

TECHNOSYSTEMS



**CENTRALIZED
LUBRICATION SYSTEMS FOR
INDUSTRIAL MACHINERY
SINGLE LINE PROGRESSIVE**



PMK 03



The **PMK 03** pump is designed for small centralised lubrication systems equipped with progressive sequence distributors.

The control lever is positioned on the front of an aluminium body. The reservoir tank is made from steel and has a capacity of 0.3 litres.

TYPES AND CHARACTERISTICS

Flow rate: 1 cm³/stroke

Operating pressure: linked to the dimensions and characteristics of the system, pressures of up to **150 bars** are admissible

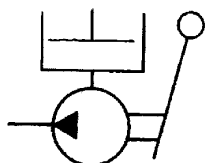
Tank: 0.3 litre capacity

Lubricants: liquid and/or thick greases with maximum thickness **NLGI 2**.

PMK 03 Series

Symbol	Code	Lubricant	Tank capacity (litres)	Flow rate per stroke (cm ³)
PMK 03	62798	Grease	0.3	1

Tab. 1

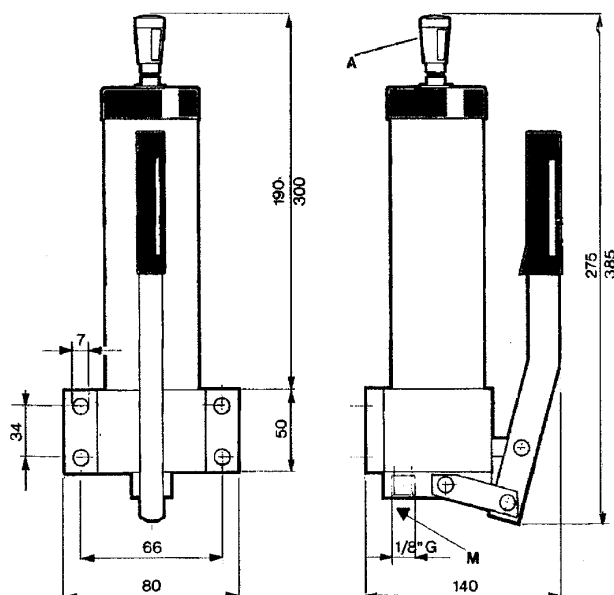


CONNECTORS, SEALS AND REDUCTIONS

For metal tubes (6mm outside diameter)

Symbol	Code	Description
95156	RD 628	G1/8 connector with seating S.1863 (6mm)
90422	RB 63	Connector for 6mm OD tube tee (S.1863)
90560	B 60	Tee for 6mm OD tube
90796	RA 45	Aluminium seal 10.2x12.6x1.5

Tab. 2



For metal tubes: (8mm outside diameter)

Symbol	Code	Description
91230	RD 1882	G1/8 connector with S.1482 seating (8mm)
90482	RB 82	Connector for 8mm OD tube tee (S.1482)
90682	B 82A	Tee for 8mm OD tube
90796	RA 45	Aluminium seal 10.2x12.6x1.5

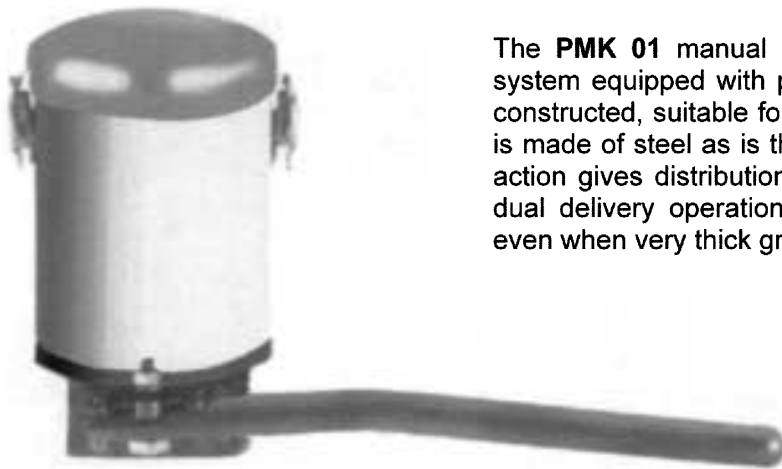
Tab. 3

A: grease level indicator rod (integrated with follower plate)

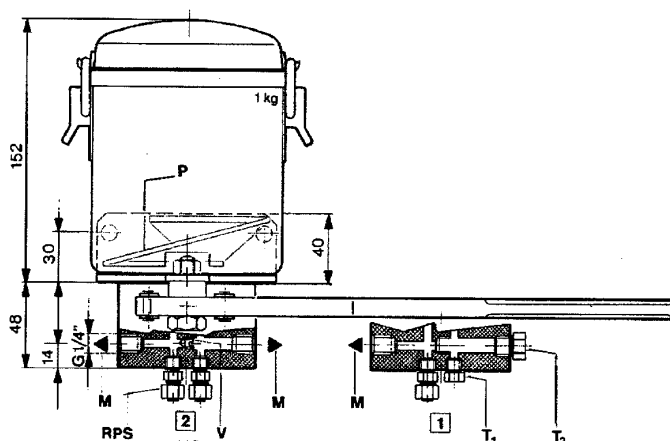
M: delivery, G1/8, scope to use attachments and connectors for 6 or 8mm tubes



PMK 01

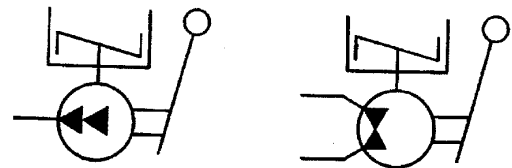


The **PMK 01** manual action pumps are designed to supply a lubrication system equipped with progressive sequence distributors. They are robustly constructed, suitable for operating in heavy-duty conditions. The pump body is made of steel as is the 1 litre capacity tank with top seal cover. The lever action gives distribution of 2 cm³ in single delivery operation and 1 cm³ in dual delivery operation. A grease pusher-scraper blade facilitates suction even when very thick greases are being used.



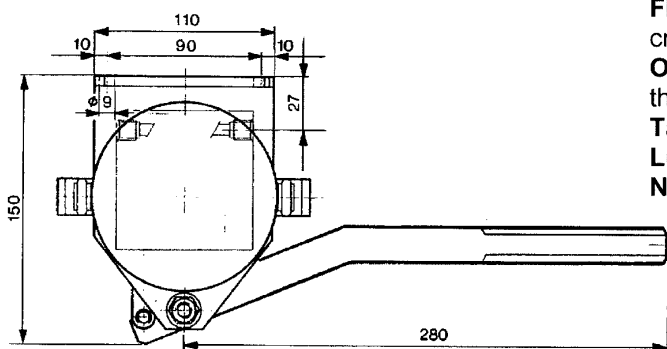
single delivery

dual delivery



single delivery

dual delivery



TYPES AND CHARACTERISTICS

Flow rate: 2 cm³/stroke in the **single** delivery version, 1 cm³/stroke/delivery line in the **dual** delivery version

Operating pressure: linked to the dimensions and characteristics of the system, pressures of up to **150 bars** are admissible

Tank: 1 litre capacity

Lubricants: liquid and/or thick greases with maximum thickness **NLGI 2**.

PMK 01 Series

Symbol	Code	Delivery lines	Tank capacity (litres)	Flow rate per stroke (cm ³)
PMK 01	61793	1	1	2
PMK 01.2	61794	2	1	1

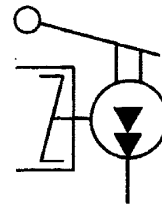
Tab. 1

M: G1/4 delivery lines
P: Grease pusher-scraper blade
T₁: TP18 Plug (G1/8)
T₂: TP14 Plug (G1/4)
R₁: Seal 10.2 x 12.6 x 1.5 mm
R₂: Seal 13.3 x 16.6 x 1.5 mm
V: Headless screws **TPS 25** (M6x1)

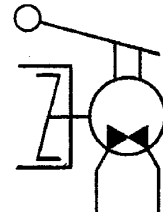


The **PMK 2** and **PMK 5** manual action pumps are designed to supply a lubrication system equipped with progressive sequence distributors. They are robustly constructed, suitable for operating in heavy-duty conditions. The pump body is made of steel as is the 2.5 or 5 litre capacity tank with top seal cover. The lever action gives distribution of 3 cm³ in single delivery operation and 1.5 cm³ for each output in dual delivery operation. A grease pusher-scraper blade facilitates suction even where very thick greases are being used.

single delivery



dual delivery



PMK 2 and PMK 5 Series

Symbol	Code	Delivery lines	Tank capacity (litres)	Flow rate per stroke (cm ³)
PMK 2	60200	1	2	3
PMK 2.2	60204	2	2	1.5
PMK 5	60201	1	5	3
PMK 5.2	60205	2	5	1.5

Tab. 1

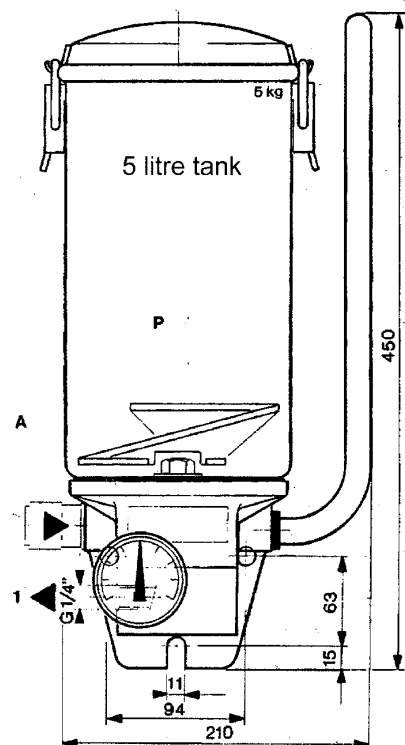
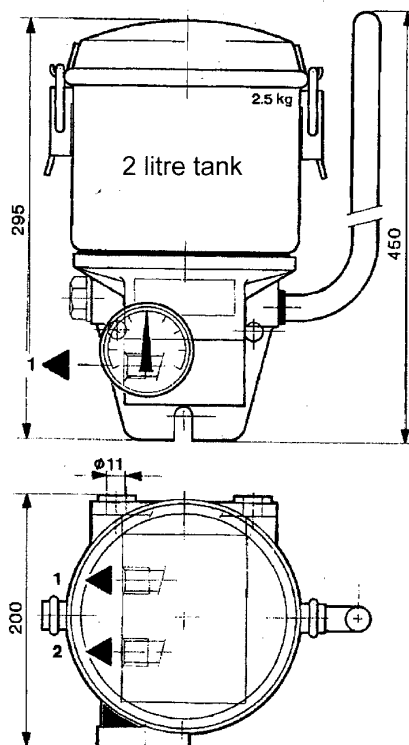
TYPES AND CHARACTERISTICS

Flow rate: 3 cm³/stroke in the **single** delivery version, 1.5 cm³/stroke/delivery in the **dual** delivery version.

Operating pressure: linked to the dimensions and characteristics of the system, pressures of up to **250** bars are admissible.

Tank: 2.5 and 5 litres capacity.

Lubricants: liquid and/or thick greases with maximum thickness **NLGI 2**.





The motorised pumps in this series are designed to supply grease lubrication systems with progressive sequence distributors. They are constructed in such a way that they can be used in severe environmental conditions and they have an insulation protection level of **IP54**.

They are equipped with one, two or three radially-positioned plungers, activated by a gearmotor-driven eccentric wheel.

The lubricant is contained in a transparent tank of capacity **2.5** or **5.0** litres. A rotating grease compressor blade connected to the eccentric wheel and a follower plate facilitate suction, even where extremely thick greases are used (**NLGI 2**).

The central aluminium body is held up by a support which enables fixing of the group to the wall. There is also a grease-gun with a filter on the central body, designed for loading the grease into the tank.

The gearmotor is located in the lower part of the group, protected by a strong plastic cover.

