

Dual-line automatic Lubrication systems





Cisolube[®]
LUBRICATION SYSTEM

COMPANY PROFILES

Yantai CISO Lubrication Technology Co., Ltd. is a high-tech enterprise specializing in R&D, production and sales of centralized lubrication systems and hydraulic equipment. The centralized lubrication systems produced by our company have the characteristics of high stability, strong reliability, good sealing, and high output pressure. The products and services currently have covered petrochemical, wind power generation, construction machinery, agricultural machinery, rail transit, medicine and other industries, and it is a leading solution provider in the industry.

The company adheres to the concept of "integrity-based, quality first, and continuous innovation" to provide customers with A+ ideal solutions to meet the different needs of customers. Through years of research and development and production practice, from product design to accessories selection, product assembly, finished product testing and sales services, to ensure product quality.



COMPANY CERTIFICATE

UDEM

MACHINERY DIRECTIVE ATTESTATION OF CONFORMITY

Technical file of the company mentioned below has been inspected and audit has been completed successfully.
2006/42/EC Machinery Directive Annex VII has been taken as references for these processes.

Company Name : **Yantai CISO Lubrication Technology Co., Ltd**

Company Address : No.30, Chunguang Road, Gaoxin District, Yantai City, Shandong Province, China

Related Directives and Annex : **2006/42/EC Machinery Directive/Annex VIII**

Related Standards : **EN ISO 12100:2010; EN 60204-1:2018**

Product Name : **Distributor**

Report No and Date : EASY03222129M

Product Brand/Model/Type : DSP,DFPP,DSG,DSL

Certificate Number : **M.2023.204.CB9411**

Initial Assessment Date : 23.08.2023

Registration Date : 24.08.2023

Reliance Date/No : -

Expiry Date : **23.08.2028**

Signature: [Handwritten Signature]

UDEM International Certification
Auditing Training Centre Industry and Trade Inc., Co.

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Related Directives and Annex : **2006/42/EC Machinery Directive/Annex VIII**

Related Standards : **EN ISO 12100:2010; EN 60204-1:2018; EN 809-1998+A1:2009**

Product Name : **Electric lubrication pump**

Report No and Date : EASY03222127M

Product Brand/Model/Type : GT-PLUS,GM,GW,GT-4AAX,GP-212

Certificate Number : **M.2023.204.CB9410**

Initial Assessment Date : 23.08.2023

Registration Date : 24.08.2023

Reliance Date/No : -

Expiry Date : **23.08.2028**

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Related Directives and Annex : **2006/42/EC Machinery Directive/Annex VIII**

Related Standards : **EN ISO 12100:2010; EN 60204-1:2018; EN 809-1998+A1:2009**

Product Name : **Mechanical drive lubrication pump**

Report No and Date : EASY0322128M

Product Brand/Model/Type : PMV,PMW,PMN

Certificate Number : **M.2023.204.CB9412**

Initial Assessment Date : 23.08.2023

Registration Date : 24.08.2023

Reliance Date/No : -

Expiry Date : **23.08.2028**

Signature: [Handwritten Signature]

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Auditing Training Centre Industry and Trade Inc., Co.

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QUALITY MANAGEMENT SYSTEM CERTIFICATE

Registration No. 064-22-Q-0152-R1-S

This is to certify that
Yantai CISO Lubrication Technology Co., Ltd
Unified social credit code: 91370600MA3MSMG60Y

Registration Address: No.30 Weisan Road, High-Tech Zone, Yantai City, Shandong Province,264003
Production Office Address: No.30 Changang Road, Yantai High-Tech Zone, Shandong Province,264003

Which is in conformity with
GB/T19001-2016/ISO9001:2015
Scope of Certification
General mechanical equipment (lubrication pump station, hydraulic station) design, production and related management activities

Issue date: Jan 18,2022 Term of validity: Jun 17,2025
Renewal Date: Dec 13,2023
Change content: Address

Signature: [Handwritten Signature]

AXE REGISTER
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40121 CENSA/148762, Rev. 02/21, No. 363, Via Sesto San Giovanni, 151, 00198 Roma, Italy

AXE REGISTER

CERTIFICATE

N. CN23 - 24511B

This is to certify that the Environmental Management System of
Yantai CISO Lubrication Technology Co.,Ltd.
Unified social credit code: 91370600MA3MSMG60Y

Registered Address: No.30, Weisan Road, High-tech Zone, Yantai, Shandong
Office & Production Address: No.30, Changang Road, High-tech Zone, Yantai, Shandong, China

Has been independently assessed and found in conformance with the standard
ISO 14001:2015

For the following scope of activities:
Design and Processing of Ordinary Mechanical Equipment (Lubrication Pump Station, Hydraulic Station)

Signature of IAF/IA, Mutual Recognition Agreements

Signature of IAF/IA, Mutual Recognition Agreements

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40121 CENSA/148762, Rev. 02/21, No. 363, Via Sesto San Giovanni, 151, 00198 Roma, Italy

AXE REGISTER

CERTIFICATE

N. CN23 - 24511C

This is to certify that the Occupational Health and Safety Management System of
Yantai CISO Lubrication Technology Co.,Ltd.
Unified social credit code: 91370600MA3MSMG60Y

Registered Address: No.30, Weisan Road, High-tech Zone, Yantai, Shandong
Office & Production Address: No.30, Changang Road, High-tech Zone, Yantai, Shandong, China

Has been independently assessed and found in conformance with the standard
ISO 45001:2018

For the following scope of activities:
Design and Processing of Ordinary Mechanical Equipment (Lubrication Pump Station, Hydraulic Station)

Signature of IAF/IA, Mutual Recognition Agreements

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System description:

CISO dual-line systems can be used on large systems with dispersed lubrication points that require varying lubrication quantities. These systems utilize two main lines that are supplied alternately with lubricant from a high-pressure pump via a change-over valve at up to 400 bar (5 800 psi). Branch lines, along the main lines, are connected with dual-line metering devices to supply a large volume of lubricant to the lubrication points. Within large dual-line systems, end-of-line pressure switches are used to control and monitor the system. These flexible systems are simple to design and can be extended or reduced easily by installing additional metering devices or by removing them. A redesign of the system is not required. Dual-line metering devices can be combined with downstream progressive metering devices to increase the total number of lubrication points receiving small lubricant amounts. CISO offers dual-line systems that can dispense a precise, metered amount of lubricant to up to 2 000 lubrication points over long distances up to 120 m (131 yd) and more, depending on case values. Even if one pair of outlets becomes blocked inside one metering device, CISO dual-line systems provide sufficient lubrication for the rest of the system's lubrication points. Lubricant volume can be metered individually for each pair of outlets and can be monitored visually or electrically.

The function principle of the dual-line systems consists of two half-cycles. In the first half-cycle, the lubricant is pumped into the main line (A) and the main line (B) is connected to the relief line. The lubricant, which is conducted by the change-over valve, is supplied to the metering devices. The pistons of the metering devices are moved into their adjusted end positions, thus dispensing an exact, metered quantity of grease. Once all metering devices have dispensed their lubricant to the consumption point, the system is hydraulically closed, which causes the pressure in main line (A) to rise until the preset pressure at the end-of-line pressure switch (mounted in the main lines prior the last metering device) is reached. This pressure switch then signals an electric pulse to the control unit, which turns the pump off and signals the change-over valve to relieve main line (A), and the pause time starts. At this stage, half of the lubrication points in the system have been lubricated.

In the second half-cycle, main line (B) is pressurized and the cycle continues as before.

Attention:

- Do not install or remove the metering devices when the system is under pressure or the pump in operation.
- Always protect the centralized lubrication system connected to the pump with a pressure reducing valve.
- Incorrect operation may lead to damage resulting from insufficient or excessive lubrication of bearings or lubrication points.
- Your own alterations or modifications of an installed system should only be carried out if approved with the manufacturer or his appointed dealer.

Operation, Maintenance and Repair

1. Repairs should be carried out only by qualified persons who have been charged with the repair work and are familiar with centralized lubrication systems.
2. Since the pistons in the metering devices are fit with the smallest tolerances, the metering device



System description

must be replaced when the pistons are worn.

3. When synthetic lubricants are used, bear in mind that they must be compatible with the sealing material of the metering devices (polyurethane or Viton).

