

The Bijur Lubricating Corporation at a Glance



Where We Came From

Bijur Lubricating Corporation was founded in New York City in 1923 by Mr. Joseph Bijur, who had an idea for a central lubricating system for automobiles. Among the prestigious nameplates that adopted the Bijur system were Nash, Auburn, Stutz, Rolls Royce, Lancia, and Dusenbergl.

By the 1930s, Bijur was expanding its lubrication system offerings to include a wide variety of industrial machinery. As business and prestige grew, it became necessary to expand production capacity, and the company established its principle manufacturing facility in Bennington, Vermont.

Bijur boomed, and in 1963 set up its European Headquarters in Paris, France. Since then, our international growth has continued. In 1995, Bijur Lubricating Corporation was acquired and became part of Vesper Corporation's Industrial Products Group.

Serving Everywhere that Lubrication Is Needed

Today, Bijur has multi-national headquarters and distribution centers in every developed nation, and provides systems for virtually every industry that requires lubricating. Chances are, we can solve your lubricating problems, too!

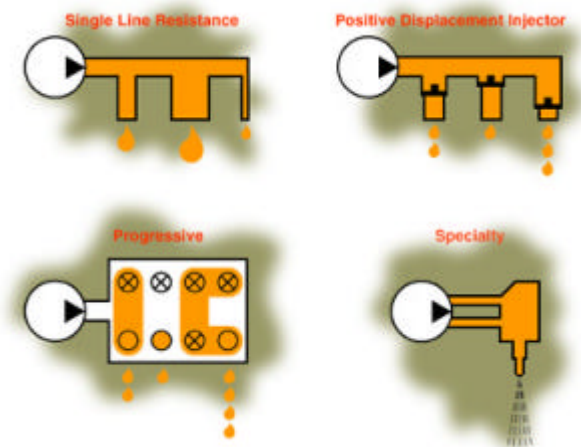
- Metal-cutting & metal-forming
- Textile machinery
- Printing equipment
- Can manufacturing
- Processing equipment
- Packaging
- Glass processing
- Agricultural equipment
- Compressors
- Computer printers
- Radiators
- Steel processing
- Soap manufacturing
- Injection molding



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A Primer on Bijur Lubricating Systems



Bijur manufactures centralized cyclic or continuous lubricating systems that reliably deliver oil or grease in any environment, application or industrial process.

Every system requires a manual or automatic lubricator -- a pump -- for delivering the oil or grease, a distribution network for getting oil or grease from the lubricator to the appropriate locations, and proportioning devices for making sure the correct amount of lubricant is delivered. Some automatic systems may require a controller to regulate the operation of the lubricator. In addition, a monitoring device may be installed for efficient operation.

At the heart of these Bijur systems are three basic designs which may be operated manually, pneumatically, or motor-driven.

Single Line Resistance (SLR) -- a low-pressure oil system ideal for light, medium, and medium-heavy machinery requiring up to 100 points of lubrication.

Positive Displacement Injector (PDI) -- designed to deliver a fixed volume of lubricant to friction points on small- and medium-heavy machinery regardless of temperature or viscosity.

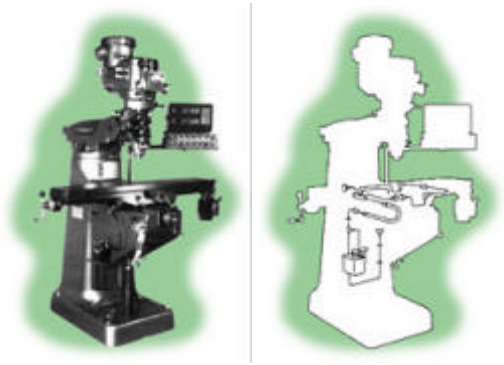
Progressive -- uses a distribution network which operates in a pre-arranged sequence to deliver a fixed volume of lubricant to bearings on medium- to large-sized equipment.

In addition, there are **Specialty Systems** -- solutions for specialized industries and applications.



Single Line Resistance Systems

Single Line Resistance (SLR) systems are compact, economical, and relatively simple to operate and maintain. This **oil-only system** is ideally suited for machinery or equipment similar to the vertical milling machine (shown below) which incorporates closely configured bearing clusters or groups.

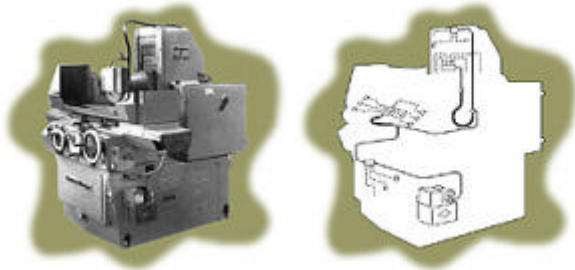


A precisely controlled discharge of oil is delivered to each point while the machine is in operation. The system provides a clean film of oil between critical bearing surfaces to keep friction and wear to a minimum. Machine life is extended and production efficiency is maintained.



Positive Displacement Injector Systems

A Bijur Positive Displacement Injector (PDI) lubrication system is a cost-effective method of protecting machinery, such as the surface grinding machine (below) from the effects of friction and excessive wear during normal operation.



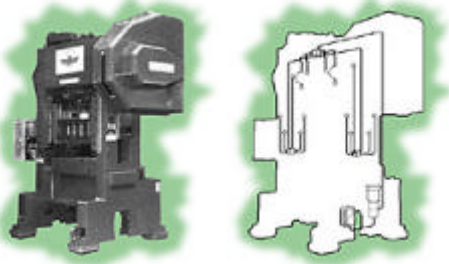
The PDI system consists of few moving parts and operates on pressure generated by the system lubricator. Each oil or grease distributor or "injector" delivers a fixed, volumetric discharge of lubricant to points connected to the system. Because the system is totally sealed, airborne particles, dust, and dirt are prevented from contaminating the lubricant supply.

PDI systems may be actuated by an automatic, self-contained lubricator that is motor-driven or pneumatic. Typically, the system is operated on a timed (hourly) cyclic basis to achieve optimum lubrication. System timers and controller/monitors are available to monitor a variety of system functions and control frequency of discharge (cycle time) to ensure efficient machine operation.



Progressive Lubrication Systems

Progressive Lubrication Systems are simple to install and easy to maintain. They deliver a cyclic or nearly continuous discharge (cc per hour) of a variety of industrial lubricants -- oils, semi-fluids, or greases -- to machinery, such as the vertical punch press (below).



During operation, a series of pistons is actuated and moves in a pre-arranged sequence. Each back-and-forth movement of the piston represents one complete lubrication cycle. A reliable, built-in monitoring feature adds protection to the Progressive system.

Manual

Manually operated Progressive systems are ideally suited for machinery which can be lubricated by a hand actuated pump lever or a centrally located single zerk fitting.

Pneumatic

Pneumatically driven Progressive systems may be specified for applications which have access to either shop or on-board air supplies of approximately 50 psi.

Motor Driven

Motor driven Progressive systems are installed on small, medium, or large machinery which requires an uninterrupted cyclic or continuous discharge of either oil or grease to protect moving parts.



Specialty Lubricating Systems

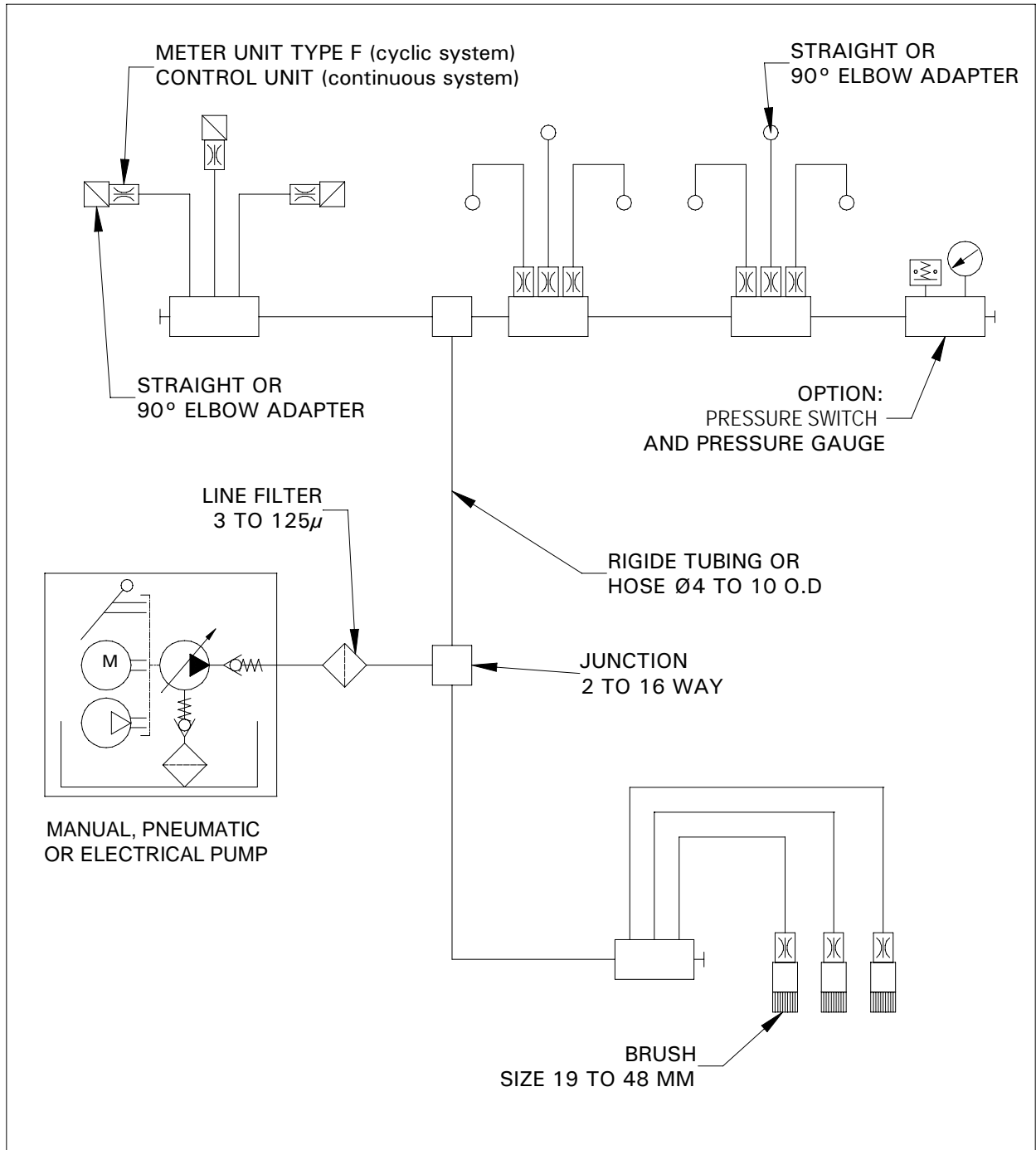
Bijur offers a number of systems to meet the specialized needs of a wide variety of applications, including the automatic lubrication of on/off-road vehicles, pressurized fluid dispensing, and high-speed anti-friction bearings lubrication. These include:

[FluidFlex](#) - the pressurized dispensing system for maximum efficiency, accuracy and control.

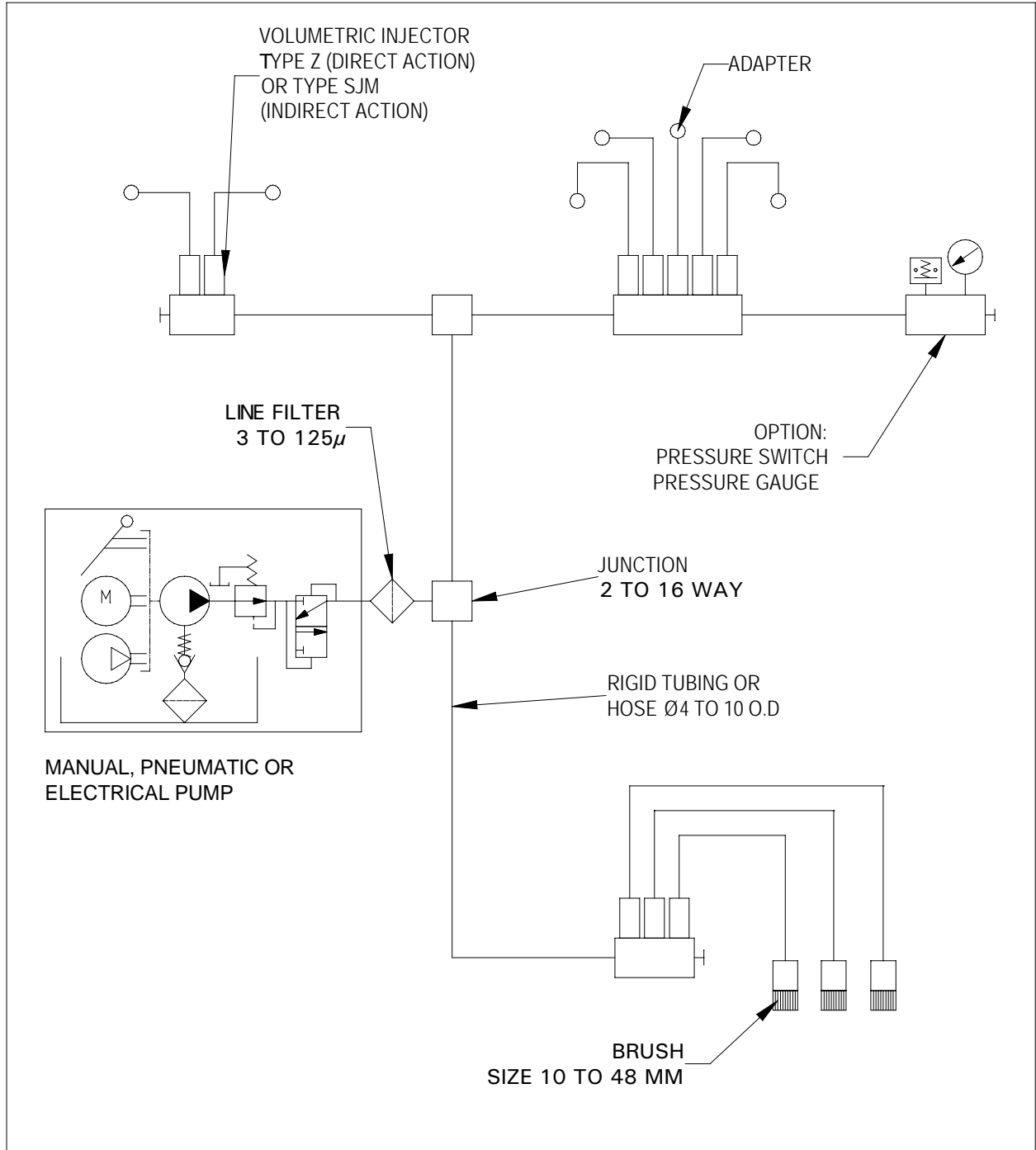
[Air/Oil System](#) - utilize PDIs to deliver precise amounts of oil intermittently.

[ChassisCare](#) - lubricating systems for off-road vehicles.

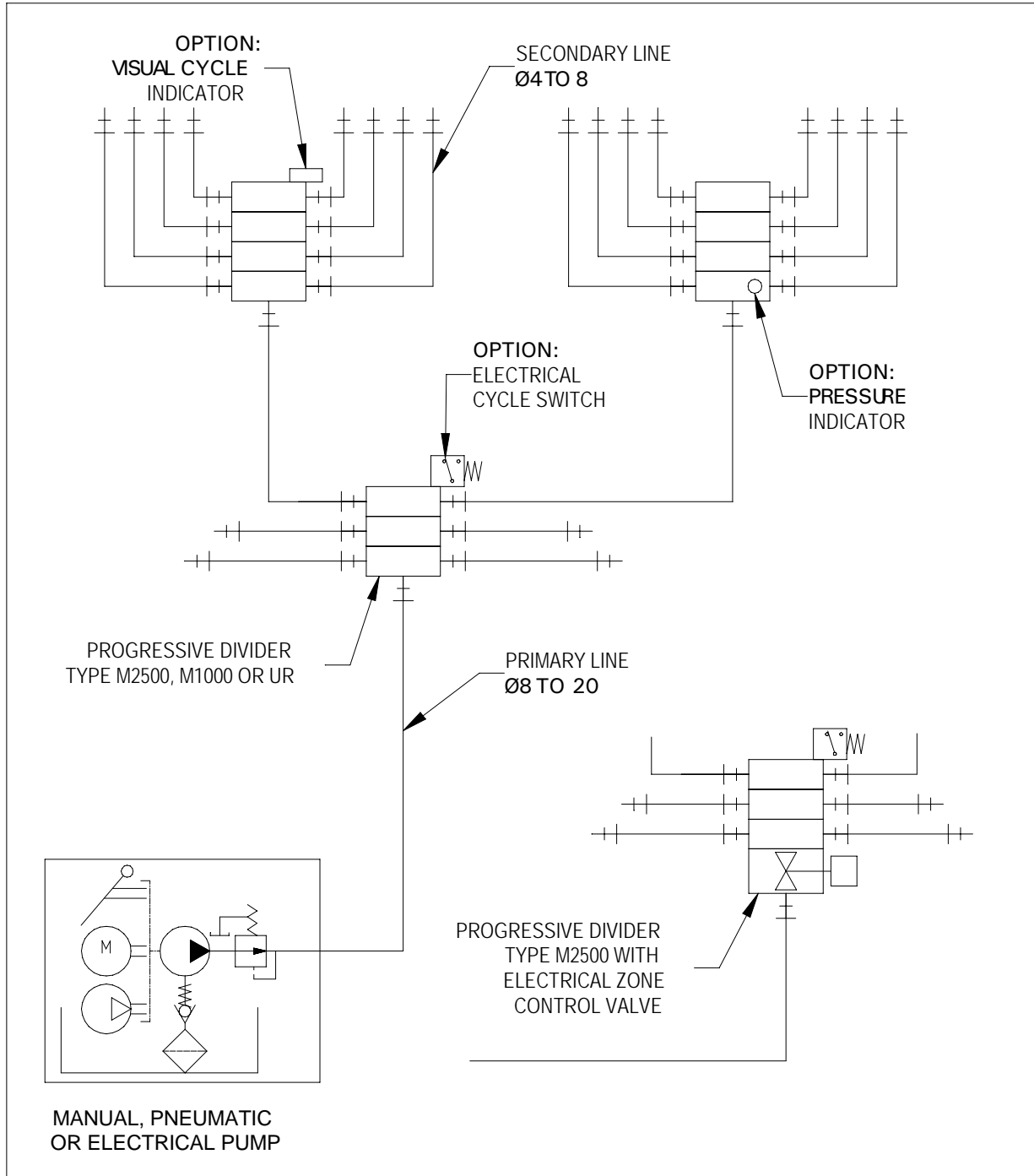
SINGLE LINE RESISTANCE



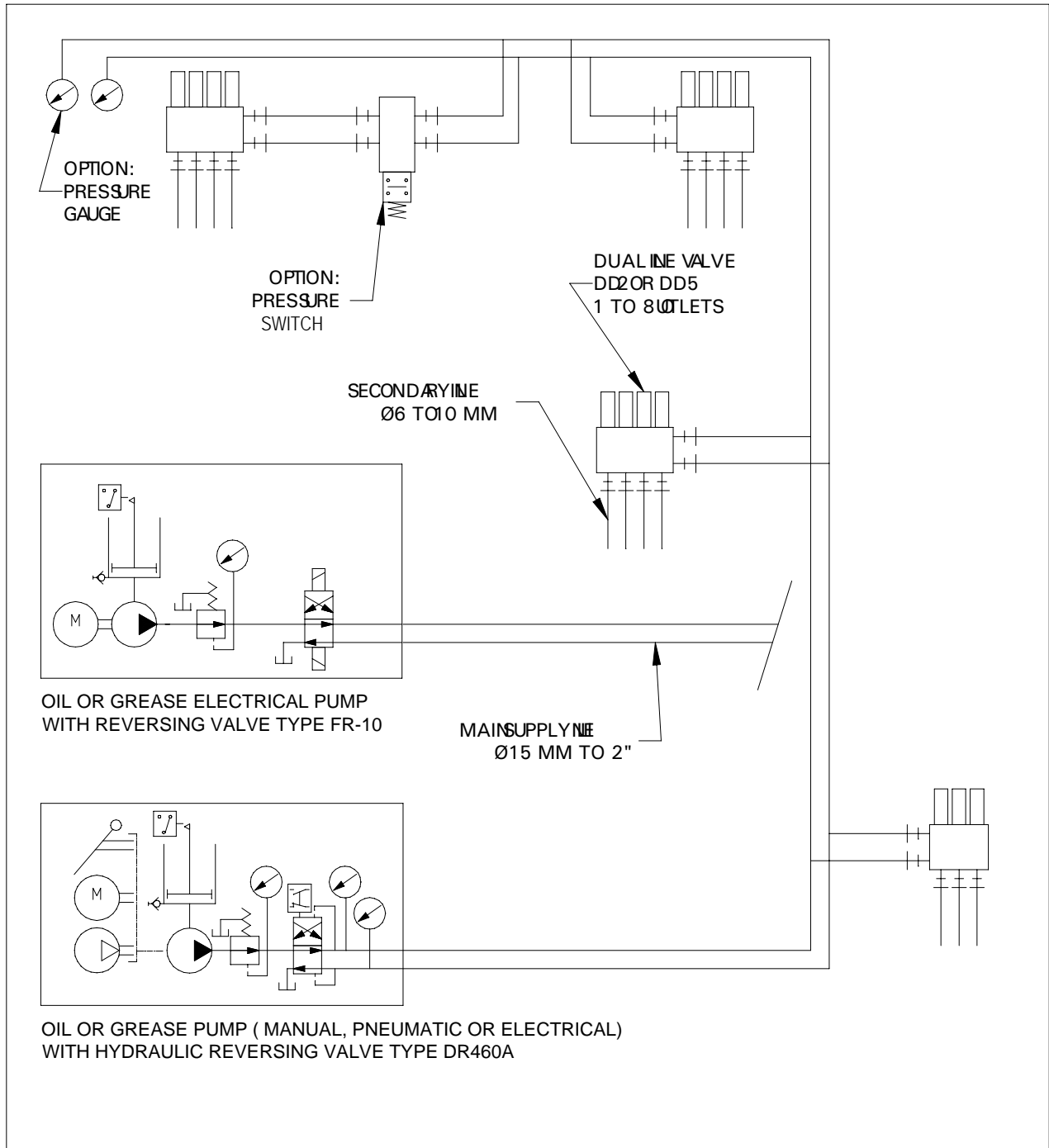
POSITIVE DISPLACEMENT INJECTOR



PROGRESSIVE SYSTEM



DUAL LINE SYSTEM



A Full Line of Equipment to Meet Every Lubricating Need



As the firm that pioneered centralized lubricating systems, Bijur today manufactures a complete line of equipment and accessories to address the full spectrum of cyclic and continuous lubrication applications that require either grease or oil.

[Lubricators](#) -- from manual one-shot systems to meet cyclic lubrication needs to highly sophisticated motor-driven programmable systems.

[Metering Devices](#) -- from meter and control units for single line resistance systems to progressive-movement lubricant divider blocks and positive displacement injectors, Bijur metering devices ensure that the correct amount of oil or grease is applied, no matter how severe the operating environment.

[Peripherals](#) -- including the distribution network components, automatic system controllers, and monitoring devices that may be needed to install and operate a centralized lubrication system.



SUMMARY

Manual pumps

Manual pump L2P
 Manual pump L3P
 Manual pump L5P
 Manual pump L18P
 Manual pump L13P
 Manual pump DA101
 Manual pump DA120
 Manual pump 25057

Pneumatic pumps

Pump AIRMATIC
 Pump SUREMATIC
 Spraymist 4 litres
 Spraymist 20 litres
 Mist 4 litres
 Air/oil system
 Oil recovery system

Mechanical pump

Pump V100

A

A1101
 A1201
 A1301
 A1401
 A1501
 A2101
 A2201
 A2301

B

B1101
 B2101
 B4201
 B4301
 B5101
 B6101
 B7101

C

C1101

Electrical Pumps

Pump TMD5
 Pump TM1
 Pump MP100
 Pump MP750
 Pump VERSA III
 Pump VERSA Tri
 Pump GPO
 Pump MULTIPORT
 Pump CS2000
 Pump DC41
 Fog Lub
 LUBESTATION

D

D1101
 D1105
 D1201
 D1205
 D1301
 D1308
 D1701
 D2201
 D2401
 D2501
 D5101
 D9101

SUMMARY

Valves - Dividers

Meter unit F
 Volumetric injector Z
 Volumetric injector SJM
 Air/oil mixing block AV
 Injector FL1
 Injector FL32-33-42-43
 Injector FL44-45
 Progressive divider M2500
 Progressive divider M1000
 Progressive divider GREASTAR
 GREASTAR multi-outlet kit
 Divider type FD
 Valve DD
 Dispensing valve CVV
 Jet assembly and nozzle
 Nozzle for micro-fog lubricator

Continuous flow valves

Control unit C

Accessories

Check valve and by-passes
 Electrical solenoid valves
 Reversing valve DR45
 Reversing valve FR10
 Air control panel

E Accessories

E1101 Pressure switches
 E1201 Pressure gauges
 E1301 Window units
 E1401 Junctions serie 1
 E1501 serie 2
 E1505 serie 3
 E1510 metric
 E2101 Brush assemblies
 E2201 "Spraymist" accessories
 E2301 Filters
 E2305 Line filters
 E2401
 E2801
 E3901
 E4101
 E5101

Controllers

SS2200
 SS4500
 31981

F Connectors

F1101 Index
 Brass connectors
 Steel connectors
 Miscellaneous connectors
 Pipe, tubing and accessories

P

P1101
 P1201
 P1301

R

R1101
 R1104
 R1109
 R1117
 R1124

MANUAL PUMPS

Manual pump type L2P	A1101A
Manual pump type L3P	A1201A
Manual pump type L5P	A1301A
Manual pump type L18P	A1401A
Manual pump type L13P	A1501A
Manual pump type DA101	A2101A
Manual pump type DA120	A2201A
Manual pump type 25057	A2301A



MANUAL PUMP TYPE L2P - CYCLIC DISCHARGE

Description

The L2P manual pump is perfectly adapted for use with resistance oil meter units (SLR) on small machines with no more than 10 lubrication points.

Functioning

The L2P manual pump works like an accumulator. On pulling the handle, the spring is compressed and the internal chamber is filled with a pre-determined quantity of oil.

On releasing the handle, the spring loaded piston pushes the oil into the distribution circuit. Oil volume discharge is measured without any viscosity influence.

(see system outline)

Characteristics

- Discharge : from 1 to 2 cm³/stroke.
(To be specified when placing the order).
- Pressure : 2 bar
- Reservoir capacity : 0,2 litre
- Filter : suction filter, must be regularly checked and replaced once a year.
- System limits : see in chapter "technical information" the indications as to how many lubrication points can be lubricated in regard to the discharge of the pump per cycle.
- Lubricants to be used : mineral oil with viscosities 30 to 1500 Cst at working temperature.



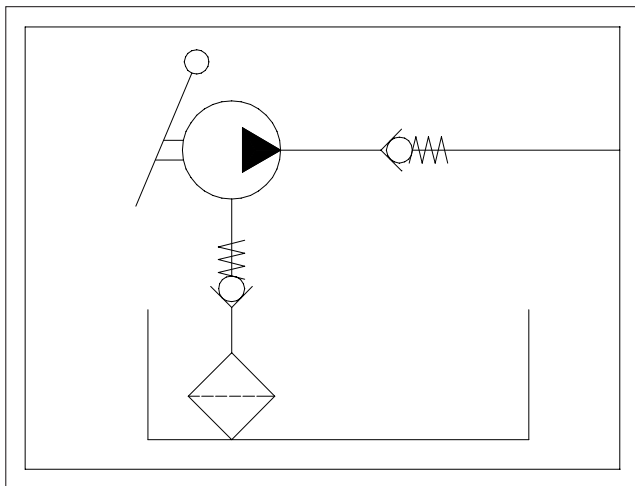
Ordering instructions

Specify description : Pump L2P

Outside dimensions

See overleaf.

System outline



SERVICE INSTRUCTIONS - MANUAL PUMP TYPE L2P

Start Up

Fill the reservoir and operate the handle until oil arrives at each lubrication point.

Oil

Use only clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 40 microns without it separating.

Service

The pump must be operated as often as recommended by the machine manufacturer. Check regularly the oil level and fill the reservoir as necessary. Control periodically the lubrication lines to ensure none are

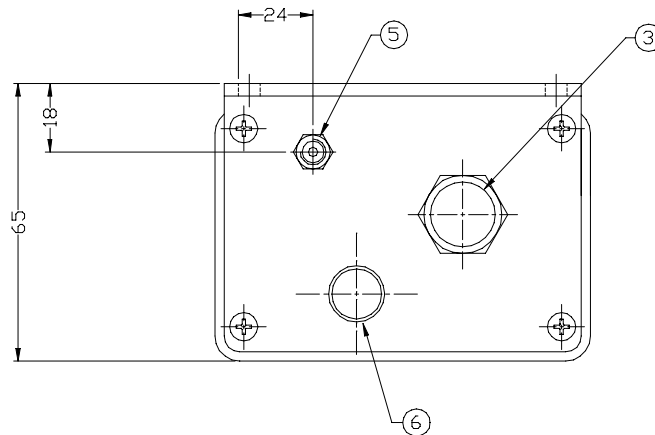
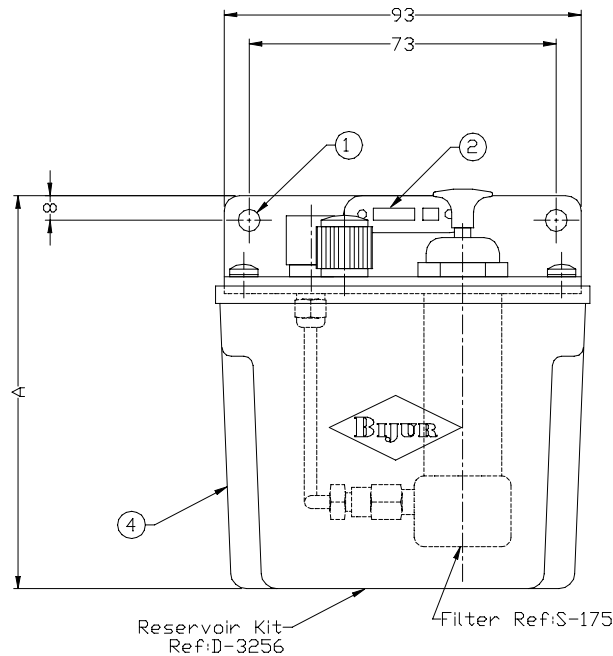
broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Check regularly the suction filter and replace it once a year.

Spare parts

For ordering, specify reference and type of pump. If possible also advise serial number of the pump.

For all repairs, it is recommended that the pump be returned to Bijur.

A	Discharge/stroke
107	1 cm ³
116	2 cm ³



Legend

- (1) 2 mounting holes \varnothing 7
- (2) Identification label
- (3) Button
- (4) Reservoir
- (5) Outlet for tubing \varnothing 4
- (6) Filling plug

MANUAL PUMP TYPE L3P - CYCLIC DISCHARGE

Description

The L3P manual pump is perfectly adapted for use with resistance oil meter units (SLR) on small machines with no more than 10 lubrication points.

Functioning

The L3P manual pump works like an accumulator. On pulling the handle, the spring is compressed and the internal chamber is filled with a pre-determined oil quantity.

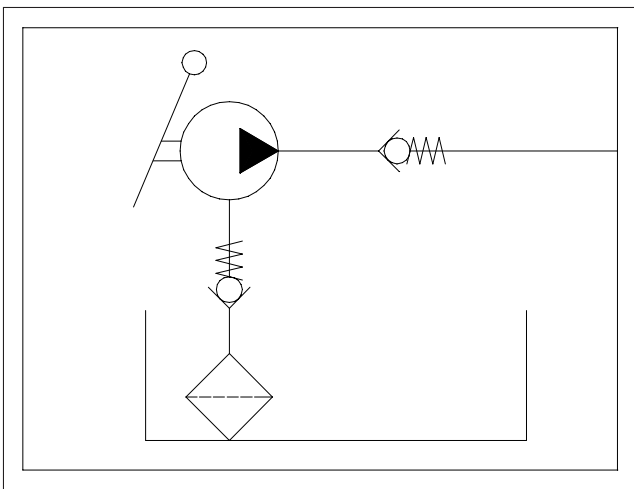
On releasing the handle, the spring loaded piston pushes the oil into the distribution circuit. Oil volume discharge is measured without any viscosity influence.

Characteristics

- Discharge : 3 cm³/Stroke
- Pressure : 2 bar
- Reservoir capacity : 0,2 litre
- Filter : suction filter, must be regularly checked and replaced once a year.
- System limits : see in chapter "technical information" the indications as to how many lubrication points can be lubricated in regard to the discharge of the pump per cycle.
- Lubricants to be used : mineral oil with viscosities 30 to 1500 Cst at working temperature.

(See system outline)

System outline



Ordering instructions :

Specify description : Pump L3P

Outside dimensions :

see overleaf.

SERVICE INSTRUCTIONS - MANUAL PUMP TYPE L3P

Start Up :

Fill the reservoir and operate the handle until oil arrives at each lubrication point.

Oil :

Use only clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 40 microns without it separating.

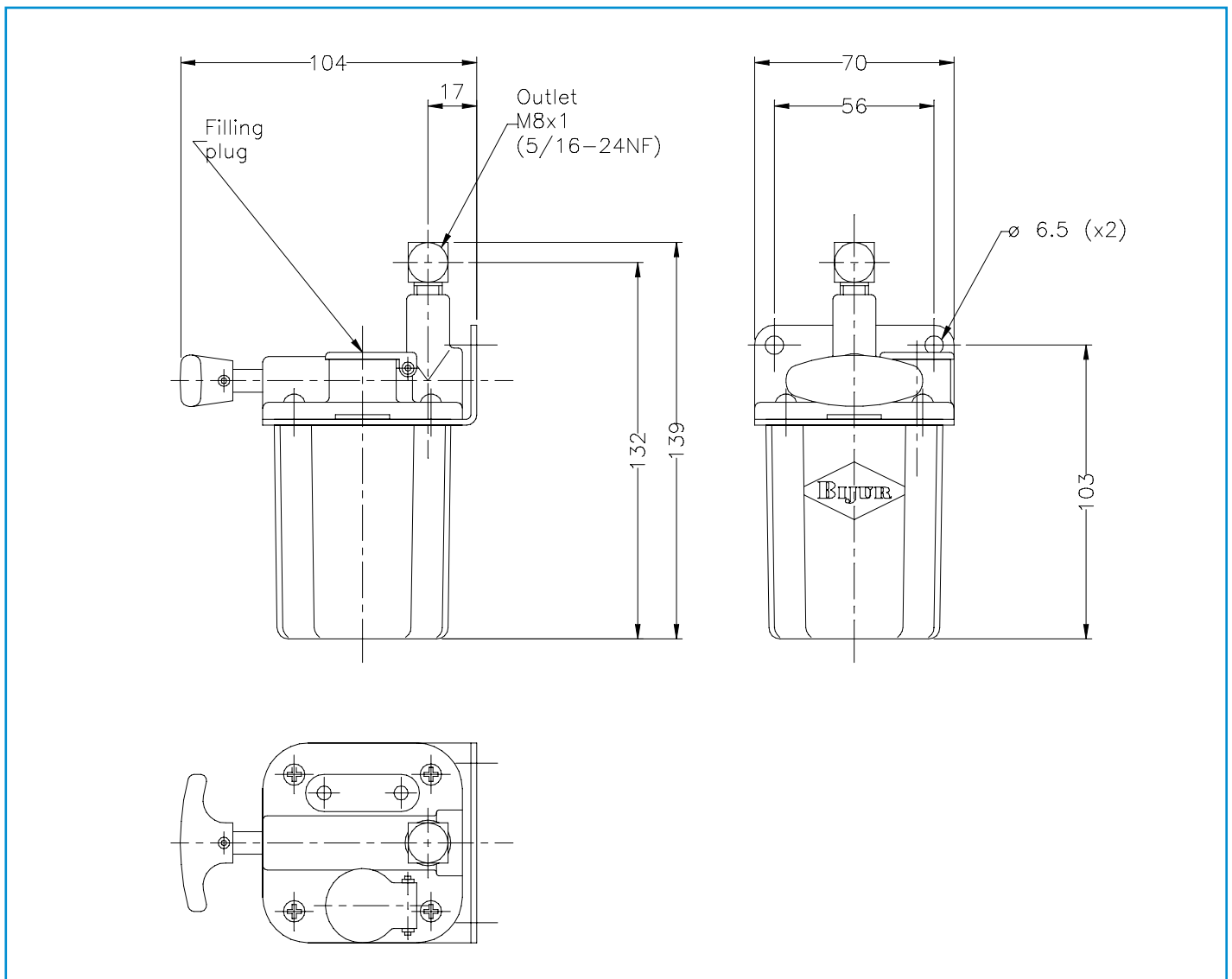
Service

The pump must be operated as often as recommended by the machine manufacturer. Check regularly the oil level and fill the reservoir as necessary. Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Check regularly the suction filter and replace it once a year.

Spare parts

For ordering, specify reference and type of pump. If possible also advise serial number of the pump.

For all repairs, it is recommended that the pump be returned to Bijur.



MANUAL PUMP TYPE L5P - CYCLIC DISCHARGE

Description

The L5P manual pump is perfectly adapted for use with resistance oil meter units (SLR) on medium size machines with no more than 30 lubrication points.

Functioning

The L5P manual pump works like an accumulator. On pushing the handle, the spring is compressed and the internal chamber is filled with a pre-determined oil quantity.

On releasing the handle, the spring loaded piston pushes the oil into the distribution circuit. Oil volume discharge is measured without any viscosity influence.

Characteristics

- **Discharge :** from 1 to 5 cm³/stroke (setting screw and stop nut are inside the reservoir).
- **Pressure :** 5 bar max.
- **Reservoir capacity :** 0,475 litre
- **Filter :** suction filter 40µ, must be regularly checked and replaced once a year.
- **System limits :** see in chapter "technical information" the indications on how many lubrication points can be lubricated in regard to the discharge of the pump per cycle.
- **Lubricant to be used :** mineral oil with viscosities 30 to 1500 Cst at working temperature.

(see system outline)

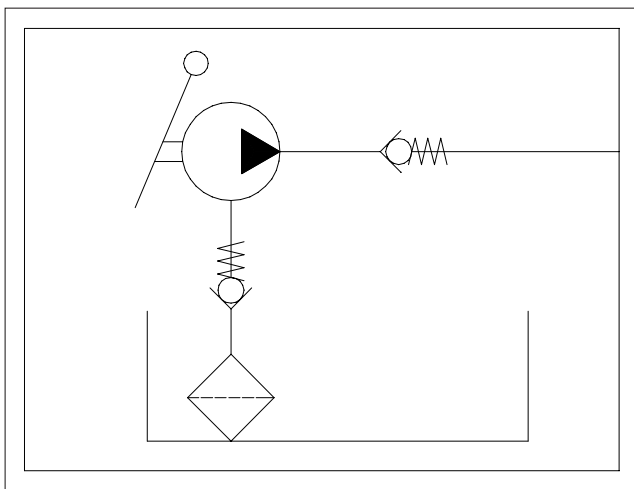


Ordering instructions :

Specify description : Pump L5P-R

Reference	Handle	Reservoir
Pump L5P-R	Right	Plastic
Pump L5P-L	Left	Plastic

System outline



Outside dimensions :

see overleaf.

SERVICE INSTRUCTIONS - MANUAL PUMP TYPE L5P

Start Up

Fill the reservoir and operate the handle until oil arrives at each lubrication point.

Oil

Use only clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 40 microns without it separating.

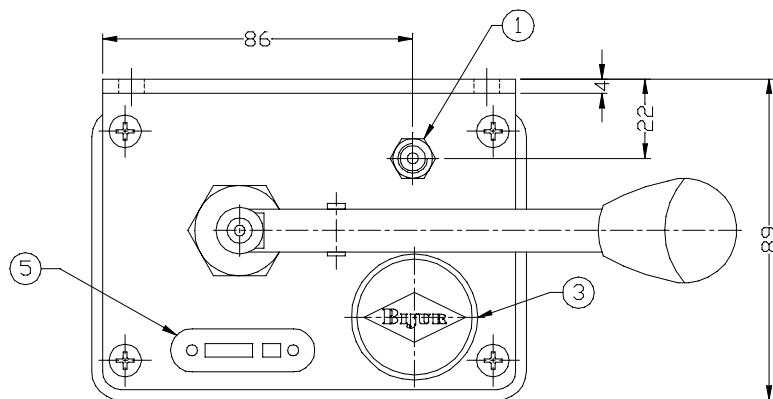
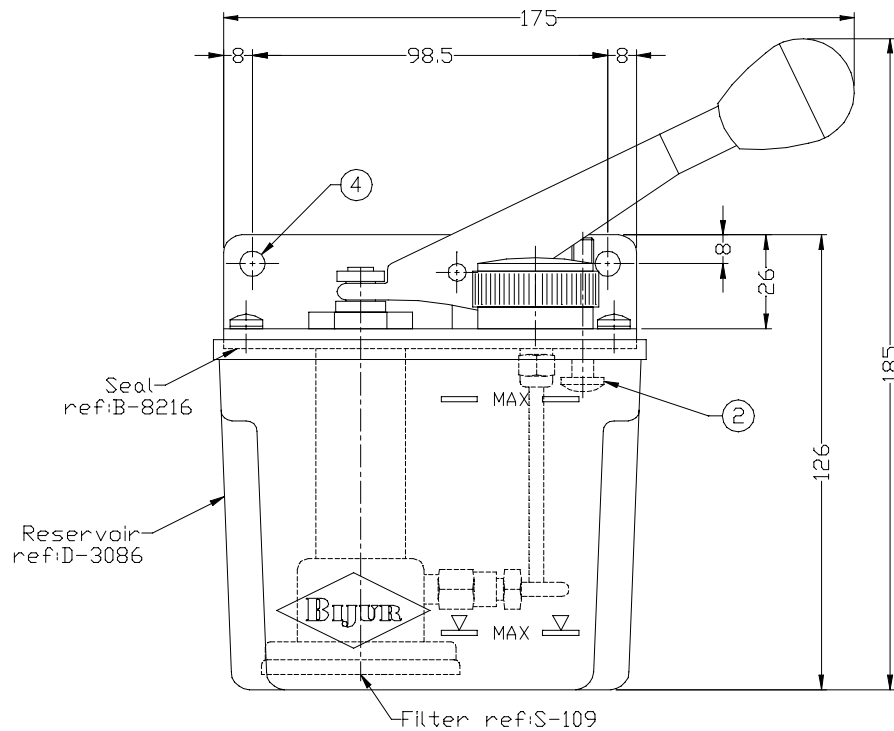
Service

The pump must be operated as often as recommended by the machine manufacturer. Check regularly the oil level and fill the reservoir as necessary. Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Check regularly the suction filter and replace it once a year.

Spare parts

For ordering, specify reference and type of pump. If possible also advise serial number of the pump.

For all repairs, it is recommended that the pump be returned to Bijur.



Legend

- (1) Outlet for tubing dia 4, use compression screw B1371 and compression sleeve B1061
- (2) Adjustment screw
- (3) Filling plug
- (4) 2 mounting holes $\varnothing 7$
- (5) Identification label

MANUAL PUMP TYPE L18P - CYCLIC DISCHARGE

Description

The L18P manual pump is perfectly adapted for use with resistance oil meter units (SLR) on medium size machines with no more than 75 lubrication points.

Functioning

The L18P manual pump works like an accumulator. On pushing the handle, the spring is compressed and the internal chamber is filled with a pre-determined oil quantity.

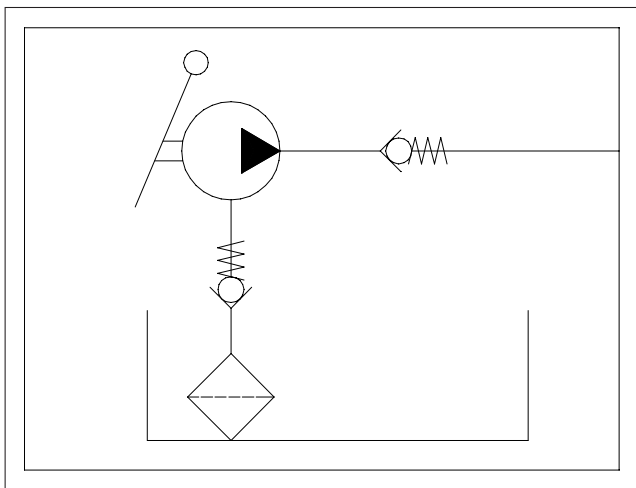
On releasing the handle, the spring loaded piston pushes the oil into the distribution circuit. Oil volume discharge is measured without any viscosity influence.

Characteristics

- **Discharge :** from 6 to 18 cm³/stroke (setting screw and stop nut are inside the reservoir).
- **Pressure :** 5 bar max.
- **Reservoir capacity :** 1 litre
- **Filter :** suction filter 40µ, must be regularly checked and replaced once a year.
- **System limits :** see in chapter "technical information" the indications on how many lubrication points can be lubricated in regard to the discharge of the pump per cycle.
- **Lubricant to be used :** mineral oil with viscosities 30 to 1500 Cst at working temperature.

(see system outline)

System outline



Ordering instructions

Specify description : Pump L18P-R

Reference	Handle	Reservoir
Pump L18P-R	Right	Plastic
Pump L18P-L	Left	Plastic

Outside dimensions

see overleaf.

SERVICE INSTRUCTIONS - MANUAL PUMP TYPE L18P

Start Up

Fill the reservoir and operate the handle until oil arrives at each lubrication point.

Oil

Use only clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 40 microns without it separating.

Adjusting oil discharge

discharge cm ³	1	2	3	4	5
Stroke mm	25,5	28,5	31,5	35	38

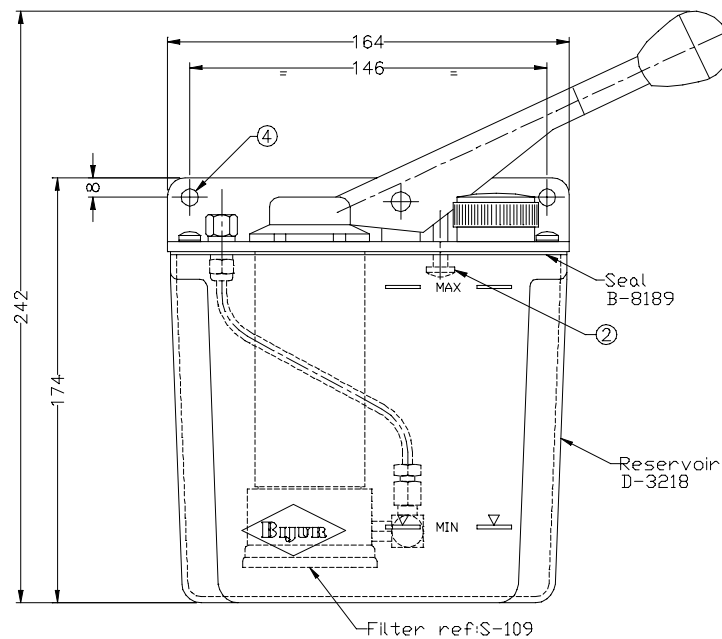
Service

The pump must be operated as often as recommended by the machine manufacturer. Check regularly the oil level and fill the reservoir as necessary. Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Check regularly the suction filter and replace it once a year.

Spare parts

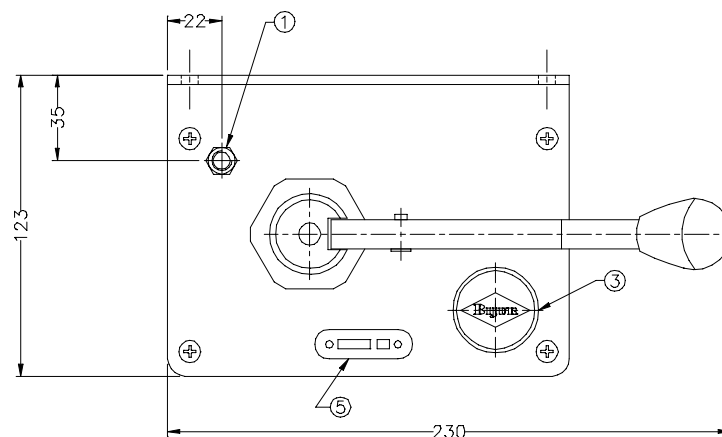
For ordering, specify reference and type of pump. If possible also advise serial number of the pump.

For all repairs, it is recommended that the pump be returned to Bijur.



Legend

- (1) Outlet for tubing dia 4, use compression screw B1371 and compression sleeve B1061
- (2) Adjustment screw
- (3) Filling plug
- (4) 2 mouting holes \varnothing 7
- (5) Identification label



MANUAL PUMP TYPE L13P - CYCLIC DISCHARGE

Description

The L13P manual pump is perfectly adapted for use with volumetric oil injectors (PDI). The oil reservoir is of translucent plastic design.

Functioning

The lubricant is injected in the lubrication system by operating the handle. When the handle is moved from its initial position, an integrated pressure valve decompresses the circuit and injectors are reloaded for the next cycle. A safety valve set at 20 bars protects the system against over pressure.

(see system outline)



Characteristics

- Discharge : 13cc maximum
- Reservoir capacity : 1 litre
- Pressure : 20 bars (290 psi)
- Relieving pressure : 0.7 bars (10 psi)
- Reservoir capacity : 1 litre
- Working temperature : 80°C max.
- Lubricants to be used : mineral oil with 30 to 750 cSt viscosity at working temperature (80° maxi.).
- Other lubricants : contact Bijur
- Installation position : vertical

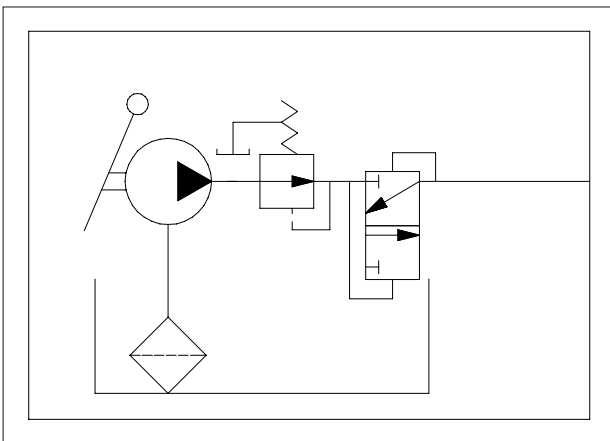
Ordering instructions

Specify description : Pump L13P

Outside dimensions

see overleaf.

System outline



SERVICE INSTRUCTIONS - MANUAL PUMP TYPE L13P

Start Up

Fill the reservoir and operate the handle until oil arrives at each lubrication point.

Oil

Use only clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

Service

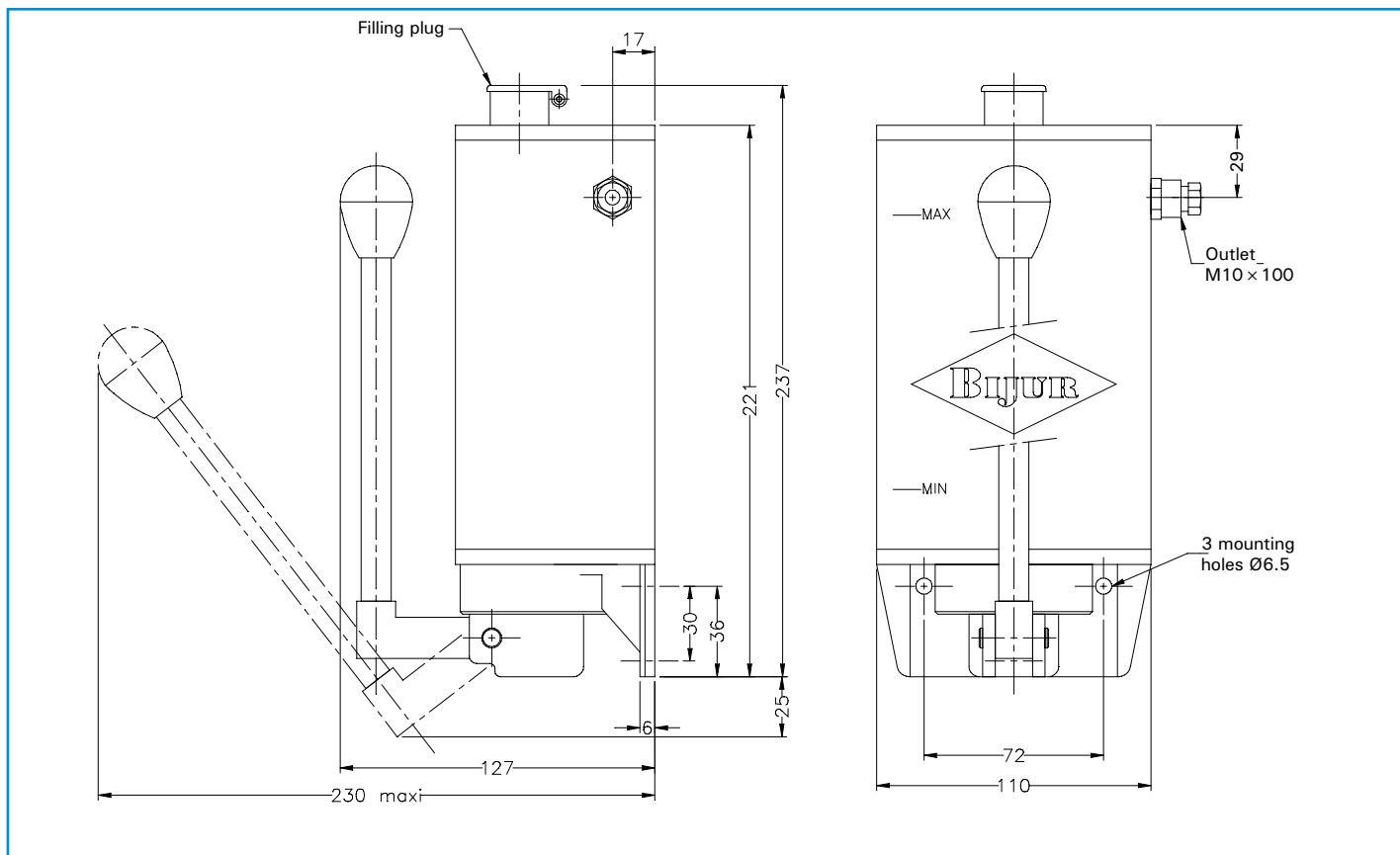
The pump must be operated as often as recommended by the machine manufacturer.

Check regularly the oil level and fill the reservoir as necessary. Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to Bijur.



Spare parts

Description	Reference
Filling plug with filter	AO254
Operating handle	AO255

MANUAL PUMP TYPE DA 101 - DUAL LINE PUMP

Description

The manual pump DA101 is perfectly adapted for use with DD valves (dual line). It comprises a handle linked to a single action piston, a pressure gauge and a manual reversing valve.

On standard version, the reservoir is equipped with a steel follower plate and indicator pin for visual level. A pressure gauge and a quick coupling are also mounted for easy filling.

Functioning

Push the manual reversing valve Knob. Operate handle to obtain a pressure of 100 bar in the circuit.

Maintain pressure for one minute until grease arrives at each lubrication point.

Pull the manual reversing valve Knob. This action results in enabling the first line to depressurise again whilst the second line pressurises by operating the handle again.

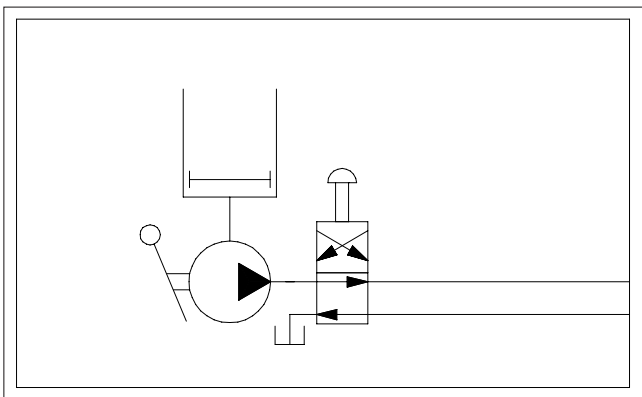
Push manual reversing valve Knob to its initial position to re-establish residual pressure in the circuit.

(See system outline)

Characteristics

- Discharge : 7,4 cm³/stroke.
- Pressure : 100 bar
- Reservoir capacities : 2 - 3,5 and 5,5 Kg
- Working temperature : 20°C to 80 °C max.
- Lubricant to be used : Grease NLGI 2 max.
(worked penetration W > 265).

System outline



Ordering instructions

To define the exact pump characteristics use the following codes:

Pump code DA 101 A

Reservoir capacity

- | | | |
|---|--------|--|
| 4 | 2 Kg | |
| 5 | 3,5 Kg | |
| 6 | 5,5 Kg | |

Example

A manual pump for dual line with a 5,5 Kg reservoir.
Reference : **DA6101A**

Outside dimensions

See overleaf.

SERVICE INSTRUCTIONS - MANUAL PUMP TYPE DA 101

Start up

Read carefully the technical data sheet supplied with the pump.
Fill the reservoir with a perfectly clean lubricant avoiding all pollutants via a quick coupling located at the bottom of the body pump. To eliminate air during the first filling operation, fill with oil to the top of the filter and then complete filling with grease.

Dimensions

Reference	reservoir	A (maxi)	B
DA4101A	2 Kg	610	368
DA5101A	3,5 Kg	940	533
DA6101A	5,5 KG	1300	

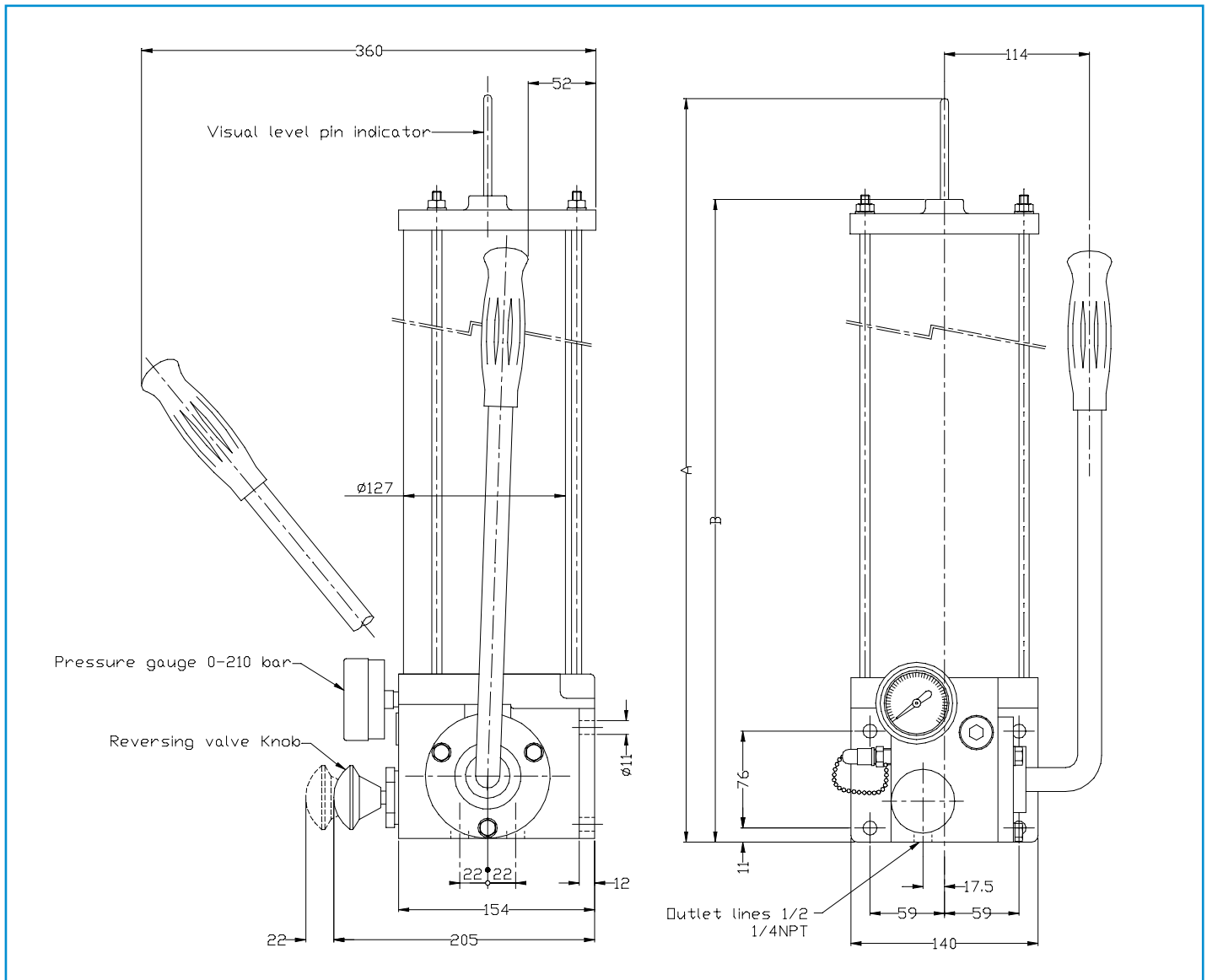
Service

Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to Bijur.



MANUAL PUMP TYPE DA 120 FOR GREASE OR OIL CYCLIC DISCHARGE

Description

The manual pump DA120 is perfectly adapted for use with progressive dividers. It comprises a handle linked to a single action piston, a pressure gauge and a visual indicator pin for standard version.

For grease system, the reservoir is equipped with a steel follower plate with a visual level pin indicator. For oil system, the follower piston is replaced by a float visual level pin indicator.

A snap-on connector must be used for grease and oil filling operations.

Functioning

Push the indicator pin and operate the handle. The indicator pin integrated into the body pump is monitored by the primary divider via a return tube. It shows the good functioning of lubrication cycles to the operator. When the pump supplies 0,16cm³ to the indicator pin, the pin moves.

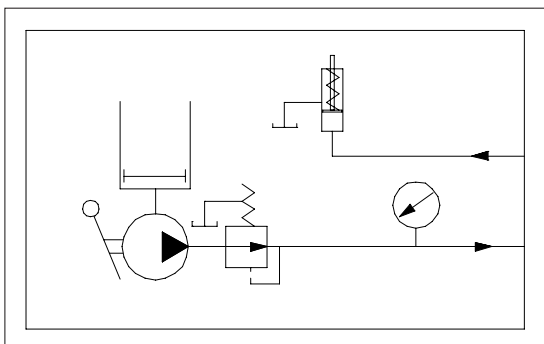
The lubrication cycle is finished and the operator pushes it in its initial position. In case of one movement being not enough, repeat these operations as many times as required.

(See system outline)

Characteristics

- Discharge : 7,4 cm³/cycle
- Pressure : 100 bar
- Reservoir capacities : 2 - 3,5 and 5,5 Kg for grease
3 - 5 and 7,5 L for oil
- Working temperature : -20°C to 80 °C max.
- Lubricant to be used : Grease NLGI 2 max. (worked penetrationW > 265).
Mineral oil viscosity 300 Cst (mini at 20°C).

System outline



Ordering instructions

To define the exact pump characteristics use the following codes :

Pump code	DA		120	
Reservoir capacity	<input type="checkbox"/> 4	2 Kg or 3 L	<input type="checkbox"/> 5	3,5 Kg or 5 L
	<input type="checkbox"/> 6	5,5 Kg or 7,5 L		
Lubricant	<input type="checkbox"/> A	Grease	<input type="checkbox"/> B	Oil

Example

A manual pump for single line system with a 5L oil reservoir.
Reference : **DA5120B**

Outside dimensions

See overleaf.

SERVICE INSTRUCTION - MANUAL PUMP TYPE DA120

Start up

Read carefully the technical data sheet supplied with the pump.
 Fill the reservoir with a perfectly clean lubricant avoiding all pollutants via a quick coupling located at the bottom of the body pump. To eliminate air during the first filling operation, fill with oil to the top of the filter and then complete filling with grease.

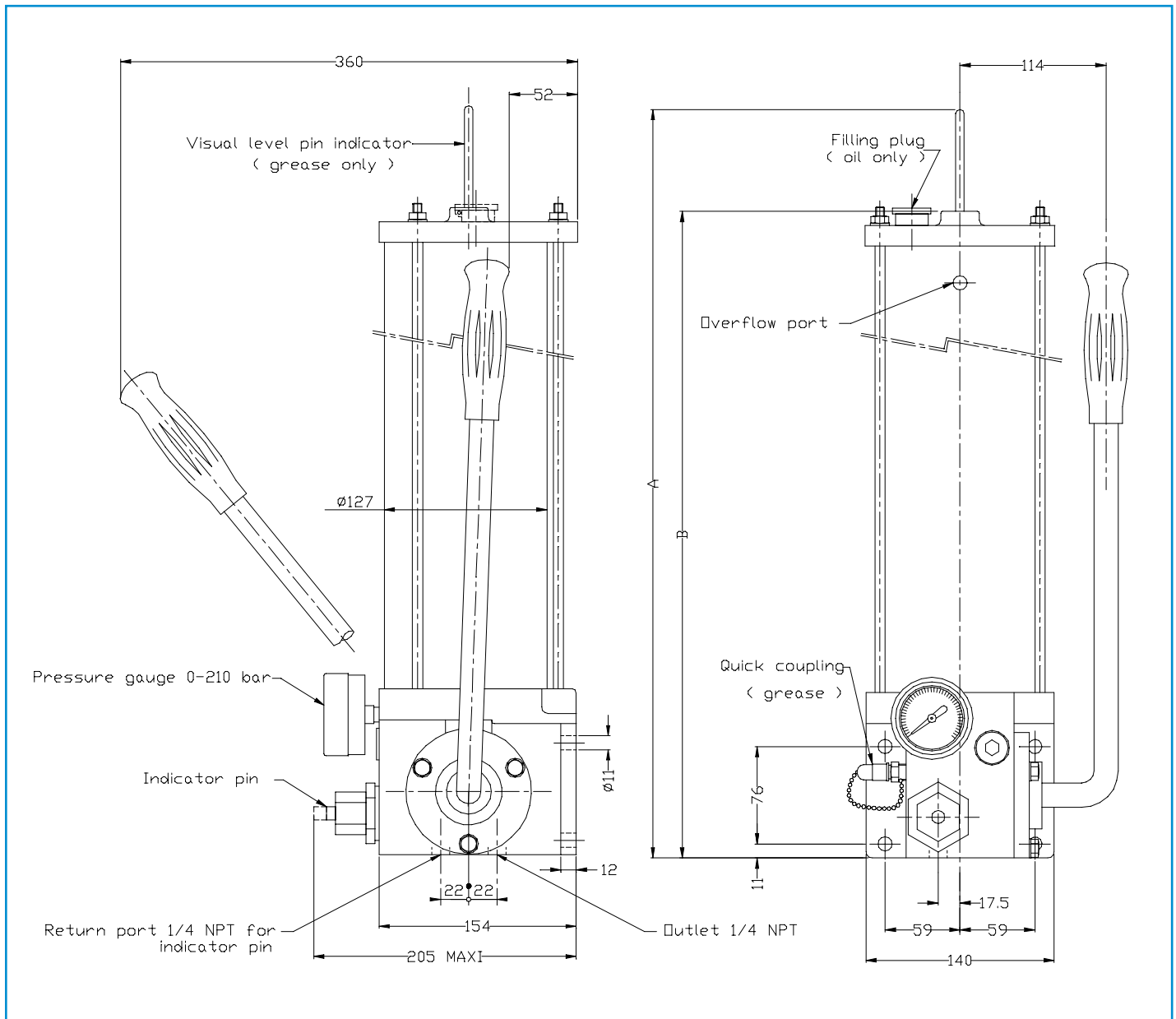
Service

Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to Bijur.



MANUAL PUMP TYPE 25057 FOR GREASE OR OIL CYCLIC DISCHARGE

Description

The manual pump 25057 is perfectly adapted for use with progressive dividers. The lubricant is introduced in the circuit by operating the handle which is linked to a single action piston. An integrated manual release valve offers possibility to use it with volumetric oil injectors (PDI). For grease, a filler port is located at the bottom of the pump body. The reservoir is also equipped with a follower plate.

Functioning

Operate the handle as often as required to fill the circuit.
For progressive application, check movement of indicator pin which is mounted on the primary divider. For volumetric application, it is recommended to install a pressure gauge on the pump outlet to check oil pressure which must be 35 bar maxi (see PDI oil injectors recommendations)

(See system outline)



Characteristics

- Discharge : 1 cm³/stroke
- Pressure : 210 bar max.
- Reservoir capacity : 1 Kg
- Working temperature : 5°C to 50 °C max.
- Lubricant to be used :
 - for progressive system : Grease NLGI 2 max.
(worked penetration W >265).
Mineral oil viscosity 200 Cst
(mini at 20°C).
 - for volumetric system : Grease NLGI 000 max
(worked penetration > 445)
Mineral oil with 200 (Cst mini at 20°C)

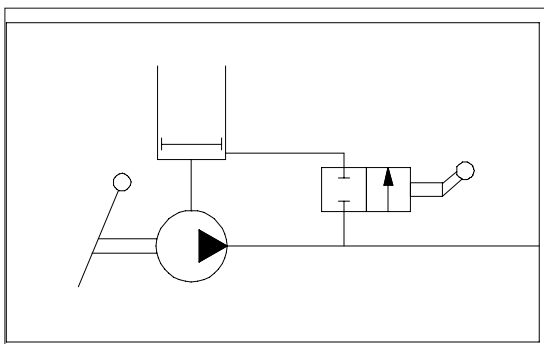
Ordering instructions

Specify description:
Manual pump, Reference 25057

Outside dimensions

See overleaf.

System outline



SERVICE INSTRUCTION - MANUAL PUMP TYPE 25057 FOR GREASE OR OIL

Start up:

Read carefully the technical data sheet supplied with the pump.
Fill the reservoir with a perfectly clean lubricant avoiding all pollutants.

With grease :

Use filler port located at the bottom at the pump body by using a grease nipple and a hand pump.

With oil :

Remove the follower plate and fill the reservoir.

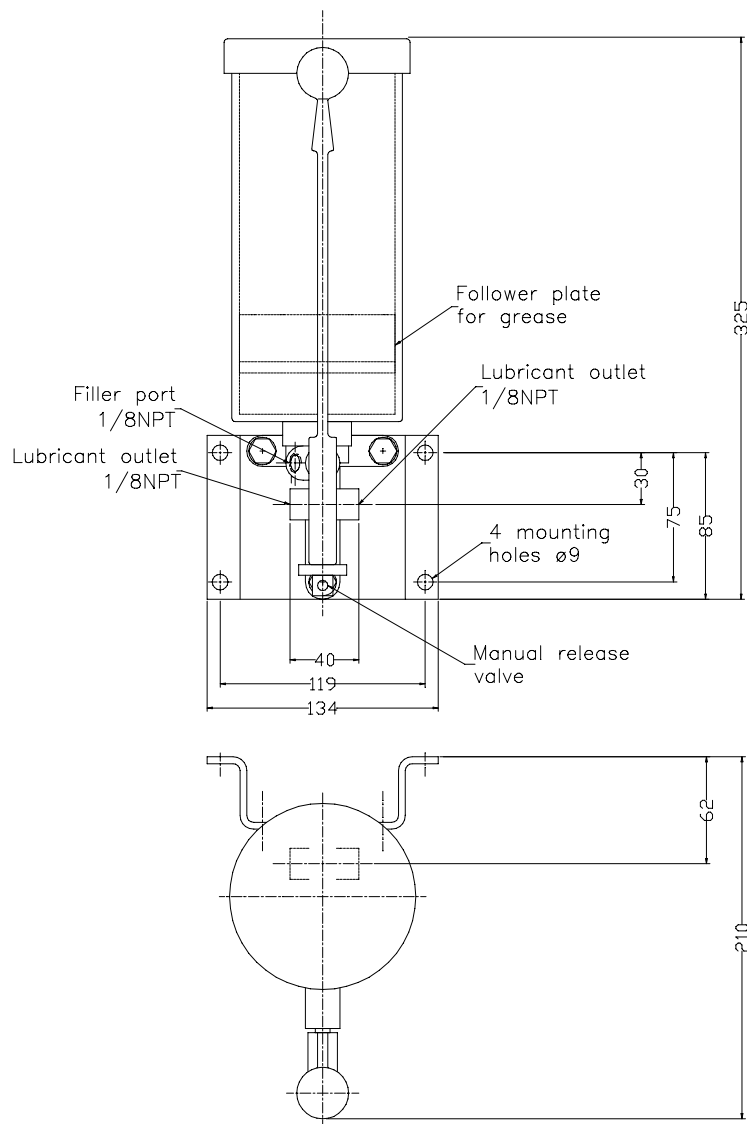
Service

Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to Bijur.



PNEUMATIC PUMPS

Pneumatic pump type AIRMATIC	B1101A
Pneumatic pump type SUREMATIC	B2101A
SPRAYMIST [™] type UB - 4 litres	B4201A
SPRAYMIST [™] type UC - 20 litres	B4301A
Mist lubricator type ZBA	B5101A
AIR/OIL system	B6101A
Oil recovery system	B7101A



PNEUMATIC PUMP TYPE AIRMATIC - CYCLIC DISCHARGE

Description

A pneumatic pump designed, depending on the version, to feed oil to Bijur's resistance (SLR) or volumetric (PDI) lubrication systems.

Functioning

The Airmatic is a **single action** pump piloted by a **3/2 way solenoid**. The oil discharge is realised by introducing compressed air into the pump. Oil is sucked from the reservoir as the compressed air in the circuit decompresses with the aid of a return spring.

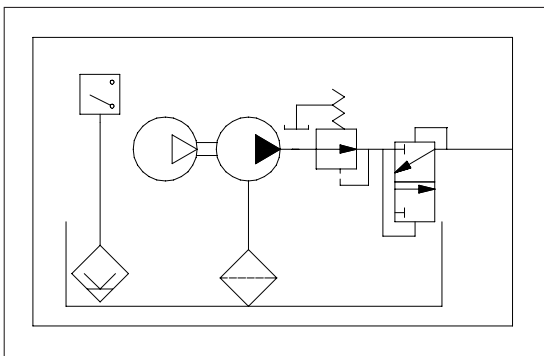
For use with volumetric injectors the pumps is equipped with a decompression block which permits the rearming of the injectors whilst the air circuit is decompressing.

Note : use dry, filtered, lubricated air.
(see system outline).

Characteristics

- Discharge : 1 to 10 cm³/stroke
- Air inlet pressure : 9 bar max.
- Air pressure ratio : 4:1
- Oil pressure : 36 bar max.
- Reservoir capacities : 1,5 or 4 litres (plastic), 12 litres (metal)
- Suction filter : 120 microns.
- Electric low level switch : 240V max.
- Power rating : 0,5 A max.
- Cycle frequency : up to 30 cycles per minute
- Working temperature : from 5 to 50 °C max.
- Lubricant to be used : mineral oil viscosity from 30 to 1800 Cst at the working temperature.
- Other lubricants : contact Bijur.

System outline



Ordering instructions

To define the exact pump characteristics use the following codes :

Pump code ——— AIR A

Reservoir capacity

1 1,5 litre _____

4 4 litre _____

12 12 litre _____

Distribution system

A Resistance _____

B Volumetric _____

D Injection _____

Option

B Low level switch (standard) _____

C Low level switch and snap-on refill connector _____

Example :

Airmatic pump with 4 litres reservoir and low level switch for a volumetric system
Reference **AIR4BBA**

Outside dimensions

See overleaf.

SERVICE INSTRUCTIONS - PNEUMATIC PUMP TYPE AIRMATIC

Start Up

Fill the reservoir and connect the air supply. Prime the pump to assure that the system pressurised.

Thereafter follow instructions on the technical data sheet supplied with the unit.

Oil

Use only clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

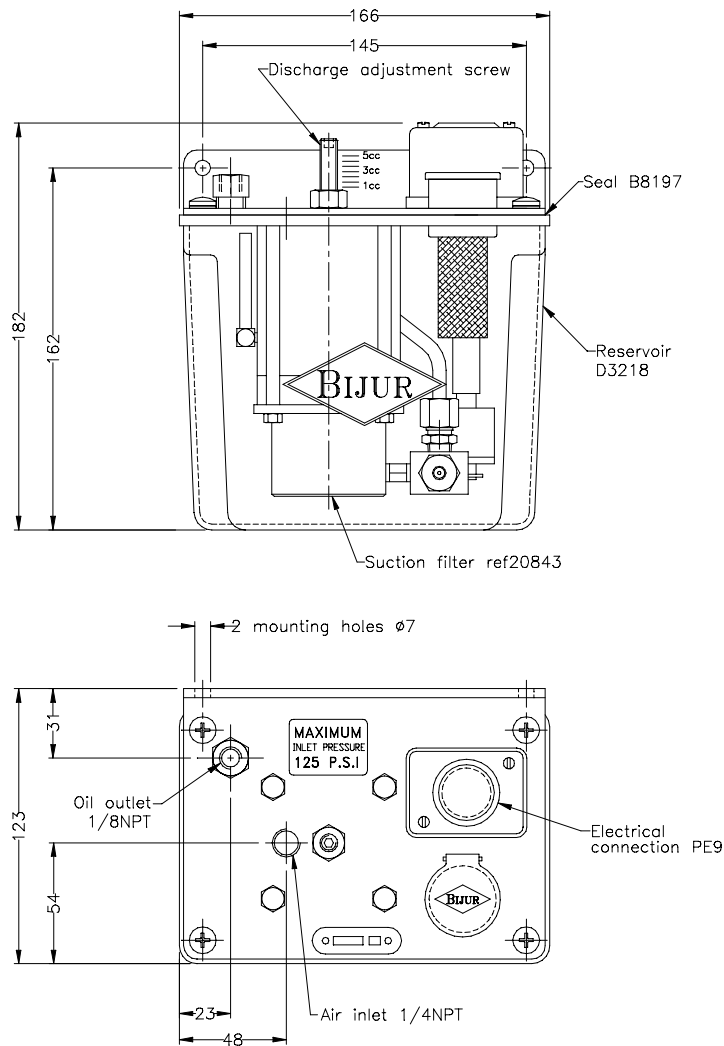
Service

Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

Important

Before start up and after any repair the lubrication circuit must be purged of air.
For all repairs it is recommended that the pump be returned to Bijur.

AIRMATIC PUMP : 1,5 litre reservoir



SERVICE INSTRUCTIONS - PNEUMATIC PUMP TYPE AIRMATIC

Start Up

Fill the reservoir and connect the air supply. Prime the pump to assure that the system pressurised.

Thereafter follow instructions on the technical data sheet supplied with the unit.

Oil

Use only clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

Service

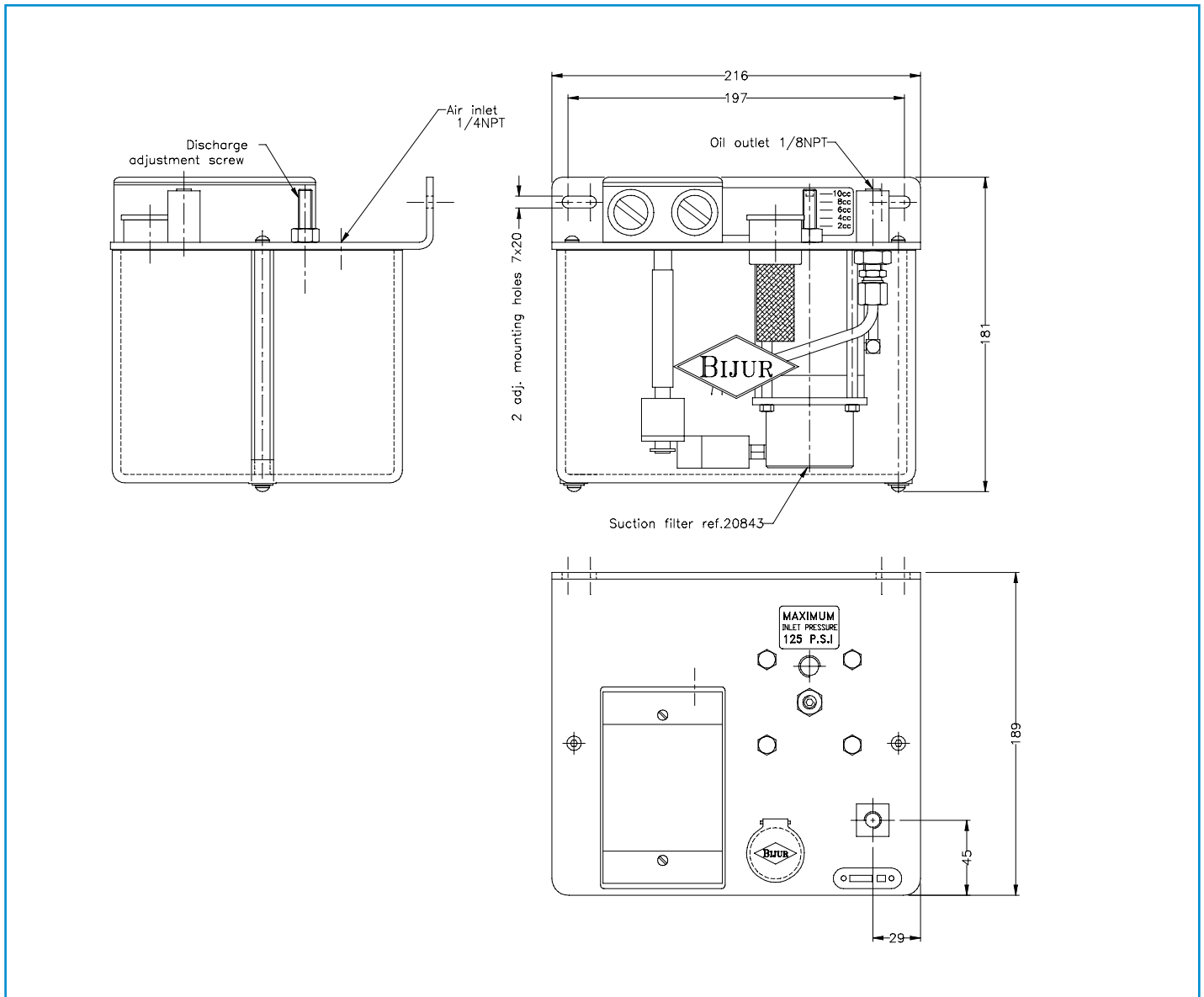
Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

Important

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to Bijur.