TYPES AND CHARACTERISTICS

Flow rate: 2.4cc/min for each plunger ;

No of delivery lines: one, two or three delivery lines are available;

Maximum pressure: 300 bars;

Tank: 2.5 and 5.0 litres capacity;

Filling attachment: UNI 7663 hydraulic grease-gun

Delivery line connector: G1/4

Level controller: PNP NC logic (6-30V d.c.) inductive proximity indicator.

Lubricants: liquid and/or thick greases with maximum thickness **NLGI 2**.

Gear motor: Voltage 12V DC; 24V DC; 110V 50/60Hz; 230V 50/60Hz. Consumption 1.6A (12V DC); 0.83A (24V DC); 0.2A (110V 50/60Hz); 0.1 (230V 50/60Hz). 18 rpm on output.

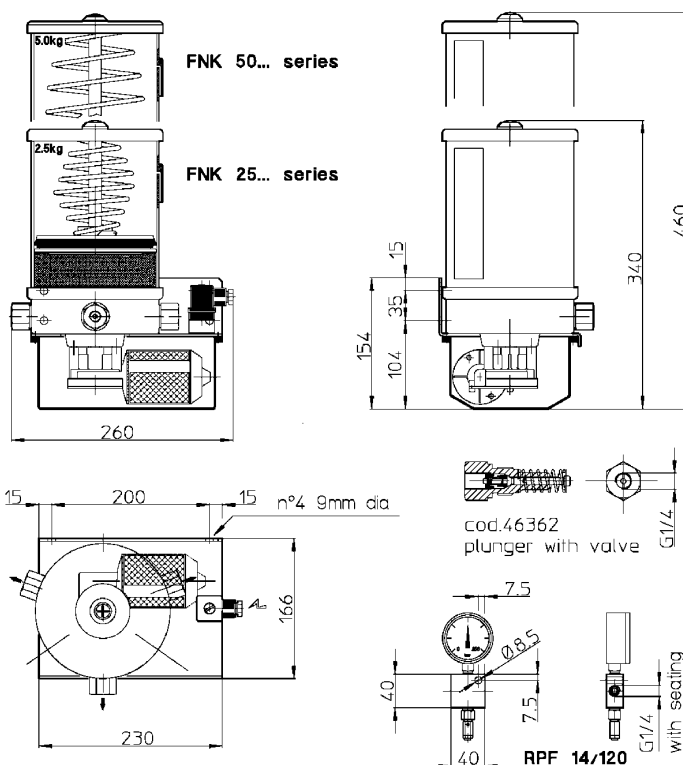
Insulation protection level: IP 54

Operating temperature: -25° +70°C.

Program controller (facility):

- Intervals: 15; 30; 60; 120 min.

- Lubetime: 1; 2; 4; 8 min.



FNK series

Symbol	Code	Delivery (cc/min)	Program Unit	Reservoir capacity (litres)	level controller (PNP NC)
FNK 2526C	69708	2.4 each plunger	NO	2.5	NO
FNK 2526LMC	96709	2.4 each plunger	NO		YES
FNK 2526AC	69716	2.4 each plunger	NO		NO
FNK 2526ALMC	69714	2.4 each plunger	NO		YES
FNK 5026C	69710	2.4 each plunger	YES	5	NO
FNK 5026LMC	69711	2.4 each plunger	YES		YES
FNK 5026AC	96717	2.4 each plunger	YES		NO
FNK5026ALMC	69715	2.4 each plunger	YES		YES

An optional mounting block, **RPF 14/120** is available for mounting at the bottom of the pump, complete with:

- Radial pressure gauge, 60 mm diameter with 0-250 bar scale
- Safety valve set to 120 bars



The motorised pumps in this series are designed to supply oil lubrication systems with progressive sequence distributors. They are constructed in such a way that they can be used in severe environmental conditions and they have an insulation protection level of **IP54**.

They are equipped with one, two or three radially-positioned plungers, activated by a gearmotor-driven eccentric wheel.

The lubricant is contained in a transparent tank of capacity **2.5** or **5.0** litres. It can be fitted with a level indicator and, in any case, there is a visual indication. Any kind of lubricant oil can be used if they have a viscosity higher **20** cSt.

The central aluminium body is held up by a support which enables fixing of the group to the wall.

The gearmotor is located in the lower part of the group, protected by a strong plastic cover.

TYPES AND CHARACTERISTICS

Flow rate: 2.4cc/min for each plunger ;

No of delivery lines: one, two or three delivery lines are available;

Maximum pressure: 300 bars;

Tank: 2.5 and 5.0 litres capacity;

Filling: Over the cover, there is a filling cap fitted with filter.

Delivery line connector: G1/4

Level controller: NO, with oil, (250V max, 3A max, 120VA max).

Lubricants: mineral or synthetic oils with viscosity higher than **20** cSt

Gearmotor: Voltage 12V DC; 24V DC; 110V 50/60Hz; 230V 50/60Hz. Consumption 1.6A (12V DC); 0.83A (24V DC); 0.2A (110V 50/60Hz); 0.1 (230V 50/60Hz). 18 rpm on output.

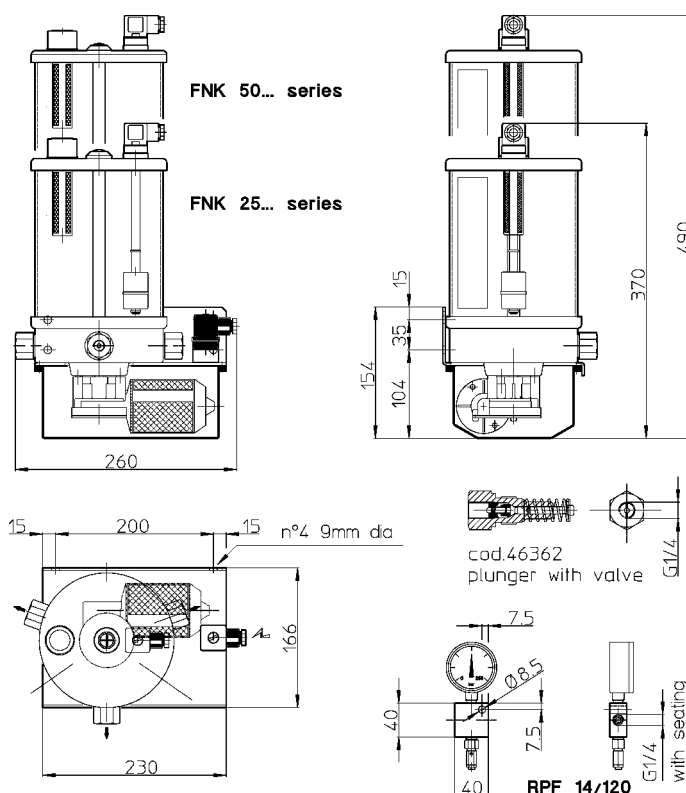
Insulation protection level: IP 54

Operating temperature: -25° +70°C.

Program controller (facility):

- Intervals: **15; 30; 60; 120** min.

- Lubetime: **1; 2; 4; 8** min.



FNO series

Symbol	Code	Delivery (cc/min)	Program Unit	Reservoir capacity (litres)	level controller (PNP NC)
FNO 2526C	69780	2.4 each plunger	NO	2.5	NO
FNO 2526LMC	69781	2.4 each plunger	NO		YES
FNO 2526AC	69786	2.4 each plunger	NO		NO
FNO 2526ALMC	69782	2.4 each plunger	NO		YES
FNO 5026C	69783	2.4 each plunger	YES	5	NO
FNO 5026LMC	69784	2.4 each plunger	YES		YES
FNO 5026AC	69787	2.4 each plunger	YES		NO
FNO5026ALMC	69785	2.4 each plunger	YES		YES

An optional mounting block, **RPF 14/120** is available for mounting at the bottom of the pump, complete with:

- Radial pressure gauge, 60 mm diameter with 0-250 bar scale
- Safety valve set to 120 bars



The motorised pumps in this series are designed to supply grease lubrication systems with progressive sequence distributors. They are constructed so that they can be used in severe environmental conditions and they have an insulation protection level of **IP56**. They are equipped with one or two radially-positioned plungers, activated by gearmotor-driven eccentric wheel.

The lubricant is contained in a 1.5 litres capacity transparent tank. A rotating grease compressor blade connected to the eccentric wheel and a follower plate facilitate suction, even where the greases are extremely thick (**NLGI 2**).

The central aluminium body is held up by a support which enables fixing of the group to the wall. There is also a grease-gun with a filter on the central body, designed for loading the grease into the tank.

The electrical parts are located in the lower part of the group, protected by a strong plastic cover.

TYPES AND CHARACTERISTICS

Flow rate: 2.4cm³/min for each plunger

No of delivery lines: versions with **one** or **two** delivery lines are available

Maximum pressure: 200 bars

Tank: 1.5 litres capacity

Filling attachment: UNI 7663 hydraulic grease-gun

Delivery line connector: G1/4

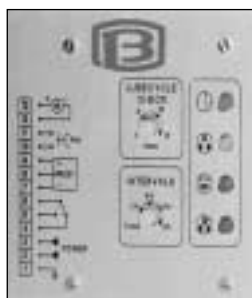
Level controller: versions without equipment have a **PNP NC** logic (6÷30V DC) inductive proximity sensor; otherwise this is controlled by the command and control electronics, which send an alarm signal.

Gearmotor: Voltage 12-24V DC. Consumption 1.8A (12V DC), 0.95A (24V DC). Non continuous operation, category S3 (CEI 6034-1) with work time equivalent to 25% of the operating cycle. 18 rpm on output.

Insulation protection level: **IP 56**

Operating temperature: -25° +70°C.

Lubricants: liquid and/or thick greases with maximum thickness **NLGI 2**.



MINI-FNK 15...L Series electrical pumps without programmer

Symbol	Code	Number of plungers	Flow rate (cm ³ /min)	Tank capacity	Level controller	Control equipment	End cycle control
MINI-FNK 151L	69131	1	2.4	1.5	YES	NO	NO
MINI-FNK 152L	69132	2	4.8				

Tab. 1

MINI-FNK 15...AL Series electrical pumps with programmer

Symbol	Code	Number of plungers	Flow rate (cm ³ /min)	Tank capacity	Level controller	Control equipment	End cycle control
MINI-FNK 151AL	69133	1	2.4	1.5	YES	YES	NO
MINI-FNK 152AL	69134	2	4.8				

Tab. 2

MINI-FNK 151 AL... Series electrical pumps with programmer and end of cycle controller

Symbol	Code	Number of plungers	Flow rate (cm ³ /min)	Tank capacity	Level controller	Control equipment	End cycle control
MINI-FNK 151ALC	69135	1	2.4	1.5	YES	YES	YES

Tab. 3





As indicated in table 11A 006, the **MINI-FNK...** pump series essentially comprises three different types:

MINI-FNK 15...L *Electric pump without programmer with one or two delivery lines*

In this case an **TK 205** type programmer must be used, see table 11A 010, connected to the pump and positioned in a remote and protected location.

MINI-FNK 15...AL *Electric pump with programmer with one or two delivery lines*

This ensures automatic operation. Setting of the pause and operation time is effected manually by entering this into the programmer. The work time in this case determines the quantity of lubricant distributed for each cycle.

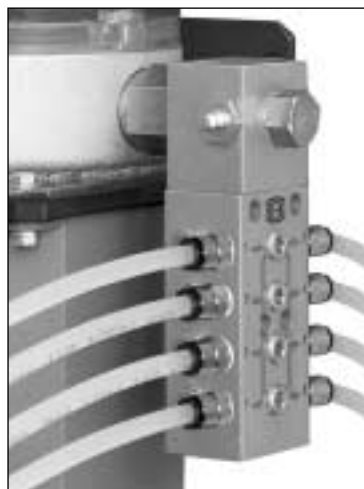
MINI-FNK 151 AL... *Electric pump with one delivery with programmer equipped with end of cycle controller*

A proximity sensor positioned on one of the system distributors produces a signal which, when received by the programmer stops the pump on completion of the lubrication cycle. If the signal received by the programmer does not correspond to correct completion of the lubrication cycle, it is able to place the system in alarm status.