4. Use only lubricants which are appropriate for centralized lubrication systems. If in doubt, ask the supplier.

Installation:

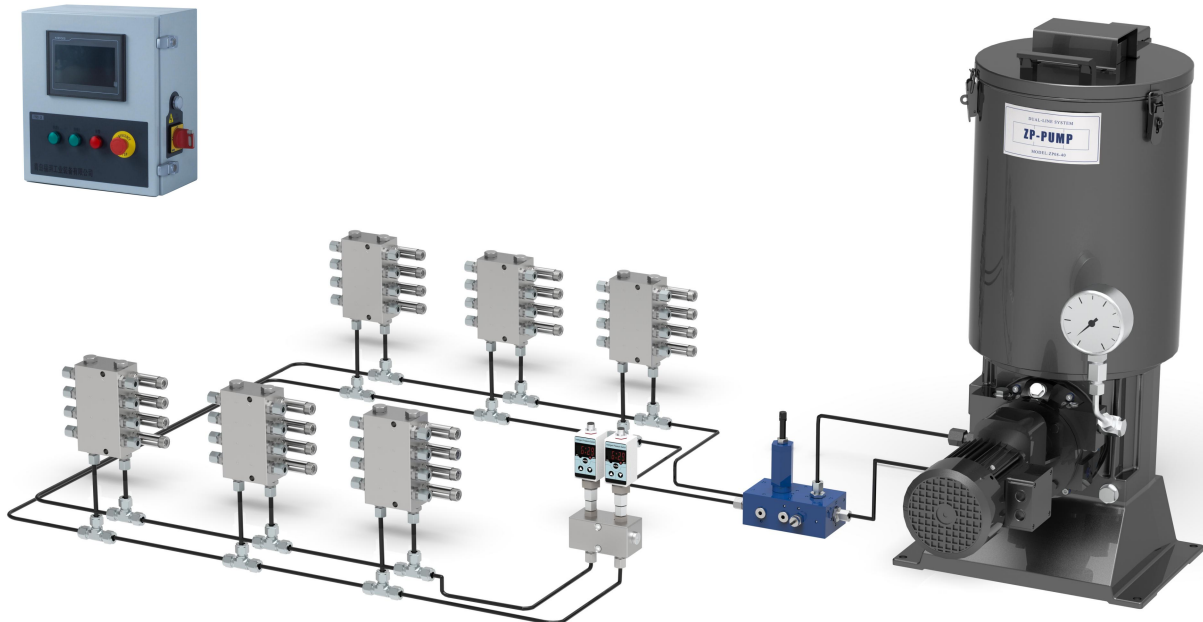
For all work at the metering device, observe extreme cleanliness.

- Attach the metering devices to even surfaces without tension.

when base plates are used, first weld the base plates without the metering devices and then attach the metering devices onto them.

- Protect the metering devices from dust and influences of heat (observe the maximum admissible operating temperatures).
- The metering devices must be easily accessible for . check and installation work.
- Before connecting the feed lines to the metering devices, fill them with lubricant.
- when connecting the main lines take care to always connect the same line (I or II) to the same metering device inlet.
- This makes it easier to check of the metering device because all indicator pins are either in or out after each cycle.

Struture diagram:



ZP01/02 lubrication pump

The ZP01/02 high-pressure, high-volume pumps can be used as a supply pump unit for small to midsize dual-line systems or for progressive systems. Depending on the system layout, these electric pumps can supply lubricant at distances of up to 100 meters and more at a maximum pressure of 400 bar (5 800 psi). Available with 15 or 30 L reservoirs, these units are compatible with oil and grease up to NLGI 2 (NLGI 3 upon request). Featuring one or two elements, the ZP01/02 pumps work effectively in temperatures ranging from -20 to $+70$ °C thanks to the integrated stirring device.



Applications

- Light to medium industrial applications
- Mixing machines
- Power plants
- Reclaimers
- Stackers

Technical data

Function principle	electrically operated piston pump unit
Operating temperature	-20 to $+70$ °C
Operating pressure	Max 40Mpa, 5 800 psi
Lubricant	grease: up to NLGI 2, NLGI 3 on request oil: with a viscosity of min 40 mm ² /s at
Metering quantity	ZP 01 : 2 160 ml/h ZP 02 : 4 320 ml/h
Reservoir capacity	15, 30L
Electrical connection	380V
Protection class	IP 65



KR piston

The reciprocating motion of pumping group's body allows to the two dosing pistons to dispense lubricant directly from pumping group to pump's outlet.

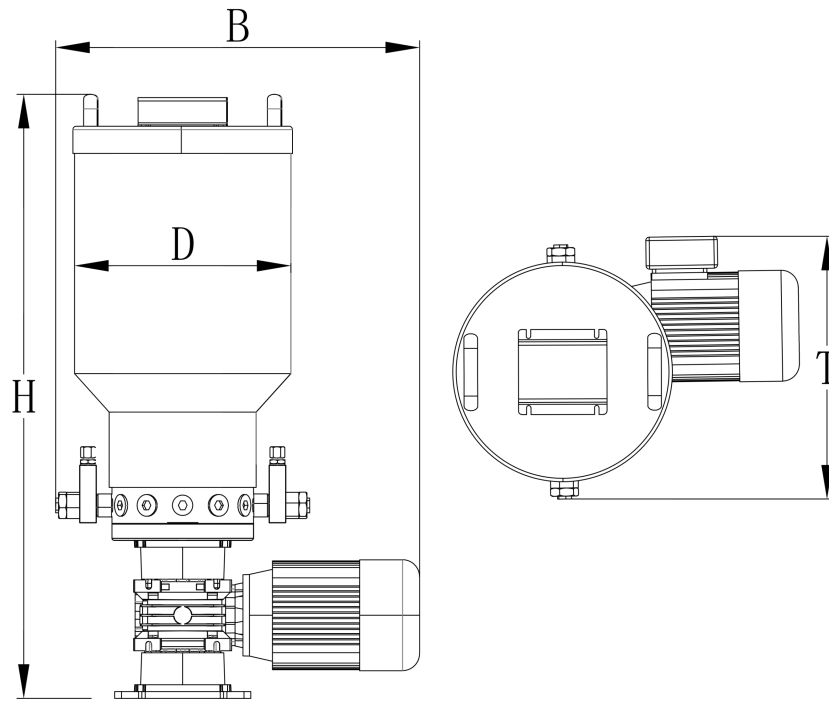


Features and benefits

- Reliable
- Simple to service
- Three options for high lubricant output
- Ultrasonic low- and high-level control options
- Built-in lubricant filter

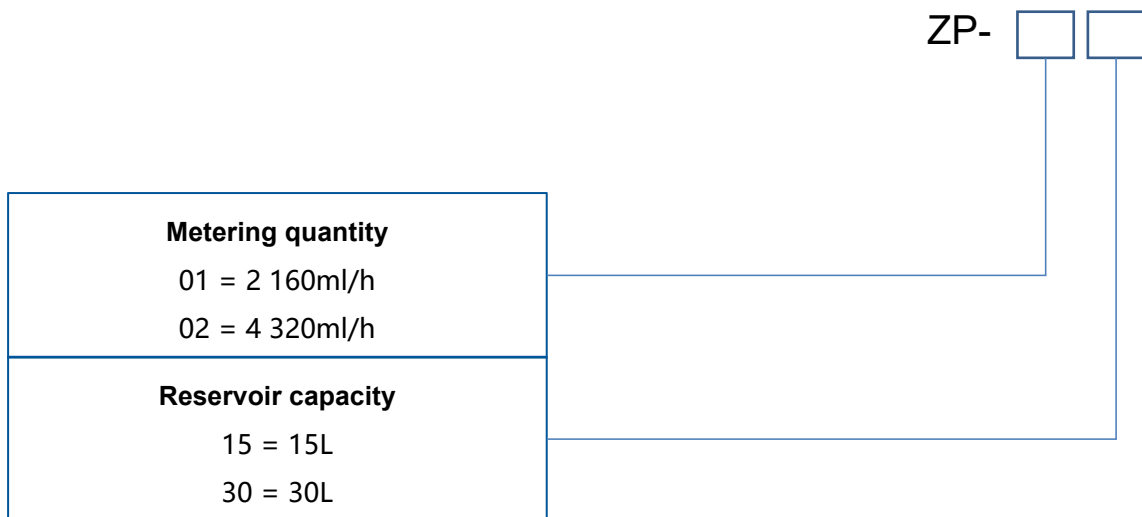


Dimensions(mm):



Reservoir	H	B	D	T
15L	740.1	534.7	256	383
30L	887.5	534.7	318	383

Ordering information:



ZP08/14/24 Dual-line lubrication pump

The **ZP08/14/24** pumps are used primarily in dual-line systems or as supply pumps and have a maximum operating pressure of 400 bar (5 800 psi) Depending on the system layout, these electric pumps can supply lubricant at distances of up to 100 meters and more Available with a 40、 60 or 100 L reser voir, the pressure ZP08/14/24 pumps come standard with a pres sure relief valve, check valve, lubricant filter and a pressure gauge.

These robust units operate effectively at temperatures ranging from -20 to +80°C thanks to the integrated stirring device.



Features and benefits

- Reliable
- Simple to service
- Three options for high lubricant output
- Ultrasonic low- and high-level control options
- Built-in lubricant filter

Applications

- Cement plants
- Steel mills
- Power plants
- Mining
- Large machines

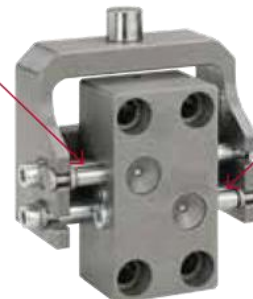
Technical data :

Model number	Pressure	Rated fuel feed (ml/h)	Reservoir (L)	Gear motor	
				Motor power (kw)	Voltage(V)
ZP08	40Mpa	8 000	40	0.75KW	380
ZP14		14 000	60		
ZP24		24 000	100		

Applicable medium is grease (NLGI0#-2#) with needle penetration not less than 265 (25°C, 150g) 1/10mm

The reciprocating motion of pumping group' s body allows to the two dosing pistons to dispense lubricant directly from pumping group to pump' s outlet.

