

### Surefire













#### Description

The Surefire automatic lubricator is a robust and reliable pump that can handle oil and soft grease. It's compact size is designed to fit your space requirements and lubrication demands. The Surefire lubricator is a self-contained electric motor-driven gear pump that can adapt to a large range of production machinery. It can handle injector groups serving up to 100 lubrication points. It's versatility also allows it to perform with other lubrication system types and for multiple applications.

#### Function

When operating, the pump pulls lubricant in from the reservoir and delivers pressurised lubricant to the distribution network through the outlet(s) in the top plate. Pressurising the distribution network forces all of the injectors in the system to fire, discharging the lubricant that was stored in each of their discharge chambers during the last pump cycle.





#### Advantages at a glance

- Functions with oil and soft grease
- Integrated low level switch
- Discharge ports on either side for easy installation
- Reservoir release clips for fast easy removal and service
- Convenient plug-in pin type terminal block provides fault free electrical connection

Large capacity fill cap with built-in strainer minimises



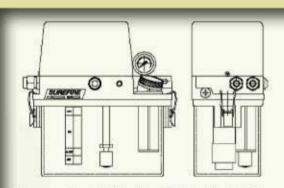




SF3 3PH



SF6 3PH Metal



Pump	Height*	Width*	Depth'
SF2	285	204	136
SF3	285	279	139
SF6	318	303	186
SF12	300	370	265
SF2 3PH	315	183	135
SF3 3PH	315	269	144
SF6 3PH	348	303	190

<sup>\*</sup> Details in mm

#### **Technical Specification**

Delivery volume:

200 cm<sup>3</sup>/min 60 Hz 167 cm<sup>3</sup>/min 50 Hz 250 cm<sup>3</sup>/min, 24 V DC 500 cm<sup>3</sup>/min, 230 / 480 3PH

Operating pressure:

max. 31 bar (450 psi)

Pressure switch:

20 bar (300 psi)

Oil viscosity:

20 bis 1.500 cSt. at working

Fluid grease\*:

NLGI 000 / NLGI 00 1,8 L / 2,7 L / 6,0 L / 12,0 L

Reservoir capacity:

Motor option:

115 / 230 V AC, 50 / 60 Hz 24 V DC 230 / 480 V 3PH

+5°C through +40°C

Working temperature:

IP 54

IP rating:

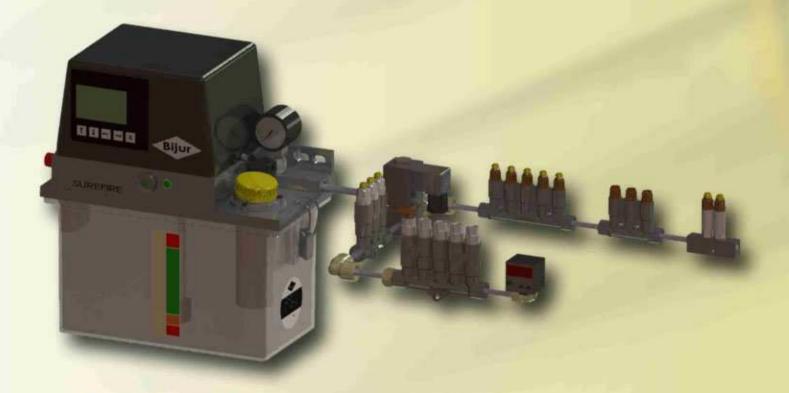
G1/4 BSPP

**Outlet connection:** 

\* Contact Bijur Delimon for applications using fluid greases.

### ... quick installation

- M12 electrical connectors
- Reservoir release clips for fast easy removal
- Programming also with Laptop
- Push-to-connect fittings



Schematic - Single Line System (Positive Displacement Injectors)



#### Single phase

SF

Reservoir capacity: 2 = 1.8 L 3 = 2.7 L 6 = 6,0 L 12 = 12,0 L

A - Resistance / SLR B - Volumetric / PDI Distribution system:

#### Options:

- N Standard oil version
  B Standard grease version (grease level switch, no fill screen)
- A Quick connect grease version (grease level switch, no lill screen)
   A Quick connect style reservoir fill fitting for grease/no fill screen)
   C Quick connect oil version (quick connect style reservoir fill fitting for oil/no fill screen)
   D Standard oil version (2 position oil level switch)

Controller.