ELECTRIC PUMP WITH ASSEMBLED DISTRIBUTOR

It is possible for the **MINI-FNK...** series electric pump to be equipped with an on-board progressive distributor from the **DPS...MY/MINI-FNK** series. This means that it is possible to link the pump to a distributor that is able to service a variable number of lube points from 6 to 18.

This solution requires the use of the **MINI-FNK 151ALCD** electrical pump (code 96186), selected from the following table, to which the distributor must be coupled.



MINI-FNK 151 AL... Series electrical pumps with programmer and end of cycle controller and distributor

Symbol	Code	Number of plungers	Flow rate (cm ³ /m in)	Tank capacity	Level controller	Control equipment	End of cycle control	Progressive distributor
MINI-FNK 151ALCD	69136	1	2.4	1.5	YES	YES	YES	YES

Tab. 1

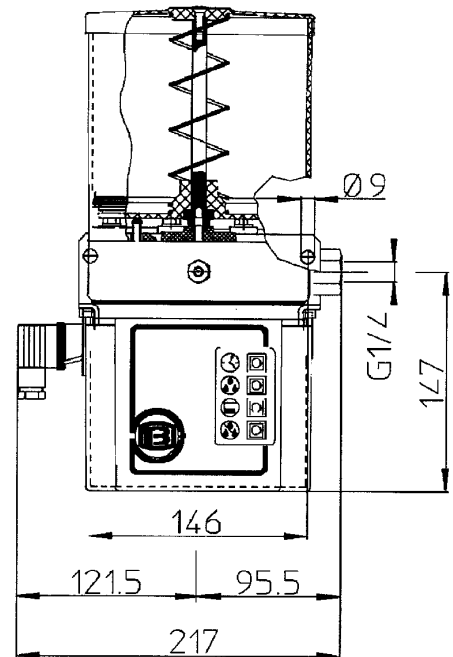
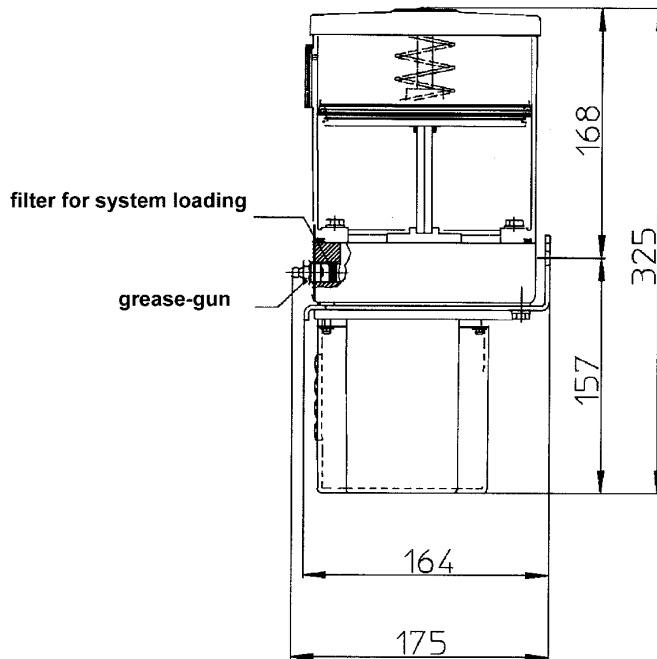
DPS...MY/MINI-FNK Series

Symbol	Code	Number of lube points	Flow rate per lube point (cm ³ /cycle)
DPS 6MY/MINI-FNK	53406	6	0.75
DPS 8MY/MINI-FNK	53408	8	
DPS 10MY/MINI-FNK	53410	10	
DPS 12MY/MINI-FNK	53412	12	
DPS 14MY/MINI-FNK	53414	14	
DPS 16MY/MINI-FNK	53416	16	
DPS 18MY/MINI-FNK	53418	18	

Tab. 1

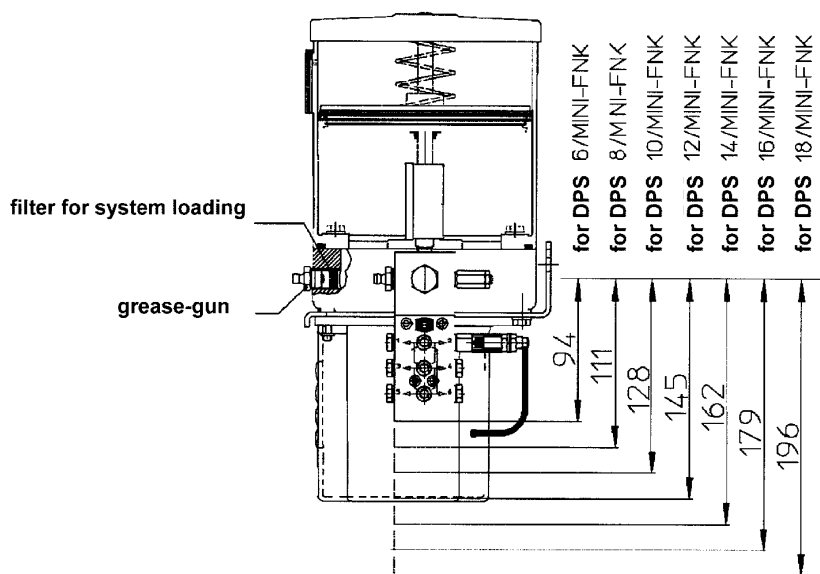
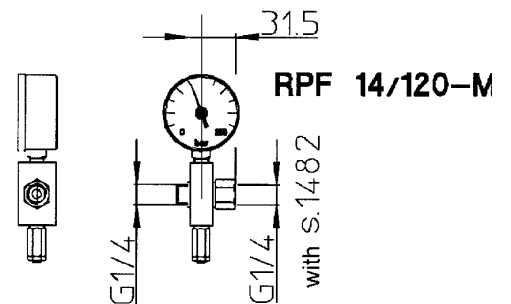


DIMENSIONS

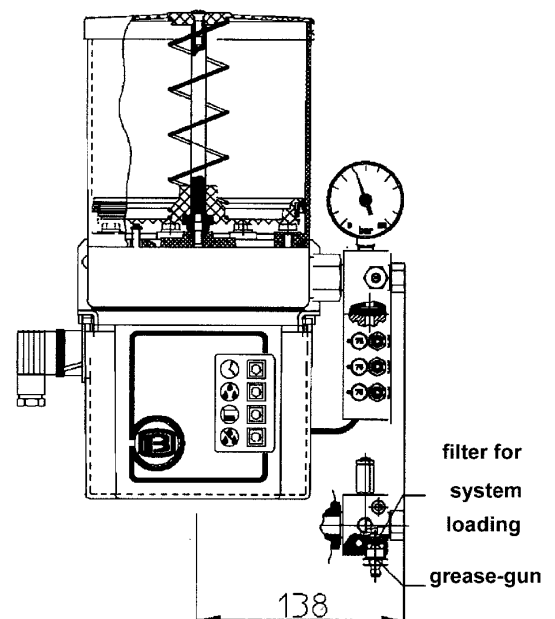


A pressure regulator must be fitted at the bottom of the pump. A subgroup, **RPF 14/120-M** (code 98934) is available as an option, complete with:

- a radial manometer with 0-250 bar **MP418.250** (code 96529);
- an adjustable connector **OD 83** (code 93612);
- a hollow screw **VOD83L** (code 2058A);
- two aluminium seals **RA 14** (code 91159);
- a pressure regulator set to 120 bars **RPG18** (code 90231)



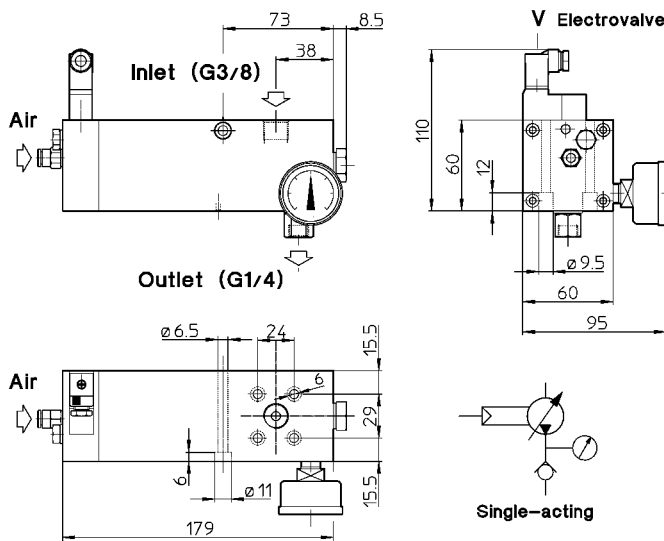
MINI-FNK 151 ALCD with DPS 6MY /MINI-FNK





SINGLE-ACTING PNEUMATIC PUMPS

Pumps belonging to **PAS...** series are designed for supplying single line progressive systems with oil or grease. These pumps are operated through a single acting pneumatic cylinder, actuated from an airline pressure ranging for 4 to 10 bar as show in follow table. Output can be adjusted by means of a screw.



FEATURES

Flow rate: for the **PAS 08** series the flow rate can be adjusted with metering plugs from **0.4, 06 to 0.8** cc/stroke; for the **PAS 20** series the flow rate can be adjusted with metering plugs from **0.5, 1.0, 1.5 to 2.0** cc/stroke; for the **PAS 40** series the flow rate can be adjusted with metering plugs from **2.5, 3.0, 3.5 to 4.0** cc/stroke;

Maximum pressure: for the **PAS 08** it is **230** bar; for the **PAS 20** it is **200** bar; for the **PAS 40** it is **120** bar.

Suction line connector: **G3/8**.

Delivery line connector: **G1/4**.

Electrovalve (facility): **3/2 way NC, 24V DC or 24V AC; 110V 50/60Hz; 230V 50/60Hz** voltage.

Lubricants: mineral or synthetic oils with viscosity higer **20** cSt and/or thick greases with maximum thickness **NLGI 2**.

Operating temperature: **-25° +70°C**.

TYPES AND FEATURES / SINGLE-ACTING

Symbol	Code	Delivery (cc/min)	Maximum Pressure (bar)	Air Pressure (bar)
PAS 08T	61896	0.4-0.6-0.8	230	4-6
PAS 20T	69333	0.5-1.0-1.5-2.0	200	6-8
PAS 40T	69940	2.5-3.0-3.5-4.0	120	8-10

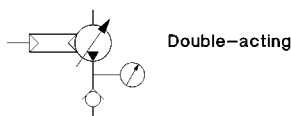
T without electrovalve.

Symbol	Code	Delivery (cc/min)	Maximum Pressure (bar)	Air Pressure (bar)
PAS 08VT	69946	0.4-0.6-0.8	230	4-6
PAS 20VT	69391	0.5-1.0-1.5-2.0	200	6-8
PAS 40VT	69942	2.5-3.0-3.5-4.0	120	8-10

VT with electrovalve.

DOUBLE-ACTING PNEUMATIC PUMPS

Pumps belonging to **PAD...** series are designed for supplying single line progressive systems with oil or grease. These pumps are operated through a double acting pneumatic cylinder, actuated from an airline pressure ranging for 4 to 10 bar as show in follow table. Output can be adjusted by means of a screw.



TYPES AND FEATURES / SINGLE-ACTING

Symbol	Code	Delivery (cc/min)	Maximum Pressure (bar)	Air Pressure (bar)
PAD 08T	69332	0.4-0.6-0.8	230	4-6
PAD 20T	69334	0.5-1.0-1.5-2.0	200	6-8
PAD 40T	69432	2.5-3.0-3.5-4.0	120	8-10

T without electrovalve.



From the pumps belonging to **PAS...** / **PAD...** series originate combined units with Oil or grease reservoir to supply single line progressive lubrication systems.