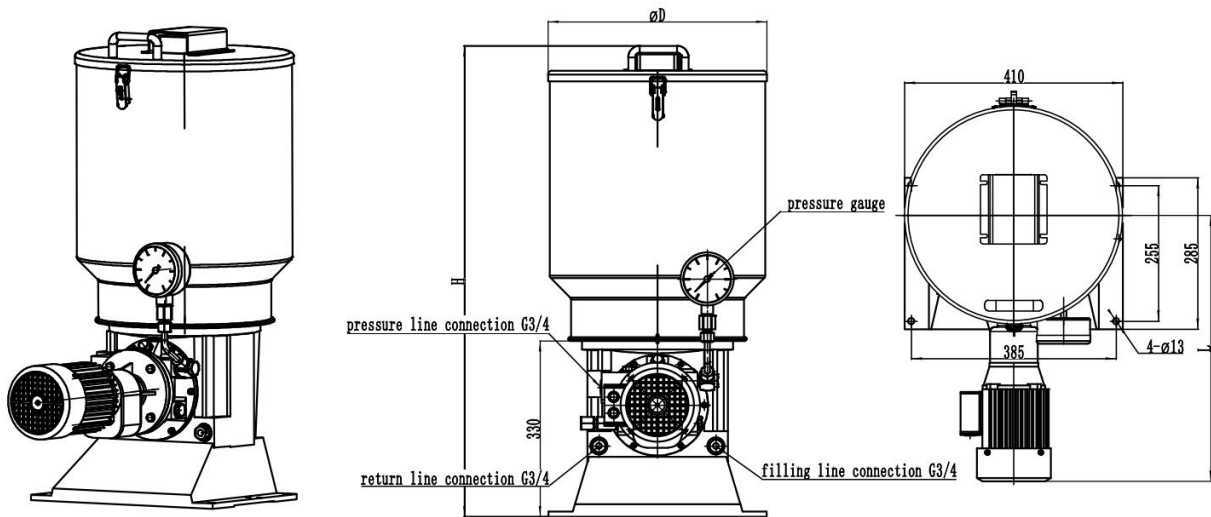
Dosing piston
(Ø 8 mm -Ø 10mm)



Dosing piston
(Ø 8 mm -Ø 10mm)



Dimensions(mm):

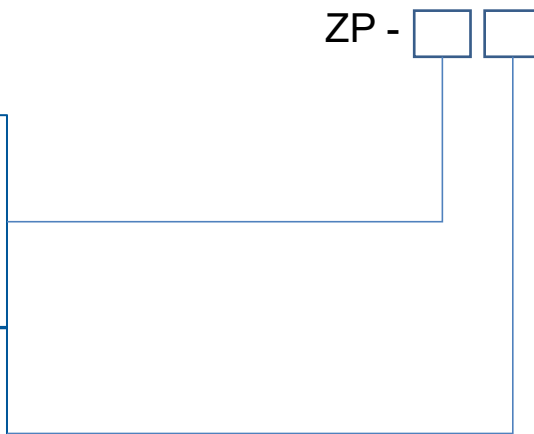


Specification		Dimensions(mm)			
		D	Hmax	Hmin	L
Reservoir	40L	325	810	760	510
	60L	410	890	840	530
	100L	510	1100	975	575

Ordering information:

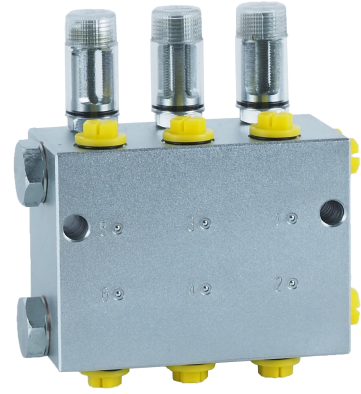
ZP -

<p>Metering quantity</p> <p>08 = 8 000ml/h</p> <p>14 = 14 000ml/h</p> <p>24 = 24 000ml/h</p>
<p>Reservoir capacity</p> <p>40 = 40L</p> <p>60 = 60L</p> <p>100 = 100L</p>



DSG Dual-line distributor

The durable, galvanized steel DSG metering devices are designed for dual-line systems with pressures of up to 400 bar (5 800 psi) These metering devices are available with up to eight outlets, and each pair of outlets is equipped with an indicator pin for visual monitoring. Also, the DSG metering devices are available with low-wear proximity switches, or piston detectors, for electrical monitoring. Additional features include rust-resistant material.



Characteristics

- Easy cross-porting with external screw to combine
- Solid-block construction for durability and error-free exchange
- Operates effectively in a wide range of temperatures
- Easy to monitor

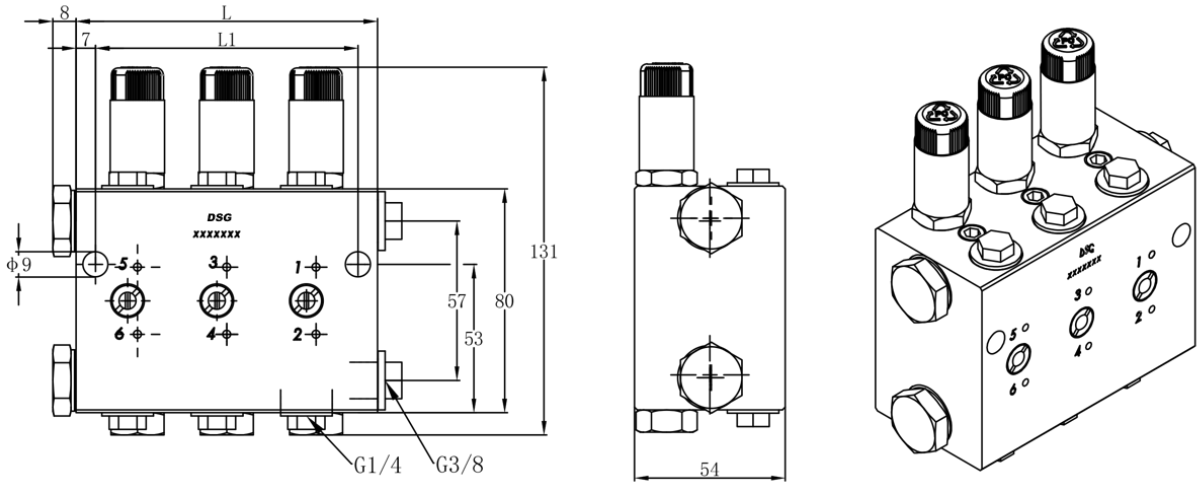
Applications

- Steel plants
- Cement plants
- Mining excavators

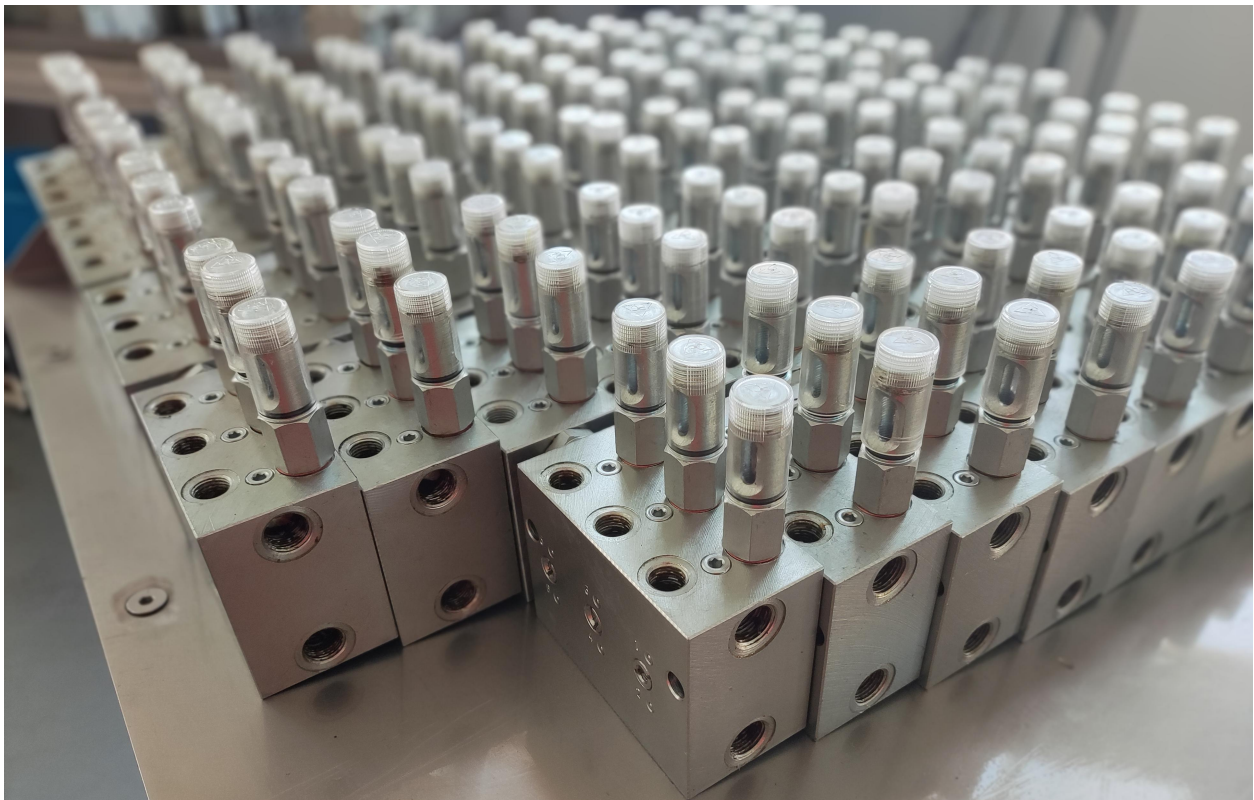
Technical data	
Outlets	2-8
Operating temperature	Max. 120°C
Operating pressure	Max. 400bar, 5800psi
Discharge	0~2.2ml/cyc (adjustable) fixed output: 0.55、1.1、1.65、2.2ml/cyc
Lubricant	NLGI 0#-3#
inlet thread	G3/8
Outlet thread	G1/4
Materials	steel galvanized