AIRMATIC PUMP : 4 litre reservoir



SERVICE INSTRUCTIONS - PNEUMATIC PUMP TYPE AIRMATIC

Start Up

Fill the reservoir and connect the air supply. Prime the pump to assure that the system pressurised.

Thereafter follow instructions on the technical data sheet supplied with the unit.

Oil

Use only clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

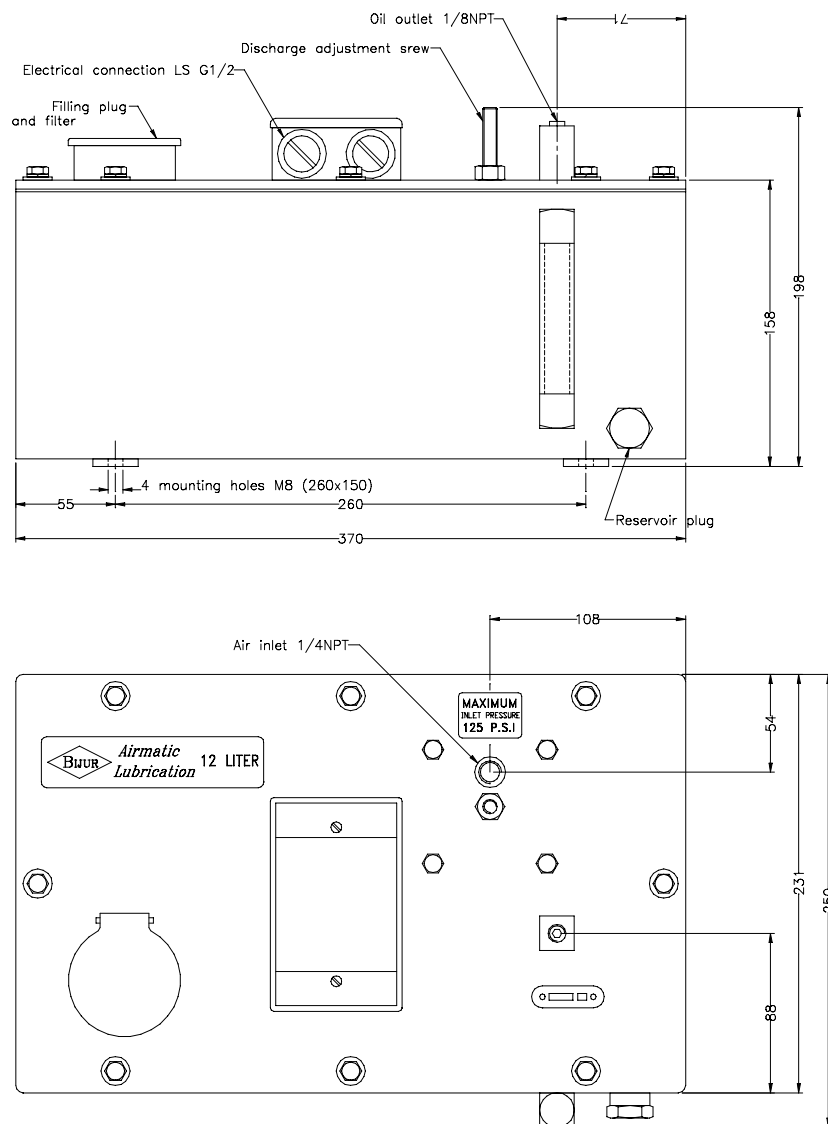
Service

Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

Important

Before start up and after any repair the lubrication circuit must be purged of air.
For all repairs it is recommended that the pump be returned to Bijur.

AIRMATIC PUMP : 12 litres reservoir



SERVICE INSTRUCTIONS - PNEUMATIC PUMP TYPE AIRMATIC SPECIAL AUTOMOTIVE VERSION

Start Up

Fill the reservoir and connect the air supply. Prime the pump to assure that the system is pressurised.

Thereafter follow instructions on the technical data sheet supplied with the unit.

Oil

Use only clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

Service

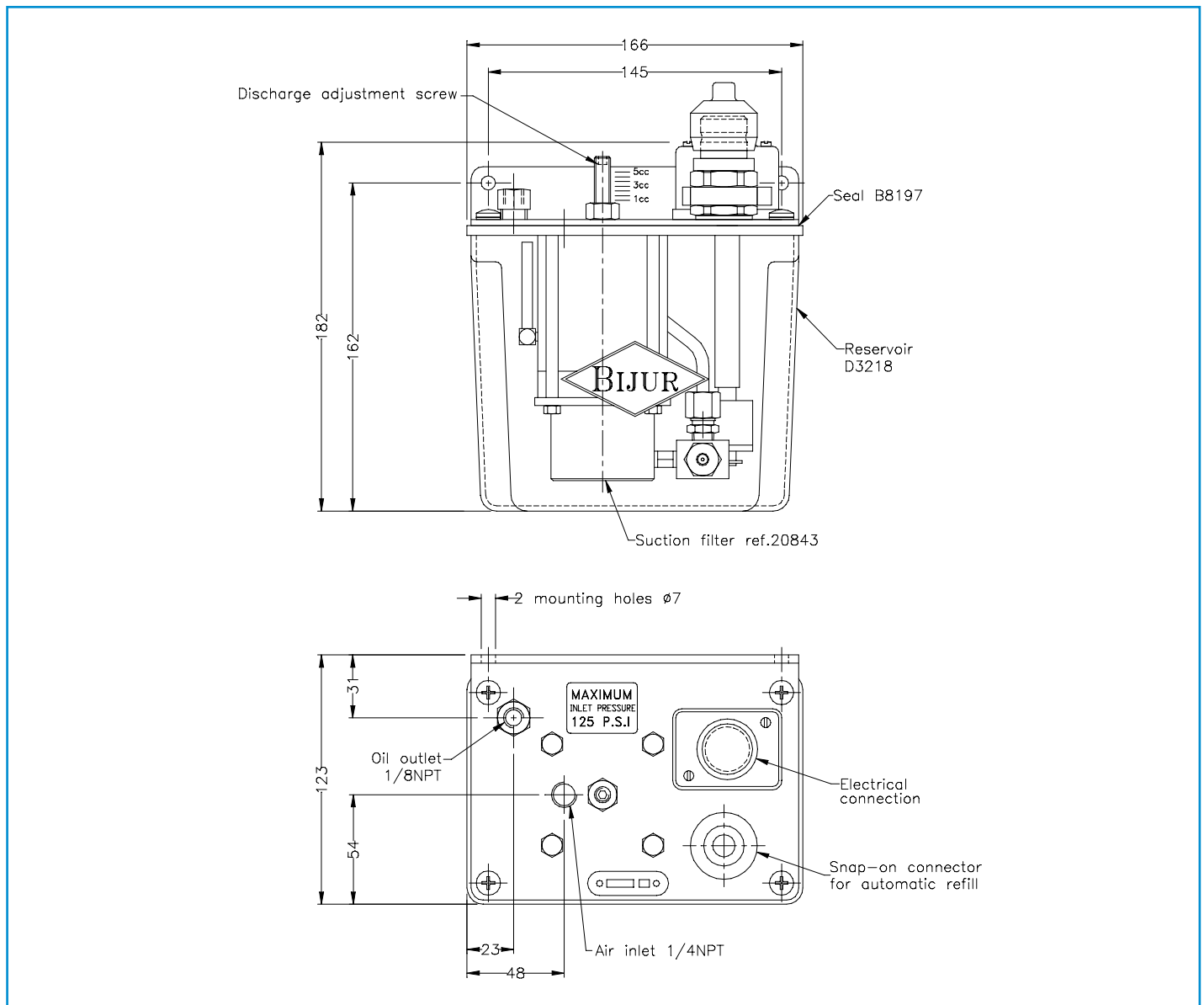
Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

Important

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to Bijur.

AIRMATIC PUMP : 1,5 litre reservoir



SERVICE INSTRUCTIONS - PNEUMATIC PUMP TYPE AIRMATIC SPECIAL AUTOMOTIVE VERSION

Start Up

Fill the reservoir and connect the air supply. Prime the pump to assure that the system pressurised.

Thereafter follow instructions on the technical data sheet supplied with the unit.

Oil

Use only clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

Service

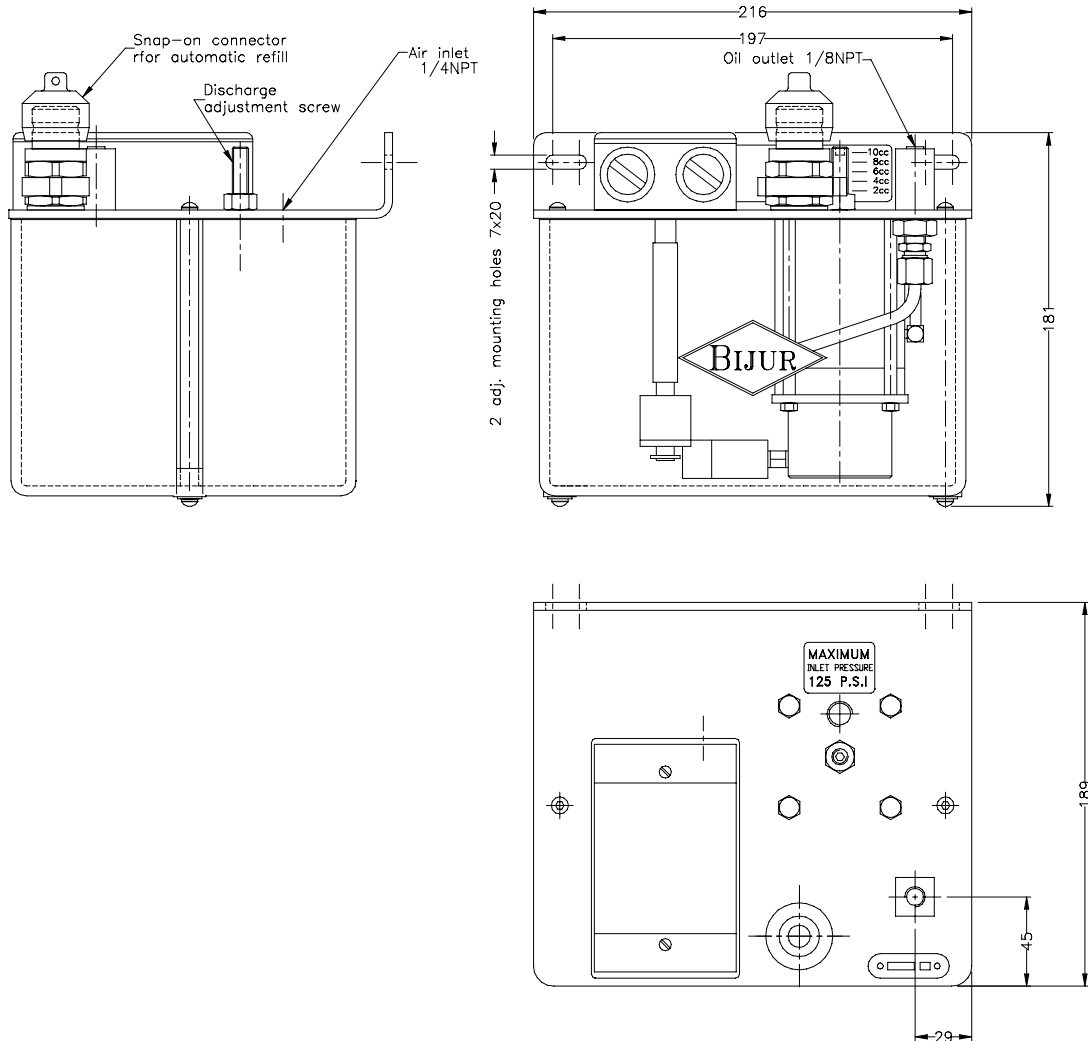
Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

Important

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to Bijur.

AIRMATIC PUMP : 4 litres reservoir



SERVICE INSTRUCTIONS - PNEUMATIC PUMP TYPE AIRMATIC SPECIAL AUTOMOTIVE VERSION

Start Up

Fill the reservoir and connect the air supply. Prime the pump to assure that the system is pressurised.

Thereafter follow instructions on the technical data sheet supplied with the unit.

Oil

Use only clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

Service

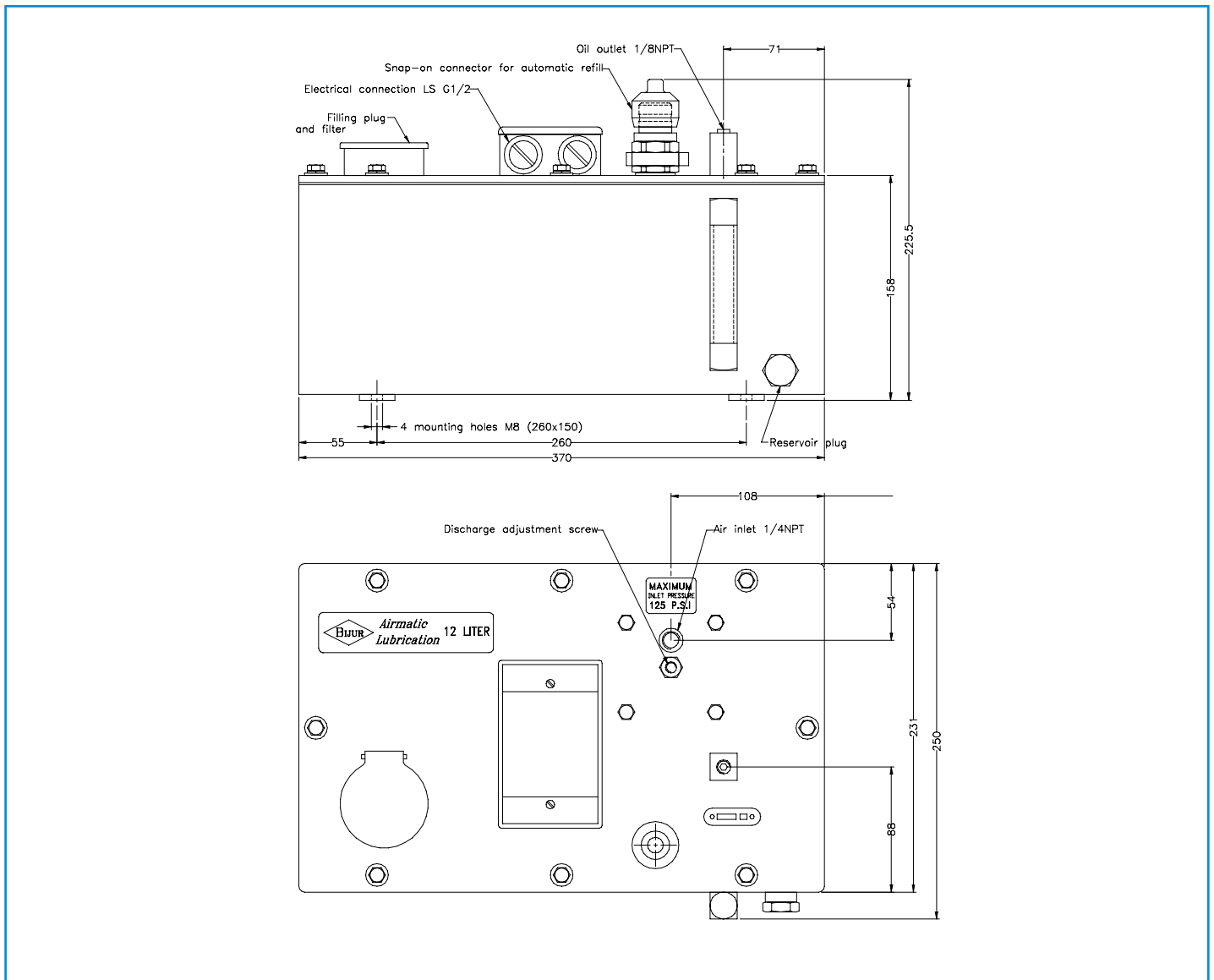
Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

Important

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to Bijur.

AIRMATIC PUMP : 12 litres reservoir



PNEUMATIC SINGLE LINE PUMP - TYPE SUREMATIC FOR OIL OR GREASE

Description

The SUREMATIC lubricator is designed for single line progressive systems with oil or grease lubricants. A piston discharge pump air actuated which comprises a low level switch, a grease nipple to refill the reservoir for the grease version which is located in lower housing, or a filling plug for the oil model.

Functioning

The SUREMATIC pump is a single action pump which must be piloted by a 3/2 way solenoid valve. The discharge is adjustable by removing position of the screw, see table below.

Characteristics

- Discharge : adjustable from 1 to 8 cm³ / stroke
- Air inlet pressure : 3 to 10 bar max
- Pressure ratio : 18/1
- Working pressure : 180 bar max
- Reservoir capacities : 2 to 5 Kg
- Cycle frequency : 65 cycles per minute max
- Working temperature : 10 to 50°C

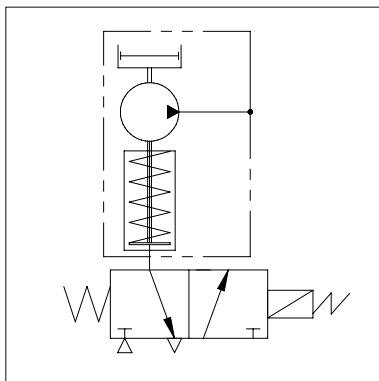
Grease version

- Lubricants to be used : Grease NLGI 000 to NLGI 2 max
- Electrical low level switch : 125 /250V max
Power rating : 6A-125V / 3A-250V

Oil version

- Lubricants to be used : Oil with viscosities 32 to 1700 Cst max
- Electrical low level switch : 240V max
Power rating : 0,17A

System outline



For ordering

To define the exact pump reference, use table below :

PUMP REFERENCE			
Grease model		Oil model	
Reference	Reservoir	Reference	Reservoir
1813020	2 L	18137	2 L
1813035	3,5 L	18138	3,5 L
18132	5 L	18139	5 L

DISCHARGE ADJUSTMENT	
Clearance (mm)	Discharge (Cm3/stroke)
76	8
68	7
60	6
54	5
46	4
38	3
32	2
24	1

Outside dimensions

See overleaf.

SERVICE INSTRUCTIONS - PNEUMATIC GREASE PUMP TYPE SUREMATIC 2L

Start up

Read carefully the technical data sheet supplied with the pump.
For these models, always use the grease nipple to refill the reservoir with a manual grease pump or a barrel grease pump. This operation minimizes introduction of air pockets and contaminants into lubricator. Remove drain plug and operate pump to purge circuit.

Note : Remove screw which maintains follower plate before filling reservoir for the first time.

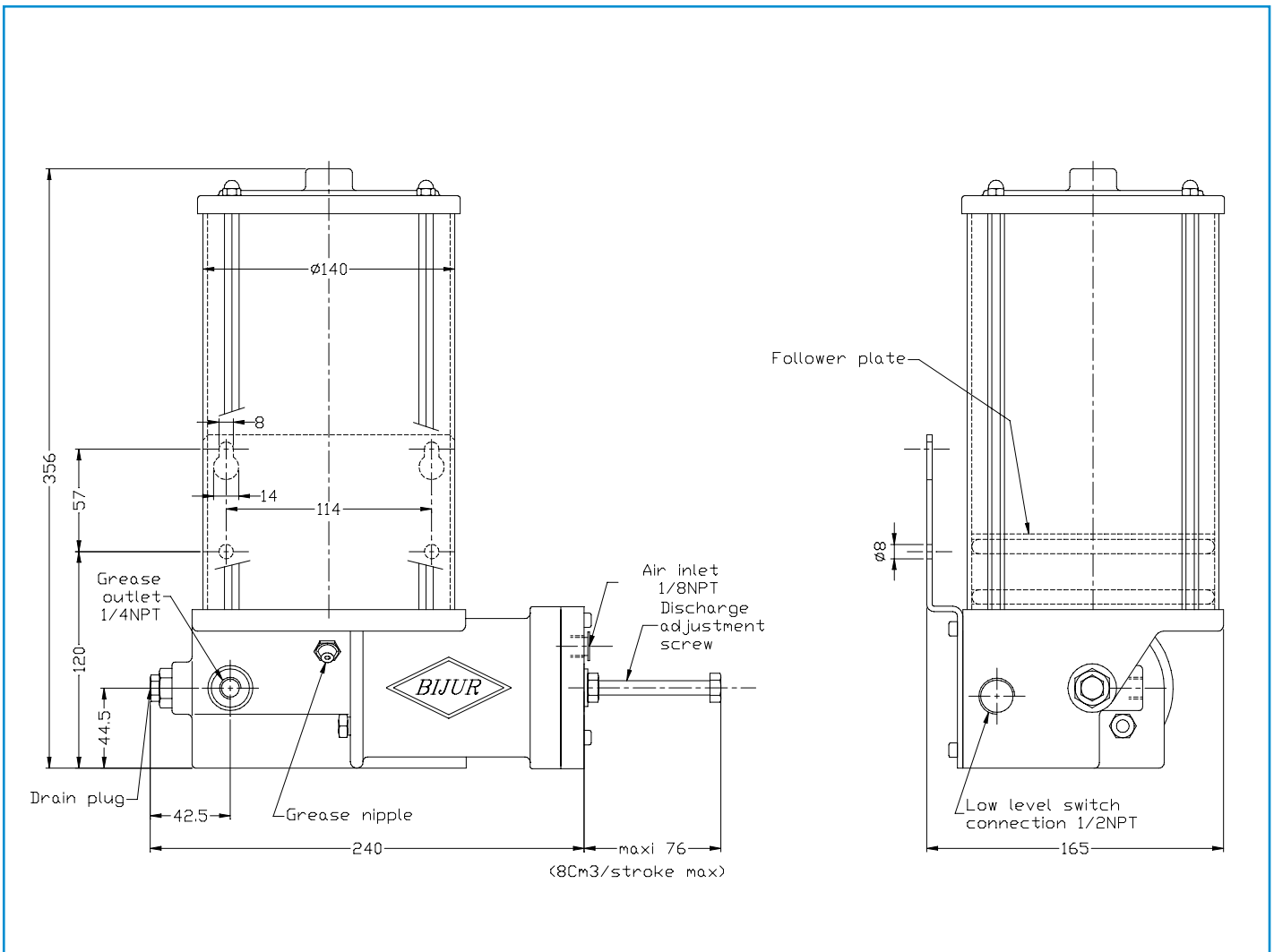
Service

Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess grease around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs, it is recommended that the pump be returned to Bijur.



SERVICE INSTRUCTIONS - PNEUMATIC GREASE PUMP TYPE SUREMATIC 5L

Start up

Read carefully the technical data sheet supplied with the pump.
For these models, always use the grease nipple to refill the reservoir with a manual grease pump or a barrel grease pump. This operation minimizes introduction of air pockets and contaminants into lubricator. Remove drain plug and operate pump to purge circuit.

Note : Remove screw which maintains follower plate before filling reservoir for the first time.

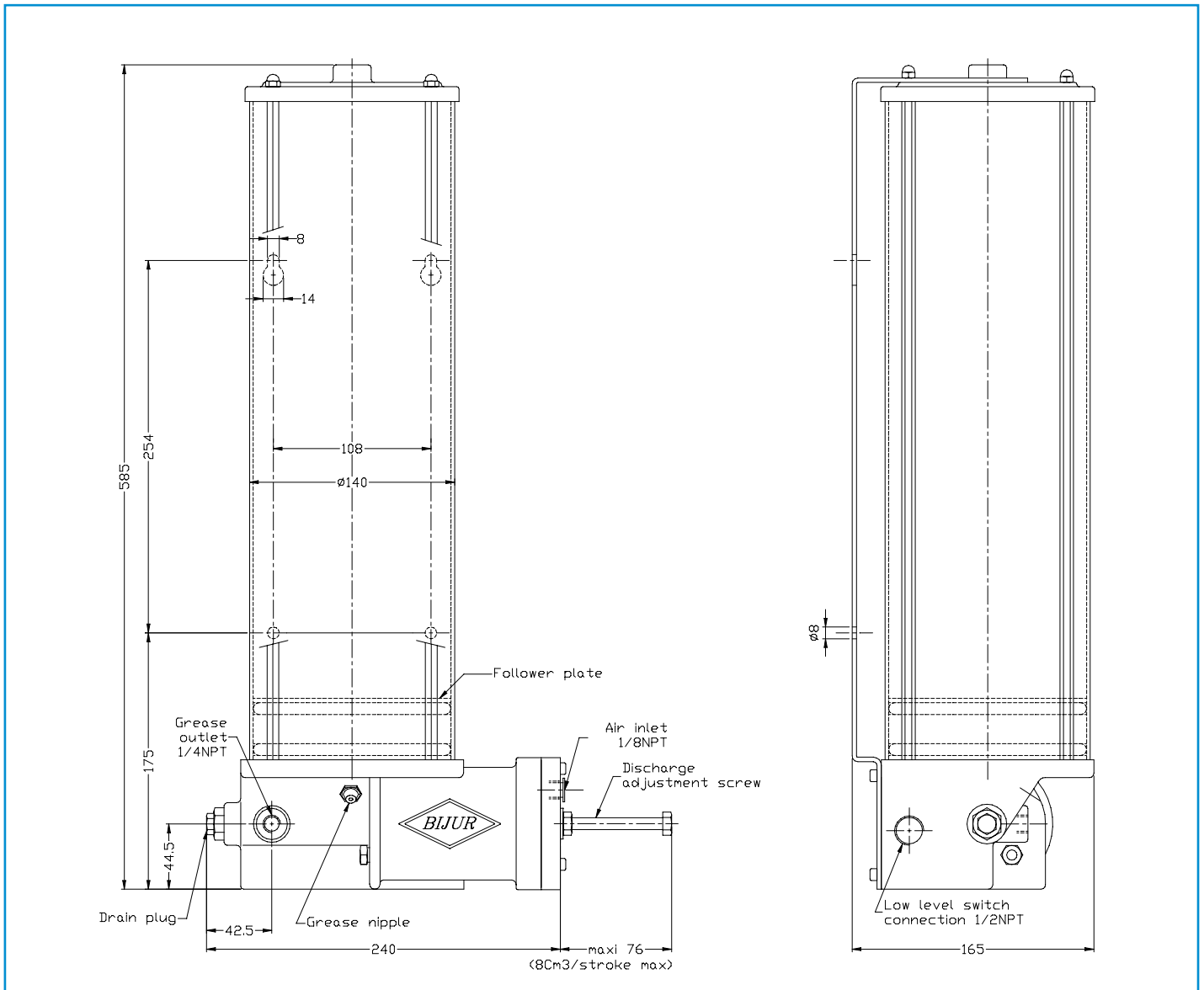
Service

Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess grease around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs, it is recommended that the pump be returned to Bijur.



SERVICE INSTRUCTIONS - PNEUMATIC OIL PUMP TYPE SUREMATIC 2L

Start up

Read carefully the technical data sheet supplied with the pump.
Fill the reservoir with a clean oil, of a quality and viscosity recommended by the manufacturer of the machine.
Remove drain plug and operate pump to purge circuit.

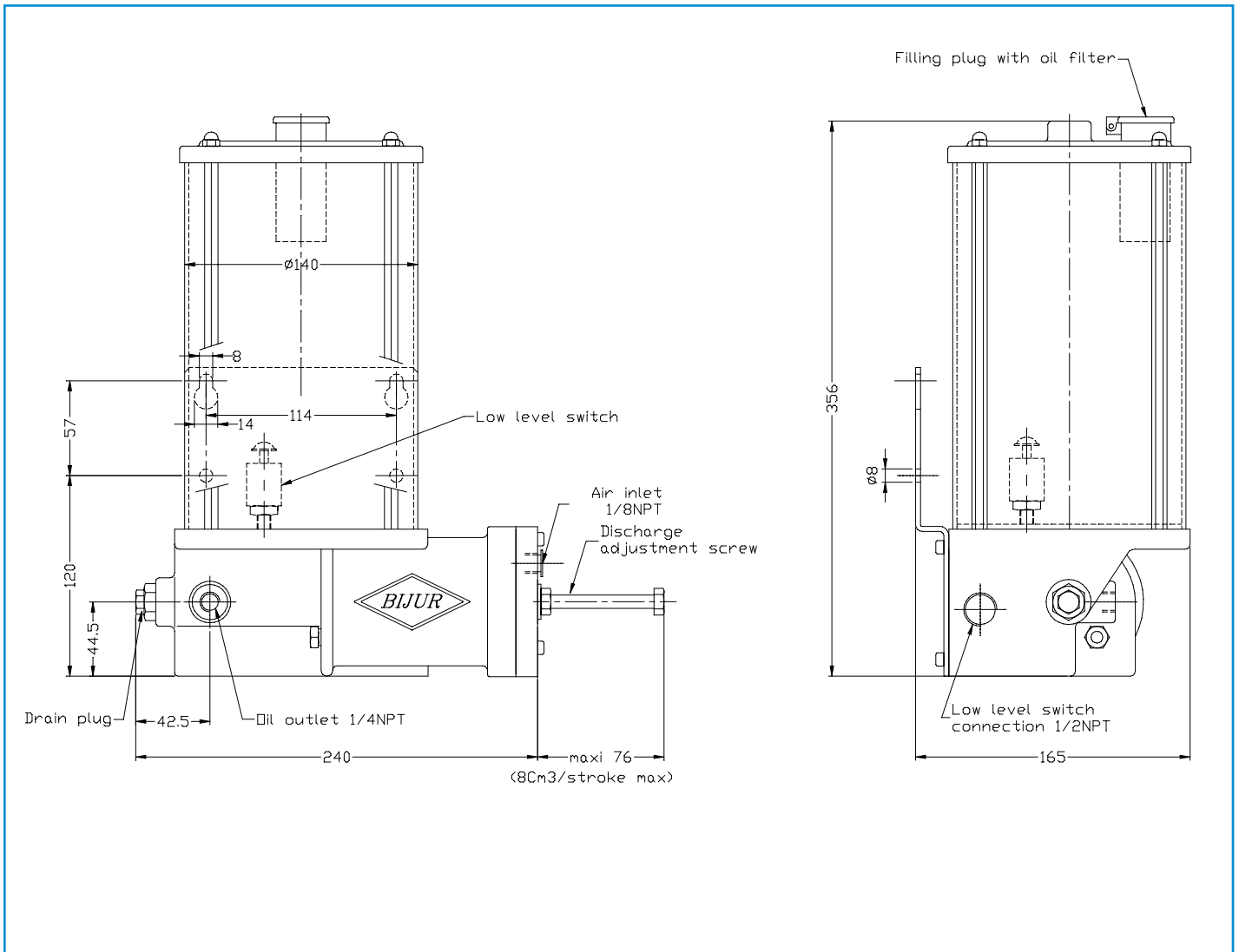
Service

Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs, it is recommended that the pump be returned to Bijur.



SERVICE INSTRUCTIONS - PNEUMATIC OIL PUMP TYPE SUREMATIC 5L

Start up

Read carefully the technical data sheet supplied with the pump.
Fill the reservoir with a clean oil, of a quality and viscosity recommended by the manufacturer of the machine.
Remove drain plug and operate pump to purge circuit.

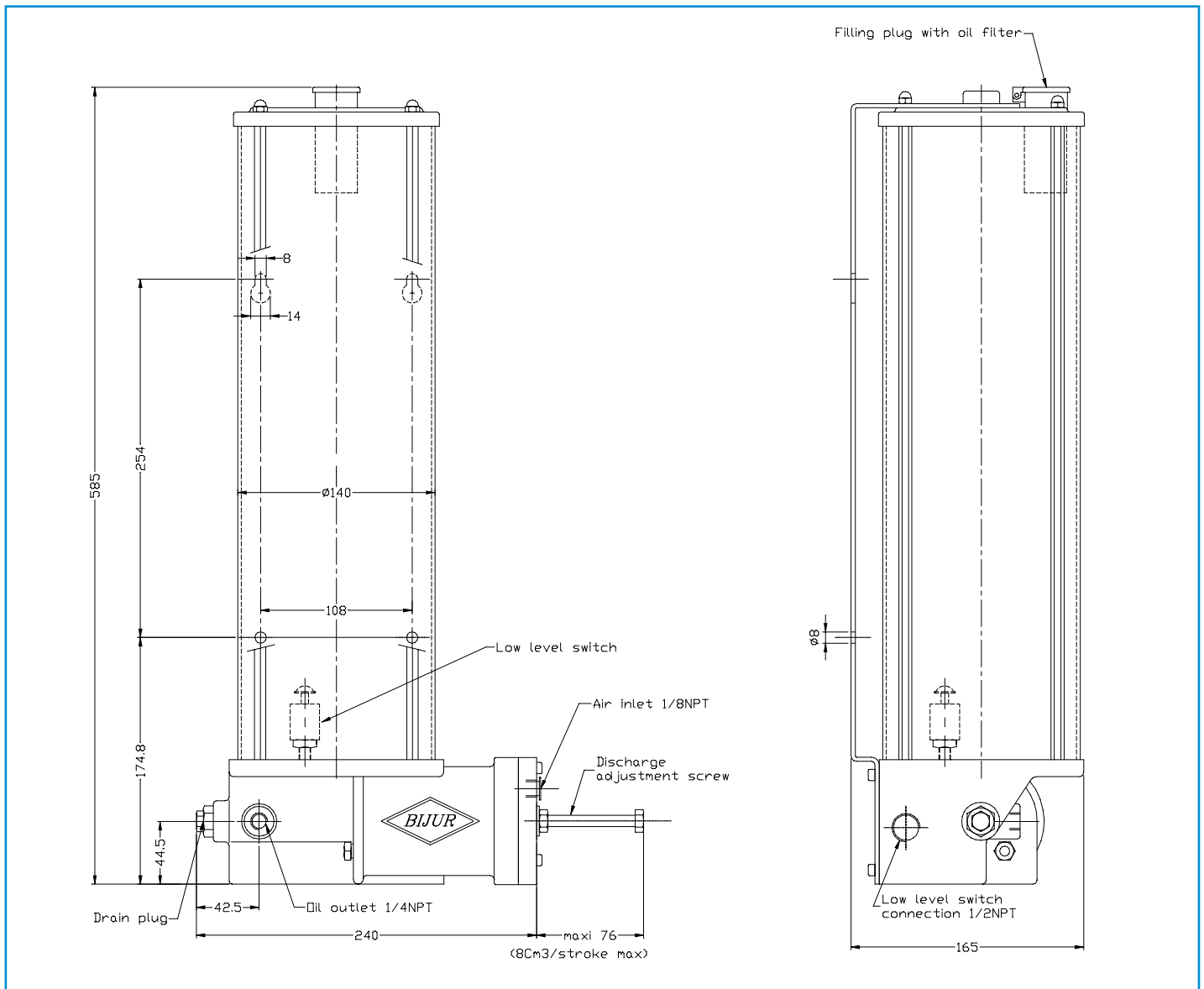
Service

Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs, it is recommended that the pump be returned to Bijur.



FLUIDFLEX EQUIPMENT - SPRAYMIST 4 L TYPE UB

Description

The Spraymist unit is perfectly adapted for use with different liquids for applications as metalcutting, drilling, grinding, cooling or wetting processes and chain lubrication.

It comprises a filter with drain, a pressure regulator, an electric solenoid valve which can be synchronised to the machine or equipment being operated, a pressurised reservoir with an integrated filter. Separate lines carry air and liquid to jet assemblies.

Functioning

Compressed air is introduced via an inlet filter which pressurises the unit to the desired pressure level and then passes through the solenoid valve. Air enters in the reservoir and forces liquid from it. Separate lines carry air and fluid through distribution lines in the system to the jet assembly for discharge. The spray effect from the jet assembly can be adjusted via a needle valve.

(See system outline)

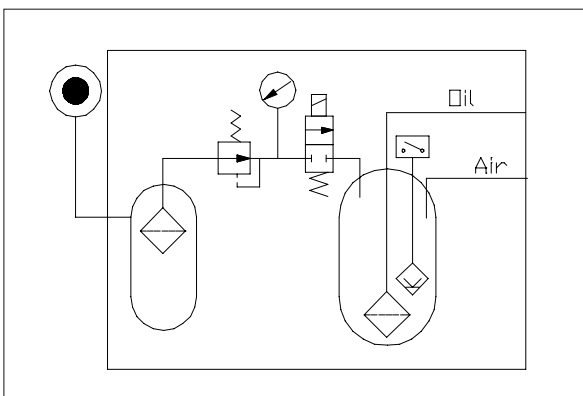
Characteristics

- Air supply : 9 bar max
- Operating pressure : 1 to 3 bar max
- Air consumption : 30L / min / jet assembly under 2 bar
- Liquid consumption : 60 to 90 Cm³ / hour per jet assembly
- Solenoid valve :
 - Electrical power for start-up : 30 W
 - Electrical operating power : 10 W
- Electrical low level switch : 250 V

Outside dimensions

See overleaf

System outline



For ordering

To define the exact part number, use following tables :

Solenoid description	Reference
Valve 24 VDC	C32276
Valve 24 VAC	C32455
Valve 48 VAC	C32454
Valve 110 VAC	C32451
Valve 220 VAC	C32452
Valve 380 VAC	C32453
Valve 440 VAC	C32453

Spraymist 4L description	Reference	
	Without low level	With low level
UB-24 VDC	D167	AP364
UB-24 VAC	D159	AP365
UB-48 VAC	AP246	AP346
UB-110 VAC	D153	D166
UB-220 VAC	D154	AP356
UB-380 VAC	D155	AP574
UB-400 VAC	D155	AP574

SERVICE INSTRUCTIONS - SPRAYMIST 4L TYPE UB

Start up

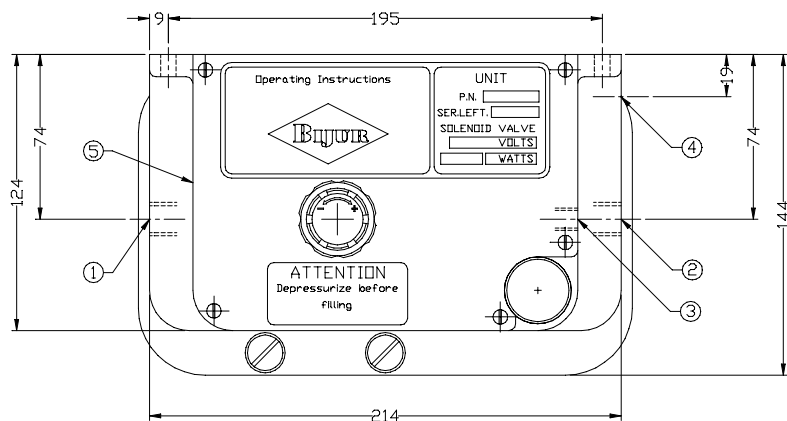
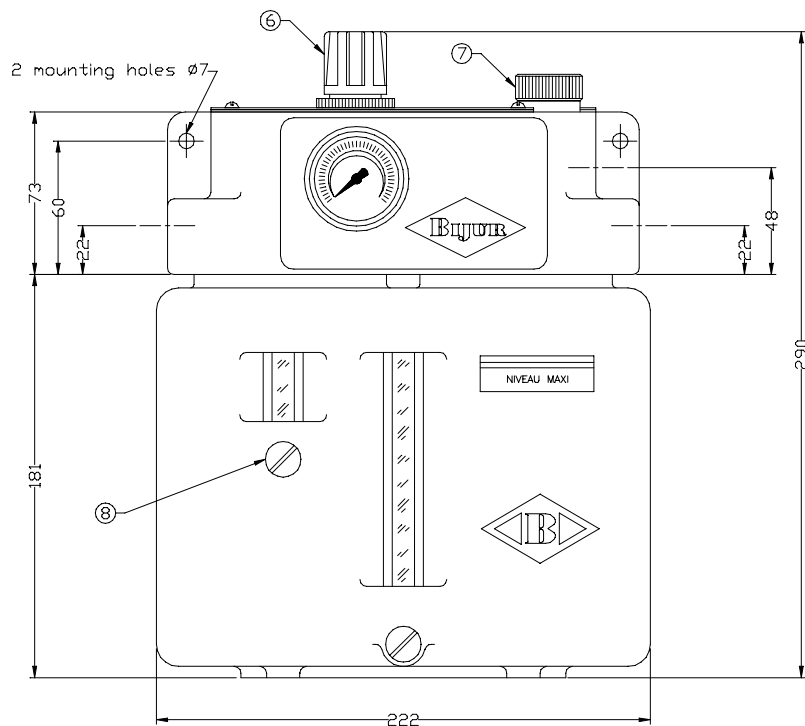
Read carefully the technical data sheet supplied with the pump.
Fill reservoir to, but never above, indication line. Adjust pressure between 1 and 3 bar with the pressure regulator button. After having supplied the solenoid valve, separate lines carry both air and liquid to jet assemblies. Spray effect can be adjusted by the needle valve on each jet assembly.

Note : Do not open reservoir plug when the unit is under pressure.

Service

Check liquid level daily and refill reservoir as required. Filters should be checked periodically and cleaned or replaced if necessary. Accumulated water and dirt in air reservoir should be drained as necessary.

Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.



Legend

- (1) Air supply 1/4NPT
- (2) Air outlet 1/4NPT
- (3) Liquid outlet 1/8NPT
- (4) Electrical connection 1/2NPT
- (5) Spraymist head
- (6) Air pressure adjustment
- (7) Filling plug
- (8) Air filter drain port

FLUIDFLEX EQUIPMENT - SPRAYMIST 20 L TYPE UC

Description

The Spraymist unit is perfectly adapted for use with different liquids for applications as metalcutting, drilling, grinding, cooling or wetting processes and chain lubrication....

It comprises a filter with drain, a pressure regulator, an electric solenoid valve which can be synchronised to the machine or equipment being operated, a pressurised reservoir with an integrated filter. Separate lines carry air and liquid to jet assemblies.

Functioning

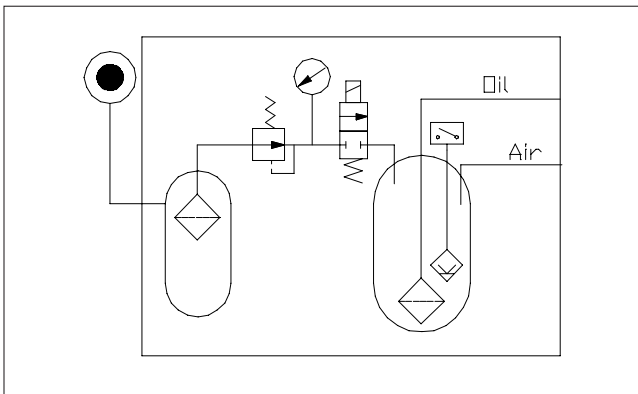
Compressed air is introduced via an inlet filter which pressurises the unit to the desired pressure level and then passes through the solenoid valve. Air enters in the reservoir and forces liquid from it. Separate lines carry air and fluid through distribution lines in the system to the jet assembly for discharge. The spray effect from the jet assembly can be adjusted via a needle valve.

(See system outline)

Characteristics

- Air supply : 9 bar max
- Operating pressure : 1 to 3 bar max
- Air consumption : 30L / min / jet assembly under 2 bar
- Liquid consumption : 60 to 90 Cm3 / hour per jet assembly
- Solenoid valve :
 - Electrical power for start up : 30 W
 - Electrical operating power: 10 W
- Electrical low level switch : 250 V
- Power rating : 40 VA max
- Lubricant to be used : oil, water (except corrosive products).

System outline



Outside dimensions

See overleaf.



For ordering

To define the exact part number, use following tables :

Solenoid description	Reference
Valve 24 VDC	C32276
Valve 24 VAC	C32455
Valve 48 VDC	C32454
Valve 110 VDC	C32451
Valve 220 VDC	C32452
Valve 380 VDC	C32453

Spraymist 20L description	Reference	
	Without low level	With low level
UB-24 VDC	D168	AP366
UB-24 VAC	D169	AP367
UB-48 VAC	AP248	AP368
UB-110 VAC	D156	D165
UB-220 VAC	D157	AP369
UB-380 VAC	D158	AP573

SERVICE INSTRUCTIONS - SPRAYMIST 20L TYPE UC

Start up

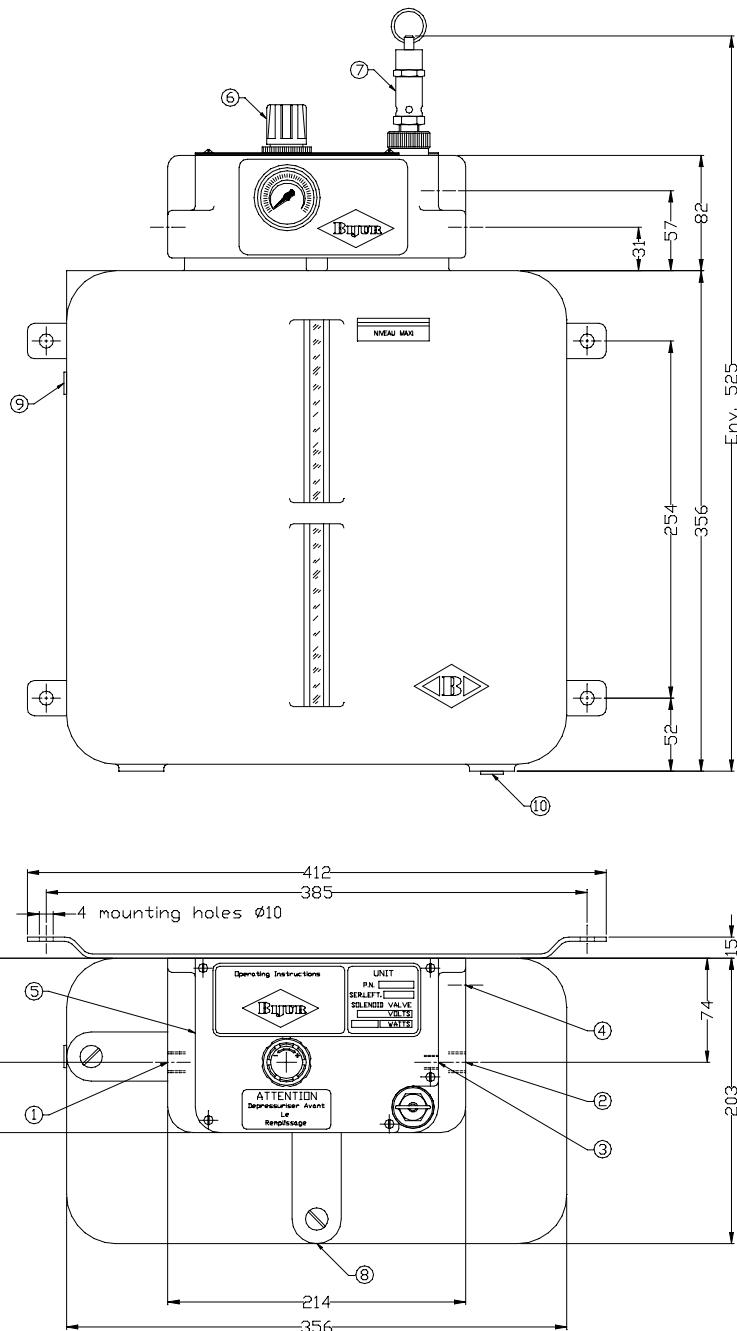
Read carefully the technical data sheet supplied with the pump.
Fill reservoir to, but never above, indication line. Adjust pressure between 1 and 3 bar with the pressure regulator button. After having supplied the solenoid valve, separate lines carry both air and liquid to jet assemblies. Spray effect can be adjusted by the needle valve on each jet assembly.

Note : Do not open reservoir plug when the unit is under pressure.

Service

Check liquid level daily and refill reservoir as required. Filters should be checked periodically and cleaned or replaced if necessary. Accumulated water and dirt in air reservoir should be drained as necessary.

Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.



Legend

- (1) Air supply 1/4NPT
- (2) Air outlet 1/4NPT
- (3) Liquid outlet 1/8NPT
- (4) Electrical connection 1/2NPT
- (5) Spraymist head
- (6) Air pressure adjustment
- (7) Filling plug
- (8) Air filter drain port

MICRO FOG LUBRIFICATION - MIST 4 L TYPE ZBA

Description

The Mist unit has been designed for continuous lubrication to bearings and is a complete and fully automatic unit.

It comprises all of the necessary components for air filtration, pressurized reservoir with integral oil filter element, electrical low level switch, pressure gauge and switch, oil atomization chamber and solenoid operated air valve.

A visible oil feed indicator provides a constant check that the lubricator is functioning. The rate of drops passing the sight window may be used as a guide to mist output.

The fog is delivered to each lubrication point by nozzles.

Functioning

Compressed air is introduced via the filter and is reduced to the desired pressure level and passed through the solenoid valve. Air enters in the reservoir and forces liquid from it through the atomizing chamber. The air flow carries fine particles of lubricant to bearings and acts as a bearing coolant while depositing them. It also prevents dust or abrasives from entering the bearing. (See system outline).

Characteristics

- Air supply : 9 bar max
- Operating pressure : 1 to 3 bar max
- Air consumption : 80L per minute under bar
- Oil consumption : 30 cm³ per hour max/ jet assembly
- Voltage : see tables below
- Electric low level switch : 130 VAC
- Power rating : 0,15 A
- Pressure switch : 115 VAC
- Power rating : 1 A

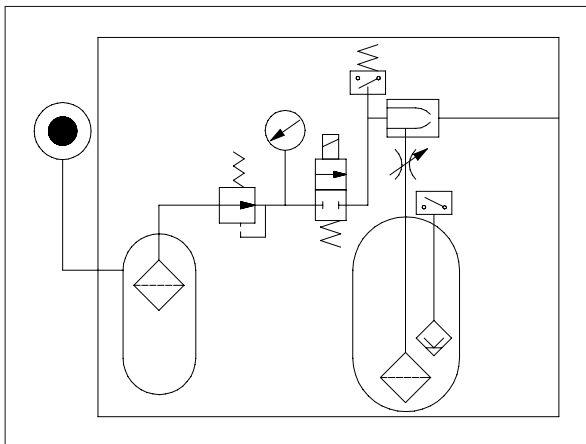


For ordering

To define the exact part number, use following tables :

Description	Reference
Coil 24 VAC ~ for type ZB24	B7497
Coil 48 VAC ~ for type ZB48	B7666
Coil 110 VAC ~ for type ZB110	B6300
Coil 220 VAC ~ for type ZB220	B6308
Coil 380 VAC ~ for type ZB380	B8132

System outline



Mist 4L description	Reference	
	Without controls	With controls
Mist type ZB24 (4 litres) VAC	D3012	AP401
Mist type ZB48 (4 litres)	AP315	AP322
Mist type ZB110 (4 litres)	D2685	D3144
Mist type ZB220 (4 litres)	D2819	AP324
Mist type ZB380 (4 litres)	AP316	AP317
Mist type ZB24 (4 litres) VDC	AP434	AP323
Mist type ZB380 (4 litres) Automotive version		AP3075

Outside dimensions

See overleaf

SERVICE INSTRUCTIONS - MIST 4L TYPE ZBA

Description

See page B5101A.

Distribution network

Main line has to respect following sizes :

- rigid pipe **dia 8x10**
- hose pipe with **int.dia 8**

Secondaries lines must respect following sizes :

- rigid pipe **dia 4x6**
- hose pipe with **int.dia 5**

Nozzle

See page E5101A.

Oil

Use clean oil of a quality and viscosity recommended by the manufacturer of the machine.

Start up

Read carefully the technical data sheet supplied with the pump. Fill reservoir to, but never above, indication line. Make sure unit is connected to the supply air line and the solenoid valve is connected to electrical system. Adjust pressure between 1 and 3 bar with the pressure regulator. To adjust the mist output, the needle valve setting must be changed, turn clockwise to decrease, counter clockwise to increase mist. The rate of oil drops visible at the sight flow window is not a measure of mist output, however, it provides a check that the lubricator is functioning and is a guide to mist output.

Note : Do not open reservoir plug when the unit is under pressure.

Service

Check level daily and refill reservoir when required. Filters should be checked periodically and cleaned or replaced if necessary. Accumulated water and dirt in air reservoir should be drained when necessary.

Vibrations in the unit :

Check electrical connections and supply voltage.

No delivery of air or mist :

Check oil level, conditions and connections of solenoid valve and air supply line.

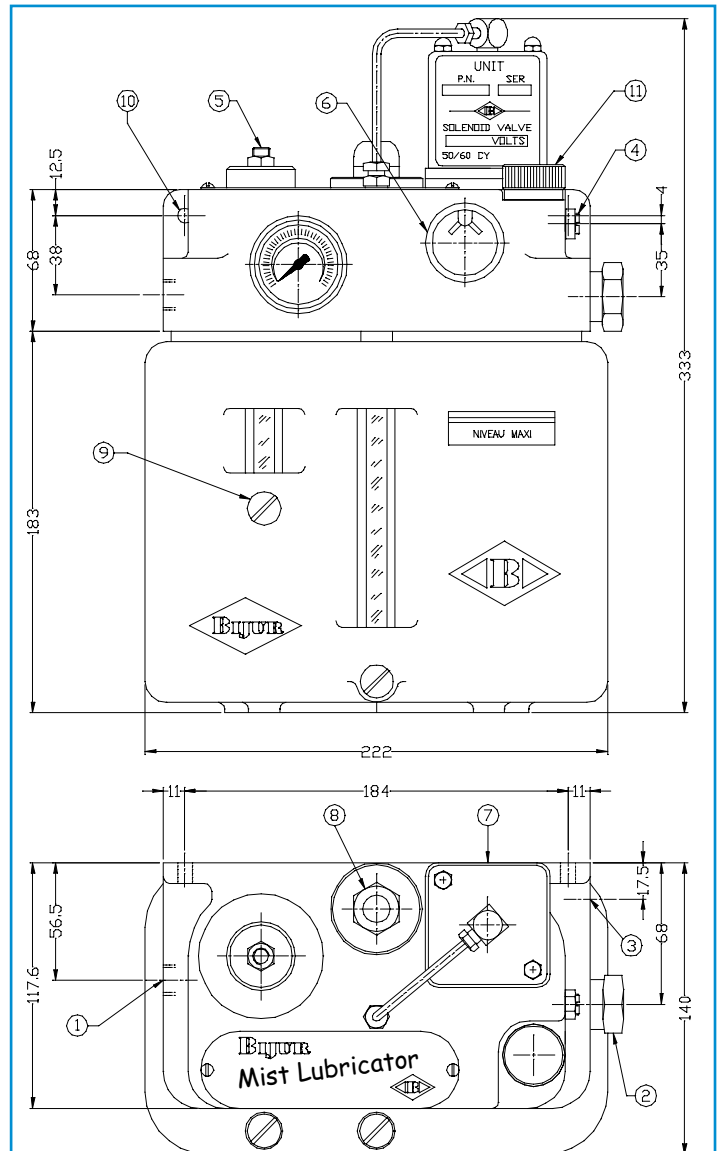
Inability to regulate air pressure :

Check diaphragm of air regulator for rip or puncture, also check pressure gauge.

IMPORTANT

Before start up and after any repair, the lubrication circuit must be purged.

For all repairs, it is recommended that the pump be returned to Bijur.



Legend

- | | |
|----------------------------------|-----------------------------|
| (1) Air supply 1/4NPT | (7) Pressure switch |
| (2) Fog outlet 3/8NPT | (8) Solenoid valve |
| (3) Electrical connection 1/2NPT | (9) Air filter drain port |
| (4) Oil needle valve adjustment | (10) 2 mounting holes dia 7 |
| (5) Air pressure adjustment | (11) Filling plug |
| (6) Sight flow window | |

SERVICE INSTRUCTIONS - MIST 4L TYPE ZBA SPECIAL AUTOMOTIVE VERSION

Description

See page B5101A.

Distribution network

Main line has to respect following sizes :

- rigid pipe **dia 8x10**
- hose pipe with **int.dia 8**

Secondaries lines must respect following sizes :

- rigid pipe **dia 4x6**
- hose pipe with **int.dia 5**

Nozzle

See page E5101A.

Oil

Use clean oil of a quality and viscosity recommended by the manufacturer of the machine.

Start up

Read carefully the technical data sheet supplied with the pump.
Fill reservoir to, but never above, indication line. Make sure unit is connected to the supply air line and the solenoid valve is connected to electrical system. Adjust pressure between 1 and 3 bar with the pressure regulator. To adjust the mist output, the needle valve setting must be change, turn clockwise to decrease, counter clockwise to increase mist. The rate of oil drops visible at the sight flow window is not a measure of mist output, however, it provides a check that the lubricator is functioning and is a guide to mist output.

Note : Do not open reservoir plug when the unit is under pressure.

Service

Check level daily and refill reservoir when required. Filters should be checked periodically and cleaned or replaced if necessary. Accumulated water and dirt in air reservoir should be drained when necessary.

Vibrations in the unit :

Check electrical connections and supply voltage.

No delivery of air or mist :

Check oil level, conditions and connections of solenoid valve and air supply line.

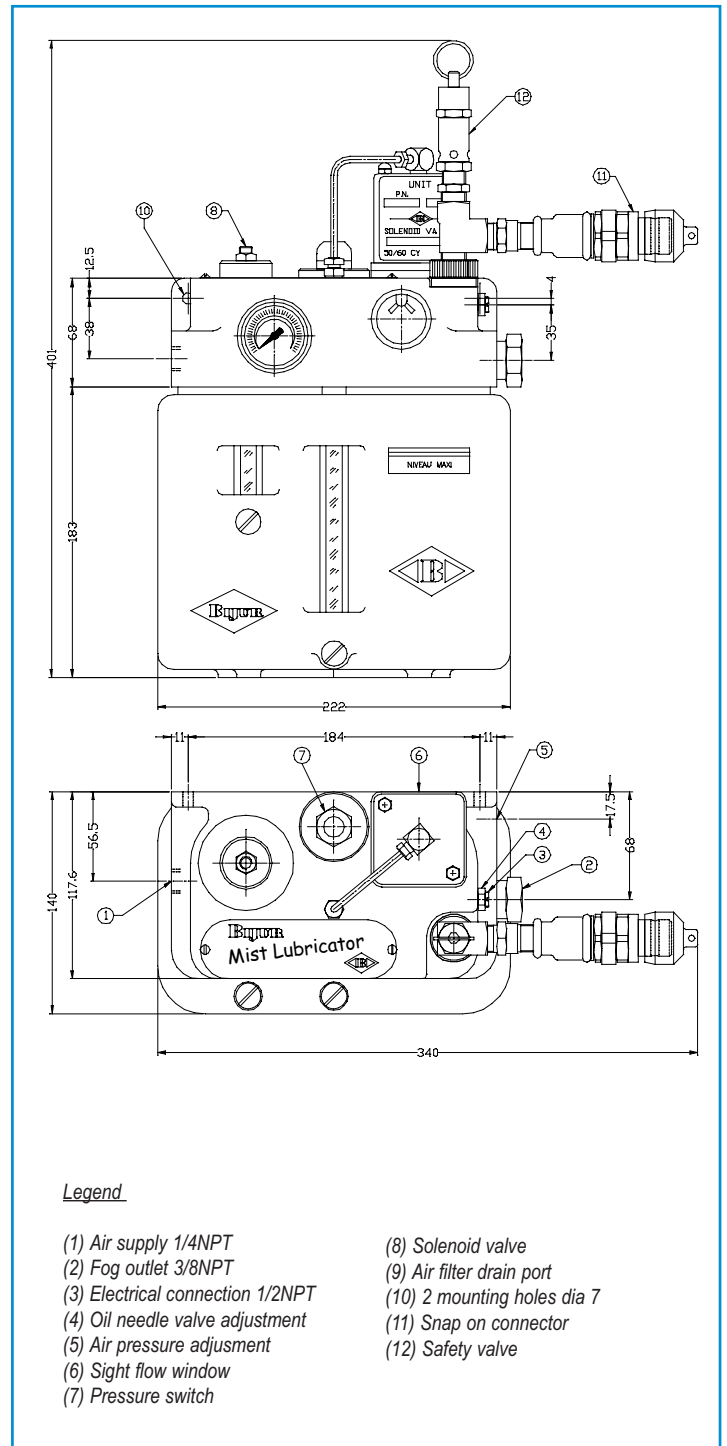
Inability to regulate air pressure :

Check diaphragm of air regulator for rip or puncture, also check pressure gauge.

IMPORTANT

Before start up and after any repair, the lubrication circuit must be purged.

For all repairs, it is recommended that the pump be returned to Bijur.



AIR OIL ASSEMBLY LUBRIFICATION SYSTEM

Description

The air oil lubrication systems are designed, amongst other applications, for high speed spindle lubrication. A measured dose of oil is delivered into a controlled continuous circuit of air. Pressurized air regulates temperature of bearings, thereby reducing variation tolerances which are caused by increased friction and wear.

Air oil system is also perfectly adapted for small machines such as open gear box and mechanical handling conveyors.

Functioning

A pneumatic or electrical pump feeds oil to injectors contained into air oil mixing block. Bijur oil injectors deliver very precise amounts of oil during a predetermined cycle time. A measured dose of oil is delivered into a controlled continuous circuit of air. The air flow transports the drops of lubricant along the inner walls of the tubing which feed the lubrication point. The lubrication concept guarantees a continuous and accurate oil supply to bearing without generating any form of mist or fog. Pressure switches control both air and oil during cycles to prevent failures.

(See system outline).

Characteristics

- Air inlet pressure : 6 bar mini, filtered to 3µ max (0,3µ requested)
- Air supply until 80 Nlitre per outlet and per minute
- Working pressure : 22 bar max
- Oil discharge : 0,01 to 0,4 cm³ per outlet
- Number of outlets : 1 to 8
- Oil filter : 10µ
- Reservoir capacities : 2 or 4 litre
- Electrical low level switch : 240V max
Power rating 0,5A
- Pressure switches : 240v max
Power rating : 10W
For oil : preadjusted at 18 bar (VERSA)
For air : 2 to 10 bar
- Working temperature : 5 to 40°C
- Lubricant to be used : Oil with viscosities 30 to 400 Cst

- Pneumatic version :
Voltage : 24VDC, 8W
Cycle frequency : 10 cycles per minute max

- Electrical version :
Voltage : 110/220V-50/60Hz-170W
Cycle frequency : 1 cycle per minute max

Outside dimensions

See overleaf.



Ordering instructions

To define the exact part number, use the following codes :

Air oil panel — AP

AP7515 (pneumatic)
AP7516 (electrical)
AP7517 (electrical 4L)
AP7518 elec.4L (with controller)

Number of outlets —

Discharge values requested

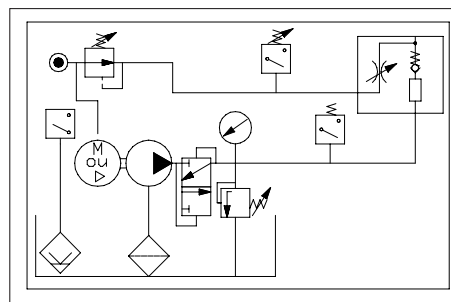
Discharge per stroke and per outlet

G	0,01 cm ³	_____
A	0,025 cm ³	_____
B	0,06 cm ³	_____
C	0,1 cm ³	_____
D	0,2 cm ³	_____
E	0,3 cm ³	_____
F	0,4 cm ³	_____

Example :

An air oil system with pneumatic pump, 3 out. (0,01/0,06/0,01)
Reference : **AP7515/3/GBG**

System Outline



SERVICE INSTRUCTIONS - AIR OIL ASSEMBLY LUBRICATION SYSTEM WITH PNEUMATIC PUMP

Start up

Read carefully the technical data sheet supplied with the pump.
Fill the reservoir.
After having primed the pump, check the system has been pressurised.

Oil

Use a clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 10 microns without separating.

Air

Use dry and filtered (**3µ min**) air supply.
However, and in order to guarantee protection of bearings, we advise to use air supply which must be filtered to 0,3µ.

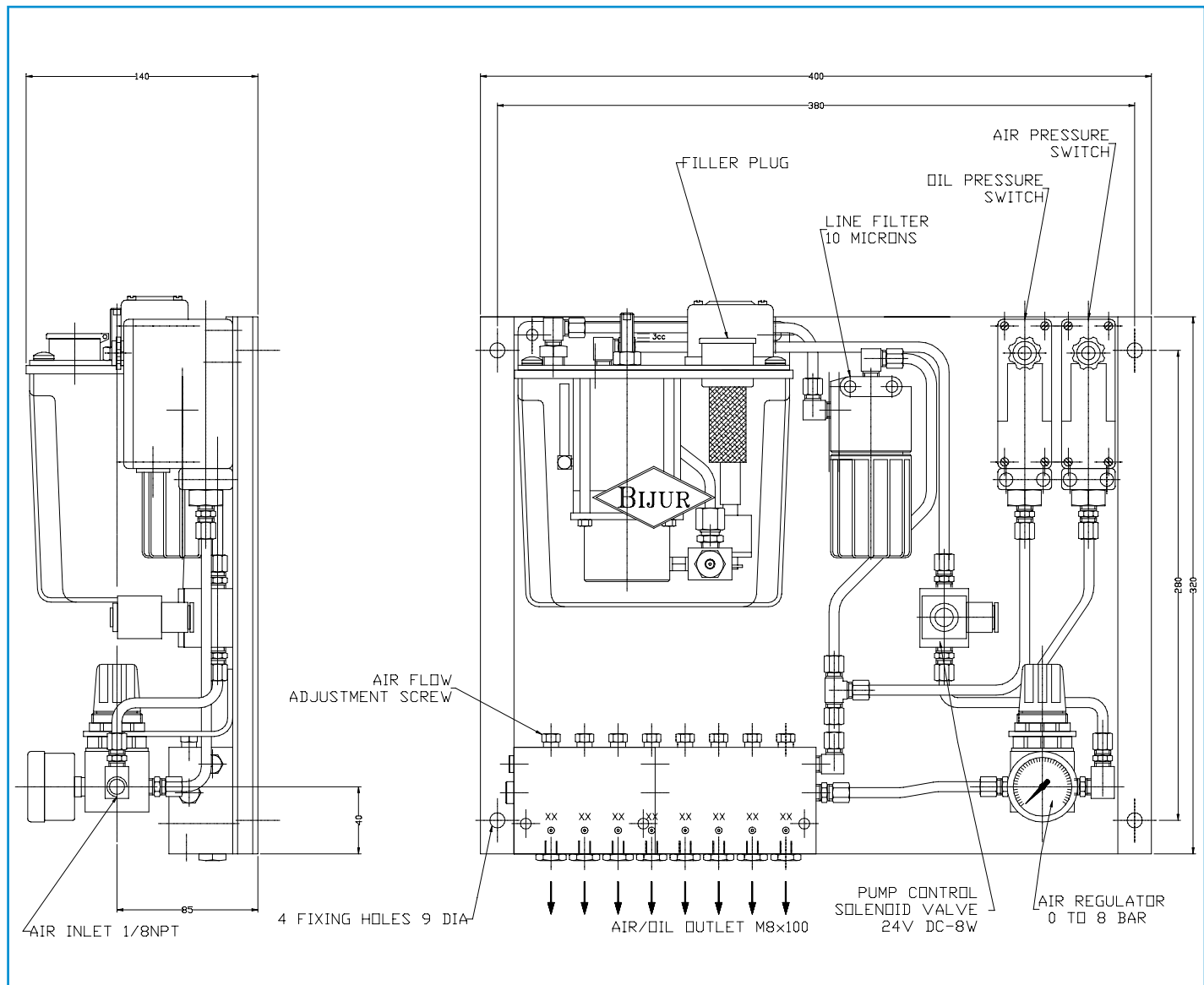
Service

Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For any repairs it is recommended that the pump be returned to **BIJUR**



SERVICE INSTRUCTION - AIR OIL ASSEMBLY LUBRICATION SYSTEM WITH ELECTRICAL PUMP

Start up

Read carefully the technical data sheet supplied with the pump.
Fill the reservoir.
After having primed the pump, check the system has been pressurised.

Oil

Use a clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 10 microns without separating.

Air

Use dry and filtered (**3µ min**) air supply.
However, and in order to guarantee protection of bearings, we advise to use air supply which must be filtered to 0, 3µ.

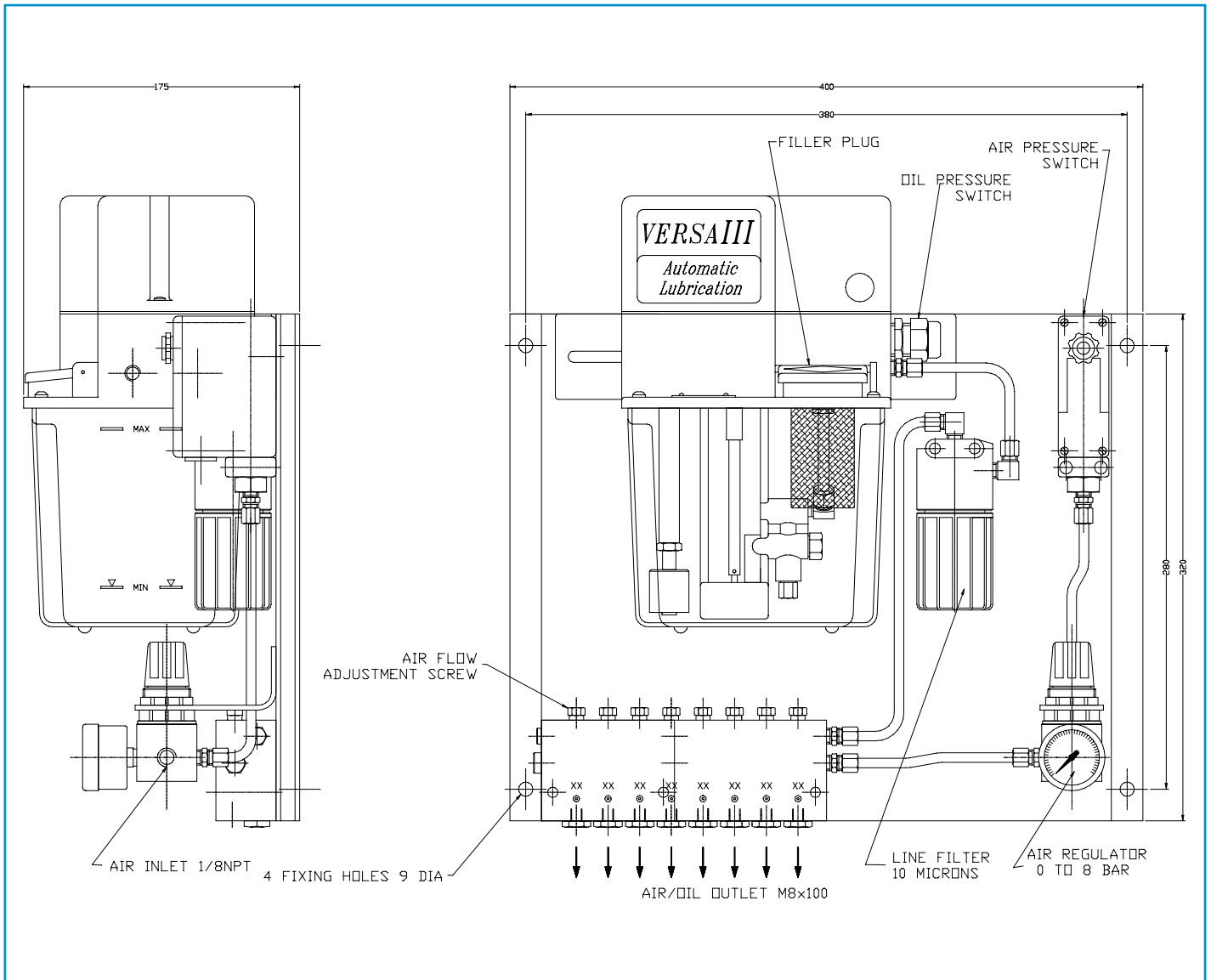
Service

Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For any repairs, it is recommended that the pump be returned to Bijur.



SYSTEM COMPONENTS - OIL RECOVERY SYSTEM

General

The fluid transfer system consists of a series of collection tubes attached to major machine component where hydraulic oil leaks occur - each line connects to a small centralized holding reservoir from which an air-powered vacuum is generated.

Escaping oil is siphoned through individual tubes to the centralized reservoir.

When oil volume in the reservoir reaches a pre-arranged level, a contact switch creates a "blowdown" condition within the container. This action expels collected oil through a special discharge port in the reservoir. The recovered oil is normally delivered through a single feed tube to a remote collection point for recycling.

Characteristics

- Voltage: 24 VDC.
- Power rated: 1,8 A. Max.
- Lubricant to be used: All type, 150 cSt Max
- Operating pressure: 5 to 10 bar Max.
- Air flow: 20 NL/mn. (0,74 SCFM).
- Reservoir capacity: 0,12 Litre.
- Number of points to collected: 4x4 Max.
- Siphone tube:
 - Ø 2,7x4 lg. 1,5 metre max.
 - Ø 4x6 lg. 10 metre max.
 - Ø 6x8 lg. 15 metre max.
- Electrical low level switch:
 - Power rating 3VA./ 250VDC.
 - or 48VCA Max



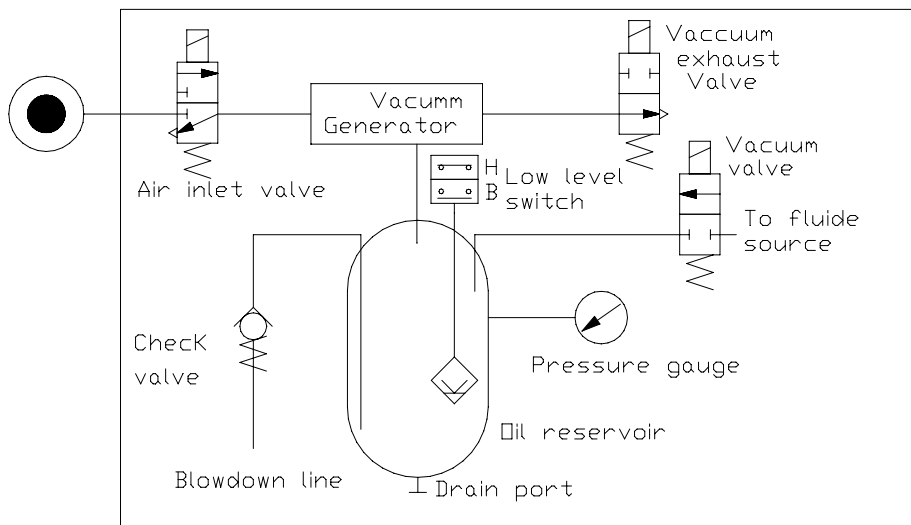
Ordering instructions

Oil recovery system
Référence **247448**.

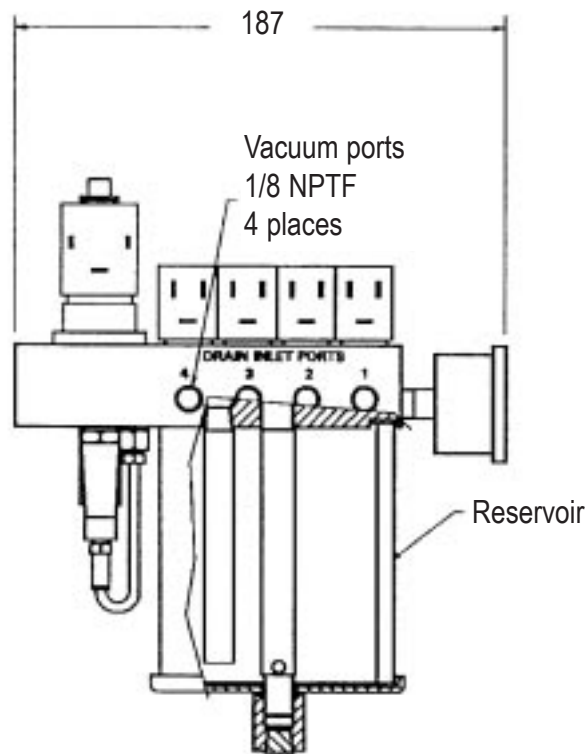
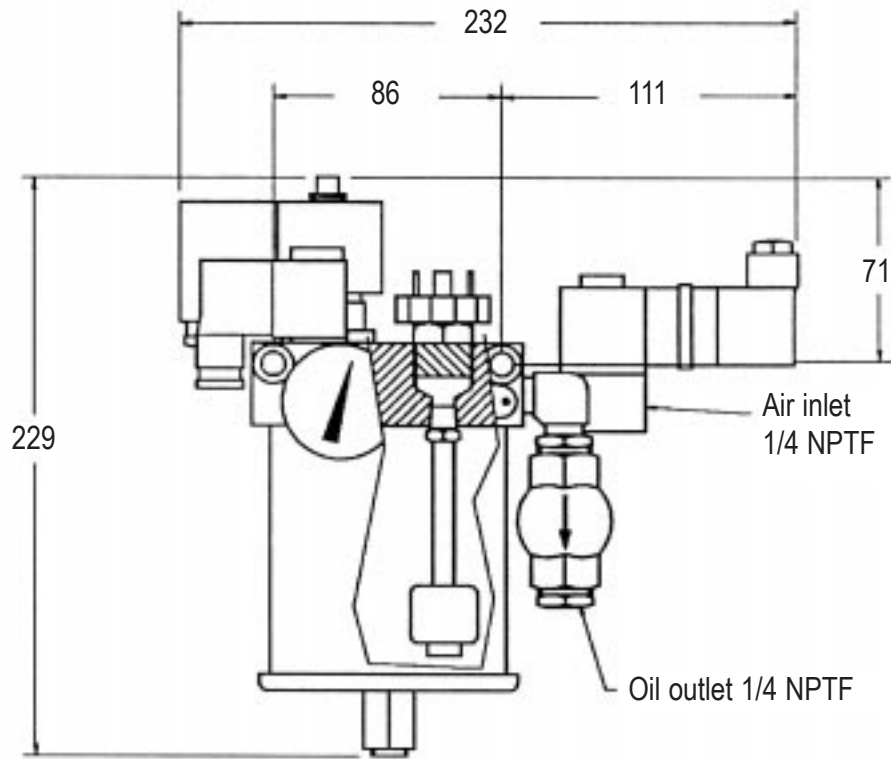
Outside dimension

See overleaf.

System outline



SYSTEM COMPONENTS - OIL RECOVERY SYSTEM





MECHANICAL PUMPS

Gear pump type **V100**

C1101A



GEAR PUMP TYPE V 100 - CONTINUOUS DISCHARGE

Description

The V 100 lubricator is mainly designed for oil recirculating systems. Also very useful for small low pressure hydraulic applications. Pumps can be mounted in all positions.

Functioning

The V 100 pumps are available with different discharges with 2 directions of rotation.

Discharge values are identified by the colour of the pump body.