PNEUMATIC SERVO-CONTROLLED PUMPS AND OIL RESERVOIR

Here all the reservoirs are fitted with filling cap and filter and visual low level. Facility for low level switch also available. Models are tabulated at page 11



PNEUMATIC SERVO CONTROLLED PUMPS AND GREASE RESERVOIR

The reservoirs are steel made and painted, fitted with grease scraper interlocked to the pump piston. This helps to push the grease towards the suction port so making priming easier and eliminating air bubbles if any. Models are tabulated at page 12

PNEUMATIC SERVO CONTROLLED PUMPS AND GREASE RESERVOIR

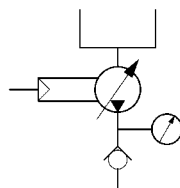
The reservoir are made of thermoplastic transparent material and fitted with follower plate and a pushing spring to help priming even in case of heavy greases. Models are tabulated at page 13





SINGLE-ACTING PNEUMATIC PUMPS WITH OIL RESERVOIR

These pumps are available with oil reservoir 3.0, 5.0 and 7.0 litres; have a visual low level indicator; an upper plate on which are assembled a filling cap with filter and an electrical low level switch. Under the reservoir is attached the pump belonging to **PAS...** series. These pumps are operated through a single acting pneumatic cylinder, actuated from an airline pressure ranging for 4 to 10 bar as show in follow table. Output can be adjusted by means of a screw.



Single-acting

Features

Flow rate: for the **PAS 08** series the flow rate can be adjusted with metering plugs from **0.4, 06 to 0.8** cc/stroke; for the **PAS 20** series the flow rate can be adjusted with metering plugs from **0.5, 1.0, 1.5 to 2.0** cc/stroke; for the **PAS 40** series the flow rate can be adjusted with metering plugs from **2.5, 3.0, 3.5 to 4.0** cc/stroke;

Maximum pressure: for the **PAS 08** it is **300** bar; for the **PAS 20** it is **200** bar; for the **PAS 40** it is **120** bar.

Reservoir: **3.0, 5.0 and 7.0** litres capacity.

Level controller: **NO** ,with oil, (250V max, 3A max, 120VA max).

Lubricants: mineral or synthetic oils with viscosity higher **20** cSt

Insulation protection level: **IP 54**

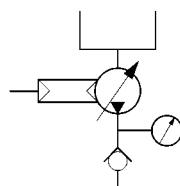
Delivery line connector: **G1/4**.

Electrovalve (facility): **3/2** way **NC**, **24V** DC or **24V** AC; **110V** 50/60Hz; **230V** 50/60Hz voltage.

Operating temperature: **-25° +70°C**.

DOUBLE-ACTING PNEUMATIC PUMPS

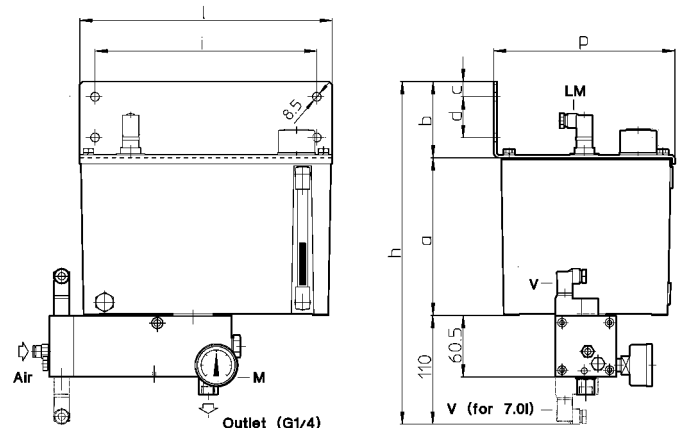
Identical to the previous one, but mounting pump **PAD...**



Double-acting

Reservoir dimension (mm)

Type	a	b	c	d	h	i	l	p
3.0l	155	55	15	40	270.5	165	195	150
5.0l	155	75	15	40	290.5	218	248	178
7.0l	182	75	15	40	367	240	270	168



- M** Pressure gauge scale 0-150 bar
LM low level indicator NO, with oil.
V Electrovalve, when ordering the pump specify voltage

TYPES / SINGLE-ACTING

Symbol	Code	Symbol	Code
PAS08TS3	69338	PAS08VTS3	62947
PAS08TS3LM	69339	PAS08VTS3LM	62948
PAS08TS5	69341	PAS08VTS5	62955
PAS08TS5LM	69342	PAS08VTS5LM	62956
PAS08TS7	69949	PAS08VTS7	62975
PAS08TS7LM	69950	PAS08VTS7LM	62976
PAS20TS3	69362	PAS20VTS3	69845
PAS20TS3LM	69363	PAS20VTS3LM	69846
PAS20TS5	69365	PAS20VTS5	69848
PAS20TS5LM	69366	PAS20VTS5LM	69849
PAS20TS7	69860	PAS20VTS7	69851
PAS20TS7LM	69861	PAS20VTS7LM	69852
PAS40TS3	69869	PAS40VTS3	69887
PAS40TS3LM	69870	PAS40VTS3LM	69888
PAS40TS5	69872	PAS40VTS5	69890
PAS40TS5LM	69873	PAS40VTS5LM	69891
PAS40TS7	69875	PAS40VTS7	69893
PAS40TS7LM	69876	PAS40VTS7LM	69894

T without electrovalve.

VT with electrovalve.

TYPES / DOUBLE-ACTING

Symbol	Code	Symbol	Code
PAD08TS3	69350	PAD20TS5LM	69378
PAD08TS3LM	69351	PAD20TS7	63371
PAD08TS5	69353	PAD20TS7LM	69955
PAD08TS5LM	69354	PAD40TS3	63374
PAD08TS7	67587	PAD40TS3LM	63375
PAD08TS7LM	67588	PAD40TS5	63376
PAD20TS3	69374	PAD40TS5LM	63377
PAD20TS3LM	69375	PAD40TS7	63378
PAD20TS5	69377	PAD40TS7LM	63379

T without electrovalve.



SINGLE-ACTING PNEUMATIC PUMPS WITH GREASE RESERVOIR

Pneumatic pumps type **PAS 25...** and **PAS 50...** are designed for supplying single line progressive system with grease. The unit is actuated by a single acting pneumatic cylinder to which is attached the piston pump. Output can be varied by means of a screw, **S**. The pump provided with a small cylinder, interlocked with the cylinder of the pump, and which conveys the grease to the pump suction ports. In this small cylinder is located the pump filling connector. Pump and reservoir are mounted on a steel bracket provided with 4 holes for wall-fixing. It is convenient to provide air inlet vent with an oil strainer to safeguard pump life.

FEATURES

Flow rate: for the **PAS 08** series the flow rate can be adjusted with metering plugs from **0.4, 06** to **0.8** cc/stroke; for the **PAS 20** series the flow rate can be adjusted with metering plugs from **0.5, 1.0, 1.5** to **2.0** cc/stroke; for the **PAS 40** series the flow rate can be adjusted with metering plugs from **2.5, 3.0, 3.5** to **4.0** cc/stroke;

Maximum pressure: for the **PAS 08** it is **300** bar; for the **PAS 20** it is **200** bar; for the **PAS 40** it is **120** bar.

Reservoir: steel made **2.5** and **5.0** kg capacity.

Level controller: **NO** ,with oil, (250V max, 3A max, 120VA max).

Lubricants: greases with maximum thickness **NLGI 2**.

Insulation protection level: **IP 54**

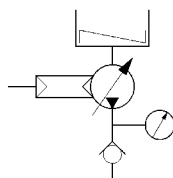
Delivery line connector: **G1/4**.

Electrovalve (facility): **3/2** way **NC**, **24V** DC or **24V** AC; **110V** 50/60Hz; **230V** 50/60Hz voltage.

Operating temperature: **-25° +70°C**.

DOUBLE-ACTING PNEUMATIC PUMPS

Identical to the previous one, but mounting pump **PAD...**



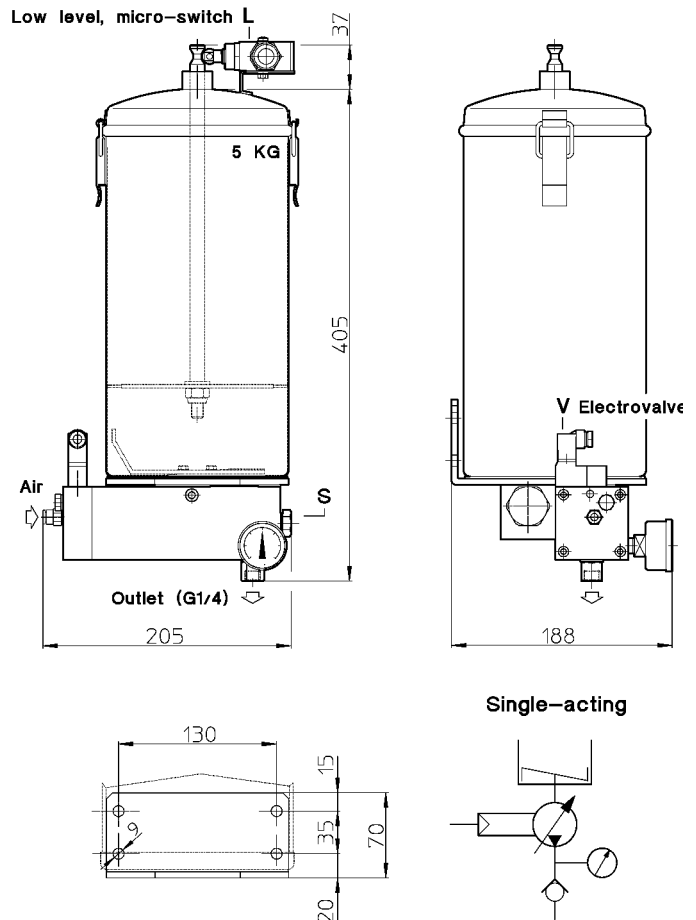
Double-acting

TYPES / DOUBLE-ACTING

Symbol	Code
PAD2508T	69307
PAD2508TL	69323
PAD5008T	69308
PAD5008TL	69324

T without electrovalve.

Symbol	Code
PAD2520T	69311
PAD2520TL	69326
PAD5020T	69312
PAD5020TL	69327



TYPES / SINGLE-ACTING

Symbol	Code	Symbol	Code
PAS2508T	69305	PAS2508VT	62935
PAS2508TL	69321	PAS2508VTL	92937
PAS2520T	69309	PAS2520VT	63609
PAS2520TL	69325	PAS2520VTL	69747
PAS2540T	69899	PAS2540VT	69905
PAS2540TL	69901	PAS2540VTL	69907
PAS5008T	69306	PAS5008VT	62938
PAS5008TL	69322	PAS5008VTL	62940
PAS5020T	69310	PAS5020VT	62921
PAS5020TL	61897	PAS5020VTL	69396
PAS5040T	69902	PAS5040VT	69908
PAS5040TL	69904	PAS5040VTL	69910

T without electrovalve.

VT with electrovalve.



SINGLE-ACTING PNEUMATIC PUMPS WITH GREASE RESERVOIR

Pneumatic pumps type **PAS 25...** and **PAS 50...** are designed for supplying single line progressive system with grease.

The unit is actuated by a single acting pneumatic cylinder to which is attached the piston pump.

Output can be varied by means of a screw, **S**.

The pumps have reservoir in thermoplastic transparent material of 2.5 or 5.0 kg.

Pump and reservoir are mounted on a steel bracket provided with 4 holes for wall-fixing. It is convenient to provide air inlet vent with an oil strainer to safeguard pump life.

FEATURES

Flow rate: for the **PAS 08** series the flow rate can be adjusted with metering plugs from **0.4, 06** to **0.8** cc/stroke; for the **PAS 20** series the flow rate can be adjusted with metering plugs from **0.5, 1.0, 1.5** to **2.0** cc/stroke; for the **PAS 40** series the flow rate can be adjusted with metering plugs from **2.5, 3.0, 3.5** to **4.0** cc/stroke;

Maximum pressure: for the **PAS 08** it is **300** bar; for the **PAS 20** it is **200** bar; for the **PAS 40** it is **120** bar.