Dimensions(mm):



Outlet Number	L1	L
2	30	44
4	62	76
6	94	108
8	126	140

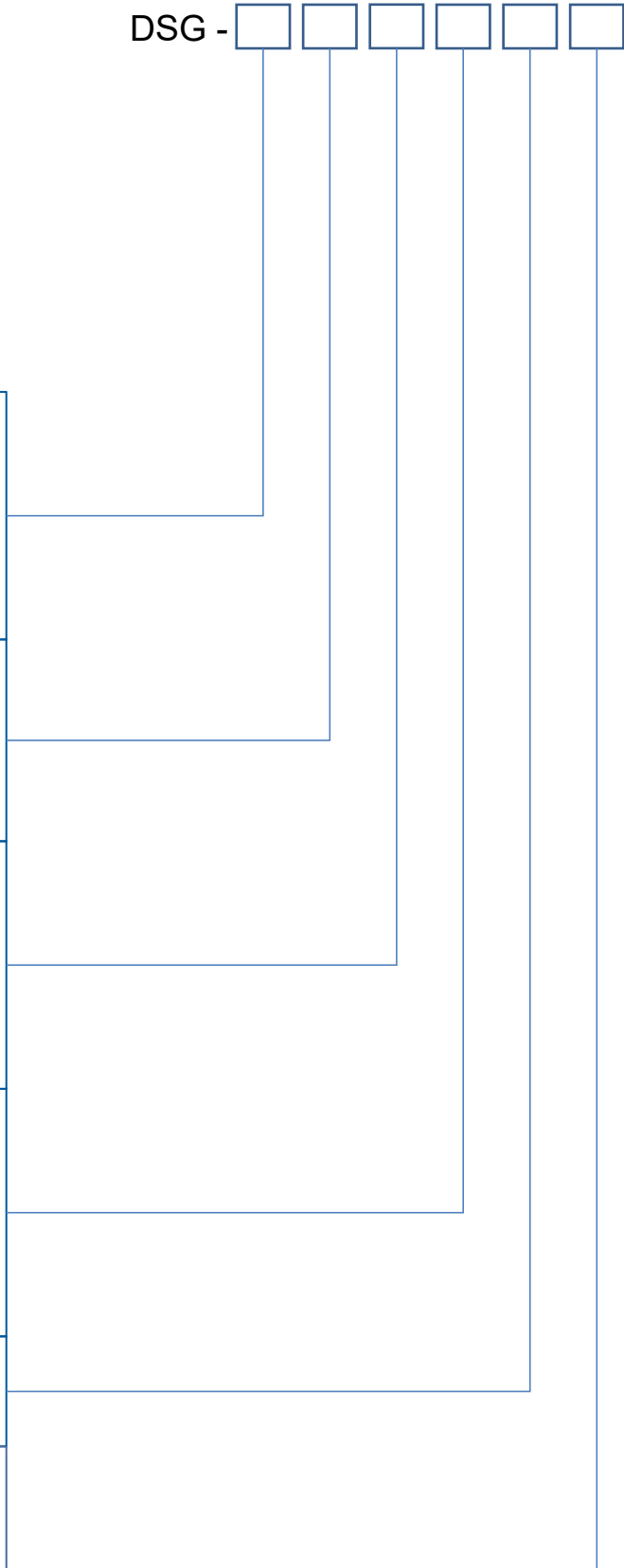


Ordering information:



DSG -

<p>Outlet Number</p> <p>02=2 04=4 06=6 08=8</p>
<p>Inlet Connector shape</p> <p>A=Without inlet and outlet fittings D= Straight fitting assembly H= Angle fitting assembly</p>
<p>Inlet Connector</p> <p>12=Ø12 16=Ø16 18=Ø18 20=Ø20</p>
<p>Type</p> <p>KR = With indicator pin and adjustment NP = piston detector D= with metering screw 0.55、 1.1、 1.65、 2.2ml/cyc</p>
<p>Plug</p> <p>XD=3-8</p>
<p>Outlet Connector</p> <p>D8=Ø8mm Straight fittings D10=Ø10mm Straight fittings D12=Ø12mm Straight fittings D16=Ø16mm Straight fittings</p>



DSL Dual-line distributor

The durable, galvanized steel DSL metering devices are designed for dual-line systems with pressures of up to 400 bar (5 800 psi). These metering devices are available with up to eight outlets, and each pair of outlets is equipped with an indicator pin for visual monitoring. Also, the DSL metering devices are available with low-wear proximity switches, or piston detectors, for electrical monitoring. Additional features include rust-resistant material.



Characteristics

- Easy cross-porting with external screw to combine
- Solid-block construction for durability and error-free exchange
- Operates effectively in a wide range of temperatures
- Easy to monitor

Applications

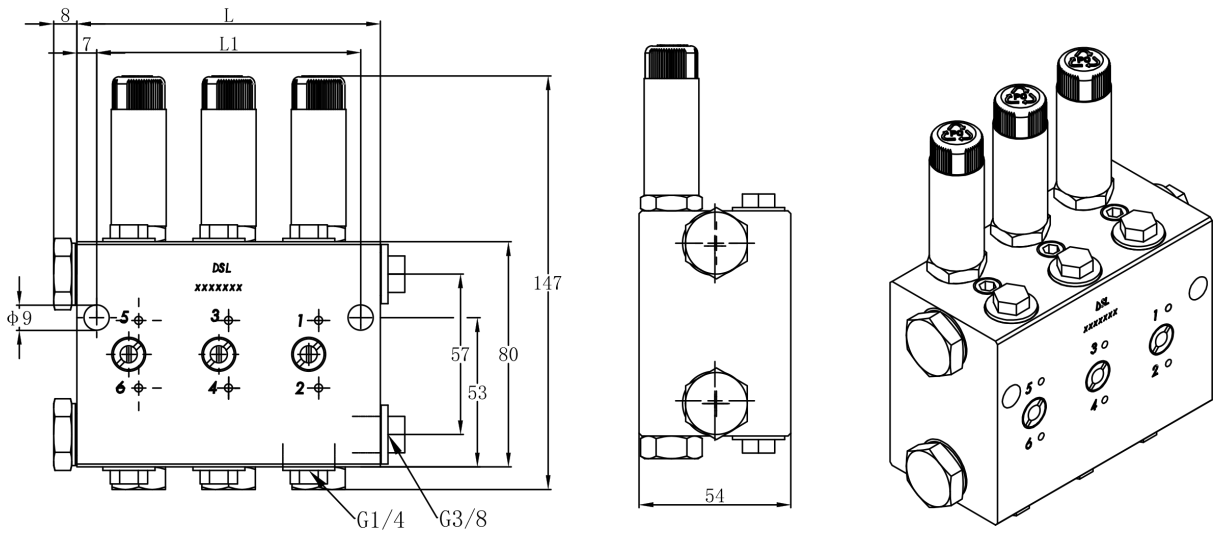
- Steel plants
- Cement plants
- Mining excavators

Technical data

Outlets	2-8
Operating temperature	Max. 120°C
Operating pressure	Max. 400bar, 5800psi
Discharge	0~5ml/cyc (adjustable) fixed output: 1.25、2.5、3、3.75、5ml/cyc
Lubricant	NLGI0#-3#
inlet thread	G3/8
Outlet thread	G1/4
Materials	steel galvanized



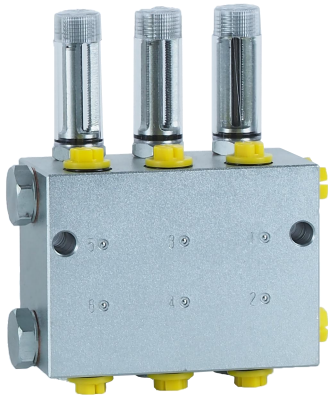
Dimensions(mm):