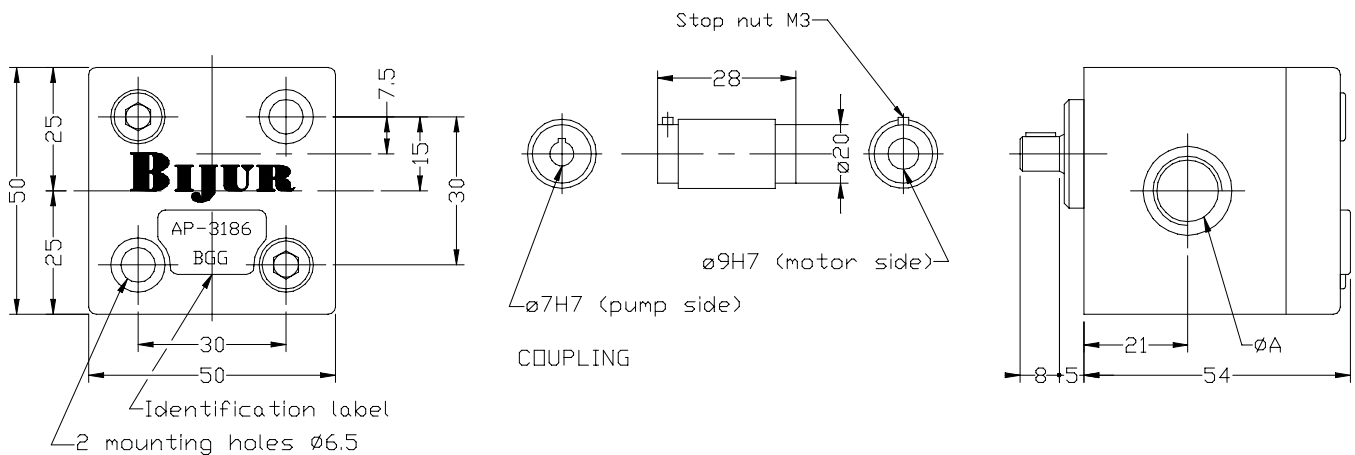


Characteristics

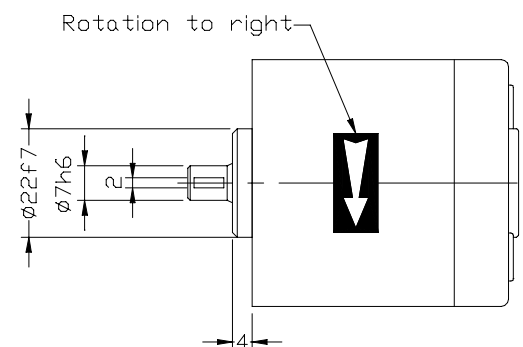
- Discharge: see table below
- Working pressure: 30 bar
- Working temperature: -10 to 120°C
- Rotation speed: 750 to 3000 rpm max
- Suction height: 2 meter max
- Lubricants to be used: mineral oils with viscosities 20 to 2000cst at working temperature
- Accessories: coupling, reference AD1175

For ordering

To define the exact part number, use the table below :



Discharge Cm ³ /min	Rotating direction	Thread connection A	Color of body	Reference
0,5	⇒	M 14 x 1,5	blue	AP3186
0,5	⇐	M 14 x 1,5	blue	AP3199
1	⇒	M 14 x 1,5	lime green	AP3183
1	⇐	M 14 x 1,5	lime green	AP3200
1,5	⇒	M 14 x 1,5	green	AP3193
1,5	⇐	M 14 x 1,5	green	AP3194
2	⇒	M 16 x 1,5	red	AP3188
2	⇐	M 16 x 1,5	red	AP3191



ELECTRICAL PUMPS

Automatic pump type TMD5	D1101A
Automatic pump type TM1	D1105A
Motorised gear pump type MP100	D1201A
Motorised gear pump type MP750	D1205A
Motorised gear pump type VERSA III	D1301A
Motorised gear pump type VERSA Tri	D1308A
Motorised gear pump type GPO	D1701A
Single line pump type MULTIPOINT	D2201A
Dual line pump type CS2000	D2401A
Dual line pump type DC41	D2501A
Micro fog lubricator type Fog-Lub	D5101A
Automatic lubricator type LUBESTATION	D9101A



AUTOMATIC PUMP TYPE TMD5 - CYCLIC DISCHARGE

Description

The wide field of applications for the TMD-5 pump is particularly ideal for machines having up to around 50 lubrication points (see technical information). The TMD-5 is interchangeable with the L18P convenient for customers wishing to change from an automatic to a manual system or vice versa..

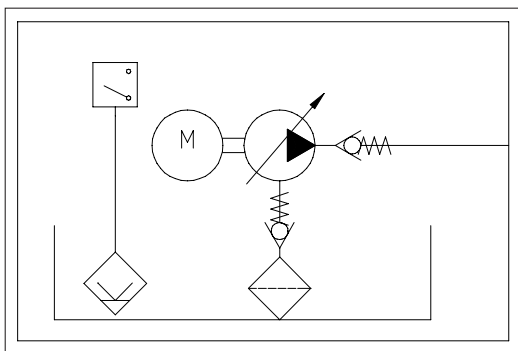
Functioning

The TMD-5 is an automatic motor driven piston pump with a spring discharge. The motor reducer assembly determines the discharge cycle time (see table opposite) of the piston which distributes oil through the system. TMD-5 pump is equipped with an electrical low level switch.

Characteristics

- **Motor :** synchronised single phase 50/60 Hz -3W.
115V : connect wires to terminal outlets 5 and 6.
220 V : connect wires to terminal outlets 4 and 6.
- **Discharge :** 1 to 5 cm³/cycle
- **Adjustment :** pumps are delivered, pre-set at 5 cm³.
To reduce the discharge, lift the stop ring and turn the knob until the required discharge engraved on the stem of the adjustment screw is apparent.
- **Pressure :** 2 to 4 bar. Pressure varies depending on the number of meter units in the system.
- **Reservoir capacity :** 1,8 litre.
- **Electrical low level switch :** 220V max
Power rating : 0,15A.
pumps are delivered with contact closed in the up position connect wire to terminal 2 and 3.
- **Filter :** mounted on oil intake, filtering to 40 μ.
- **System limits :** see chapter "technical information".
The number of points which can be lubricated depends on the discharge per cycle of the pump.

System outline :



Ordering instructions

To define the exact pump characteristics, use the following table :

Voltage V	Time cycle	motor R.P.M.	Reference	
			Pump	Replacement motor
115/220	120	1/4	263506	242785
	60	1/2	263505	242784
	30	1	263504	242782
	15	2	263503	242786
	10	3	263502	242783
	6	5	263501	242781

Example :

Pump TMD5, cycle 30 mn
Reference : **263504**

Outside dimensions

See overleaf.

SERVICE INSTRUCTIONS - AUTOMATIC PUMP TYPE TMD5

System

Your machine is equipped with a Bijur centralised lubrication system which, if properly maintained, will correctly lubricate all the points in the system.

Oil

Use only clean mineral oil, of a quality and viscosity as recommended by the machine builder. The oil characteristics must allow filtering filtration down to 25 microns without it separating.

Spare parts

For ordering, specify reference and type of pump. If possible also advise serial number of the pump. Example : filter assembly B3746 for TMD5 pump.

For all major repairs it is recommended that the pump be returned to Bijur.

Start up

Fill the reservoir.

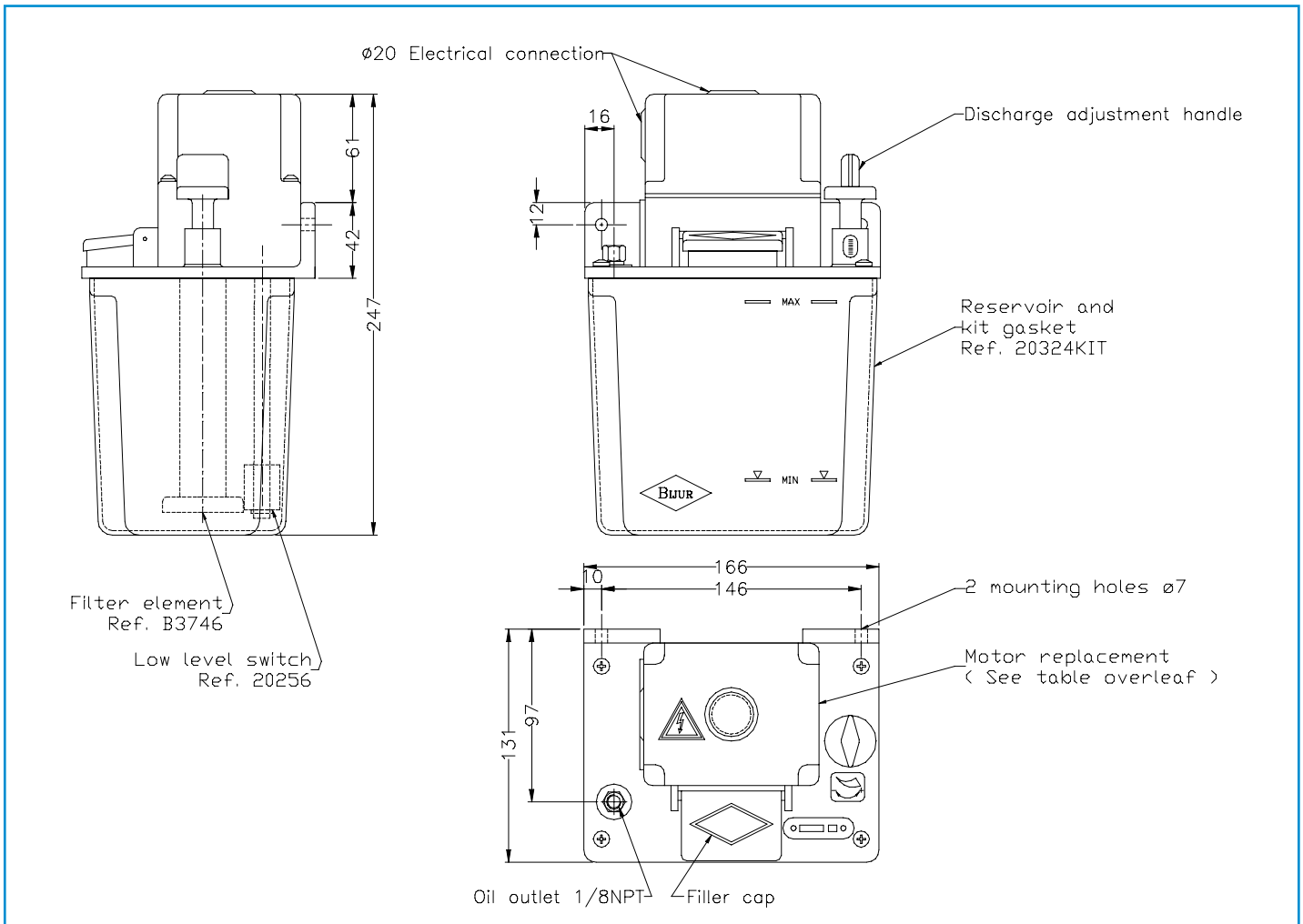
Service

Check oil level daily. Check periodically the tubing to ensure none are broken or crushed and that all fittings are properly tightened. Any sign of excess oil around the machine should be investigated immediately.

Lack of oil at the lubrication points : Verify the oil level in the reservoir and the distribution circuit (e.g. look for broken, crushed or detached tubing or a leak at one of the fittings). Check also the condition of the filter. To increase or reduce the amount of oil being delivered to any given point change the value of the meter unit at that point.

Filter : A filter is incorporated in the pump to protect the system. It must be checked periodically and replaced once a year.

Motor replacement : Lift off the motor cover. The motor is held in position by two screws which allows motor to be replaced without dismantling the pump.



AUTOMATIC PUMP TYPE TM1 - CYCLIC DISCHARGE

Description

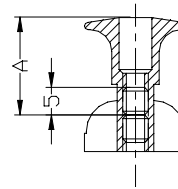
The TM-1 pump has a wide field of applications but is particularly suited to small machines with no more than about 20 lubrication points (see technical information). The TM-1 pump is interchangeable with the manual L5P giving customers the ability to change easily from a manual to an automatic system or vice versa.

Functioning

The TM1 is an automatic motor driven piston pump with a spring discharge. The motor reducer assembly determines the discharge cycle time (see table opposite) of the piston which distributes oil through the system. TM1 pump is equipped with an electrical low level switch.

Characteristics

- **Motor :** single phase 50/60 Hz - 3W
115V : connect wires to outlets 5 and 6.
220 V : connect wires to outlets 4 and 6.
- **Discharge :** 0,2 to 1 cm³/cycle
- **Setting (see drawing):** pumps are pre-set to 1 cm³. For less delivery, remove lock screw, measure "A", turn adjusting screw clock wise, increasing "A" by "X" dimension.
- **Pressure :** 1,5 to 3,5 bar. Pressure varies depending on the number of meter units in the system.
- **Reservoir capacity :** 0,5 or 1 litre
- **Electrical low level switch:** max. power 0,15A/220V. Pumps are delivered with contact closed at the high position. Connect wire to terminal 2 and 3.
- **Filter :** 40 micron filter mounted at oil intake.
- **System limits :** see chapter 'technical information'. The number of points which can be lubricated depends on the discharge setting of the pump.
- **Lubricants to be used :** mineral oil with viscosity 30 to 1700 Cst at working temperature.



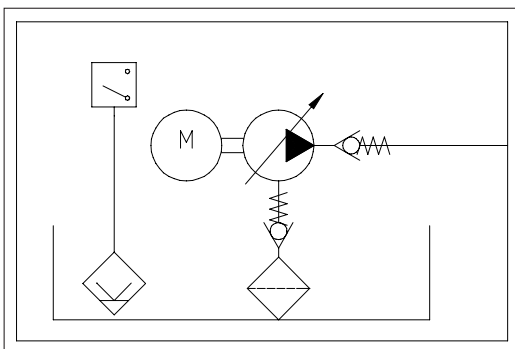
x	Discharge
11	0,2 cm ³
8,5	0,4 cm ³
5,5	0,6 cm ³
3	0,8 cm ³
0	1,0 cm ³

Ordering instructions

To define the exact pump characteristics, use the following table :

Voltage (V)	Time cycle	Motor Rpm	Reference				Replacement motor
			without level switch		with level switch		
			0,5 L	1 L	0,5 L	1 L	
115	145	1	C2731	D3107	C2889	D3087	19422-1
	72	2	C2739	D3108	C2890	D3089	19422-3
	18	8	C2741	D3109	C2891	D3090	19422-1
	9	8	C2803	D3115	C2896	D3095	19422-1
115/220	2	60	C2798	D3114	C2895	D3094	24278-2
220	145	1	C2736	D3110	C2892	D3091	19306-2
	72	2	C2764	D3111	C2893	D3092	24095-3
	18	8	C2765	D3112	C2894	D3093	24095-1
	9	8	C2774	D3113	C2897	D3096	24095-1

System outline



Example :

TM1 pump with level switch, 220 V / 72 mn
Reference : C2893

Outside dimensions

See overleaf.

SERVICE INSTRUCTIONS - AUTOMATIC PUMP TYPE TM1 WITH 0,5 LITRE RESERVOIR

System

Your machine is equipped with a Bijur centralised lubrication system which, if properly maintained, will correctly lubricate all the points in the system.

Oil :

Use only clean mineral oil of the quality and viscosity as recommended by the machine builder. The oil characteristics must allow filtering filtration down to 25 microns without it separating.

Spare parts

For ordering, specify reference and type of pump.
If possible also advise serial number of the pump.
Example : filter assembly S178 for TM1 pump.

For all major repairs it is recommended that the pump be returned to Bijur.

Start up

Fill the reservoir.

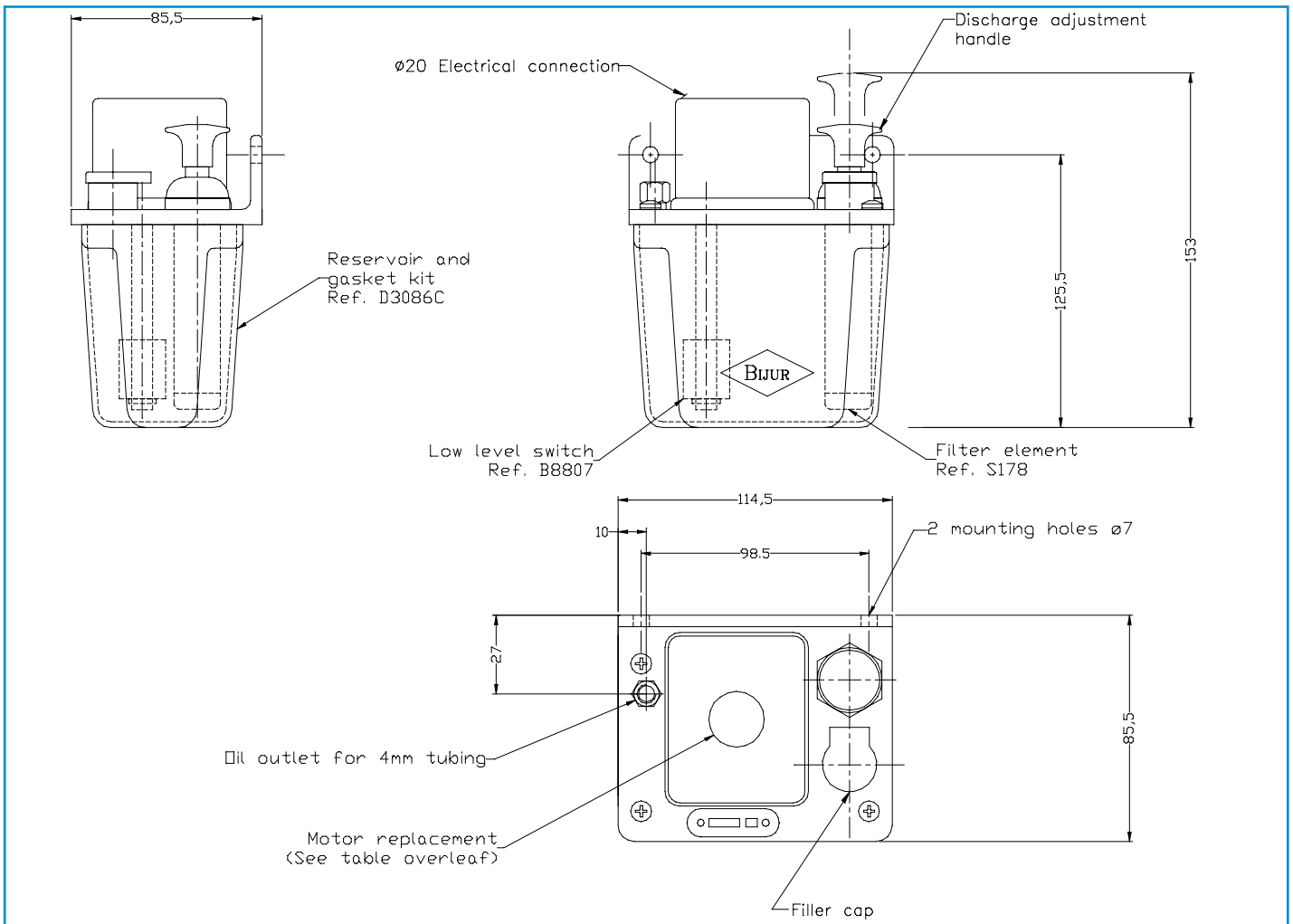
Service

Check oil level daily. Check periodically the tubing to ensure none are broken or crushed and that all fittings are properly tightened. Any sign of excess oil around the machine should be investigated immediately.

Lack of oil at the lubrication points : Verify the oil level in the reservoir and the distribution circuit (e.g. look for broken, crushed or detached tubing or a leak at one of the fittings). Check also the condition of the filter. To increase or reduce the amount of oil being delivered to any given point change the value of the meter unit at that point.

Filter : A filter is incorporated in the pump to protect the system. It must be checked periodically and replaced once a year.

Motor replacement : Lift off the motor cover. The motor is held in position by two screws which allows motor to be replaced without dismantling the pump.



SERVICE INSTRUCTIONS - AUTOMATIC PUMP TYPE TM1 WITH 1 LITRE RESERVOIR

System

Your machine is equipped with a Bijur centralised lubrication system which, if properly maintained, will correctly lubricate all the points in the system.

Oil :

Use only clean mineral oil of the quality and viscosity as recommended by the machine builder. The oil characteristics must allow filtering filtration down to 25 microns without separating.

Spare parts

For ordering, specify reference and type of pump. If possible also advise serial number of the pump. Example : filter assembly S178 for TM1 pump.

For all major repairs it is recommended that the pump be returned to Bijur.

Start up

Fill the reservoir.

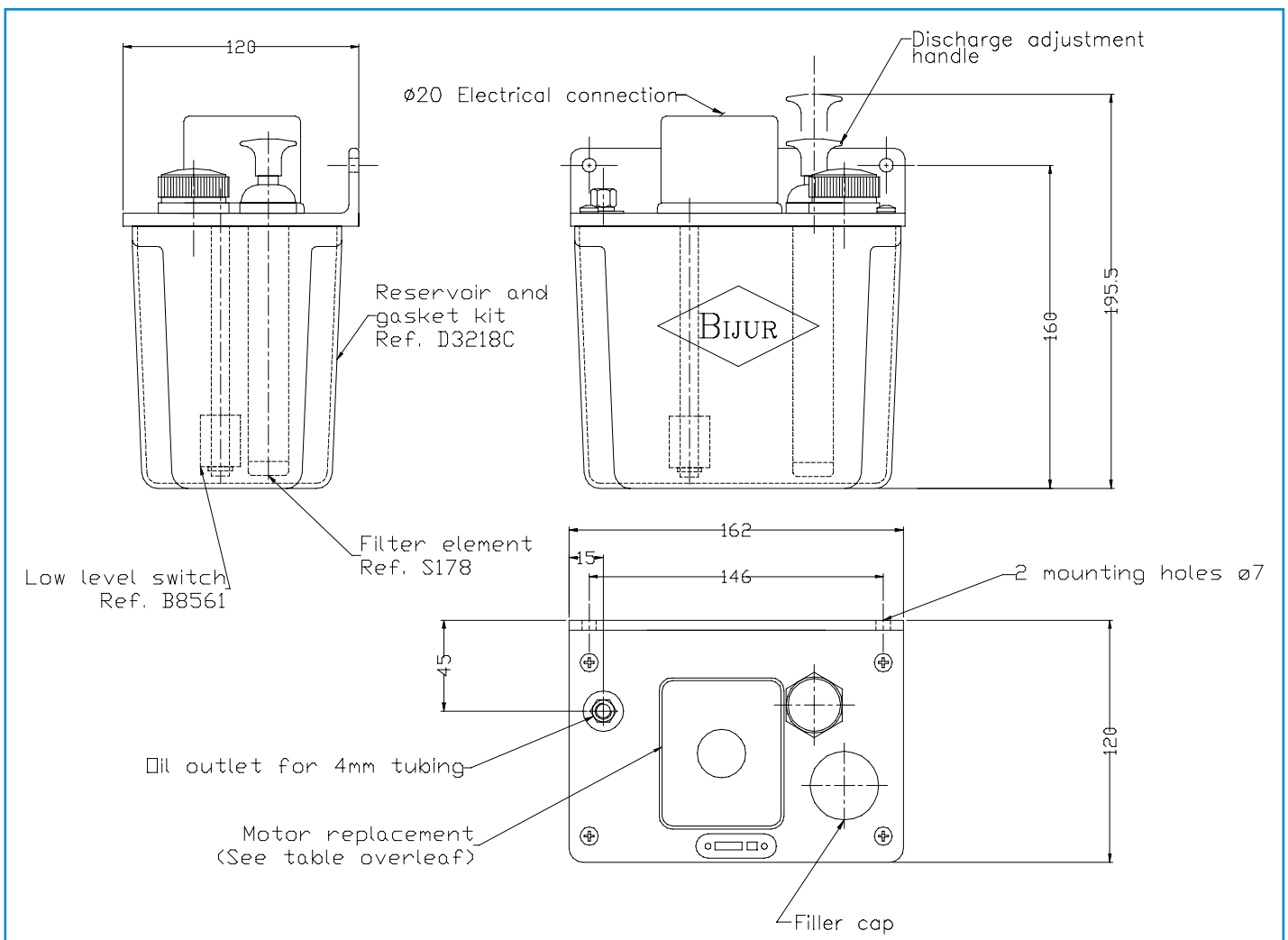
Service

Check oil level daily. Check periodically the tubing to ensure none are broken or crushed and that all fittings are properly tightened. Any sign of excess oil around the machine should be investigated immediately.

Lack of oil at the lubrication points : Verify the oil level in the reservoir and the distribution circuit (e.g. look for broken, crushed or detached tubing or a leak at one of the fittings). Check also the condition of the filter. To increase or reduce the amount of oil being delivered to any given point change the value of the meter unit at that point.

Filter : A filter is incorporated in the pump to protect the system. It must be checked periodically and replaced once a year.

Motor replacement : Lift off the motor cover. The motor is held in position by two screws which allows motor to be replaced without dismantling the pump.



MOTORIZED GEAR LUBRICATOR TYPE MP 100 CONTINUOUS DISCHARGE

Description

The MP 100 lubricator is mainly designed for oil recirculating systems.
Also very useful for small low pressure hydraulic applications.

Functioning

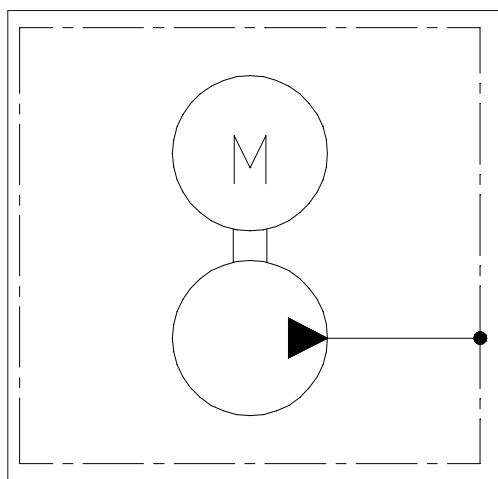
The MP 100 lubricator comprises a gear pump with an electric motor
(see system outline).

Characteristics

- **Motor :** 3 phase electric motor, ventilated,
multi-voltage 230/400V - 50/60 Hz
- **Discharge :** see table below
- **Working pressure :** see table below
- **Working temperature :** 5 to 50°C
- **Lubricants to be used :** mineral oils with viscosities
20 to 2000 Cst at working temperature.



System outline



For ordering

To define the exact part number, use the table below :

Discharge cm ³ /mm	Direction of rotation	Motor		P max Bar	Reference
		R.P.M	P (W)		
750	⇐	1500 T/mn	90	30	AP3218
750	⇒	1500 T/mn	90	30	AP3219
1500	⇐	1500 T/mn	90	15	AP3220
1500	⇒	1500 T/mn	90	15	AP3221
2250	⇒	1500 T/mn	90	10	AP3222
2250	⇒	1500 T/mn	90	10	AP3223
3000	⇒	3000 T/mn	120	6	AP3224
3000	⇒	3000 T/mn	120	6	AP3225

Outside dimensions

See overleaf.

SERVICE INSTRUCTIONS - MOTORISED GEAR LUBRICATOR TYPE MP 100

Start up

Read carefully the technical data sheet supplied with the pump.
After having primed the pump, check the system has been pressurised with a pressure gauge.
If it has not, check the direction of rotation of the motor.

Oil :

Use a clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without separating.

Service

Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

Spare parts

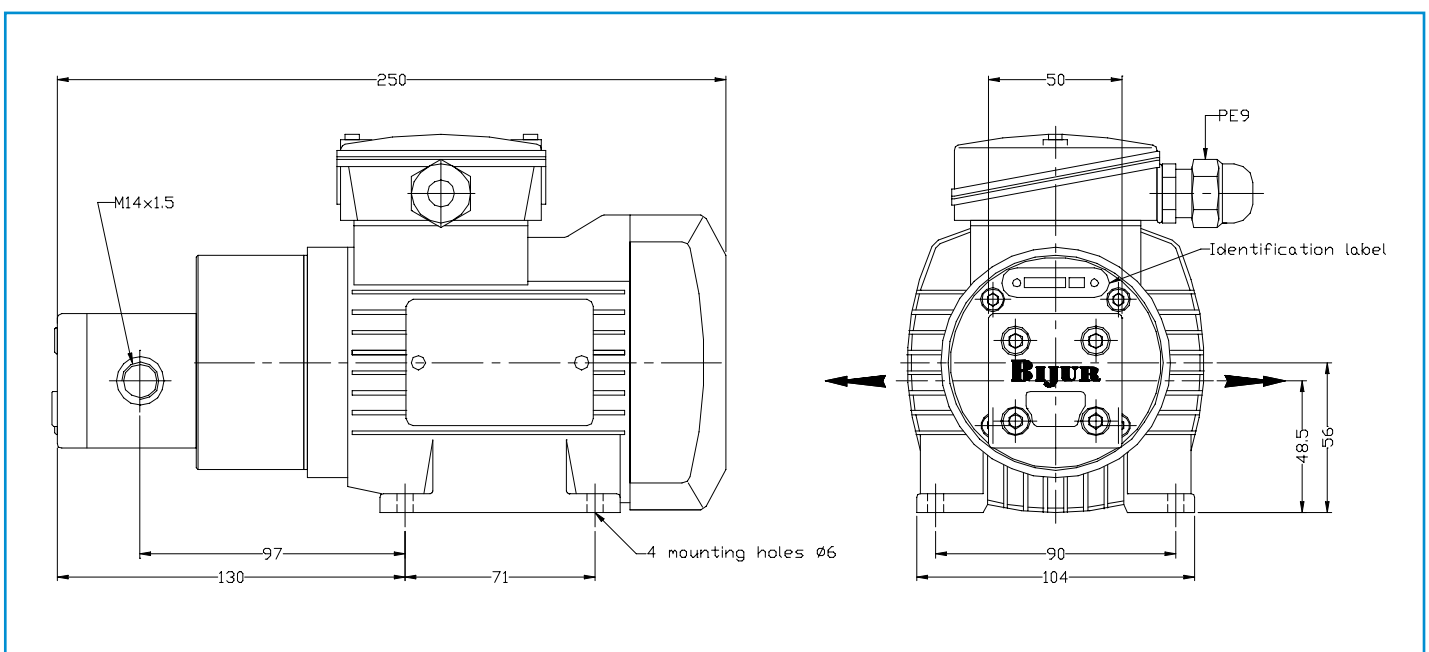
For ordering, specify reference and type of the pump. If possible also,

IMPORTANT

Before start up, and after any repair, the lubrication circuit must be purged of air.

For all repairs, it is recommended that the pump be returned to Bijur.

Reference MP100	Pump	Coupling	Motor
AP3218	AP3186	AD1175	AM239
AP3219	AP3199	AD1175	AM239
AP3220	AP3183	AD1175	AM239
AP3221	AP3200	AD1175	AM239
AP3222	AP3193	AD1175	AM239
AP3223	AP3194	AD1175	AM239
AP3224	AP3183	AD1175	AM240
AP3225	AP3200	AD1175	AM240



MOTORIZED GEAR LUBRICATOR TYPE MP 750 CONTINUOUS DISCHARGE

Description

The MP 750 lubricator is mainly designed for oil recirculating systems. Also very useful for small low pressure hydraulic applications.

Functioning

The MP 750 lubricator comprises a gear pump with an electric motor. The oil discharge is regulated via a pressure by-pass which permits the over flow to return to the reservoir

(see system outline).

Characteristics

- **Motor :** 3 phase electric motor, ventilated, multi voltage 230/400V - 50/60 Hz
0,09KW ; 1500 rpm
- **Discharge :** 0 to 750 cm³/min
- **Working pressure :** 20 bar max
- **Working temperature :** 5 to 50°C
- **Lubricants to be used :** mineral oils with viscosities 20 to 2000 Cst at working temperature

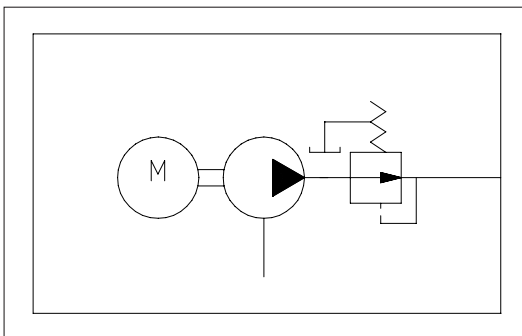


For ordering

Specify reference as below :

Lubricator type MP 750, reference AP3079

System outline



Outside dimensions

See overleaf.

SERVICE INSTRUCTIONS - MOTORISED GEAR LUBRICATOR TYPE MP 750

Start up

Read carefully the technical data sheet supplied with the pump.
After having primed the pump, check the system has been pressurised with a pressure gauge.
If it has not, check the direction of rotation of the motor.

Oil:

Use a clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without separating.

Service

Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

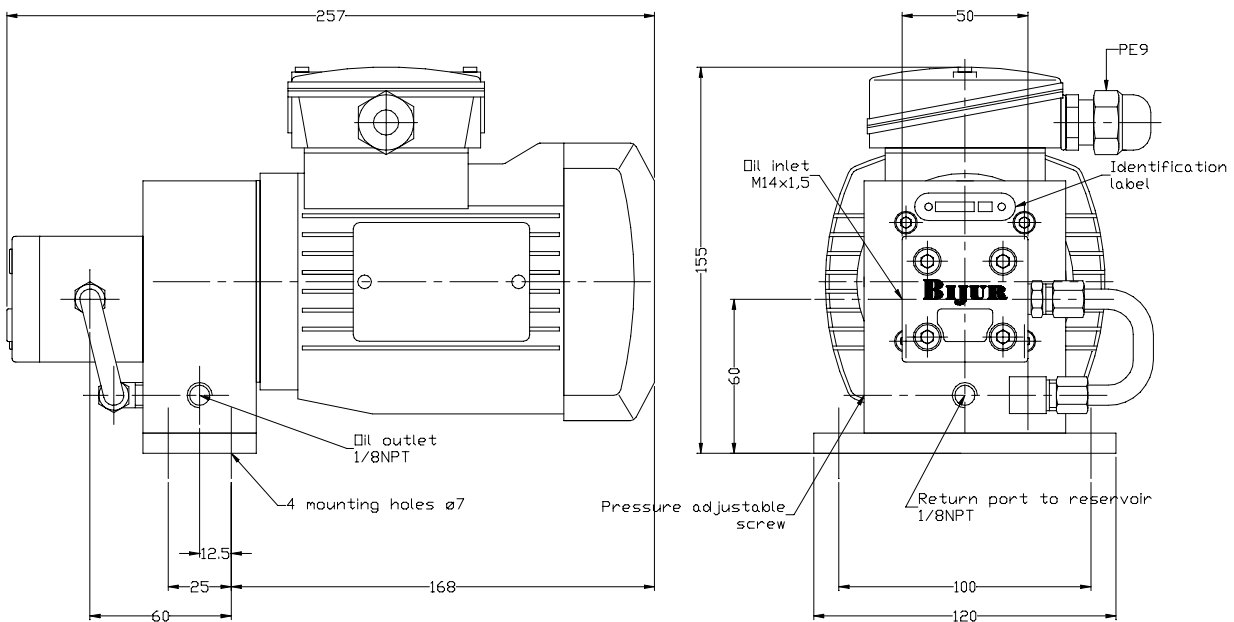
Spare parts

For ordering, specify reference and type of the pump. If possible also, advise serial number of the pump.

IMPORTANT

Before start up, and after any repair, the lubrication circuit must be purged of air.

For all repairs, it is recommended that the pump be returned to Bijur.



ELECTRIC PUMP TYPE VERSA III-CYCLIC DISCHARGE

Description

Versa III lubricator is perfectly adapted for use with volumetric oil injectors (PDI). Comprises a motorised gear pump mounted on a clear, plastic reservoir, equipped with an electrical low level switch as standard. The 2 litre version may be equipped with a timer to control the cycle time and frequency.

The 4 litre version is available with controller to provide full control of the system (cycle time, cycle frequency, oil level and working pressure).

Functioning

When charged, the pump pressurises the main primary line. The motor is stopped by an integrated pressure switch. A discharge valve ensures the compression of the main line of the end at the cycle. the two litre version can be supplied with a terminal strip or with a time-based timer. The 4 litre version may be supplied with or without electronic controller (time-based and cycle based).

Characteristics

When using the 4 litre model with electronic controller all system control and fault indication is by LED. It is also possible to provide external signalling for low level and low pressure to a remote control. This information can be wired into a control panel or the machine's PLC. Lubrication intervals can be regulated by the user :

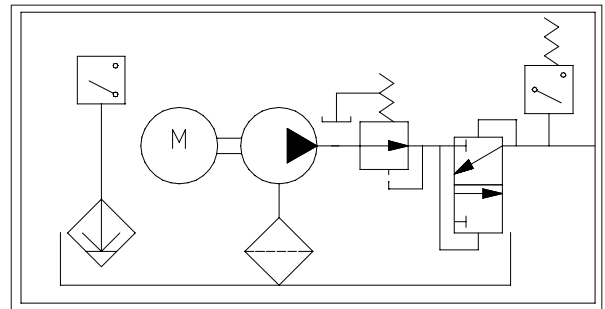
- **Cycle based:** from 10 to 220 000 machine cycle count increments of 10 cycles (4 litre version only).
- **Time based:** from 5 to 780 minutes increments of 1 minute.
- **Motor:** single phase dual voltage electric motor with thermal protection: 110/220 V50/60Hz 170 W maxi
- **Reservoir capacity:** 2 and 4 litres.
- **Electric low level switch:** 230 V maxi.
- **Power rating:** 40 VA.
- **Pressure switch:** 250 V maxi,
- **Power rating:** 5 A maxi.
- **Discharge:** 125 cm³/mn (à 50 Hz)
- **Safety valve:** close at 16 bars.
- **Discharge pressure:** 20 bars.
- **Working temperature:** de 5°C à 40°C.
- **Lubricant to be used:** mineral oil
- **Oil viscosity at working temperature:** from 300 to 1500 cSt
from 20 to 400 cSt ('L' version)
- **Other lubricants:** contact Bijur.

Outside dimintions

See overleaf.



System outline (for all types)



Ordering instructions

To define the exact pump characteristics used the following codes:

Pump code	_____	VERSA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reservoir capacity	<input type="checkbox"/> 2	2 litre	_____	_____	_____	_____
	<input type="checkbox"/> 4	4 litre	_____	_____	_____	_____
Distribution system	<input type="checkbox"/> A	Résistance	_____	_____	_____	_____
	<input type="checkbox"/> B	Volumetric	_____	_____	_____	_____
	<input type="checkbox"/> C	Progressive	_____	_____	_____	_____
Options	<input type="checkbox"/> B	Low level switch (standard)	_____	_____	_____	_____
	<input type="checkbox"/> C	Low level switch and snap-on refif connector (automotive approved)	_____	_____	_____	_____
Programmation	<input type="checkbox"/> A	Pump with terminal strip (2 or 4 litre version)	_____	_____	_____	_____
	<input type="checkbox"/> B	pump with timer (2 litre only)	_____	_____	_____	_____
	<input type="checkbox"/> C	pump with electronic controler	_____	_____	_____	_____

Example: VERSA III, 4 litre with controller with 4 litre reservoir
Reference **VERSA4BBC**

SERVICE INSTRUCTIONS-MOTORISED PUMP TYPE VERSAIII

Start Up

Read carefully the technical data sheet supplied with the pump. Fill the reservoir. having powered the pump ensure the system comes up to pressure.

Oil

Use only clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

Service

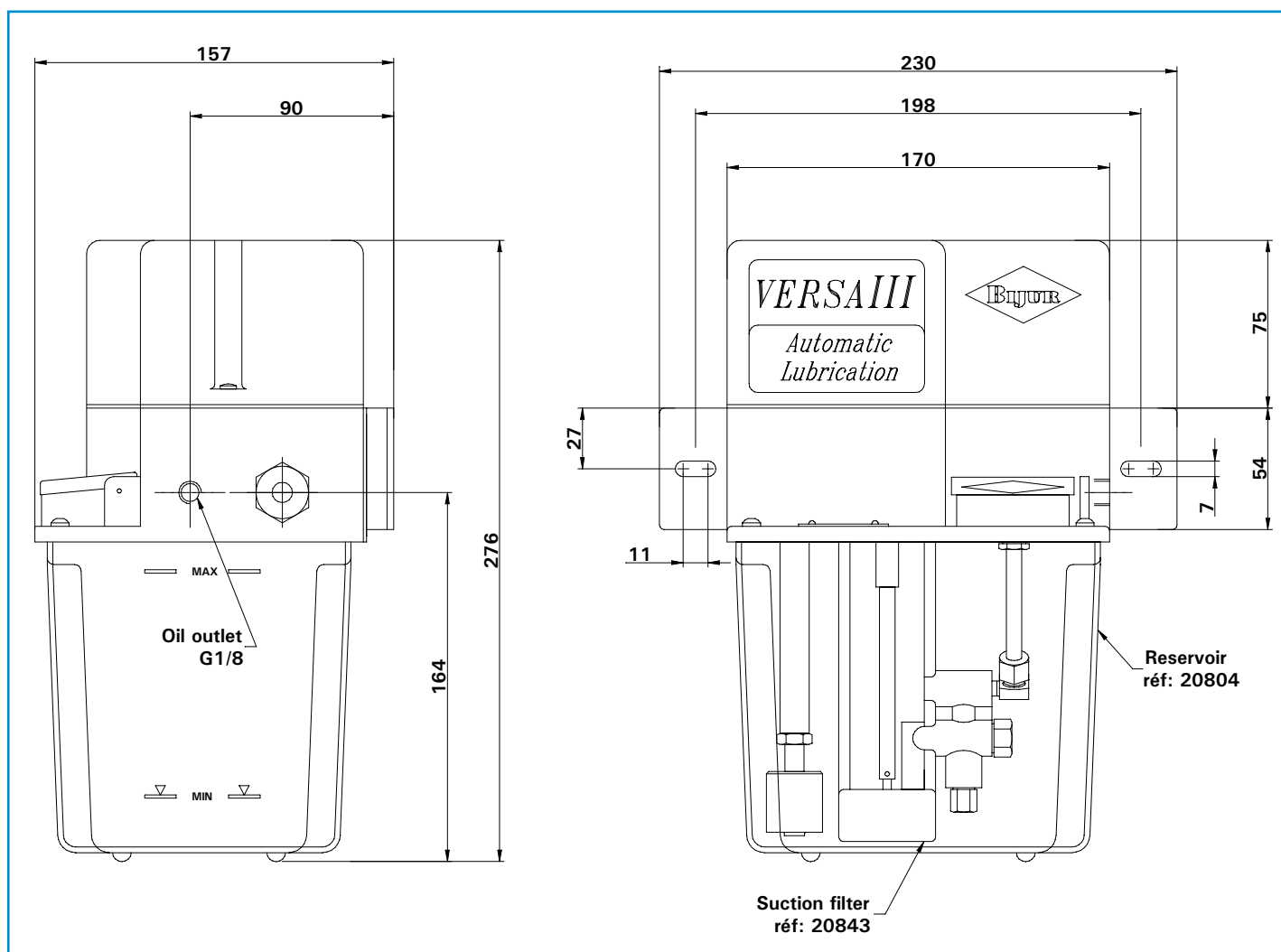
Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to bijur.

Pump VERSA III: 2 litre reservoir



SERVICE INSTRUCTIONS-MOTORISED PUMP TYPE VERSAIII

Start Up

Read carefully the technical data sheet supplied with the pump. Fill the reservoir. Having powered the pump ensure the system comes up to pressure.

Oil

Use only clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

Service

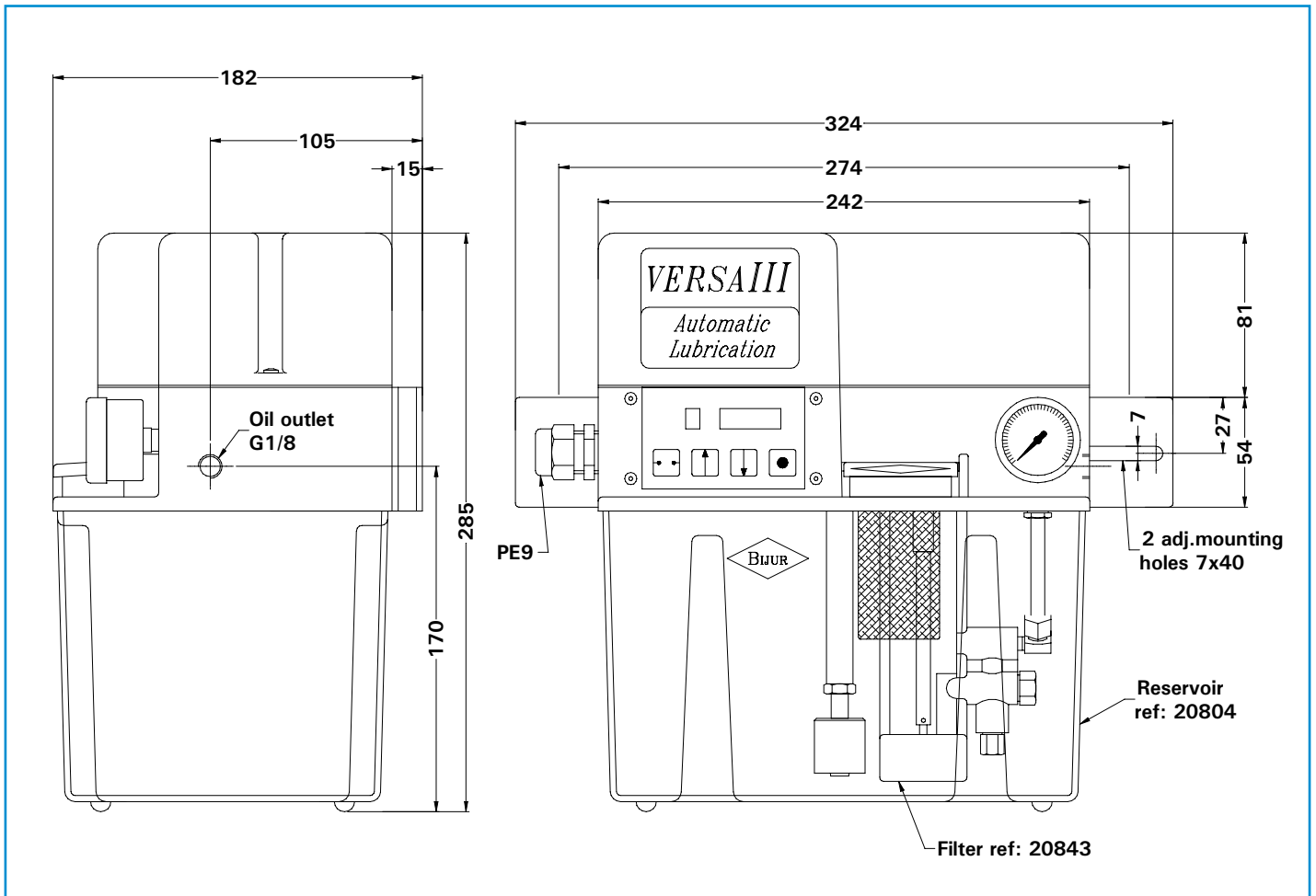
Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to bijur.

Pump VERSA III: 4 litre reservoir



SERVICE INSTRUCTIONS-MOTORISED PUMP TYPE VERSAIII SPECIAL AUTOMOTIVE VERSION

Start Up

Read carefully the technical data sheet supplied with the pump. Fill the reservoir. having powered the pump ensure the system comes up to pressure.

Oil

Use only clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

Service

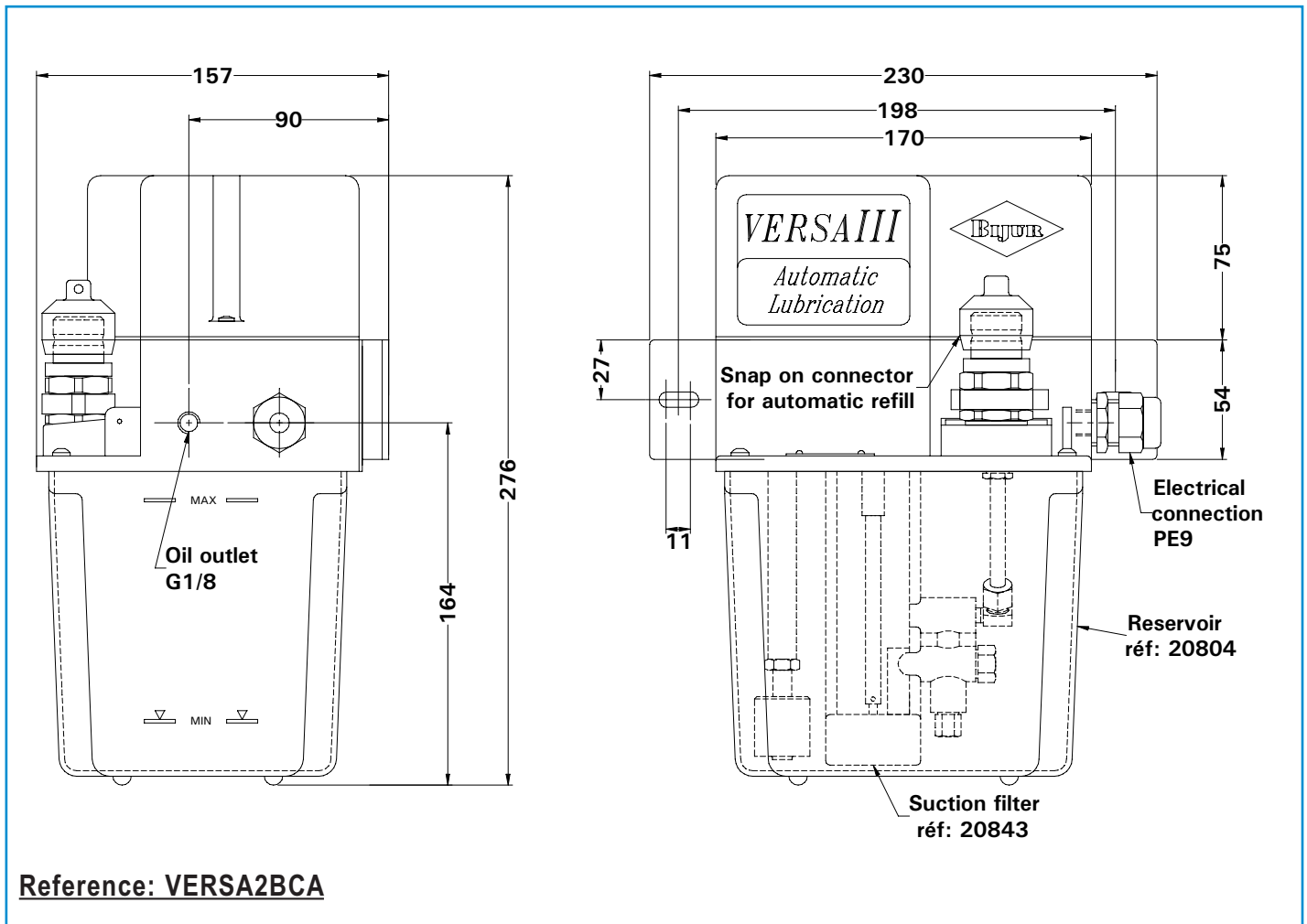
Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to bijur.

Pump VERSA III: 2 litre reservoir



SERVICE INSTRUCTIONS-MOTORISED PUMP TYPE VERSAIII SPECIAL AUTOMOTIVE VERSION

Start Up

Read carefully the technical data sheet supplied with the pump. Fill the reservoir. having powered the pump ensure the system comes up to pressure.

Oil

Use only clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

Service

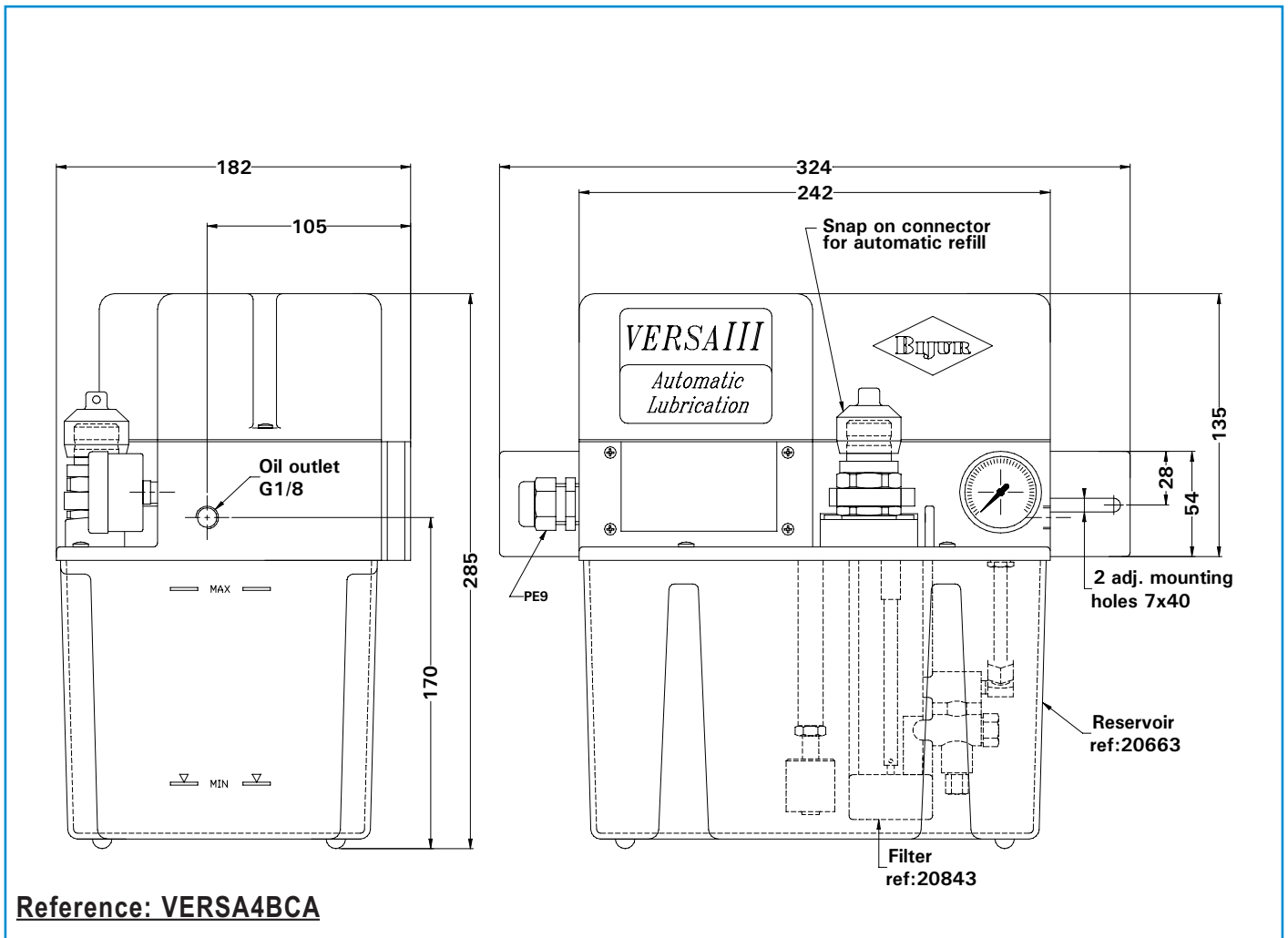
Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to bijur.

Pump VERSA III: 4 litre reservoir



SERVICE INSTRUCTIONS-MOTORIZED PUMP TYPE VERSAIII SPECIAL AUTOMOTIVE VERSION

Start Up

Read carefully the technical data sheet supplied with the pump. Fill the reservoir. having powered the pump ensure the system comes up to pressure.

Oil

Use only clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

Service

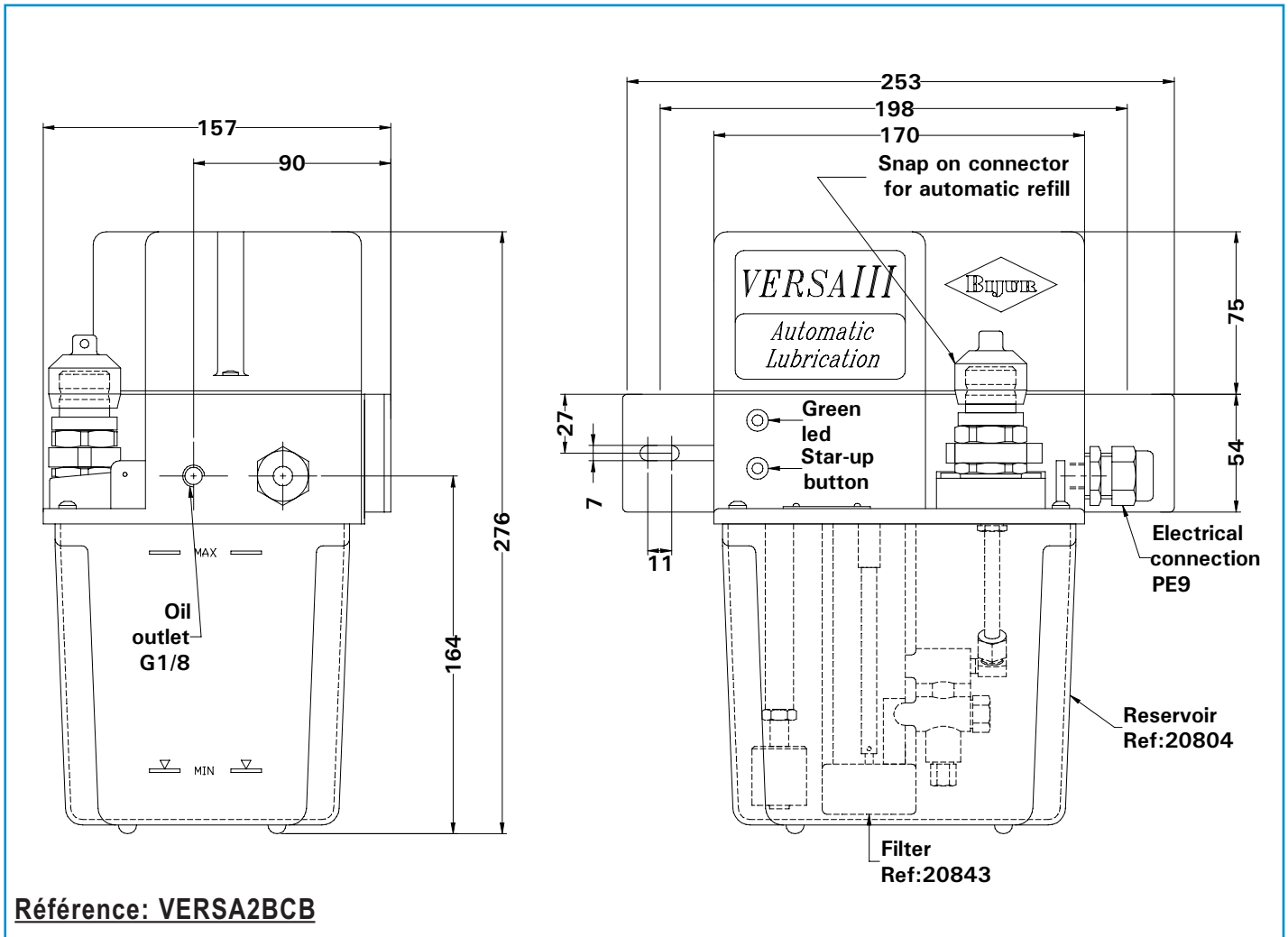
Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to bijur.

Pump VERSA III: 2 litre reservoir



SERVICE INSTRUCTIONS-MOTORIZED PUMP TYPE VERSAIII SPECIAL AUTOMOTIVE VERSION

Start Up

Read carefully the technical data sheet supplied with the pump. Fill the reservoir. Having powered the pump ensure the system comes up to pressure.

Oil

Use only clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

Service

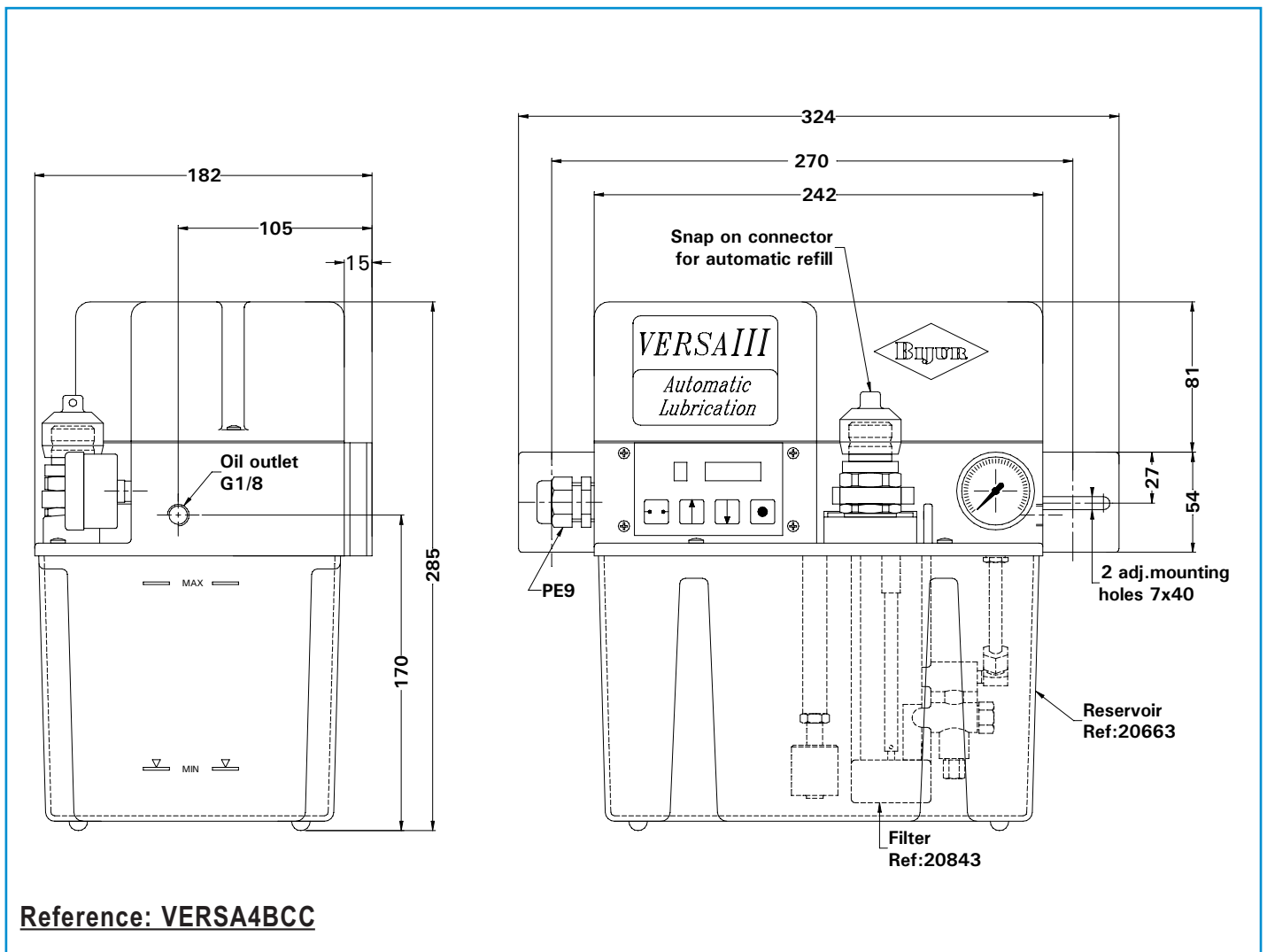
Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to bijur.

Pump VERSA III: 4 litre reservoir



ELECTRIC PUMP TYPE VERSA TRI - CYCLIC DISCHARGE

Description

The Versa tri lubricator is perfectly adapted for use with volumetric oil injectors (PDI) and meter units (SLR). It comprises a motorised gear pump mounted on a translucent plastic reservoir equipped with an electrical low level switch as standard.

Functioning

When charged, the pump pressurises the main primary line. A discharge valve ensures the decompression of the main line at the end of the cycle. The motor can be stopped by a base timing controller or by a pressure switch which must be installed at the end of the primary line

(See system outline).



Characteristics :

- **Motor :** 3 phase electric motor, ventilated, multivoltage : 230/415V (50 Hz) - 2700 Rpm - 90W 260/480V (60 Hz) - 3240 Rpm - 110W
- **Discharge :** 160 cm³/min at 2700 Rpm
- **Discharge pressure :** 20 bar(PDI)
adjustable from 0 to 20 bar (SLR)
- **Reservoir capacity :** 2 - 4 litre (plastic) or 10 litre (metal)
- **Electric low level switch :** 240 V maxi.
Power rating : 40 VA maxi.
- **Working temperature :** 80 °C max.
- **Lubricant to be used :** mineral oil with viscosity 30 to 3000 Cst at working temperature.
- **Other lubricant :** consult Bijur

Ordering instructions

To define the exact pump characteristics use table below :

Reservoir	References	
	SLR system	PDI system
2L	AP3434	AP3381
4L	AP3435	AP3388
10L	AP3432	AP3391

Nota:

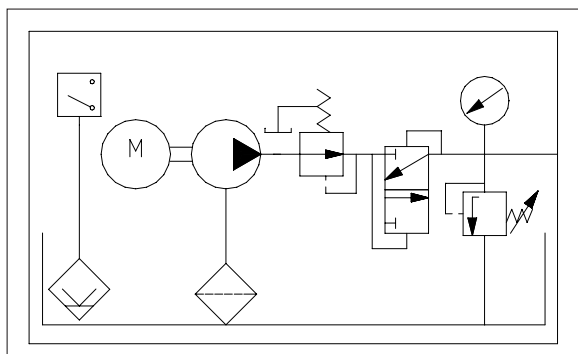
For automotive version, add the suffix "C" to the reference (fitted with snap-on connector SBA11).

Example :

A Versa tri lubricator, 2 litre reservoir with snap-on connector SBA11.

Reference : **AP3381C**

System outline



Outside dimensions

See overleaf.

SERVICE INSTRUCTIONS - MOTORISED PUMP TYPE VERSA TRI 2 LITRE

Start up

Read carefully the technical data sheet supplied with the pump.
Fill the reservoir. After having primed the pump, check the system has been pressurised. If it has not, check the direction of rotation of the motor.

Oil

Use a clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

Service

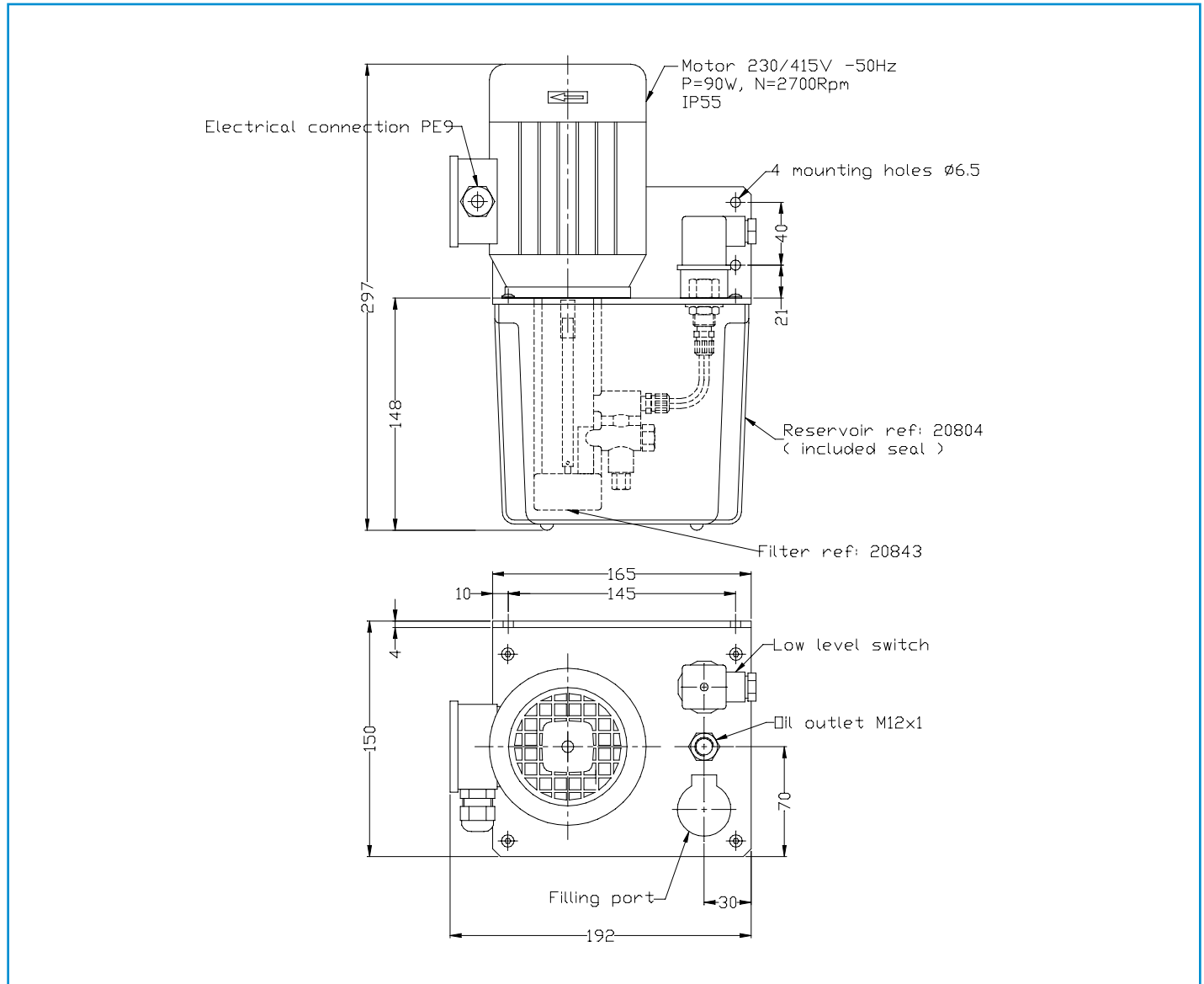
Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to Bijur.

VERSA Tri lubricator ref. AP3381 or AP3434



SERVICE INSTRUCTIONS - MOTORISED PUMP TYPE VERSA TRI 4 LITRE

Start up

Read carefully the technical data sheet supplied with the pump.
Fill the reservoir. After having primed the pump, check the system has been pressurised. If it has not, check the direction of rotation of the motor.

Oil

Use a clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

Service

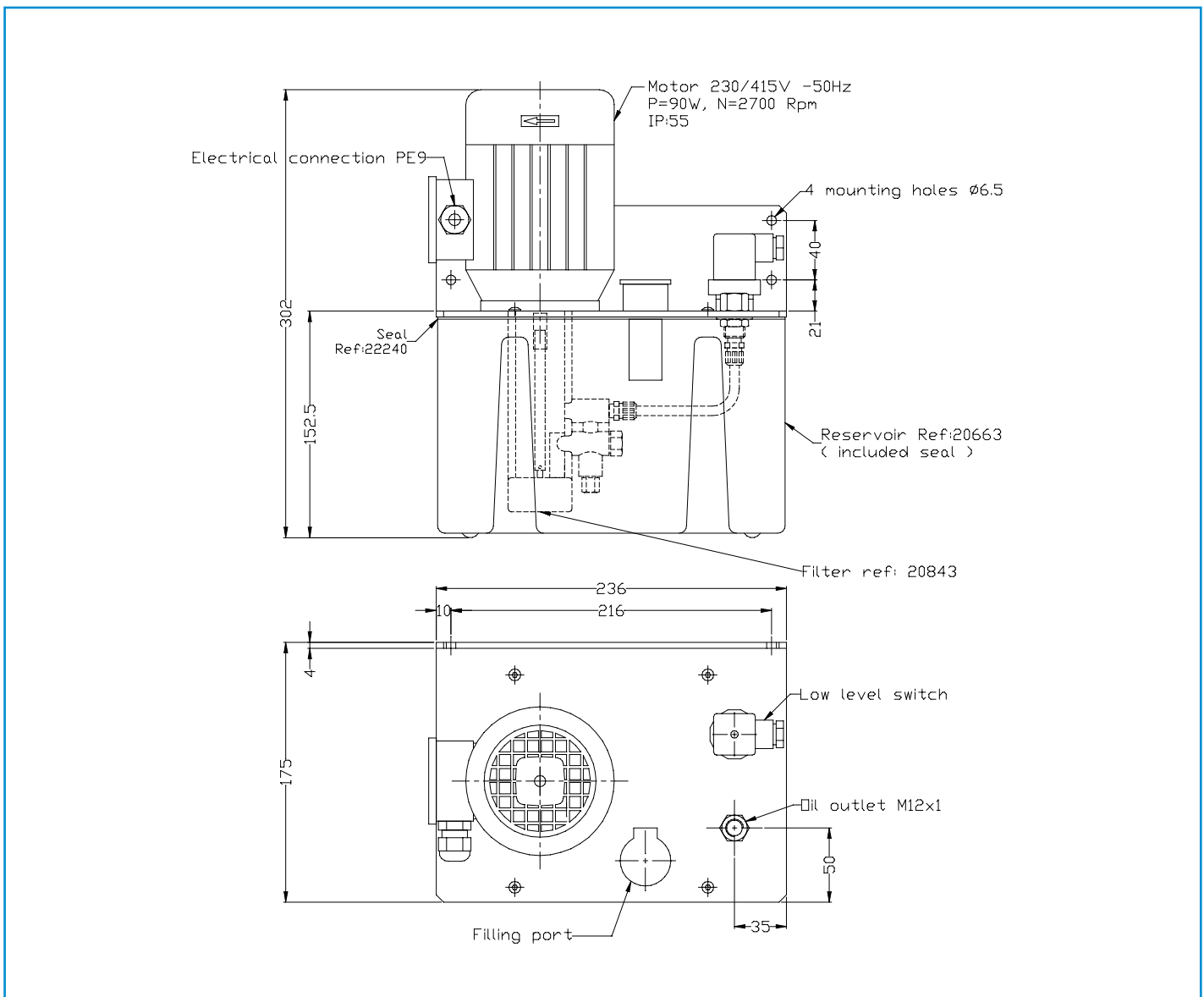
Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to Bijur.

VERSA Tri lubricator ref. AP3388 or AP 3435



SERVICE INSTRUCTIONS - MOTORISED PUMP TYPE VERSA TRI 10 LITRE

Start up

Read carefully the technical data sheet supplied with the pump.
Fill the reservoir. After having primed the pump, check the system has been pressurised. If it has not, check the direction of rotation of the motor.

Oil

Use a clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

Service

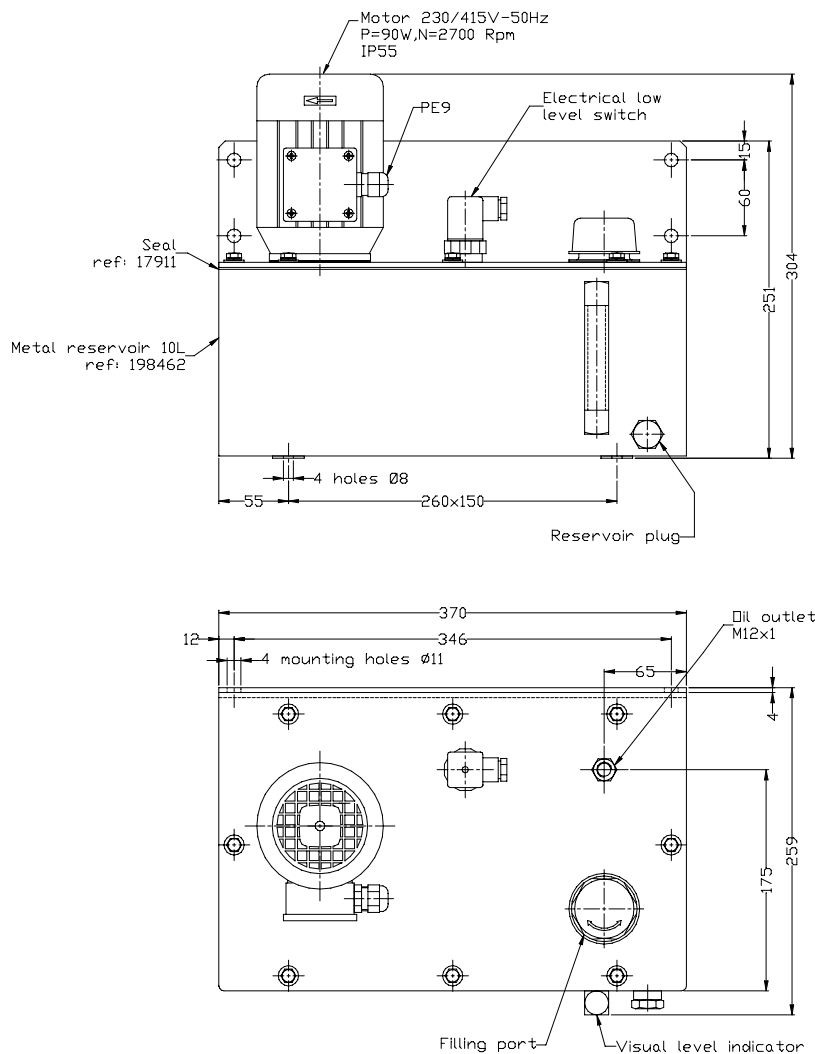
Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to Bijur.

VERSA Tri lubricator ref. AP3391 or AP3432



SERVICE INSTRUCTIONS - MOTORISED PUMP TYPE VERSA TRI 2 LITRE - SPECIAL AUTOMOTIVE VERSION

Start up

Read carefully the technical data sheet supplied with the pump.
Fill the reservoir. After having primed the pump, check the system has been pressurised. If it has not, check the direction of rotation of the motor.

Oil

Use a clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

Service

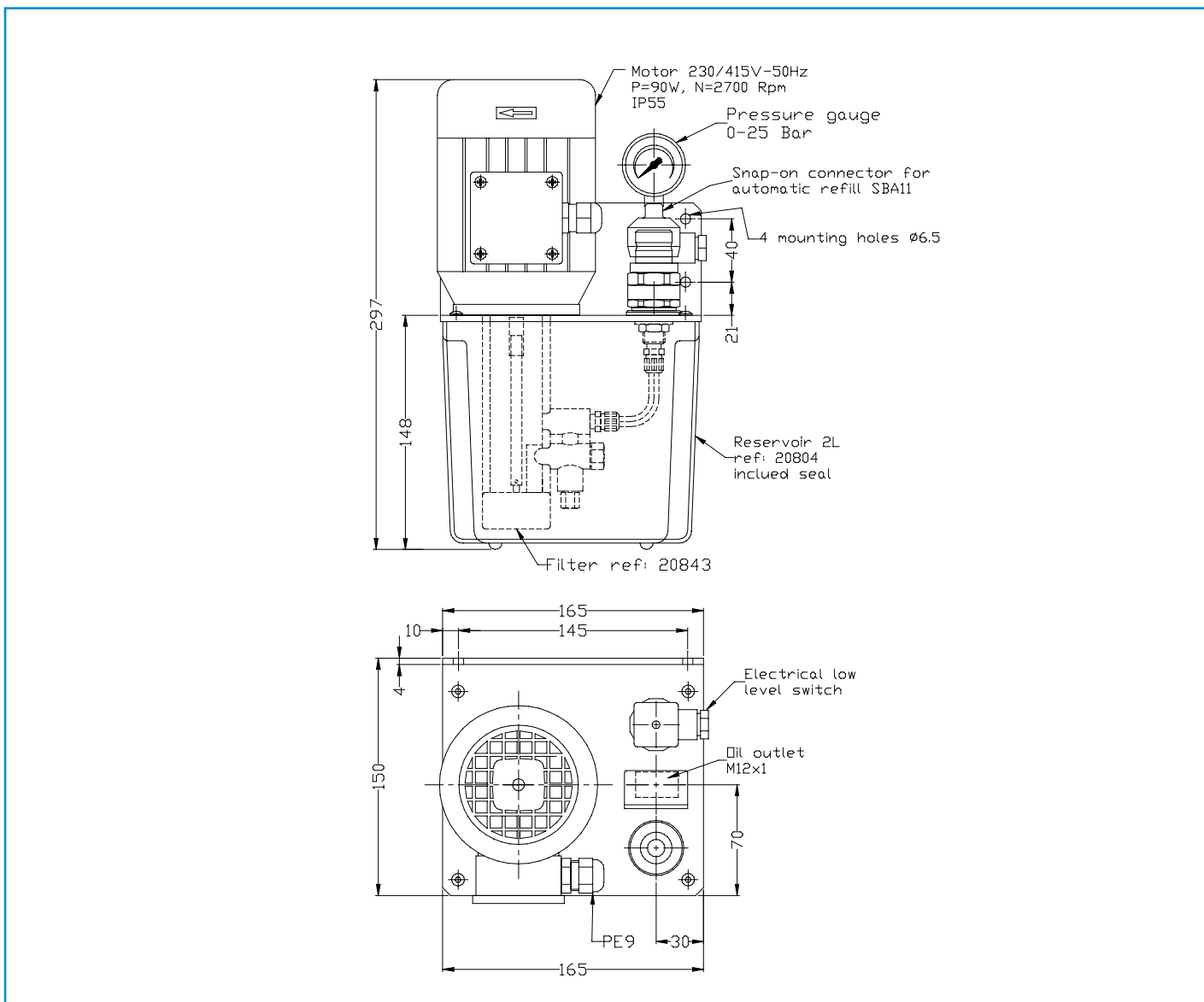
Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to Bijur.