A - No C - Controller (only with M12 connectors)

Voltage:

B - 24 VDC, 2.4 Amp C - 115 VAC, 50/60 Hz, 2.2 Amp D - 230 VAC, 50/60 Hz, 0.95 Amp

Model with M12 Connections: A

Standard versions include: foat type reservoir low level switch, standard reservoir fill-cap screen, quick dump valve for PDIs, 31 bar (450 psi) pressure relief valve.

#### 3 phase

Reservoir capacity: 2 = 1,8 L 3 = 2,7 L 6 = 6,0 L

12 = 12,0 L

A - Resistance / SLR B - Volumetric / PDI Distribution system:

#### Options:

- Oppores:
  N Standard cil version
  B Standard grease version (grease level switch, no fill screen)
  A Quick connect grease version (grease level switch and quick connect style reservoir fill fitting for grease/no fill screen)
  C Quick connect cil version (quick connect style reservoir fill fitting for grease/no fill screen)
- fitting for oil/no fill screen)

  D Standard oil version (2 position oil level switch)

Electrical connection: D - Direct connection to three phase motor

E - 230/480 VAC, 3 phase 50/60 Hz, .50 Amp

(416/500 cc/min, 50/60 Hz)

Standard versions include: foat type reservoir low level switch, standard reservoir fill-cap screen, quick dump valve for PDIs, 31 bar (450 ps) pressure relief valve.









#### Description

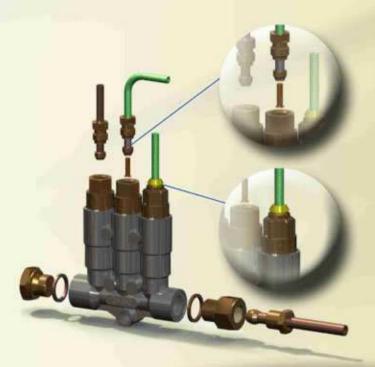
The injectors type ZEM (direct action) are perfectly adapted for use with volumetric system (PDI) for diverse applications. Their precise delivery and predetermined quantity helps ensure each lubrication point receives the proper amount of lubricant.

#### Function

ZEM injectors are classic direct action PDIs, reliable and accurate. When pressure builds in the manifold, the piston in the injector moves forwards, discharging a set amount of lubricant to the lubrication point. As the pressure is relieved, a compression spring returns the piston to its original position. This movement recharges the injector (discharge chamber) and the injector is now ready for the next cycle.











#### **Technical Specification**

Discharge pressure:

45 bar max. (650psi) 15 bar min. (220psi)

Seals:

Lubricant to be used:

Viton

Oil (20 to 1.500 cSt)

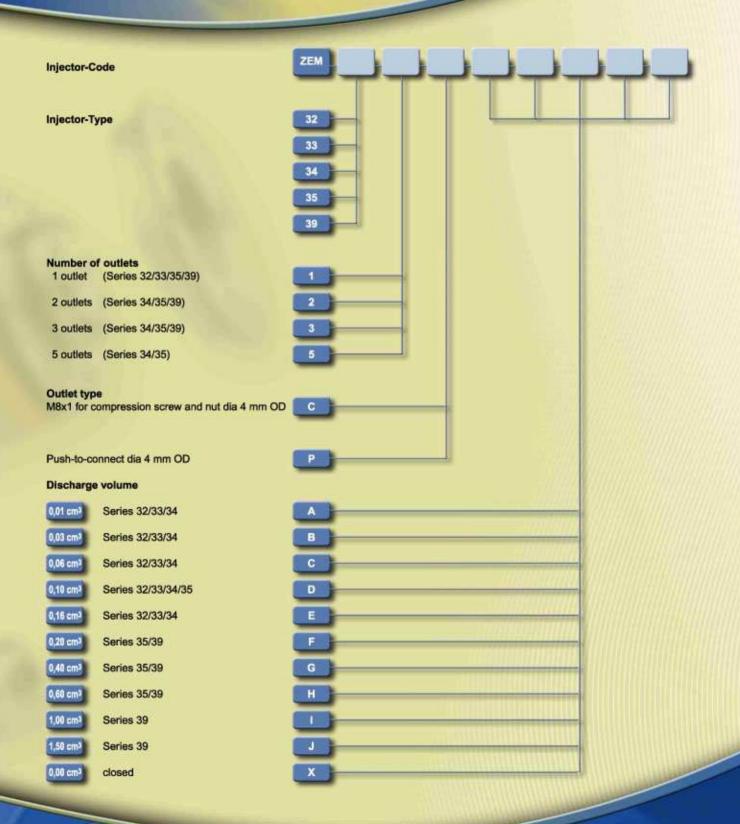
Contact Bijur for applications using soft greases.