Outlet Number	L1	L
2	30	44
4	62	76
6	94	108
8	126	140

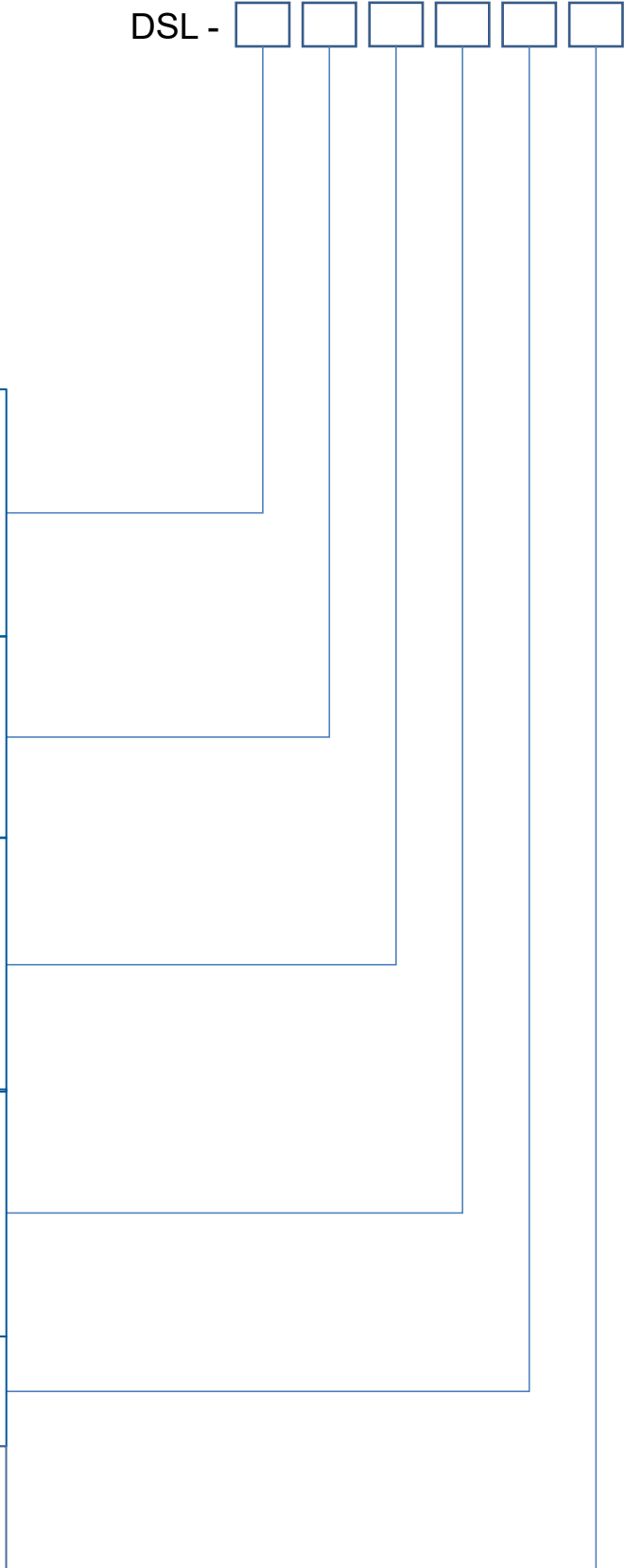


Ordering information:

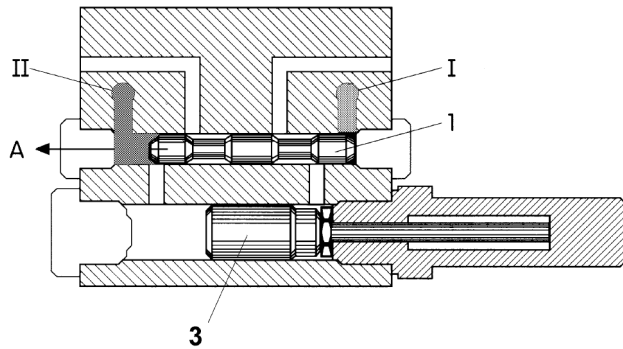


DSL -

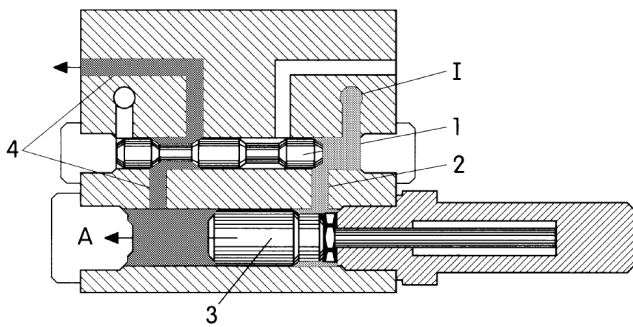
<p>Outlet Number</p> <p>02=2 04=4 06=6 08=8</p>
<p>Inlet Connector shape</p> <p>A=Without inlet and outlet fittings D= Straight fitting assembly H= Angle fitting assembly</p>
<p>Inlet Connector</p> <p>12=Ø12 16=Ø16 18=Ø18 20=Ø20</p>
<p>Type</p> <p>KR = With indicator pin and adjustment NP = piston detector D= with metering screw 1.25、 2.5、 3、 3.75、 5ml/cyc</p>
<p>Plug</p> <p>XD=3-8</p>
<p>Outlet Connetor</p> <p>D8=Ø8mm Straight fittings D10=Ø10mm Straight fittings D12=Ø12mm Straight fittings D16=Ø16mm Straight fittings</p>



Description of operation:

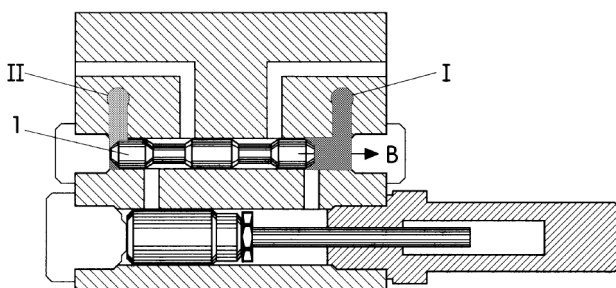
**Stage 1**

Pressurised lubricant is supplied to the metering device via main line I. The control piston (1) starts moving in the direction of arrow A, displacing the lubricant in front of the control piston into the relieved main line II.

**Stage 2**

when the control piston (1) uncovers the connecting passage (2) lubricant is transferred to the right end of the dispensing piston (3), thereby displacing it to the left in the direction of arrow A.

The lubricant volume ahead of the dispensing piston is transferred via the connection passage (4) to the lubrication point. with the dispensing piston in its terminal position, the pressure in main line I will continue to rise to reach the preset changeover pressure of the dual-line system. At this stage, the changeover valve of the system operates to connect main line I which has so far been under pressure to the lubricant reservoir of the lubrication pump and the lubricant in main line I is depressurized.

**Stage 3**

At the same time the change-over valve connects main line II to the lubrication pump, thus pressurizing the lubricant in this main line. The control piston (1) moves in the direction of arrow B, displacing the lubricant ahead of the control piston into the relieved main line I.



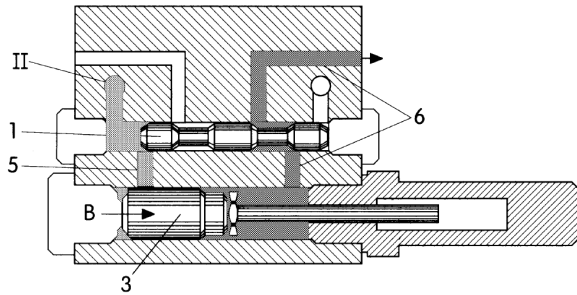


FIG.5

Stage 4

when the control piston (1) uncovers the connecting passage (5) lubricant is transferred to the left end of the dispensing piston (3) and displaces it to the right in the direction of arrow B. The lubricant ahead of the dispensing piston (3) is transferred via the connecting passage (6) to the lubrication point. with the dispensing piston (3) in its terminal position, the pressure in main line II will continue to rise to reach the preset changeover pressure of the dual-line system. At this stage, the changeover valve will once again cause a pressure changingover in main lines I and II and the cycle will be repeated as described in stage 1.

Discharge adjustment and Outlets:

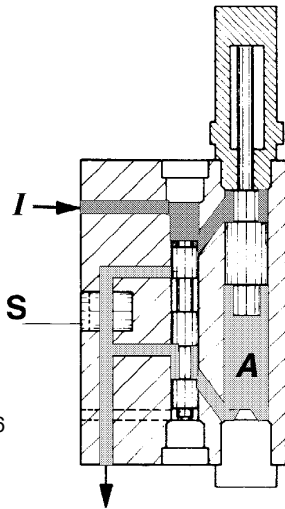


FIG.6

Crossporting of outlets

This feature enables one outlet only of a pair of outlets to be used, and provides double the lubricant volume output per lubrication cycle.

Figure 5 shows stage 2 and figure 6 shows stage 4 of the operation cycle with this feature operative. All models of the series DSG and DSL are equipped with a lockable rotary slide for each pair of outlets.