VERSA Tri lubricator ref. AP3381C or AP3434C



SERVICE INSTRUCTIONS - MOTORISED PUMP TYPE VERSA TRI 4 LITRE - SPECIAL AUTOMOTIVE VERSION

Start up

Read carefully the technical data sheet supplied with the pump.
Fill the reservoir. After having primed the pump, check the system has been pressurised. If it has not, check the direction of rotation of the motor.

Oil

Use a clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

Service

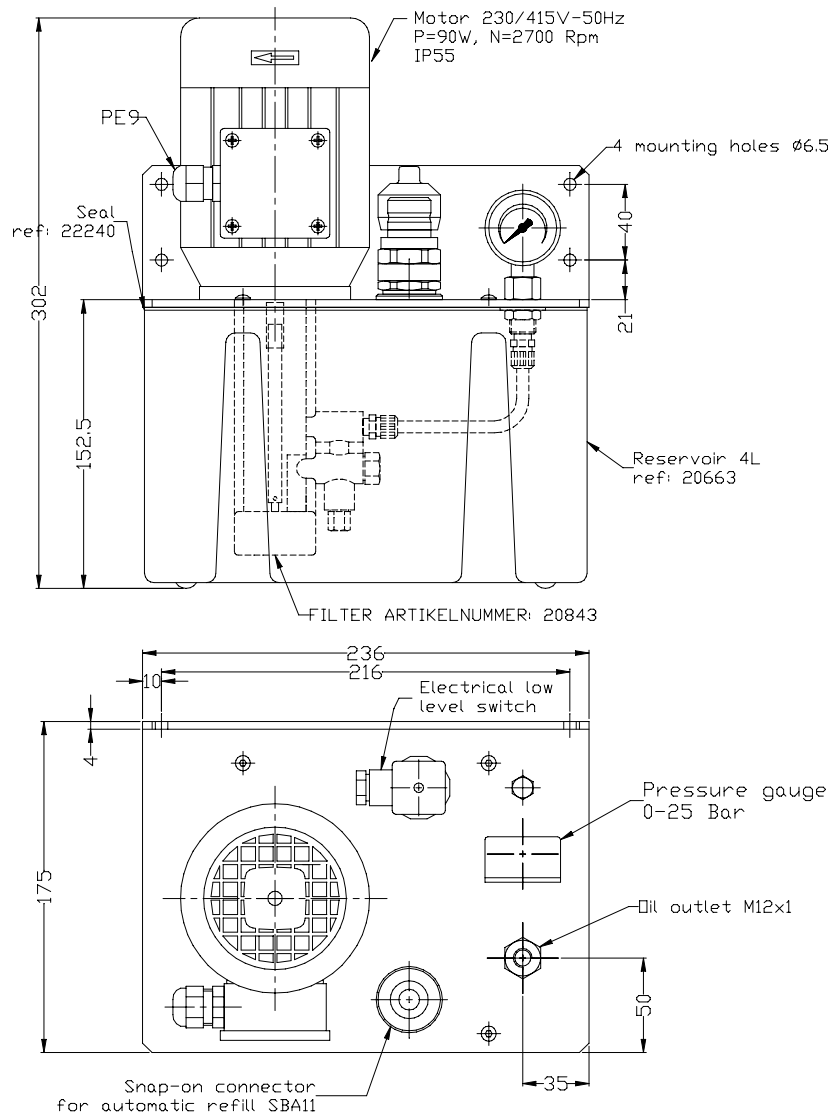
Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to Bijur.

VERSA Tri lubricator ref. AP3388C or AP3435C



SERVICE INSTRUCTIONS - MOTORISED PUMP TYPE VERSA TRI 10 LITRE - SPECIAL AUTOMOTIVE VERSION

Start up

Read carefully the technical data sheet supplied with the pump.
Fill the reservoir. After having primed the pump, check the system has been pressurised. If it has not, check the direction of rotation of the motor.

Oil

Use a clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

Service

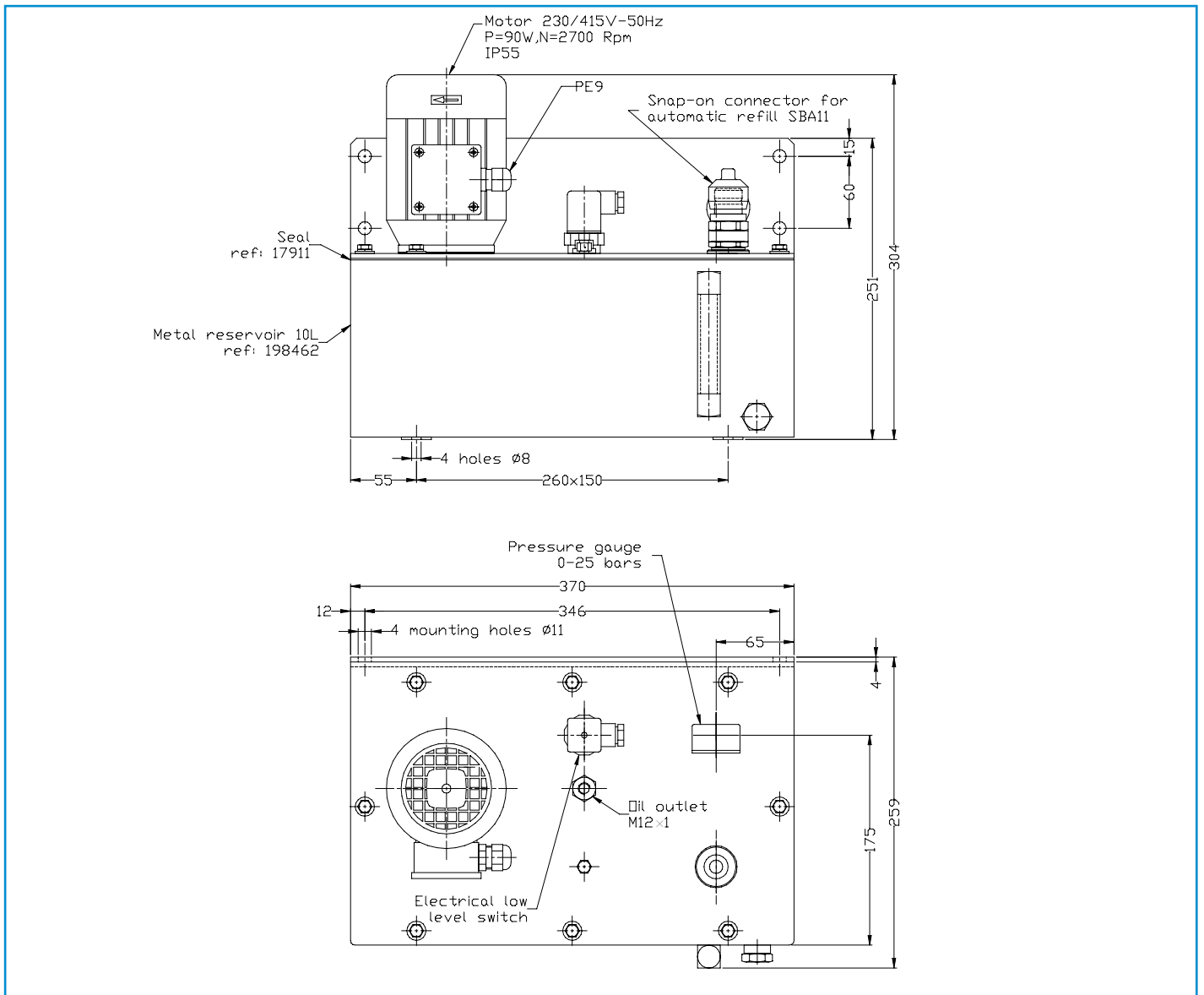
Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to Bijur.

VERSA Tri lubricator ref. AP3391C or AP3332C



MOTORIZED GEAR PUMP TYPE GPO - CYCLIC DISCHARGE

Description

The GPO lubricator is designed for single line progressive system. It comprises an electric motor with a gear pump mounted on a reservoir equipped with an electric high and low level switch.

However, it is possible to use GPO lubricator with volumetric injectors type FL42-43.

Functioning

Once charged, the motorised gear pump pressurises lubricant in the primary supply line. An integrated safety valve protects the system from over pressure. The motor can be stopped by a timer (based on time) or via a cycle switch which is installed on the primary divider.

A by-pass permits the pressure to be regulated.

(see system outline).

Characteristics

- **Motor :** 3 phase electric motor, ventilated, multivoltage: 220/480 V - 50/60 Hz
70 W - 750 rpm
- **Discharge :** 125 cm³/min at 750 rpm
- **Working pressure :** 0 to 172 bar
- **Over pressure valve set :** 125 bar
- **Reservoir capacity :** 12 litre
- **Electrical level switch :** 240 V maxi
Power rating: 10 watt
- **Working temperature :** 80°C max.
- **Lubricant to be used :** mineral oil with viscosities, 20 to 1300 Cst at working temperature
- **Other lubricants :** contact Bijur.

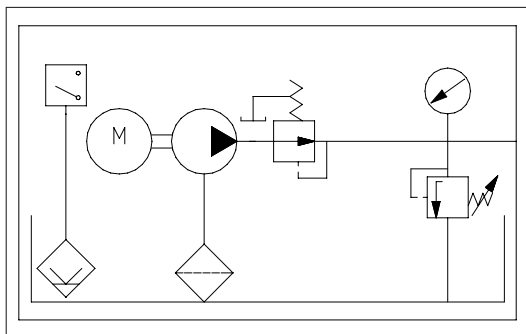


Ordering instructions

To define the exact pump characteristics, use the following table :

Type	Reservoir capacity	Reference
GPO12	12	270123

System outline



Outside dimension

See overleaf.

SERVICE INSTRUCTIONS - MOTORISED GEAR PUMP TYPE GPO

Start-up

Read carefully the technical data sheet supplied with the pump.
Fill the reservoir. After having primed the pump, check the system has been pressurised. If it has not, check the direction of rotation of the motor.
With the help of the by pass, adjust the pressure to the required value.

Oil :

Use a clean mineral oil, of a quality and viscosity as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without it separating.

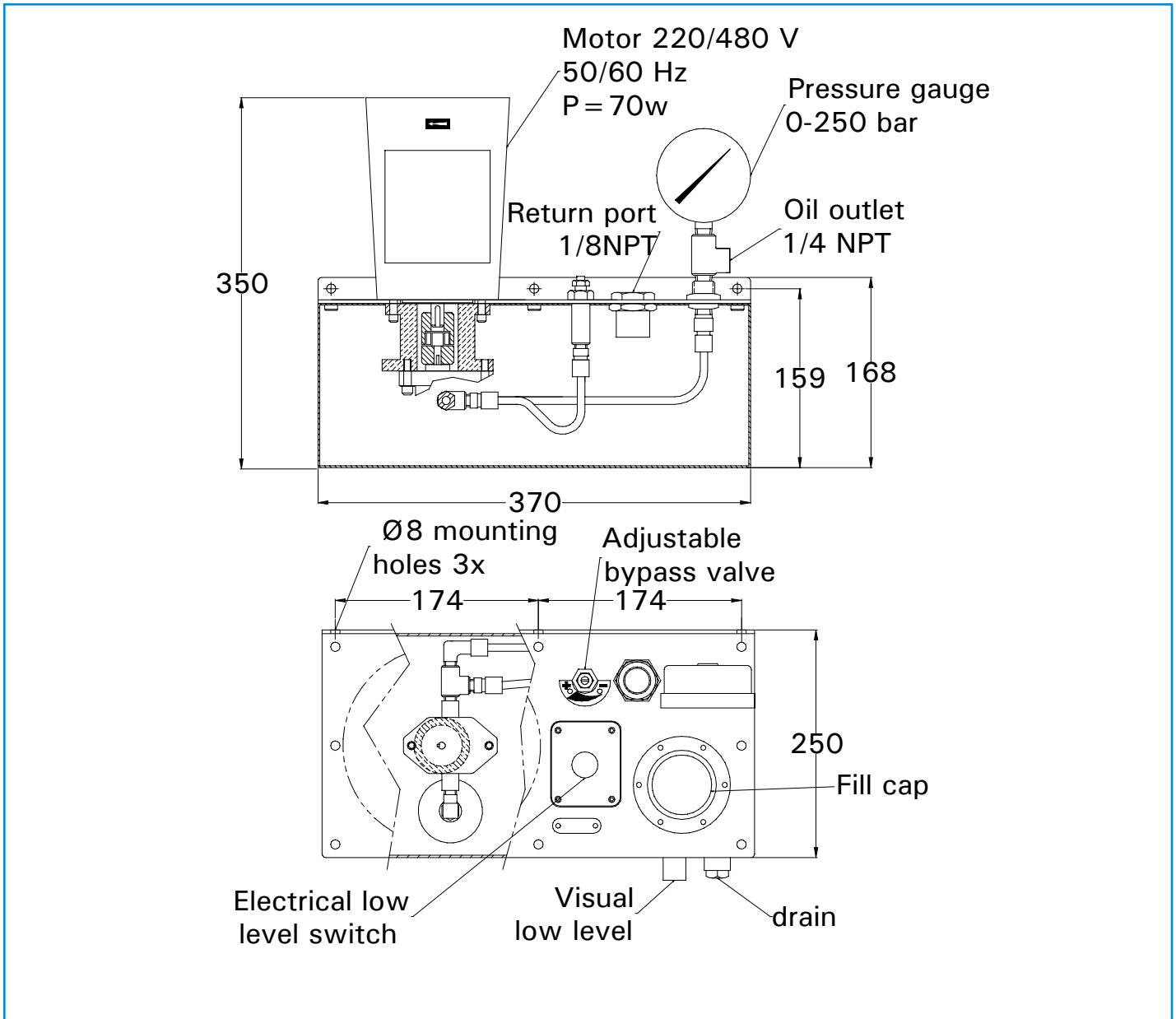
Service

Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately.

IMPORTANT :

Before start up and after any repair the lubrication circuit must be purged of air.

For all repairs it is recommended that the pump be returned to Bijur.



ELECTRIC GREASE PUMP TYPE MULTIPOINT CONTINUOUS DISCHARGE

Description

The MULTIPOINT electric grease pump is designed to feed progressive lubrication systems. It can be supplied with 1, 2 or 3 discharge elements with fixed or adjustable output. Different voltages are available, continuous, singlephase or 3 phase. The reservoirs are metal or plastic with or without low level switch.

Functioning

The MULTIPOINT pump is equipped with an eccentric gear reducer which operates with 1 or more discharge elements which pushes lubricant into lubrication lines.

Control

The pumps can be supplied with an electrical low level switch. Each discharge element is equipped with a safety valve which prevents visually over pressure in the system.

Characteristics

- Discharge pressure: 250 bar
- Reservoir capacities: 2 or 4 kgs (plastic)
8 kgs (metal)
- Discharge: G1/4, (0,16cc per rpm)
from 0 to 4,3 cc/min for adjustable output
4,3 cc/min for fixed output
with adjustable safety valve (0 to 250 bar)
- Voltage: triphase 220/380 VAC 50/60hz
monophase 110 or 220 VAC 50/60hz
12 or 24 VDC
- Electric low level switch: 240VAC max, 1,5 amp max, IP67
- Working temperature: -18 to 50°C max.
- Lubricants to be used: grease NLGI 2 max
oil (contact Bijur)
- Installation: on vertical position.

Ordering instructions

To define the exact pump characteristics use the following codes.

Example:

A MULTIPOINT pump, 2 adjustable outlets, with a 4kg reservoir equipped with low level switch, electric motor 220/380 VAC

Reference: **MULTI 2BSE**

Same as, but without low level switch

Reference: **MULTI 2BE**



PUMP CODE	<input type="checkbox"/> MULTI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of outlets	<input type="checkbox"/> 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reservoir capacity	<input type="checkbox"/> A 2 kg	<input type="checkbox"/> Plastic	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> B 4 kg	<input type="checkbox"/> Plastic	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> C 8 kg	<input type="checkbox"/> Métal	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> S Low level switch (option)		<input type="checkbox"/>	<input type="checkbox"/>
Voltage	<input type="checkbox"/> A 12 VCC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> B 24 VCC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> C 110 VAC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> D 220 VAC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> E 220/380 VAC Triphase	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> F Other voltage (contact Bijur)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

* Lubricator with 8kg reservoir are not available with voltage 12-24 VDC.

Pump dimensions

See overleaf

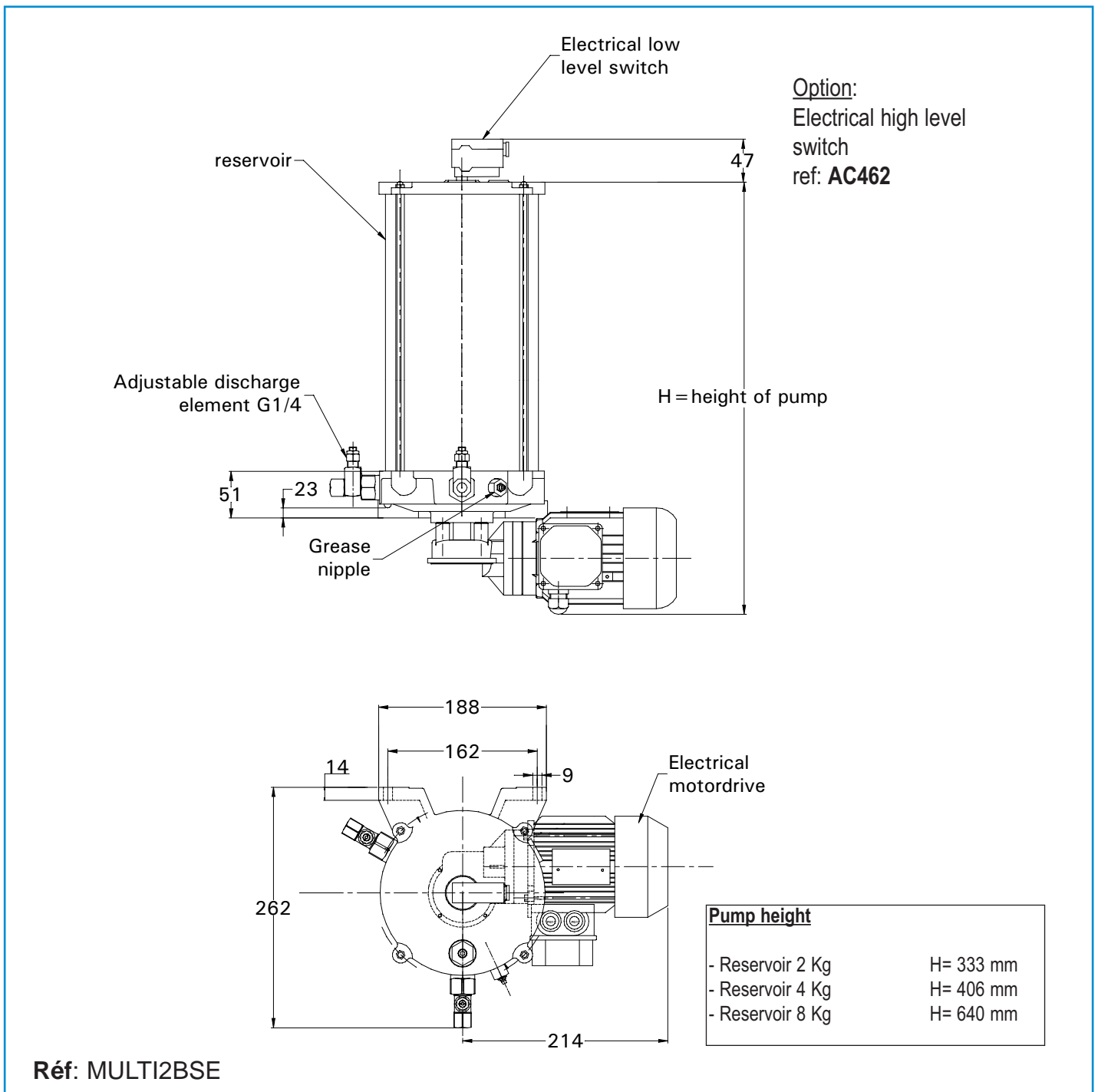
SERVICE INSTRUCTIONS-ELECTRICAL GREASE PUMP TYPE MULTIPOINT

Start up and service

Fill the reservoir with a manual or pneumatic grease gun by using the grease nipple which is located at the bottom of the reservoir. After having primed the pump check the system has been pressurised.

If it has not check the direction of rotation of the motor. Check and control periodically the grease level and the safety valve.

Singlephase and 3 phase MULTIPOINT pump



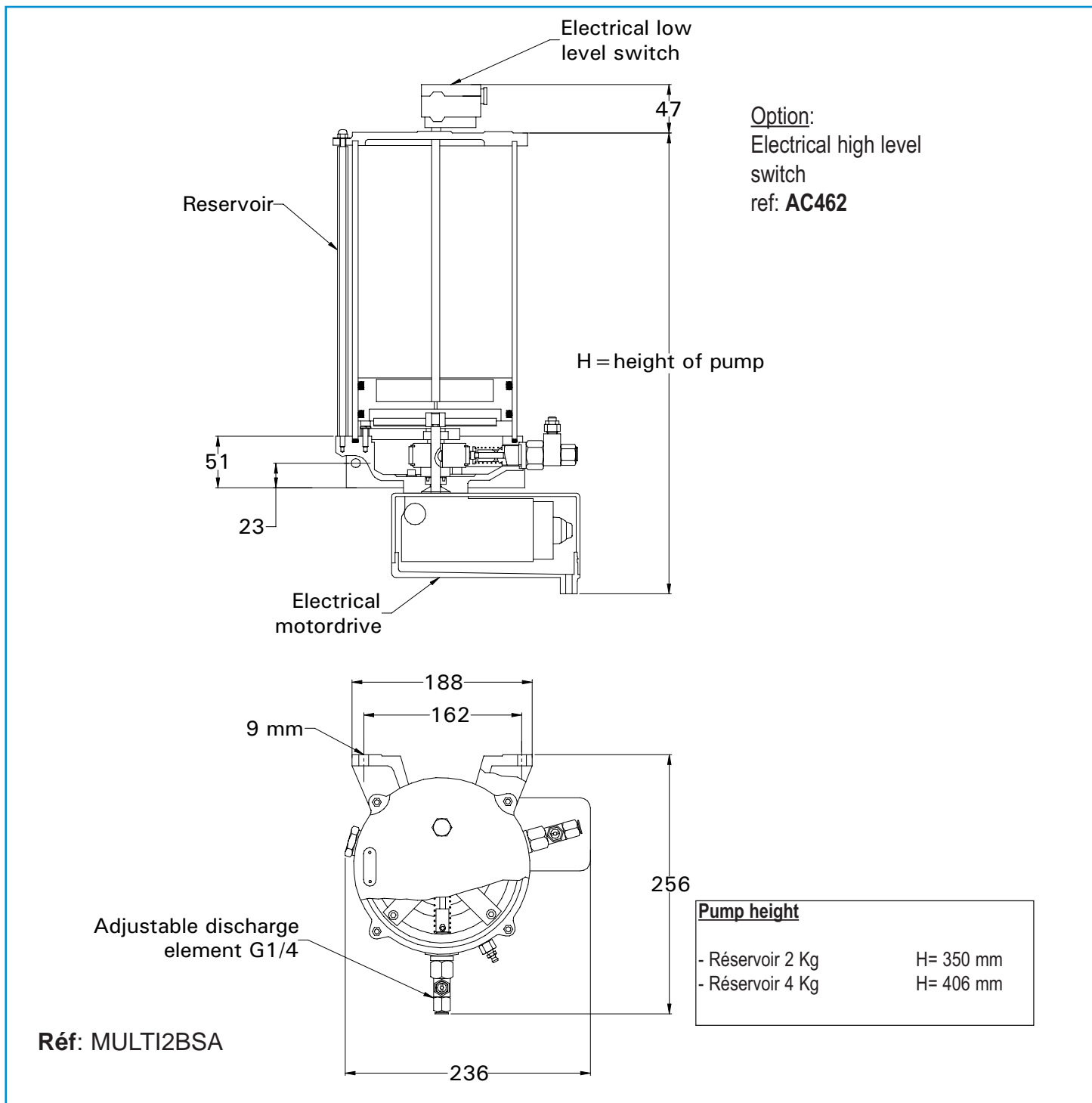
SERVICE INSTRUCTIONS-ELECTRICAL GREASE PUMP TYPE MULTIPORT

Start up and service

Fill the reservoir with a manual or pneumatic grease gun by using the grease nipple which is located at the bottom of the reservoir. After having primed the pump check the system has been pressurised.

If it has not check the direction of rotation of the motor. Check and control periodically the grease level and the safety valve.

12 et 24 VDC MULTIPORT pump



DUAL LINE PUMP TYPE CS2000

Description

The motorised pump **CS2000** is designed for dual line lubricating systems. It comprises a piston pump body, and a grease reservoir equipped with a level switch. The pump body is protected by an outer casing. An hydraulic reversing valve, type DR 45 is directly mounted on the pump body. An over-pressure valve is incorporated into the pump.

Functioning

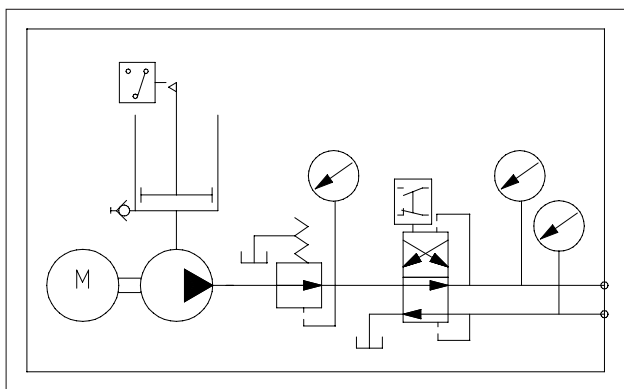
When the motor is switched on, the pump pressurises one of the lubrication lines connected to the reversing valve. When the entire length of the lubrication line has been pressurised the reversing valve switches over to the second lubrication line also connected to it. This action results in enabling the first line to depressurise whilst the second line pressurises.

(see system outline).

Characteristics

- Double piston pump
- Motor : 3 phase electric motor, ventilated, multi voltage 230/440V - 50/60 Hz , 245 W - 1500/1800 rpm.
- Discharge : 85 cm³/min
- Working pressure : 245 bar max
- Over pressure valve set : 210 bar
- Reservoir capacities : 11 kg or 45 Kg.
- Electric low level switch : 240V max
Power rating : 1,5A max
- Hydraulic reversing valve: type DR 45
- Working temperature : -20° to + 80°C.
- Lubricants to be used : grease NLGI 2 max (worked penetration w>265)

System outline



Ordering instructions

To define the exact part number, use the following codes :

Motorised pump reference	Reservoir capacity	Electric level switch
CS2224	11 Kg	Low
CS2225	11 Kg	High and low
CS22101	45 Kg	High and low

Example :

A motorised pump CS2000 ,reservoir 11Kg with a high and low level switch

Reference : **CS2225**.

Outside dimensions

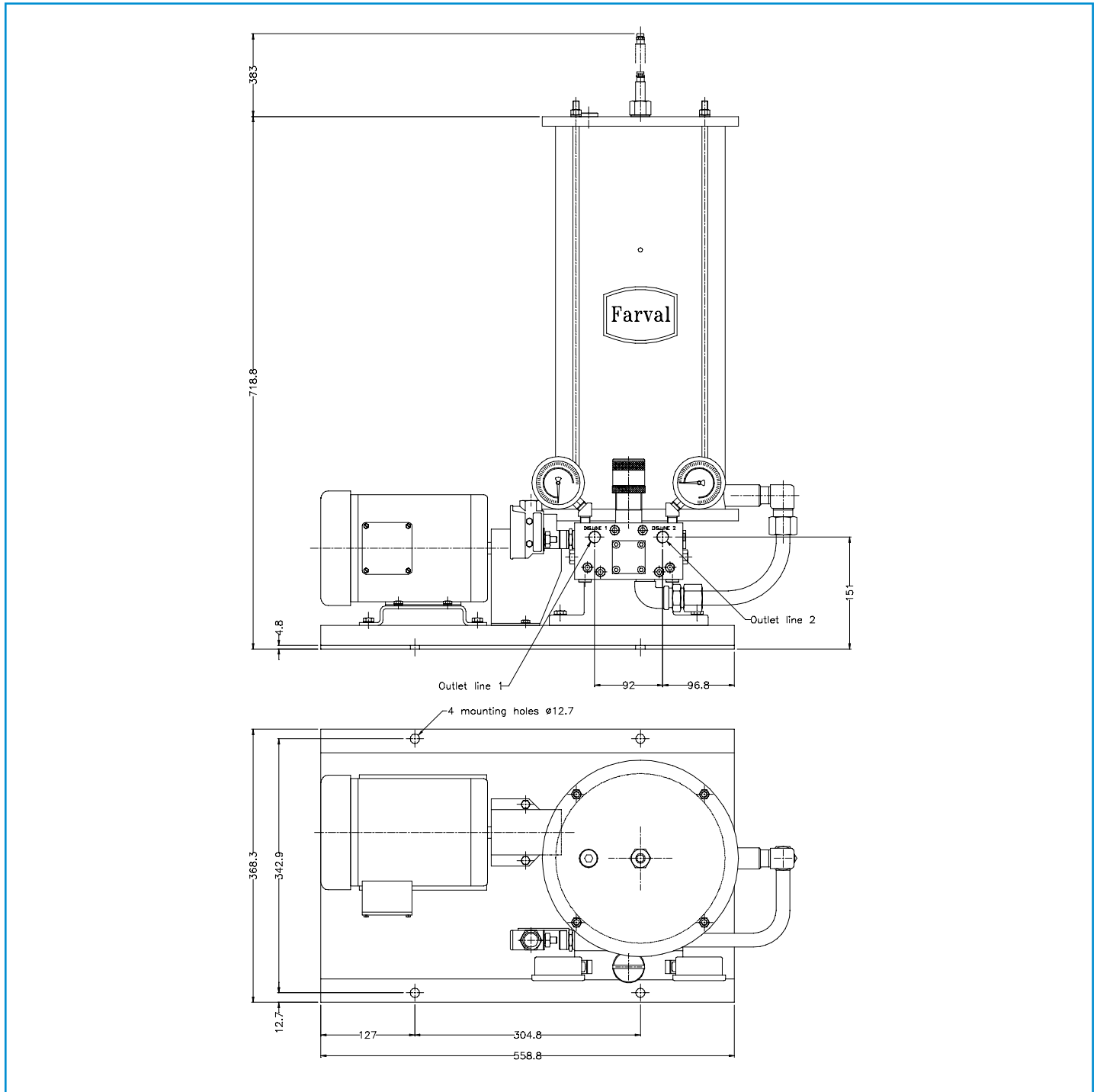
See overleaf.

SERVICE INSTRUCTIONS : MOTORISED PUMP TYPE CS2000

Start up

Install the pump in a clean area with easy access for servicing and refilling of the reservoir. Prior to the first start up fill the reservoir with oil to just above the filter then complete the filling with grease. Grease should be clean, free from contaminants and filled to the top of the reservoir.

Motorised pump with 11 Kg reservoir :

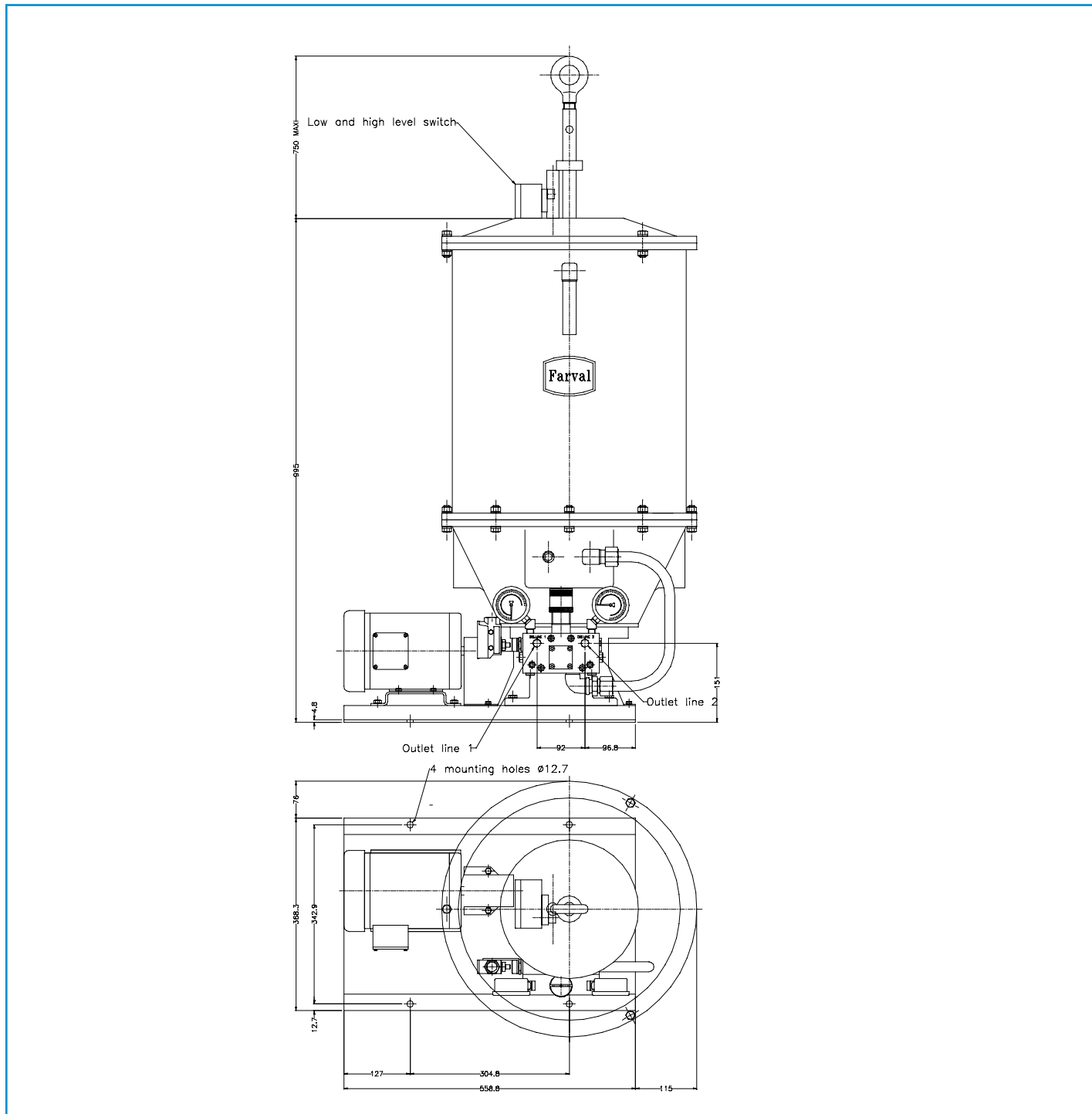


SERVICE INSTRUCTIONS : MOTORISED PUMP TYPE CS2000

Start up

Install the pump in a clean area with easy access for servicing and refilling of the reservoir. Prior to the first start up fill the reservoir with oil to just above the filter then complete the filling with grease. Grease should be clean, free from contaminants and filled to the top of the reservoir.

Motorised pump with 45 Kg reservoir :



DUAL LINE PUMP TYPE DC 41

Description

The motorised pump DC 41 is designed for dual line lubricating systems. It comprises a piston pump body and a grease reservoir equipped with a high and low level switches. The pump body is protected by an outer casing.

An electromechanical reversing valve, type FR 10 is directly mounted on the base of the pump. An over-pressure valve is incorporated in the pump assembly.

Functioning

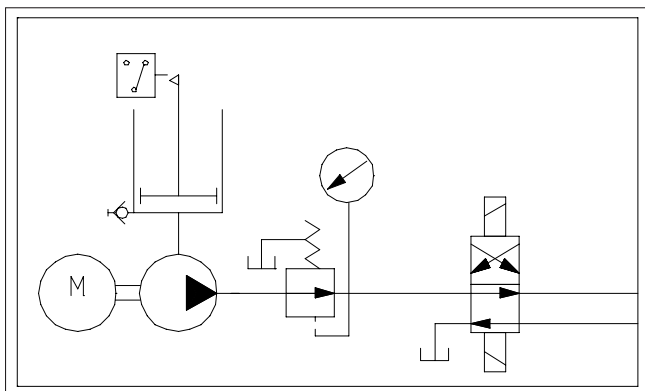
When the motor is switched on, the pump pressurises one of the lubrication lines connected to the reversing valve. As soon as the entire lubrication line is pressurised, a pressure switch mounted at the end of the line sends a signal back to the reversing valve causing it to switch the direction of flow of the lubricant to the second lubrication line. As the second line starts to pressurise, the first line depressurises by lubricant passing from the line directly into the pump reservoir. The same cycle is repeated when the second line is fully pressurised and a second end of line pressure switch signals the reversing valve.

(see system outline).

Characteristics

- **Motor :** 3 phase electric motor, ventilated , multivoltage, 230/440V - 50/60 Hz , 736 W -1500/1800 rpm.
- **Discharge :** 470 cm³/min with a 10/1 gear ratio at 1500rpm
- **Working pressure :** 200 bar max
- **Over pressure valve set at :** 168 - 175 bar
- **Reservoir capacities :** 45 kg or 90 kg
- **Electrical level switches :** 240V max, 1,5A max
- **Electromechanical reversing valve :** type FR 10
- **Working temperature :** -20° to + 80°C.
- **Lubricants to be used :** grease NLGI 2 max (worked penetration W>265)

System outline



Ordering instructions

To define the exact pump number, use the following codes :

Pump code	_____	DC41	M	<input type="checkbox"/>	C
Reservoir capacity					
	31	45 Kg	_____		
	32	90 Kg	_____		

Example :

Lubricator type DC41 with reservoir 90 Kg
Reference **DC41M32C**

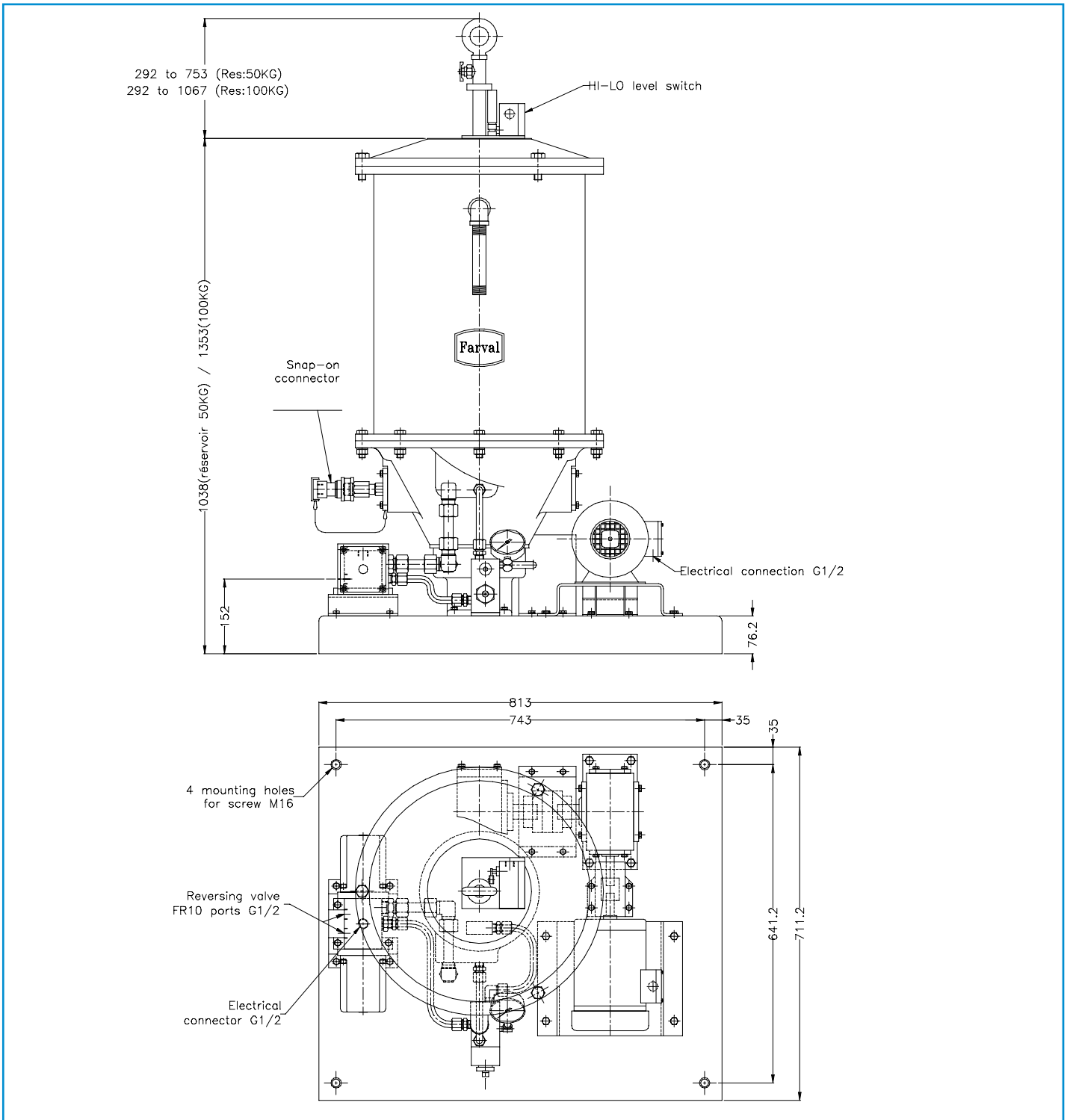
Outside dimensions

See overleaf.

SERVICE INSTRUCTIONS - MOTORISED PUMP TYPE DC41

Start up :

Install the pump in a clean area with easy access for servicing and refilling of the reservoir. Prior to the first start up fill the reservoir with oil to just above the filter then complete the filling with grease. Grease should be clean, free from contaminates and filled to the top of the reservoir.



OIL FOG LUBRICATION - LUBRICATOR TYPE FOG-LUB

Description

The Fog-lub lubricator is a compressor which is perfectly adapted to spray oil without compressed air supply. The spray distance is 1 metre for wetting fog. The micro-fog effect (1μ for particle) can be carried several metres. Air oil mixture delivered by pump is sprayed into the chamber via one or several nozzles.

Visual or electrical controls can be provided. It is a recirculating system which requires no venting as do conventional mist systems, thereby eliminating atmospheric contamination around the machine.

Fonctioning

The Fog lub lubricator comprises a pallet pump. Both air and non condensed oil, contained in the oil sump are vacuumed through port A (direct mounting) or through port A1 (indirect mounting). A line filter is integrated in the base plate. Air oil mixture generated by the pump is directed and supplied by ports B. The Fog lub lubricator must always be equipped with the base plate AM 216.

Mounting

The pump can be fixed in any position, but should be installed at the highest point of the air suction line. Avoid curves on the vacuum pipe. Suction pipe must be placed as far as possible from fog nozzles.

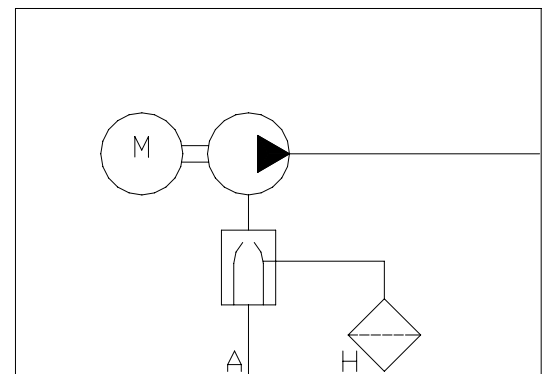
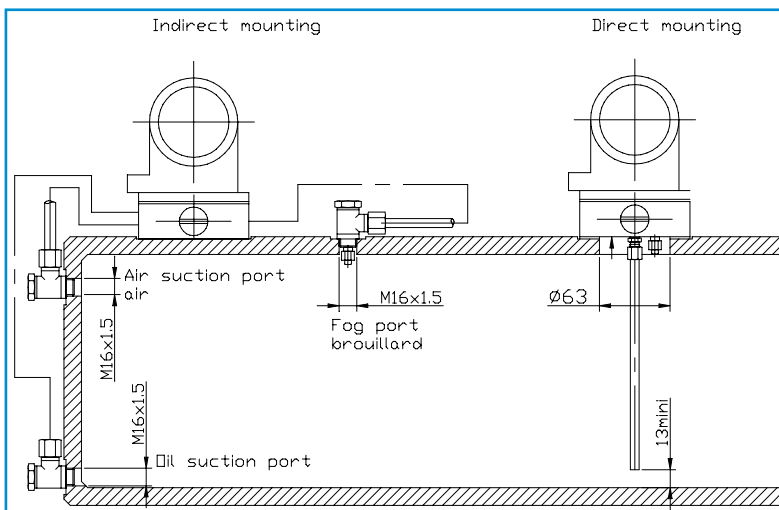
In case of using a gear box with internal compartments, communication holes of 40mm ID must be drilled to optimize the fog circulation. Fog nozzles must be installed inside the gear box to obtain a perfect fog dispatching, (avoid directing them towards wall).

To determine nozzles, see page **E5101**.



Characteristics

- **Motor :** 3 phase electric motor, ventilated, multi voltage, 220/460V
50/60 Hz, 180W, 1500/1800 rpm
- **Oil discharge :** 3L per hour max
- **Working pressure :** 1,2 bar
- **Working temperature :** 80°C max
- **Lubricants to be used :** mineral oils with viscosities 30 to 200 cst at working temperature
- **Volume of chamber to vacuum :** 0.8 M3 max



For ordering

Specify reference as below :

Oil fog lubricator, reference AP3016

Outside dimensions

See overleaf.

SERVICE INSTRUCTIONS - LUBRICATOR TYPE FOG LUB

Start up

Read carefully the technical data sheet supplied with the pump.
Assure the correct direction of rotation of the motor and the quality of the fog discharge.

Oil

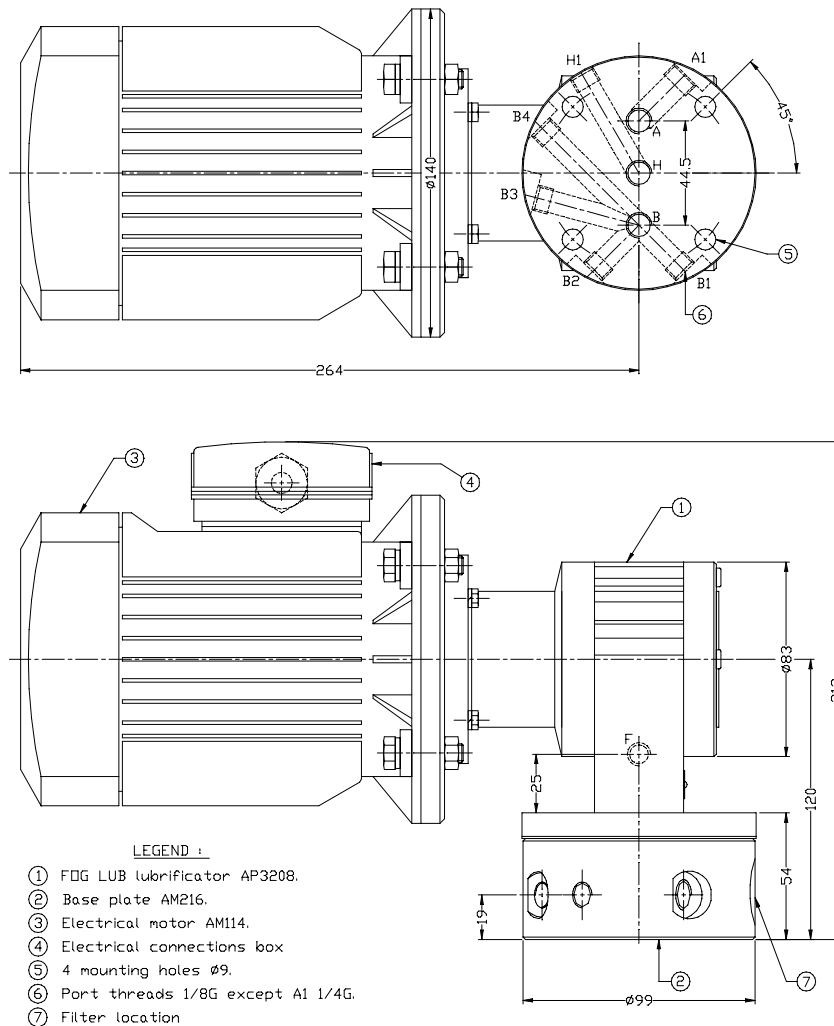
Use a clean mineral oil of a quality and viscosity (200 Cst max) as recommended by the manufacturer of the machine. The oil characteristics must allow filtering down to 25 microns without separating.

Service

Control periodically the lubrication lines to ensure none are broken or crushed and that they are in good condition. Ensure all fittings are correctly tightened. Any excess oil around the machine should be investigated immediately. A filter, which is mounted on the base plate must be checked and replaced periodically.

IMPORTANT :

Before start up and after any repair the lubrication circuit must be purged of air.



Note: Filter element : B6530

AUTOMATIC LUBRICATOR-TYPE LUBESTATION

Description

The LUBESTATION is an automatic lubricator comprising a refillable reservoir, a piston pump unit and an integrated timer, which is perfectly adapted for small machines or single point lubrication. It can also be connected to our multi outlet kits to supply a maximum of 8 lubrication points.

Functioning

The LUBESTATION is equipped with a base time controller which controls the time between lubrication cycles. The piston pump unit, driven by a direct current electric motor, delivers a fixed volume of 0,5cm³ each cycle. For programming, open the front cover and see adjustment table for the required lubricating cycle. An ON / OFF button stops it immediately if required. The LUBESTATION is supplied with 4 batteries LR6-1,5V. During functioning, a green LED flashes every 5 seconds to indicate it is operating correctly.

Characteristics

- Voltage : 6 VDC, 4 batteries LR 6.
- Programming : 1 to 18 months.
- Discharge : 0,5 cm³ per stroke.
- Pressure : 25 bar max.
- Reservoir capacity : 113 gr or 226 gr
- Working temperature : -10 to 50°C max.
- Lubricant to be used : grease NLGI 2 max.

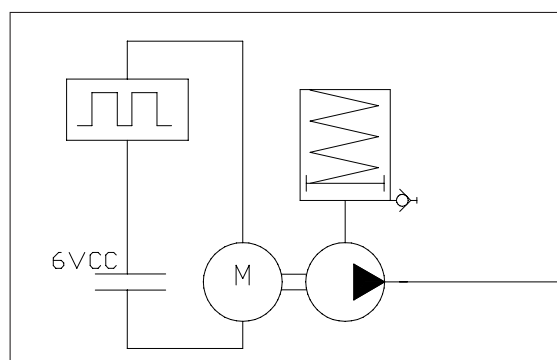


LUBESTATION 113 Gr.



LUBESTATION 226 Gr.

System outline



Ordering instructions

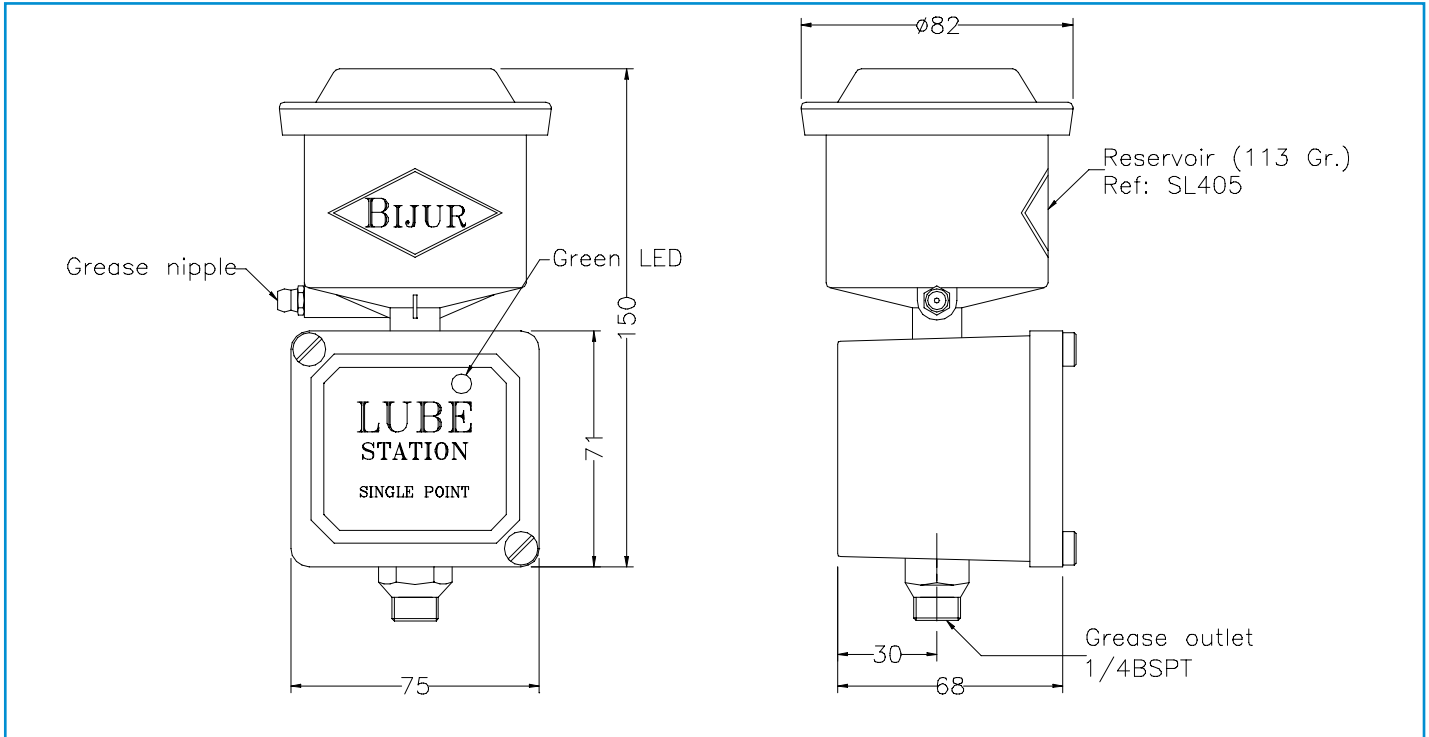
Lubestation 113 gr. : Ref 27458 4RB
Lubestation 226 gr. : Ref 27458 8RB

Outside dimensions

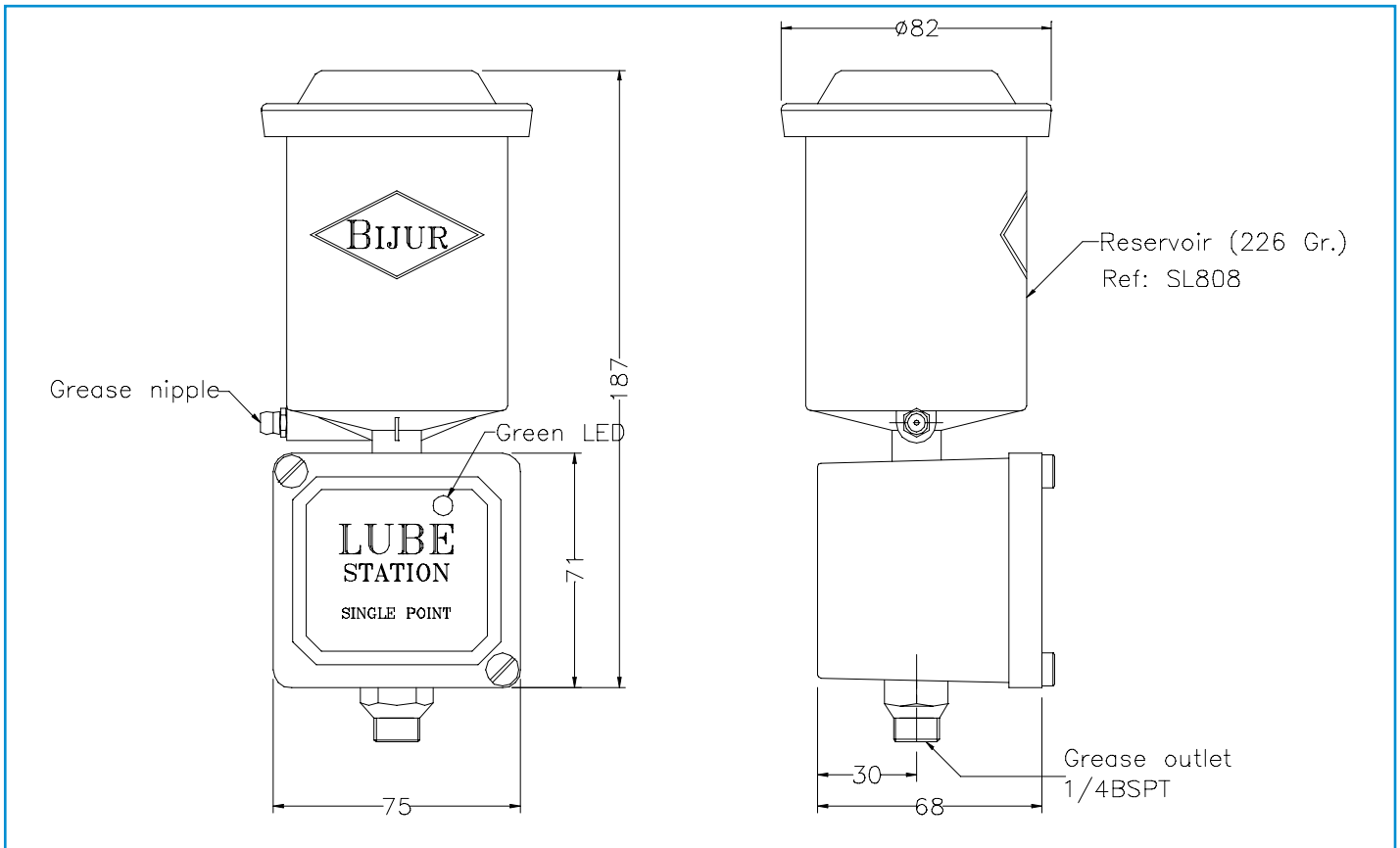
See overleaf.

AUTOMATIC LUBRICATOR-TYPE LUBESTATION

Lubestation version 113 gr.



Lubestation version 226 gr.



SERVICE INSTRUCTIONS - AUTOMATIC LUBRICATOR TYPE LUBESTATION

Start-up

Remove the front cover and insert battery pack. Program the timer in selecting desired settings as required for the application by moving DIP switches 3 to 8 to "ON".

For start-up, move DIP switch 1 to "ON".

Check that green LED flashes every 5 seconds.

For continuous discharge, move DIP switch 2 to "ON".

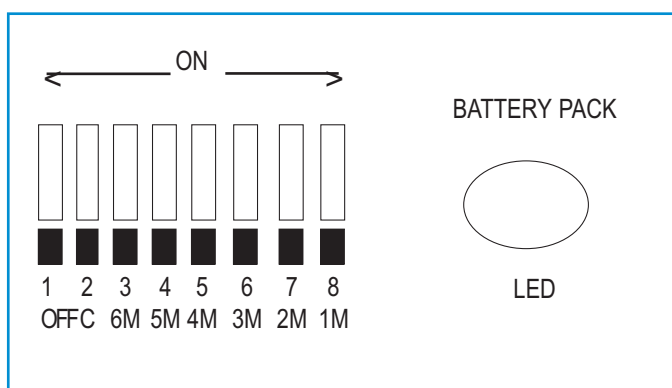
Service

For reservoir refilling, use only the grease nipple.

Control periodically the battery pack power to ensure that the system is functioning correctly.

(LED indicator should flash at 5 seconds intervals)

DIP Switch position	Lube cycle OFF time	Autonomy (hours)		Nb of cycle per month	Daily out put in cm3
		113g	226g		
1	on/off	--	--	--	--
2	continuous run	--	--	--	--
3	18 hours	4068	8136	40	0,65
4	15 hours	3390	6780	48	0,8
5	12 hours	2712	5474	60	1
6	9 hours	2034	4068	81	1,35
7	6 hours	1356	2712	120	2
8	3 hours	678	1356	240	4



Legend

- ON : Operating position
- OFF : Stop position
- C : Continuous Run
- 6M : 6 months refilling reservoir

Position of DIP switches 3 to 8 is cumulative.

Example

6M + 5M = 11 months cumulative.

VALVES - DIVIDERS

Meter unit type F	E1101A
Volumetric injector type Z	E1201A
Volumetric injector type SJM	E1301A
Air-oil mixing block type AV	E1401A
Injector type FL1	E1501A
Injector type FL32-33-42-43	E1505A
Injector type FL44-45	E1510A
Progressive divider type M2500	E2101A
Progressive divider type M1000	E2201A
Progressive divider type U	E2301A
Greastar multi-outlet kit	E2305A
Divider type FD	E2401A
Valve type DD	E2801A
Dispensing valve type CVV	E3901A
Jet assembly and nozzle	E4101A
Nozzle for micro-fog lubricator	E5101A

SYSTEM COMPONENTS - METER UNIT TYPE F

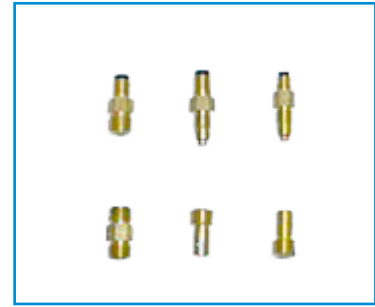
Description

Meter units type F are oil proportioning devices for cyclic systems which have to be mounted on each lubrication point.

Functioning

Meter unit has hydraulic resistance which comprises an integrated non return valve to control oil flow discharge. The lubricator delivers a certain amount of oil into the distribution system which is calibrated to each point by a meter unit. Each device has a letter and a number stamped on the flat surface of the body. It feeds in one single direction as indicated by an arrow. Standard flow rates from "3/0" (extra slow) to "5" (extra fast) are available.

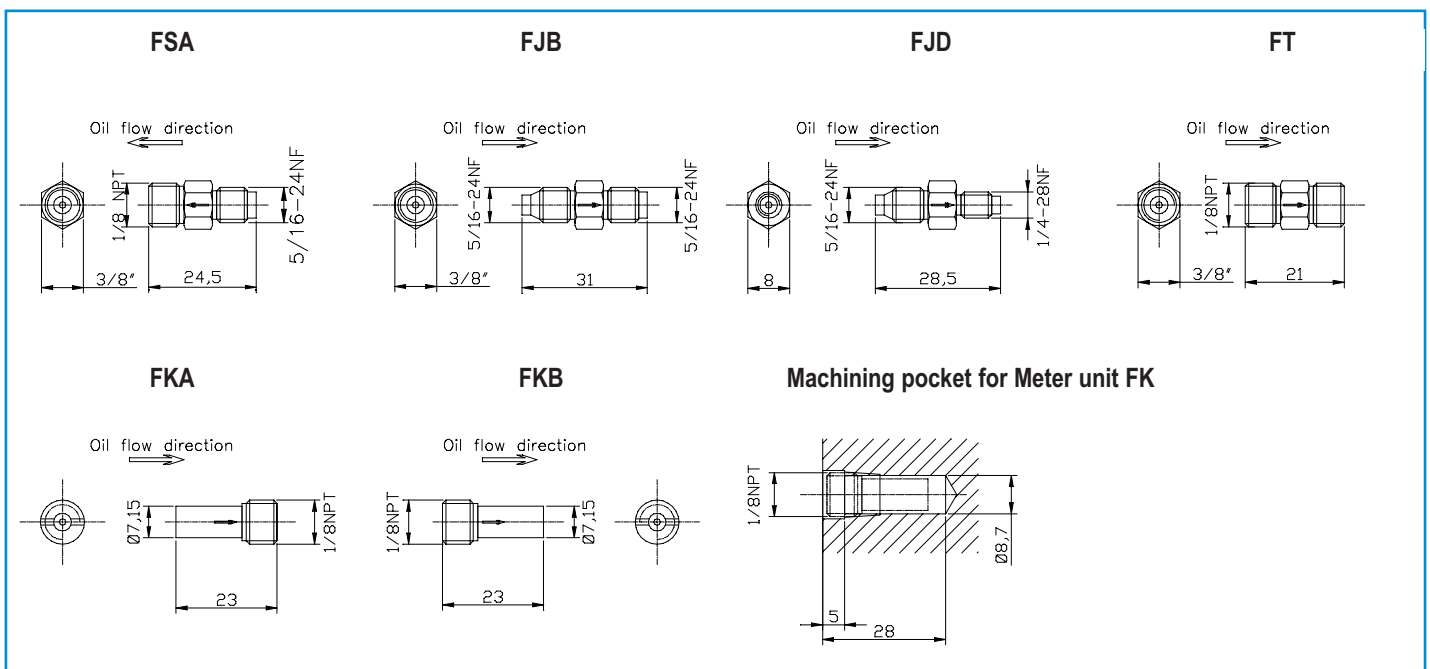
See chapter "technical information" for ratio between each value.



For ordering

Specify part number in using the table below :

Example : Meter unit FSA0.



Discharge flow ratio	Reference					
	FSA	FJB	FJD	FT	FKA	FKB
0,5	FSA 3/0	FJB 3/0	FJD 3/0	FT 3/0	FKA 3/0	FKB 3/0
1	FSA 00	FJB 00	FJD 00	FT00	FKA 00	FKB 00
2	FSA 0	FJB 0	FJD 0	FT 0	FKA 0	FKB 0
4	FSA 1	FJB 1	FJD 1	FT 1	FKA 1	FKB 1
8	FSA 2	FJB 2	FJD 2	FT 2	FKA 2	FKB 2
16	FSA 3	FJB 3	FJD 3	FT 3	FKA 3	FKB 3
32	FSA 4	FJB 4	FJD 4	FT 4	FKA 4	FKB 4
64	FSA 5	FJB 5	FJD 5	FT 5	FKA 5	FKB 5

NB:

1) 5/16 - 24 NF :
For tubing Ø 4,
Compression nut : B1095
Compression sleeve : B1061
or B8272

2) 1/4 - 28 NF :
For tubing Ø 2,4,
Compression nut : B3610
Compression sleeve: B3313

SYSTEM COMPONENTS - METER UNIT TYPE FT

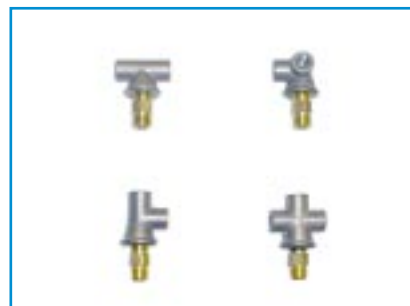
Description

Meter units type FT are oil proportioning devices for cyclic system which have to be mounted on each lubrication point. Each unit comprises a meter unit mounted on a Junction header.

Functioning

Meter unit has hydraulic resistance which comprises an integrated non return valve to control oil flow discharge. The lubricator delivers a certain amount of oil into the distribution system which is calibrated to each point by a meter unit. Each device has a letter and a number stamped on the flat surface of the body. It feeds in one single direction as indicated by an arrow. Standard flow rates from "3/0" (extra slow) to "5" (extra fast) are available.

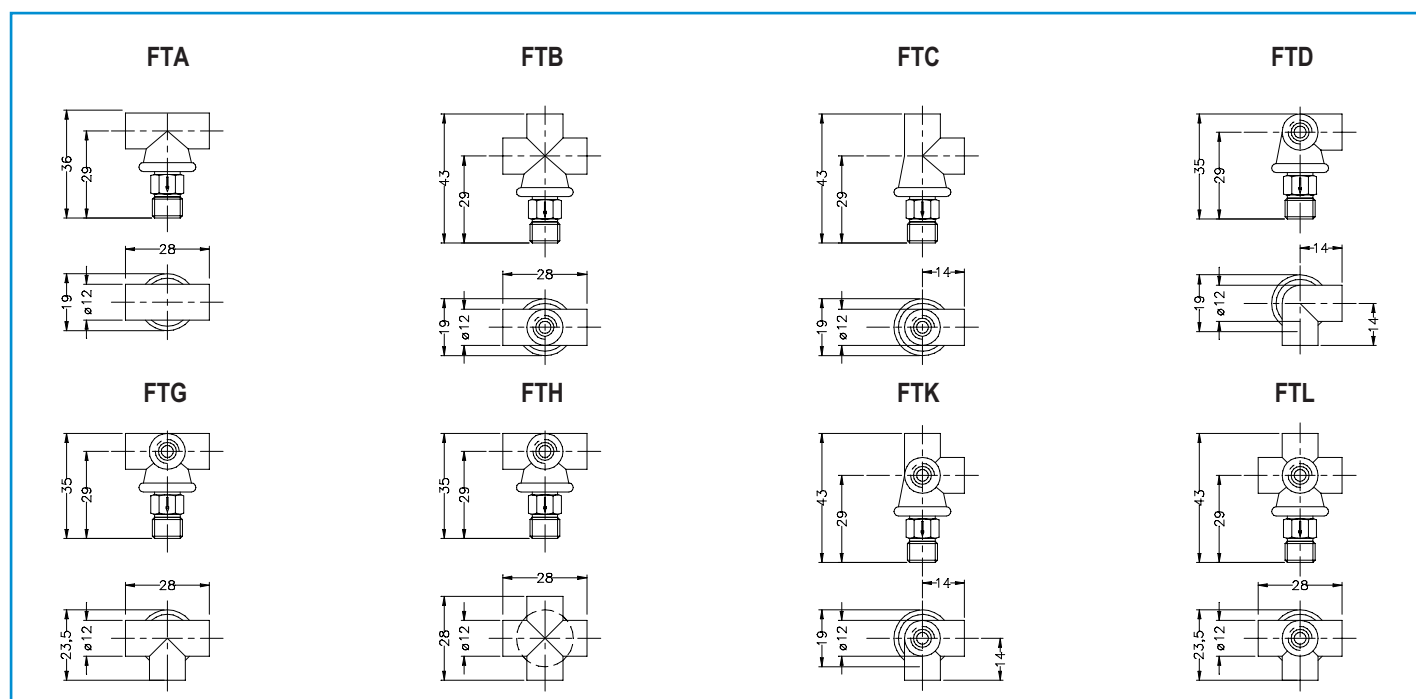
See chapter "technical information" for ratio between each value.



For ordering

Specify part number in using the table below :

Example: Meter unit FTB 3/0



Discharge flow ratio	Reference							
	FTA	FTB	FTC	FTD	FTG	FTH	FTK	FTL
0,5	FTA 3/0	FTB 3/0	FTC 3/0	FTD 3/0	FTG 3/0	FTH 3/0	FTK 3/0	FTL 3/0
1	FTA 00	FTB 00	FTC 00	FTD 00	FTG 00	FTH 00	FTK 00	FTL 00
2	FTA 0	FTB 0	FTC 0	FTD 0	FTG 0	FTH 0	FTK 0	FTL 0
4	FTA 1	FTB 1	FTC 1	FTD 1	FTG 1	FTH 1	FTK 1	FTL 1
8	FTA 2	FTB 2	FTC 2	FTD 2	FTG 2	FTH 2	FTK 2	FTL 2
16	FTA 3	FTB 3	FTC 3	FTD 3	FTG 3	FTH 3	FTK 3	FTL 3
32	FTA 4	FTB 4	FTC 4	FTD 4	FTG 4	FTH 4	FTK 4	FTL 4
64	FTA 5	FTB 5	FTC 5	FTD 5	FTG 5	FTH 5	FTK 5	FTL 5

SYSTEM COMPONENTS - VOLUMETRIC INJECTOR TYPE Z

Description

The injectors type Z (direct action) are perfectly adapted for use with the volumetric system (PDI) in cyclic systems. It delivers a fixed predetermined quantity of lubricant for each discharge cycle.

Functioning

Discharge cycle :

The system pressure builds up and forces oil into inlet. Disc (1) collapses and oil is forced into the inlet chamber around it. Under the pressure effects, Disc (1) moves and compresses spring (3), oil in discharge chamber (5) is displaced "positively" to the lube point by advancing piston (2). Piston assembly continues to travel towards outlet until it reaches the shoulder of the discharge chamber (5).

Release cycle :

Pressure is quickly relieved from injector inlet. Disc seal (1) relaxes and covers inlet. Spring (3) pushes down piston (2) and it forces oil in intake chamber up through hollow transfer tube (4) into the discharge chamber. The injector is ready for the next cycle.

(See system outline).

Characteristics

- Discharge : 0,01 to 0,4 cm³/stroke
- Pressure : normal : 14 bar mini
max : 40 bar
- Working temperature : 80 °C max.
- Lubricant to be used : mineral oil viscosity from 30 to 3000 Cst.
- Other lubricant : contact Bijur.



For ordering

Specify type and value of discharge

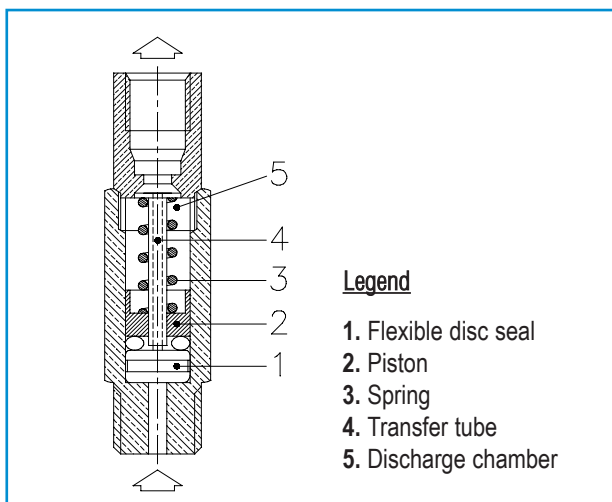
Example:

Volumetrical injector type ZMB, discharge 0,3 cm³
Reference : ZMB 30.

Outside dimensions

See overleaf.

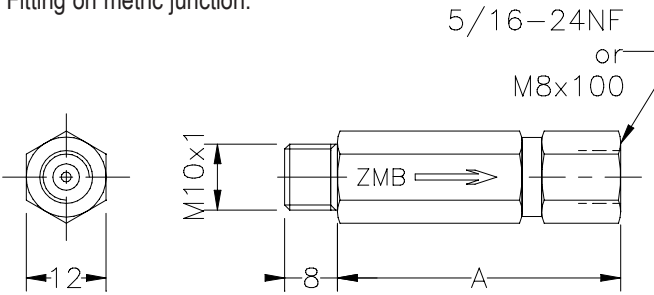
System outline



SYSTEM COMPONENTS - VOLUMETRIC INJECTOR TYPE Z

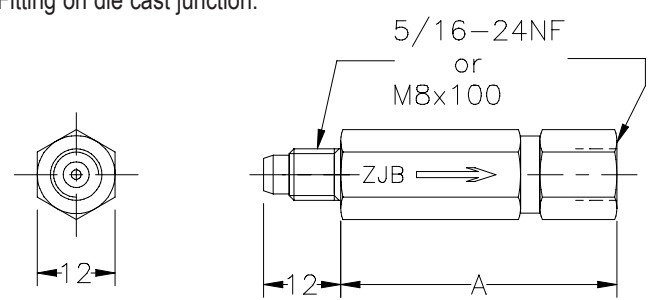
Type ZMB

Fitting on metric junction.



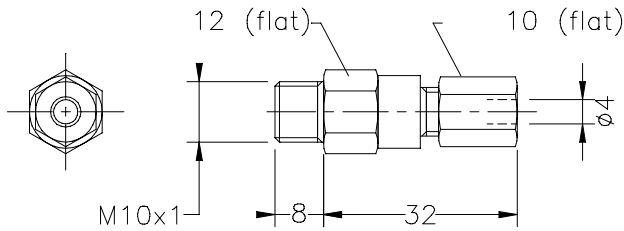
Type ZJB

Fitting on die cast junction.



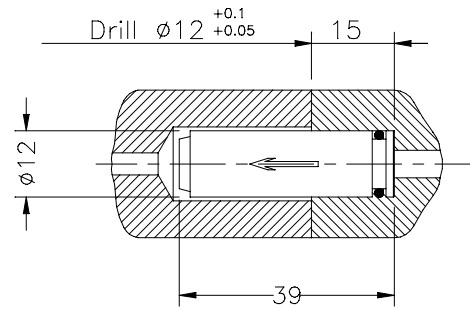
Type ZEE

Fitting on metric junction.
(Use only for chain lubrication by injection.)



Type ZCN

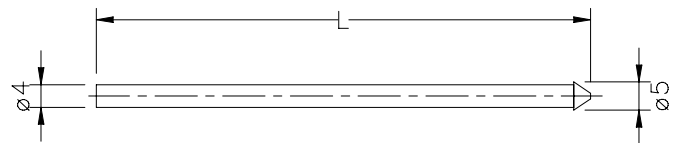
For direct mounting into machine beds.