Details on the products can be found on special data sheets Download from www.bijurdelimon.eu

## How to order your ZEM-Injector





### TM-Serie





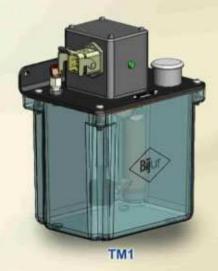
#### Description

The wide field of applications for the TM Series is particularly ideal for machines having between 20 - 50 lubrication points.

The pumps are interchangeable with hand pumps, making them convenient for customers wishing to change from an automatic to a manual system (and reverse).

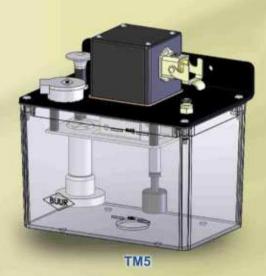
#### Function

TM pumps are 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. TM pumps are equipped with an electrical low level switch.



#### Ordering instructions / Technical specification Discharge volume 0,2-1,0 cm<sup>3</sup> / Pressure 1,5-3,5 bar

Voltage (V)	Cycle Time	Motor RPM	P/N 0,5 L	P/N 1,0 L	replacement motor
115	145	1	C2889	D3087	19422-2
115	72	2	C2890	D3089	19422-3
115	18	8	C2891	D3090	19422-1
115	9	8	C2896	D3095	19422-1
115/220	2	60	C2895	D3094	24278-2
220	145	1	C2892	D3091	19306-2
220	72	2	C2893	D3092	24095-3
220	18	8	C2894	D3093	24095-1
220	9	8	C2897	D3096	24095-1



#### Ordering instructions / Technical specification Discharge volume 1-5 cm<sup>3</sup> / Pressure 2-4 bar / Reservoir 1,0 L

Voltage (V)	Cycle Time	Motor RPM	P/N Pump	replacement motor
115/220	120	1/4	D-2992	242785
115/220	60	1/2	D-3187	B-9015
115/220	30	1	D-2990	242782
115/220	10	3	D-2988	242781
115/220	6	5	D-2986	242783

### Meter Units







#### Description

Meter units are oil proportioning devices for cyclic systems. There are different forms. Type QSA for mounting directly to the lubrication point, type QMB and QJB are designed for installation in distribution blocks. They are equipped with a push-to-connect fitting for 4mm tubing.

Discharge		P/N.					
Flow rate	QJB	QSA	QSB	QMB	QQB		
0,5	QJB30	QSA30	QSB30	QMВ30	QQB30		
1	QJB00	QSA00	QS800	QMB00	QQB00		
2	QJB0	QSA0	QSB0	QMB0	QQB0		
4	QJB1	QSA1	QSB1	QMB1	QQB1		
8	QJB2	QSA2	QSB2	QMB2	QQB2		
16	QJB3	QSA3	QSB3	QMB3	QQB3		
32	QJB4	QSA4	QSB4	QMB4	QQ84		
64	QJB5	QSA5	QSB5	QMB5	QQB5		

QJB	5/16-24 NF + Ø 4 mm push-to-connect
QSA	1/8 NPT + Ø 4 mm push-to-connect
QSB	1/8 BSPT + Ø 4 mm pusti-to-connect
QMB	M8x1 with cone ± Ø 4 mm push-to-connect
QQB	2 x Ø 4 mm push-to-connect

#### Technical specification Reference: Pump L18P.

Discharge volume:	6 bis 18 cm³/stroke
Pressure:	max. 5 bar
Reservoir:	1,0 L

#### Function

A Meter unit has hydraulic resistance which contains 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.