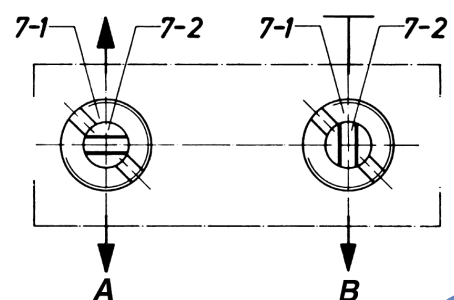
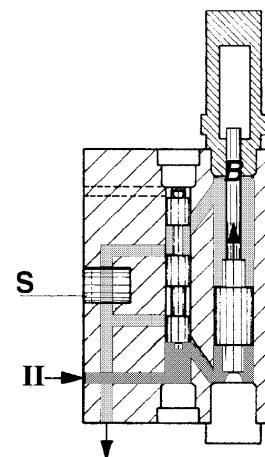
Position of crossporting rotary slide

7-1 lock screw

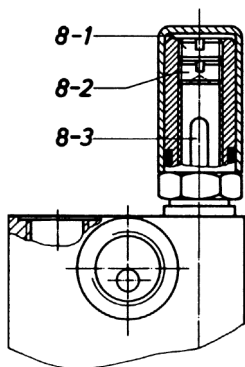
7-2 rotary slide horizontal: 2 outlets

rotary slide vertical: 1 outlet

with the two main lines being relieved (i.e. when the pump is switched off) the lock screw 7-1 can be loosened and the rotary slide 7-2 can be turned through 90. If the rotary slide is put into position A the connecting passage between the two outlets is closed, and the lubricant is discharged by the two outlets. If the rotary slide is in position B, the connecting passage is open. In this case one of the two outlets has to be closed by means of a closure plug, and then the double lubricant volume is discharged by the other outlet (Table 1).



Adjustment of the output Volume:



Variation KR for infinitely variable adjustment and visual indication
Infinitely variable adjustment of lubricant output is achieved by turning the adjustment screw 8-2. Maximum output is available if the lock screw 8-1 and the adjustment screw 8-2 are in their uppermost position. By turning the screw down-ward the output can be continuously reduced. With the two screws in their fully closed position, the indicator pin 8-3 is completely restrained and, because the pin is attached directly to the dispensing piston, the lubricant output will be nearly zero.

The indicator pin shows the correct functioning of a pair of outlets.
After setting the lubricant output, the adjustment screw 8-2 will be locked in position by means of screw 8-1.

CAUTION:

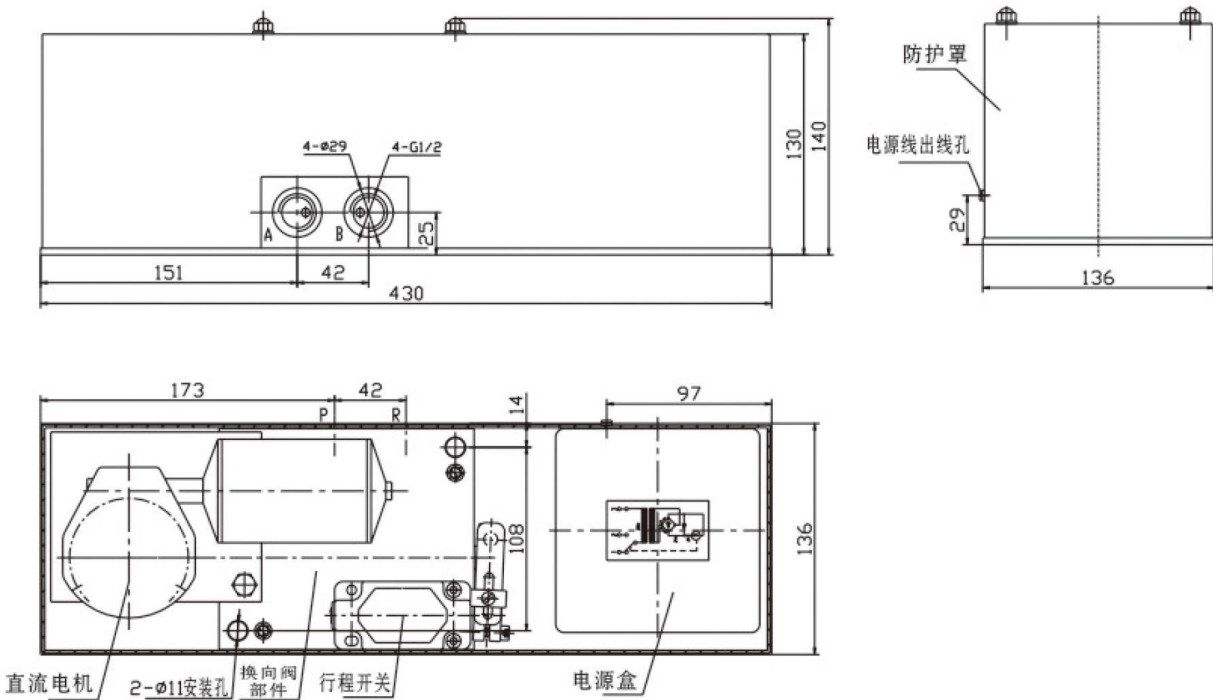
To secure the setting, lock the adjusting screw only when the indicator pin is retracted.



WP-C Electric change-over valve is an integrated detention control device which uses a large torque DC eceleration motor to drive the valve sliding core to move in order to open and close the oil supply pipeline or change the direction of oil supply. It is suitable for two position two-way, two position three-way and two position four-way directional valves in the main pipeline of lubrication system and hydraulic system with nominal pressure below 40Mpa.



Dimensions:



Part number	Pressure	Voltage	Power	Reversing time	Weight	Applicable medium
24EJF46	40Mpa	AC220	40W	0.5s	13KG	220-385 (25°C, 150g) 1 / 10mm of grease (NLGI 0 # -3 #) and lubricating oil greater than N68
24EJF424		DC24			11KG	



Ordering information:

Two-position	2	4	EJF	4	6
Number of access 2=two-way 3=three-way 4=four-way					
Transdirectional valve driven by the DC motor					
Pressure grade code 4=40Mpa					
Voltage 24=DC24V 6=AC220					

Action specification:

The valve is mainly composed of DC motor, limit switch, reversing valve body, rectifier transformer device and other parts installed in the same floor on the protective cover shell. The electric control box in the system sends a reversing signal (the differential pressure switch at the end of the system) causes the DC motor to rotate, and drives the sliding core through the eccentric wheel. When the sliding core reaches the required reversing position from one end to the other, the baffle at the end of the sliding core touches the limit switch, sends an electrical signal to the electric control box, and orders the DC motor to stop rotating and complete the reversing process.

Direction for use :

1. The valve is installed at the front end of the main and branch lines of the system, and is located in the ventilated, dry parts for inspection and no interference of the surrounding motion mechanism.
2. When used as two channels, the oil outlet "B" and "R" oil outlet shall be blocked.
3. When used as two positions and three links, the oil outlet "B" must be blocked.
4. The pressure oil end of the controlled line must be connected to the "P" port of the valve.
5. If the electrical signal valve does not work, first check whether the fuse is burned out, and then check whether the pin solder is off or the wire is loose.



DU-C are hydraulic change-over valves designed primarily for use in dual-line lubrication systems. These change-over valves alternately discharge lubricant, fed by the pump into one of the two main lines. The other line is connected to the return line connection of the pump. The switching pressure is adjustable.



Features and benefits

- Reliable, even for hard grease
- Change-over process initiated automatically once preset pressure is reached
- Maximum operating pressure of 35 Mpa (5 076 psi)
- Various mounting positions
- Works effectively in temperatures ranging from -20 to +80 °C

Applications

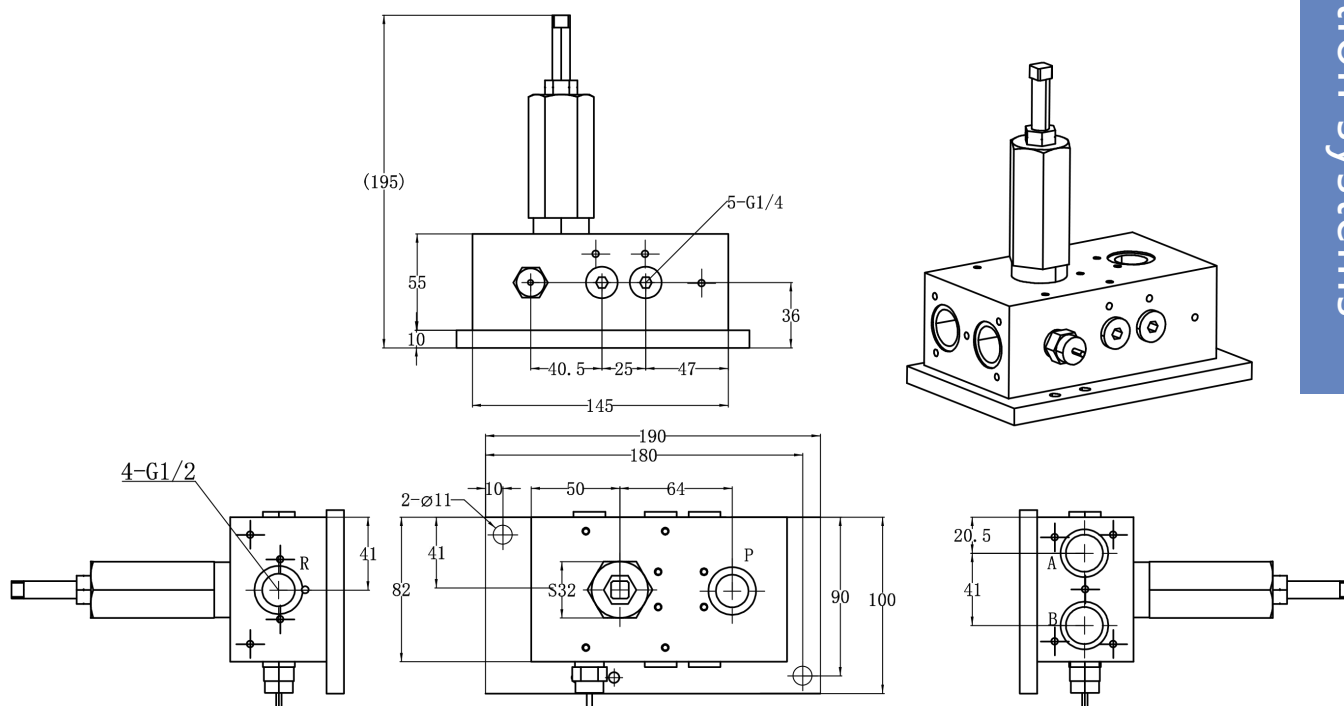
- Ideal for small, electrically driven dual-line systems that requires minimal monitoring