Nozzles for Injector ZEE

Length L : 150mm. Reference 73654-2141

Length L : 250mm. Reference 73654-2151



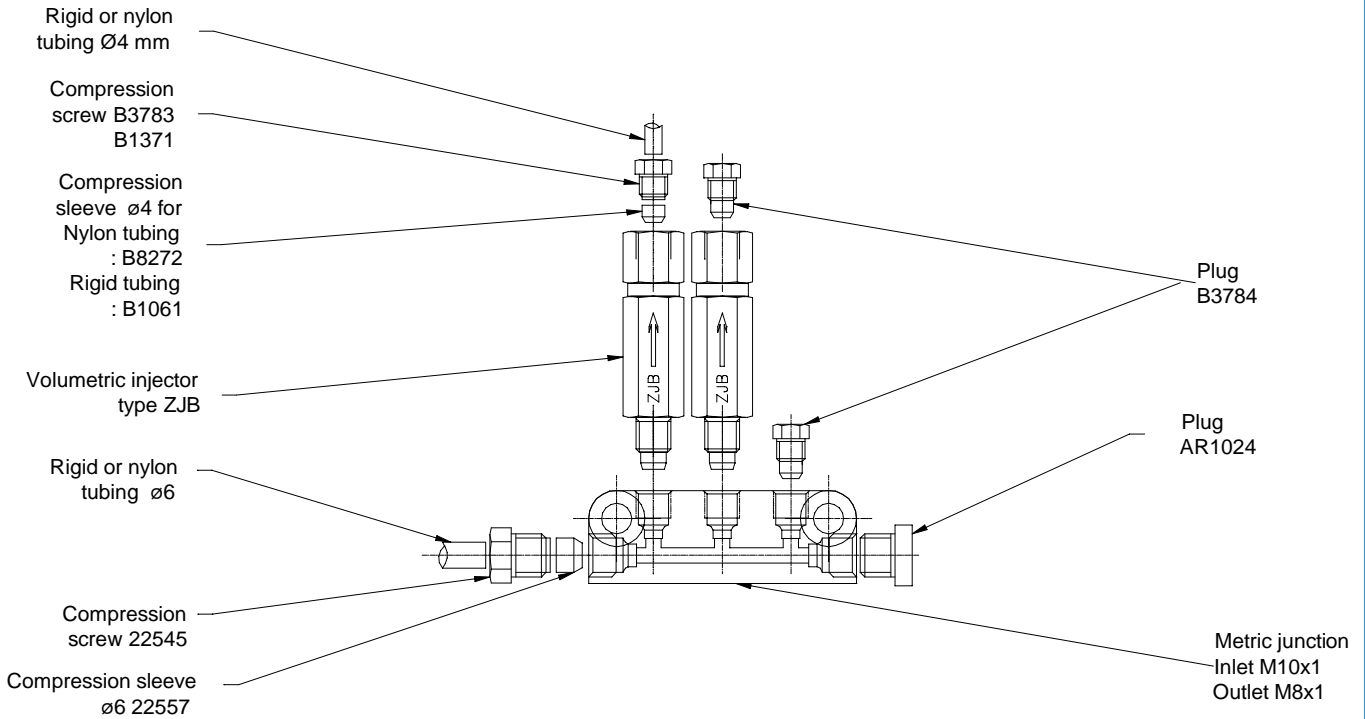
Discharge / cycle	Reference ZMBE*	Reference ZMBM**	A (mm)	Reference ZJBE*	Reference ZJBM**	A (mm)	Reference ZEE	Reference ZCN
0,01							ZEE10	ZCN010
0,025				ZJBE025	ZJBM025	35	ZEE25	ZCN025
0,05							ZEE50	
0,06	ZMBE06	ZMBM06	33	ZJBE06	ZJBM06	35		ZCN06
0,1	ZMBE10	ZMBM10	33	ZJBE10	ZJBM10	35	ZEE100	ZCN10
0,2	ZMBE20	ZMBM20	44	ZJBE20	ZJBM20	53	ZEE200	ZCN20
0,3	ZMBE30	ZMBM30	44	ZJBE30	ZJBM30	53		ZCN30
0,4	ZMBE40	ZMBM40	44	ZJBE40	ZJBM40	53		ZCN40

* 5/16-24 NF

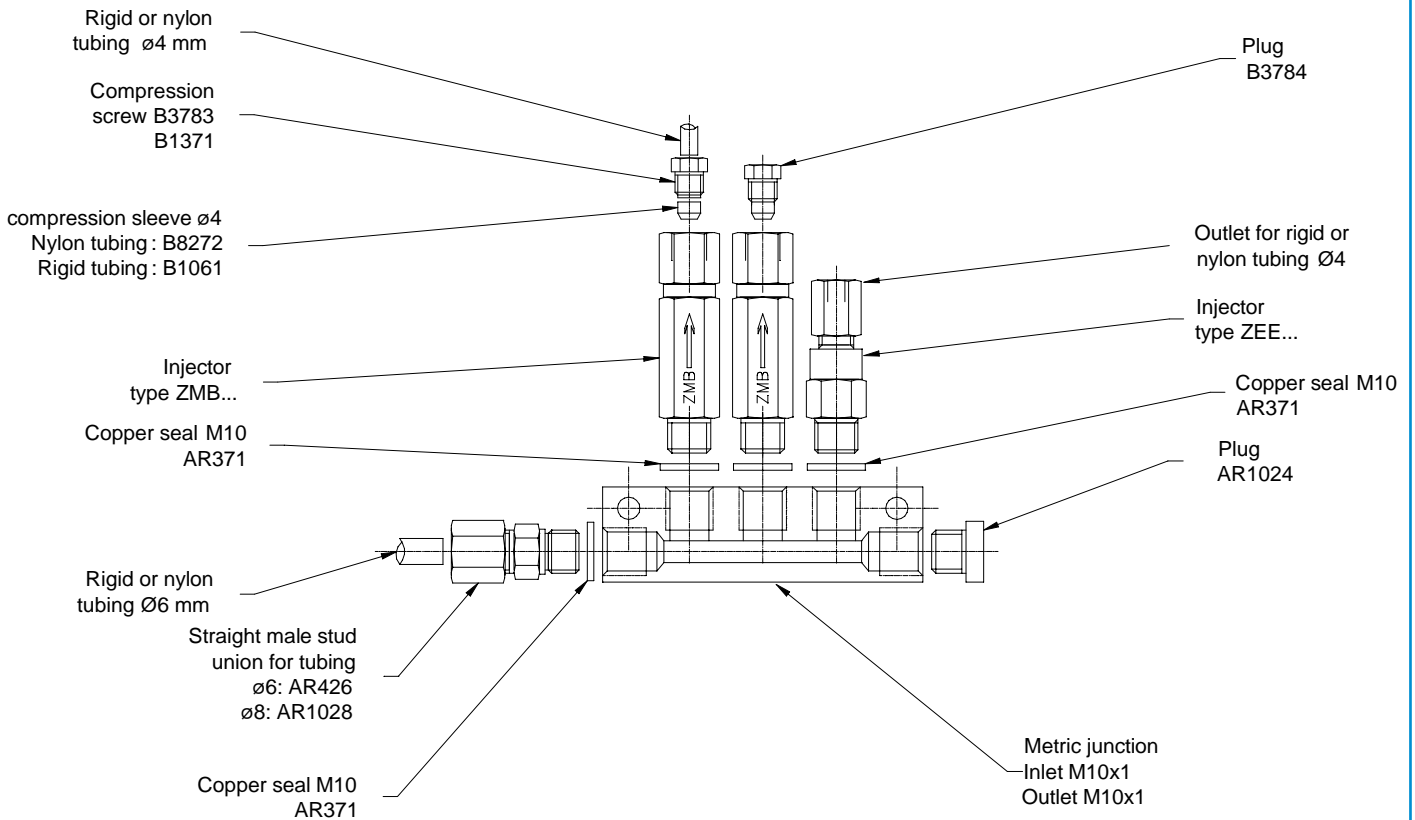
** M8x100

PRINCIPLE OF MOUNTING : VOLUMETRICAL INJECTOR

Die cast junction with ZJB injector



Aluminium junction with injector type ZMB or ZEE



SYSTEM COMPONENTS - VOLUMETRIC INJECTOR TYPE SJM

Description

The injectors type SJM (indirect action) are perfectly adapted for use with the volumetric system (PDI) in cyclic systems. It delivers a fixed predetermined quantity of lubricant for each discharge cycle. One, three and five outlets die cast manifold are available. Screws - in PDI's are easy to change without disturbing manifold and secondary line connections.

Functioning

Pressurised cycle :

The system pressure builds up through manifold inlet and forces disc seal (1) against the discharge outlet port. The system pressure forces piston (2) forward, compressing spring (3) and oil enters into the discharge chamber (5). The piston (2) moves forward to the topmost position and an indicator pin extends from assembly.

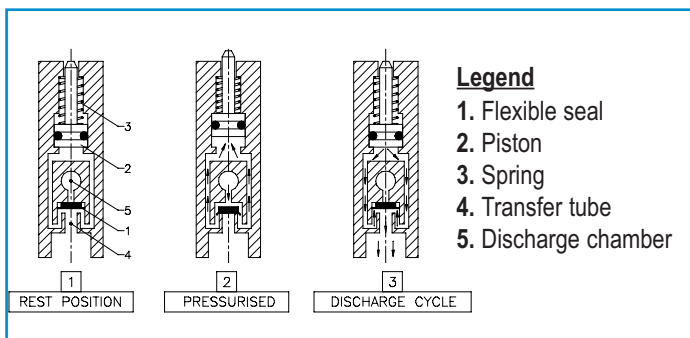
Discharge cycle :

The pressure is relieved from the inlet. Compressed spring (3) commences discharge stroke, forcing disc seal against inlet opening, exposing outlet port. Spring (3) continuous discharge stroke through full stroke and oil is forced from discharge chamber through tubing outlet. Indicator pin retracts into housing.

Characteristics

- **Discharge :** 0,06 to 0,4 cm³/stroke - 1, 3 to 5 outlets
- **Pressure :** normal : 17 bar mini
max : 35 bar
discharge : 0,5 bar
- **Discharge tube length :** 3 meters max. for tubing dia 4 mm.
- **Working temperature :** 80 °C max.
- **Lubricant to be used :** mineral oil viscosity from 20 to 500 Cst.
- **Other lubricant :** contact Bijur.

System outline



For ordering

To define the exact injector assembly characteristics, use the following codes :

Injector code — **SJM**

Number of outlets (1, 3 or 5)

Discharge (1, 3 or 5 outlets)

00	0,00 cm ³	_____
06	0,06 cm ³	_____
10	0,10 cm ³	_____
20	0,20 cm ³	_____
30	0,30 cm ³	_____
40	0,40 cm ³	_____

N.B : Specify Screw-in PDI rating valves from left to right position.

Example

Volumetric injector type SJM, 4 outlets, discharge 0,3 - 0,2 - 0,0 - 0,2 - 0,4 cm³

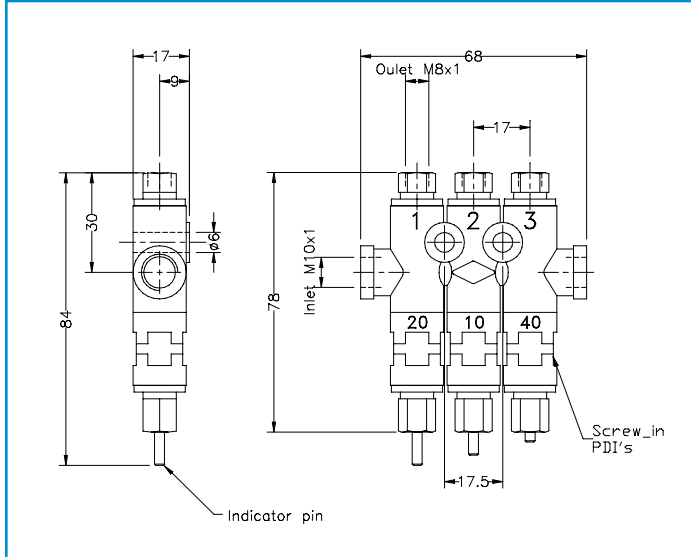
Reference : **SJM53020002040**

Outside dimension

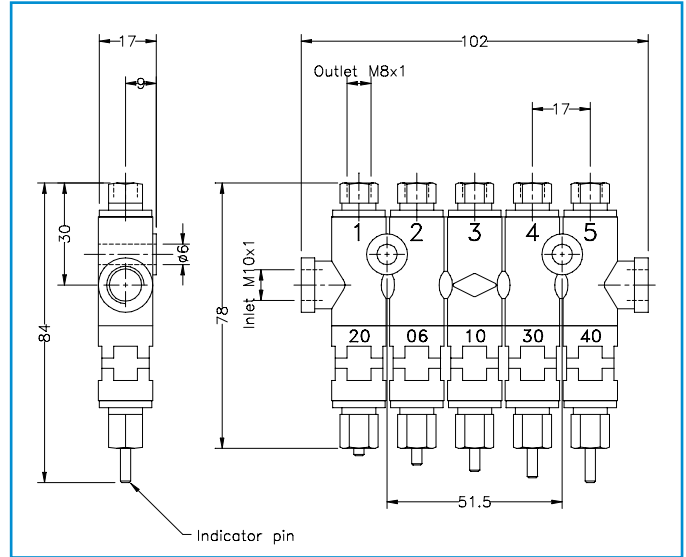
See overleaf.

SYSTEM COMPONENTS - VOLUMETRIC INJECTOR TYPE SJM

Type SJM - 3 outlets



Type SJM - 5 outlets

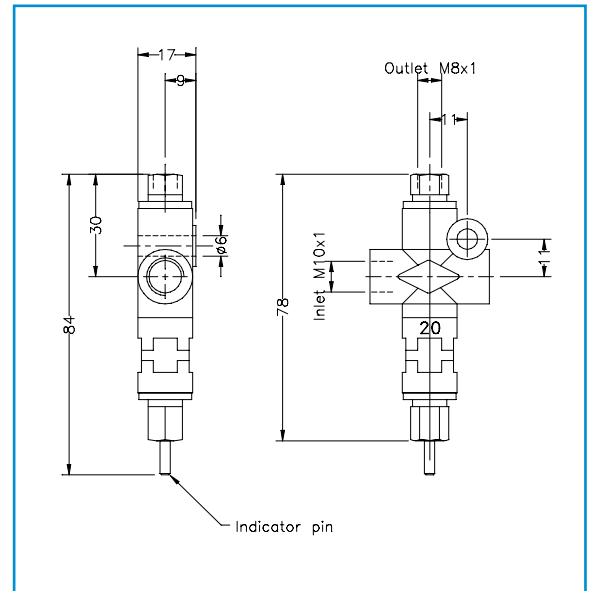


Discharge rating

Discharge flow of each outlet are easy to modify in using Screw-in PDI's as below :

Discharge/cycle	Replacement Screw-in PDI's
0,00 cm3	Ref. SJM 00
0,06 cm3	Ref. SJM 06
0,10 cm3	Ref. SJM 10
0,20 cm3	Ref. SJM 20
0,30 cm3	Ref. SJM.30
0,40 cm3	Ref. SJM 40

Type SJM - 1 outlet



NB

To connect 2 manifold assemblies, use coupling reference : **25632**

SYSTEM COMPONENTS - AIR OIL MIXING BLOCK

Description

The air oil blocks type AV are designed, amongst other applications, for high speed spindle lubrication. Bijur air oil injectors deliver very precise amounts of oil during a predetermined cycle time. A measured dose of oil is delivered into a controlled continuous circuit of air. The air flow transports the drops of lubricant along the inner walls of the tubing which feed the lubrication point.

A large selection of injectors with varying discharges and precise adjustment and control of the air discharge permits continuous air oil lubrication.

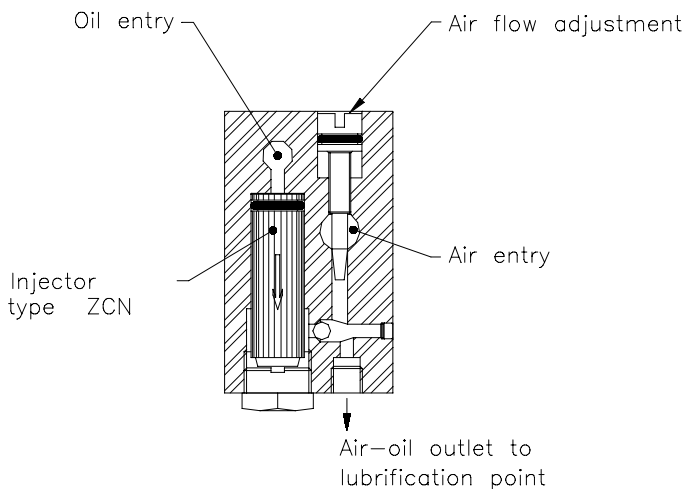
Functioning

All injectors discharge as the system pressurises and reprimed as the automatic pump decompresses. The highly accurate discharge of oil over the range of injectors together with an adjustable flow of air per injector allows a variable discharge of oil to be fed to each point. (See system outline).

Characteristics

- Discharge : 0,01 to 0,04 cm³ per injector and per stroke
- Working pressure : 15 to 27 bar max
- Reset pressure : 2 bar max
- Seal : viton
- Lubricants to be used : mineral oil with viscosities 30 to 3000 Cst at working temperature

System outline



Ordering instructions

To define the exact part numbers, use the following codes :

Injector code — **AV**

Number of outlets — Discharge values requested

From 1 to 8

Discharge per stroke and per outlet

G	0,01 cm ³	_____
A	0,025 cm ³	_____
B	0,06 cm ³	_____
C	0,1 cm ³	_____
D	0,2 cm ³	_____
E	0,3 cm ³	_____
F	0,4 cm ³	_____

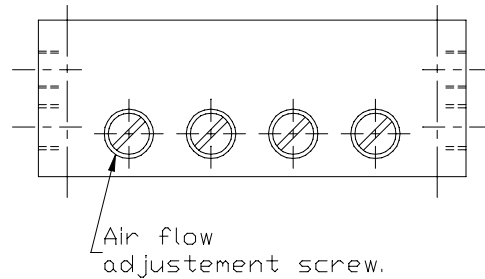
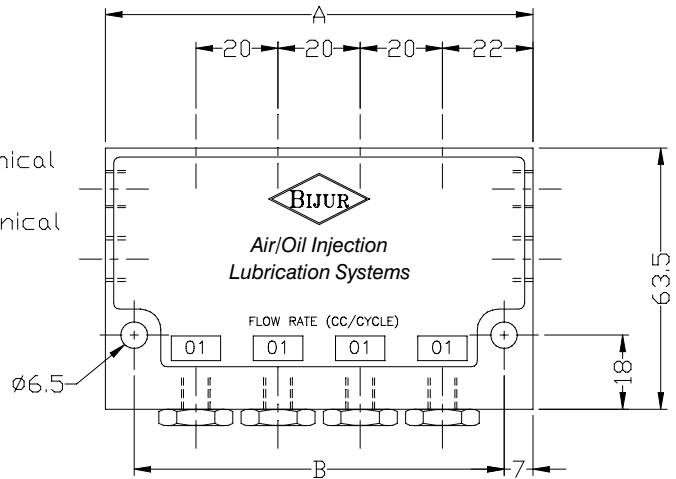
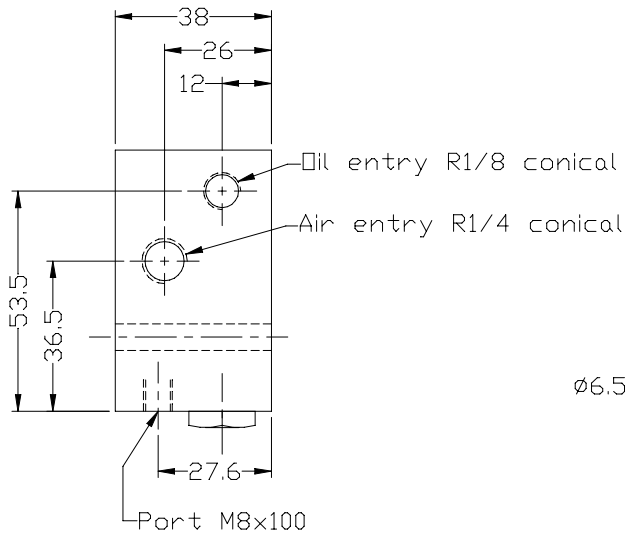
Example

A valve with 4 outlets, 3 outlets 0,025 cm³, 1 outlet 0,06 cm³
Reference **AV4AAAB**

Outside dimensions

See overleaf.

OUTSIDE DIMENSIONS - AIR OIL MIXING BLOCK



Number of injectors	G (mm)	H (mm)
1	44	30
2	64	50
3	84	70
4	104	90
5	124	110
6	144	130
7	164	150
8	184	170

SYSTEM COMPONENTS - INJECTOR TYPE FL1

Description

FL1 injectors are positive displacement type. They have adjustable outputs and a visual indicator pin. They can supply one lubrication point, or several in combination with a progressive divider. All incorporate grease zerker fittings for priming of system.

Functioning

The lubricant under pressure is introduced into entry port and pushes a seal which opens the entry channel. Pressure moves the main piston to deliver a preadjusted volume determined by the value of the discharge chamber.

At the end of the lubrication cycle, the vent valve relieves the primary line. Spring which was compressed, pushes the seal to its initial position and opens the entry channel. When the main piston moves to the top, it transfers the lubricant into the discharge chamber. The injector is ready for the next cycle.

(See system outline).

Characteristics

- Discharge : adjustable from 0,13 à 1,6 cm³
- Working pressure : 125 bar mini (1850 PSI)
248 bar max (3500 PSI)
- Maximum vent (recharge) pressure : 41 bar (600 PSI)
- Working temperature : -10°C (14°F) to +175°C (350°F)
- Lubricant to be used : Oil with a viscosity of 220 Cst mini to semi fluid grease NLGI 000 to 2 others lubricants, contact Bijur
- Life : 100.000 working cycles

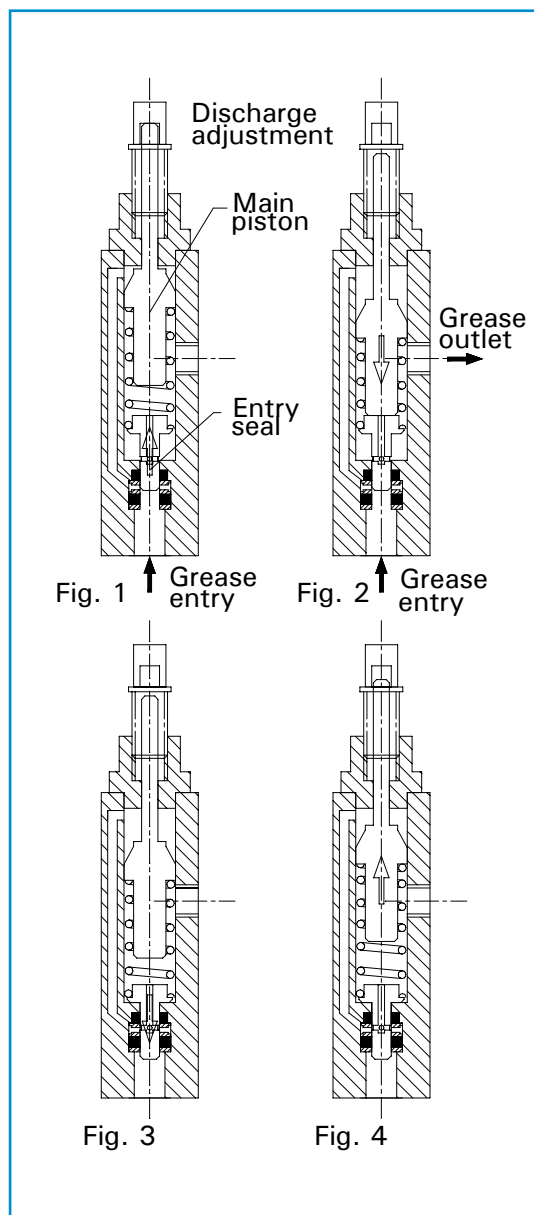
Reference	number of outlets	Dimensions				Reference for manifold only
		A		B		
		mm	(inches)	mm	(inches)	
13844	Single injector with 3/8 NPT male adaptor					
13843	Replacement injector for existing manifold					
FL1-1	1	*	*	63	(2 1/2)	13281
FL1-2	2	*	*	76	(3)	13282
FL1-3	3	32	(1 1/4)	108	(4 1/4)	13283
FL1-4	4	63	(2 1/2)	140	(5 1/2)	13284
FL1-5	5	95	(3 3/4)	171	(6 3/4)	13285
FL1-6	6	127	(5)	203	(8)	13286
FL1-8	8	191	(7,5)	267	(10,5)	13288

Outside dimensions

See overleaf.

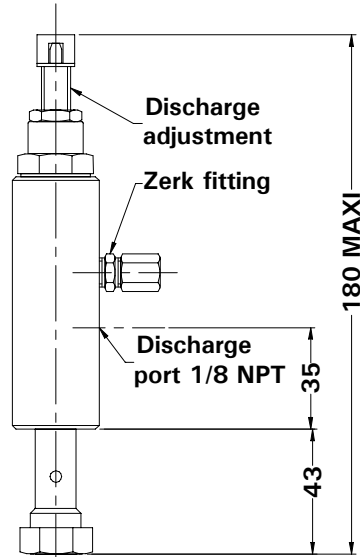


System outline

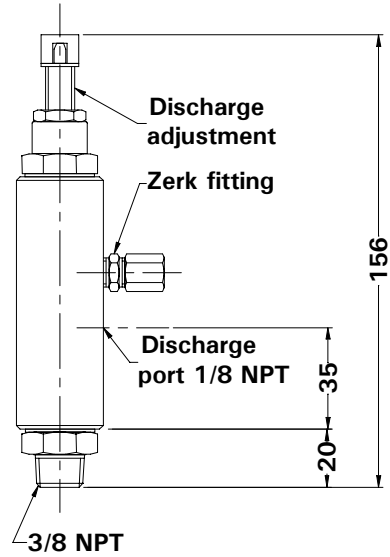


SYSTEM COMPONENTS - INJECTOR TYPE FL1

Single injector

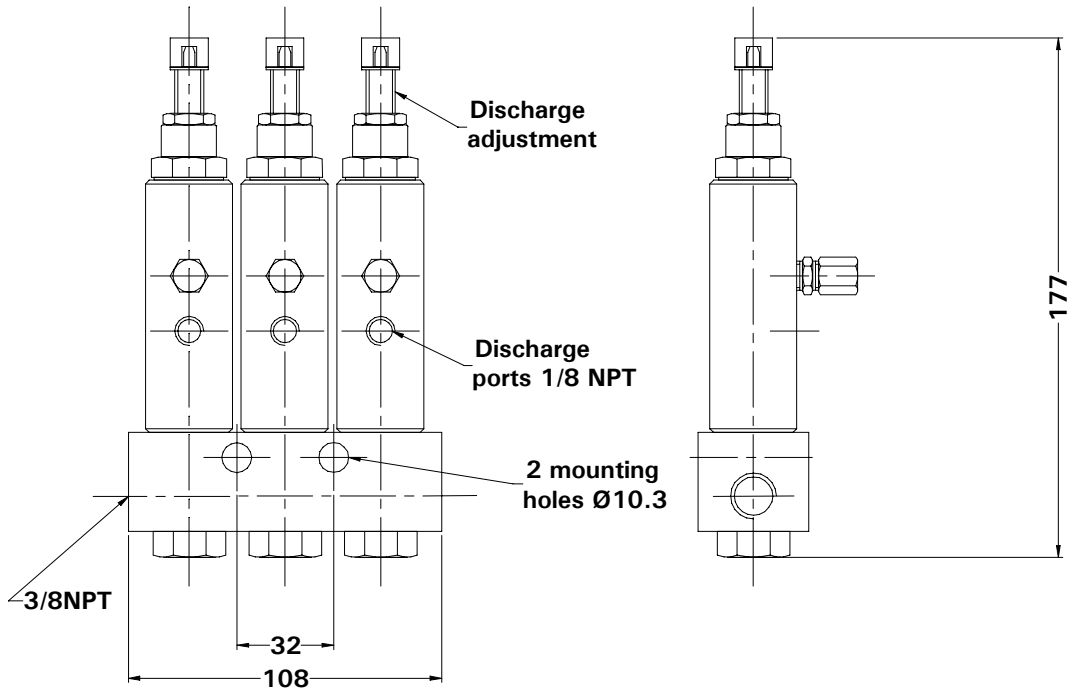


REF. 13843



REF. 13844

Manifold injector assembly



SYSTEM COMPONENTS - INJECTOR TYPE FL1

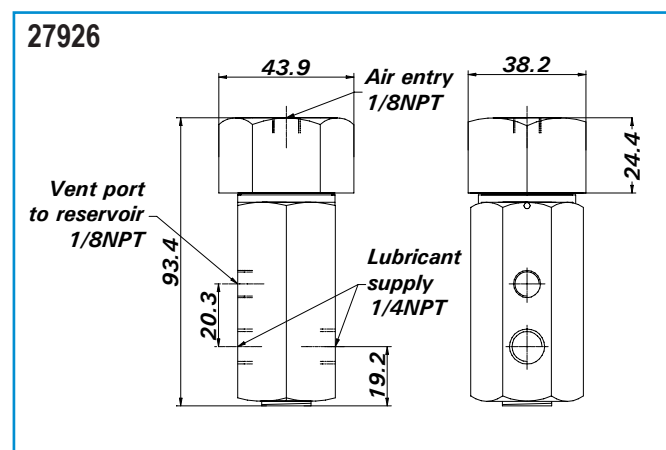
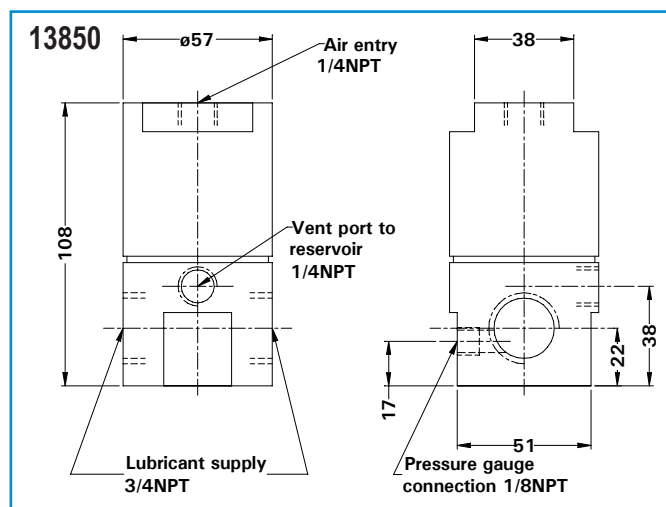
Vent valve Part N° 13850

Miniature vent valve Part N° 27926

Vent valve is used with Bijur Farval FL series injectors to relieve system pressure back to reservoir after a lubrication cycle. With a pneumatic operated pump, air pressure would be applied to the vent valve at the same time as the pump. When air pressure is relieved from pump and vent valve, lubricant moves past the valve seat and out vent port, and piped back to the reservoir.

Caracteristics

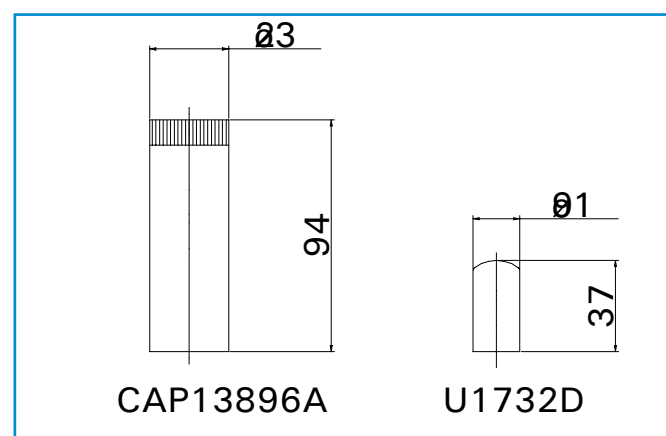
- Air pressure : 3 to 8 bar (40 à 120 PSI).
- Lubricant pressure : 260 bar max. (3800 PSI).
- Mounting : any position.



Injector cover caps

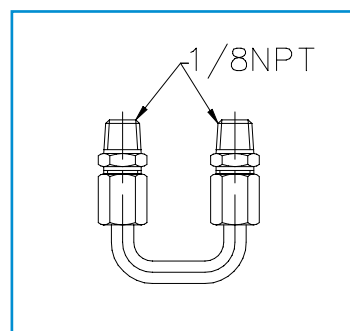
Cover caps are used in environments where excessive moisture, dirt and other contaminants exist. They are intended to protect the internal components and the indicator pin to avoid lubricant leakages.

- Ref. U1732D :
Is made of clear vinyl plastic which allows visual check of indicator pin.
- Ref. CAP13896A :
Is made of aluminium to protect the injector head from high temperatures, up to 70°C.



Injector connector tube Part N° 13899

Combines discharge of 2 or more injectors through one feed line, or when a bearing lube requirement cannot be met from one injectors output.



SYSTEM COMPONENTS - INJECTOR TYPE FL1

TABLE FOR DETERMINING RIGID LINE CAPACITIES AND SIZES

SIZE OF TUBE	MAXIMUM LENGTH (METRE)					
	GREASE NLGI 0		GREASE NLGI 1		GREASE NLGI 2	
	Primary line	Secondary line	Primary line	Secondary line	Primary line	Secondary line
Ø3x4	-	1,2	-	1	-	-
Ø8x10	-	10	-	5	-	2,5
Ø10x12	16	20	8	8	-	5
Ø13x15	25	-	12	-	8	-
Ø16x20	40	-	20	-	12	-
3/4"(20x27)	55	-	30	-	20	-
1"(26x32)	110	-	55	-	30	-
1"1/4(33x42)	150	-	80	-	50	-
2"(50x60)	300	-	200	-	120	-

Formula to determine section of tubing according to the lubricant using rigid pipe or flexible hose : Example

- 1°) Determine the total length between pump and the farthest injector.
 - Grease NLGI 0
 - Total length 26M
 - 2 flexible hoses of 1,5m being used
- 2°) Coefficient " 1 " for rigid pipe
Coefficient " 2 " for flexible hose
- 3°) Add all values of flexible and rigid pipe length.
Select the correct tube section (see table on top).

	Lg	x	Total
Rigid tube	26-(1,5x2)	1	23
Hose	1,5x2	3	9
Total length			32

Result

For a length of 32 m, choose a pipe with a minimum IDØ16x20.



SYSTEM COMPONENTS-INJECTOR TYPE FL 32-33 GREASE

Description

FL32-33 type injectors are perfectly adapted to lubricate all types of machines with a cyclic sequence.

Discharge of each injector is adjustable yet delivers a precise amount of lubricant. A visual indicator pin built into each injector makes it easy to confirm a successful discharge at any lubrication point.

Functioning

The lubricant under pressure is introduced from the supply line and moves the injector piston forward. This forces a pre-measured amount of lubricant (delivered during the vent stage) out of the discharge chamber outlet. At the same time, lubricant is transferred into the measuring chamber the indicator stem extends as this chamber fills.

When the pump stops, the spring which was compressed forces the plunger to its initial position. This movement allows lubricant stored in the measuring chamber to empty into the discharge chamber, the indicator stem retracts and the lubricant is ejected to the lubrication point. (See system outline).

Characteristics

- Discharge : from 0,016 to 0,131 Cm³ / cycle (FL32)
from 0,016 to 0,049 Cm³ / cycle (FL33)
- Number of outlets : 1 to 6
- Working pressure : 82 bar mini
230 bar max
- Maximum vent (recharge) pressure : 14 bar
- Working temperature : 5 to 175°C
- Lubricants to be used : grease NLGI 2 max
- Others lubricants : contact Bijur
- Materials : galvanised carbon steel and viton seals.



For ordering :

Specify part number in using table below.

Reference injector type FL32	Reference injector type FL33	Number of outlets
27163	27164	1*
271631	271641	1
271632	271642	2
271633	271643	3
271634	271644	4
-	271645	5
-	271646	6
27163R	27164R	#

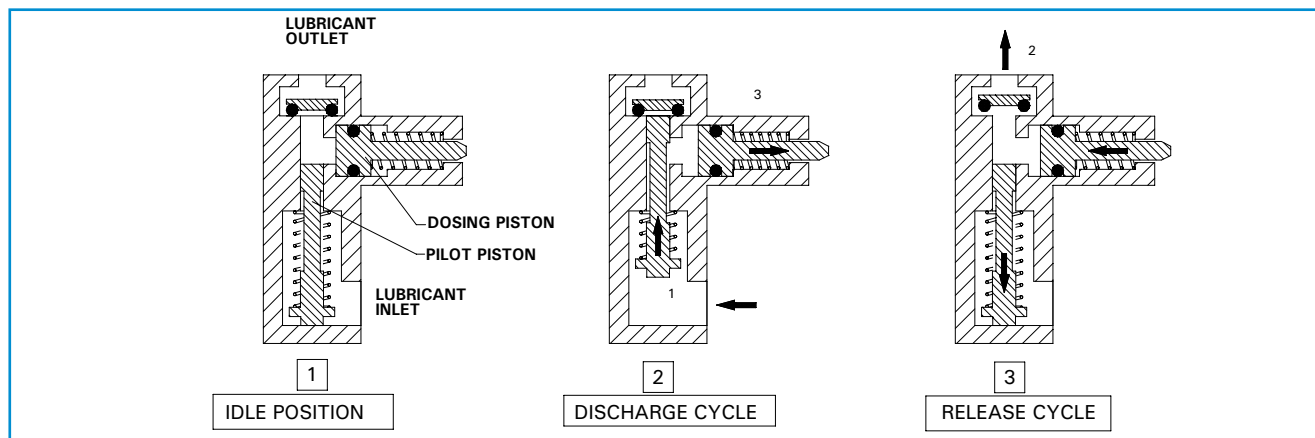
* Single direct mount FL32 1/4NPT
FL33 1/8 NPT

Manifold replacement injector

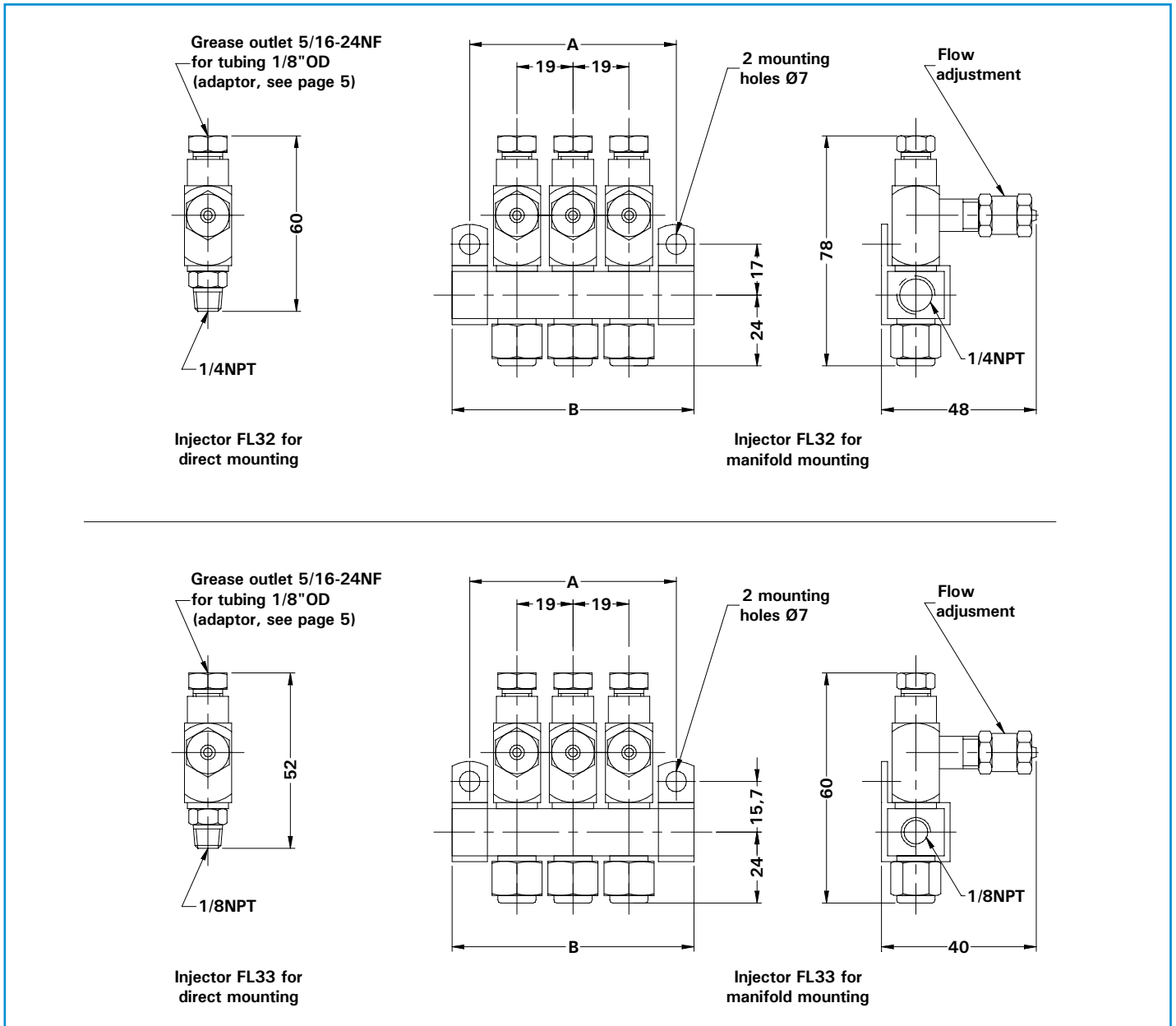
Outside dimensions

See overleaf

System outline



SYSTEM COMPONENTS-INJECTOR TYPE FL 32-33 GREASE



Number of outlets	Dimensions (mm)			
	Injector FL32		Injector FL33	
	A	B	A	B
1	32	44	30	41
2	51	63	48	60
3	70	82	67	70
4	89	102	87	98
5	-	-	105	117
6	-	-	124	137

Discharge adjustment

On all injectors, the amount of discharge is controlled by the position of the indicator cap.

Fully tighten the indicator cap to obtain the minimum discharge 0,016 Cm³.

To increase the output, loosen the indicator cap as required.

FL 32 : 5 turns for the maximum (0.131cc)

FL 33 : 2 turns for the maximum (0.049cc)

SYSTEM COMPONENTS-INJECTOR TYPE FL 42-43 OIL

Description

FL42-43 type injectors are perfectly adapted to lubricate all types of machines with a cyclic sequence.

Discharge of each injector is adjustable and it delivers a precise amount of lubricant. A visual indicator pin built into each injector makes it easy to confirm a successful discharge at any lubrication point.

Functioning

The lubricant under pressure is introduced from the supply line and moves the injector piston forward. This forces a pre-measured amount of lubricant (delivered during the vent stage) out of the discharge chamber outlet. At the same time, lubricant is transferred into the measuring chamber the indicator stem extends as this chamber fills.

When the pump stops, the spring which was compressed forces the plunger to its initial position. This movement allows lubricant stored in the measuring chamber to empty into the discharge chamber, the indicator stem retracts and the lubricant is ejected to the lubrication point. (See system outline).

Characteristics

- Discharge : from 0,016 to 0,131 Cm³ / cycle (FL43)
from 0,016 to 0,049 Cm³ / cycle (FL42)
- Number of outlets : 1 to 15
- Working pressure : 50 bar mini
68 bar max
- Maximum vent (recharge) pressure : 10 bar
- Working temperature : 5 to 175°C
- Lubricants to be used : mineral oil with viscosities from 30 to 500 cSt
- Others lubricants : contact Bijur
- Materials : galvanised carbon steel and viton seals.



For ordering

Specify part number in using table below

Reference injector		Number of outlets
type FL42	type FL43	
27165	27166	1*
271651	271661	1
271652	271662	2
271653	271663	3
271654	271664	4
271655	-	5
271656	-	6
2716510	-	10
2716515	-	15
27165R	27166R	#

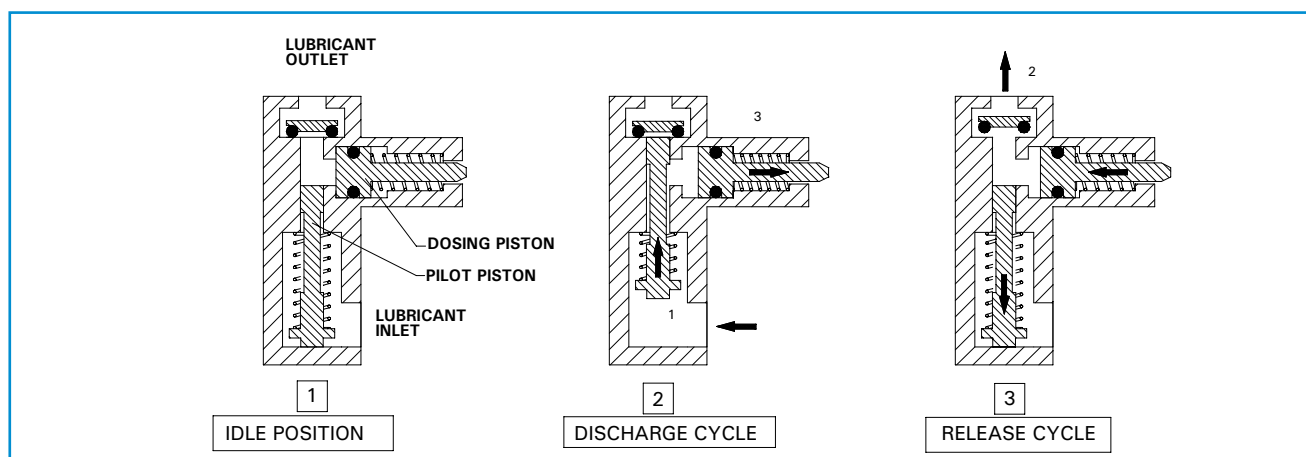
* Single direct mount **FL42** 1/4NPT
 FL43 1/8 NPT

Manifold replacement injector

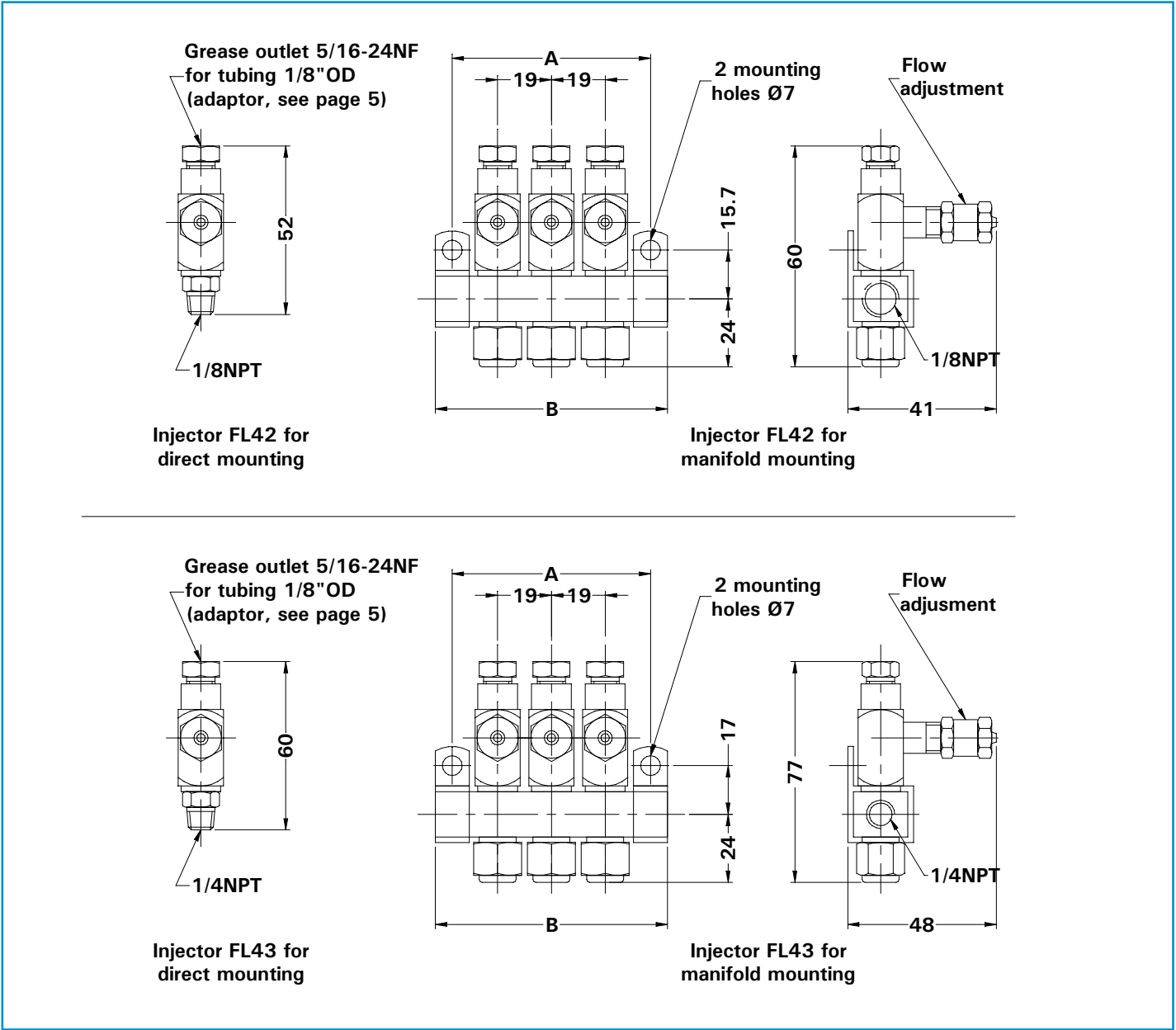
System outline

Outside dimensions

See overleaf.



SYSTEM COMPONENTS-INJECTOR TYPE FL 42-43 OIL



Number of outlets	Dimensions (mm)			
	Injector FL42		Injector FL43	
	A	B	A	B
1	30	41	32	44
2	48	60	51	63
3	67	70	70	82
4	87	98	89	102
5	105	117	-	-
6	124	137	-	-
10	200	213	-	-
15	292	310	-	-

Discharge adjustment

On all injectors, the amount of discharge is controlled by the position of the indicator cap.

Fully tighten the indicator cap to obtain the minimum discharge 0,016 cm³.

To increase the output, loosen the indicator cap as required.

FL 42 : 2 turns for the maximum (0.049 cc)

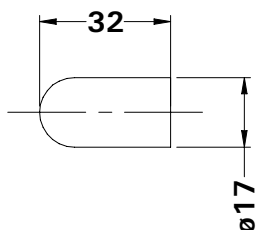
FL 43 : 5 turns for the maximum (0.131 cc)



SYSTEM COMPONENTS-ACCESSORIES FOR INJECTOR TYPE FL32-33-42-43

Injector cover caps Part N° 27335

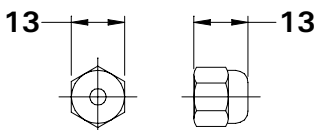
Cover caps in plastic are used in environments where excessive moisture, dirt and other contaminants exist. They are intended to protect the indicator pin to avoid lubricant leakages.



Lock nut Part N° 27347

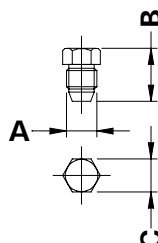
Nut can be used to replace adjustment screw to obtain a fixed discharge.

Injector FL 32/43: 0,033 cm³ /cycle
 Injector FL 33/42: 0,049 cm³ /cycle



Plug

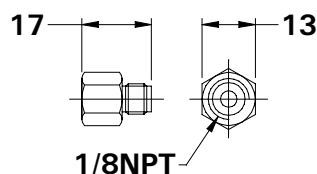
Can be used to close surplus tapped holes (see table below).



Dimensions (mm)			Reference
A	B	C	
5/16-24NF	13	8	27336
1/8NPT	18	9,5	HP604
1/4NPT	6,4	4,8	HP622

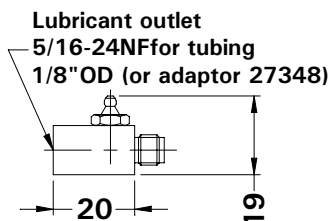
Adapter Part N° 27348

Can be mounted on discharge port.



Connector for manual greasing Part N° 27344

Simply a zerk fitting mounted onto a junction. It can be used to fill secondary lines before the first start-up.



MODULAR PROGRESSIVE DIVIDER TYPE M2500

Description

The M2500 series dividers are perfectly adapted for use in Bijur Farval progressive lubrication systems.

The modular construction makes the system easy to install, and can be modified and maintained without removing any tubing. Operation of all valves in the system can be monitored by a single cycle indicator switch. Up to 20 bearings can be lubricated from one divider and up to 20 dividers can be included in a system.

Zone control valves can be used to build a system of any size and can be divided into individually controlled and monitored zones. This permits varied cycle times, quick trouble-shooting and easy maintenance.

Functioning

Each metering segment of progressive divider comprises a piston which divides the lubricant volume has been delivered under pressure. When the system is pressurised, pistons are positively displaced in sequence one after the other until the cycle is complete at all outlets, having discharged the full metered volume of lubricant.

The progressive divider will keep recycling as long as lubricant is being delivered from the pump.



System outline

Figure 1

The lubricant under pressure is introduced to entry port P. Pistons are positioned to the right. Piston B is moving on the left, followed by piston C.

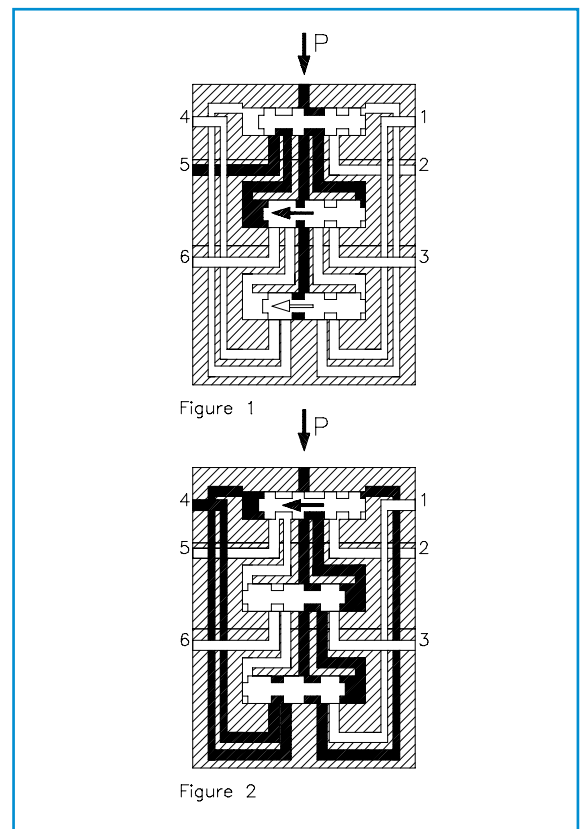
Figure 2

Now, the centre and lower pistons are to the left. The pressurised lubricant is delivered to inlet P which pushes the top piston which can now move to the left discharging lubricant at outlet N°4. Thereby opening an orifice which allows lubricant to push centre piston back towards the right.

(See system outline).

Characteristics

See overleaf.



MODULAR PROGRESSIVE DIVIDER TYPE M2500

M2500 metering valve sections

STANDARD VERSION

Valve size	Discharge cc		Valve section				
	Twin outlet	Single outlet	Twin outlet			Single outlet	
			Standard	With indicator pin	With indicator pin **	Standard	With indicator pin
05	0,08	0,16	MCVA250105T	-	-	MCVA250105S	-
10	0,16	0,32	MCVA250110T	-	-	MCVA250110S	-
15	0,25	0,50	MCVA250115T	-	-	MCVA250115S	-
20	0,32	0,65	MCVA250120T	MCV250120TP	MCVA250120T	MCVA250120S	MCV250120SP
25	0,40	0,80	MCVA250125T	MCV250125TP	MCVA250125T	MCVA250125S	MCV250125SP
30	0,50	1,00	MCVA250130T	MCV250130TP	MCVA250130T	MCVA250130S	MCV250130SP
35	0,57	1,15	MCVA250135T	MCV250135TP	MCVA250135T	MCVA250135S	MCV250135SP
40	0,65	1,30	MCVA250140T	MCV250140TP	MCVA250140T	MCVA250140S	MCV250140SP

** Approved by automotive industry

Characteristics

Discharge per cycle :

Standard version : **0,08 to 1,3 cc**
High pressure version : **0,1 to 1,0 cc**

Discharge pressure :

Standard version : **240 bar max**
Working temperature : **-10 à +163°C**

Material :

Steel with zinc plating (electroless nickelplating on request).

Seals :

Viton O-ring 90 Shore.

Lubricant to be used :

Mineral oil with viscosity 150 Cst mini to grease Grade NLGI 2.

Valve manifold bases

Valve manifold bases consist of an inlet section, several valve base sections and an end section.

INLET SECTION

(one per divider, see table on right)

Inlet type	Port style	
	G 1/4 BSP	1/4 NPT
Standard	MCI2504C	MC12504B
Zone oil*	MCI2504ZC	MC12504ZB
Zone Grease*	MCI2506ZC	MC12506ZB

VALVE BASE SECTIONS

(one per each metering segment)

Comprises : Integral check valves, mounting screws and viton seals.

References:

- MCBA2502C : port G 1/8 BSP
- MCBA2502B : port 1/8 NPT

END SECTION

(one per divider)

Reference MCEA2503

TIE ROD KIT

(one per divider, see table at right)

Comprises : 3 tie rods and lock nuts.

Référence: voir tableau ci-contre.

Note:

Thread ports NPT are not available from stock (special request).

Number of sections	Tie rod kit number
3	MCRK25053
4	MCRK25054
5	MCRK25055
6	MCRK25056
7	MCRK25057
8	MCRK25058
9	MCRK25059
10	MCRK250510

Note:

Base sections in BSP thread are available from stock. For ordering a complete divider, see page **E2107A**.

MODULAR PROGRESSIVE DIVIDER TYPE M2500

M2500 Zone control valves

M2500 series offers a full range of zone control valves to satisfy a variety of requirements.

- Type :**
- **MCZ2501F** for oil systems operating up to 100 bar
 - **MCZ2501A** for oil systems operating from 100 to 200 bar
 - **MCZ2503B** for grease systems operating up to 200 bar

- Installation :**
- (ZONE VALVE MANIFOLD) Instead of standard inlet section location.
 - (REMOTE ZONE VALVE) On the primary line before the divider.

Electrical characteristics : - 115/230 V (50 - 60 Hz) - 20W - 0,21A

- Electrical connector :**
- Automotive 3 pin connector accepts Brad Harrison, Mini-Change, Crouse Hinds or Mini-Line connectors. Conforms to ANSI B93.55M.
 - 3 pin connector DIN 43650 :
 - Form A** (grease zone control valve - AE 299)
 - Form B** (oil zone control valve - AE 483)

- Port types :**
- Zone valve Manifold : G ¼ BSP or ¼ NPT
 - Remote zone valve : ¼ NPT

ZONE VALVE MANIFOLD

For oil < 100 bar	MCZ2501F	VO	*
For oil > 100 bar	MCZ2501A	VO	*
For grease	MCZ2503B	VO	*

- * **Electrical voltage :**
- 11** = 115 V - 50/60 Hz
 - 12** = 12 VDC
 - 22** = 230 V - 50/60 Hz
 - 24** = 24 VDC

REMOTE ZONE VALVE

Add "N" at the reference for port thread 1/4NPT.

Example :

Remote zone valve for grease, viton seal :
Reference : **MCZ2503BV0HC24N**



Zone valve Manifold



Remote zone valve for oil



Remote zone valve for grease

MODULAR PROGRESSIVE DIVIDER TYPE M2500

Accessories :

ZONE CONTROL VALVES CONNECTORS

For connection on connectors type Brad Harrison, Mini-Change, Crouse Hinds and Mini-Line , conform to ANSI B93.55M norm.
The 3 conductor cables are yellow, PVC insulated STO, rated at 10A/300V - protection NEMA 6P, IP68

Reference : **MCC2505**



MCC2505

For connection on connector type DIN 43650
Protection 16 A / 250 V

Reference :

- AE299 - Form A
- AE483 - Form B



AE299 - Form A



AE483 - Form B

CROSSPORT BARS MCCA2501

Crossport bar is installed in the alternate outlet port of adjacent M2500 valves to combine the outputs to feed a single lubrication point.

PRESSURE INDICATOR

These indicators are springloaded and can only be reset when system pressure decreases. The indicator's memory pin remains extended until manually reset. They are installed in the alternate outlet port.



Reference	Pressure (bar)	Type
20356	40	Non relieving
203512	80	Non relieving
203516	110	Non relieving
203522	150	Non relieving
203530	210	Non relieving
21355	35	Relieving
213510	70	Relieving
213515	105	Relieving
213520	140	Relieving



MODULAR PROGRESSIVE DIVIDER TYPE M2500

RUPTURE DISC INDICATOR

This indicator bursts at a selected pressure to automatically relieve excessive system pressure. It is installed in an alternate outlet port. Indicator is assembled with one rupture disc.

Reference	Burst pressure (bar)	Disc color	Replacement disc kit
10412YW	100	yellow	FT15423YWK
10412RD	125	red	FT15423RDK
10412PR	225	purple	FT15423PRK
10412YN	260	yellow / white	FT15423YNK



VISUAL INDICATOR MCSA2502

Installed on one metering valve, it permits visual control of the functioning of the system.

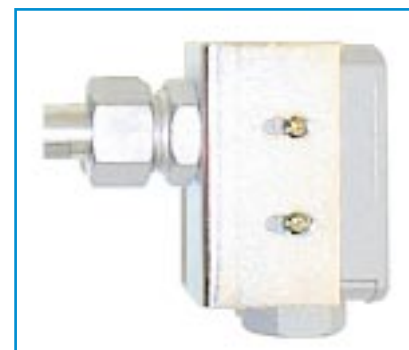


MCSA2502

ELECTRICAL CYCLE SWITCH MC13974B

Installed on any metering valve having a cycle indicator pin, it provides an electrical signal each time the divider moves.

Power rating : 250 VAC / 125 VDC - 5 A



MC13974B

MODULAR PROGRESSIVE DIVIDER TYPE M2500

Ordering instructions

Completely assembled Modular progressive dividers can be ordered as follows :

First, select the manifold base assembly from the table. The assembly includes the inlet section, valve base sections, end section, tie rods, nuts and seals. The metering valves are mounted on to it. Each valve section and by-pass section requires a base section. Every progressive divider must have at least 3 operating valve sections.

Next, specify the metering valves, by-pass sections and accessories. Begin at the first section after the inlet and continue towards the end section. Separate each entry with a slash.

M2500C / ⁽¹⁾ 20 ⁽²⁾ T ⁽³⁾ PP ⁽⁴⁾ /

(1) Metering valve section (discharge valve on page E2102)

(05, 10, 15, 20, 25, 30, 35, 40 or BP)

BP = By-pass : discharge equal to 0. It is used for extra metering valve if it is necessary.

(2) Number of outlets

- T 2 outlets
- S 0 outlet, use crossport
- SL 1 outlet on left
- SR 1 outlet on right

(3) Accessories

- V Visual indicator **MCSA2502**
- PP Pin indicator **MCVIA2504...**
- CS Electrical indicator **MCSA2503**
- CP Crossport **MCCA2501**

(4) Others accessories

Zone control valves, pressure indicator and rupture disc indicator can be ordered separately.

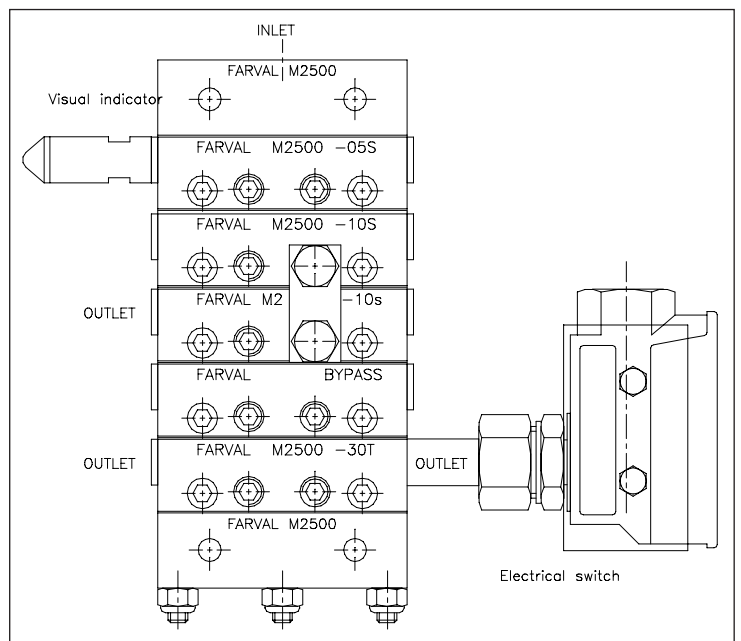
Example :

M2500C5 /05SR, VL/ 10S, CPR/ 10SL/ BP/ 30T,CSR

Note : Unused outlet ports are plugged.

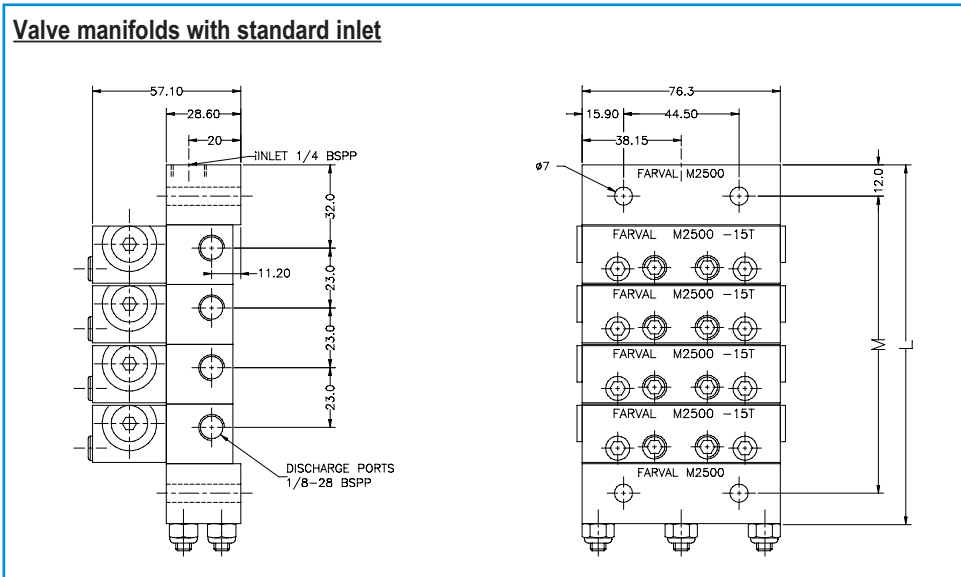
Reference for full assembled Modular divider				
Inlet type	Number of sections	Discharge port		
		1/8-27 NPT	1/8-28 BSP	
Standard	3	M2500B3	M2500C3	
	4	M2500B4	M2500C4	
	5	M2500B5	M2500C5	
	6	M2500B6	M2500C6	
	7	M2500B7	M2500C7	
	8	M2500B8	M2500C8	
	9	M2500B9	M2500C9	
	10	M2500B10	M2500C10	
	Zone oil (MCZ2501)	3	M2500B3Z	M2500C3Z
		4	M2500B4Z	M2500C4Z
5		M2500B5Z	M2500C5Z	
6		M2500B6Z	M2500C6Z	
7		M2500B7Z	M2500C7Z	
8		M2500B8Z	M2500C8Z	
9		M2500B9Z	M2500C9Z	
10		M2500B10Z	M2500C10Z	
Zone grease (MCZ2503)		3	M2500B3X	M2500C3X
		4	M2500B4X	M2500C4X
	5	M2500B5X	M2500C5X	
	6	M2500B6X	M2500C6X	
	7	M2500B7X	M2500C7X	
	8	M2500B8X	M2500C8X	
	9	M2500B9X	M2500C9X	
	10	M2500B10X	M2500C10X	

Note : NPT Thread connections are not available from stock (Specific order).

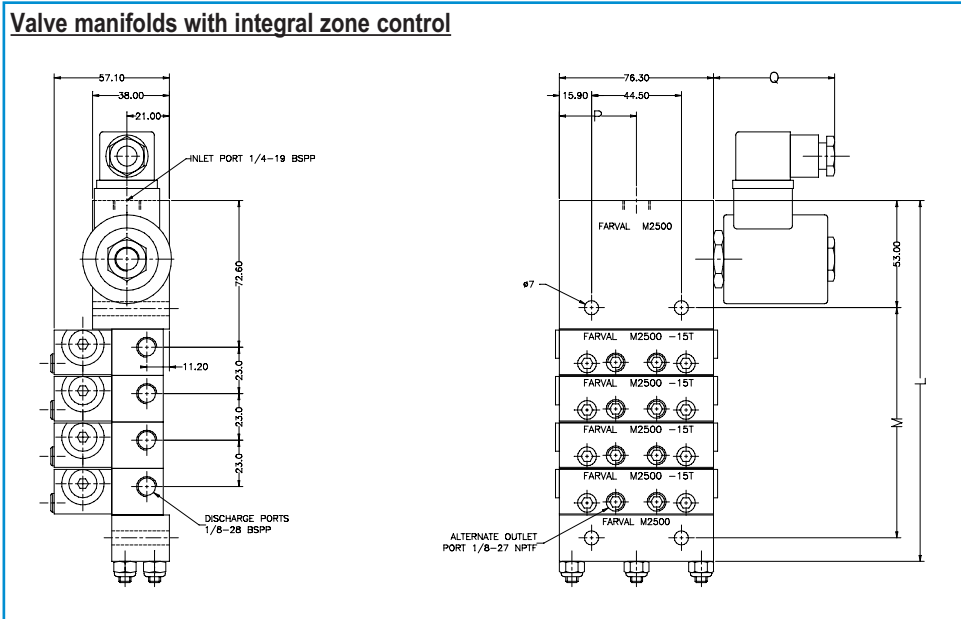


MODULAR PROGRESSIVE DIVIDER TYPE M2500

Dimensions

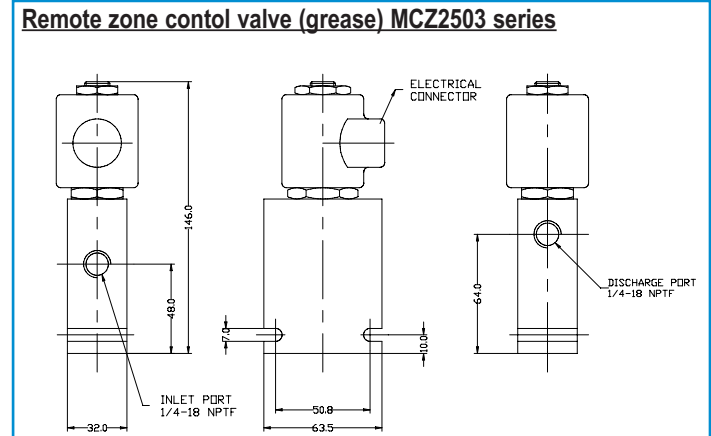
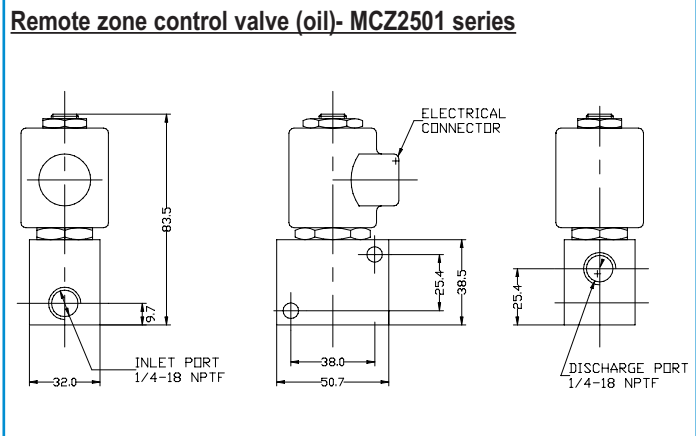


Number of section	M	L
3	91	115
4	114,3	138
5	137,6	161,5
6	161	185
7	185	208
8	208	231
9	231	254
10	254	277



Number of section	M	L
3	91	179
4	114,3	202
5	137,6	228
6	161	248
7	185	272
8	208	296
9	231	319
10	254	342s

Lubricant	P	Q
Oil (MCZ2501)	38	47
Grease (MCZ2503)	57	60



SYSTEM COMPONENTS-PROGRESSIVE DIVIDER TYPE M1000 (NPT) FOR OIL OR GREASE

Description

The M1000 series divider are perfectly adapted for use into Bijur Farval progressive lubrication systems.

Each divider comprises a minimum of 5 elements as explained below :

- 1 inlet segment
- 3 to 8 metering segments.
- 1 outlet segment.

Functioning

Each metering segment of progressive divider comprises a piston which divides the lubricant volume has been delivered under pressure. When the system is pressurised, pistons are positively displaced in sequence one after the other until the cycle is complete at all outlets, having discharged the full metered volume of lubricant.

The progressive divider will keep recycling as long as lubricant is being delivered from the pump.

Figure 1

The lubricant under pressure is introduced to entry port P. Pistons are positioned to the right. Piston B is moving on the left, followed by piston C.

Figure 2

Now, the centre and lower pistons are to the left. The pressurised lubricant is delivered to inlet P which pushes the top piston which can now move to the left discharging lubricant at outlet N°4. Thereby opening an orifice which allows lubricant to push centre piston back towards the right.

Characteristics

- Discharge pressure : 138 bar maxi
- Working temperature : -10 to +85°C.
- Lubricants to be used : oil and grease NLGI 2 maxi.

Metering segment

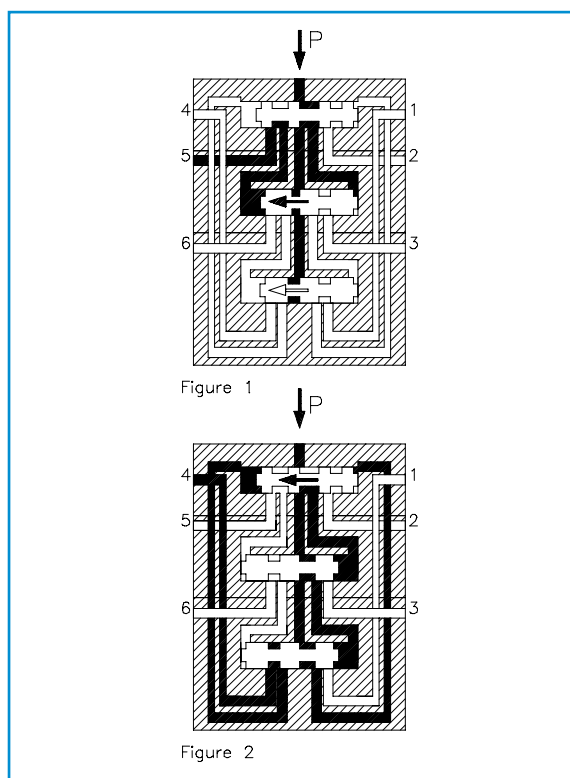
Valve size	Single outlet	Discharge per stroke	Twin outlet	Discharge per stroke
5	100005AS	0,16 cm ³	100005AT	0,08 cm ³
10	100010AS	0,32 cm ³	100010AT	0,16 cm ³
15	100015AS	0,48 cm ³	100015AT	0,24 cm ³

Outside dimensions

See overleaf.



System outline



Ordering instructions

Specify description, number of outlets and discharge for each segment.

Example

Progressive divider, 3 segments with 6 outlets 0,16 cm³
Reference **M10003**

SYSTEM COMPONENTS-PROGRESSIVE DIVIDER TYPE M1000 (NPT) FOR OIL OR GREASE

Number of outlets modification

Each metering segments has 2 equal discharge ports. A progressive divider which has 4 metering segments will have 8 discharge ports. However, if an odd number at outlets is required, or a different discharge for one port, cross ports are available and the volume is doubled. Discharge ports which are not used are plugged.

- Combination of 2 adjacent outlets on separated segments.
Remove both hexagonal top screws and replace them with a cross port ref: 322652.

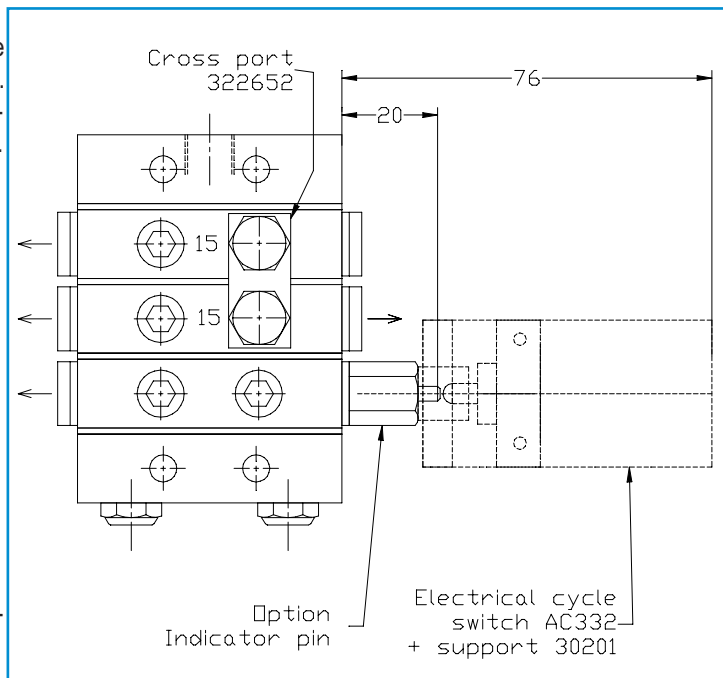
Closing plug 1/8NPT	Cross port
HP603	322652

Option

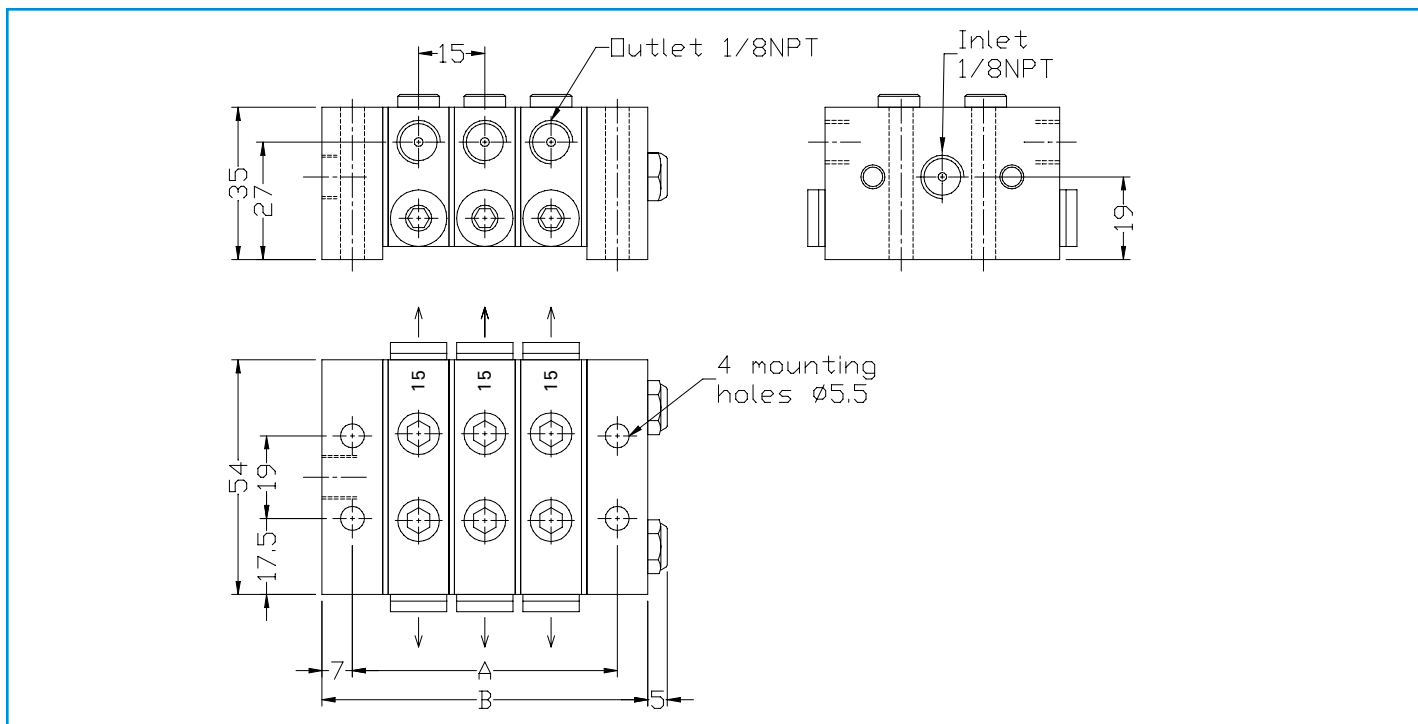
Indicator pins are available to visually check the divider is correctly-functioning.
For ordering, add to the reference, 157 as a suffix.

Example : divider 6 outlets with indicator pin.
Reference M10003157.

Note : indicator pin is only available on discharge port 0,24 cm³



Number of segments	Sizes		Référence
	A	B	
3	59,4	73,1	M10003
4	74,2	87,9	M10004
5	89	102,6	M10005
6	103,7	117,4	M10006
7	118,5	132,2	M10007
8	133,3	147	M10008



SYSTEM COMPONENTS-PROGRESSIVE DIVIDER TYPE M1000 (BSP) FOR OIL OR GREASE

Description

The M1000 series divider are perfectly adapted for use into Bijur Farval progressive lubrication systems.

Each divider comprises a minimum of 5 elements as explained below :

- 1 inlet segment
- 3 to 8 metering segments.
- 1 outlet segment.

Functioning

Each metering segment of progressive divider comprises a piston which divides the lubricant volume has been delivered under pressure. When the system is pressurised, pistons are positively displaced in sequence one after the other until the cycle is complete at all outlets, having discharged the full metered volume of lubricant.

The progressive divider will keep recycling as long as lubricant is being delivered from the pump.

Figure 1

The lubricant under pressure is introduced to entry port P. Pistons are positioned to the right. Piston B is moving on the left, followed by piston C.

Figure 2

Now, the centre and lower pistons are to the left. The pressurised lubricant is delivered to inlet P which pushes the top piston which can now move to the left discharging lubricant at outlet N°4. Thereby opening an orifice which allows lubricant to push centre piston back towards the right.

Characteristics

- Discharge pressure : 138 bar maxi
- Working température : -10 to +85°C.
- Lubricants to be used : oil and grease NLGI 2 maxi.

Metering segment

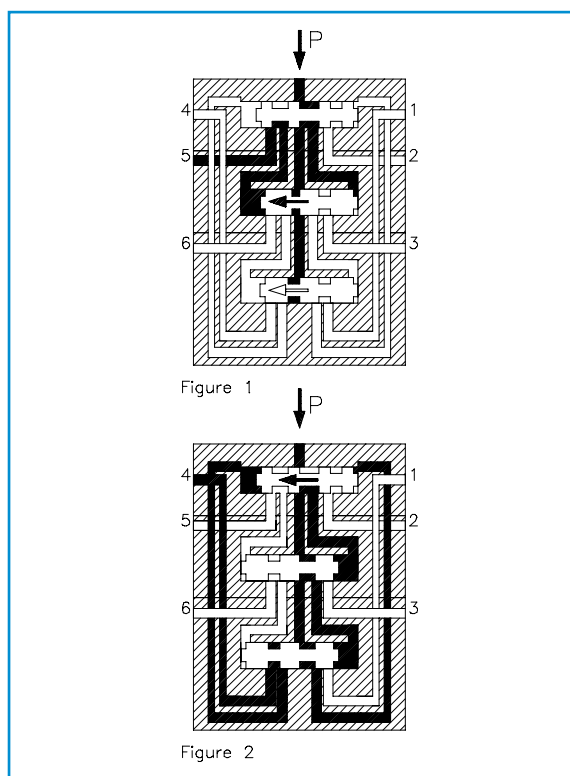
Valve size	Single outlet	Discharge per stroke	Twin outlet	Discharge per stroke
5	100005ASBSP	0,16 cm ³	100005ATBSP	0,08 cm ³
10	100010ASBSP	0,32 cm ³	100010ATBSP	0,16 cm ³
15	100015ASBSP	0,48 cm ³	100015ATBSP	0,24 cm ³

Outside dimensions

See overleaf.



System outline



Ordering instructions

Specify description, number of outlets and discharge for each segment.

Example

Progressive divider, 3 segments with 6 outlets 0,16 cm³
Reference **M10003**

SYSTEM COMPONENTS-PROGRESSIVE DIVIDER TYPE M1000 (BSP) FOR OIL OR GREASE

Number of outlets modification

Each metering segments has 2 equal discharge ports. A progressive divider which has 4 metering segments will have 8 discharge ports. However, if an odd number at outlets is required, or a different discharge for one port, cross ports are available and the volume is doubled. Discharge ports which are not used are plugged.