### Multiport L100P



#### Description

The MULTIPORT 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, single phase or 3 phase. The reservoirs are metal or plastic with or without low level switch.

#### Function

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



Multiport

#### Description

The L100P manual grease pump mainly comprises of an aluminum pump body and a heat-treated steel piston which is driven by a vertical hand lever. Pushing down the lever causes the pump to draw oil into the chamber while pushing back the lever causes the pump to deliver grease to the outlet.

#### Function

Once the lubrication system is installed, the number of pump strokes should be determined in order to ensure all lube points are correctly lubricated and that over-lubrication is prevented. A grease level indicator can be seen in the reservoir, this 198P Hanuar Ga could help the operator to observe if there is enough grease in the reservoir. Maximum operating pressure is set to 140bar, working pressure may be adjusted through the pressure 1 valve assembly, making sure the lock screw is tightened after adjusting. Note: It is recommended that the reservoir be filled through inlet port, otherwise dust or other impurities may get into the reservoir.

L100P

#### **Technical specification**

Installation:

G1/4 (0,15 cm<sup>3</sup> per revolution), 6,4 cm<sup>3</sup>/min for DC voltage Delivery volume: 4,3 cm³/min for AC voltage; adjustable safety valve (0 - 250 bar) Discharge pressure 250 bar 2 or 4 kg (plastic), 6 kg (Metal) Reservoir capacity: 12 or 24 VDC; single phase 110 or 220 VAC 50/60 Hz; 3 phase 220/380 VAC 60/60 Hz Electric low level switch min.: 240 VAC; 1,5A; IP 67 Lubricants: Grease NLGI 2 max., with oil, ase contact our Customer -18" C to +50" C Working temperature:

#### Technical specification

Delivery volume:

Discharge pressure:

Reservoir:

1,4 kg (Aluminium)

Grease viscosity range:

Grease NLGI 1-3 max.

## Distributor ZP-A PROGRESSIVE Pump FZ-A



#### **Product characteristics**

- · Progressive distributors
- · up to 24 outlets
- Electronic monitoring possible
- Metered volume variable from 0.1 cm<sup>3</sup>
- Grease, liquid grease and oil



#### Function

ZPA distributors consist of several individual segments (at least 3 in the standard version) that are screwed together and sealed against each other. Depending on the arrangement within the distributor, the following segment types are available:

- · Initial- or A-segment
- · Medium or M-segment
- · Final- or E-segment

The distributor ZP-A has the task to divide the lubricant volume (oil or grease) received under pressure into portions and to deliver them successively to up to 24 possible outlets. This is achieved by the pressured lubricant moving pistons in sequence. The pistons move into their final positions, and the lubricant waiting in front of the piston is successively supplied to the lubrication points. The distributor works as long as it is supplied with lubricant. On request, the distributor can be equipped with integrated nonreturn valves.

#### Application

The FZ-A type lubricator is a central plunger grease pump, which is operating without valves and springs. The FZ-A type grease lubricator is intended mainly for multiline systems, i.e., in systems with up to a maximum of 12 lubrication points no additional distributor is required. The numerous ratios available within the range 3:1 to 2880:1 which are between the speed of the drive shaft on machine to be lubricated and the number of strokes of the delivery plunger, ensure universal application of the lubricator so that it can be adapted to any system having a small to medium number of

FZ-A

#### Advantages

lubrication points.