Technical data

Function principle	change-over valve, hydraulic
Operating temperature	-20 to +80 °C
Lubricant	grease up to NLGI 3, oil with a viscosity of min 20 mm ² /s
Operating pressure	max 35 Mpa, 5 075 psi
Change-over pressure	min 14 Mpa, max 35 Mpa,
Electrical connection	max 500 V, 25–60 Hz



Dimensions(mm):



Ordering information:

DU-C-

Blank = without indicator pin C = with indicator pin
Blank = without proximity switch E = with proximity switch



The **MC- I** control equipment is dedicated to the management and control of centralized lubrication system. The dedicated card installed inside controls the inlet and outlet signals of the whole system.

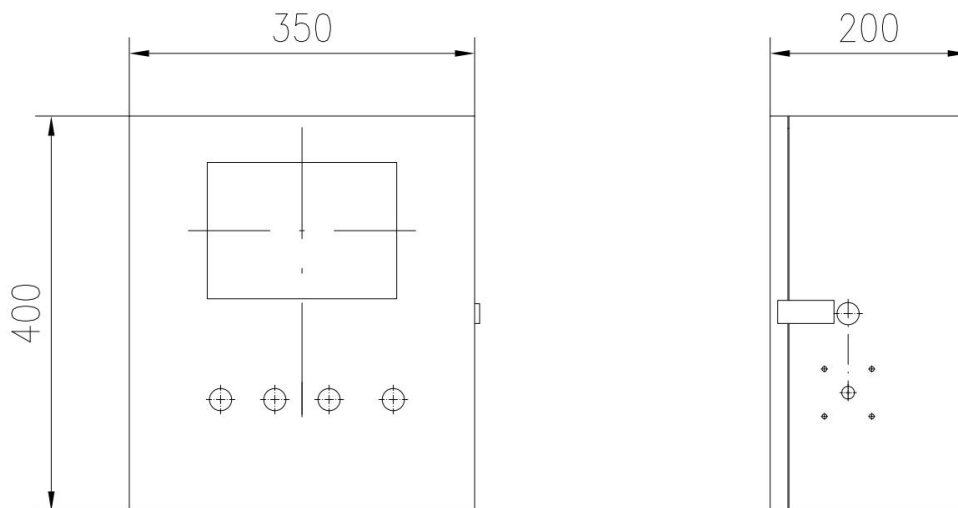


Features and benefits

- Super large LED LCD screen, simplicity of operator
- Chinese and English operating system
- Strong case for harsh environment
- Ability to customize the lubrication intervals, pause and the cycle count

Technical data	
PN	MC- I
Input power	380VAC ± 10%
Operating temperature	-20°C - 60°C
Power	60W
Protection rating	IP55

Dimensions(mm):



End - of - line pressure unit



EPW end-of-line pressure switches are key components in a dual-line lubrication system. Designed to monitor the system, these switches detect the pressure at the end of the respective main line and start the change-over procedure. If the pressure at the end of the line is not reached within a specific period of time, a fault signal will be generated at the electronic control unit.

Features and benefits

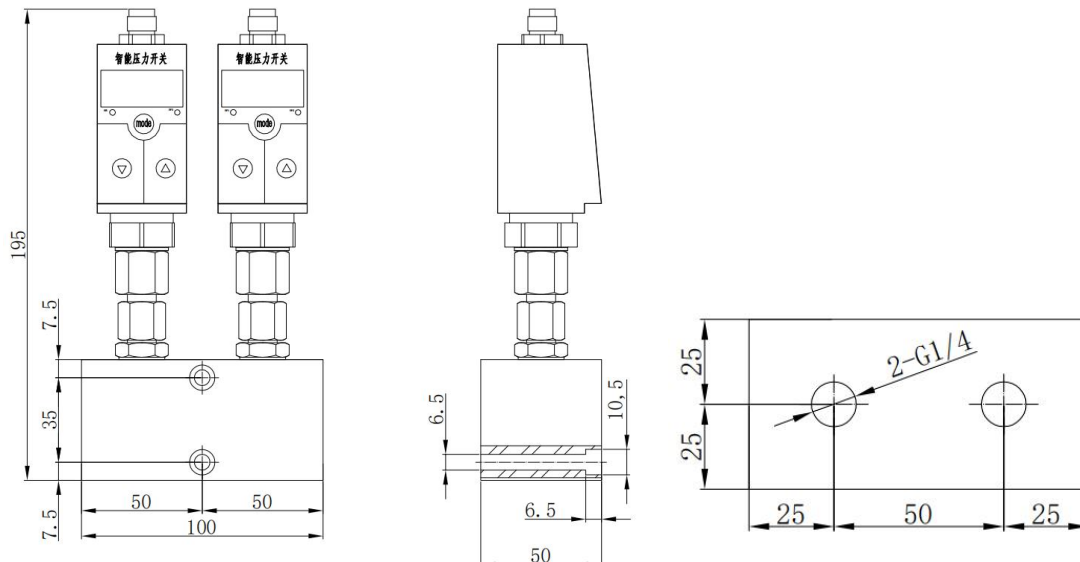
- Controls proper functioning of the pump and change-over unit
- Monitors for leaks in the tube line system
- Available with limit switches or with electronic pressure switches with LED display
- Proven, rigid design for tough conditions

Technical data	
Function principle	Electronic pressure switch with
Operating temperature	-25 °C to +85 °C
Operating pressure	0-600 bar
Supply voltage	18-36 VDC
Accurate measurement	0.5%FS (default), 0.2%FS, 0.1%FS
Range	-100kpa~0~100mpa (Optional within the range)

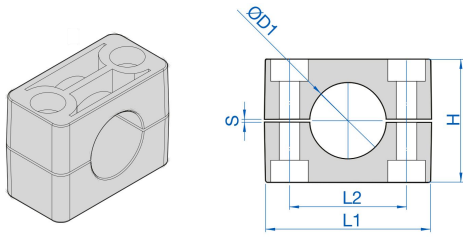
Applications

- Large dual-line systems
- Steel mills
- Cement plants
- Minerals and mining

Dimensions(mm):

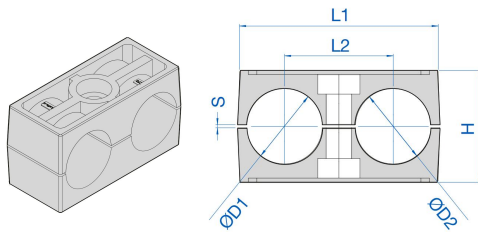


Single pipe clip



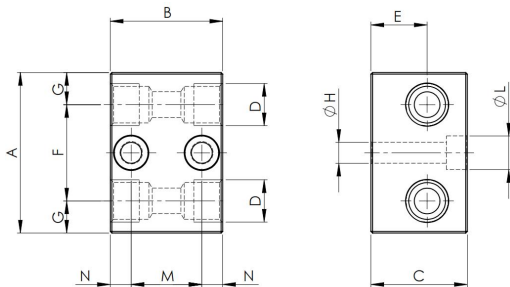
PN	ØD1	L1	H
SC06	Ø6	37	27
SC08	Ø8	37	27
SC10	Ø10	37	27
SC12	Ø12	37	27
SC16	Ø16	42	33

Twin pipe clip



PN	ØD1	L1	L2	H
TC1010	Ø10-Ø10	36	20	27
TC1212	Ø12-Ø12	36	20	27
TC1616	Ø16-Ø16	53	27	29
TC2020	Ø20-Ø20	67	36	37
TC2525	Ø25-Ø25	67	36	37
TC3030	Ø30-Ø30	81	45	42

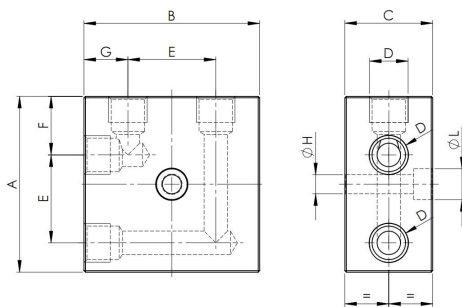
Straight dual line Junction blocks



PN	D	A	B	C	E	F	G	H	L	M	N
JDS04	G1/4"	50	35	30	17.5	30	10	6.5	10.5	22	6.5
JDS06	G3/8"	80	40	32	27	33	15	6.5	10.5	28	11

The standard material is steel, if you need to order stainless steel, please add -SS after PN, EG.: JDS04-SS

