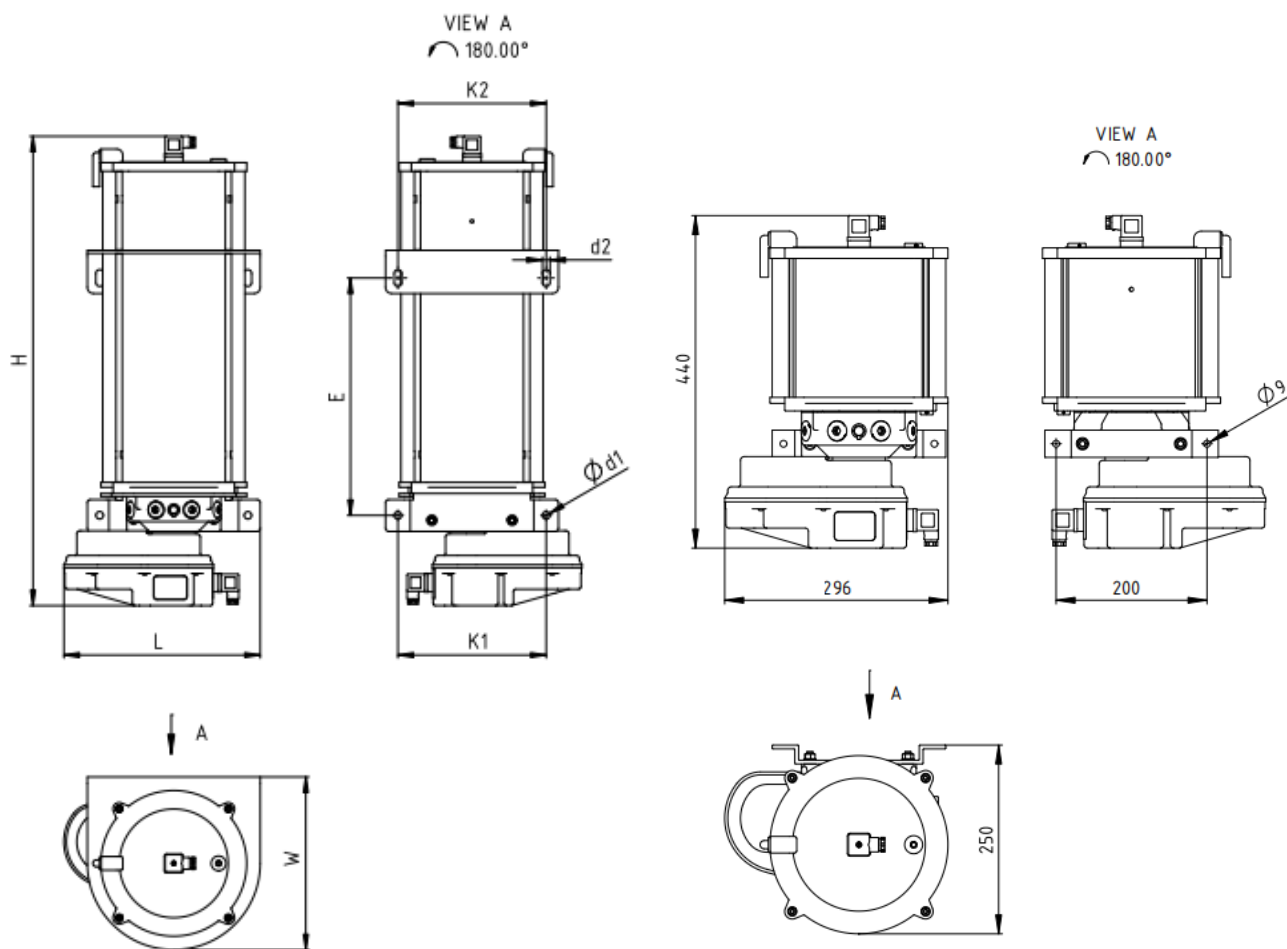
Signal and cable code explanation

The external signal cable kit has two options and they are mutually exclusive. All external signal cables are 5m length.

All signal sockets in pump unit are compliant with IEC 61076-2-101-A (M12x1, 4 pins, female).