- Best adaptability to archieve different driving speeds and to the machine to be lubricated.
- · Additional control can be omitted.
- Use for anticlockwise and clockwise rotation is possible without modifications.
- · Forced control by valves springs.
- Rugged, consequently minimal expenditure for maintenance and repair work.
- Explosion protection according to ATEX guideline 94/9/EG

#### Technical specification

#### 10

Working pressure max.:

Temperature range:

Admissible differential pressure between 2 outlets:

Metered volume per piston stroke:

Flow volume for oil and grease:

Opening pressure of nonreturn valves:

Response pressure:

usable lubricants on mineral oil basis:

Synthetic lubricants:

Pipe connections:

160 bar

-20°C bis +80°C (higher temperature on reques

max. 50 bar, with nonreturn valves max. up to admissible system pressure

0,1; 0,2 or 0,3 cm<sup>3</sup>

min. 0,5 cm3/min; max, 1000 m3/min

2 ber

10 bar

+ Lubricating greenes up to NLGI class 3 DIN 51818 • ON ISO VG 68 to 1500 (DIN 51519) at 20°C antiblent temperature

on request

Inlet Ø 6; Ø 8 oder Ø 10 / Outlet Ø 6

#### **Technical specification**

Permissible feed pressure:

Delivery volume per outlet and pump plunger rotation:

Delivery volume per outlet and hours:

Number of outlet:

Rotational direction of drive shaft:

Reservoir volume:

Usable lubricants:

Operating temperature:

200 bar (and for short periods 250 bar)

max. 0,1 cm<sup>3</sup>

max, 60 cm<sup>3</sup>, pendulum lever drive max, 36 cm<sup>3</sup>

FZ-A 1 to 6, 8, 10 and 12 outlets

optional

2,5; 8; 15 and 30 litres

greases based of mineral oils to NLG1-class 2, DIN 51818. Oils : on request Synthetic greases : on request

-20°C up to +80°C

Depending on the Aubricant used, restrictions to the service temperature are Possible.

### Distributor M2500



#### Description

The M2500 series dividers are perfectly adapted for use in Bijur Delimon progressive lubrication systems. The modular construction makes the system easy to install, and it may 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.

#### Function

Each metering segment of a progressive divider comprised which 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.



#### Technical specification

Discharge per cycle: 0,08 to 1,3 cm<sup>3</sup> Discharge pressure: max. 240 bar (3500 psi) Working temperature: -10 a +163°C

	Discharge / Cycle			
Valve size	Twin outet	Single outlet		
05	0,08	0,16		
10	0,16	0,32		
15	0,25	0,50		
20	0,33	0,66		
25	0,40	0,80		
30	0,50	1,00		
35	0,57	1,14		
40	0,65	1,30		

## PVB-Distributor UR-Distributor





#### Application

The distributors type PVB in monobloc design are applied in small-size progressive lubrication systems representing a cost-saving and efficient solution for central supply of lubricating points with relatively small pressure and small metered quantities.

#### **Design and Function**

The distributors of a monobloc design consist of housings fitted with 6, 8, 10 or 12 lubricating-point connections according to the respective applications, the piston stops the closure end plugs as well as shutoff elements for shutting-off or junction of lubricatingpoint connections. The piston bores are interlinked so that entire progressive the distributor is hydraulic controlled. The progressive distributor delivers the lubricant continuously in metered quantities from the lubricating-point connections until interruption of lubricant flow. The hydraulic forced control allows easy monitoring of the entire lubrication system by monitoring one lubricating-point connection of the progressive distributor. When feeding lubricant to the progressive distributor, the pistons deliver lubricant to the lubrication points as long as the lubricant feed is maintained with sufficient pressure. Outlets can also be combined on both sides of a progressive distributor. Here, care has to be taken that the two outlets having the greatest distance to the lubricant inlet are not plugged.



**PVB** 



#### Description

The U...R series dividers are perfectly adapted for use in Bijur Delimon progressive lubrication systems. Dividers with 4, 6, 8 and 12 outlets are available. A Crossport can be mounted and the volume discharge is doubled.

#### Function

Each progressive divider comprises 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.