Reservoir: 2.5 and 5.0 kg capacity.

Level controller: PNP NC logic (6-30V d.c.) inductive proximity indicator.

Lubricants: greases with maximum thickness **NLGI 2**.

Insulation protection level: **IP 54**

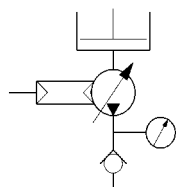
Delivery line connector: **G1/4**.

Electrovalve (facility): 3/2 way **NC**, **24V** DC or **24V** AC; **110V** 50/60Hz; **230V** 50/60Hz voltage.

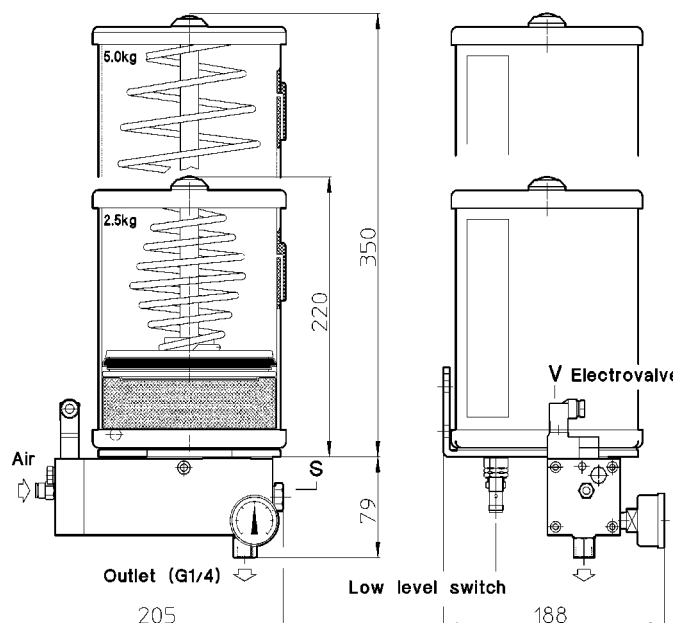
Operating temperature: **-25° +70°C**.

DOUBLE-ACTING PNEUMATIC PUMPS

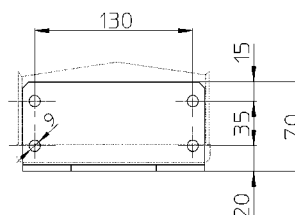
Identical to the previous one, but mounting pump **PAD...**



Double-acting



Single-acting



TYPES / SINGLE-ACTING

Symbol	Code	Symbol	Code
PAS2508TT	63239	PAS2508VTT	63251
PAS2508TTL	63240	PAS2508VTTL	63252
PAS2520TT	63243	PAS2520VTT	63255
PAS2520TTL	63244	PAS2520VTTL	63256
PAS2540TT	63247	PAS2540VTT	63259
PAS2540TTL	63248	PAS2540VTTL	63260
PAS5008TT	63241	PAS5008VTT	63253
PAS5008TTL	63242	PAS5008VTTL	63254
PAS5020TT	63245	PAS5020VTT	63257
PAS5020TTL	63246	PAS5020VTTL	63258
PAS5040TT	63249	PAS5040VTT	63261
PAS5040TTL	63250	PAS5040VTTL	63262

T without electrovalve.

VT with electrovalve.

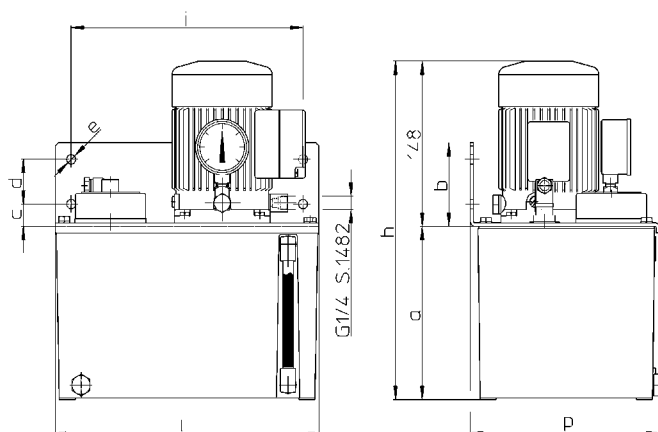
TYPES / DOUBLE-ACTING

Symbol	Code	Symbol	Code	Symbol	Code
PAD2508TT	63263	PAD2520TT	63267	PAD2540TT	63271
PAD2508TTL	63264	PAD2520TTL	63268	PAD2540TTL	63272
PAD5008TT	63265	PAD5020TT	63269	PAD5040TT	63273
PAD5008TTL	63266	PAD5020TTL	63270	PAD5040TTL	63274

T without electrovalve.



PRQ... series geared pump units with or without differently sized oil reservoirs (or without) are designed for progressive lubrication systems. These units consist on a 3-phase motor and a gear pump fitted with pressure relief valve, the unit is also fitted with a pressure gauge. Each reservoir is equipped with an oil sight glass and optionally with floating low level switch, **LM**. Pump and reservoir are mounted on a steel bracket provided with 4 holes for wall-fixing.



Dimension (mm)

Reservoir	a	b	c	d	i	l	p	h	e
2.7	152	50	35	-	125	155	142	301	6.5
3.0	155	55	40	-	165	195	146	300	6.5
3.0 *	150	76	18	50	180	207	134	295	7.0
5.0	155	75	20	40	218	248	174	300	8.5
6.0 *	200	76	60	-	241	271	240	345	8.0
7.0	180	80	25	40	240	270	268	325	8.5

* thermoplastic reservoir



FEATURES

Operating pressure: maximum 70 bar.

Output range: 100; 180 and 300 cc/min (according to gear pump types).

E-motor: 3 phase 0.070 or 0.090 kW; 230-400V 50Hz (special voltages available on request).

Level controller: 250V max, 3A max, 120VA max. Suffix for low level switch / on ordering pls state if **NO** or **NC**.

Lubricants: mineral or synthetic oils viscosity range **20-2000 cSt**

Insulation protection level: **IP 54**

Delivery line connector: **G1/4** seat S.1482 for 8mm tubing

Reservoir: 2.0, 3.0, 5.0 and 7.0 litres made of aluminium; 15 and 30 litre steel made, 2.7, 3.0 and 6.0 litre made of thermoplastics. The top plates for same are steel made.

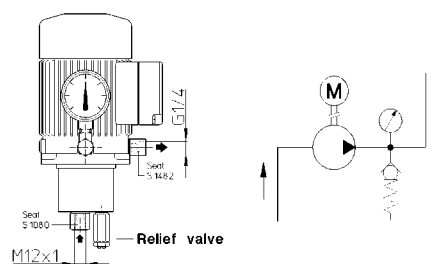
GEAR PUMPS (100cc/min-70bar)

Symbol	Code	Reservoir capacity (litre)
PRQ 2760	63224	2.7
PRQ 2760LM	63619	2.7
PRQ 3060	63225	3.0
PRQ 3060LM	63616	3.0
PRQ 3060T *	63226	3.0
PRQ 3060TLM *	63227	3.0
PRQ 5060	63614	5.0
PRQ 5060LM	63617	5.0
PRQ 6060T *	63228	6.0
PRQ 6060TLM *	63229	6.0
PRQ 7060	63230	7.0
PRQ 7060LM	66238	7.0

* thermoplastic reservoir / **LM** with level indicator

GEAR PUMPS (180cc/min-70bar)

Symbol	Code	Reservoir capacity (litre)
PRQ 2780	63292	2.7
PRQ 2780LM	63285	2.7
PRQ 3080	63293	3.0
PRQ 3080LM	63287	3.0
PRQ 3080T *	63231	3.0
PRQ 3080TLM *	63232	3.0
PRQ 5080	63294	5.0
PRQ 5080LM	63284	5.0
PRQ 6080T *	63233	6.0
PRQ 6080TLM *	63234	6.0
PRQ 7080	63695	7.0
PRQ 7080LM	63696	7.0



GEAR PUMPS

Symbol	Code	Delivery (cc/min)	Pressure (bar)
PRQ 60	63620	100	max 70
PRQ 80	63296	180	max 70
PRQ 150	63359	300	max 70

Suction line connector: **M12x1** seat S.1080 for 8mm tubing. Use: connector for **RB 80** compression fitting code 90480 and compression fitting **B 80** code 90580



DESCRIPTION

The rotary eccentric and electrically driven pumps of the **PR4...** and **PRK4...** series are designed for supplying a multi-line, centralized lubrication system operating with oil, **PR4...**, and with grease, **PRK4...**. These radial piston pumps have a maximum of 4 outlets and therefore, 4 deliveries located radially on the central block.

Maximum allowed output for each pumping element is 900cc/h.

Operation pressure is **350** bar with 70:1 speed rotation ratio.

The lubricant reservoir which is available in size **10**, **20** and **70** litre is provided with minimum, **LM**, or minimum and maximum, **MX**, electrical level indicators. The oil is loaded through the filling cap, with is fitted with a filter located on the tank cover.

Grease version are loaded through a filter located on the pump body, fitted with a connector, **G1/2** with pipe plug. Besides, the reservoir is equipped with a paddle shape scraper arm, driver by the main pump shaft, which conveys the lubricant to the suction of the pumping elements. It ensures correct flow of the lubricant without any air bubbles.



OPERATION

The pistons of the pumping elements push the metered lubricant to the delivery connectors. The driving mechanism consists of a worm rear-wheel assembly which drives an eccentric crown shaft which in turn provides, without any return spring, an alternated movement to the piston of the pumping elements; these are located horizontally and radially around the main pump body.

PR4 series

Symbol	Code	Reservoir * capacity (litre)
PR4 YM 10	69473	10
PR4 YM 10 LM	69474	
PR4 YM 10 MX	69475	
PR4 YM 20	69476	20
PR4 YM 20 LM	69477	
PR4 YM 20 MX	69478	
PR4 YM 70	69482	70
PR4 YM 70 LM	69483	
PR4 YM 70 MX	69484	

* for oil

PRK4 series

Symbol	Code	Reservoir * capacity (litre)
PRK4 YM 10	69557	10
PRK4 YM 10 LM	69558	
PRK4 YM 10 MX	69559	
PRK4 YM 20	69560	20
PRK4 YM 20 LM	69561	
PRK4 YM 20 MX	69562	
PRK4 YM 70	69566	70
PRK4 YM 70 LM	69567	
PRK4 YM 70 MX	69568	

* for grease



FEATURES

Operating pressure: maximum 350 bar.

Deliveries: From 1 to 4 provided with non-return valves, for G3/8 connection.

Electrical drive: Three-phase UNEL MEC motor, size 71, model B14, power 0.25 kW, 6 pole, S1 operation. Supply voltage 230-400V 50Hz. Motors are available on request with different characteristics and/or homologations.

Level controller: changeover contact is always provided.

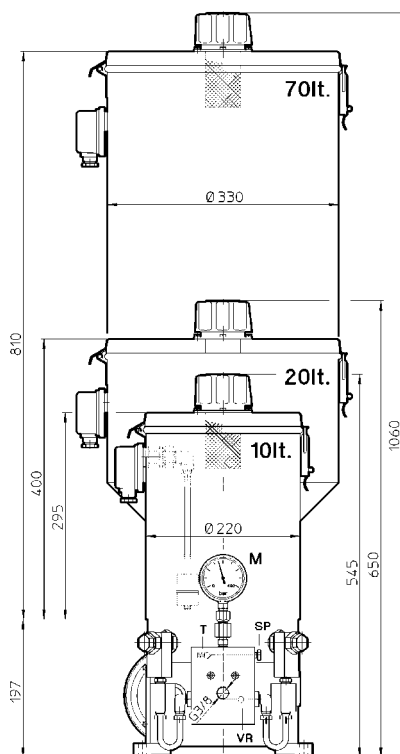
Insulation protection level: IP 54

Reservoir: produced in steel sheet furnace coated with epoxy-polyester powder, minimum film thickness 30µm, colour RAL 6013. Capacity can be 10, 20 or 70 l. The PRK4... series has a grease pusher-scraper helix which has the function of removing the grease from the walls of the tank and pushing it towards the pumping suction openings.