Controller			Low level sensor			External signal interaction				External signal cable kit		
			No	Yes								
Integrated	Pump type	Signal Code			Signal to controller	Signal to customer	Remote alarm (NO)	Pulse	Remote startup	Modbus	No kit code	Kit code
No (C0)	S	0			X						0	1
Yes (CH/CM)	S / MS	A		X							A	
	S / MS	B		X		X					0	B
	S	C		X			X				0	C
	S / MS	D		X				X			0	D
	S / MS	E		X					X		0	E
	S	F		X		X	X				0	F
	S	G		X		X		X			0	G
	S	H		X			X	X			0	H
	S	J		X			X		X		0	J
	S	K		X		X	X	X			0	K

■ LEP Standard Rotating Lubrication Pump Unit Dimension

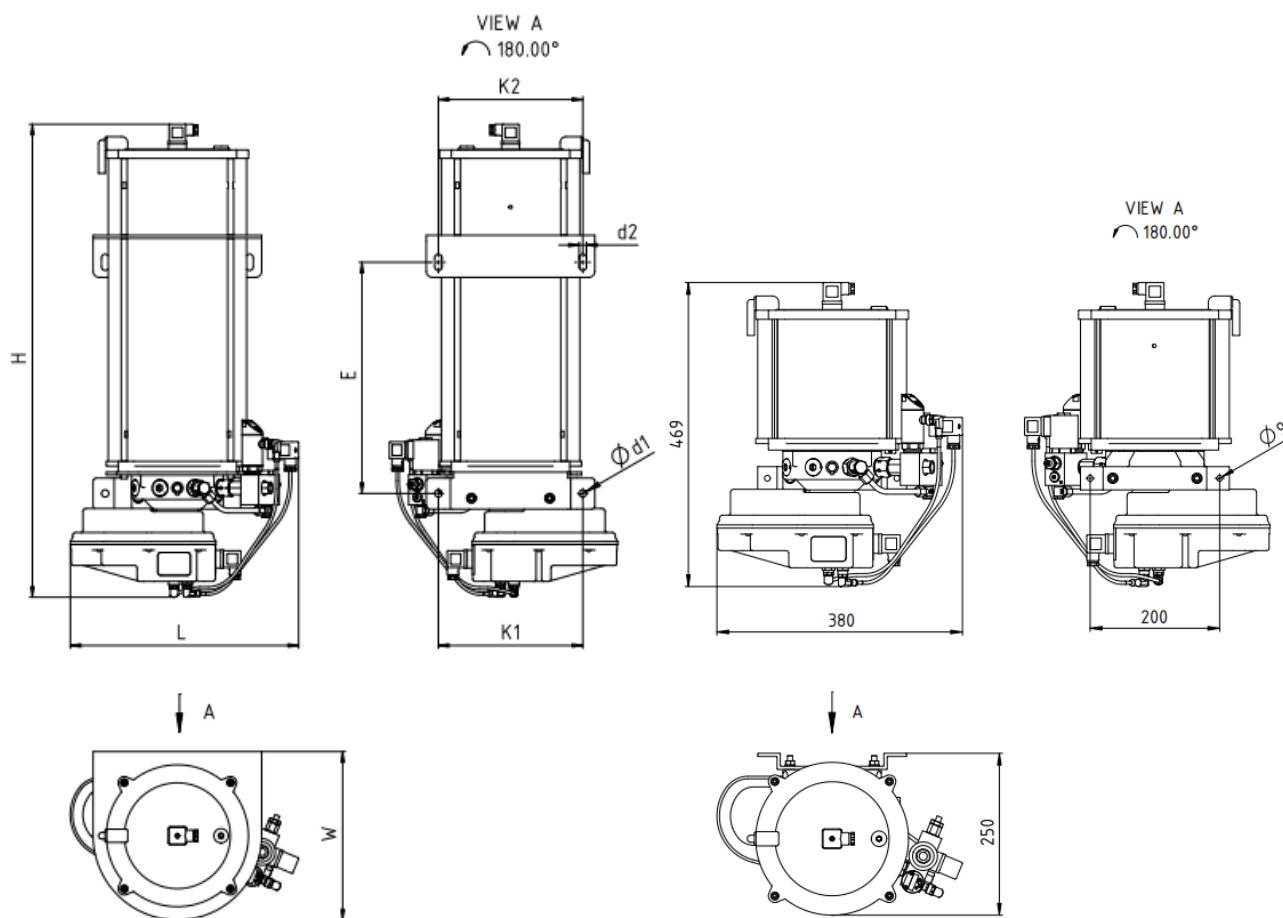


8/10/15/20/25 L tank

4 L tank

Model	Pump Element Mounting Port	Tank Capacity (L)	H (mm)	W (mm)	L (mm)	E (mm)	K1 (mm)	K2 (mm)	Ød1 (mm)	d2 (mm)
LEP212S...	6 - M20x1.5	4	440	250	296	/	200	/	2 x Ø9	/
LEP213S...		8	601	280	318	273.5	240	240	2 x Ø12.2	2x12.2
LEP2110S...		10	657	280	318	273.5	240	240	2 x Ø12.2	2x12.2
LEP2115S...		15	768	280	318	384.5	240	240	2 x Ø12.2	2x12.2
LEP2120S..		20	908	280	318	384.5	240	240	2 x Ø12.2	2x12.2
LEP2125S...		25	1036	280	318	512.5	240	240	2 x Ø12.2	2x12.2

■ LEP Rotating & Single-line Lubrication Pump Unit Dimension



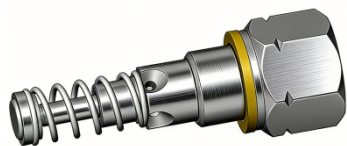
8/10/15/20/25 L tank

4 L tank

Model	Pump Element Mounting Port	Tank Capacity (L)	H (mm)	W (mm)	L (mm)	E (mm)	K1 (mm)	K2 (mm)	$\phi d1$ (mm)	d2 (mm)