- Combination of 2 adjacent outlets on separated segments.
Remove both hexagonal top screws and replace them with a cross port ref: 322651.

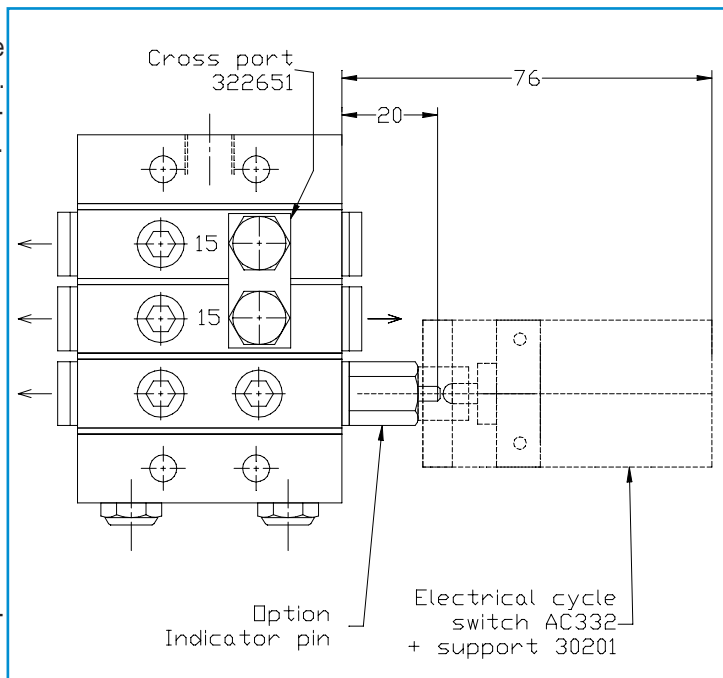
Closing plug G1/8	Cross port
AR164	322651

Option

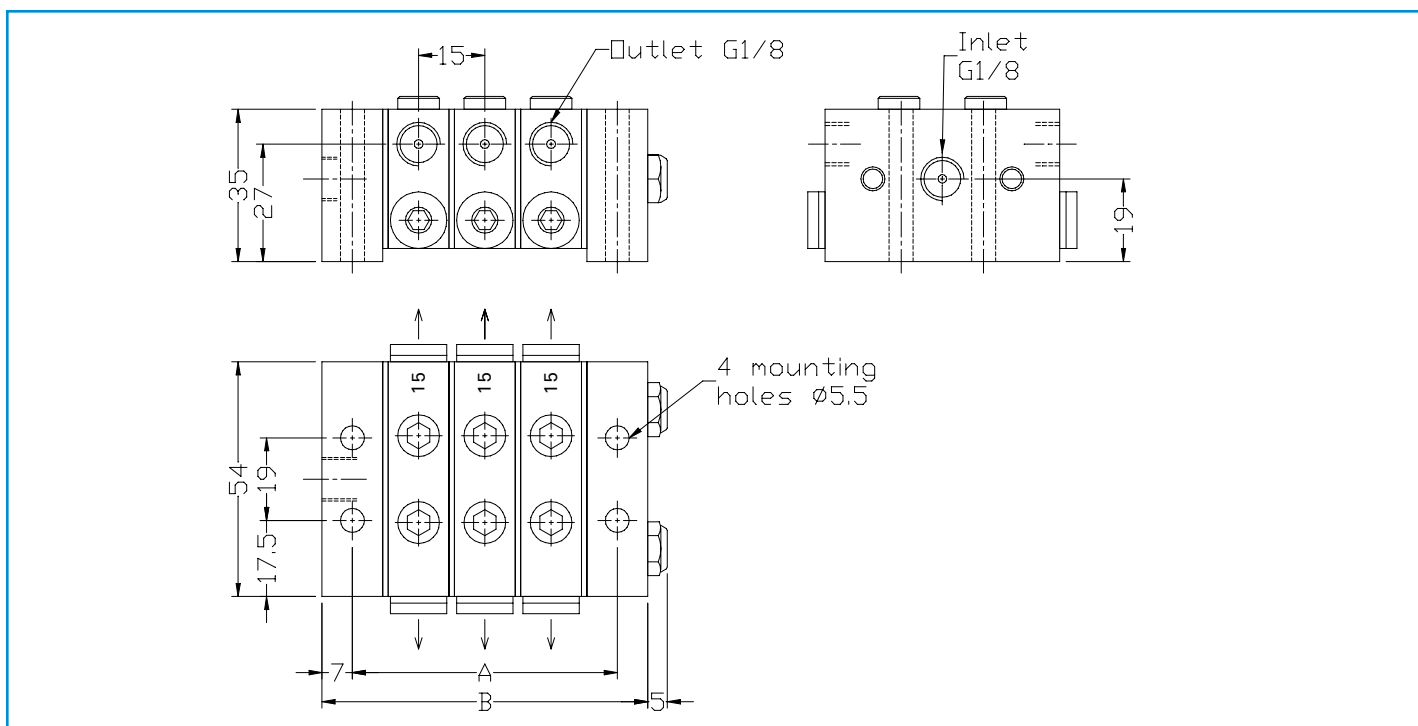
Indicator pins are available to visually check the divider is correctly-functioning.
For ordering, add to the reference, 157 as a suffix.

Example : divider 6 outlets with indicator pin.
Reference M10003157.

Note : indicator pin is only available on discharge port 0,24 cm³



Number of segments	Sizes		Référence
	A	B	
3	59,4	73,1	M10003
4	74,2	87,9	M10004
5	89	102,6	M10005
6	103,7	117,4	M10006
7	118,5	132,2	M10007
8	133,3	147	M10008



SYSTEM COMPONENTS - PROGRESSIVE DIVIDER TYPE UR FOR OIL OR GREASE

Description

The U...R series dividers are perfectly adapted for use in Bijur Farval progressive lubrication systems.

Dividers with 4, 6, 8 and 12 outlets are available. Crossport can be mounted and the volume discharge is doubled.

Functioning

Each progressive divider comprises from 2 to 6 pistons which divide the lubricant volume which has been delivered under pressure. When the system is pressurised, pistons are positively displaced in sequence one after the other until the cycle is complete. All outlets, having discharged the full metered volume of lubricant.

The progressive divider will keep recycling as long as lubricant is being delivered from the pump.

Figure 1 :

The lubricant under pressure is introduced to entry port P. Pistons are positioned to the right. The centre piston is moving to the left, followed in sequence by the bottom piston.

Figure 2 :

Now, the centre and lower pistons are to the left. The pressurised lubricant is delivered to inlet P which pushes the top piston which can now move to the left discharging lubricant at outlet N°4. Thereby opening an orifice which allows lubricant to push centre piston back towards the right.

(See system outline).

Characteristics

- Discharge : 0,3 Cm³ / stroke
- Working pressure : 14 bar mini.
60 bar max for oil
150 bar for grease
- Working temperature : -10 to +85°C
- Lubricant to be used : oil with a viscosity of 150Cst
mini to grease grade NLGI2

For ordering

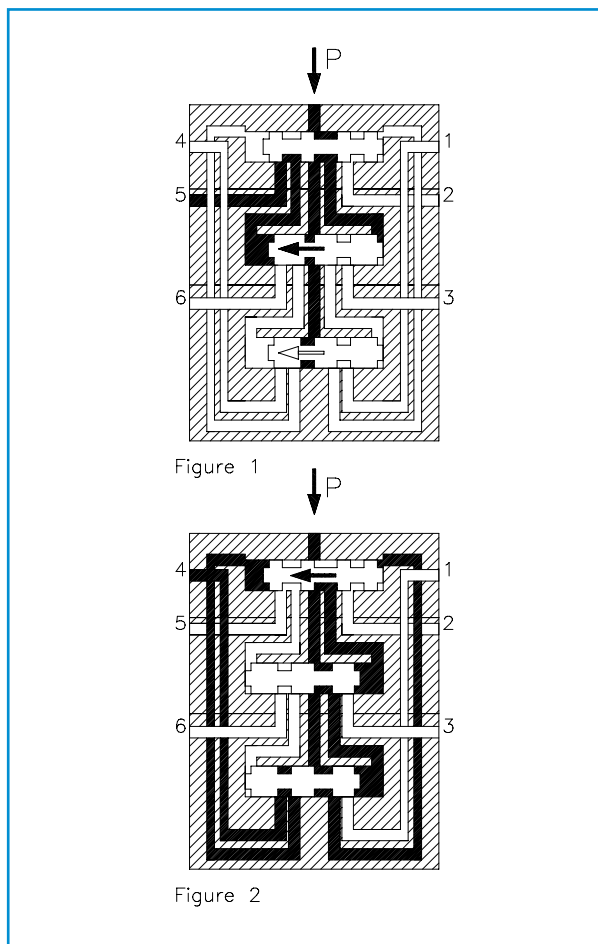
To define the exact part number, specify the number of outlets.

Example

Progressive divider 6 outlets
Reference : **U6R**



System outline

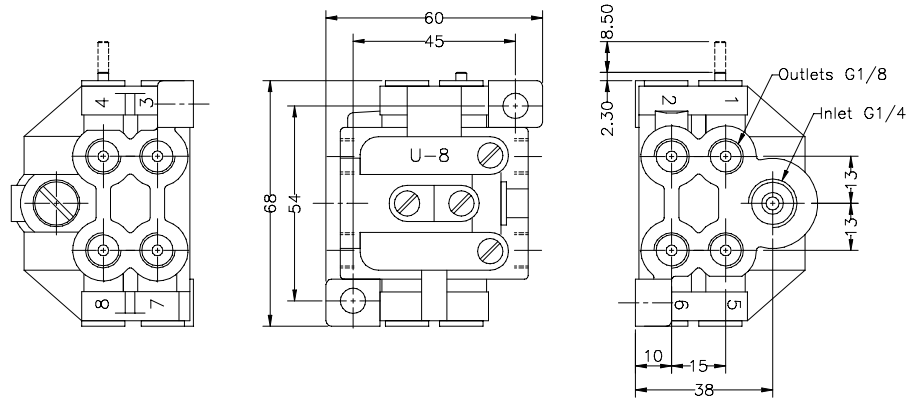


Outside dimensions

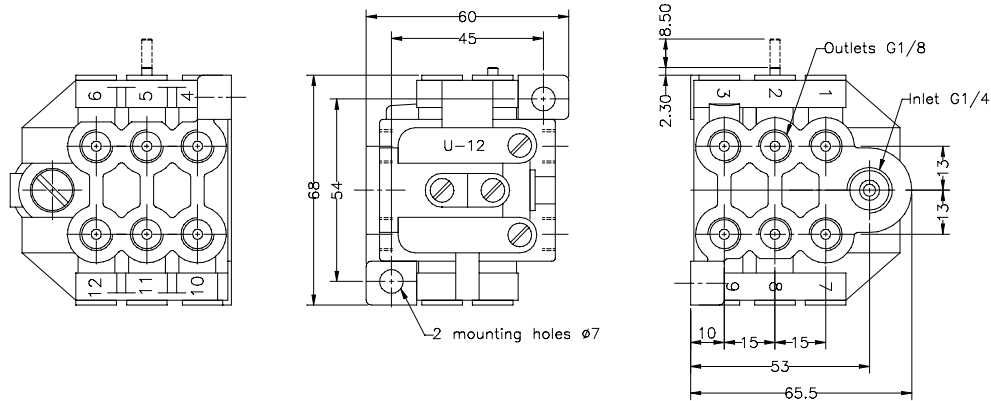
See overleaf.

OUTSIDE DIMENSIONS - PROGRESSIVE DIVIDER TYPE UR FOR OIL OR GREASE

Model U4R, U4RL
Model U6R, U6RL
Model U8R, U8RL



Model U12R, 12RL

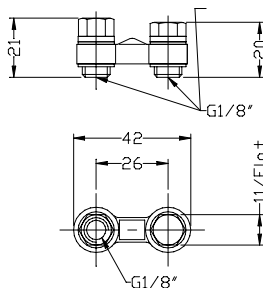


Type	Number of outlets	Discharge per stroke	Outlet identification	Weight (Kg)
U4R	4	0,3 cm ³	1.4.5.8	0,32
U6R	6		1.3.4.5.7.8	0,31
U8R	8		1 à 8	0,31
U12R	12		1 à 12	0,42

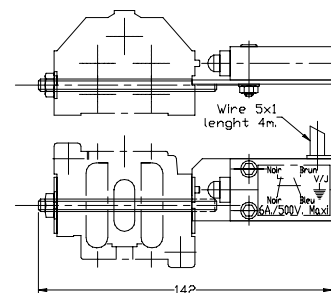
For oil application,
add "L" as a suffix to the type.

Accessories

Crossport
ref: **AU26**



Electrical switch
ref: **AE439**



SYSTEM COMPONENTS - GREASTAR MULTI-OUTLET KITS

Description

The GREASTAR multi outlet kit is perfectly adapted for use with LUBE-STATION or a manual pump on small machines, (maximum of 8 lubrication points with lubestation) which required a small amount of lubricant per day.

Functioning

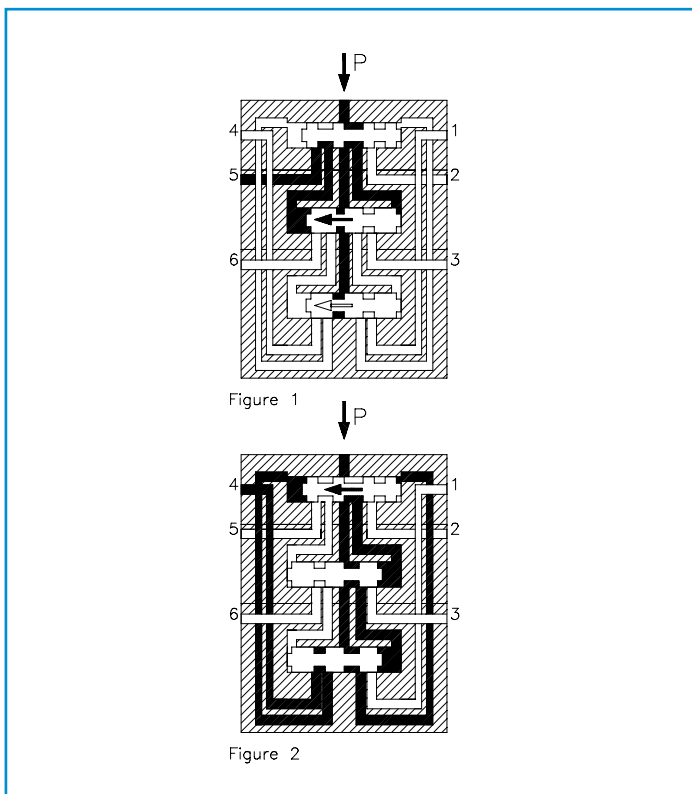
A kit comprises a progressive divider type U...R mounted on a support plate. The divider distributes the lubricant to each lubrication point.

Characteristics

- Discharge : 0,3 cm³/outlet / stroke.
- Working pressure : 150 bar max.
- Nb. of outlets : 2 to 8 (other, contact Bijur).
- Tubing : use tubes with length of 1 metre max, int dia 2,5 mm min (other, contact Bijur).
- Lubricant to be used : grease NLGI 3/0 to NLGI 2.



System outline



Ordering instructions

To define the part number, use the table below :

Nb of outlets	Reference	Description
2	FB-524	Kit Greastar 2 outlets
3	FB-525	Kit Greastar 3 outlets
4	FB-504	Kit Greastar 4 outlets
5	FB-526	Kit Greastar 5 outlets
6	FB-505	Kit Greastar 6 outlets
7	FB-527	Kit Greastar 7 outlets
8	FB-506	Kit Greastar 8 outlets

Note :

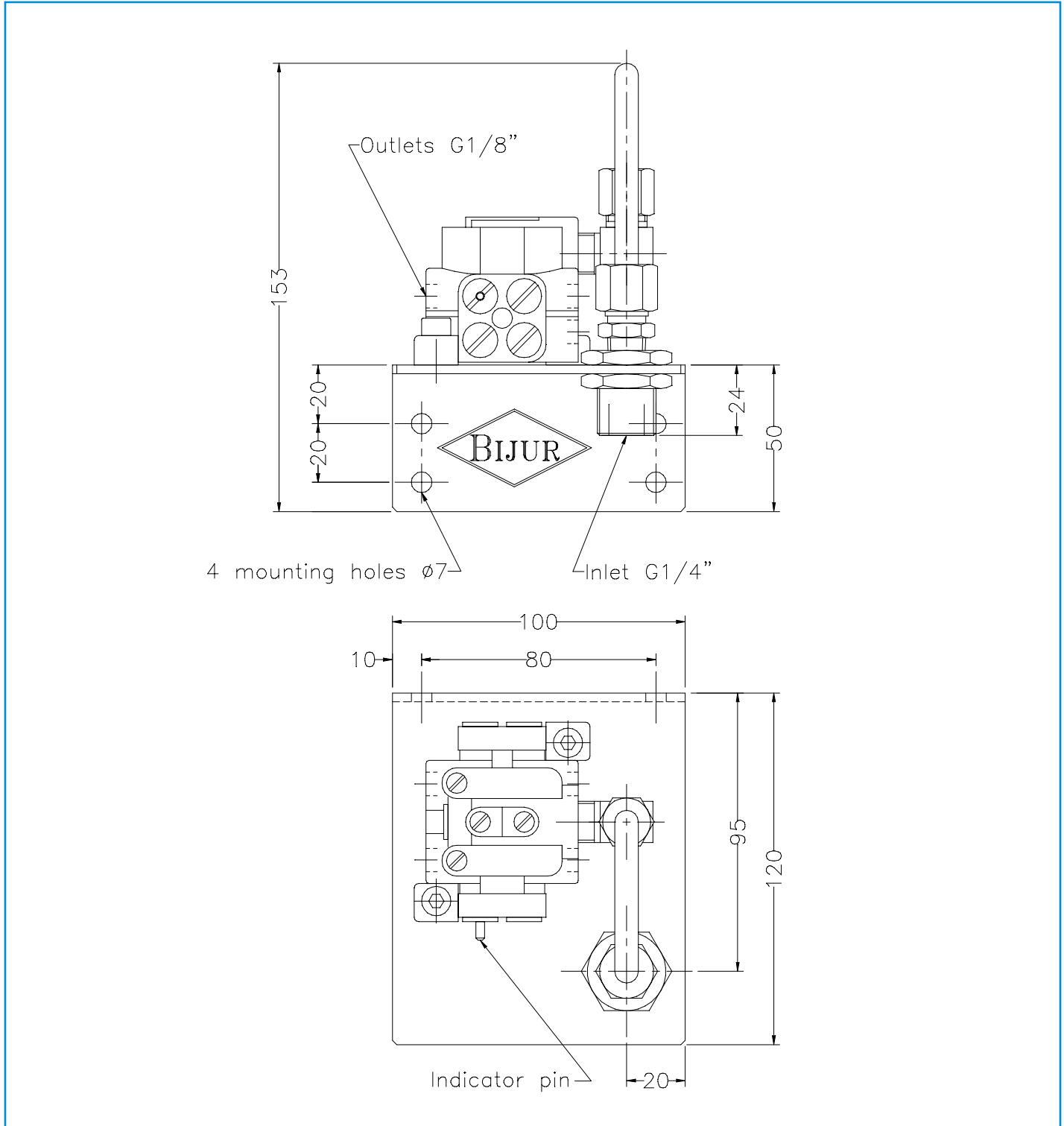
Automatic lubricator LUBESTATION can be used with a maximum of 8 outlets, (int dia 4mm min).

Outside dimensions

See overleaf.

SYSTEM COMPONENTS - GREASTAR MULTI-OUTLET KITS

Kit Greastar FB504



SYSTEM COMPONENTS-PROGRESSIVE DIVIDER VALVE TYPE FD

Description

FD valves are designed for use with progressive oil or grease lubrication systems. They are of two pieces, steel construction with viton o-ring seals. FD valves will serve 2, 3, 4 or 6 points of lubrication.

The 2,3 and 4 point divider valve require 1.3 cm³ to complete full cycle.

The divider valve **FD-2** divide this volume in 2 equal outputs.

$$2 \times 0.65 \text{ cm}^3 = 1.30 \text{ cm}^3/\text{cycle}$$

The divider valve **FD-3** divide this volume in 3 equal outputs.

$$2 \times 0.325 \text{ cm}^3 + 1 \times 0.65 \text{ cm}^3 = 1.30 \text{ cm}^3/\text{cycle}$$

The divider valve **FD-4** divide this volume in 4 equal outputs.

$$4 \times 0.325 \text{ cm}^3 = 1.30 \text{ cm}^3/\text{cycle}$$

An **FD-6** divider valve requires 0.98 cm³ to complete full cycle and will divide this volume into:

$$6 \times 0.163 \text{ cm}^3 = 0.98 \text{ cm}^3/\text{cycle}$$

Functioning

The FD Divider valve is a self-contained, multiple outlet, series progressive valve. The term progressive means that each piston must complete its stroke, discharging a measured amount of lubricant before the following piston operates. As long as lubricant is supplied under pressure to the inlet section, each piston will continue to operate in a progressive manner.

When lubricant flow is interrupted to the inlet, piston movement stops. When flow resumes, piston movement commences at the same point in the discharge cycle. Feed lines deliver lubricant from the valve block to individual lube points. Should a discharge line become blocked, it will stop all the valves operating.

Option

Indicators pin are available to alert a blockage

Characteristics

- Pressure max: 207 bar
- Temperature: from -10°C to +85°C
- Lubricant: SAE 10 oil to NLGI2 grease
- Net weight: 0.68 kg
- Dimensions: 75 x 45 x 29



For ordering

Specify part number in using table below.

Standard model	With cycle indicator pin	Number of lube outlets
FD-2	FDP-2	2
FD-3	FDP-3	3
FD-4	FDP-4	4
FD-6		6

Example

A divider valve, 4 outlets, with cycle indicator pin.

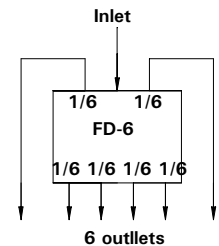
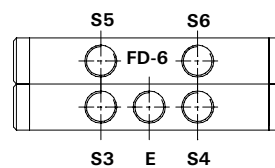
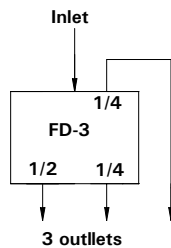
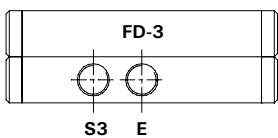
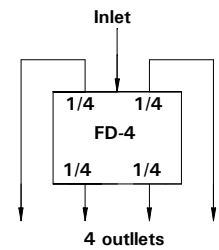
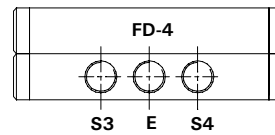
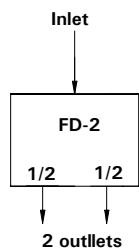
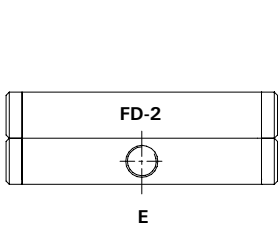
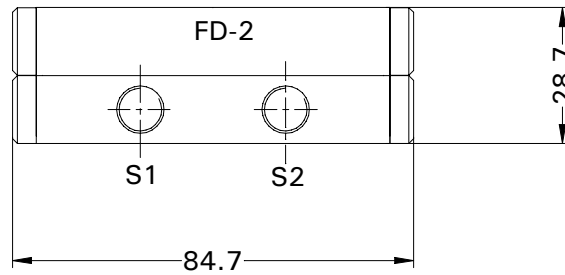
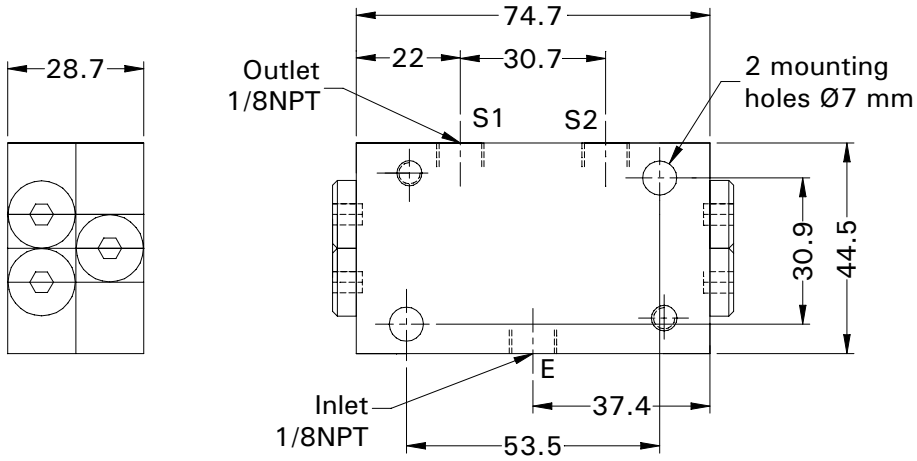
Reference: **FDP-4**

Outside dimensions

See overleaf

SYSTEM COMPONENTS-PROGRESSIVE DIVIDER VALVE TYPE FD

Dimensions



SYSTEM COMPONENTS - DUAL LINE VALVES TYPE DD FOR OIL OR GREASE

Description

Valves DD are perfectly adapted for use in dual line systems either for oil or grease. They are fully and individually adjustable in regard to discharge quantity. Each valve serves two bearings, but, by a simple method of cross-porting, it can feed one bearing with double the amount of lubricant..

Functioning

Pressurized lubricant entering valve forces pilot piston down, allowing pressure to be applied to top of main piston, which begin then to move down.

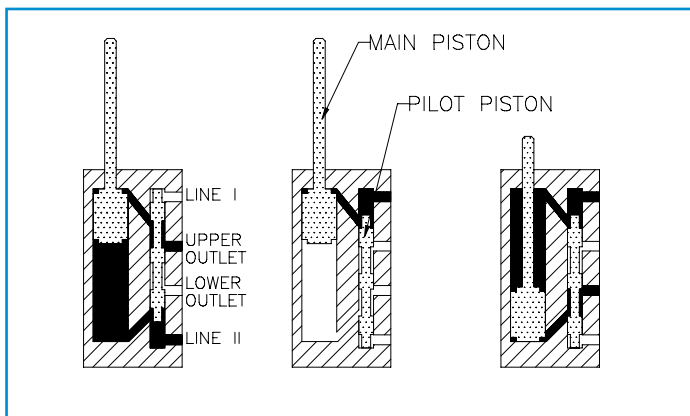
Main piston moves down under pressure forcing lubricant from its chamber, past the lower land of the pilot piston and out the discharge line to the bearing.

For the opposite outlet, the line which was under pressure is released, and the line which was depressurized is under pressure.

Characteristics

- Discharge : 0,1 to 4,7 cm³/outlet
- Working pressure : 50 to 280 bar max.
- Working temperature : - 20 to + 80°C.
- Lubricants to be used : grease NLGI 2 max (worked penetration W>265)

System outline



Ordering instructions

To define the exact part number, use the following table :

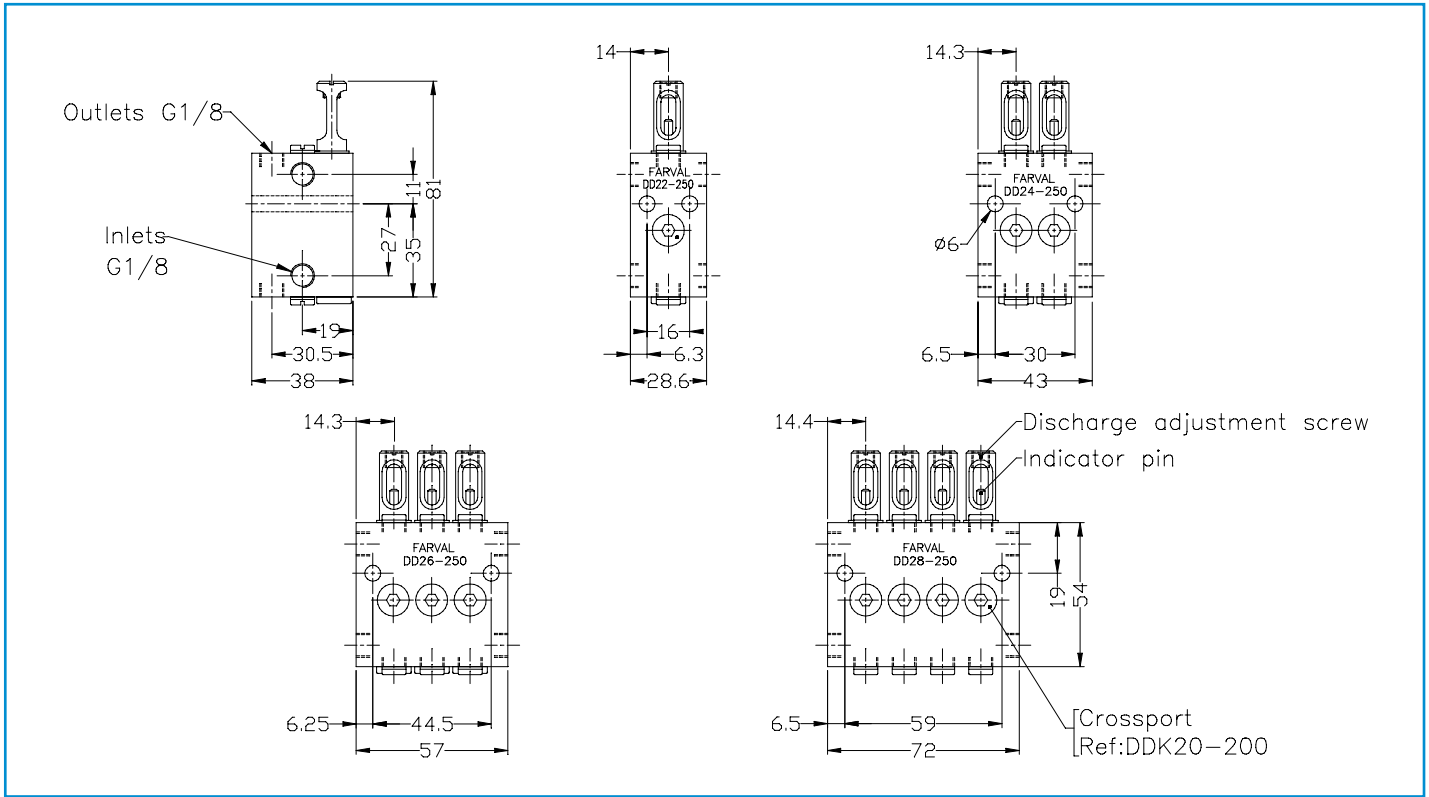
Type	Number of outlets	Discharge cm ³ /cycle	Reference
DD22	2	0,1 à 0,6	DD22250
DD24	4	0,1 à 0,6	DD24250
DD26	6	0,1 à 0,6	DD26250
DD28	8	0,1 à 0,6	DD28250
DD52	2	0,18 à 4,7	DD52250
DD54	4	0,18 à 4,7	DD54250
DD56	6	0,18 à 4,7	DD56250
DD58	8	0,18 à 4,7	DD58250

Outside dimensions

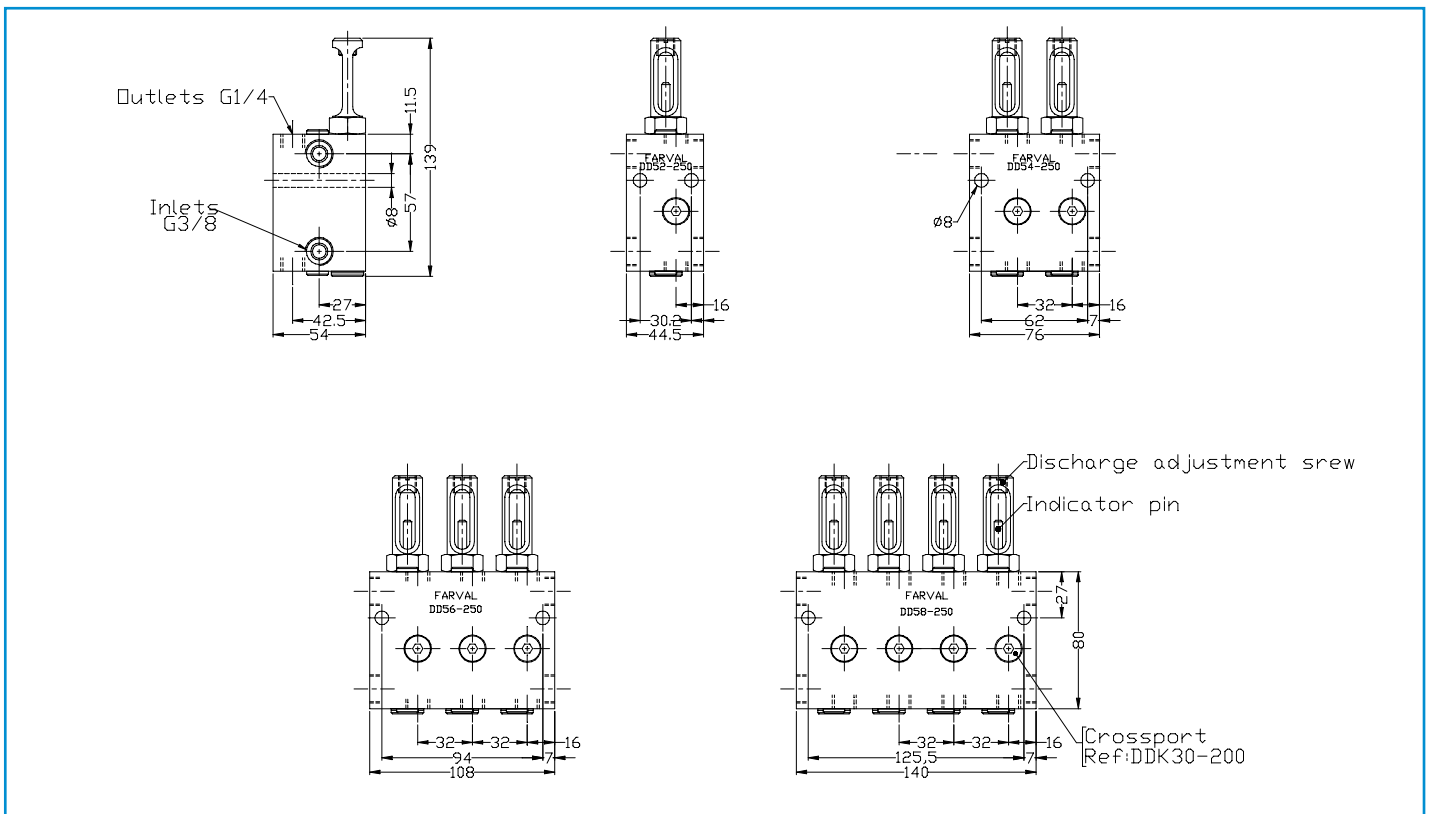
See overleaf.

OUTSIDE DIMENSIONS - VALVES TYPE DD

Dual line valve type DD20



Dual line valve type DD50



SYSTEM COMPONENTS - DISPENSING VALVES TYPE CVV

Description

Dispensing valves type CVV are perfectly adapted to supply a fixed amount of lubricant with high accuracy before to assemble small components as for instance brakes, electrical wire connectors, door locks, roller bearings... .

The discharge volume can be adjusted by a screw. In addition, the system is capable of suction backing, so there is no drops backflow.

Fonctioning

Position stand-by

The pilot piston which opens the release air port moves up and the grease pressure is applied to the top and bottom faces of the main piston. The main piston moves upwards as a result of the ensuing difference of area in pressure on its sides.

Position dispensing

When the pressurized air is introduced on air piston, the pilot piston is pushed down and the grease comes through the surrounding of it. Grease applied on the top face of the main piston pushes down it. Lubricant which was contained under the main piston is dispensed.

Position return of the pilot piston

When the air is released, the pilot piston returned to its initial position under the effect of the spring. At this time, a suction effect is created under the pilot piston to avoid drops. The CVV valve is ready for the next cycle.

(See system outline)

Characteristics

- Discharge: see table overleaf
- Pressure:
 - Air inlet de 4 to 7 bar
 - Grease de 60 to 210 bar (excepted for CVV10, 100 bar mini).
- Back pressure: 10 bar max.
- Lubricants to be used: grease NLGI 00 to 2 max.

For ordering

To define the exact part number, use table overleaf.

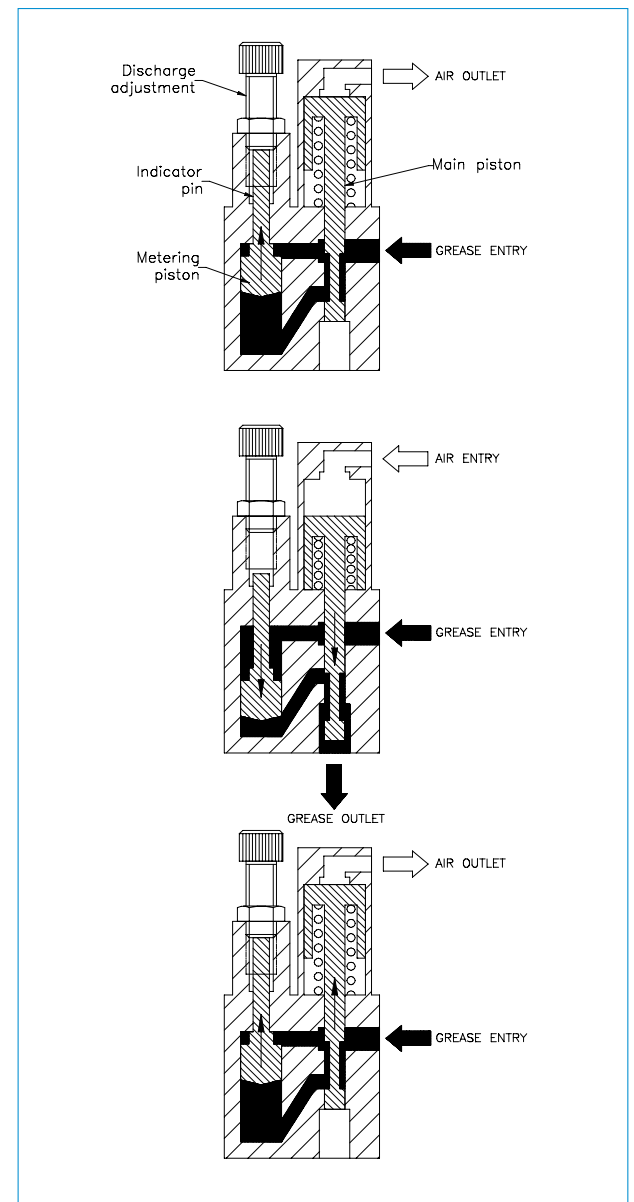
Dispensing valve **CVV11B**
Reference **44796100**

Outside dimensions

See overleaf.



System outline



SYSTEM COMPONENTS - DISPENSING VALVES TYPE CVV

Instructions

1) **AIR**
Use dry, lubricated and filtered air supply

2) **INSTALLATION**
Place the dispensing valve close to element to lubricate. The discharge port has a thread of 1/8G to adapt all types of nozzles. Do not use nylon pipe for the discharge.

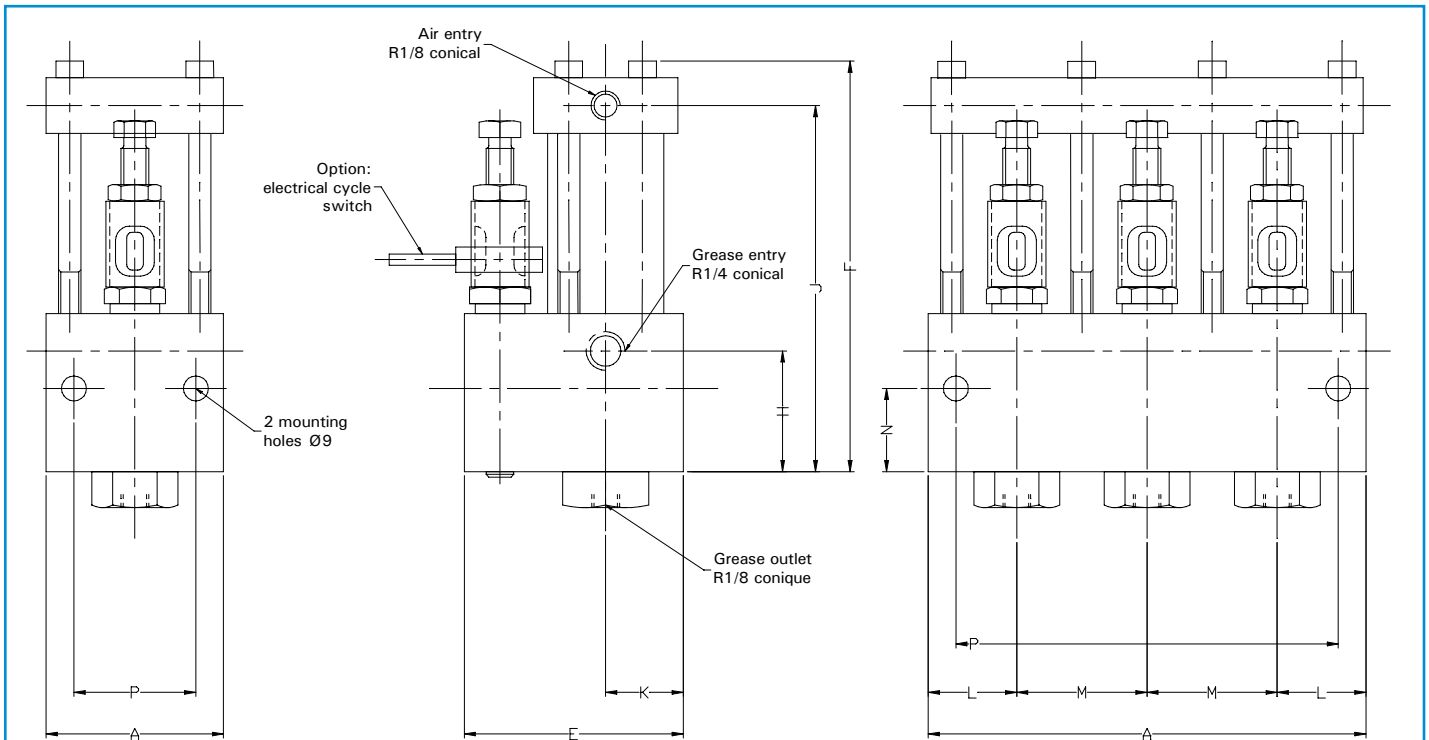
Failures

No discharge:

- Control the air supply circuit.
- Control main piston displacement.

Irregular discharge:

- Grease which contains air.
(you must use clean lubricant without air particles).



Type	Discharge cm ³ /cycle	A	E	F	G	H	J	K	L	M	N	P	Weight (Kg)	Reference	Number of outlets
CVV11B	0,025/0,2	64	79	150	57	43,5	132	28	32	47	30	44	2,8	44796100	1
CVV12B		111										91	5,3	44796200	2
CVV13B		158										138	7,8	44796300	3
CVV14B		205										185	10	44796400	4
CVV31B	0,04/1,2	64	79	150	57	43,5	132	28	32	47	30	44	2,8	44797100	1
CVV32B		111										91	5,3	44797200	2
CVV33B		158										138	7,8	44797300	3
CVV34B		205										185	10	44797400	4
CVV51B	0,15/5	64	80	172	79	44,5	154	28	32	47	30	44	3,8	44797500	1
CVV52B		111										91	6,8	44797600	2
CVV53B		158										138	9,8	44797700	3
CVV54B		205										185	13	44797800	4
CVV61B	1,4/15	64	89	182	89	44,5	164	28	32	47	30	44	4,6	44797900	1
CVV62B		111										91	8,2	44797800	2

FLUIDFLEX COMPONENTS - JET ASSEMBLIES AND NOZZLES

Description

These jet assemblies are used for all types of spraying applications: cooling, lubricating or process wetting. Three versions are available: flexible, rigid extension or manifold jet assembly.

Basic model is equipped with standard nozzle B 136. For specific spray pattern, it must be specified when ordering. Liquid flow discharge is adjustable via a needle screw located on the head. Check valve B 6999 can be mounted on each jet to prevent drainback during shut-down and to permit more rapid response time at jet tip when unit is actuated.

Manifold jet assemblies comprise an entry jet section, an end jet section and 3 intermediate jet sections.



For ordering

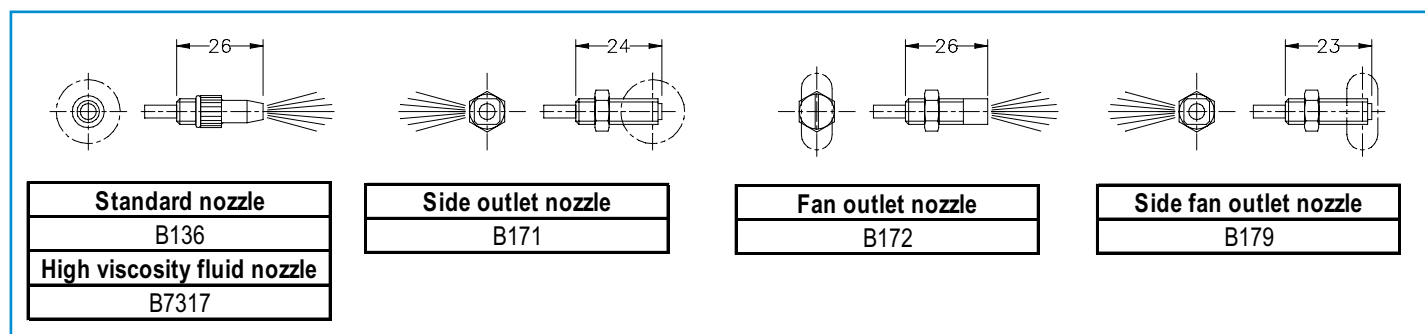
To define the exact part number, use the tables below.

Outside dimensions

See overleaf.

Figure	Description	A	B	Reference
1	Flexible jet assembly			B101
2	Rigid jet assembly	73	0	B1023
	Rigid jet assembly	101,5	3	B1024
	Rigid jet assembly	127	28,5	B1025
	Rigid jet assembly	152,5	54	B1026
	Rigid jet assembly	183	79,5	B1027
	Rigid jet assembly	203	104,5	B1028
	Rigid jet assembly	228,5	130	B1029
	Rigid jet assembly	254	155,5	B10210
	Rigid jet assembly	265	166,5	B102
	Rigid jet assembly	305	206,5	B10212
	Rigid jet assembly	355,5	257	B10214
	Rigid jet assembly	406,5	306	B10216

Figure	Désignation	A	B	Référence	
2	Rigid jet assembly	457	358,5	B10218	
	Rigid jet assembly	508	409,5	B10220	
	Rigid jet assembly	558,5	460	B10222	
	Rigid jet assembly	609,5	511	B10224	
	Rigid jet assembly	660,5	562	B10226	
	Rigid jet assembly	711	612,5	B10228	
	Rigid jet assembly	762	663,5	B10230	
	Rigid jet assembly	813	714,5	B10232	
	Rigid jet assembly	863,5	765	B10234	
	3	Short jet assembly			B103
	4A	Inlet "Manifold" jet assembly			B7527
4B	Intermediate "Manifold" jet assembly			B7525	



OUTSIDE DIMENSIONS - JET ASSEMBLIES AND NOZZLES

Figure 1

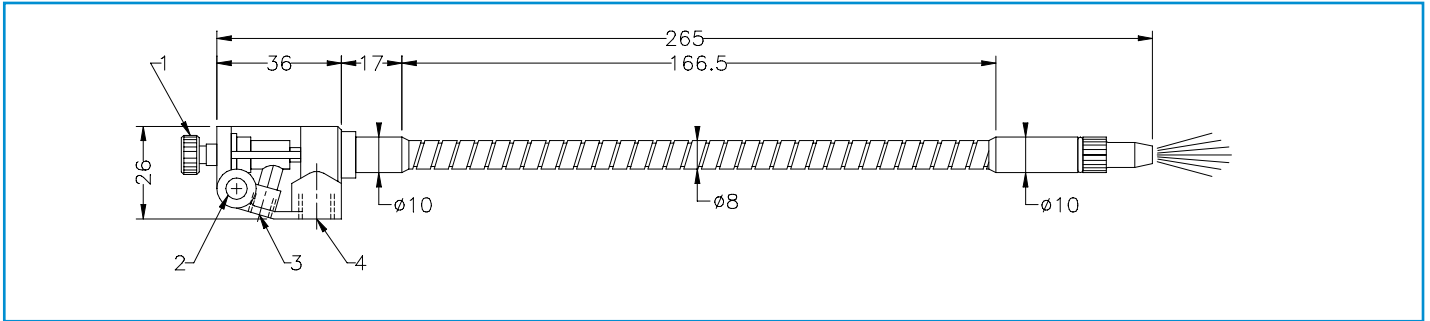


Figure 2

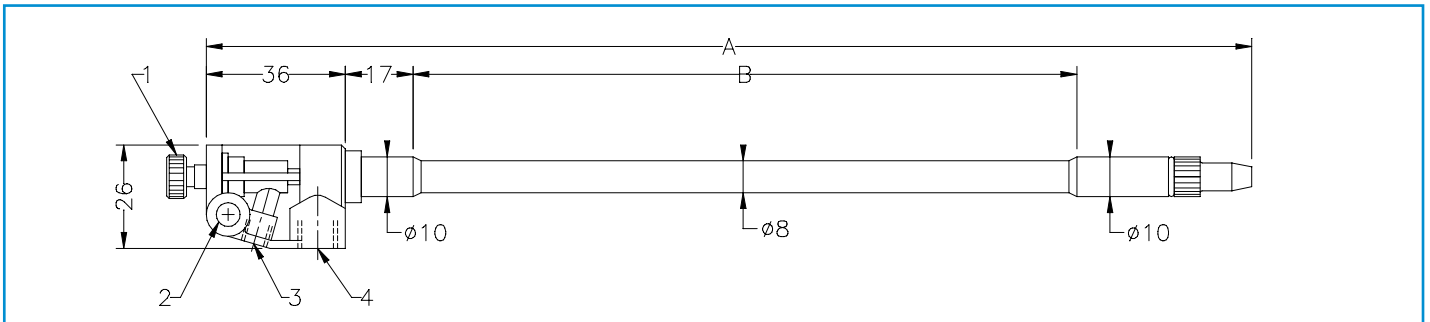


Figure 3

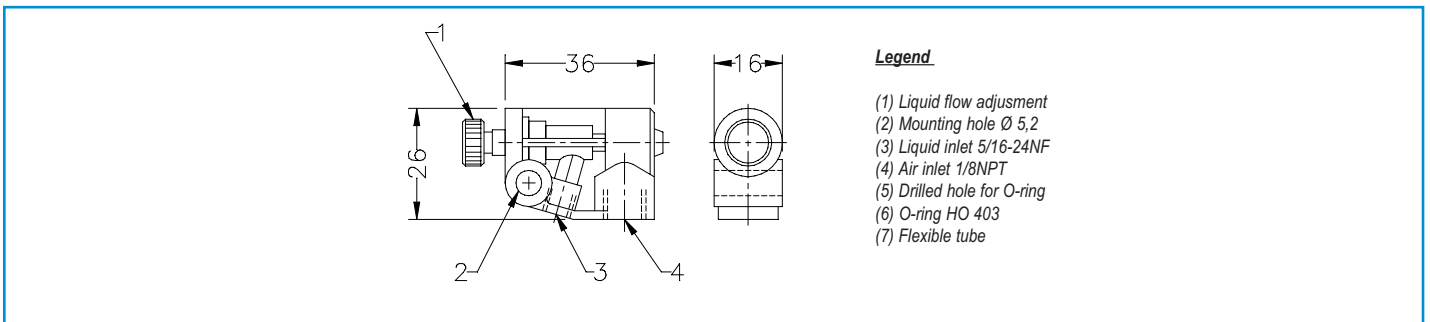
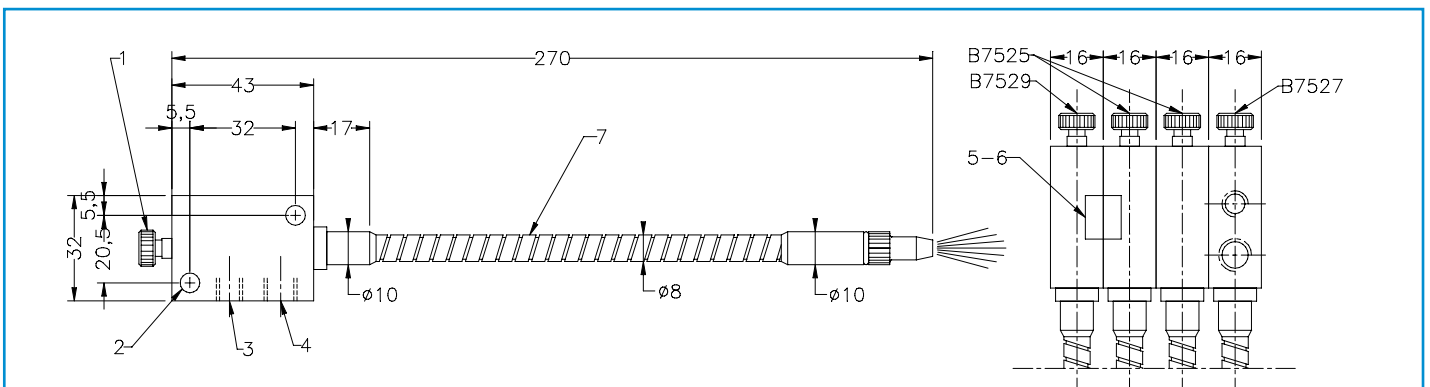


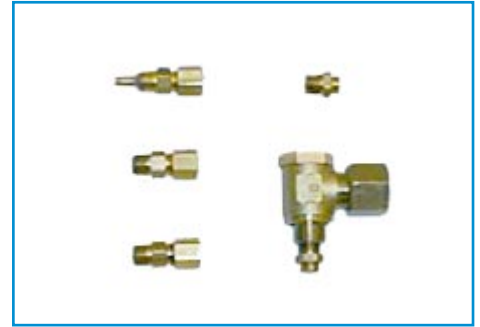
Figure 4



SYSTEM COMPONENTS - NOZZLES FOR MICRO-FOG LUBRICATOR

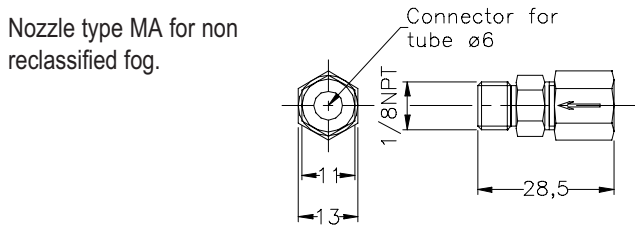
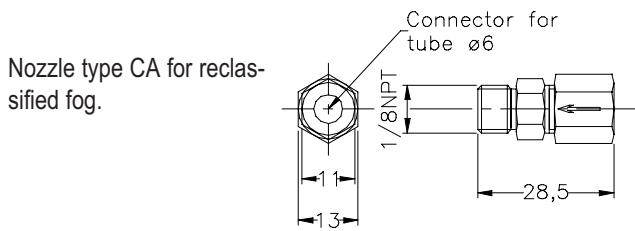
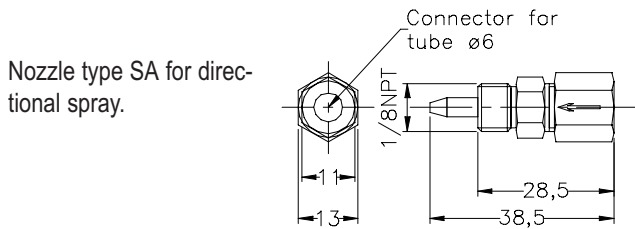
Description :

These nozzles have a calibrated orifice to regulate the air oil mixture and are designed for use with micro-fog lubricators to lubricate various moving machine components.



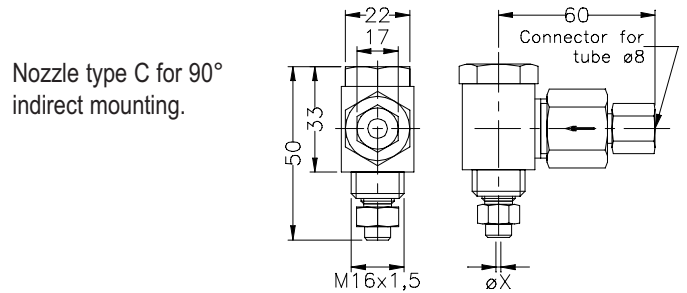
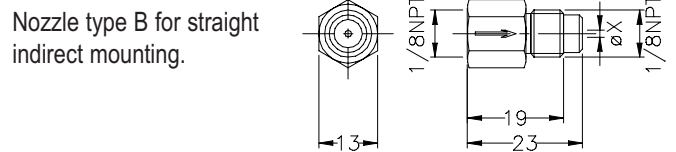
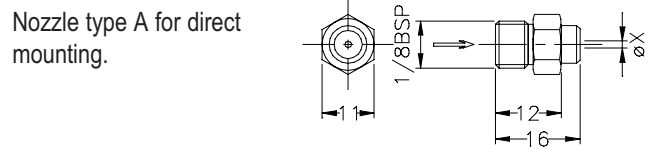
Nozzles for Mist lubricator :

3 different models are available.



Nozzles for Fog-Lub lubricator :

3 different models are available.



Discharge value	Nozzle reference		
	SA	CA	MA
1	SA1	CA1	MA1
2	SA2	CA2	MA2
3	SA3	CA3	MA3
4	SA4	CA4	MA4
5	-	-	MA5

Needle øX	Nozzle reference		
	Type A	Type B	Type C
0,6	AR150	AR132	AR896
0,7	AR151	AR133	AR895
0,8	AR152	AR134	AR894
1,2	AR153	AR135	AR893



CONTINUOUS FLOW VALVES

Control unit type C

F1101A



SYSTEM COMPONENTS - CONTROL UNIT TYPE C

Description :

Control units type C are oil proportioning devices for continuous systems which must be mounted on each lubrication point. Control units type CSA are mounted directly on the bearing, CJB and CJD are screwed into tapped holes in junctions, CT are mounted in junction headers. Other types are directly fitted on the machine lubrication points.

Functioning :

Control unit has hydraulic resistance which comprises an integrated, fixed calibrated spiral orifice to control oil flow discharge. The lubricator delivers a certain amount of oil into the distribution system which is calibrated to each point by a control unit. Each device has a letter and a number stamped on the flat surface of the body. It feeds in one single direction as indicated by an arrow. Standard flow rates from "5/0" (extra slow) to "5" (extra fast) are available.

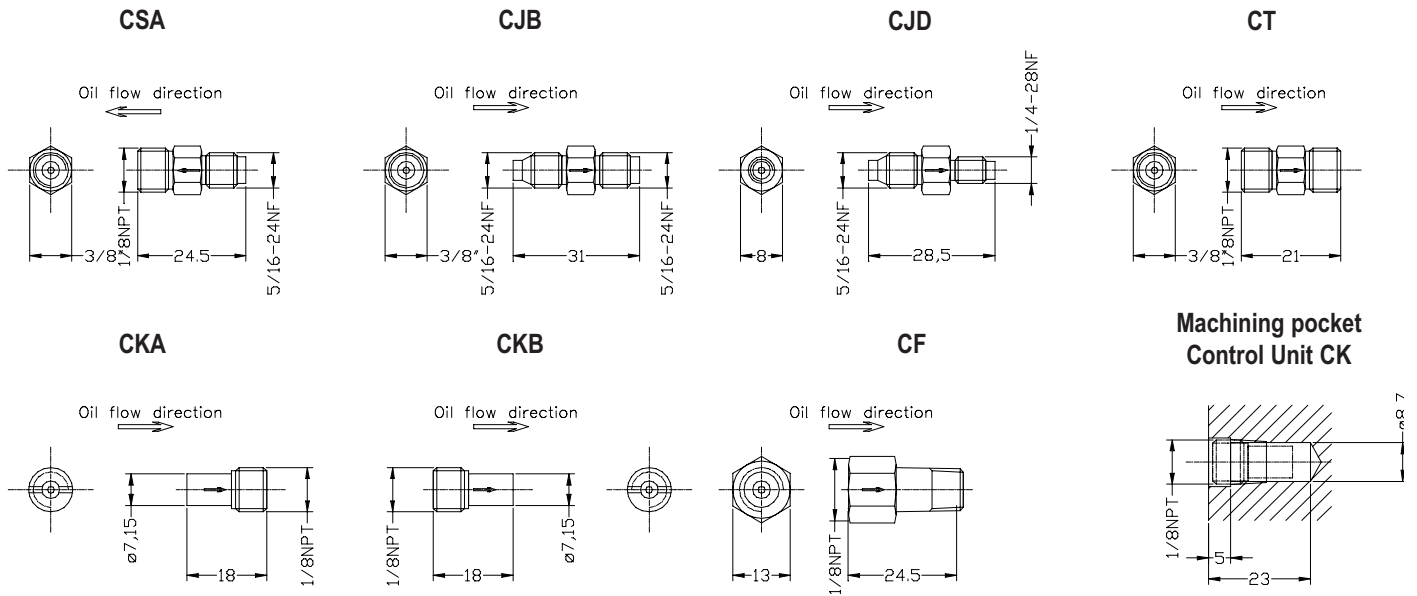
See chapter "technical information" for ratio between each value.



For ordering :

Specify description in using the table below :

Example : Control unit CSA0



Discharge flow ratio	Reference						
	CSA	CJB	CJD	CT	CKA	CKB	CF
0,12	CSA 5/0	CJB 5/0	CJD 5/0	CT 5/0	CKA5/0	CKB 5/0	---
0,25	CSA 4/0	CJB 4/0	CJD 4/0	CT 4/0	CKA 4/0	CKB 4/0	---
0,5	CSA 3/0	CJB 3/0	CJD 3/0	CT 3/0	CKA 3/0	CKB 3/0	---
1	CSA 00	CJB 00	CJD 00	CT 00	CKA 00	CKB 00	---
2	CSA 0	CJB 0	CJD 0	CT 0	CKA 0	CKB 0	---
4	CSA 1	CJB 1	CJD 1	CT 1	CKA 1	CKB 1	---
8	CSA 2	CJB 2	CJD 2	CT 2	CKA 2	CKB 2	---
16	CSA 3	CJB 3	CJD 3	CT 3	CKA 3	CKB 3	CF 3
32	CSA 4	CJB 4	CJD 4	CT 4	CKA 4	CKB 4	CF 4
64	CSA 5	CJB 5	CJD 5	CT 5	CKA 5	CKB 5	CF 5

NOTE :

- 5/16 - 24NF :
For tubing Ø4,
Compression nut B1095
Compression sleeve B1061
or B8272
- 1/4 - 28NF :
For tubing Ø2,4,
Compression nut B3610
Compression sleeve B3313

SYSTEM COMPONENTS - CONTROL UNIT TYPE CT

Description :

Control units type CT are oil proportioning devices for continuous systems which must be mounted on each lubrication point. Each unit comprises a control unit mounted on a junction header. Threads on junction header are 5/16 - 24NF for tubing Ø 4mm.

Functioning :

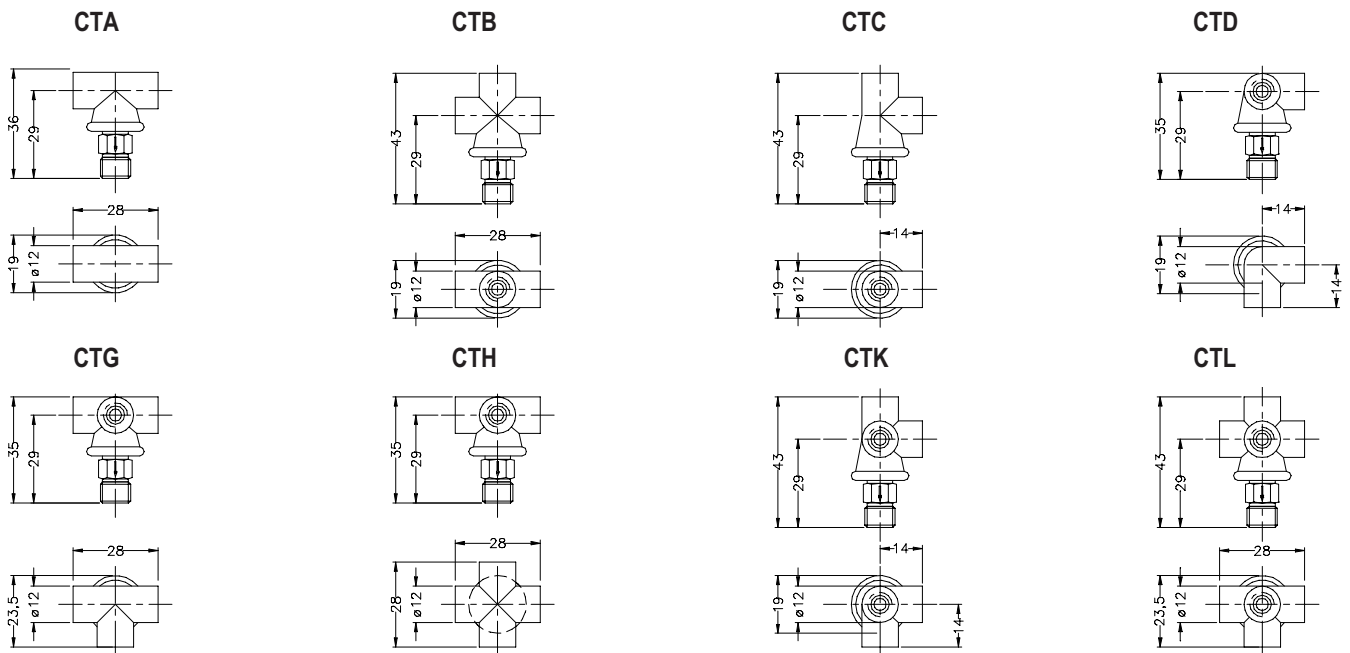
Control unit has hydraulic resistance which comprises an integrated fixed calibrated spiral orifice to control oil flow discharge. The lubricator delivers a certain amount of oil into the distribution system which is calibrated to each point by a control unit. Each device has a letter and a number stamped on the flat surface of the body. It feeds in one single direction as indicated by an arrow. Standard flow rates from "5/0" (extra slow) to "5" (extra fast) are available. See chapter "technical information" for ratio between each value.



For ordering :

Specify part number in using the table below :

Example : Control unit CTB 3/0



Discharge flow ratio	Reference							
	CTA	CTB	CTC	CTD	CTG	CTH	CTK	CTL
0,12	CTA 5/0	CTB 5/0	CTC 5/0	CTD 5/0	CTG 5/0	CTH 5/0	CTK 5/0	CTL 5/0
0,25	CTA 4/0	CTB 4/0	CTC 4/0	CTD 4/0	CTG 4/0	CTH 4/0	CTK 4/0	CTL 4/0
0,5	CTA 3/0	CTB 3/0	CTC 3/0	CTD 3/0	CTG 3/0	CTH 3/0	CTK 3/0	CTL 3/0
1	CTA 00	CTB 00	CTC 00	CTD 00	CTG 00	CTH 00	CTK 00	CTL 00
2	CTA 0	CTB 0	CTC 0	CTD 0	CTG 0	CTH 0	CTK 0	CTL 0
4	CTA 1	CTB 1	CTC 1	CTD 1	CTG 1	CTH 1	CTK 1	CTL 1
8	CTA 2	CTB 2	CTC 2	CTD 2	CTG 2	CTH 2	CTK 2	CTL 2
16	CTA 3	CTB 3	CTC 3	CTD 3	CTG 3	CTH 3	CTK 3	CTL 3
32	CTA 4	CTB 4	CTC 4	CTD 4	CTG 4	CTH 4	CTK 4	CTL 4
64	CTA 5	CTB 5	CTC 5	CTD 5	CTG 5	CTH 5	CTK 5	CTL 5

ACCESSORIES

Check valves and by-passes	G1101A
Electrical solenoid valve	J1101A
Reversing valve type DR45	J2101A
Reversing valve type FR10	J2201A
Air control panel	J9101A
Pressure switches	K1101A
Pressure gauges	L1101A
Window units	L1201A
Junctions:	
- Série 1	M1101A
- Série 2	M1102A
- Série 3	M1103A
- Metric	M1201A
Brush	M1301A
“Spraymist” accessories	M4101A
Filters	N1101A
Line filters	N1103A
Controllers:	
- SS2200	P1101A
- SS4500	P1201A
- 31981	P1301A

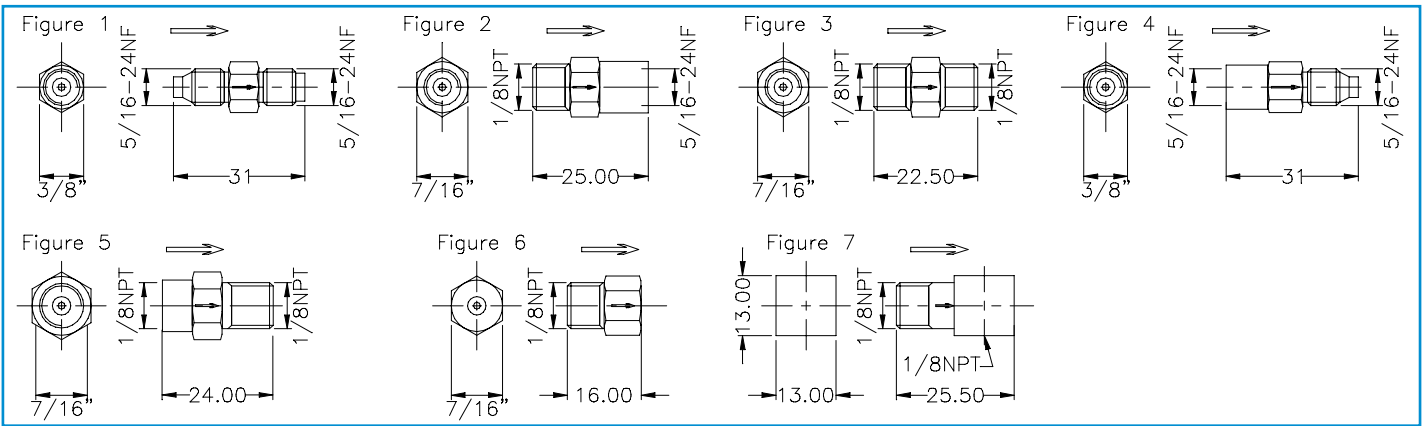
SYSTEM COMPONENTS - CHECK VALVES AND BY-PASSES

Description

Check valves are ball type. They can be used as non-return valves or as discharge valves. Tolerance of the valve opening pressure is $\pm 10\%$. Maximum pressures which are permitted are : 20 bar for flow direction, 100 bar for the counter flow direction. To determine the maximum flow discharge, use formula which is mentioned in chapter "Technical information".

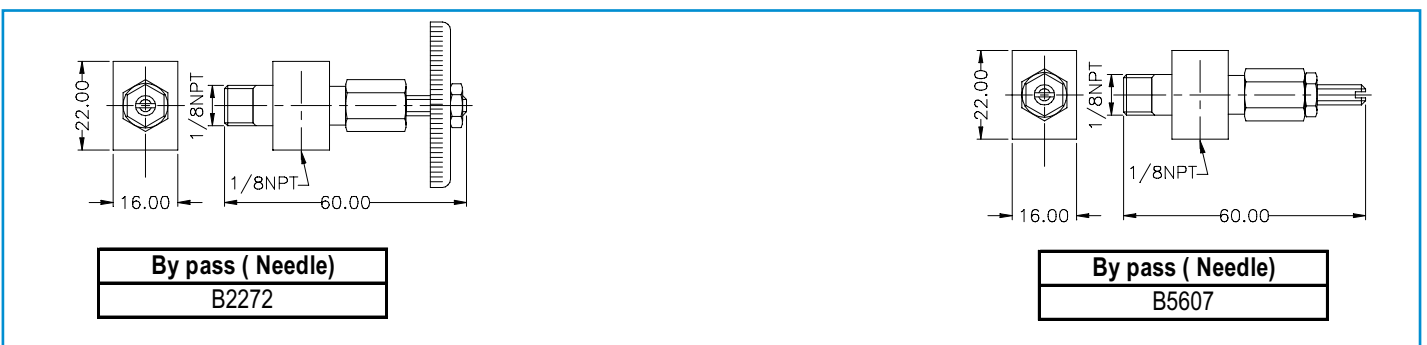
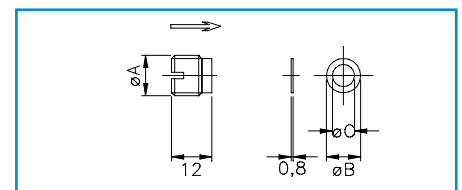


bar	0,03	0,07	0,14	0,35	0,7	1,4	3,5
φ	20.000		8.000	4.600	3.000	2.000	8.000



Pressure		Check valve reference						
LBS	bar	Fig 1	Fig 2	Fig 3	Fig 4	Fig 5	Fig 6	Fig 7
1/2	0,03			B5290				
1	0,07				B6999			
2	0,14		B3815	B4052		B5892		B3833
5	0,35	B3003	B3905	B4942				B3907
10	0,7	B3363	B3906	B4943				B3908
20	1,4	B3251	B4450	B4944				
50	3,5	B5146	B4960					
130	9,1						B6898	
175	12,2						B6965	
200	14						B5643	

A	LBS	Bar	Check valve
7/1620 NF	1/2	0,03	A3889
1/220 NF	1/2	0,03	B3674
for	$\varnothing B$	$\varnothing C$	seal
A3889	11	5,2	A3772
B3647	9,5	8	A4191



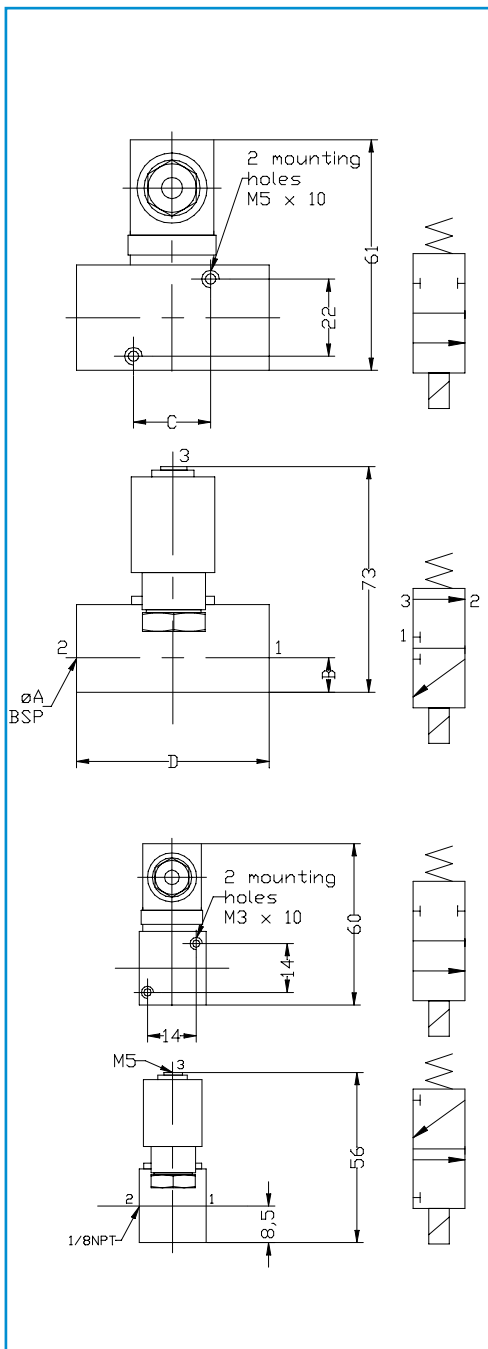
SYSTEM COMPONENTS-ELECTRICAL SOLENOID VALVES

Description

These solenoid are used to control entire or sections of Bijur lubricating systems by means of an electrical signal.

Caracteristics

- Operating pressure: see table below
- Voltage: see table below
- Power: 8W
- Fluid: air or mineral oil



Function	Orifice size \varnothing (mm)	Pressure Max	Dimensions				Voltage	Reference	
			A	B	C	D		Solenoid	Coil
2/2 NF	8	14	3/8"	10,5	22	55	24VCA	AE131	AE211
							48VCA	AE132	AE212
							110VCA	AE133	AE213
							220VCA	AE134	AE214
	1,6	11	1/8"	9	25	35	24VCC	AE116	AE216
3/2 NO	1,6	15	1/8"	9	25	35	24VCA	AE167	AE211
							48VCA	AE160	AE212
							110VCA	AE108	AE213
							220VCA	AE109	AE214

Function	Orifice size \varnothing (mm)	Pressure Max	Voltage	Reference	
				Solenoid	Coil
2/2 NF	2	6	24VCA	AE111	AE206
			48VCA	AE112	AE207
			110VCA	AE113	AE208
			220VCA	AE114	AE209
	1,6	11	24VCC	AE193	AE215
3/2 NF	1,6	15	24VCC	AE166	AE215
			110VCA	AE117	AE208
			220VCA	AE118	AE209

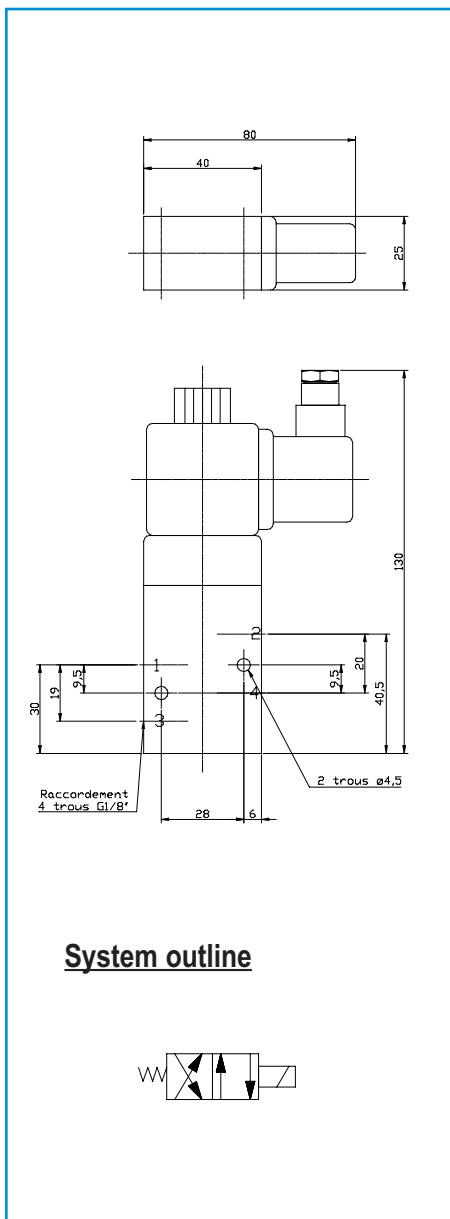
SYSTEM COMPONENTS-ELECTRICAL SOLENOID VALVES

Description

Electrical solenoid valves are used to operate all double action pneumatic equipment.

Characteristics

- Operating pressure: 10 bar max
- Voltage: see table below
- Power: 6W
- Fluid: air



Orifice size Ø (mm)	Voltage	Reference
	24V.CC	AE498
DN4	110V.CA	AE474
	220V.CA	AE524

SYSTEM COMPONENTS - REVERSING VALVE TYPE DR460A

Description

The DR460A is an automatic hydraulic reversing valve which is designed to mount directly on the CS2000 range of motorised pumps, or with Bijur Farval pneumatic barrel pumps.

Functioning

The diagrams opposite show one half of a complete DR460A reversing valve operating cycle for non-return system. Black indicates line is under pressure and white indicates line is relieved of reservoir.

Position 1

Lubricant from pump enters at port A. Reversing piston B directs flow from port A to supply line L1. Line pressure holds piston B in position. Line 2 is relieved to the reservoir thru port C. Rising pressure causes all valves to discharge to bearings.

Position 2

Pressure in line L1 continues to rise, actuating pilot piston D, until it overcomes the spring force applied at point F. The pilot piston moves to the position shown. Lubricant flow is re-directed to the right end of piston B by piston D. Pressure created by movement of pilot piston D to the right end is relieved to reservoir thru port C.

Position 3

Rising pressure moves piston B to new position (extreme left) tripping switch H stopping pump and relieving line L1. When timer starts next half cycle, line L2 will be pressurized and line L1 relieved.