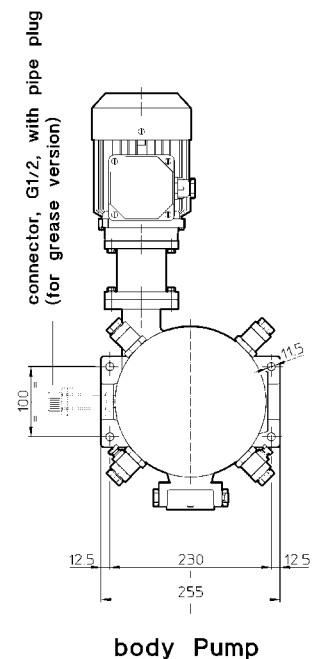
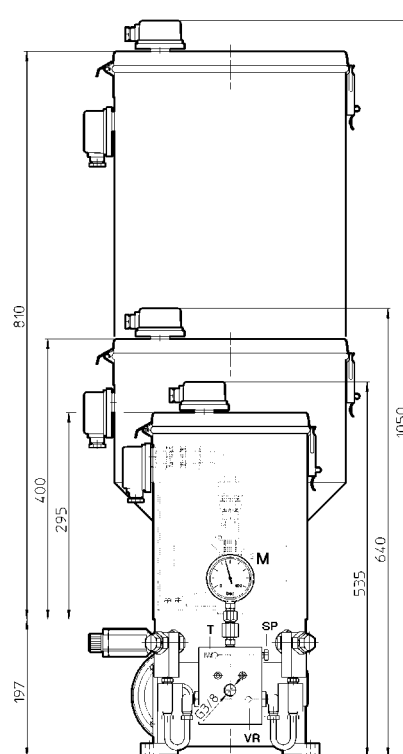
Level controllers: A minimum level controller with changeover contact is always provided (maximum 220V; maximum 30W, 60VA). On request a minimum and maximum level controller is available. Alternatively, it is possible to have a capacitive controller which is able to monitor both the minimum and maximum level. The latter becomes indispensable where soft greases are used, that is with an NLGI thickness of less than 0.

Lubricants: lubricant oils with viscosity higher than 20 cSt and greases with maximum thickness NLGI 2.

PR4... series for oil



PRK4... series for grease

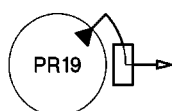




OUTPUT

Single or combined outlet (see below) allow to get different deliveries (up to 11 facilities). A pressure monitor device incorporate a pressure gauge, **M** scale 0-400 bar, an overpressure relief valve, **T**, pressure range **0-350** bar; an exhaust fitting, **SP**, and a non return valve, **VR**. When ordering, add to the pump code the code of required outlets combination.

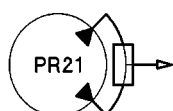
No 1 Outlet



1 pumping unit - 1 outlet
(15 cc/min output)

Symbol	Code
PR19	62991

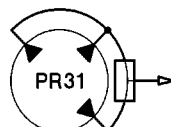
No 1 Outlet



2 pumping units - 1 outlet
(30 cc/min output)

Symbol	Code
PR21	60221

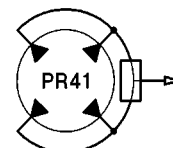
No 1 Outlet



3 pumping units - 1 outlet
(45 cc/min output)

Symbol	Code
PR31	60223

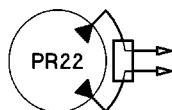
No 1 Outlet



4 pumping units - 1 outlet
(60 cc/min output)

Symbol	Code
PR41	60226

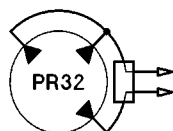
No 2 Outlets



2 pumpings unit - 2 outlets
(15 and 15 cc/min output)

Symbol	Code
PR22	60222

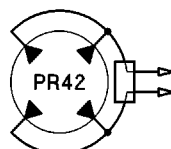
No 2 Outlets



3 pumping units - 3 outlets
(15 and 30 cc/min output)

Symbol	Code
PR32	60224

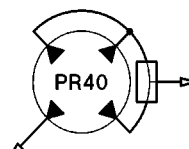
No 2 Outlets



4 pumping units - 2 outlets
(30 and 30 cc/min output)

Symbol	Code
PR42	60227

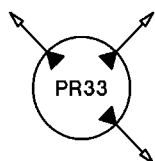
No 2 Outlets



4 pumping units - 2 outlets
(45 and 15 cc/min output)

Symbol	Code
PR40	60228

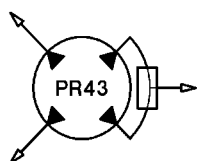
No 3 Outlets



3 pumping units - 3 outlets
(15-15-15 cc/min output)

Symbol	Code
PR33	60225

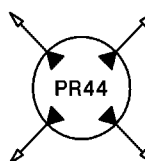
No 3 Outlets



4 pumping units - 3 outlets
(15-15 and 30 cc/min output)

Symbol	Code
PR43	69569

No 4 Outlets



4 pumping units - 4 outlets
(15-15-15-15 cc/min output)

Symbol	Code
PR44	60229



TK 205



The **TK 205** program unit is designed to drive and operate a lubrication system equipped with an electric pump or with a pneumatic servo-controlled pump with progressive sequence distributors

The unit enables the pause time and lubrication method to be programmed. The pause time is adjustable from 0 minute to 100 hours. In the case where an electric pump is used, the operating time that can be set may vary from 1 sec to 59 minutes, whilst if a pneumatic servo-controlled pump is used, 1 to 99 actions can be set.

Programming is effected by entering on a keypad and reading the values on an **LCD** display.

Both the lubrication cycle complete control and the control relative to the minimum level of lubricant can be programmed. In the event of an alarm due to a failed cycle and insufficient level, the signal is remotable. The operating state of the lubricating system can be diagnosed on the **LCD** display. It is also possible to carry out an extra cycle additional lubrication by pressing the "**ENTER**" button and the remote button.

TECHNICAL CHARACTERISTICS

Pause time:

Operating time:

Operating hours counter:

Default hours counter:

Functions display:

Protection:

Voltage:

Power consumption:

Light for remote signal:

Operating temperature:

from **0** minute to **99** hours and **59** seconds

from **1** second to **99** minutes and **59** seconds or

from **1** to **99** actions

up to 9999 day 23 hours

up to 9999 hours 59 min.

LCD

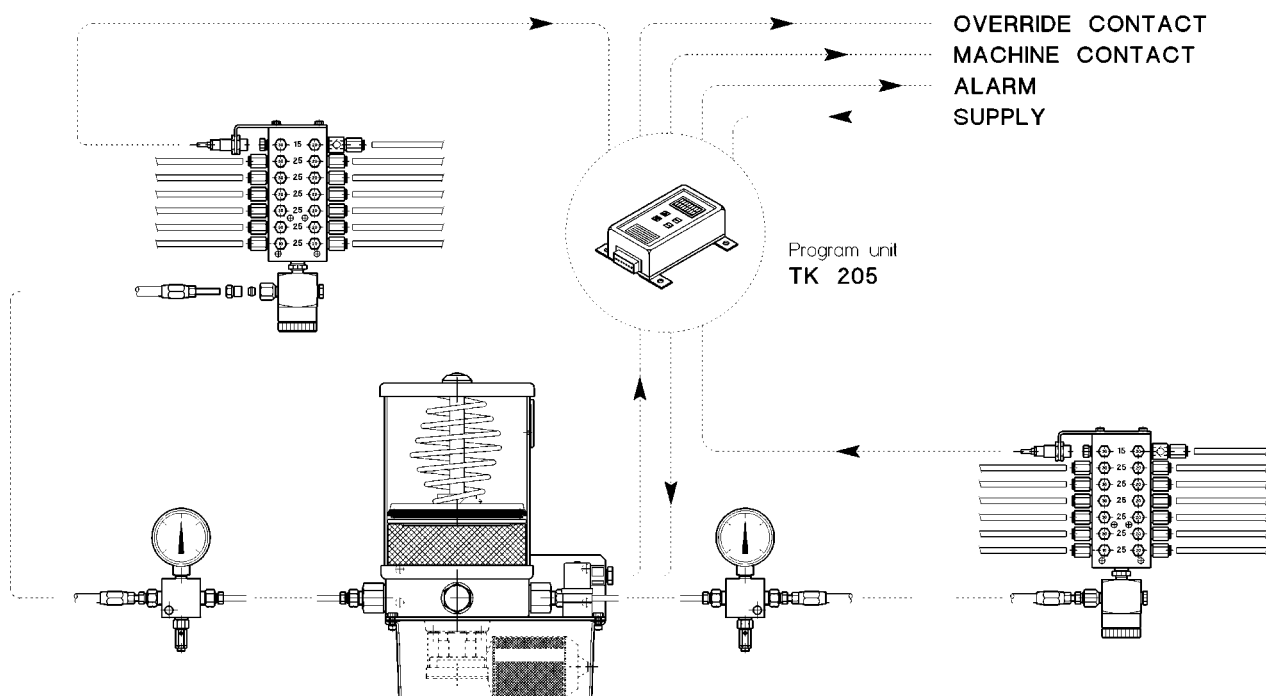
IP 20 DIN 40050

12V DC; 12V AC; 24V DC; 110V 50/60Hz and 230V 50/60Hz

5A

max 4W

-25° +70°C



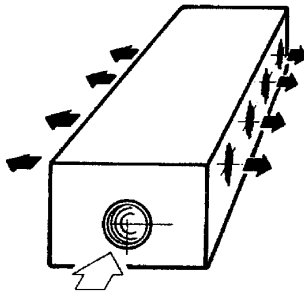


Production of a system with progressive sequence lubricant distribution involves certain selections in relation to the pump to be used, to the most suitable types of distributors, and to operation and control where creation of an automatic system is desired. The tables which follow will examine all the options presented by our range of products. Furthermore, it is important to establish at this point which types of distributors are available. In essence, there are two main groups which we will define as:

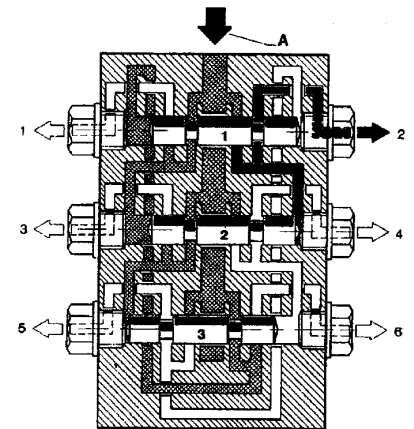
Single-unit variable flow rate distributors Modular variable flow rate distributors

SINGLE-UNIT VARIABLE FLOW RATE DISTRIBUTORS DPS, DPX, DPZ

These are distributors constructed in units which can contain from three to twelve sections. The difference in the flow rates is obtained by the variation in the metering piston travel. The internal circuits are simplified with respect to the distributors in the previous series, but involve displacement of the delivery lines with respect to the section of operation under consideration, such that the piston in section 2 sends to section one, and the others also send to the previous section.



DPS – flow rate from 0.025 to 0.10 cmc
DPX – flow rate from 0.10 to 0.40 cmc
DPZ – flow rate from 0.80 to 1.50 cmc

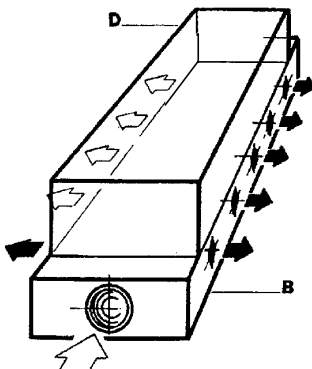


MODULAR VARIABLE FLOW RATE DISTRIBUTORS DMS, DMX, DMZ

This series is characterised by the fact that the distributors are made up of a base component to which the supply tubes and delivery tubes are connected and an "active" component, which contains the metering piston and the communication circuits.