LEP212MS...	G 1/4	4	469	250	380	/	200	/	2 x $\phi 9$	/
LEP213MS...		8	630	280	380	273.5	240	240	2 x $\phi 12.2$	2x12.2
LEP2110MS...		10	686	280	380	273.5	240	240	2 x $\phi 12.2$	2x12.2
LEP2115MS...		15	797	280	380	384.5	240	240	2 x $\phi 12.2$	2x12.2
LEP2120MS..		20	937	280	380	384.5	240	240	2 x $\phi 12.2$	2x12.2
LEP2125MS...		25	1065	280	380	512.5	240	240	2 x $\phi 12.2$	2x12.2

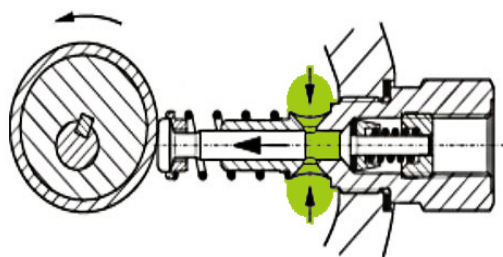
■ IBX Pump Element

✧ Product Description

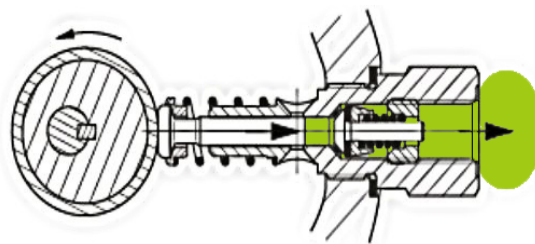


The IBX series pump elements are all plunger-type part which are driven by spring reset. The pump element has two kinds of available displacements. It's designed with a simple structure and easy to install and replace.

✧ Work Principle



Suction phase



Delivery phase

✧ Technical Data

Model	Type	Drive	Displacement (cm ³ /min)	Max. Working Pressure (bar)	Mounting Thread	Outlet
IBX-3E	Normal	Spring	3.3	350	M20x1.5	G 1/4
IBX-4E	Normal	Spring	6.0	350	M20x1.5	G 1/4

■ SV Safety Valve



✧ Product Description

The safety valve is directly installed at the pump element outlet to protect the entire lubrication system from excessive pressure. The opening pressure of the safety valve is 350 bar, and the outlet pipe diameter is available in three specifications: Ø6, Ø8, and Ø10.