Characteristics

- | | |
|-------------------------|--|
| - Working pressure: | 245 bar max |
| - Reversing pressure: | adjustable from 35 to 245 bar,
preadjusted to 105 bar |
| - Working temperature: | 10 to 50°C |
| - Lubricant to be used: | grease NLGI2 (worked
penetration W>265) |

Outside dimensions

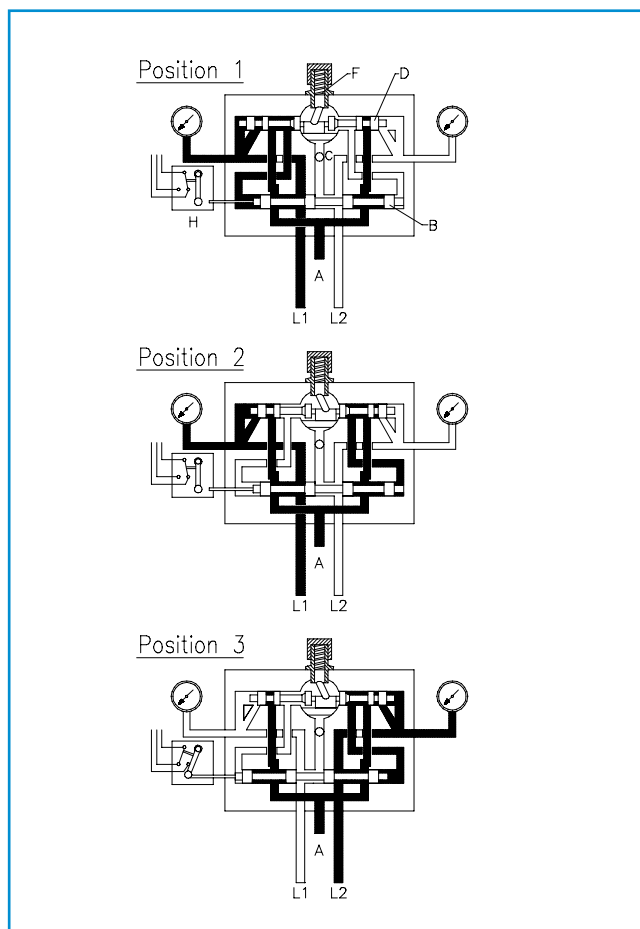
See overleaf.



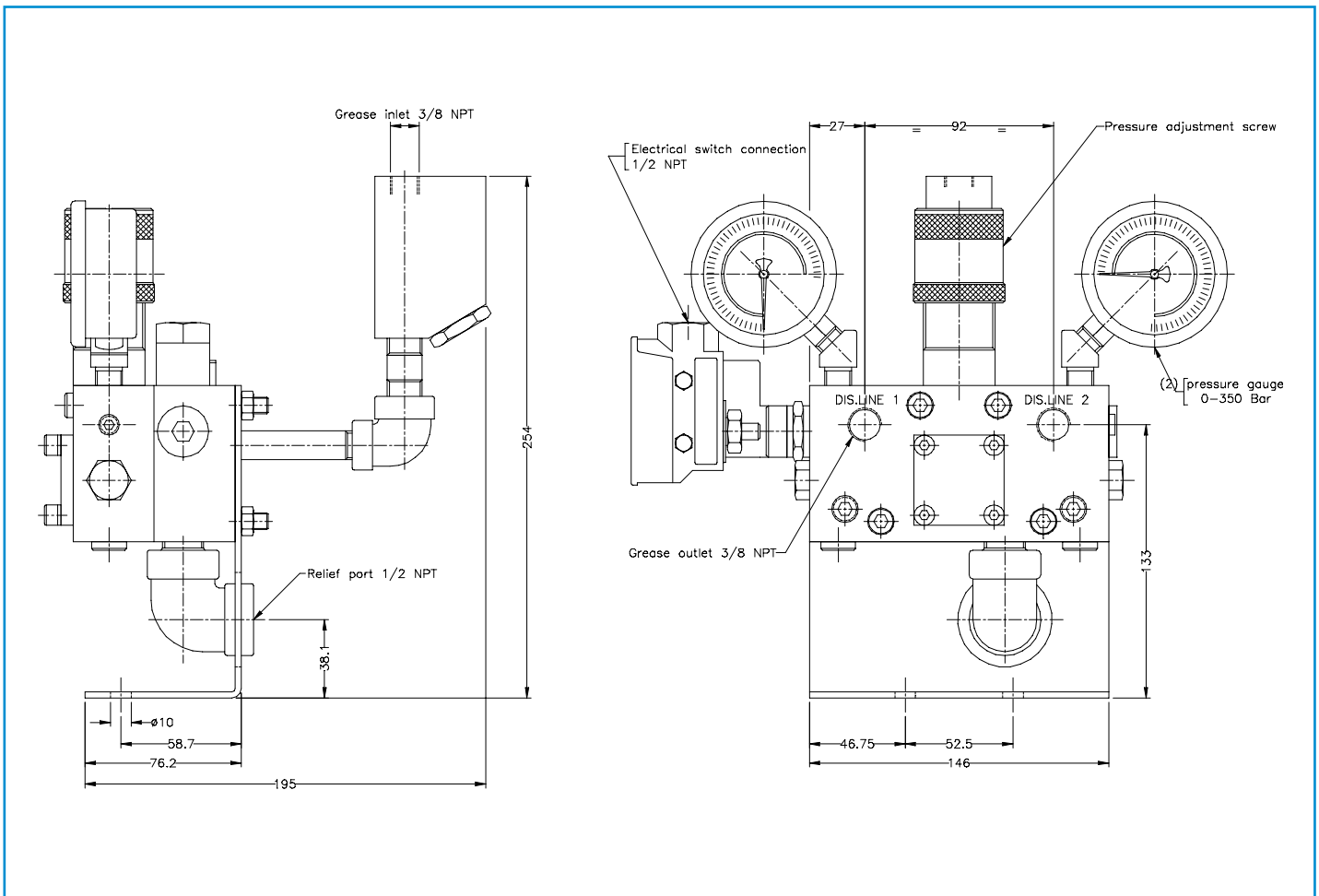
For ordering

Specify description and part number:

Reference **DR460A**



OUTSIDE DIMENSIONS - REVERSING VALVE TYPE DR460A



SYSTEM COMPONENTS - REVERSING VALVE TYPE FR10

Description

The FR10 is an automatic electromechanical reversing valve which operates in conjunction with pressure switches and is designed to mount directly on the DC41 range of motorised pumps, or Bijur Farval pneumatic barrel pumps.

Functioning

The diagram below shows a cross section of an one half of a complete FR10 reversing valve and the pressure control switch operating cycle. The other half is identical except pressure is applied to line L2 with line L1 relieved. At the end of the second half of the cycle, piston A will have returned to position 1. Black indicates line is under pressure and white indicates line is relieved to reservoir.

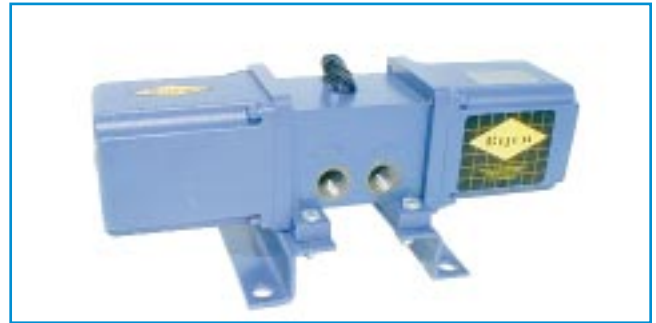
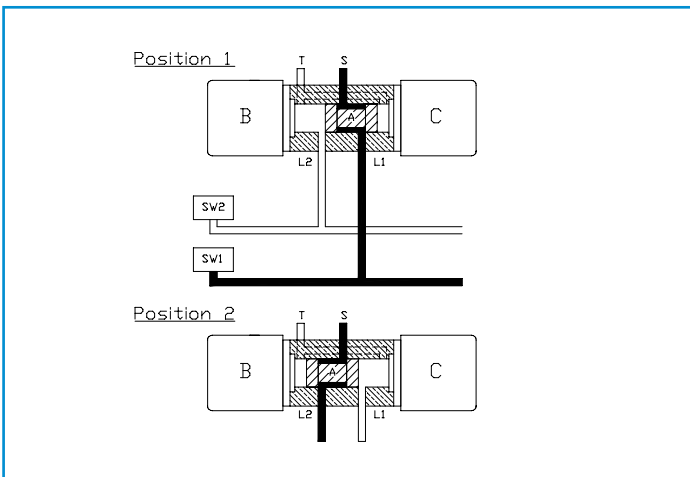
First half of lube cycle

Lubricant from pump enters at port S. Reversing piston A, which is held in position by solenoid B, directs flow from port S to supply line L1. Line 2 is relieved to the reservoir thru port T.

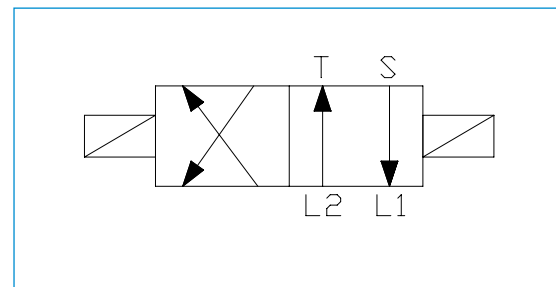
Pressure increases in line 1 until all valves have discharged and the setting of the pressure control switch has been reached. When pressure switch SW1 indicates that the end of line working pressure is attained, the lines are reversed. The feed circuit of coil B opens and that of coil C closes to maintain piston A at position 2. Then, the second half of the cycle commences.

Characteristics

- Working pressure: 200 bar max
- Reversing pressure: usable from 30 to 280 bar
- Spool configuration: 2 position, closed center
- Solenoid valve: push, type epoxy covered coil
120/230/380/460V-50/60Hz
- Start up current: 11A
- Holding current: 1,65A
- Working temperature: -20 to 80°C
- Lubricant to be used: grease NLG12 (worked penetration W >265)



System outline



For ordering

To define the exact part number, use the following codes :

Reversing valve identification Voltage Frequency	<table border="1" style="border-collapse: collapse; width: 100%;"> <tr> <td style="width: 100px;">FR10</td> <td style="width: 50px;">9</td> <td style="width: 50px;"></td> <td style="width: 50px;"></td> </tr> </table> <table border="0" style="width: 100%;"> <tr> <td style="width: 50px; text-align: center;">120</td> <td style="width: 100px;">120 Volts</td> <td style="width: 50px;">_____</td> </tr> <tr> <td style="text-align: center;">230</td> <td>230 Volts</td> <td>_____</td> </tr> <tr> <td style="text-align: center;">380</td> <td>380 Volts</td> <td>_____</td> </tr> <tr> <td style="text-align: center;">460</td> <td>460 Volts</td> <td>_____</td> </tr> </table> <table border="0" style="width: 100%;"> <tr> <td style="width: 50px; text-align: center;">50</td> <td style="width: 100px;">50 Hertz</td> <td style="width: 50px;">_____</td> </tr> <tr> <td style="text-align: center;">60</td> <td>60 Hertz</td> <td>_____</td> </tr> </table>	FR10	9			120	120 Volts	_____	230	230 Volts	_____	380	380 Volts	_____	460	460 Volts	_____	50	50 Hertz	_____	60	60 Hertz	_____
FR10	9																						
120	120 Volts	_____																					
230	230 Volts	_____																					
380	380 Volts	_____																					
460	460 Volts	_____																					
50	50 Hertz	_____																					
60	60 Hertz	_____																					

Example

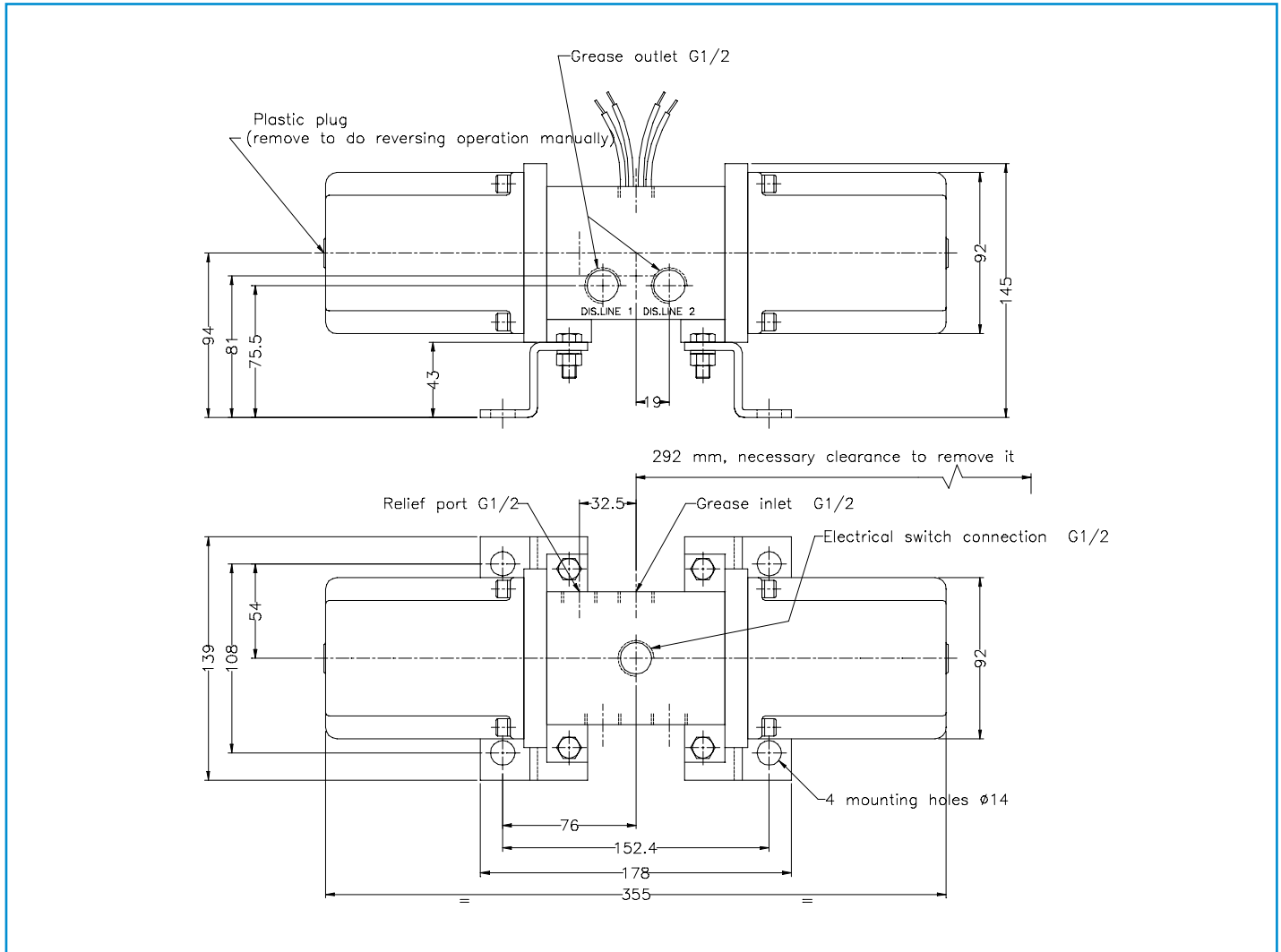
Reversing valve , 220V / 50Hz

Reference : FR10912050

Outside dimensions

See overleaf.

OUTSIDE DIMENSIONS - REVERSING VALVE TYPE FR10



SPARE PARTS

For ordering

To define the exact parts number, use the following codes :

Example

Coil for reversing valve type FR10, 120V-50Hz
Reference U685D12050

Coil identification U685D

Voltage

- 120 120 Volts _____
- 230 230 Volts _____
- 380 380 Volts _____
- 460 460 Volts _____

Frequency

- 50 50 Hertz _____
- 60 60 Hertz _____

SYSTEM COMPONENT-AIR CONTROL PANELS

Description

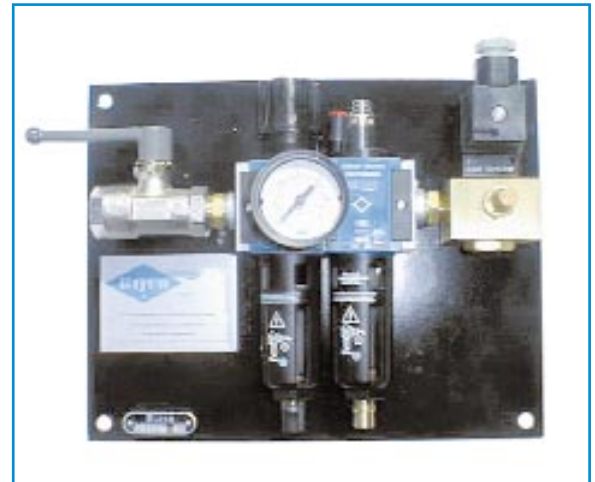
Air control panels are used to supply and regulate air flow for all our pneumatic lubricator.

Functioning

A panel comprises a lubricator filter regulator, a manual shut off valve and an electrical solenoid valve.
The air filter is equipped with an automatic drain screw.

Characteristics

- Air flow: 55 m³/h
- Operating pressure: 1 to 10 bar max.
- Lubricator filter capacity: 4 cl.
- Lubricant to be used: Type FD22.
- Solenoid valve 3/2 NC: Voltage, see table below
Power 8W,10W for 24VDC

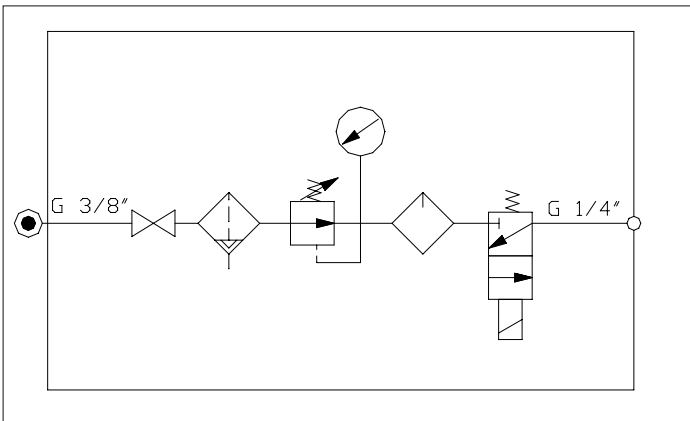


For ordering

To define the exact part number, use the following table:

Voltage	Reference
24VDC	FB3470
48V. 50/60Hz	FB3322
110V. 50/60Hz	FB3323
220V. 50/60Hz	FB3324

System outline



Outside dimensions

See overleaf.

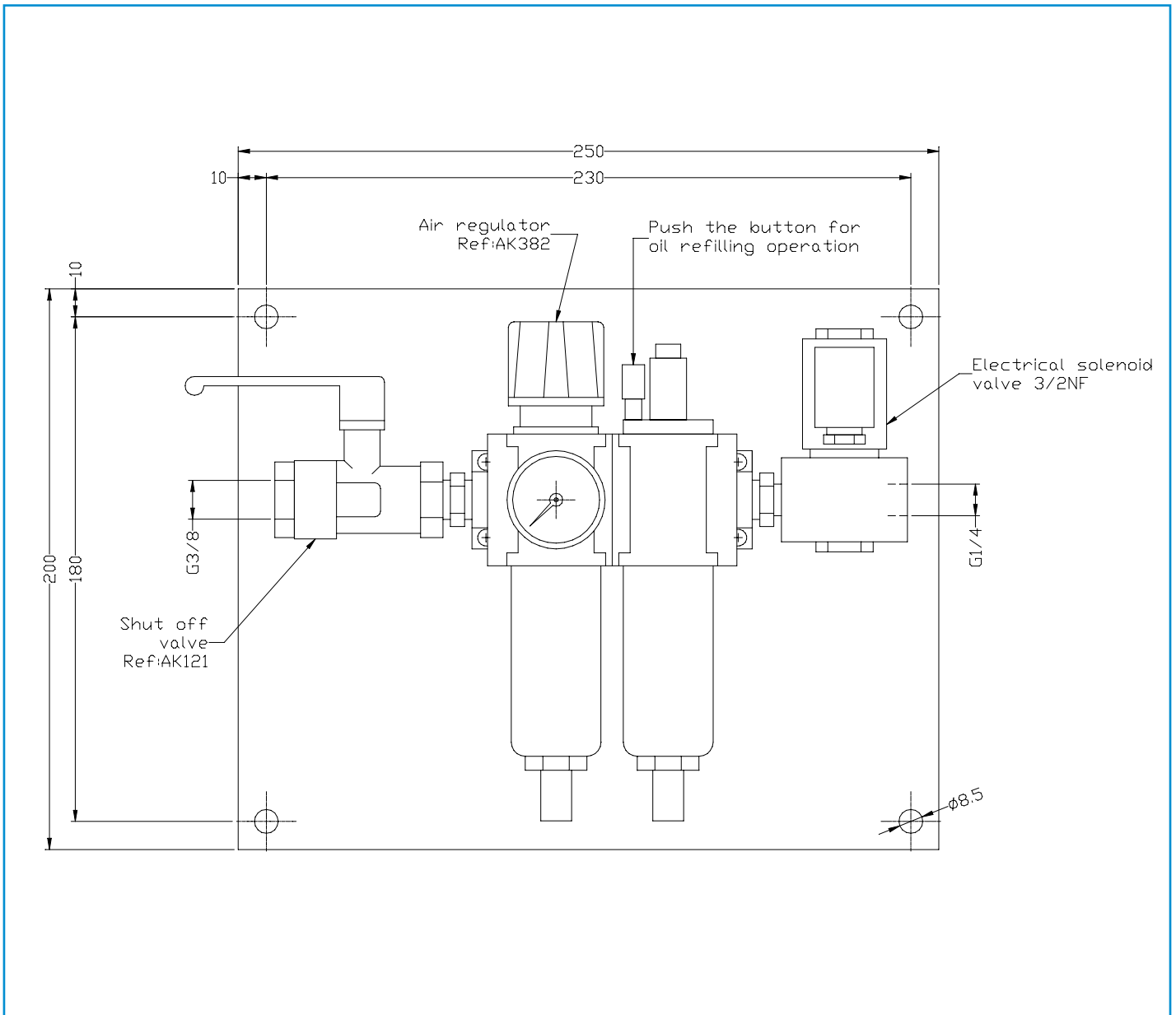
SERVICE INSTRUCTIONS-AIR CONTROL PANELS

1) OIL

Use a clean oil for pneumatic tools, type FD22 or equivalent.

2) SERVICE

Control periodically the oil level into the bowl and refill it when it is necessary.



SYSTEM COMPONENTS - PRESSURE SWITCHES

Description

Pressure switches are perfectly adapted for use in centralised lubrication system to control the pressure, which means that it also indicates if the installation is operating correctly.

Pressure switches on figure N°1 can be used into air or oil devices.

Pressure switches on figure N°2 can be used into air, oil and grease devices.



Outside dimensions

Figure 1

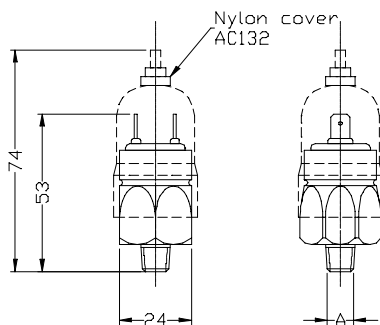


Figure 2

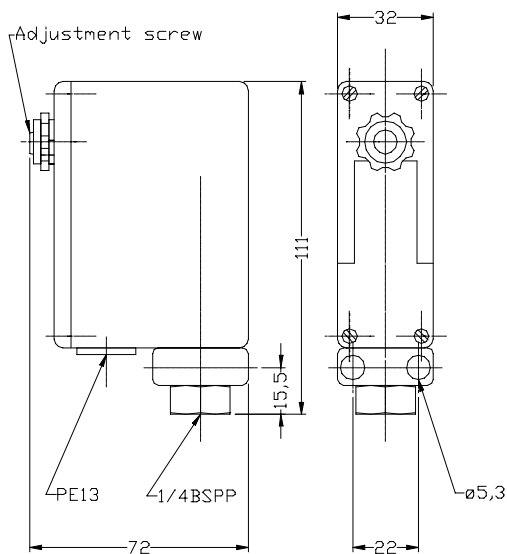


Figure	Function	Pre-adjusted pressure	Thread A	Reference
1	NO	0,6 bar	M10x1 conical	AC152
	NO	0,7 bar	M10x1 conical	HE825
	NC	0,7 bar	M10x1 conical	HE855
	NO	1 bar	M10x1 conical	AC160
	NO	2,5 bar	M10x1 conical	AC174*
	NO	4 bar	M10x1 conical	AC178*
	NC	4,5 bar	M10x1 conical	AC175*
	NO	14 bar	M10x1 conical	AC179*
	NO	18 bar	M10x1 conical	AC176*

Characteristics

Voltage : 42V. CA/CC Maxi.

Power rating : 100VA.

Protection : IP54.

Safety pressure : 50 bars.

NOTA: Parts identified with * are equipped with cover AC 132.
For others references, covers must be ordered separately.

Figure	Function	Pressure adjustment (bar)	Pressure Max (bar)
2	Reversing	0,5 à 3,5	20
	Reversing	1 à 10	30
	Reversing	2 à 20	40
	Reversing	50 à 500	600

Characteristics

Voltage : 500VDC/VAC max.

Power rating : 10 A.

Protection : IP66

SYSTEM COMPONENTS - PRESSURE GAUGES

Description

Pressure gauges are used to indicate pressure delivered in the primary line of the system. They are supplied either with standard indicators to show the pressure during lubrication cycle, or with an additional red finger which is carried along to the maximum pressure position during the pressure cycle. The red finger remains as evidence of the maximum pressure position until manually reset to zero. The latter type is identified by the suffix " F ".



Outside dimensions

Figure 1

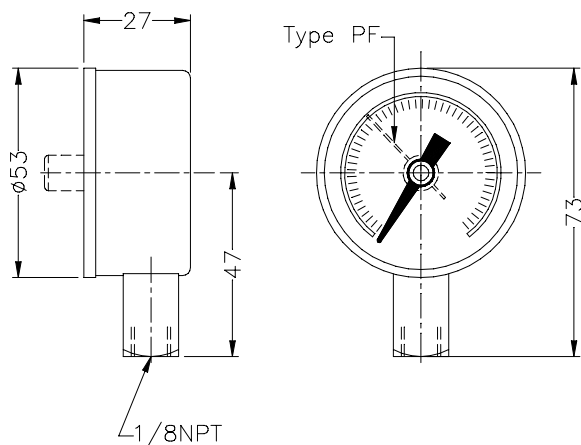


Figure 2

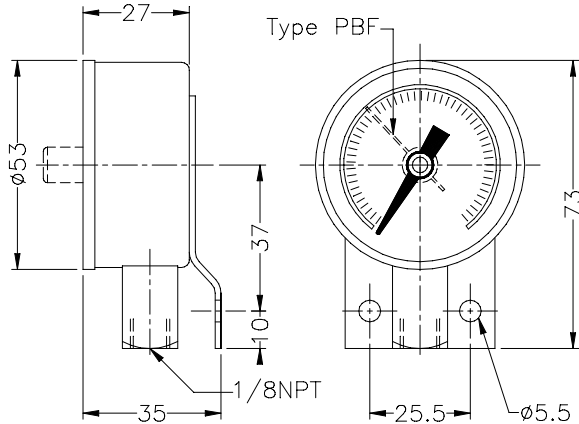


Figure	Type	Description	Reference
1	P	Pressure gauge 2,1 bar / 30 PSI	B3840
		Pressure gauge 7 bar / 100 PSI	B4340
		Pressure gauge 14 bar / 200 PSI	B3839
	PF	Pressure gauge 7 bar / 100 PSI	B5609
		Pressure gauge 14 bar / 200 PSI	B4581

Figure	Type	Description	Reference
2	P	Pressure gauge 2,1 bar / 30 PSI	B4310
		Pressure gauge 7 bar / 100 PSI	B4363
		Pressure gauge 14 bar / 200 PSI	B3513
	PBF	Pressure gauge 7 bar / 100 PSI	B5610
		Pressure gauge 14 bar / 200 PSI	B5614

SYSTEM COMPONENTS - WINDOW UNITS

Description

Window units are perfectly adapted for use where BSP thread can be used.

Characteristics

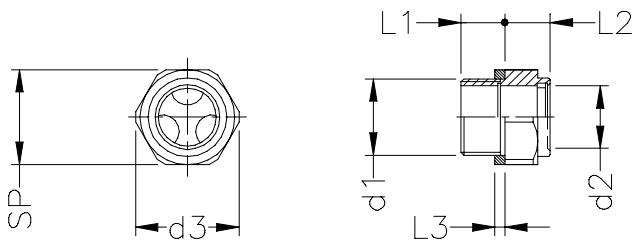
Window unit comprises a light metal hexagonal body, a plexiglass window with reflecting background and a sealing ring.

Pressure: 3,5 bar max
Working temperature: 70°C max for seal



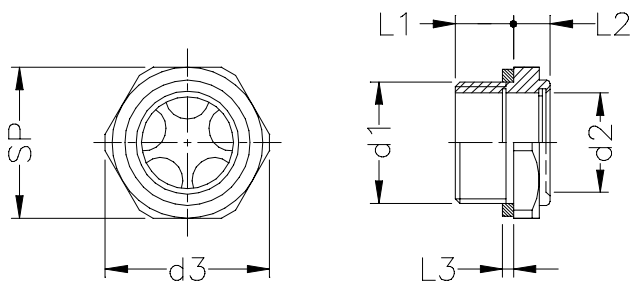
For ordering

To define the exact part number, use following tables :

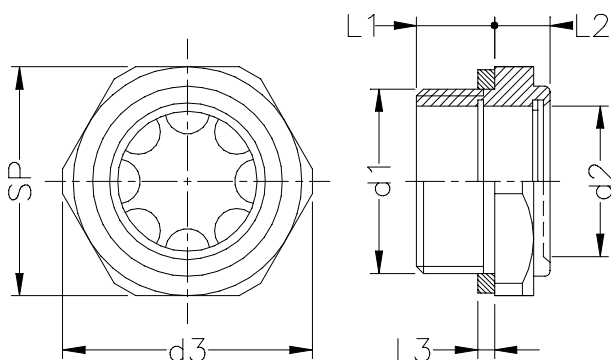


d1	d2	d3	L1	L2	L3	SP	Ref.
G 1/4"	8,5	18	7	7	1,8	17	21145
G 3/8	13	24	7	8	1,5	22	21150

Note: Window unit, ref 21145 is not equipped with reflecting background.



d1	d2	d3	L1	L2	L3	SP	Ref.
G 1/2"	15	29	10	8	2,1	27	21155
G 3/4	20	35	10	8	2,1	32	21160



d1	d2	d3	L1	L2	L3	SP	Ref.
G 1"	25	45	14	8,5	2,3	41	21165
G 1/4"	33	55	14	8,5	2,3	50	21170
G 1/2"	38	60	14	8,5	2,3	55	21175

SYSTEM COMPONENTS - WINDOW UNITS

Description

Window units are perfectly adapted for use where a hole of imperial dimension has been drilled.

Three different models are available according to the application.

Characteristics

Reference of window is based on size of the hole. To ensure tightness, cover the surface of the hole (D) with a thin coat of heat resisting sealing material before pressing window unit into place.

Window plastic unit:

Operating pressure: 0,7 bar max at 38°C
0,14 bar max at 70°C

Window glass unit:

Operating pressure: 3,5 bar max at 150°C



For ordering

To define the exact part number, use following tables :

Description	Dimension				Reference	
	A	B	C	D	Plastic	Glass
Standard type						
5/8"	16	22,40	7,60	22,22	B4900	B5184
1"	25,5	31,90	8,75	31,75	B4904	B5108
1 1/4"	32	38,25	9,50	38,10	B4908	B5145
1 3/4"	44,5	50,95	10,30	50,80	B5171	B5582

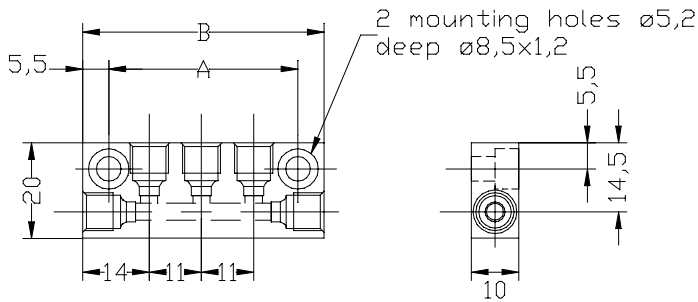
Description	Dimension				Reference	
	A	B	C	D	Plastic	Glass
Level type						
5/8"	16	22,40	7,60	22,22	B5095	B5944
1"	25,5	31,90	8,75	31,75	B5093	B5631
1 1/4"	32	38,25	9,50	38,10	B5091	B5734
1 3/4"	44,5	50,95	10,30	50,80	B5175	B5191

Description	Dimension				Reference	
	A	B	C	D	Plastic	Glass
Open type						
5/8"	16	22,40	5,55	22,22	B5104	B5602
1"	25,5	31,90	6,35	31,75	B5102	B5603
1 1/4"	32	38,25	6,35	38,10	B5100	B5604
1 3/4"	44,5	40,95	7,15	50,80	B5177	B5605

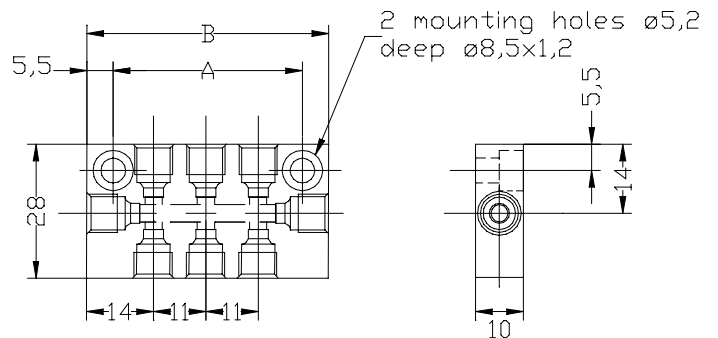
SYSTEM COMPONENTS-NARROW PROFILED JUNCTIONS(SERIE 1)

Description

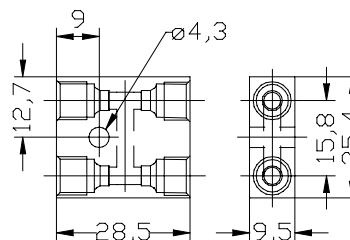
Aluminium profiled junctions, serie 1, are perfectly adapted for use in confined areas. All tapped holes are 5/16-24NF. For connection, use compression sleeves B1061 or B 8272 and compression screws B3783 or B1371. For closing surplus tapped holes, use plugs B 3784.



A	B	Description	Reference
-	-	Junction 2 way	B4522
17,5	28,5	Junction 3 way	B4498
28,5	39,5	Junction 4 way single	B3764
39,5	50,5	Junction 5 way single	B3765
51	62	Junction 6 way single	B3766
62	73	Junction 7 way single	B3767
73	84	Junction 8 way single	B3768
84	95	Junction 9 way single	B3769
95	106	Junction 10 way single	B3770
106,5	117,5	Junction 11 way single	B3771
117,5	128,5	Junction 12 way single	B3772



A	B	Description	Reference
28,5	39,5	Junction 6 way double	B3785
39,5	50,5	Junction 8 way double	B3786
51	62	Junction 10 way double	B3787
62	73	Junction 12 way double	B3788
73	84	Junction 14 way double	B3789

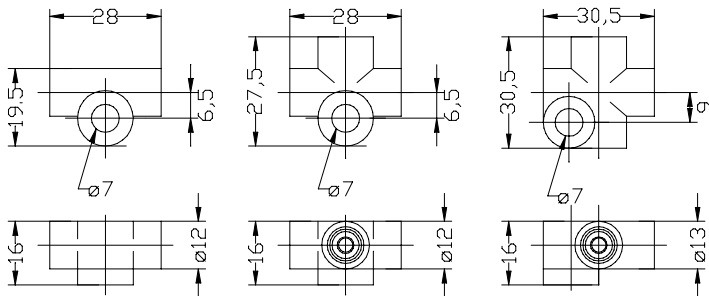
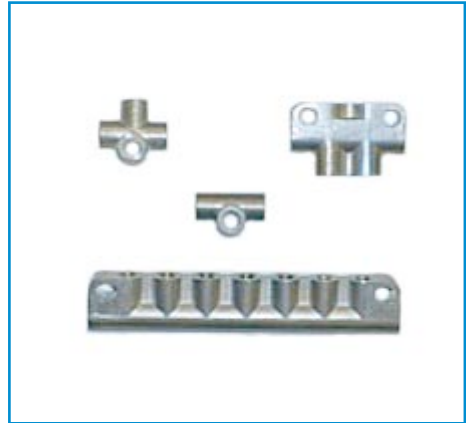


Junction 4 way double
B5831

SYSTEM COMPONENTS-STANDARD JUNCTIONS (SERIES 2)

Description

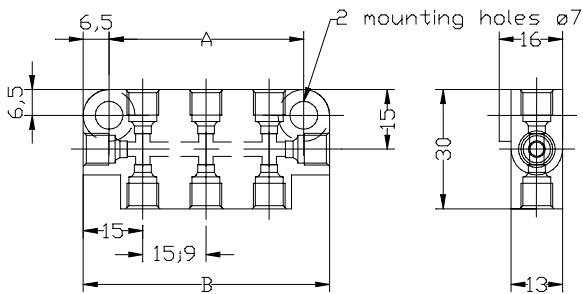
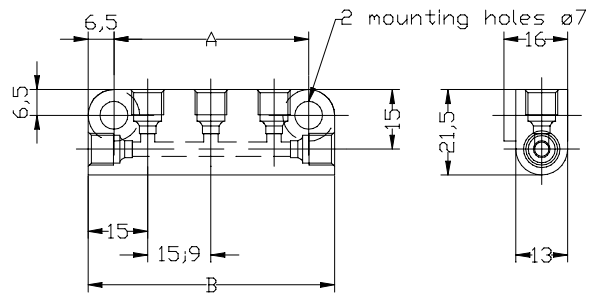
Die cast junctions, serie 2 are perfectly adapted for use in lubrication systems with tubing of 4 mm. All tapped holes are 5/16-24NF. For connection, use compression sleeves B1061 or B8272 and compression screws B3783. For closing surplus tapped holes, use plugs B 3784.



Junction 2 way
B3288

Junction 3 way
B3065

Junction 4 way
B4231



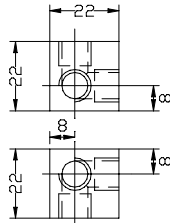
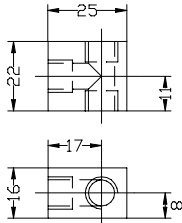
A	B	Description	Reference
33,5	46,5	Junction 4 way single	B3262
49	62	Junction 5 way single	B3263
65	78	Junction 6 way single	B3264
81	94	Junction 7 way single	B3289
97	110	Junction 8 way single	B3265
112,5	125,5	Junction 9 way single	B4508
128,5	141,5	Junction 10 way single	B3704
144,5	157,5	Junction 11 way single	B3708
160,5	173,5	Junction 12 way single	B3471

A	B	Description	Reference
33,5	46,5	Junction 6 way double	B3109
49	62	Junction 8 way double	B3253
65	78	Junction 10 way double	B3254
81	94	Junction 12 way double	B3249
97	110	Junction 14 way double	B4020
112,5	125,5	Junction 16 way double	B4025

SYSTEM COMPONENTS-LARGE PROFILED JUNCTIONS (SERIES 3)

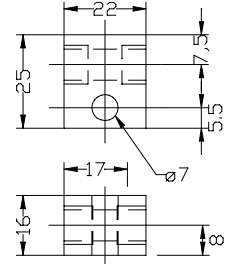
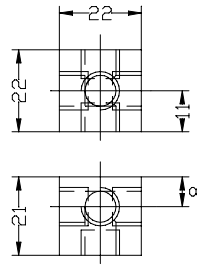
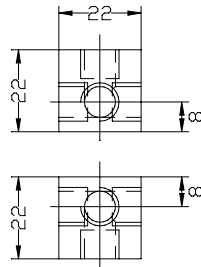
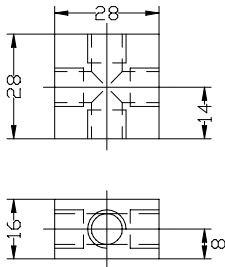
Description

Aluminium profiled junctions ,serie 3 are perfectly adapted for use into lubrication systems whith tubing of over 4 mm diameter.All threads are 1/8 NPT.For fixing,use screws M6.



Junction header 3 way
B7682

Junction header 3 way
B7683

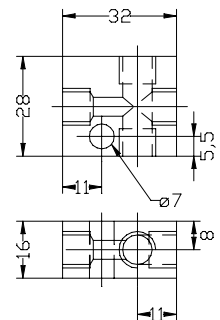
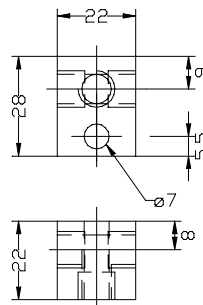
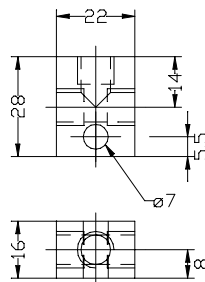
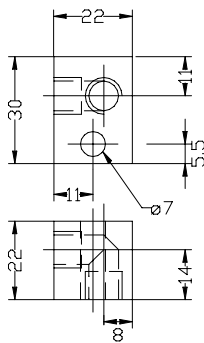


Junction header 4 way
B7684

Junction header 4 way
B7685

Junction header 5 way
B7686

Junction header 2 way
B7690



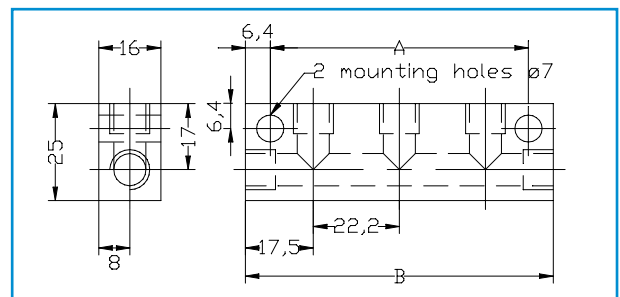
Junction header 2 way
B7691

Junction header 3 way
B7692

Junction header 3 way
B7693

Junction header 4 way
B7694

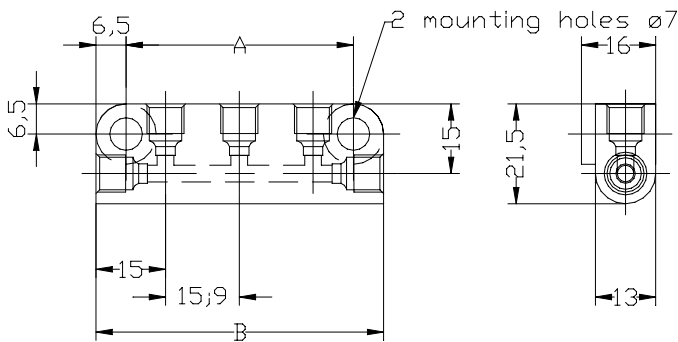
A	B	Description	Reference
44,5	57,2	Junction 4 way	B7687
66,7	79,4	Junction 5 way	B7688
88,9	101,6	Junction 6 way	B7689
111,1	123,8	Junction 7 way	B8897
133,3	146	Junction 8 way	B8898
177,7	190,4	Junction 10 way	B8899



SYSTEM COMPONENTS - METRIC JUNCTIONS FOR INJECTORS TYPE Z

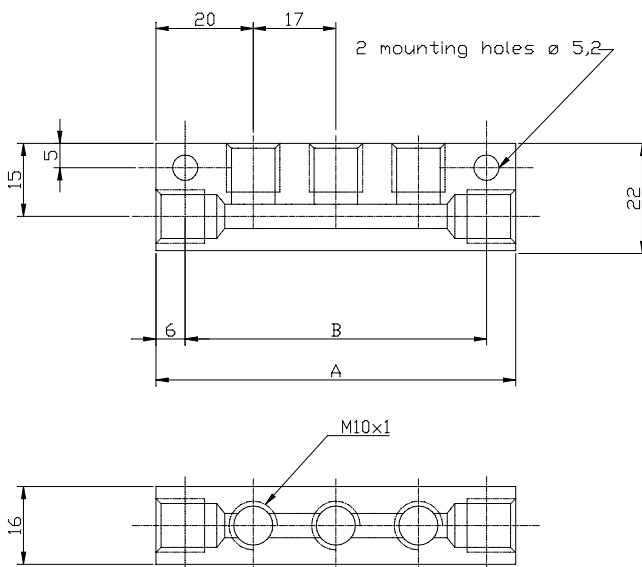


Die cast junction M 10 x 1 / M 8 x 1



A	B	Description	Reference
34	48	Junction 2 way	22653
50	64	Junction 3 way	22654
66	80	Junction 4 way	22655
82	96	Junction 5 way	22656
98	112	Junction 6 way	22657
114	128	Junction 7 way	22658
130	144	Junction 8 way	22659
162	176	Junction 10 way	22660

Aluminium junction M 10 x 1



A	B	Description	Reference
57	45	Junction 2 way	AJ138
74	62	Junction 3 way	AJ139
91	79	Junction 4 way	AJ140
108	96	Junction 5 way	AJ141
125	113	Junction 6 way	AJ142
142	130	Junction 7 way	AJ143
159	147	Junction 8 way	AJ144

Note: Use copper seal for injector mountage.

SYSTEM COMPONENTS - BRUSH ASSEMBLIES

Description

Brush assemblies are suitable for lubricating various moving machine components such as chains, cams, open gears....Oil flow to each brush must be controlled by a meter unit or a control unit. The brush must be mounted close to the component to be lubricated, but the bristles should not be in contact.

Characteristics

- **Material:** anodised aluminium body
nylon Ø 0,3 (bristle for standard version)
brass Ø 0,1 (bristle for "L" version)
- **Working temperature:** -30 to 95°C (standard version)
up to 300°C ("L" version)
- **Connection:** 1/8 NPT or 5/16-24NF



For ordering

To define the exact part number, use tables below .

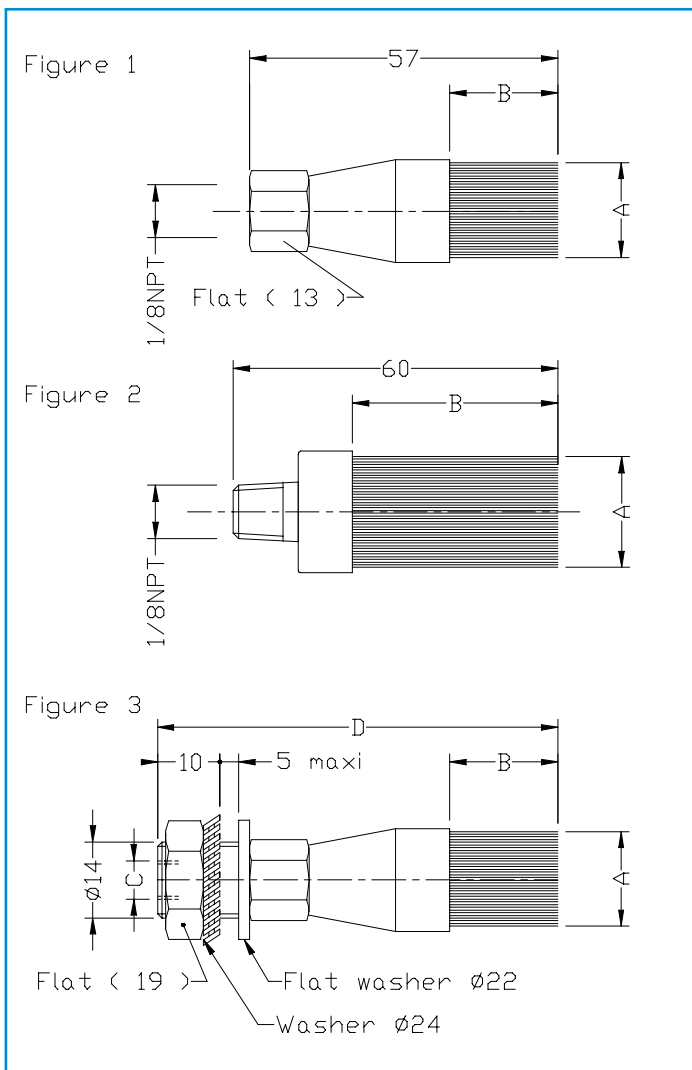


Figure	Sizes			Bristle material	Reference
	A	B	C		
1	20x4	19	1/8NPT	nylon	B7488
	20x4	19	1/8NPT	brass	B7488L
	30x4	19	1/8NPT	nylon	AR1473

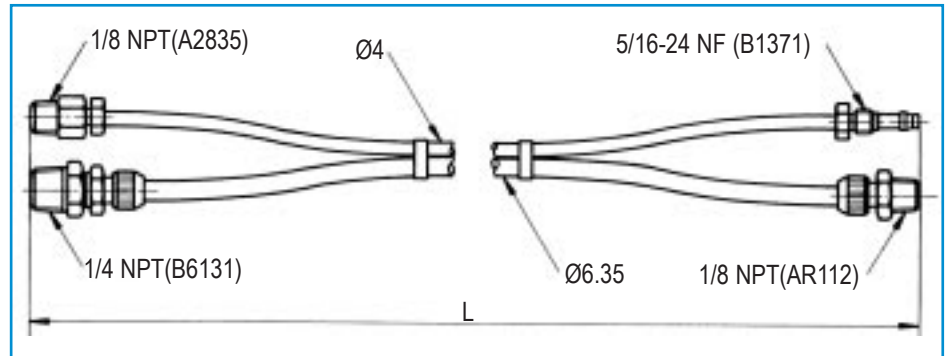
Figure	Sizes			Bristle material	Reference
	A	B	C		
2	48x14	35	1/8NPT	nylon	80311
	ø25	35	1/8NPT	nylon	80310

Figure	Sizes				Bristle material	Reference
	A	B	C	D		
3	20x4	19	5/16-24NF	74	nylon	B7491
	20x4	19	1/8NPT	74	nylon	B7492
	20x4	19	5/16-24NF	74	brass	B7491L
	20x4	19	1/8NPT	74	brass	B7492L
	30x4	19	5/16-24NF	74	nylon	AR1530
	30x4	19	1/8NPT	74	nylon	AR1531
	ø25	35	5/16-24NF	90	nylon	AR1583
	ø25	35	1/8NPT	90	nylon	AR1584
	48x14	35	5/16-24NF	90	nylon	AR1585
	48x14	35	1/8NPT	90	nylon	AR1586

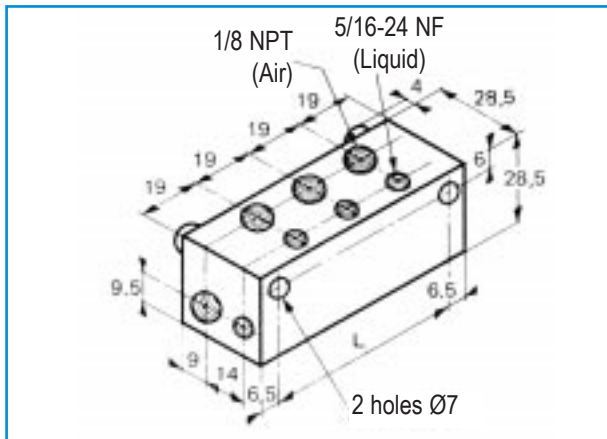
FLUIDFLEX EQUIPMENT- ACCESSORIES

Dual hose assemblies

	L(mm)	Part No.
Dual hose assemblies	305	B20701
	610	B20702
	915	B20703
	1220	B20704
with extra fitting	1830	B20706
	2440	B20708
	3050	B207010



Dual tee blocks

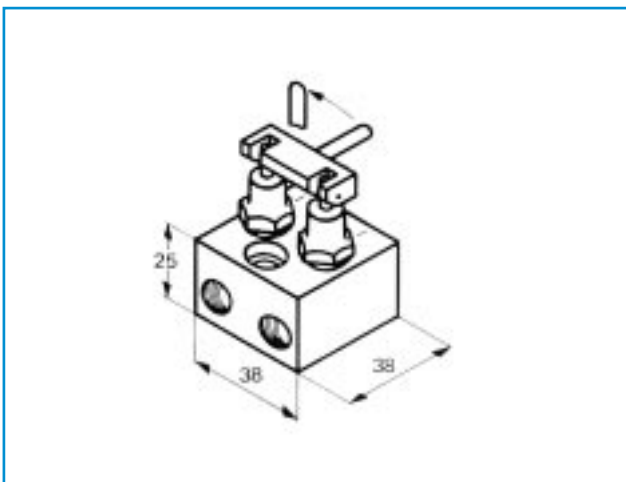


Type	L (mm)	Part No.
3-way dual tee block	25	B128
5-way dual tee block	64	B129
6-way dual tee block	82,5	B130
8-way dual tee block	121	B131
10-way dual tee block	159	B132

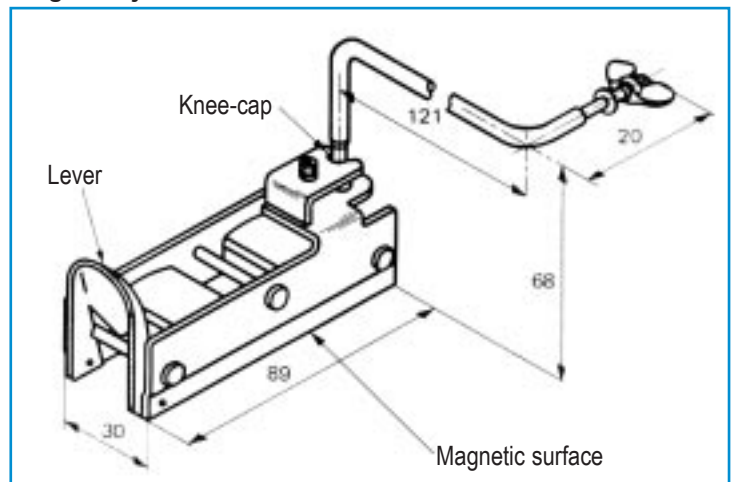
Solenoid valves 2/2 NC

See data-sheet J1101.

Shut-off valve: B7987



Magnetic jet holder: réf B133



SYSTEM COMPONENTS - OIL FILTERS

Description

Bijur has developed a large range of suction and line filters for use with cyclic or continuous discharge lubricators. It comprises metal wire mesh and fiber screen for suction filters and porous metal cartridge for line filters. Elements are high strength corrosion resistant, capable of removing large amounts of contaminants without breakdown or damage. Filter elements must be checked, cleaned and replaced periodically.

Characteristics

Line filter:

These filters (fig.1/2) must be installed in a vertical position (to assure settling of contaminants into the bowl) between the lubricator and the first application points.

For replacement of the cartridge, a clearance of 45 mm (fig 1), 90 mm (fig 2), is necessary under the filter to remove it.

- **Operating pressure:** 21 bar max

Suction filter:

Use only filters shown on figures 3, 4 and 5, which must be installed in the reservoir of lubricators.

Continuous system:

To optimize the efficiency of your equipment, use only filters shown on figure 2;

Pressure drop formula for filter:

$$P_v = \frac{f \times V \times 2,5}{\varphi}$$

P_v	= pressure drop (bar)
f	= oil discharge (Cm ³ / min)
V	= viscosity at working temperature (°Engler)
φ	= flow value of filter element



For ordering

Specify type and reference in using the table below.

Example : Line filter 25 μ, reference : 19848

For ordering replacement filter element, specify name and part number of item.

Fig.N°	Description	Reference of filter	Reference of filter	Flow value
1	Filter 25P	19850	B6527	9300
	Filter 125P	19851	B6530	146000
2	Filter 25P	19848	B6890	34000
	Filter 125P	19849	B6889	200000
	Filter 10P	19329	19325	15000
3	Filter 40F	B4848	S175	21000
	Metal wire mesh 125S	B4850	S234	652000
4	Filter 40F	B5696	S109	90000
	Metal wire mesh 125S	B5909	S181	1360000
	Filter 125P	B6504	S235	122000
5	Metal wire mesh 125S	B6727	S181	1360000
	Filter 125P	B7421	S235	122000

Numbers which follow description indicate smallest particles size which are stopped (μ).

Letters which follow description are the material characteristics of the filter element.

F : fibre screen
S : metal wire mesh screen
P : porous

Outside dimensions

See overleaf.

SYSTEM COMPONENTS - OIL FILTERS

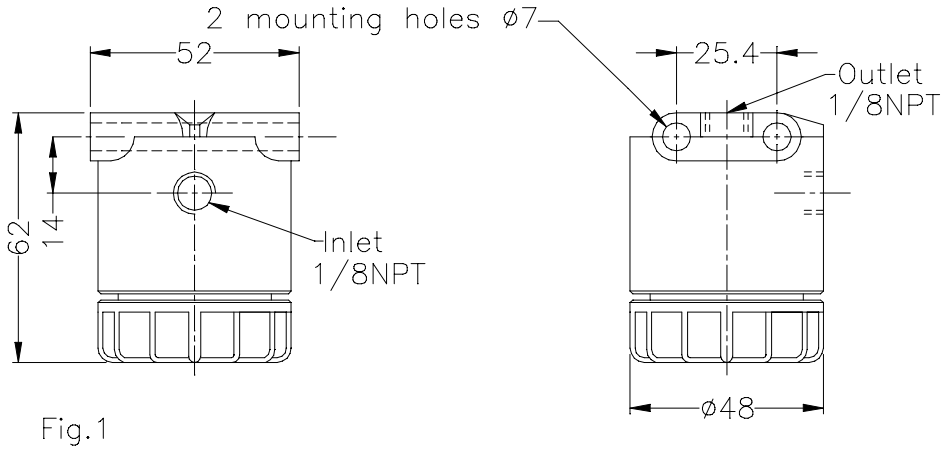


Fig.1

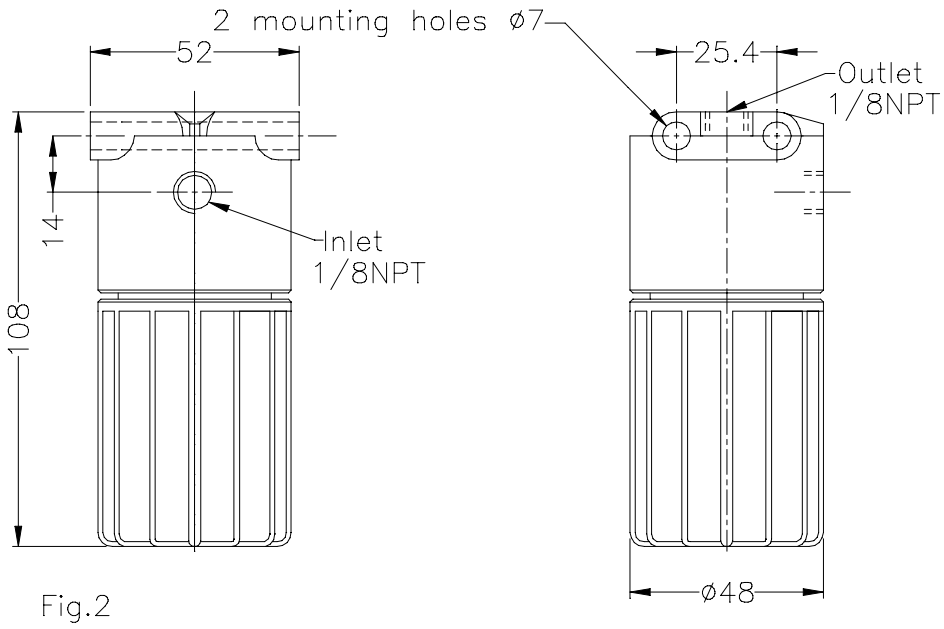


Fig.2

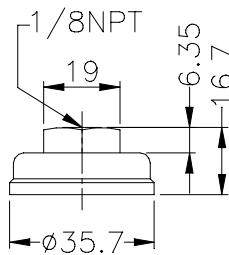


Fig.3

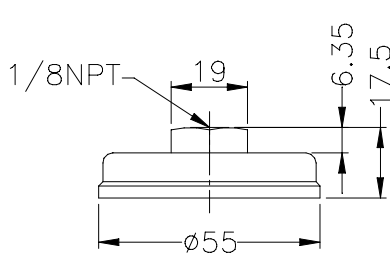


Fig.4

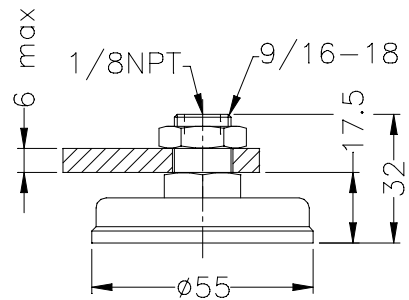


Fig.5

SYSTEM COMPONENTS - LINE FILTERS

Description

These filters with their large filtering surface (142Cm²) are perfectly adapted for use into oil recirculating systems, thereby minimising cleaning frequency.
Pressure gauges can be mounted to check clogage of filter element.

Characteristics

- Operating pressure: 21 bar max
- Filtering capacities: 3, 12 and 25 μ

Installation

Filter must be installed in a vertical position in the main distribution line between lubricator and the first application points.
The bowl can be easily disassembled by hand without disconnecting the piping. A clearance of 76mm is required under the filter to dismantle the bowl.

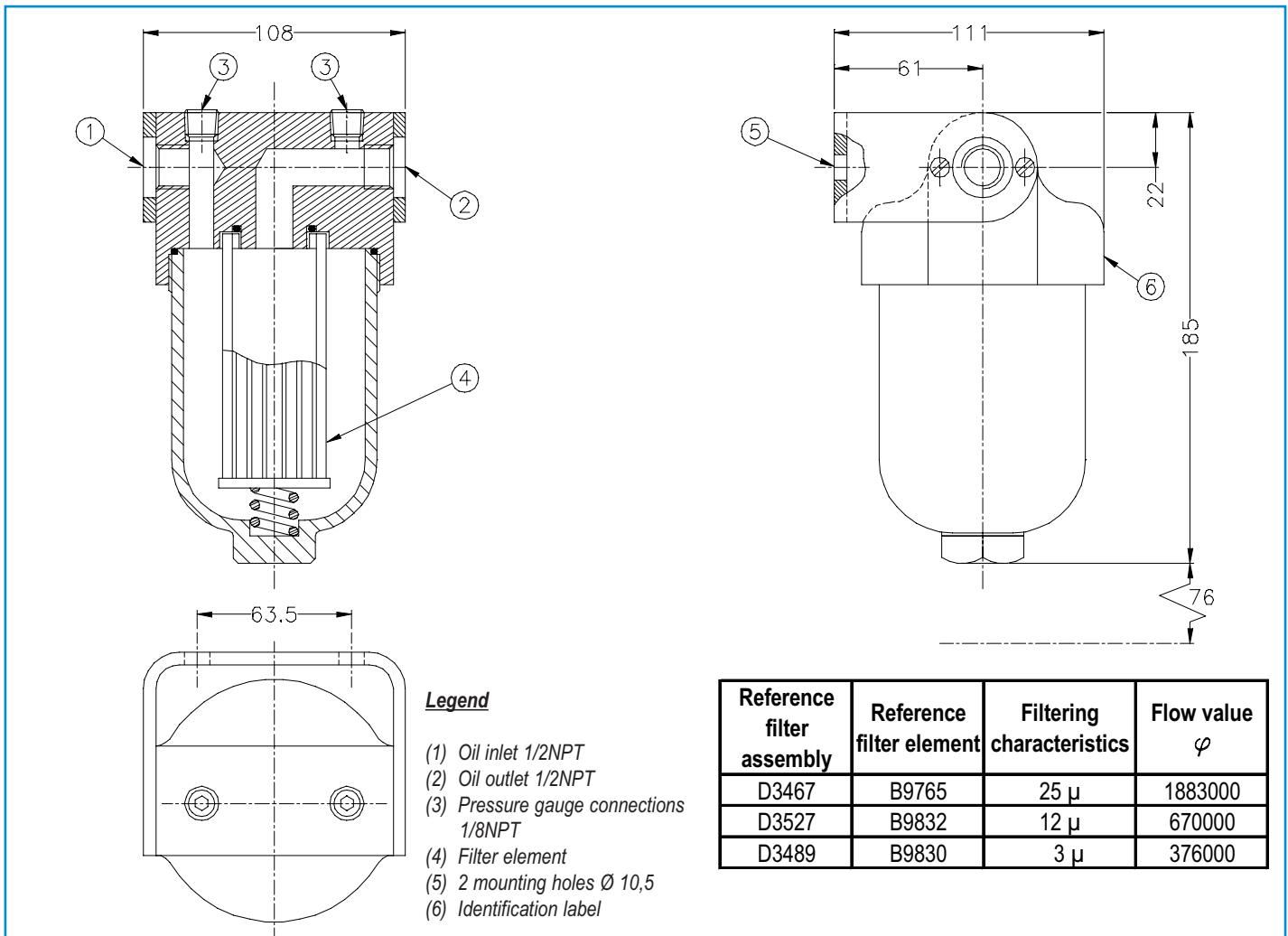
Outside dimensions



For ordering

Specify type and reference in using table below.

Example : Line filter 12 μ, reference : D3527



SYSTEM COMPONENTS - ELECTRICAL CONTROLLER TYPE SS2200

Description

The controller type **SS2200** has been developed to control and to monitor centralised lubrication systems.

- **Single line system** with injectors type FL or progressive dividers.
- **Dual line system** with hydraulic reversing valve.

For each type of system, the controller can provide several adjustment options. It comprises a three digit numerical display and 4 keys to make easy programming.

Terminal connections are available to connect all necessary devices for the good operating of the installation, depending on the type of the system.

The controller contains a functioning control relay which sends fault information to a remote alarm (buzzer or machine PLC,.....).



Electrical characteristics

- **Voltage :** 110VAC or 220VAC 50/60Hz, 24VDC
- **Consumption :** 50 mA / 110VAC
25 mA / 220VAC
100 mA / 24VDC
- **Pump output :**
 - Start up current 5 A max
 - Holding current 2 A max
- **Cycle entry power :** 12 to 16 mA
- **Fault entry power :** 12 to 16 mA
- **Protection :** IP 56 (CEI529, NEMA4X)
- **Working temperature :** -10 to 55°C
- **Storage temperature :** -40 to 85°C
- **Vibration :** 1,5G
- **Weight :** 0,7Kg
- **Dimensions (L x l x H) :** 174 x 124 x 78
- **Idle time :**
 - Time base : 1 to 999 hours
 - Cycle base : 1 to 9990 machine counts
(30 pulses max per second)
- **Pulsed output on time :** 1 to 99 counts
- **Cycle completion time :** 1 to 999 minutes

Outside dimensions

See overleaf.

Ordering instructions

Specify part number in using information below :

- 24 VDC Ref: **SS220024**
- 110 VAC Ref: **SS2200**
- 220 VAC Ref: **SS2200220**

SYSTEM COMPONENTS - ELECTRICAL CONTROLLER TYPE SS2200














Installation

Install the controller in a clean area with easy access for programming and checking. Mount the controller on a flat surface free of vibration. Before positioning, drill holes for electrical wire connections after removing electrical circuit to protect it against dirt and other contaminants.

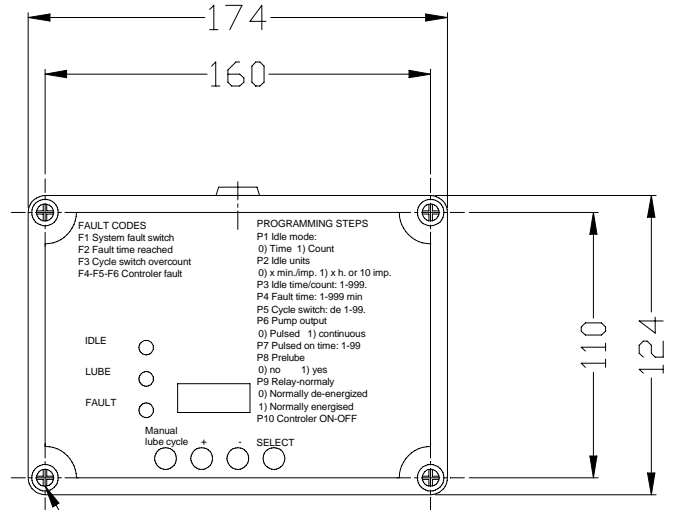
Electrical connections

Power supply must be off while making any connections. Respect connections as shown on the terminal layout below.

Terminal connections

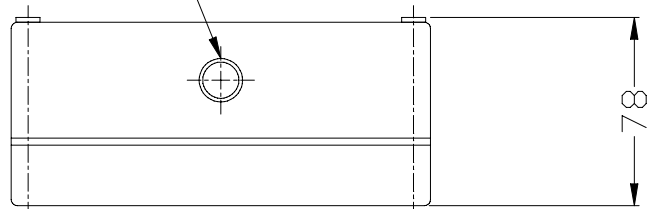
	+	Input
	-VAC or VDC
	+	Output pump
	-	...VAC or VDC
	C	Output relay
	NO	N.O or N.F
	NF	
	+	Cycle switch
	-	
	+	Fault count
	-	relay contact
	+	Manual
	-	

Outside dimensions



4 mounting holes $\varnothing 4,3$

Key
Manual lub cycle
clears fault codes



SYSTEM COMPONENTS - ELECTRICAL CONTROLLER TYPE SS2200

Description

FAULT CODES		PROGRAMMING STEPS	
F1 System fault switch		P1 Idle mode:	
F2 Fault time reached		0) Time 1) Count	
F3 Cycle switch overcount		P2 Idle units	
F4-F5-F6 Controller fault		0) x min./imp. 1) x h. or 10 imp.	
		P3 Idle time/count: 1-999.	
		P4 Fault time: 1-999 min	
		P5 Cycle switch: de 1-99.	
		P6 Pump output	
IDLE	<input type="radio"/>	0) Pulsed 1) continuous	
LUBE	<input type="radio"/>	P7 Pulsed on time: 1-99	
FAULT	<input type="radio"/>	P8 Prelube	
		0) no 1) yes	
		P9 Relay-normally	
		0) Normally de-energized	
		1) Normally energised	
		P10 Controller ON-OFF	
		Manual lube cycle	
		+ -	SELECT
		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	

SERVICE INSTRUCTIONS - ELECTRICAL CONTROLLER TYPE SS2200

Programming

For programming the controller, Press SELECT to enter programming mode and move from one programming step to the next.

Programming description

You will have to choose different options. The list which is below will help select the appropriate function.

Each function can offer 2 possibilities one of which can be selected by (+ or -). In case of not pressing the key, the first value will be selected automatically by the controller.

P1 - Idle mode

Press the (select) key until the numerical display reads **P1** and determine method of measurement to be used :

- 0) **Time base**
- 1) **Machine counts**

Use the (+ or -) key to display the determined value

P2 - Idle unit

Press the (select) key until the numerical display reads **P2** and determine the units of measurement required, based on time or machine count operation programmed in step 1 :

- | Time | Machine counts |
|------------|----------------|
| 0) Minutes | 0) Counts x 1 |
| 1) Hours | 1) Counts x 10 |

Use the (+ or -) key to display the determined value.

If units other than minutes are used, placed the unit label hours, counts x 1, or counts x 10 over "Minutes" above the numerical display on the front panel.

P3 - Idle time / counts

Press the (select) key until the numerical display reads **P3** and determine the number of minutes, hours, counts x 1, or counts x 10 required from 1 to 999.

Use the (+ or -) key to display the determined value.

P4 - Fault time

Press the (select) key until the numerical display reads **P4** and determine the number of minutes from 1 to 999 of fault time desired. The recommended value for most applications is 30% of the time the system is normally in the lube mode.

Use the (+ or -) key to display the determined number of minutes.

P5 - Cycle switch

Press the (select) key until the numerical display shows **P5** and determine the number of switch transitions from 1 to 99 required for the lubrication cycle.

Use the (+ or -) key to display the determined number of switch transitions.

P6 - Pump output

Press the (select) key until the numerical display shows **P6** and determine the correct setting for the type of pump being used.

- 0) **Pulsed pump or cyclic**
- 1) **Continuous pump (electric motor driven)**

Use the (+ or -) key to display the determined setting.

P7 - Pulsed time

Press the (select) key until the numerical display shows **P7**.

If step 6 is set for pulsed pump output " 0 ", determine the power on time from 1 to 99 seconds required. Power off time is fixed at 3 seconds.

If step 6 is set for continuous pump output " 1 ", the setting for step " 7 " is ignored and may be any value.

Use the (+ or -) key to display the determined setting.

P8 - Prelube

Press the (select) key until the numerical display shows **P8** and determine if, when power is applied to the controller, the cycle should begin in :

- 0) **Idle mode, no prelube**
- 1) **Lube mode, prelube**

Use the (+ or -) key to display the determined setting.

P9 - Relay

Press the (select) key until the numerical display shows **P9** and determine the normal state the fault relay is to be in :

- 0) **Normally de-energized**
- 1) **Normally energized**, this is the fail safe

setting, normally open contacts will open with a loss of power. Set to "0" if relay is not being used.

Use the (+ or -) key to display the determined setting.

10 - Controller

Press the (select) key until the numerical display shows **P10** and determine the complete lubrication system is ready to be operated.

- 0) **Place controller in "OFF" mode**
- 1) **Place controller in operate mode "ON"**

Saving the program

Press the (select) key until the controller enters the idle mode. The program has been saved and the controller will operate as programmed.

To change programming

To find out the current setting of any program steps or to make changes, enter the programming mode by pressing the (select key) until the desired step number is displayed.

SYSTEM COMPONENTS - ELECTRICAL CONTROLLER TYPE SS4500

Description

The controller type **SS4500** has been developed to control and to monitor centralised lubrication systems.

- **Single line system** with injectors type FL and progressive dividers.
- **Dual line system** with hydraulic or electromechanical reversing valve.
- **Spraying system** with single line or dual line equipments.

For each type of system, the controller can provide several adjustment options. It comprises an LCD, 12 keys to make easy programming and 3 LED status lights.

Terminal connections are available to connect all necessary devices for the good operating of the installation, depending on the type of the system.

The controller contains a functioning control relay which allows to send the fault informations to remote (buzzer or machine PLC,.....) and a port RS232.



Electrical characteristics

- **Voltage :** 90 VAC or 250 VAC 50/60Hz
- **Current consumption :** 50 mA / 110VAC (less load)
25 mA / 220 VAC (less load)
- **Pump output rating :** 5 A (90 to 250 VAC)
- **Ligne A output rating :** 5 A (90 to 250 VAC)
- **Ligne B output rating :** 5 A (90 to 250 VAC)
- **Switch input rating :** 12 VDC at 25 mA (nominal)
- **Sensor input rating :** 12 VDC at 250 mA (max)
Use 10 to 30 VDC, NPN, NO
proximity switch for sensors inputs.
- **Protection :** IP 56 (CEI529, NEMA4X)
- **Working temperature :** -10 to 55°C
- **Storage temperature :** -40 to 85°C
- **Vibration :** 2G (3 axes)
- **Weight :** 2,6Kg
- **Dimensions (L x l x H) :** 266 x 230 x 165
- **Idle time :**
 - Time base : 1 sec to 100 days
 - Cycle base : 1 to 999,000 machine counts
(30 pulses max per second)
- **Cycle counts on :** 1 to 99 counts
- **Over counts :** 0 to 9
- **Watchdog timer :** 1 sec to 60 minutes
- **Monitor time :** 1 sec to 24 hours
- **Timing accuracy :** 01% (crystal controlled)

Outside dimensions

See overleaf.

SYSTEM COMPONENTS - ELECTRICAL CONTROLLER TYPE

Installation

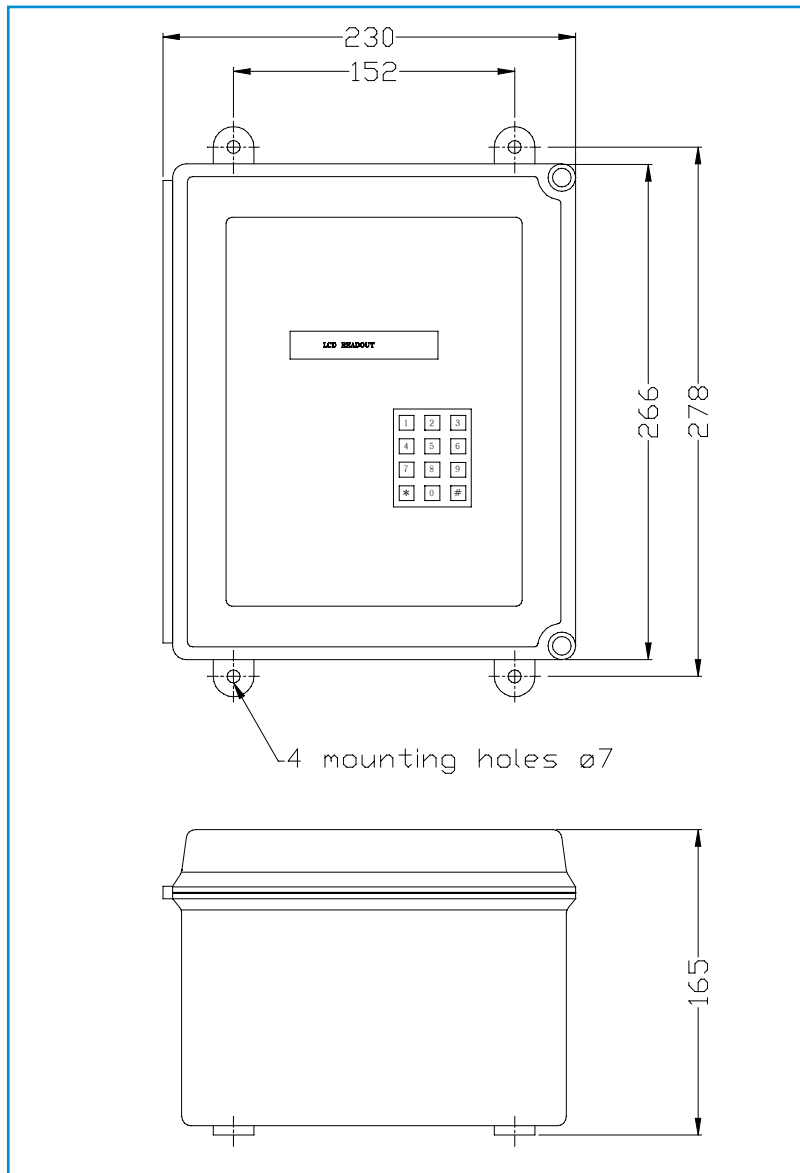
Install the controller in a clean area with easy access for programming and checking. The support must be extra-flat and without any excess of vibrations.

Before positioning, drill holes for electrical wire connections after removing electrical circuit to protect it against dirt and contaminants.

Electrical connections

Power supply must be off while making any connections. Respect connections as shown on the terminal connections page **P1203A**.

Outside dimensions



SYSTEM COMPONENTS - ELECTRICAL CONTROLLER TYPE SS4500

Description

Machine cycle			Volume sensor A			Volume sensor B			Low level			Low pression basse		Over pression		Stand By		Red led	Yel led	Grn led	+ 12 VDC	Serial com.port type RS-232
P	S	G	P	S	G	P	S	G	P	S	G	S	G	S	G	S	G	Red led	Yel led	Grn led	+ 12 VDC	
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	

Input connection

Fused circuit 250mA. Max.

P=power(+12VDC)
S=Signal load
G=ground (-)

Manual reset button

Program review button

Normal

Cycle in progress

Fault

- Press the "manual /reset" button to reset a fault or start a manual lube cycle.
- Hold the "*" key to enter setup mode. When in the setup mode "#" accepts the value and "*" clears the value so a new number can be entered
- Hold the "#" key to enter diagnostic mode. When in diagnostic mode "#" selects: input test or return to normal operation.

250V.AC Max
15Amp.

15 Amp.

15 Amp.

INPUT POWER
90 to 250VAC.
50/60Hz

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘
Ground	⏏	⏏		-	+	-	+	-	+	NO	NC	CO	NO	NC	CO
	VAC Line			Line B	Line A (spray)	Lube pump		Fault 2		Fault 1					

WARNING
Disconnect electrical power to the SS4500 before removing this safety panel

MULTI-FONCTION CONTROLLER-MONITOR REF. SS4500

SERVICE INSTRUCTIONS - ELECTRICAL CONTROLLER TYPE SS4500

Programming

For programming the controller, Press "*" to enter programming mode and move from one programming step to the next in pressing "#".

Programming description

You will have to choose different options. The list which is below will help you to select the appropriate function.

Each function can offer 2 possibilities of functioning mode which you will have to select.

In case of no pressing the key, the first value will be selected automatically by the controller.

SYSTEM TYPE

- 1) Single line
- 2) Dual line

Use the "#" key to select the determined value.

REVERSING VALVE (if case of dual line selected)

- 1) Hydraulic type DR460
- 2) Elect. type FR10

DISTRIBUTOR TYPE (if case of single line selected)

- 1) Injector type FL
- 2) Divider type M2500, M1000,...