90° dual line Junction blocks



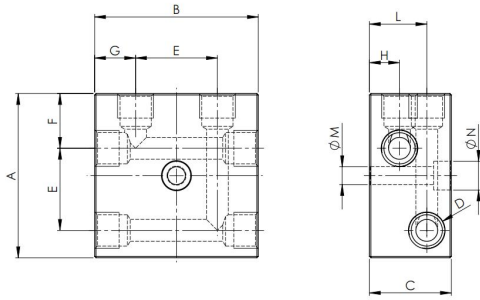
PN	D	A	B	C	E	F	G	H	L
JDA04	G1/4"	60	60	30	30	20	15	6.5	10.5
JDA06	G3/8"	80	96	50	50	19	23	8.5	13.5

The standard material is steel, if you need to order stainless steel, please add -SS after PN, EG.: JDA04-SS



Accessories

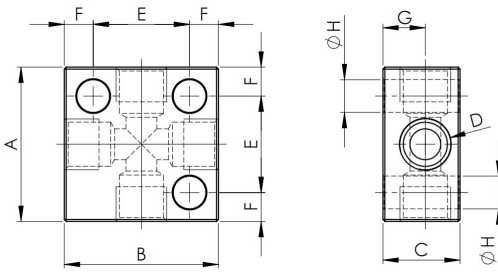
T dual line Junction blocks



PN	D	A	B	C	E	F	G	H	L	M	N
JDT04	G1/4"	60	60	30	30	20	15	11	21	6.5	10.5
JDT06	G3/8"	80	96	50	50	19	23	21.5	33.5	8.5	13.5

The standard material is steel, if you need to order stainless steel, please add -SS after PN, EG.: JDT04-SS

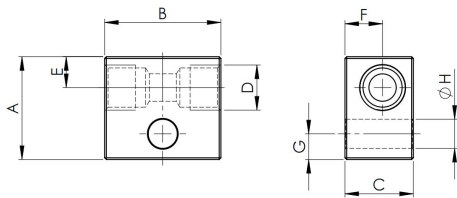
X dual line Junction blocks



PN	D	A	B	C	E	F	G	H	L	M	N
JDF04	G1/4"	60	70	30	30	15	20	11	21	6.5	10.5
JDF06	G3/8"	100	96	50	50	25	23	21.5	33.5	8.5	13.5

The standard material is steel, if you need to order stainless steel, please add -SS after PN, EG.: JDF04-SS

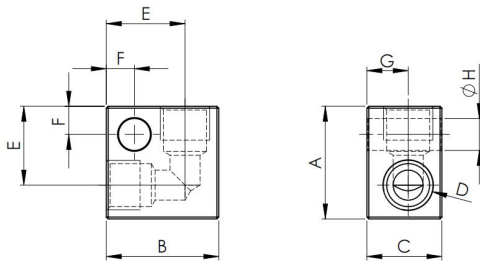
Straight single line Junction blocks



PN	D	A	B	C	E	F	G	H
JSS04	G1/4"	30	34	20	9	11	7.5	8.5
JSS06	G3/8"	40	45	25	15	12.5	7.5	8.5

The standard material is steel, if you need to order stainless steel, please add -SS after PN, EG.: JSS04-SS

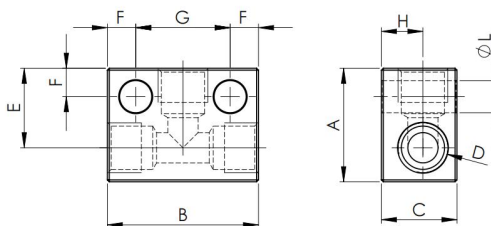
90° single line Junction blocks



PN	D	A	B	C	E	F	G	H
JSA04	G1/4"	30	30	20	21	7.5	11	8.5
JSA06	G3/8"	40	40	30	28	7.5	15	8.5

The standard material is steel, if you need to order stainless steel, please add -SS after PN, EG.: JSA04-SS

T single line Junction blocks

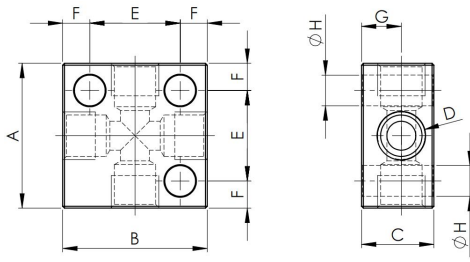


PN	D	A	B	C	E	F	G	H
JST04	G1/4"	40	40	20	25	7.5	11	8.5
JST06	G3/8"	50	50	30	35	7.5	15	8.5

The standard material is steel, if you need to order stainless steel, please add -SS after PN, EG.: JST04-SS



X single line Junction blocks



PN	D	A	B	C	E	F	G	H	L
JSF04	G1/4"	30	40	20	21	7.5	25	11	8.5
JSF06	G3/8"	40	50	30	28	7.5	35	15	8.5

The standard material is steel, if you need to order stainless steel, please add -SS after PN, EG.: JSF04-SS

Stright fitting



Main line

PN	Tube OD	Thread	Material
TW1206	Ø12	G3/8"	Carbon steel
TW1606	Ø16	G3/8"	Carbon steel

Outlet line

PN	Tube OD	Thread	Material
TW0604	Ø6	G1/4"	Carbon steel
TW0804	Ø8	G1/4"	Carbon steel
TW1004	Ø10	G1/4"	Carbon steel

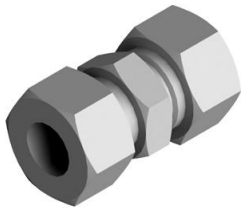
Junction fittings



Junction stright fitting

PN	Tube OD	Material
5D0606	Ø6	Carbon steel
5D0808	Ø8	Carbon steel
5D1010	Ø10	Carbon steel
5D1212	Ø12	Carbon steel
5D1616	Ø16	Carbon steel
5D2020	Ø20	Carbon steel
5D2525	Ø25	Carbon steel
5D3030	Ø30	Carbon steel





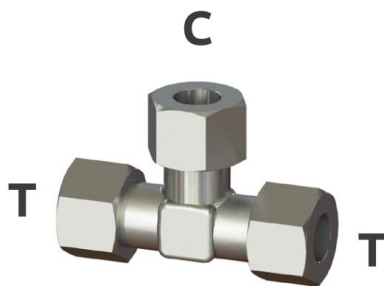
Reduction fitting

PN	Tube OD	Tube OD	Material
5D1612	Ø16	Ø12	Carbon steel
5D2012	Ø20	Ø12	Carbon steel
5D2016	Ø20	Ø16	Carbon steel
5D2516	Ø25	Ø16	Carbon steel
5D2520	Ø25	Ø20	Carbon steel
5D3020	Ø30	Ø20	Carbon steel
5D3025	Ø30	Ø25	Carbon steel

T junction fitting



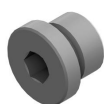
PN	Tube OD	Material
TJ06	Ø6	Carbon steel
TJ08	Ø8	Carbon steel
TJ10	Ø10	Carbon steel
TJ12	Ø12	Carbon steel
TJ16	Ø16	Carbon steel
TJ20	Ø20	Carbon steel
TJ25	Ø25	Carbon steel
TJ30	Ø30	Carbon steel



PN	Tube OD T	Tube OD C	Material
TJ1612	Ø16	Ø12	Carbon steel
TJ2012	Ø20	Ø12	Carbon steel
TJ2016	Ø20	Ø16	Carbon steel
TJ2516	Ø25	Ø16	Carbon steel
TJ2520	Ø25	Ø20	Carbon steel



Plug with seals



PN	Thread	Material
5PG06	G3/8"	Carbon steel
5PG04	G1/4"	Carbon steel

Elbow junction

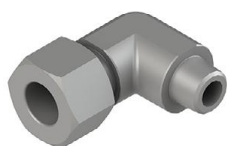


PN	Tube OD	Material
EJ06	Ø6	Carbon steel
EJ08	Ø8	Carbon steel
EJ10	Ø10	Carbon steel
EJ12	Ø12	Carbon steel
EJ16	Ø16	Carbon steel
EJ20	Ø20	Carbon steel
EJ25	Ø25	Carbon steel
EJ30	Ø30	Carbon steel

Fitting for point



Straight			
PN	Tube OD	Thread	Material
TW0602	Ø6	G1/8"	Carbon steel
TW0802	Ø8	G1/8"	Carbon steel



90°			
PN	Tube OD	Thread	Material
HW0602	Ø6	G1/8"	Carbon steel
HW0802	Ø8	G1/8"	Carbon steel



Accessories

Steel tubing



PN	Outer diameter	Inside diameter
T-CP06	Ø6	Ø4
T-CP08	Ø8	Ø6
T-CP10	Ø10	Ø8
T-CP12	Ø12	Ø9
T-CP16	Ø16	Ø12
T-CP20	Ø20	Ø16
T-CP25	Ø25	Ø20
T-CP30	Ø30	Ø24

PNP Ultra sensor



PN	Thread	Thread	Description
125516	M16*1.5	M12*1	4Core, To DSL
125504	G1/4	M12*1	4Core, To DSG



CISO

LUBRICATION SYSTEM

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MADE IN CHINA



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