✧ Technical Data

Model	Relief Pressure (bar)	Outlet (Ferrule Connector)	Mounting Thread (with fitting)	Mounting Thread (without fitting)	Relief Port Thread
SV-35-06	350	Ø6	G 1/4	M14x1.5	G 1/8
SV-35-08	350	Ø8	G 1/4	M14x1.5	G 1/8
SV-35-10	350	Ø10	G 1/4	M18x1.5	G 1/8

■ PFB Progressive Divider

✧ Product Description



The PFB series progressive divider has a block-type integrated structure. The displacement at each outlet of the divider is fixed and uniform, at 0.2 cm³/stroke, with a max. working pressure of 350 bar. Each divider block has a minimum of 6 outlets and a maximum of 22 outlets, allowing users to choose a divider with an appropriate number of outlets based on actual lubrication needs.

■ PFB Progressive Divider Part Number

PFB - 6 - E

PFB series progressive divider

Quantity of outlet

6: 6 outlets	16: 16 outlets
8: 8 outlets	18: 18 outlets
10: 10 outlets	20: 20 outlets
12: 12 outlets	22: 22 outlets
14: 14 outlets	

Blockage monitor

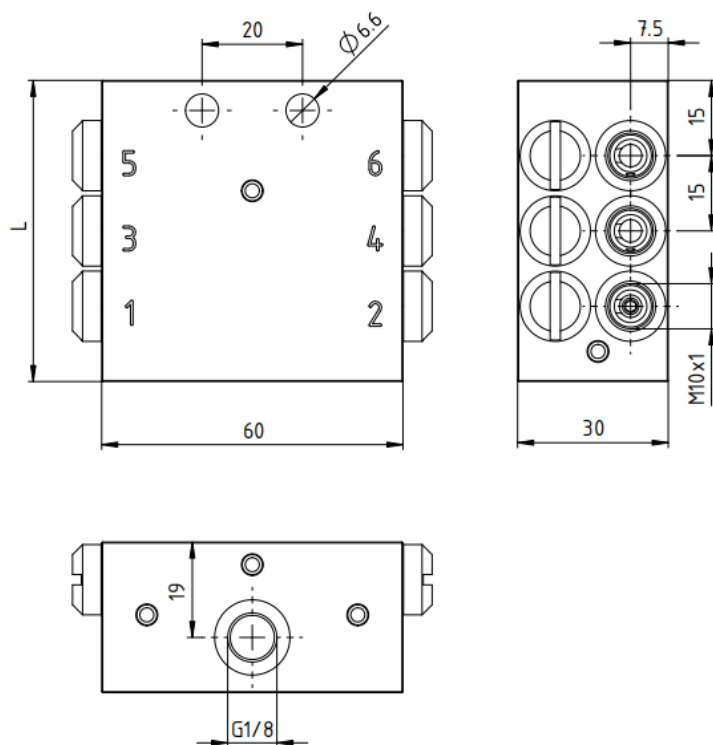
Blank: No

M: Visual indicator

E: Piston detector, DC 24V, PNP NO

EV: Piston detector, DC 24V, PNP NO, with 5m cable

■ PFB Progressive Divider Dimension



Model	L (mm)
PFB-6-...	60
PFB-8-...	75
PFB-10-...	90
PFB-12-...	105
PFB-14-...	120
PFB-16-...	135
PFB-18-...	150
PFB-20-...	165
PFB-22-...	180

■ PFM Progressive Divider



✧ Product Description

The PFM series progressive divider has a modular structure, with each block locked together by fastening bolts. The PFM divider consists of three parts: a head block, several intermediate blocks and an end block. The head block and end block are standard configurations, while all intermediate blocks are metering blocks, which can be freely selected and combined as needed.

However, the total number of metering blocks must be at least 3 (for 6 outlets) and no more than 10 (for 20 outlets). The PFM divider is available in 8 displacements with a maximum operating pressure of 250 bar.