SPRAY SYSTEM

- 1) Yes
- 2) No

AFTER BLOW TIME (if case of using spray system)

Min	Sec	(air solenoid valve open time)
00	00	

CYCLE TYPE (if case of dual line selected)

- 1) Full complete lubrication cycle
- 2) Half half lubrication cycle

IDLE MODE (counting mode between each lub.cycle)

1) Time

Day	Hour	Min	Sec
00	00	00	00

2) Cycle
Mach cycle from 1 to 999.999 pulses

WATCHDOG TIMER (if case of mach cycle selected)

1) Yes
Min **Sec**
00 00
2) No

MONITOR TIME (control time of lub.cycle)

Hour **Min** **Sec**
00 00 00

It must be equal to the necessary functioning time of the lubricator + 10%.

OVER COUNT (if case of cycle count selected)

From 0 to 9 cycles

CYCLE COUNT (if case of single line with divider selected)

From 1 to 999, number of divider cycles selected per lub.cycle

PRE LUBE

- 1) Yes
- 2) No

LUBE POST STAND-BY

- 1) Yes Controller start the system on one lub.cycle
- 2) No Controller start the system according to the last stop

POWER PUMP

- 1) Continuous
- 2) Pulse

PULSE ON TIME (if case of using cyclic pump)

Min **Sec**
00 00

PULSE OFF TIME (if case of using cyclic pump)

Min **Sec**
00 00

VALIDATION

Start Lube Cycle = 1
Review Program = 2



SYSTEM COMPONENTS - ELECTRICAL CONTROLLER TYPE 31981

Description

The controller type 31981 has been developed to control and to monitor centralised lubrication systems installed with pump 12 or 24 VDC, equipped with or without lowlevel switch.

In count mode, cycles are counted via an electrical switch fitted on progressive dividers (M1000, M2500, UR...).

Controller comprises a four digits numerical display, four keys to make easy programming and electrical connection plug.

Characteristics

- **Voltage:** 12.or 24VDC
- **Output current:** 4 amps. Max .(12VDC)
2 amps. Max .(24VDC)
- **Electrical low level:** NO
- **Protection:** IP44
- **Working temperature:** de -20 to +40°C.
- **Weight:** 0,2 Kg.
- **Dimensions (L x l x H):** 130 x 70 x 33

Count mode:

- **Pause time:** 1 to 9999 minutes.
- **Working time:** 1 to 9999 impulses.

Time mode:

- **Pause time:** 1 à 9999 minutes.
- **Working time:** 1 à 999 sec.
- **Alarm:** Yellow led and buzzer

Alarm is operated when the lubricant level is minimum.
For the count mode version, a buzzer is operated after 5 minutes when there is a blockage in system line.



Ordering instructions

Specify part number in using informations below:

Count mode:

- 24VDC. ==> Reference **31981 1**
- 12VDC. ==> Reference **31981 3**

Time mode:

- 24VDC. ==> Reference **31981 2**
- 12VDC. ==> Reference **31981 4**

Outside dimensions





See overleaf.

SYSTEM COMPONENTS - ELECTRICAL CONTROLLER TYPE 31981

Installation

Install the controller in a clean area with easy access for programming and checking. Mount the controller on a flat surface free of vibrations.

Keys description

-  Select
-  Enter and reset
-  Step selection
-  Adjustment

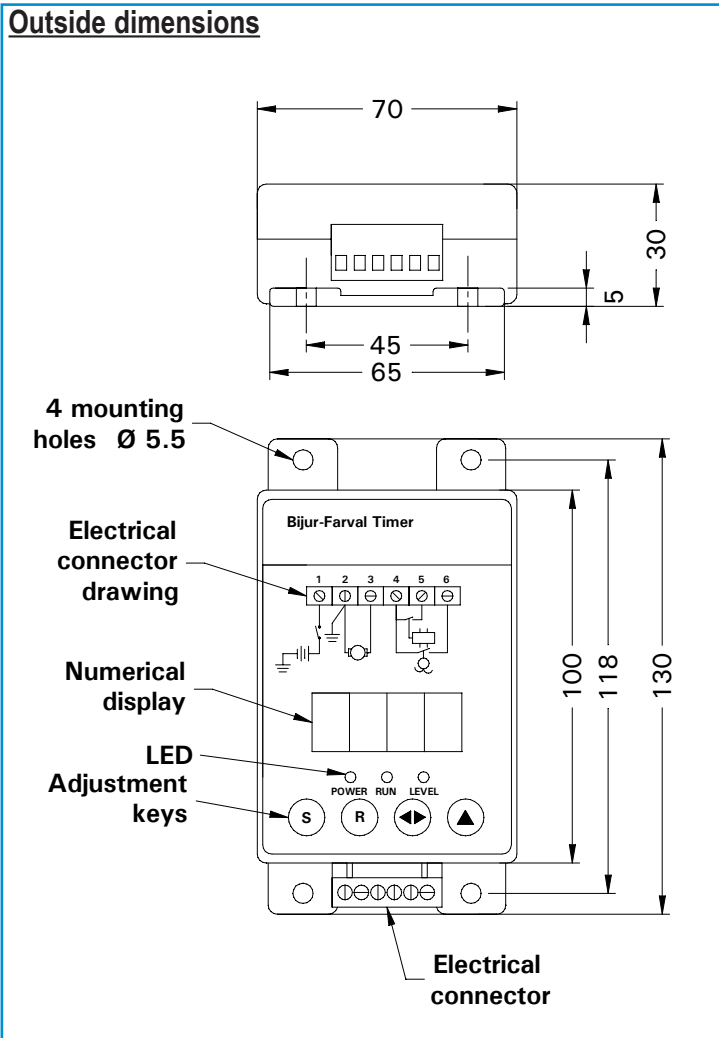
Led

Green: power supply on

Red: lubrication cycle

Yellow: alarm (lubricant low level or blockage in the system).

Outside dimensions

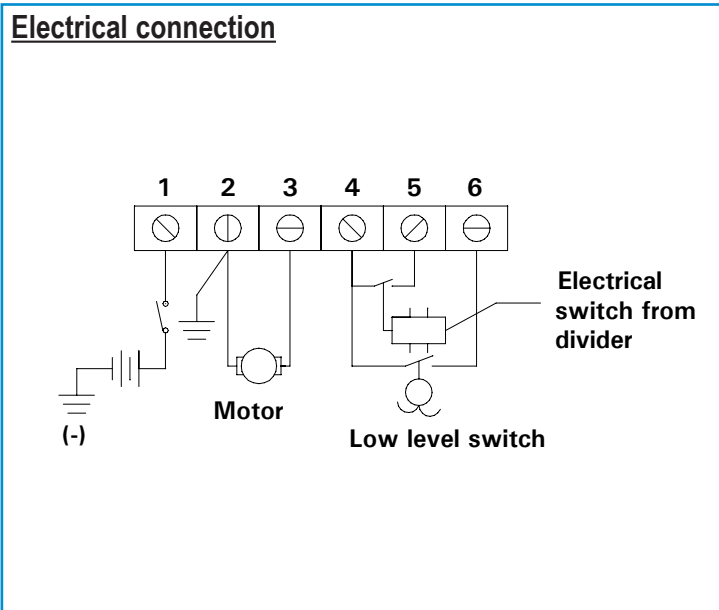


Terminal connections

Power supply must be off while making any connections. Respect connections as shown on the terminal connections below.

- Connection N°1: Supply (+), 12 or 24VDC
- Connection N°2: (-) for motor
- Connection N°3: (+) for motor
- Connection N°4 et 6: Low level switch
- Connection N°4 et 5: Electrical switch (only for count mode version)

Electrical connection



SYSTEM COMPONENTS - ELECTRICAL CONTROLLER TYPE 31981

Programming

For programming the controller, press at the same time keys "S" and "R".

The controller is on adjustment mode and the digit board is flashing.

Programming description - count mode

Step 1 [P]
Pause time from 1 to 9999 minutes
Press the "S" key

Step 2 [C]
Lubrication cycles (electrical switch on divider) from 1 to 9999 cycles

Press "R" to enter requested adjustments.
The controller is ordering the first lubrication cycle, red LED is switched on.

Programming description- Time mode

Step 1 [U]
Lubrication time from 1 to 999 sec
Press the "S" key

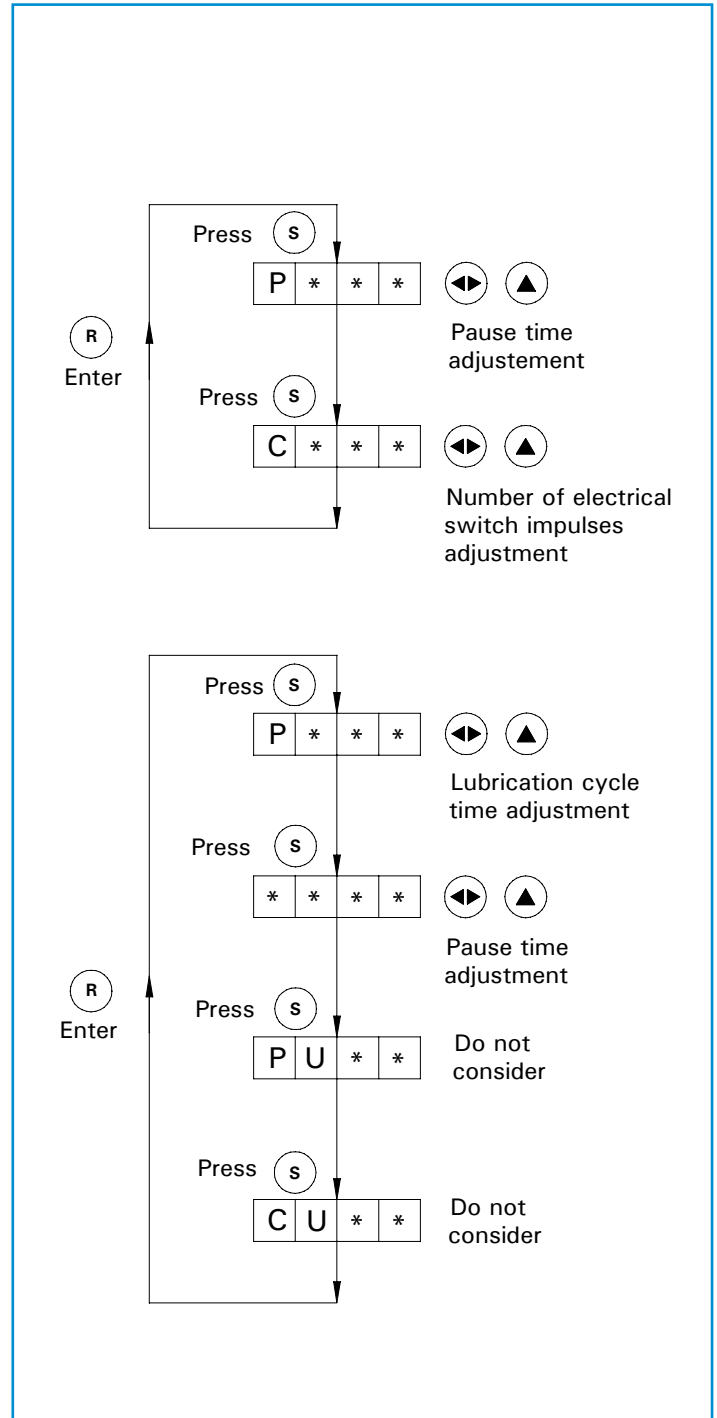
Step 2 [*]
Lubrication time from 1 to 9999 sec
Press the "S" key

Step 3 et Step 4 [CU] and [PU]
Press 2 times the "S" key to come back to [U]
Do not consider values [CU] and [PU] which are on the numerical display.

Press "R" to enter requested adjustments.
The controller is ordering the first lubrication cycle, red LED is switched on.

Data check

The controller can check all preset data at any time. Press the "S" key continuously.





Centralised lubrication system

FITTINGS AND ACCESSORIES



POMAC
LUB SERVICES BVBA

Kortrijkstraat 187 B-8770 Ingelmunster
Tel. +32 (0)51 316 205 - Fax +32 (0)51 309 621 info@pomac.be - www.pomac.be



Bijur-Farval lubrication systems are designed and engineered to deliver optimum performance. To ensure that you receive only trouble free performance from your lubrication system, the Bijur-Farval part numbers are listed in this annexe. Parts are easily identifiable.

For additionnal information or specific applications, do not hesitate to contact us.



INDEX

BRASS CONNECTORS

- . Connector for tubing Ø 2,4, Ø 4 mm and over 4 mm.
- . Quick coupling.
- . Coupling and Banjo assembly.
- . Nut, screw and compression sleeve, insert.

R1104A-R1105A-R1106A
R1105A
R1107A
R1108A

STEEL CONNECTORS

- . Straight Male stud coupling.
- . 90° Male stud elbow.
- . Banjo assembly.
- . Coupling and tee.
- . Reducer/ Bulkhead union.
- . Pressure gauge connector.
- . Adjusted flow union.
- . Nut, compression sleeve, copper seal, brass insert.

R1109A-R1110A
R1111A
R1112A
R1113A
R1114A
R1115A
R1115A
R1116A

MISCELLANEOUS CONNECTORS

- . Elbow connector.
- . Reducer.
- . Bulkhead assembly.
- . Quick coupling.
- . Plug.
- . Swivel and Zerk fitting.

R1117A
R1118A
R1119A
R1120A-R1121A
R1122A
R1123A

PIPES, TUBING AND ACCESSORIES

- . Low pressure tubing.
- . High pressure tubing.
- . Nylon tubing.
- . Copper and zinc plated steel rigid tubing.
- . Steel tubing.
- . Clamp, tool.

R1124A
R1125A
R1126A
R1127A
R1128A
R1129A



SYSTEM COMPONENTS: BRASS CONNECTORS

CONNECTORS FOR TUBING Ø 2.4

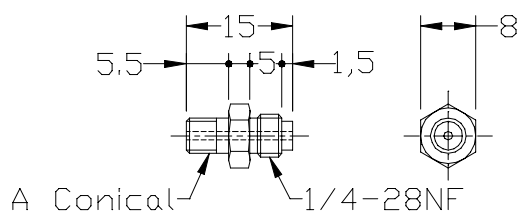
APPLICATIONS

Adaptors are used to connect tubing ø2,4 on machine parts or lube-system junctions.

All of them must be mounted with Sleeve B3313 and compression Nut B3373.

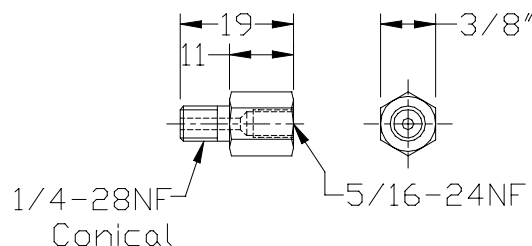
1/8 NPT thread can be used in M10 x 1 female thread.

STRAIGHT CONNECTOR



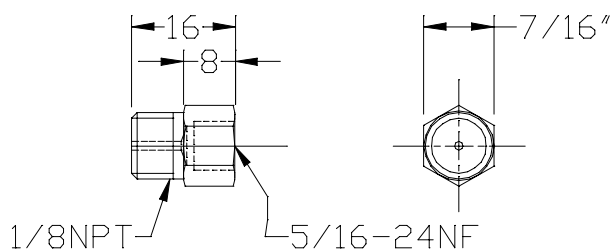
A	REFERENCE	
1/428NF	B4452	
M6	AR107	

STRAIGHT CONNECTOR



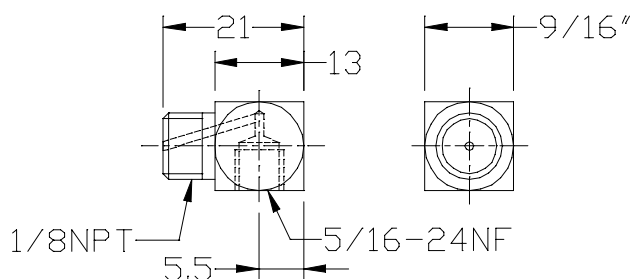
REFERENCE	
B4316	

STRAIGHT CONNECTOR



Straight connector	
B3430	

90° ELBOW CONNECTOR

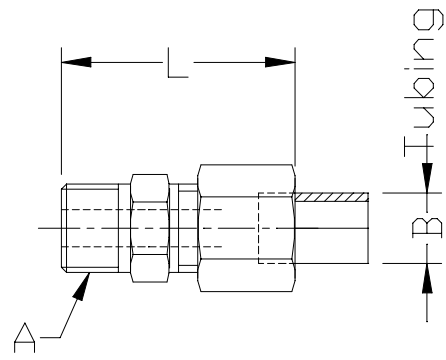


90° Elbow tubing connector	
B3431	

SYSTEM COMPONENTS: BRASS CONNECTORS

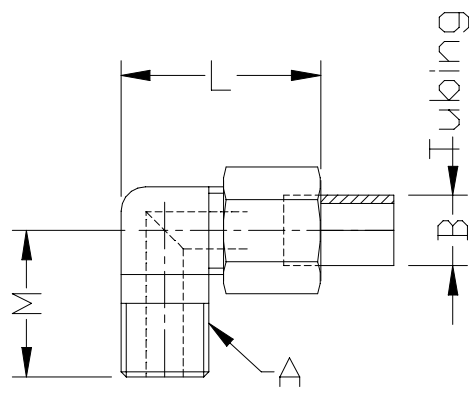
CONNECTORS FOR TUBING OVER Ø4mm

STRAIGHT CONNECTOR



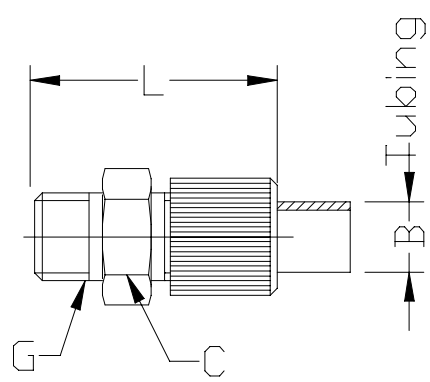
A	B	C	L	M	REFERENCE
3/8 NPT	9,5		36		B6512
1/4 NPT	9,5		33		B6514
1/4 NPT	6,35		32		B6533
1/8 NPT	6,35		29		B6534
1/8 NPT	10				AR265
R 3/8	10				AR410
R3/8	6				AR521
R 1/4	10				AR442
R 1/4	8				AR575
R 1/4	6				AR520
R 1/8	8				AR576
R 1/8	6				AR519

90° ELBOW CONNECTOR



A	B	C	L	M	REFERENCE
3/8 NPT	9,5		26	23	B6518
1/4 NPT	9,5		25	23	B6519
1/4 NPT	6,35		22	20	B6535
1/8 NPT	6,35		22	19	B6536
R 1/4	10				AR582
R 1/4	8				AR438
R 1/4	6				AR425
R 1/8	6				AR581

QUICK COUPLING FOR NYLON TUBING



Tubing Ø B	L	C	D	G	REFERENCE
6 x 4	24	11	12	M10x1c	AR1105
6,4 x 4,8	27,5	12	12	5/1624NF	AR126
6,4 x 4,8	25	12	12	1/8 NPT	AR112
8 x 6	25	14	15	1/8 NPT	AR122
8 x 6	25	13	14	M10x1c	AR1105
8 x 6	29	17	14	M14x1,5	AR728

SYSTEM COMPONENTS: BRASS CONNECTORS

CONNECTORS FOR TUBING Ø 4

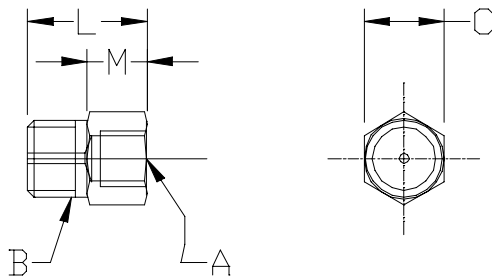
APPLICATIONS

Adaptors are used to connect tubing Ø4 on machine parts or Lube-system junctions.

All of them must be mounted with compression sleeve B1061 or B8272.

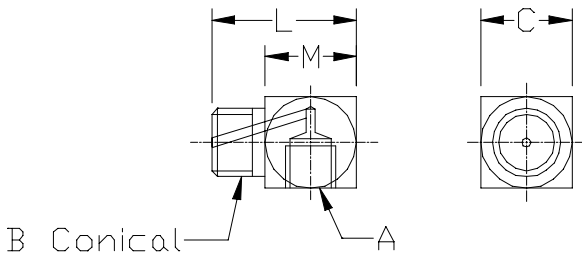
For thread connections, use compression nut B1095, or compression screw B1371 or B3783.

STRAIGHT CONNECTOR



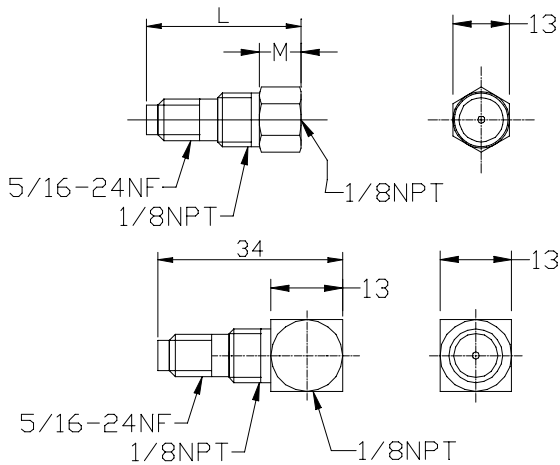
A	B	L	M	C	REFERENCE
5/1624NF	M5	17	9	9,5	AR1327
5/1624NF	M6	17	9	9,5	AR110
5/1624NF	M8x1	16	8	11	AR119
M8x1	M10x1	16	8	11	AR1113
5/1624NF	1/8 NPT	16	8	11	A2835
5/1624NF	G 1/8	16	8	11	B8884
5/1624NF	1/428NF	19	11	3,8"	B4312

90° ELBOW CONNECTOR



A	B	L	M	C	REFERENCE
5/1624NF	1/8 NPT	21	13	13	A3080
5/1624NF	1/8 GAZ	21	13	13	B8883
M8x1	M10x1	19	11	11	AR1112

BULKHEAD COUPLING

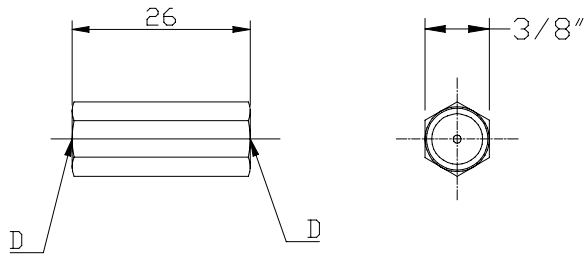


L	REFERENCE
32	B5560
40	B4856

REFERENCE
B4416

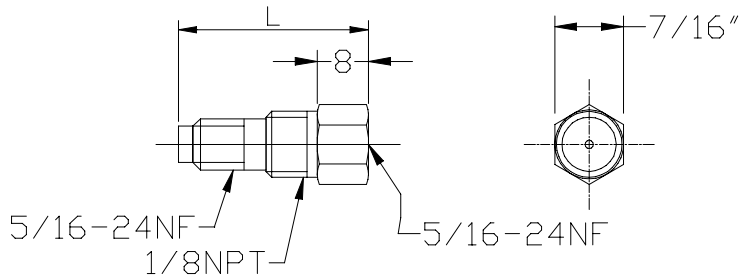
SYSTEM COMPONENTS: BRASS CONNECTORS

STRAIGHT COUPLING



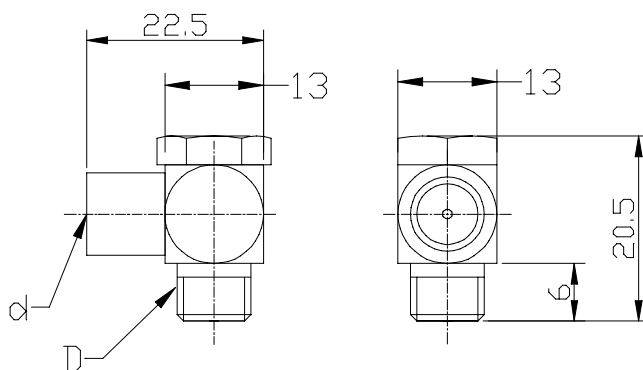
D	REFERENCE	
5/1624NF	A2899	
M8x1	AR1118	

BULKHEAD COUPLING



L	REFERENCE	
29	B3108	
37	B3599	

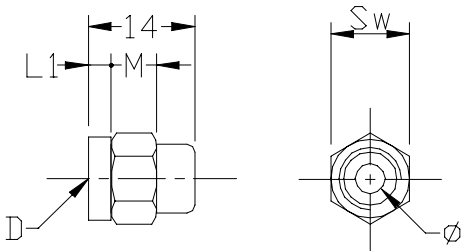
BANJO ASSEMBLY



d	D	REFERENCE	
5/1624NF	M 8x1	AR210	
5/1624NF	M6	AR236	
M 8x1	M 8x1	AR1120	

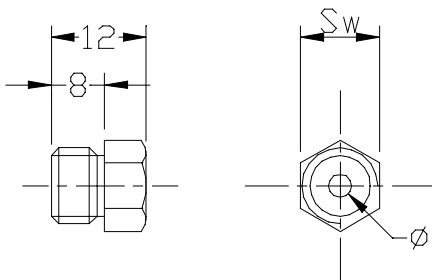
SYSTEM COMPONENTS: BRASS CONNECTORS

COMPRESSION NUT



Tubing Ø	D	L	L1	SW	M	REFERENCE
2,4	1/428NF	10,5	2	8	5,5	B3610
4	5/1624NF	12	2,5	3/8	5,5	B1095
4	M 8x1	12	2,5	10	5,5	15327

COMPRESSION SCREW

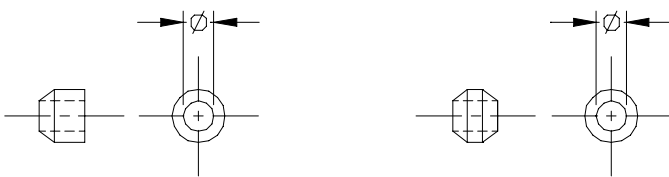


Tubing Ø	D	SW	REFERENCE
2,4	5/1624NF	8	B3373
4	5/1624NF	3/8	B3783
4	5/1624NF	3/8	B1371
4	M 8x1	8	15326
6	M 10x1	11	22545

COMPRESSION SLEEVE

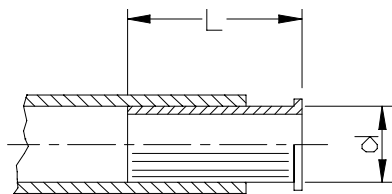
Fig.1: For nylon tubing

Fig. 2: For rigid tubing



Tubing Ø	Figure	REFERENCE
2,4	2	B3313
4	1	B8272
4	2	B1061
6	1	22577
6	1	AR547
6	2	AR938
6,35	1	B10202
6,35	2	B2520
8	1	AR548
8	2	AR1430
9,5	2	B6532
10	2	AR990

BRASS INSERT FOR NYLON TUBING

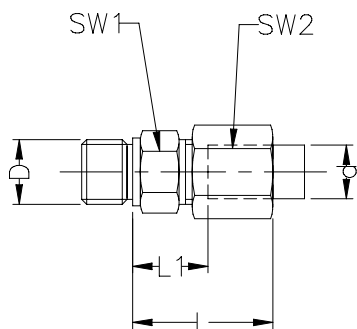


Tubing Ø	d	L	REFERENCE
2,7x4	2,7	10	AR629
4x6	4	10	AR1094
6x8	6	15	AR1090
8x10	8	15	AR1121

SYSTEM COMPONENTS: STEEL CONNECTORS

STRAIGHT MALE STUD COUPLING

- Thread G : (BSP).
- Thread M : Metric.



Tubing d	Thread D	Series	Sizes				Reference	
			L	L1	SW1	SW2	Steel	Stainless steel
6	G 1/8	L	23	8,5	14	14	AR383	AR383I
6	G 1/4	L	23,5	9	19	14	AR397	AR397I
6	G 1/4	S	28	13	19	17	AR959	AR959I
8	G 1/8	L	23,5	8,5	17	17	AR789	AR789I
8	G 1/4	L	25	10	19	17	AR384	AR384I
10	G 1/8	L	25,5	10,5	19	17	AR898	AR898I
10	G 1/4	L	26	11	19	19	AR385	AR385I
10	G 3/8	S	31	15	22	22	AR400	AR400I
12	G 1/2	L	27,5	13	27	22	AR1423	AR1423I
12	G 1/4	L	26,5	12	19	22	AR790	AR790I
12	G 3/8	L	27	12,5	22	22	AR386	AR386I
15	G 3/8	L	28,5	13,5	24	27	AR730	AR730I
15	G 1/2	L	29	14	27	27	AR387	AR387I
20	G 3/4	S	42	20,5	32	36	AR791	AR791I
6	M10 x 1	L	23	8,5	14	14	AR426	AR426I
6	M12 x 1	L	24	9	17	14	AR1026	
8	M10 x 1	L	24	9	14	17	AR1028	
8	M12 x 1	L	25	10	17	17	AR1027	
8	M14 x 1,5	S	30	15	19	19	AR1280	
10	M14 x 1,5	L	26	11	19	19	AR1417	
10	M16 x 1,5	S	31	15	22	22	AR906	
12	M14 x 1,5	L	27	12,5	19	22	AR1281	
12	M16 x 1,5	L	27	12,5	22	22	AR905	

For copper seal, see page R1116.

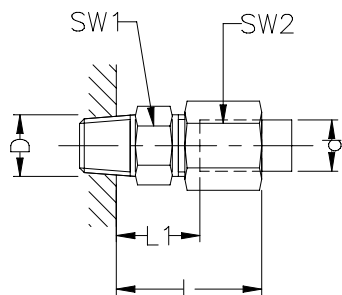
BIJUR FARVAL connectors conform to norm DIN2353, and are available for all grease and oil centralised lubrication applications.

Connectors are available in steel and stainless steel. For others sizes and specific designs, contact Bijur Farval.

SYSTEM COMPONENTS: STEEL CONNECTORS

STRAIGHT MALE STUD COUPLING

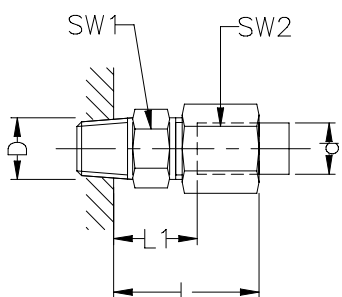
- Thread R : (BSP).
- Thread M : Metric.



Tubing d	Thread D NTP	Series	Sizes				Reference	
			L	L1	SW1	SW2	Steel	Stainless steel
4	R 1/8	LL	20	10,5	10	10	AR974	AR974I
6	R 1/8	LL	20,5	9	11	12	AR154	AR154I
6	R 1/4	L	34,5	20	14	14		AR1277I
6	R 1/4	S	30	15	17	17	AR960	
8	R 1/8	LL	23,5	11	12	14	AR168	AR168I
8	R 1/4	L	27	12	17	17	AR916	AR916I
10	R 1/8	L			17	19	AR937	
10	R 1/4	L	28	13	17	19	AR155	AR155I
10	R 3/8	L	36	21	17	19		AR1276I
10	R 3/8	S	32,5	16,5	19	22	AR973	
12	R 1/4	L	28,5	14	19	22	AR1158	
12	R 3/8	L	28,5	14	19	22	AR170	AR170I
15	R 3/8	L	30	15	24	27	AR1069	
15	R 1/2	L	30,5	15,5	24	27	AR286	AR286I
20	R 3/4	S	44	22,5	32	36	AR1275	
4	M 8 x 1	LL	20	10,5	10	10	AR992	AR992I
6	M10 x 1	LL	20,5	9	11	12	AR1169	AR1169I
8	M10 x 1	LL	23,5	11	12	14	AR618	AR618I

STRAIGHT MALE STUD COUPLING

- Thread NPT.

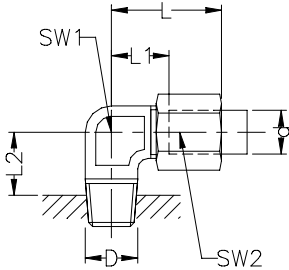


Tubing d	Thread D NPT	Series	Sizes				Reference	
			L	L1	SW1	SW2	Steel	Stainless steel
6	1/8	LL	21,5	10	11	12	AR138	AR974I
6	1/8	L	31,5	17	12	14		AR1278I
6	1/4	S	31	16	17	17	AR882	AR882I
8	1/8	LL	24,5	12	12	14	AR167	
8	1/8	L	33	18	14	17		AR1279I
10	1/4	L	29	14	17	19	AR140	AR140I
10	3/8	L	30	15	19	19	AR1035	AR1035I

SYSTEM COMPONENTS: STEEL CONNECTORS

90° MALE STUD ELBOW

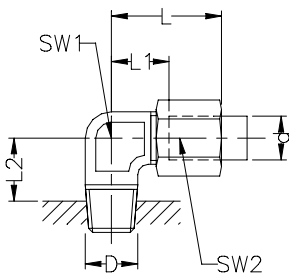
- Thread R: (BSP).
- Thread M: metric.



Tubing d	Conical thread D	Series	Sizes					Reference	
			L	L1	L2	SW1	SW2	Steel	Stainless steel
4	R 1/8	LL	21	11	12	11	10	AR975	AR975I
6	R 1/8	LL	21	9,5	12	11	12	AR156	
6	R 1/8	L	16,5	12	12	12	14		AR1282I
6	R 1/4	S	31	16	18	14	17	AR961	AR961I
8	R 1/8	LL	23	11,5	15	12	14	AR174	
8	R 1/8	L	28,5	14	16	12	17		AR1283I
8	R 1/4	L	29	14	18	14	17	AR794	AR794I
10	R 1/4	L	30	15	19	17	19	AR157	AR157I
10	R 3/8	L	29,5	15	16	14	19		AR1284I
10	R 3/8	S	34	17,5	20	19	22	AR795	
12	R 3/8	L	32	17	20	19	22	AR176	AR176I
15	R 1/2	L	36	21	24	19	27	AR797	AR797I
20	R 3/4	S	48	26,5	31	27	36	AR799	
6	M10 x 1	LL	21	9,5	12	11	12	AR904	
6	M10 x 1	L	27	12	12	12	14		AR1285I
8	M10 x 1	LL	23	11,5	15	12	14	AR617	AR617I

90° MALE STUD ELBOW

- Thread NPT.

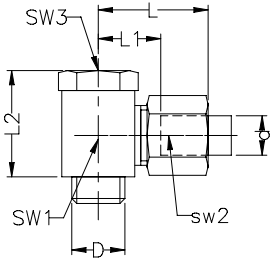


Tubing d	Conical thread D	Series	Sizes					Reference	
			L	L1	L2	SW1	SW2	Steel	Stainless Steel
4	R 1/8 NPT	LL	21	11	11,5	11	10	AR632	
6	R 1/8 NPT	LL	21	9,5	11,5	11	12	AR139	
6	R 1/8 NPT	L	27	12	11,5	12	14		AR1286I
8	R 1/8 NPT	LL	23	11,5	16	12	14	AR173	
8	R 1/8 NPT	L	29	14	16	12	17		AR1287I
10	R 1/4 NPT	L	30	15	21	17	19	AR141	AR141I
10	R 3/8 NPT	L	32	17	21	14	19		AR1288I
10	R 3/8 NPT	S	34	17,5	22	19	22	AR1036	

SYSTEM COMPONENTS: STEEL CONNECTORS

BANJO ASSEMBLY (CONVENTIONAL)

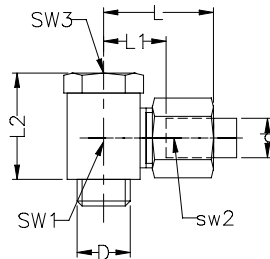
- Thread G: (BSP).
- Thread M: metric.



Tubing d	Thread D	Series	Sizes						Reference	
			L	L1	L2	SW1	SW2	SW3	Steel	Stainless Steel
4	G 1/8	LL	21	11	17	14	10	14	AR1097	AR1097I
4	M 8 x 1	LL	20	10	17	12	10	12	AR991	AR991I
6	M12 x 1	S	28	13,5	25	17	17	17	AR1022	
8	M10 x 1	LL	25	10	22	14	14	14	AR1029	AR1029I
8	M12 x 1	L	28	13	25	17	17	17	AR1023	
10	M16 x 1,5	S	32	15,5	32	22	22	22	AR137	AR137I
12	M16 x 1,5	L	30	15	32	22	22	22	AR1263	AR1263I

BANJO ASSEMBLY (ECCENTRIC)

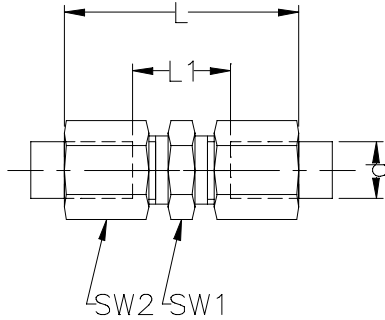
- Thread G: (BSP).
- Thread M: metric.



Tubing d	Thread D	Series	Sizes						Reference
			L	L1	L2	SW1	SW2	SW3	Steel
6	G 1/8	L	27	12	25,5	5	14	18	AR339
6	G 1/4	S	31	16,5	30	8	17	22	AR1032
8	G 1/4	L	29	14,5	30	8	17	22	AR982
10	G 1/4	L	30	15,5	30,5	8	19	22	AR983
12	G 3/8	L	33	18	37	10	22	27	AR342
6	M10 x 1	L	27	12	25,5	5	14	18	AR1021
8	M14 x 1,5	S	31	16,5	30,5	8	19	22	AR1033
10	M14 x 1,5	L	30	15,5	30,5	8	19	22	AR553

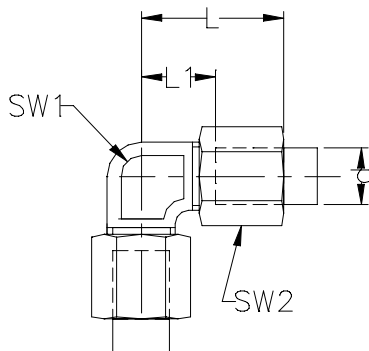
SYSTEM COMPONENTS: STEEL CONNECTORS

STRAIGHT COUPLING



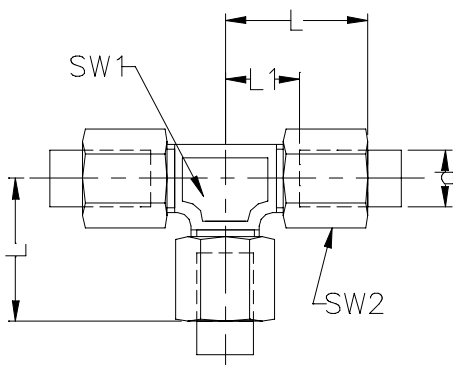
Tubing d	Series	Sizes				Reference	
		L	L1	SW1	SW2	Steel	Stainless steel
4	LL	31	12	9	10	AR993	AR993I
6	LL	32	9	11	12	AR143	
6	L	39	10	12	14		AR1289I
8	LL	35	12	12	14		
8	L	40	11	14	17	AR184	AR1290I
10	L	42	13	17	19	AR144	AR144I
12	L	43	14	19	22	AR308	AR308I
15	L	46	16	24	27	AR309	AR309I
20	S	66	23	32	36	AR801	AR801I

ELBOW COUPLING



Tubing d	Series	Sizes				Reference	
		L	L1	SW1	SW2	Steel	Stainless steel
12	L	32	17	19	22	AR316	AR316I
15	L	36	21	19	27	AR317	AR317I
20	S	48	26,5	27	36	AR802	AR802I

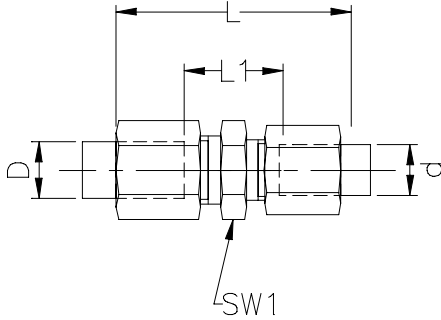
EQUAL TEE



Tubing d	Series	Sizes				Reference	
		L	L1	SW1	SW2	Steel	Stainless steel
4	LL	21	11	9	10	AR976	AR976I
6	LL	21	9,5	11	12	AR179	
6	L	27	12	12	14		AR1291I
8	L	29	14	14	17	AR180	
8	L	29	14	12	17		AR1292I
10	L	30	15	17	19	AR181	AR181I
12	L	32	17	19	22	AR182	AR182I
15	L	36	21	19	27	AR321	AR321I
20	S	48	26,5	27	36	AR803	AR803I

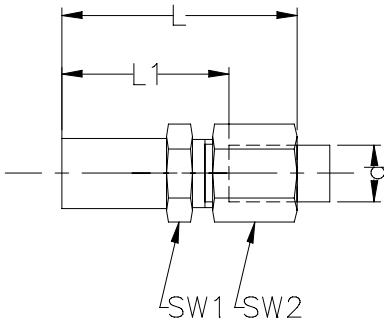
SYSTEM COMPONENTS: STEEL CONNECTORS

STRAIGHT REDUCER



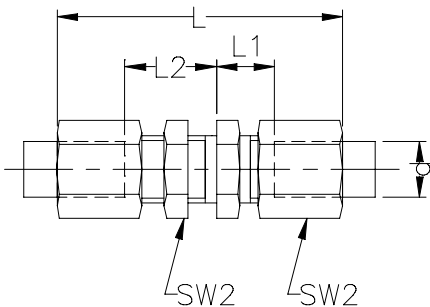
Tubing D/d	Series	Sizes				Reference	
		L	L1	SW1	SW2	Steel	Stainless steel
8/6	L	40	11	11	14	AR427	AR427I
10/6	L	41	12	12	17	AR185	AR185I
10/8	L	42	12	12	17	AR191	AR191I
12/10	L	43	14	14	19	AR192	AR192I
15/10	L	45	15	15	24	AR1293	AR1293I
20/10	S	56	22	22	32	AR705	AR705I
15/12	L	44	15	15	24	AR1422	AR1422I

REDUCER CONNECTOR



Tubing D/d	Series	Sizes				Reference	
		L	L1	SW1	SW2	Steel	
8/6	L	40	25	12	14	AR922	
10/6	L	41	26	12	14	AR805	
10/8	L	42	27	14	17	AR806	
12/10	L	43	28	17	19	AR911	
15/10	L	45	30	17	19	AR807	
20/10	S	58	41	22	22	AR808	
15/12	L	46	31	19	22	AR1421	

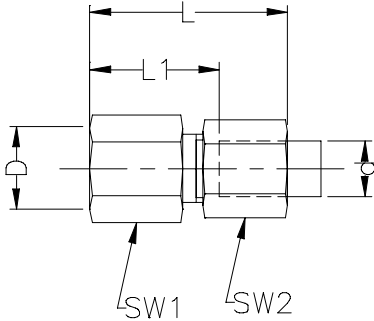
BULKHEAD UNION



Tubing d	Series	Sizes					Reference	
		L	L1	SW1	SW2	dp	Steel	Stainless steel
6	L	64	7	27	14	14	AR825	AR825I
8	L	65	8	27	17	16	AR826	AR826I
10	L	68	10	28	19	18	AR827	AR827I
12	L	69	10	29	22	20	AR828	AR828I
15	L	73	12	31	27	24	AR829	AR829I
20	S	94	17	33	36	32	AR830	AR830I

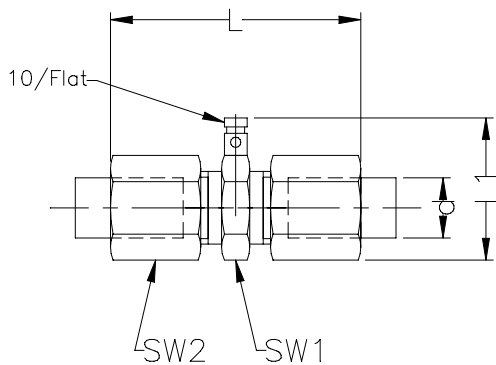
SYSTEM COMPONENTS: STEEL CONNECTORS

FEMALE PRESSURE GAUGE CONNECTOR



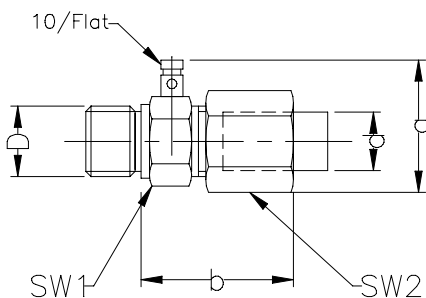
Tubing d	Female thread D	Series	Sizes				Reference	
			L	L1	SW1	SW2	Steel	Stainless steel
6	G 1/2	S	46	11	27	17	AR722	AR722I
8	G 1/4	L	37	7,5	19	17	AR817	AR817I
10	G 1/4	L	38	8,5	19	19	AR818	AR818I
10	G 1/4	S	47	10,5	27	22	AR819	AR819I

STRAIGHT COUPLING WITH AJUSTABLE FLOW SCREW



Tubing d	Series	Sizes				Reference	
		L	L1	SW1	SW2	Steel	
6	L	36	45	14	17	AR1294	
8	L	39	47	17	19	AR1295	
10	L	42	49	19	22	AR735	

STRAIGHT MALE STUD COUPLING WITH AJUSTABLE FLOW SCREW

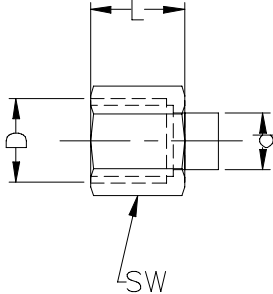


Tubing d	Thread D	Series	Sizes				Reference	
			a	b	SW1	SW2	Steel	
20	G 1/2	S	54	42	32	36	AR1296	

For copper seal, see page R1116.

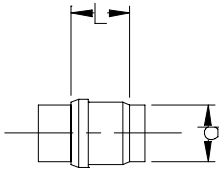
SYSTEM COMPONENTS: STEEL CONNECTORS

NUT



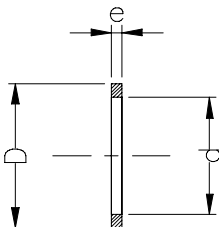
Tubing d	Thread D	Series	Sizes		Reference	
			L	SW	Steel	Stainless steel
6	M10x1	LL	11,5	12	AR194	
6	M12x1,5	LL	14,5	14	AR204	AR204I
6	M14x1,5	S	16,5	17	AR1272	AR1272I
8	M12x1	LL	14	12	AR569	
8	M14x1,5	LL	14,5	17	AR205	AR205I
8	M16x1,5	S	16,5	19	AR1273	AR1273I
10	M16x1,5	LL	15,5	19	AR208	AR208I
10	M18x1,5	S	17,5	22	AR1274	
12	M18x1,5	LL	15,5	22	AR197	AR197I
15	M22x1,5	LL	17	27	AR821	AR821I
20	M30x2	S	24	36	AR822	AR822I

COMPRESSION SLEEVE



Tubing d	Series	Sizes	Reference	
		L	Steel	Stainless steel
6	LL	7,5	AR199	
6	LL	8,5	AR206	AR206I
6	S	8,5	AR206	AR206I
8	LL	7,5	AR207	
8	L	8,5	AR200	AR200I
8	S	8,5	AR200	AR200I
10	L	9,5	AR209	AR209I
10	S	9,5	AR209	AR209I
12	L	9,5	AR202	AR202I
15	L	10	AR823	AR823I
20	S	11,5	AR824	AR823I

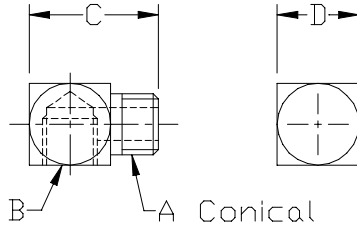
COPPER SEAL



Thread	D	d	e	Reference
G 1/8	13,5	10,3	1	AR371
G 3/8	21	17,3	1,5	AR373
G 1/2	26	21,3	1,5	AR374
G 3/4	32	27,3	1,5	AR375
M8	12	8,2	1,5	AR1068
M10	13,5	10,3	1	AR371
M12	15,4	12,2	1,5	AR1064
M14	17,9	14,2	1,5	AR372
M16	20	16,2	1,5	AR1124

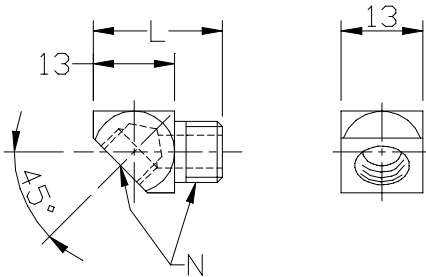
SYSTEM COMPONENTS: MISCELLANEOUS CONNECTORS

90° BRASS ELBOW CONNECTOR



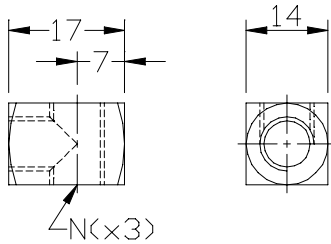
A	B	C	D	Reference
1/4-28NF	1/4-28NF	14	8	B4453
1/4-28NF	1/8NPT	21	13	B3608
G1/8	G1/8	21	13	E1000
M6x100	1/8NPT	21	13	AR104
M8x125	1/8NPT	21	13	AR105
M10x1	M10x1	21	13	AR1114
M10x150	1/8NPT	21	13	AR106
M6x100	M6x100	14	8	AR108
M8x100	M8x100	19	11	AR120
1/8NPT	1/8NPT	21	13	A2768
1/8NPT	1/8NPT	24	13	B1936
1/8NPT	1/8NPT	32	13	A2309
1/8NPT	1/8NPT	42	13	A2539

45° BRASS ELBOW CONNECTOR



N	Reference
1/8 NPT	B3133
M10xc	AR1115

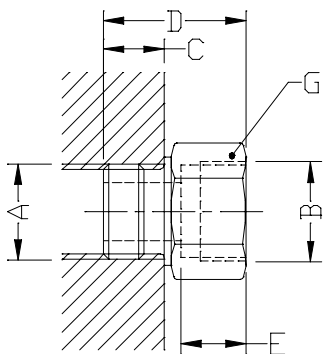
BRASS TEE CONNECTOR



N	Reference
1/8 NPT	A4071
M10x1	AR1111

SYSTEM COMPONENTS: MISCELLANEOUS CONNECTORS

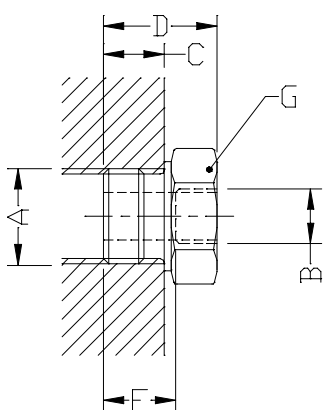
REDUCER FEMALE-MALE



Thread A	Female thread B	Sizes				Reference	
		C	D	E	G	Steel	Brass
M5x0,75c	G1/8	8	19	8	13		AR1086
M6x1c	1/8NPT	8	20	9	13	AR101	
M8x1c	1/8NPT	8	19	9	13		AR215
M8x1	G1/4	8	28	15	17	AR713	
M8x125c	1/8NPT	8	19	9	13		AR102
M8x125	G1/4	8		15	17	AR541	
M10x1	G1/4	8	28	15	17	AR514	
M10x150c	1/8NPT	8	19	9	13		AR103
M10x150c	G1/4	8	28	15	17	AR712	
M12x1	G1/4	9	27	15	17	AR746	
G1/8	G1/4	8	31	17	19	AR811	
G1/4	G3/8	12	36	17	24	AR812	
G1/4	G1/2	12	40	20	27	AR627	
G1/4	G3/4	12	43	22	36	AR814	
G3/8	G1/2	12	41	20	27	AR738	
G1/2	G3/4	14	46	22	36	AR636	
G1/2	G1	14	49	24,5	41	AR816	
G3/4	G1	16	51	24,5	41	AR643	
1/4-28NF	1/8NPT	8	19	9	13	B4311	
1/8NPT	1/8NPT	8	19	9	13		A3920
1/8NPT	1/8NPT	15	26	9	13		A3528
1/8NPT	1/8NPT	21	32	9	13		A2540

For copper seal, see page R1116.

REDUCER MALE-FEMALE

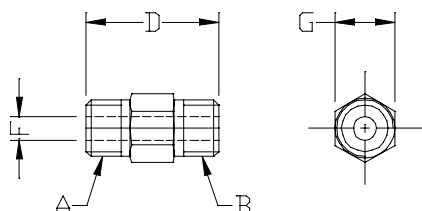


Thread A	Female thread B	Sizes				Reference	
		C	D	E	G	Steel	Brass
M12x1	1/8NPT	9	27	15	17	AR1030	
M16x1,5	G1/4	12	32	16	21	AR563	
G1/4	G1/8	12	28	12	19	AR351	
G3/8	G1/8	12	22,5	8	22	AR352	
G3/8	G1/4	12	36	17	22	AR1151	
G1/2	G1/8	14	24	8	27	AR809	
G1/2	G1/4	14	24	12	27	AR354	
G3/4	G1/4	16	26	12	32	AR355	
R3/4	G1/2	17,5	22,5	15	27		AR1162
G1	G1/4	18	29	12	41	AR810	
R1	G1/2	19	29	17	36		AR1072
R1	G3/4	19	29	17	36		AR1073
1/4NPT	1/8NPT	10	15	20	14		B6131
3/8NPT	1/8NPT	13	19	22	18		B9955
3/8NPT	1/4NPT	13	19	20	18		B9956
1/2NPT	1/4NPT	14	21	22	21		B9953
1/2NPT	3/8NPT	16	26	24,5	22		B8130

For copper seal, see page R1116.

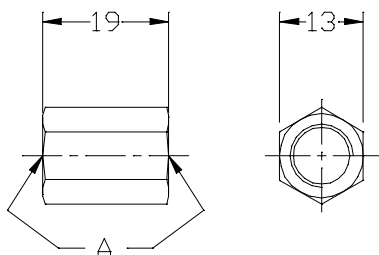
SYSTEM COMPONENTS: MISCELLANEOUS CONNECTORS

STRAIGHT NIPPLE



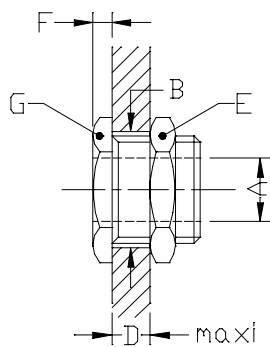
Ø A	Ø B	D	Ø F	G	Reference
R1/8	R1/8	19	5	11	AR1424
R1/4	R1/4	27	7	14	AR697
R3/8	R3/8	28	11	17	AR476
R1/2	R1/2	36	14	22	AR540
R1/8	R1/4	23,5	5	14	AR570
R1/8	R3/8	24	5	17	AR403
R1/4	R3/8	27,5	7	17	AR443
R1/4	R1/2	32	7	22	AR243
R1/2	R3/8	32,5	11	22	AR423
1/8NPT	1/8NPT	21	4	3/8	A4019
M10x1c	M10x1c	21	4	10	AR1110

BRASS FEMALE CONNECTOR



Ø A	Reference
1/8NPT	B6539
G1/8	AR1443

BRASS BULKHEAD ASSEMBLY

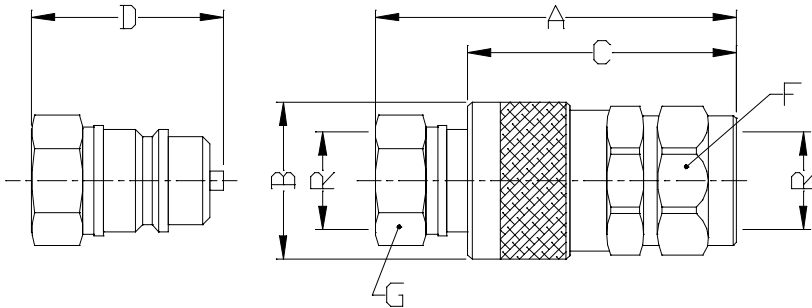


Ø A	Ø B	D	E	Ø F	G	Reference
G1/8	16,5	9	22	4	19	AR508
G1/4	20,5	15	27	4	24	AR234
G3/8	26,5	14	32	5	30	AR622
G1/2	28,5	20	36	6	32	AR401

SYSTEM COMPONENTS: MISCELLANEOUS CONNECTORS

TWO-WAY FLOW COUPLING

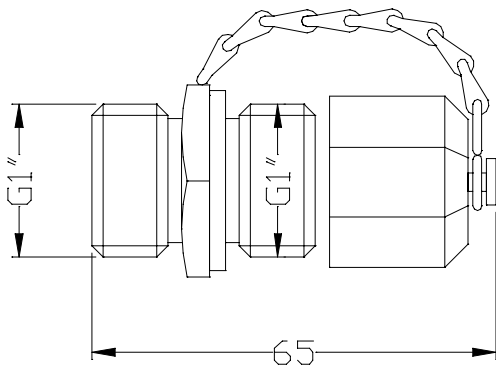
(For oil and grease)



DN	Max pressure	BSP	A	B	C	D	E	F	G	Reference
6	400 b	1/4	70	26,5	49,5	38	90	19	19	AK150
8	350 b	3/8	86,5	35	61	47,5	110	24	24	AK308
11	320 b	1/2	96,5	40,5	70	53,5	127	30	28	AK270
15	250 b	3/4	119	48	86,5	56	157	36	36	AK282
17	210 b	1"	141	55,5	104	78,5	190	44	41	AK309

SNAP ON CONNECTOR WITH FILLER VALVE

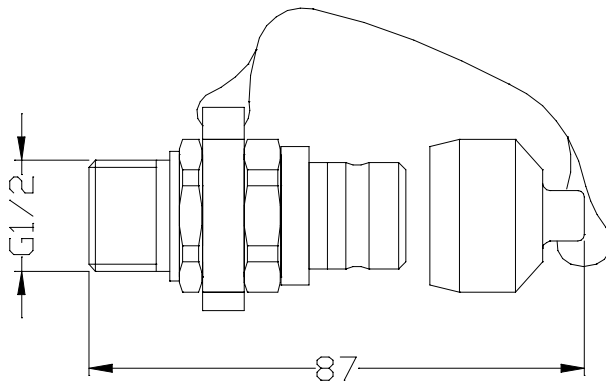
(For grease pump)



Reference	
AR1268	

SNAP ON CONNECTOR (OIL INLET / OUTLET)

AUTOMOTIVE APPROVED (For oil)

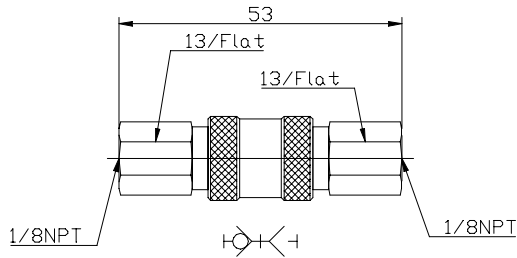


Reference	
AR764	

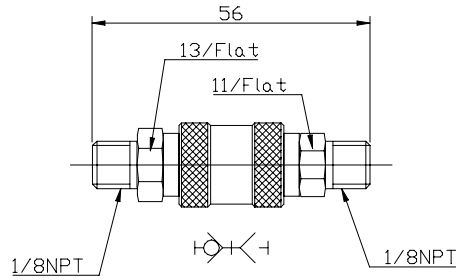
SYSTEM COMPONENTS: MISCELLANEOUS CONNECTORS

QUICK COUPLING PN 14B./DN 2,5

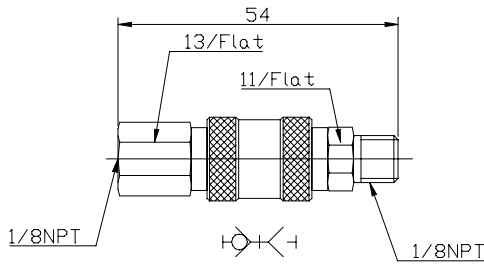
(For oil and air)



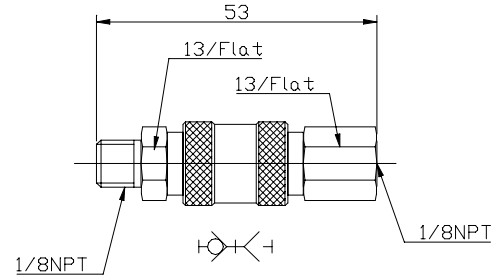
Type FS-F	
B6576	



Type MS-M	
B6574	



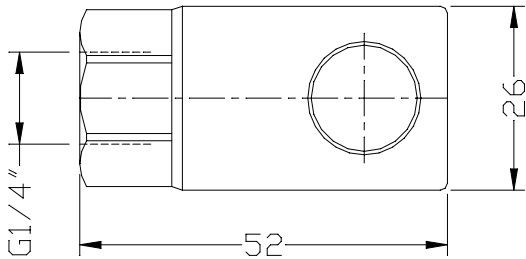
Type FS-M	
B6609	



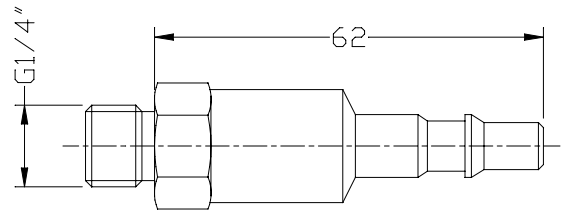
Type MS-F	
B6571	

TWO-WAY FLOW QUICK COUPLING

(For oil and air)

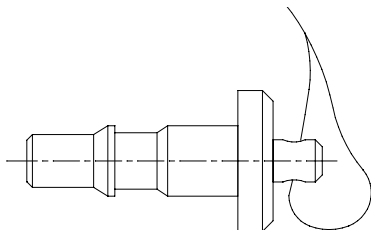


Auto closure	
AR555	

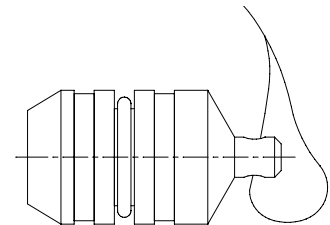


Auto closure	
AR501	

COVER PLUG FOR QUICK COUPLING



Male plug	
AR556	

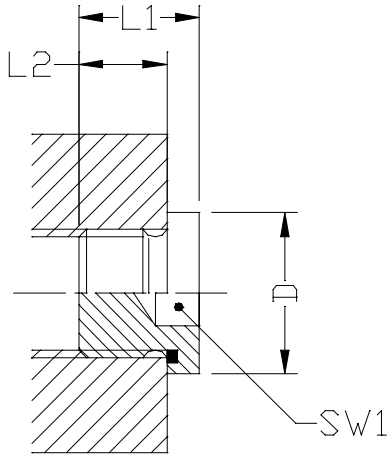


Female plug	
AR502	

SYSTEM COMPONENTS: MISCELLANEOUS CONNECTORS

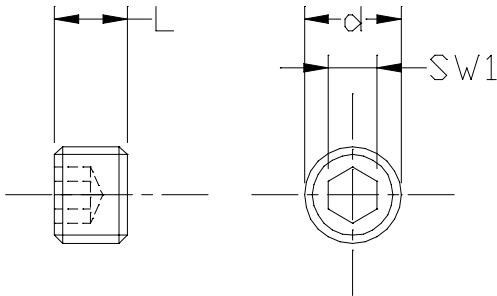
HEXAGONAL PLUG

- Stud sealing by elastomer profiled ring.



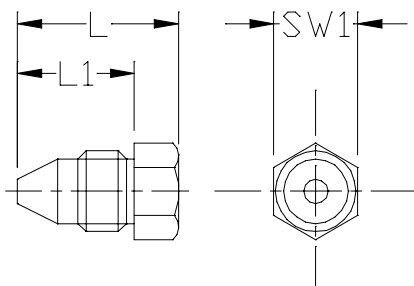
d	L1	L2	SW 1	D	Reference
M10x1	12	8	5	14	AR1024
M12x1	16	12	6	17	AR1025
M14x1,5	16	12	6	19	AR1014
G1/8	12	8	5	14	AR1254
G1/4	16	12	6	19	AR1255
G3/8	16	12	8	22	AR1256
G1/2	19	14	10	27	AR1258
G3/4	21	16	12	32	AR1015
G1	22,5	16	17	40	AR1257

HEXAGONAL PLUG



d	L1	SW 1	Reference
1/8NPT	8	5	HP603
1/4NPT	10	6	HP616
3/8NPT	11	8	HP615
M10x1c	8	5	AR1116
R1/8	8	5	AR164
R1/4	10	6	AR165
R3/8	11	8	AR1259
R1/2	13	10	AR602
R3/4	17	14	AR166

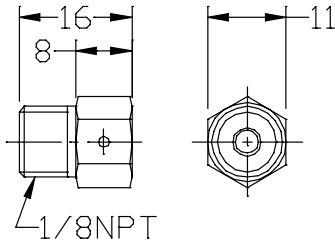
BRASS PLUG



d	L	L1	SW 1	Reference
5/16-24NF	16	11,5	8	B3784
5/16-24NF	16	11,5	3/8	B2488
M8x1	16	11,5	8	15322

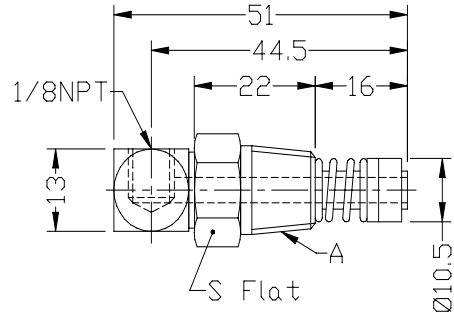
SYSTEM COMPONENTS: MISCELLANEOUS CONNECTORS

VENT PLUG



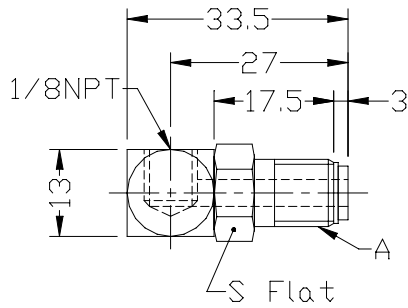
Reference
B7745

SWIVEL



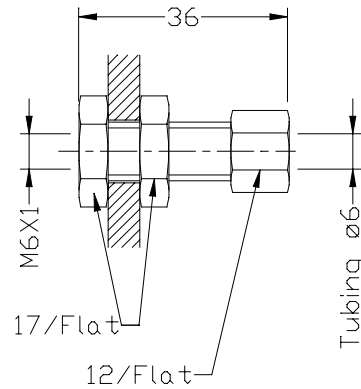
Characteristic			A	S	Reference
MAX speed	MAX pressure	Torque	1/4 NPT	5/8"	B5083
			3/8 NPT	3/4"	B3964
1000 T/mn	4,2 bars	0,012 mkg			

SWIVEL



Characteristic			A	S	Reference
MAX speed	MAX pressure	Torque	1/8 NPT	1/2"	B5776
			1/4 NPT	5/8"	B3010
500 T/mn	0,35 bars	0,003 mkg	3/8 NPT	3/4"	B2999

BULK HEAD ASSEMBLY FOR ZERK FITTING AK260



Reference
AR1018

ZERK FITTING

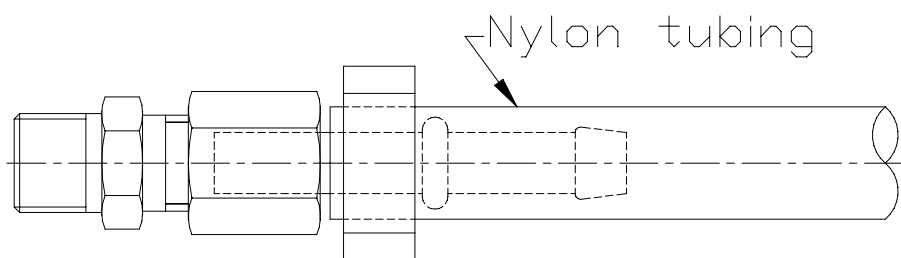


d	Reference
1/8 NPT	AK128
G1/4	AK118
M6x1	AK260
G1/8	AK320

d	Reference
G1/8	AK115
M10x1,5	AK151
G1/4	AK152

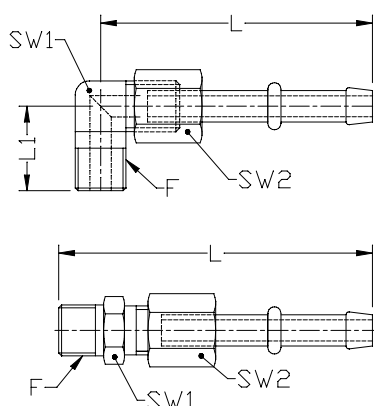
SYSTEM COMPONENTS:FLEXIBLE HOSES

LOW PRESSURE HOSE (7 B Maxi.)



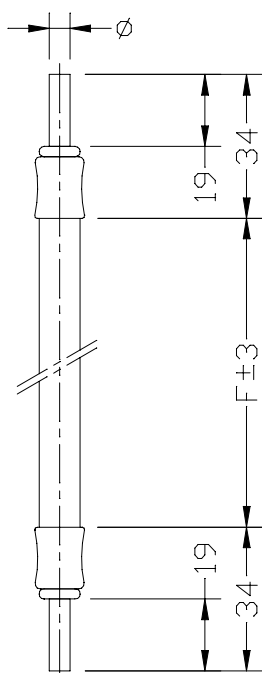
Internal Ø x External Ø	Supplied in units of (m)	Reference
Ø6 x 11	1	AF158
Ø8 x 13	1	AF198

LOW PRESSURE HOSE FITTING



HOSE Ø INT	Thread F	90° Elbow (E) straight (S)	Sizes				Reference steel
			L	L1	SW1	SW2	
6	1/8NPT	E	52	17	11	12	AR1173
8	1/4NPT	E	58	27	17	19	AR1164
8	3/8NPT	E	60	27	19	22	AR1165
6	1/8NPT	S	49		11	12	AR1172
8	1/4NPT	S	55		17	19	AR1170
8	3/8NPT	S	56		19	22	AR1163

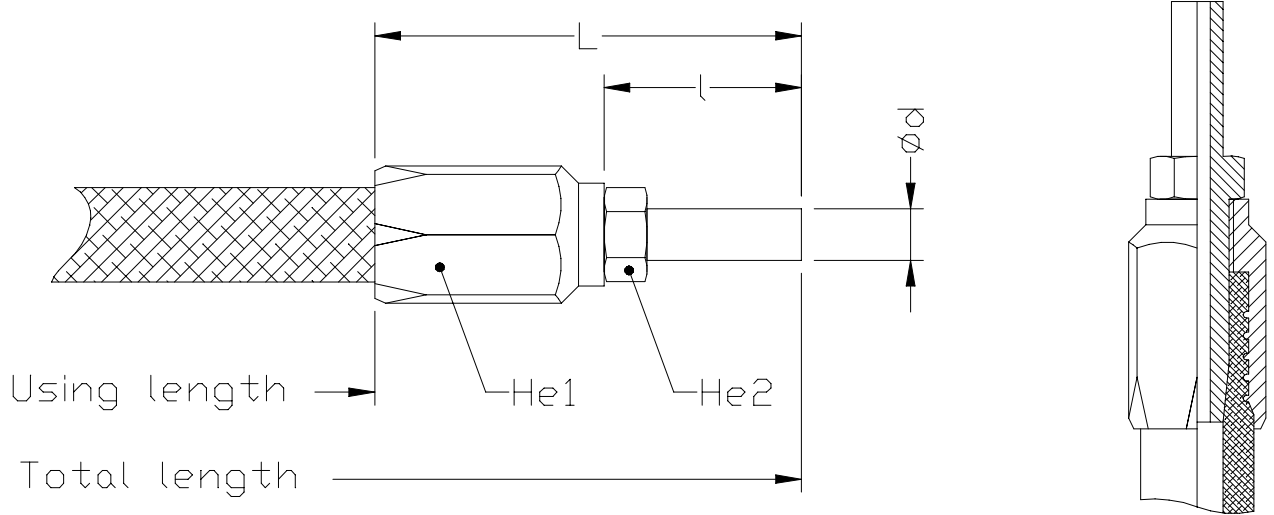
LOW PRESSURE FLEXIBLE HOSE ASSEMBLY (30 B Maxi.)



Length F (mm)	REFERENCE			
	Straight fitting Ø 4 wirebraid	Straight fitting Ø 4	Straight fitting Ø 6	Straight fitting Ø 8
300	AFG300	AFG300	AF6300	AF8300
350	AFG350	AF4350	AF6350	AF8350
400	AFG400	AF4400	AF6400	AF8400
450	AFG450	AF4450	AF6450	AF8450
500	AFG500	AF4500	AF6500	AF8500
600	AFG600	AF4600	AF6600	AF8600
700	AFG700	AF4700	AF6700	AF8700
800	AFG800	AF4800	AF6800	AF8800
900	AFG900	AF4900	AF6900	AF8900
1000	AFG1000	AF41000	AF61000	AF81000
1500	AFG1500	AF41500	AF61500	AF81500
2000	AFG2000	AF42000	AF62000	AF82000
3000	AFG3000	AF43000	AF63000	AF83000

SYSTEM COMPONENTS: FLEXIBLE HOSES

HIGH PRESSURE HOSE (400 B Maxi.)
 - Continuous working T°: -20 to +100°C.



STEEL WIRE BRAID HOSE

Ø d	L	l	He1 s/flat	He2 s/flat	AF215 Ø 3/8	AF216 Ø 1/2	AF212 Ø 5/8	Hose coupling
12	76	31	17	23	■			AR1265
15	78	31	19	27		■		AR635
20	91	40	22	30			■	AR1266

POLYESTER HOSE WITH TEXTILE WIRE BRAID

Ø d	L	l	He1 s/flat	He2 s/flat	AF240 Ø 4,1 x 8,3	AF217 Ø 4,8 x 12,8	Hose coupling
6	50	27	11	12	■		AR1532
8	52	27	12	14		■	AR1270

HOSE WITH TEXTILE WIRE BRAID

Ø d	L	l	He1 s/flat	He2 s/flat	AF151 Ø 3/8	AF152 Ø 1/2	Hose coupling
6	57	28	12	17	■		AR509
8	61	30	12	19		■	AR510
10	63	32	12	19		■	AR511

SYSTEM COMPONENTS: FLEXIBLE TUBING

NYLON TUBING

Maximum pressure - Burst pressure is equal to:

$$P = \frac{200 \times e \times R}{\varnothing m}$$

P = Burst pressure (B)

e = Tube thickness (mm)

R = Burst ratio = 2,60 à 20°C

$\varnothing m$ = Average tube diameter ($\frac{EXT \varnothing + INT \varnothing}{2}$)



Tubing d int.	Tubing D ext.	Colour	Supplied in coils of (m)	Reference
1,2	2,4	White	25	3N20
1,2	4	White	25	5N55
2	4	Yellow	25	4N2J
2	4	Red	25	4N2R
2	4	Blue	25	4N2B
2	4	Black	25	4N2N
2,7	4	Green pale	25	5N25
3	6	Black	25	6N3
3	6	White	25	6N3B
4	6	White	25	6N4
4,5	6,35	White	25	8N31
6	8	White	25	8N6
8	10	White	25	10N8

SYSTEM COMPONENTS: RIGID TUBING

COPPER TUBING



Tubing d int.	Tubing D ext.	Supplied in units of (m)	Reference
1,2	2,4	20	3C22
1,2	4	5	5C55
2,5	4	5	5C25
4	6	5	6C4
4,8	6,35	5	8C31
6	8	5	8C6
8	9,5	5	12C31
8	10	5	10C8

ZINC PLATED STEEL TUBING

Tubing d int.	Tubing D ext.	Supplied in units of (m)	Reference
3	4	2	5S20
4,5	6	3	6S4
4,8	6,35	2	8S31
6,5	8	3	8S6
8,5	10	3	10S8
10	12	6	12S10
13	15	6	15S13
16	20	6	20S16

SYSTEM COMPONENTS: RIGID TUBING

STAINLESS STEEL TUBING

Tubing d int	Tubing D ext	Supplied in units of (m)	Reference		
			304	304L	316L
3	4	2	5I20		
4	6	6		06I04EA	06I04EC
6	8	6	08I06RA	08I06RB	08I06EC
8	10	6	10I08RA	10I08RB	10I08EC
10	12	6	12I10RA	12I10RB	12I10EC
13	15	6	15I13RA	15I13RB	15I13EC
16	20	6	20I16RA	20I16RB	20I16EC



STEEL TUBING, HYDRAULIC NORM.QUALITY

- PN 400, as NF-A49-330 or DIN 2391

Tubing d int	Tubing D ext	Supplied in units of (m)	Reference
4	6	6	06H04E
6	8	3	08H06E
8	10	6	10H08E
10	12	6	12H10E
13	15	6	15H13E
16	20	6	20H16E

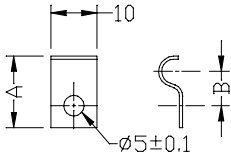
STEEL TUBING, LUBRICATION NORM.QUALITY

- PN 150, as NF-A49-115 (serie Gaz)

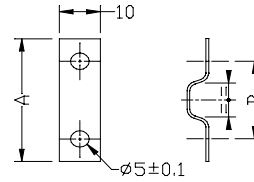
Tubing Ø	Tubing d int	Tubing D ext	Supplied in units of (m)	Reference 304
3/8	10	17	6	13GO3EN
1/2	15	21	6	21GO3EN
3/4	20	27	6	27GO3EN
1"	25	34	6	34GO3EN
1"1/4	32	42	6	42GO3EN
1"1/2	40	49	6	49GO3EN
2"	50	60	6	60GO3EN

SYSTEM COMPONENTS: CLAMPS AND TOOLS

TUBING CLAMP view A



TUBING CLAMP view B

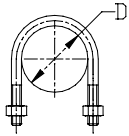


Tubing Ø	Nb of Tubings	A	B	Reference
2,4	1	15	6,5	B3570
4	1	18	9	A2435
6	1	20	10	B6537
8	1	22	11	B9773
10	1	23	11	B6508
4	2	22,5	11	AV108
4	3	26	12	B7535

Nb of tubing	Ø Tubings	A	B	Référence
2	4	33	21	AV201
3	4	39	27	AV202
4	4	44	32	AV203
5	4	48	36	AV204
6	4	52	40	AV205
1	6	32	20	AV104
2	6	38	26	AV114
3	6	45	33	AV113
4	6	51	39	AV121
5	6	57	45	AV122
6	6	64	52	AV123
1	8	34	22	AV105
3	8	51	39	AV107
4	8	59	47	AV110
5	8	68	56	AV111
6	8	76	64	AV106
1	10	34	22	AV120
2	10	44	32	AV116
3	10	55	43	AV117
4	10	67	55	AV118
5	10	77	65	AV119
6	10	90	78	AV124

TUBING CLAMP

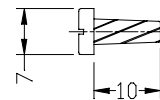
- Zinc plated steel with nut M6



Tubing Ø D	Reference
12	1/4 AV186
15	3/8 AV128
20	1/2 AV129
	3/4 AV130
	1 AV131
	1"1/4 AV132
	1"1/2 AV187
2 AV135	

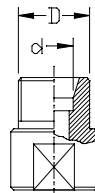
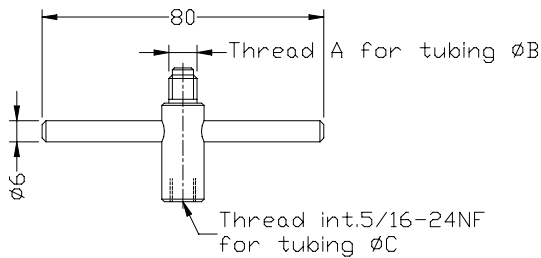
SELFTAPPING SCREW M4

Reference: AV102 (drill Ø 3,5)



MANUAL PREASSEMBLY TOOL

BRASS CONNECTOR PREASSEMBLY TOOL



A	B	C	Reference
5/16-24 NF	4	4	B3529
5/16-24 NF	2,4	2,4	B3652
5/16-24 NF	2,4	4	B3800

Tubing d	Series	D	Reference	
			Steel	Stainless steel
4	LL	M8x1	AO189	AO189I
6	LL	M10x1	AO172	
6	LL	M12x1,5	AO174	AO174I
6	S	M14x1,5	AO176	
8	LL	M12x1	AO173	
8	LL	M14x1,5	AO175	AO175I
8	S	M16x1,5	AO177	
10	L	M16x1,5	AO190	AO190I
10	S	M18x1,5	AO191	
12	L	M18x1,5	AO192	AO192I
15	L	M22x1,5	AO193	AO193I
20	S	M30x2	AO194	AO194I