#### Technical specification

Working pressure.:

Differential pressure between 2 outlets max.:

EBISIARISCE MINISTER

Metered volume per piston stroke and outlet:

Response pressure:

Temperature range:

Usable lubricants on mineral oil basis:

160 bar (300 bar)

70 ber

0,17 cm<sup>3</sup>

10 ber

-20°C up to +60°C

Lubricating greases up to NLGI class 3 DIN 51818

ISO VG 68 to 1500 (DIN 51519) at working temperature

Synthetic lubricants:

Discharge:

Technical specification

Working pressure:

Working temperature:

Lubricant to be used:

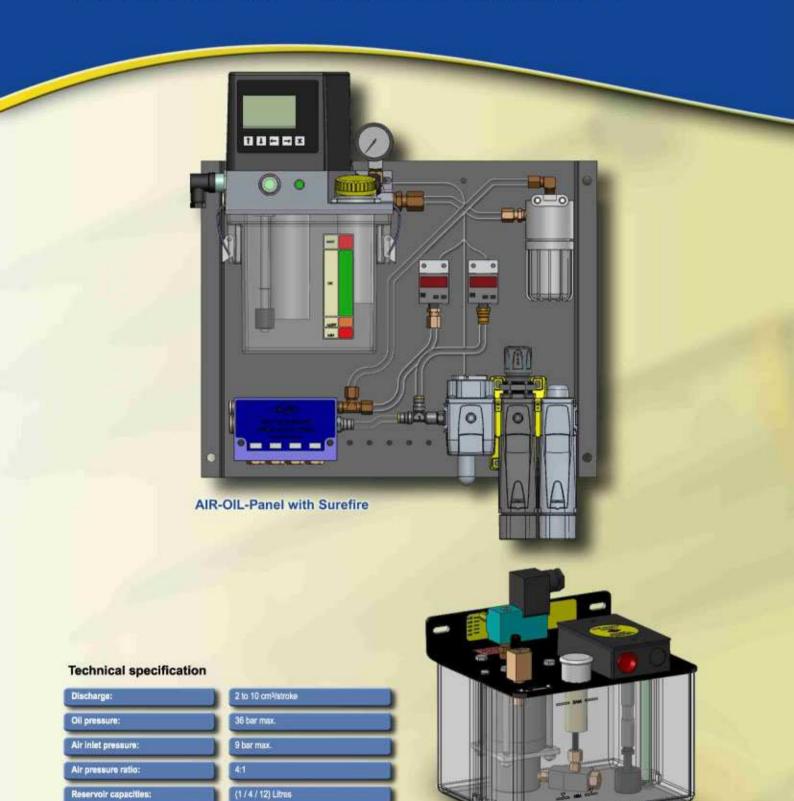
0,3 cm7/stroke

14 bar mini. 60 bar max for oil 150 bar for grease

-10°C to +85°C

Oil with a viscosity of 150 cSt mini to grease grade NLGi2

### AIRMATIC - the alternative



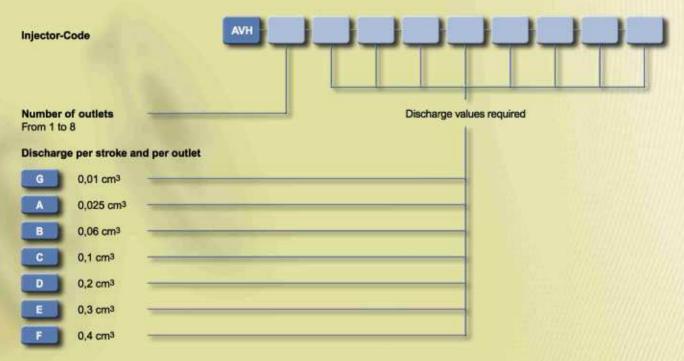
**AIRMATIC** 

### Air-Oil-Lubrication



#### **Ordering instructions**

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



#### Example:

A valve with 4 outlets, 3 outlets 0,025 cm<sup>3</sup>, 1 outlet 0,06 cm<sup>3</sup> Reference AVH4AAAB

#### Description

The air oil blocks type AVH 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.

#### **Functioning**

All injectors discharge as the system pressurises, and recharge as the automatic pump relieves pressure. 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.



### Spray-Pump





#### Description

The Spraymist unit is perfectly adapted for use with different liquids for applications such as metal cutting, 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 and a pressurised reservoir with an integrated filter. Separate lines carry air and liquid to jet assemblies.

#### Function

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 out. Seperate 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.