■ PFM Progressive Divider Part Number

PFM - 4/6 - 06S/12S/20T/24T - E

PFM series progressive divider _____

Quantity of metering blocks / outlet _____

X / Y: X metering blocks / Y outlets

X: Any number between 3 and 10

Y: Any number between 1 and 20

Metering blocks model ¹⁾ _____

06T: 2 outlets and 0.06 cm³/stroke/outlet

12T: 2 outlets and 0.12 cm³/stroke/outlet

20T: 2 outlets and 0.20 cm³/stroke/outlet

24T: 2 outlets and 0.24 cm³/stroke/outlet

06S: 1 outlet and 0.12 cm³/stroke/outlet

12S: 1 outlet and 0.24 cm³/stroke/outlet

20S: 1 outlet and 0.40 cm³/stroke/outlet

24S: 1 outlet and 0.48 cm³/stroke/outlet

Blockage monitor ²⁾ _____

Blank: No

M: Visual indicator

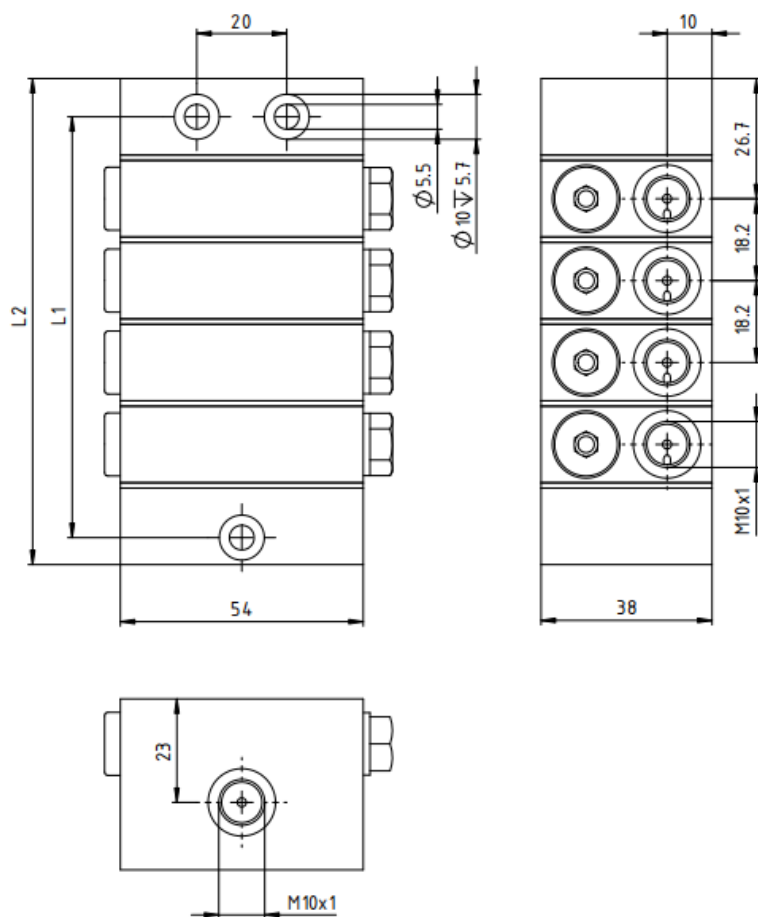
E: Piston detector, DC 24V, PNP NO

EV: Piston detector, DC 24V, PNP NO, with 5m cable

1) When selecting the metering blocks, the first one is the one after head block and others are selected in sequence.

2) "M" is available only when selecting any one metering block of "20T", "20S", "24T" and "24S".

■ PFM Progressive Divider Dimension



Model	L1 (mm)	L2 (mm)
PFM-3/ -...	75.3	89.8
PFM-4/ -...	93.5	108.0
PFM-5/ -...	111.7	126.2
PFM-6/ -...	129.9	144.4
PFM-7/ -...	148.1	162.6
PFM-8/ -...	166.3	180.8
PFM-9/ -...	184.5	199.0
PFM-10/ -...	202.7	217.2

■ SFM-1 Single-line Grease Injector



✧ Product Description

The SFM-1 series grease injectors are used in single-line, high-pressure centralized lubrication systems. It can accommodate lubricants with viscosity of up to NLGI 2.