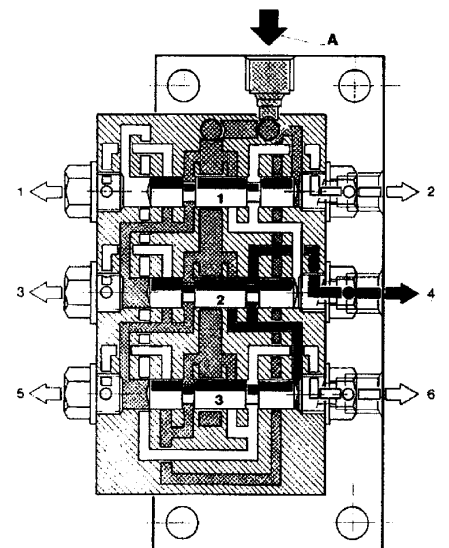
This means that from a system design point of view it is possible to extend and connect the pump lines to the lube points, using the base plates, whilst the active components are fixed to the base with four or more screws and are therefore easily removed and replaced.

In reality, this is the advantage with respect to the previous series, which enables extremely quick and simple maintenance intervention during operation.



DMS – flow rate from 0.025 to 0.10 cmc
DPX – flow rate from 0.10 to 0.40 cmc
DPZ – flow rate from 0.80 to 1.5 cmc

B – Base
D – Metering module





DESCRIPTION

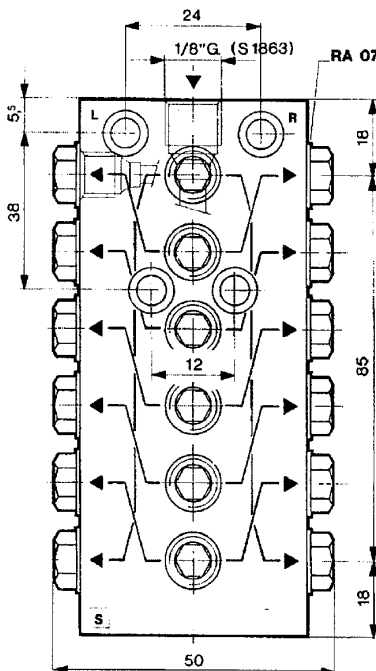
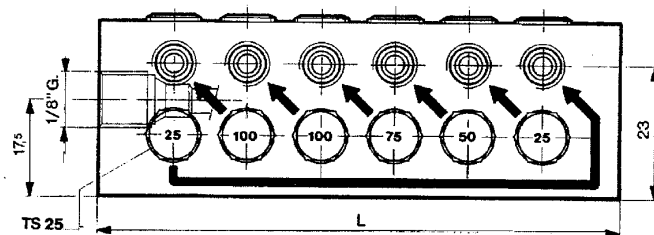
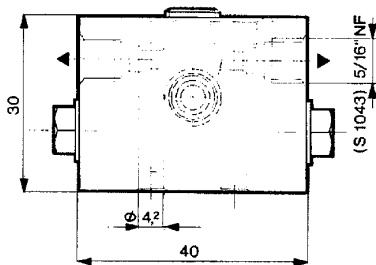
Distributors in the **DPS** series are separation and metering units designed for a progressive sequence centralised lubrication system. They enable delivery of a predetermined quantity of oil or grease for each section to a corresponding number of lube points. This is achieved through the action of a series of pistons positioned in their housings, each one driven by the other in an interdependent sequence, generated by a flow of lubricant. The main characteristics of this series are the **single-unit construction** with the choice of ten different sizes which in turn enable **distribution and metering to a variable number of from 3 to 24 lube points**.

DELIVERY LINES

The delivery lines are positioned on two sides of the unit and can be independent or coupled, as described in the following table. Threaded with 5/16" NF, with seating S 1043 for tubes of 4mm in accordance with DIN 3854/3862, they require the use of RB 43 or RM 43 connectors with B 40 tee or M 40 coupling compression fittings.

FLOW RATE As already mentioned above, flow rates are adjustable by means of metering screws from 0.025 to 0.1 cmc/cycle for each delivery line. With two different metering screws on the same section, a flow rate is obtained which is the arithmetical average of the flow rate indicated.

OPERATING PRESSURE The distributors allow normal operating pressures of up to 100 bars.



The diagrams on the left and above indicate the delivery route of the lubricant depending on the amount determined by each screw. The same details are given for each distributor in the series.

TYPES AND DIMENSIONS

Code	Symbol	Delivery lines	L
52562	DPS 6	6	70
52563	DPS 8	8	87
52564	DPS 10	10	104
52565	DPS 12	12	121
52566	DPS 14	14	138
52567	DPS 16	16	155
52568	DPS 18	18	172
52569	DPS 20	20	189
52570	DPS 22	22	206
52571	DPS 24	24	223

SUPPLY AND DELIVERY LINES

Threaded G1/8 connections with S 1863 housing for 6mm tube and 5/16" NF for 4 mm dia tubes.

Connectors and reductions for metallic and nylon tubes.

Code	Symbol	Tube dia	Description	Code	Symbol	Tube dia	Description
90443	RB 43	4	Connector	90644	RM 63	6	Connector
90540	B 40	4	Tee	90860	M 60	6	Coupling
90643	RM 43	4	Connector	90960	BS 60	6	Sleeve
90840	M 40	4	Coupling	97980	RD 51618	6	Reduction
90940	BS 40	4	Sleeve	90218	RA 516	4	Seal
90422	RB 63	6	Connector	91230	RD 1882	8	Reduction
90560	B 60	6	Tee	90796	RA 45	6	Seal



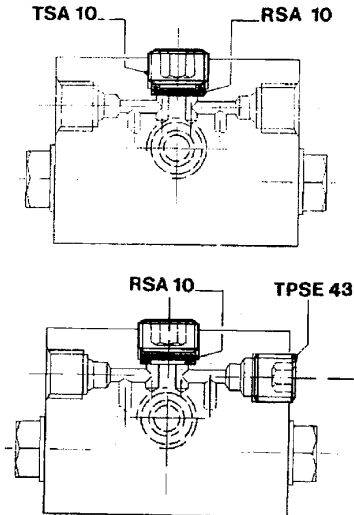
METERING SCREWS

The metering screws have the numbers 25, 50, 75 or 100 marked on their heads which correspond to the metering of each delivery as detailed in the table on the right. Unless indicated otherwise, the distributors are normally mounted with TS 50 screws.

Code	Symbol	Flow rate cmc/cycle
53104	TS 25	0.025
53105	TS 50	0.050
53106	TS 75	0.075
53107	TS 100	0.100
91289	RA07T	Washer

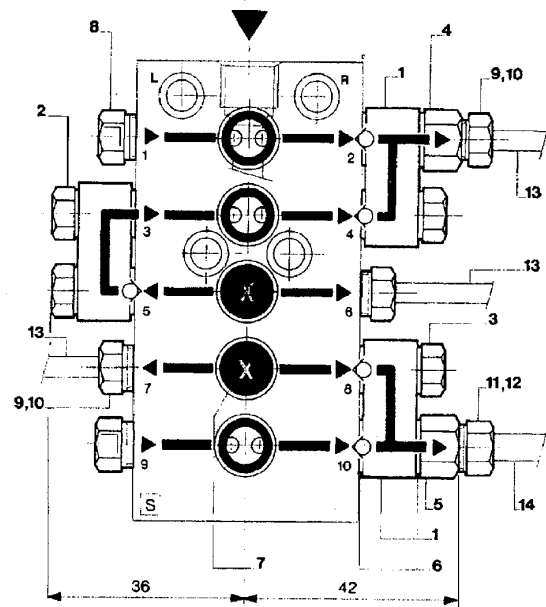
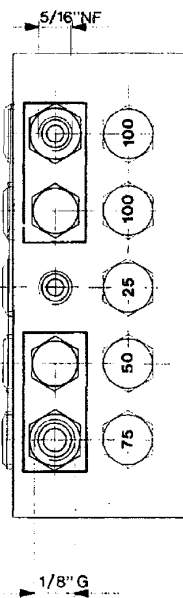
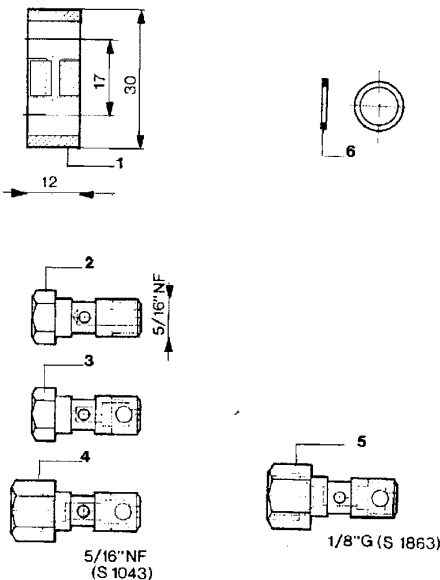
SINGLE AND DUAL DELIVERY

Each section of the distributor is set up for unilateral or bilateral distribution. This is enabled by the RSA 10 washer which is flat on one side and hollow on the other side. If this washer is positioned with the hollow side up, delivery of the lubricant takes place separately on each side of the side of the section (figure 1 on left). If, on the other hand, the hollow face is turned downwards (figure 2), dual distribution will occur (equal to the sum of the of the nominal flow rates), on one or other side of the section as selected. The opposite outlet will be closed off with a plug **TPS 43**. It is once again pointed out that, for each delivery line, the flow rate to separate delivery lines is equal to the sum of the nominal flow rates of the metering screws used, divided by two. It is also pointed out that the metering amounts set in one section in reality relate to delivery distributed on the previous section and as detailed in the figure in table DP0190.4.



PLUGS AND SEALS

Code	Symbol	Flow rate cmc/cycle
53120	TSA 10	Threaded plug M10x1
90561	RSA 10	Flat socket washer
91513	TPSE43	Plug with counter-seating 5/6" NF



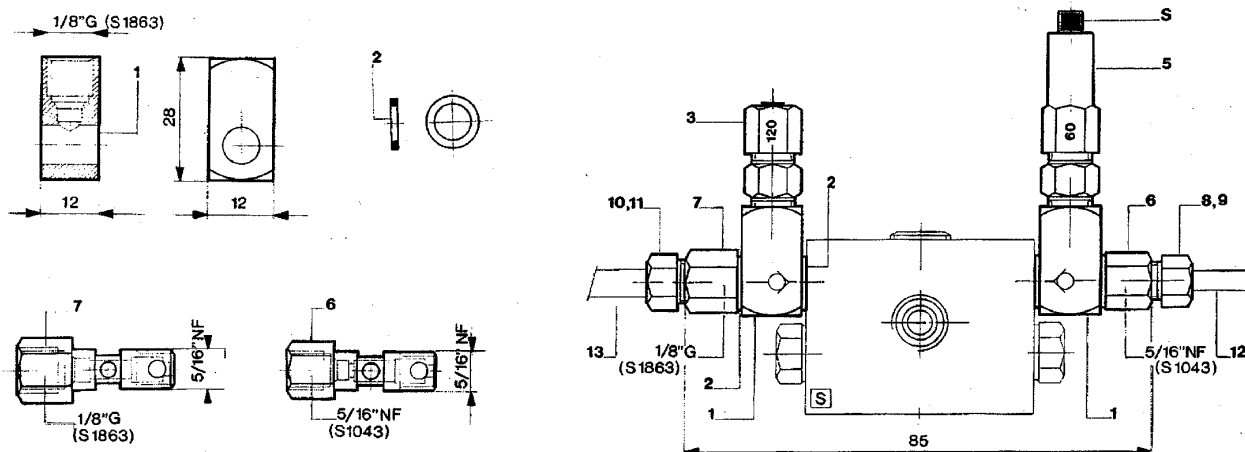
CONNECTING PLATES, HOLLOW SCREWS, SEALS AND CONNECTORS