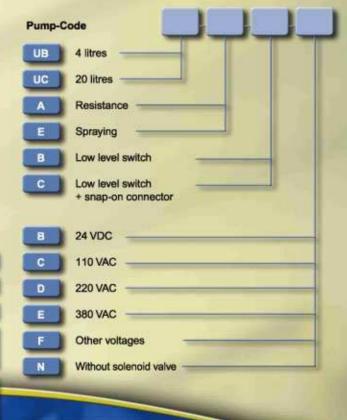


#### **Technical specification**



#### For ordering

To define the exact pump characteristics, use table below:



Description	NIP
Solenoid valve 24 VDC for type UB-UC	B9660
Solenoid valve 110 VAC for type UB-UC	C32451
Solenoid valve 220 VAC for type UB-UC	C32452
Solenoid valve 380 VAC for type UB-UC	C32453

#### Example

Spraymist unit 4L for spraying with LL.S, 220 VAC Reference: UBEBD



# New range of products



Type A quick connect



Type B quick connect



Type C quick connect

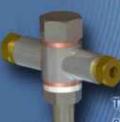
MERKSENGWASON -ALTH



Type A compression



Type B



Type C compression

ZDM

B - 90° banjo C - 180° banjo D - 90° straight E - Simple banjo

C - Compression fitting P - Push connect Outlet type:

**Tubing Diameter:** 

4-4 mm OD

6-6 mm OD

### Discharge Volume: A = 0,03 cm<sup>3</sup> B = 0,06 cm<sup>3</sup> C = 0,10 cm<sup>3</sup>

Thread Type: A – M8 Tapered B – M10 Tapered C – 1/8' BSPT

#### Technical specification

Discharge pressure:

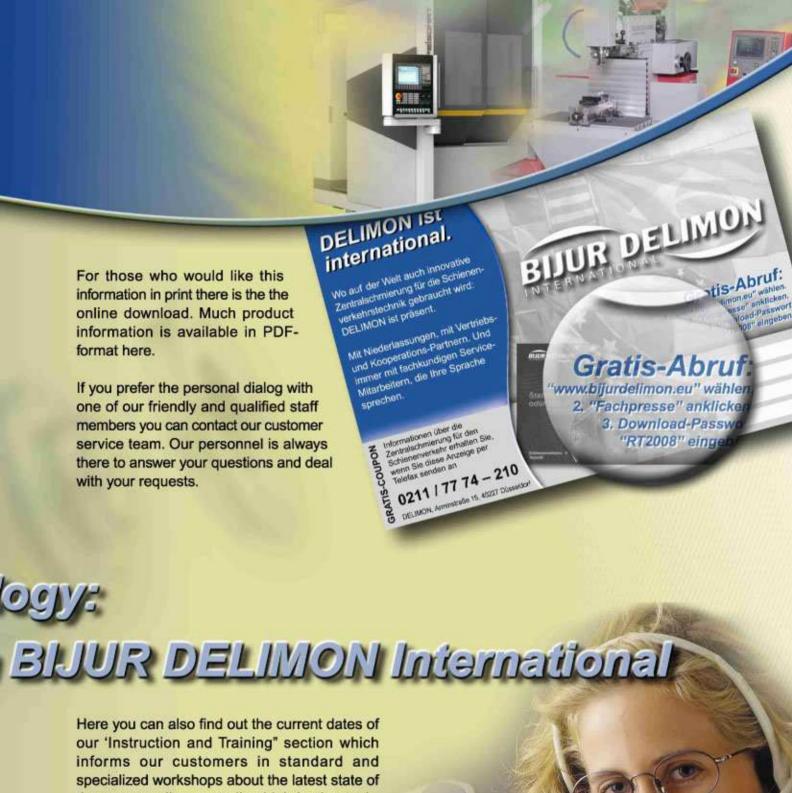
45 bar maxi (650psi) 15 bar mini (220psi)

Lubricant to be used:

Oil (20 to 1.500 cSt)

Soft greese NLGI 000/00 contact Bijur Delimon for applications using soft greases.





Here you can also find out the current dates of our 'Instruction and Training" section which informs our customers in standard and specialized workshops about the latest state of the art regarding centralized lubrication technology. You see, BIJUR DELIMON International takes customer service further. We are there for you whenever you need us.





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