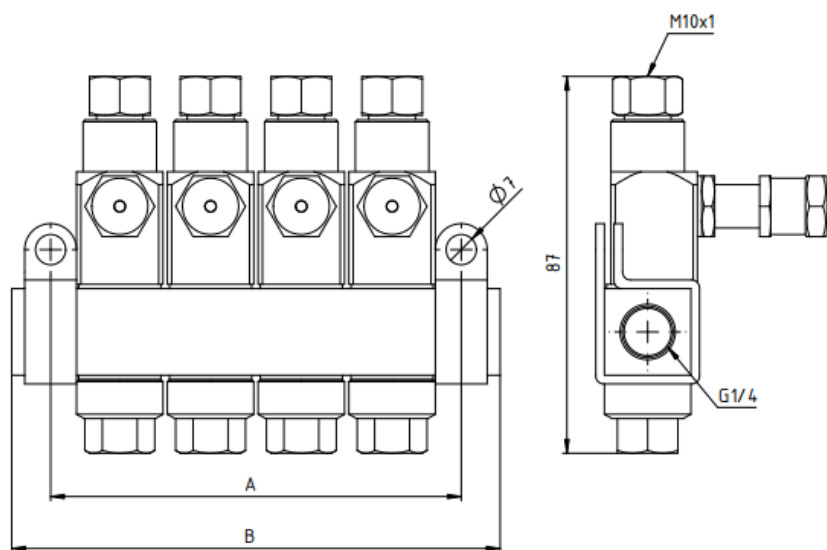
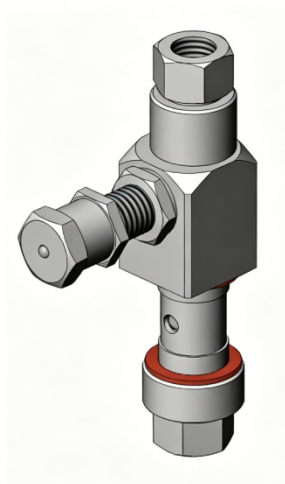
The grease injector can be easily disassembled for inspection or replacement. The injector is solid and reliable, and can be widely used in wind energy, automatic machinery and general machinery, etc.

✧ Product Features

1. The number of outlets for a single-line injector can be chosen from 1 to 6.
2. Adjust the grease flow of each outlet by rotating the adjustment screw.
3. Integrated visual indicator to monitor the working status of each point.
4. The single injector is easy to disassemble and replace.

✧ Technical Data

<i>Working Principle</i>	Intermittent
<i>Number of Outlet</i>	1 ~ 6
<i>Displacement of Each Cycle</i>	0.015 ~ 0.3 cm ³ /cycle, adjustable
<i>Working Pressure</i>	Max. 240 bar
<i>Open pressure</i>	60 bar
<i>Relief Pressure</i>	25 bar
<i>Lubricant</i>	NLGI 0, 1, 2
<i>Inlet Thread</i>	G 1/4
<i>Outlet Thread</i>	M10x1
<i>Working Temperature</i>	-26 °C ~ +80 °C
<i>Mounting</i>	Any position



Model	Name	Number of Outlet	Displacement of Single Injector in Each Cycle	Dimension (mm)	
				A	B
SFM-1-1	Single-line injector (w. bar)	1	0.015 cm ³ ~ 0.3 cm ³	32	50
SFM-1-2	Single-line injector (w. bar)	2	0.015 cm ³ ~ 0.3 cm ³	53	71
SFM-1-3	Single-line injector (w. bar)	3	0.015 cm ³ ~ 0.3 cm ³	74	92
SFM-1-4	Single-line injector (w. bar)	4	0.015 cm ³ ~ 0.3 cm ³	95	113
SFM-1-5	Single-line injector (w. bar)	5	0.015 cm ³ ~ 0.3 cm ³	116	134
SFM-1-6	Single-line injector (w. bar)	6	0.015 cm ³ ~ 0.3 cm ³	137	155
SFM-1	Injector (w/o bar)	1	0.015 cm ³ ~ 0.3 cm ³	/	/