Item	Code	Symbol	Description
1	90562	CPS516	Connecting plates 2 positions
2	90563	VO516	5/16" NF normal hollow screw
3	11842	VO516.1	5/16" NF hollow valve screw
4	90564	VOD516	5/16" NF hollow valve screw - 4mm
5	90427	VOD518	5/16" NF hollow valve screw - 6mm
6	90218	RA516	Aluminium seal 8.2x10.2x1
7	90561	RSA10	Socket washer

Item	Code	Symbol	Description
8	91513	TPSE43	5/16" NF plug with counterseating
9	90443	RB43	5/16" NF connector x 4mm
10	90540	B40	Tee for 4mm tube
11	90422	RB63	G1/8 x 6mm connector
12	90560	B60	Tee for 6mm tube
13	90043	TAC43	4 x 3 mm steel tube
14	90064	TAC64	6 x 4 mm steel tube

**OVERPRESSURE INDICATORS**

The drawings which follow show the application of the overpressure indicators designed to indicate the blockage of any supply line to the lube points

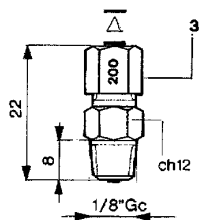
**HOLLOW SCREWS, SEALS AND CONNECTORS**

Item	Code	Symbol	Description
1	90565	OS516	G1/8 Adjustable connector
2	90218	RA516	Aluminium seal
6	90564	VOD516	5/16\" NF hollow valve screw – 4mm
7	90427	VOD518	5/16\" NF hollow valve screw – 6mm
8	90443	RB43	5/16\" NF connector – 4 mm tube

Item	Code	Symbol	Description
9	90540	B40	Tee for 4mm tube
10	90422	RB63	G1/8 connector – 6mm tube
11	90560	B60	Tee for 6mm tube
12	90043	TAC43	4 x 3 mm steel tube
13	90064	TAC64	6 x 4 mm steel tube

OVERPRESSURE INDICATORS (Items 3,5) All the threaded G1/8 compression fitting overpressure indicators are detailed below, produced for the various recommended pressures indicated in the table.

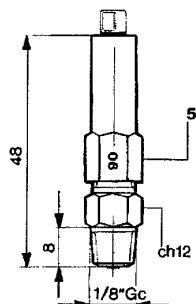
SERIES RPD 18/...(ITEM 3) This indicator is provided only with a rupture disc which, when subjected to pressures above the anticipated limit, breaks and lets the lubricant leak out. In this case the system does not lock.



Indicator Code	Symbol	Rupture pressure / bars
95828	RPD 18. 60	60
95829	RPD 18. 90	90
96655	RPD 18.120	120
95830	RPD 18.150	150
95831	RPD 18.200	200
95832	RPD 18.240	240

Rupture disc code	Symbol	Colour
95858	D 60.1	black
95859	D 90.2	green
97153	D 120.3	red
95860	D 150.4	orange
95861	D 200.5	grey
95862	D 240.6	blue

SERIES RPS 19/...(ITEM 5) With memory, in the sense that the red indicator **S** pops out, produced by overpressure as a result of a blockage, and remains until such time as, after removal of the cause of the blockage, it is pushed back in manually.



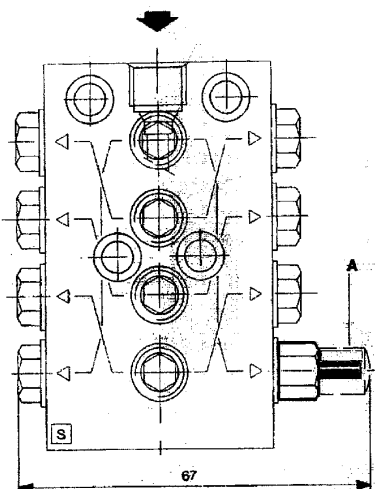
Indicator Code	Symbol	S exit pressure
95178	RPS 19/ 25	25 bar
95179	RPS 19/ 40	40 bar
95180	RPS 19/ 60	60 bar
95181	RPS 19/ 90	90 bar
95182	RPS 19/ 120	120 bar
95183	RPS 19/ 150	150 bar
95184	RPS 19/ 200	200 bar

**CYCLE VISUAL INDICATORS**

These are small plexiglass domes within which a coloured rod appears that becomes visible when the metering piston for the corresponding section has operated.

With this coupling it is easy to check the cycle which has taken place, when movement of the indicator for the previous section involved is complete.

The table below details the codes for the **DPS...A** distributors, with control rod and the various metering screws with protective dome.

**DISTRIBUTORS**

With visual indicators

Code	Symbol	No. of delivery lines
52572	DPS 6A	6
52573	DPS 8A	8
52574	DPS 10A	10
52575	DPS 12A	12
52576	DPS 14A	14
52577	DPS 16A	16
52578	DPS 18A	18
52579	DPS 20A	20
52580	DPS 22A	22
52581	DPS 24A	24

METERING SCREWS

With seal

Indicator Code	Symbol	Flow rate cmc/cycle
53116	TSA 25	0.025
53117	TSA 50	0.050
53118	TSA 75	0.075
53119	TSA 100	0.100
91289	RA 07T	Seal

In standard types such as in the diagram, the visual control rod is normally located on the right hand side of the distributor. A non-standard configuration must be defined at the time of order.

ELECTRIC CYCLE INDICATORS

Similarly to the visual indicators, a rod pops up when the metering piston for the corresponding section has functioned.

The rod causes intervention of the microswitch.

DISTRIBUTORS

With microswitch

Code	Symbol	No. of delivery lines
52593	DPS 6MH	6
52594	DPS 8MH	8
52595	DPS 10MH	10
52596	DPS 12MH	12
52597	DPS 14MH	14
52598	DPS 16MH	16
58172	DPS 18MH	18
58173	DPS 20MH	20
58175	DPS 22MH	22
58177	DPS 24MH	24

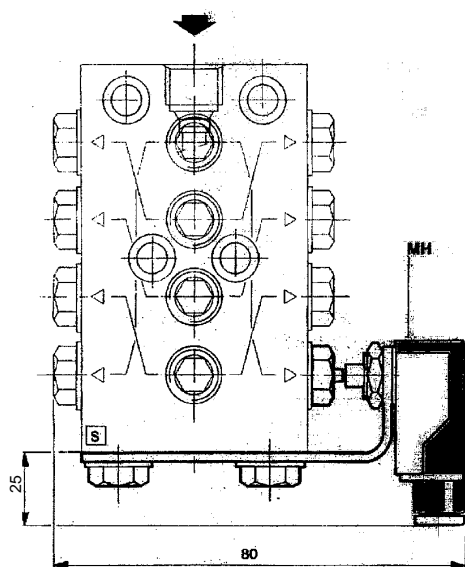
METERING SCREWS

With seal

Code	Symbol	Flow rate cmc/cycle
53035	TSHY 25	0.025
53036	TSHY 50	0.050
53037	TSHY 75	0.075
53038	TSHY 100	0.100
27812	MH	Microswitch
91289	RA 07T	Seal

In standard types such as in the diagram, the control microswitch is normally located on the right hand side of the distributor.

A non-standard configuration must be defined at the time of order.

**CYCLE "PROXIMITY" INDICATORS**

A proximity indicator is used which intervenes when the metering piston rod pops out as the piston has moved.

DISTRIBUTORS

With "proximity" (PNP)

Code	Symbol	No. of delivery lines
52636	DPS 6MY	6
52637	DPS 8MY	8
52638	DPS 10MY	10
52639	DPS 12MY	12
58179	DPS 14MY	14
58181	DPS 16MY	16
58183	DPS 18MY	18
58185	DPS 20MY	20
58186	DPS 22MY	22
58187	DPS 24MY	24

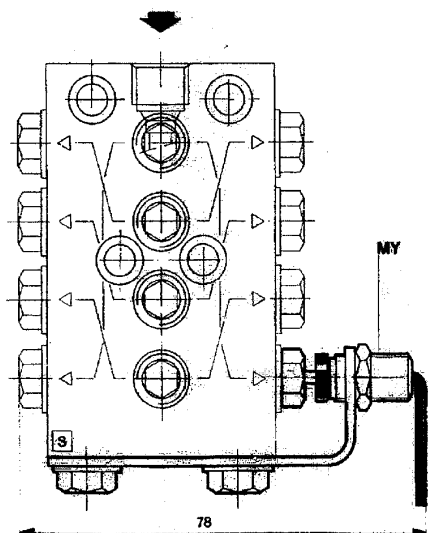
METERING SCREWS

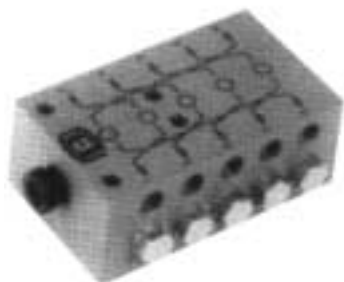
With seal

Indicator Code	Symbol	Flow rate cmc/cycle
53035	TSHY 25	0.025
53036	TSHY 50	0.050
53037	TSHY 75	0.075
53038	TSHY 100	0.100
28070	MY	Proximity PNP
91289	RA 07T	Seal

In standard types such as in the diagram, the control "proximity" is normally located on the right hand side of the distributor.

A non-standard configuration must be defined at the time of order.



**DESCRIPTION**

Distributors in the **DPX** series are separation and metering units designed for a progressive sequence centralised lubrication system. They enable delivery of a predetermined quantity of oil or grease for each section to a corresponding number of lube points. This is achieved through the action of a series of pistons positioned in their housings, each one driven by the other in an interdependent sequence, generated by a flow of lubricant.

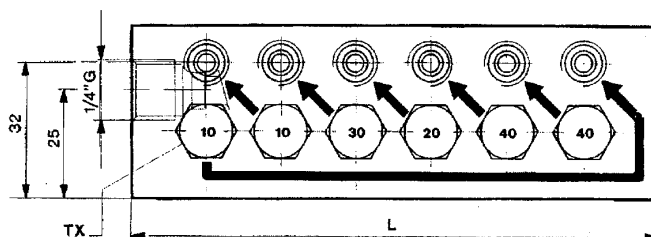
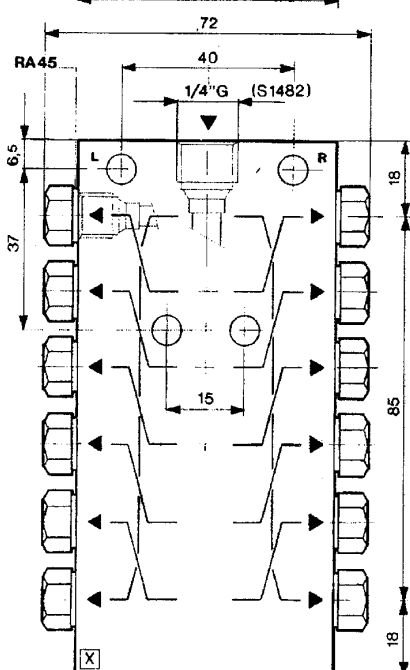
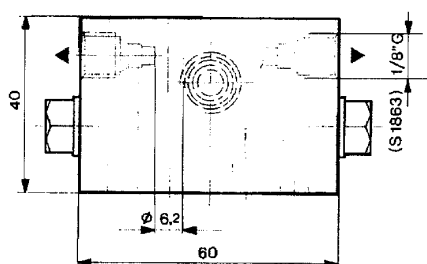
The main characteristics of this series are the **single-unit construction** with the choice of ten different sizes which in turn enable **distribution and metering to a variable number of lube points from 6 to 24**.

DELIVERY LINES

The delivery lines are positioned on two sides of the unit and can be independent or coupled, as described in the following table. Threaded with G1/8, with seating S 1863 for tubes of 6mm in accordance with DIN 3854/3862, they require the use of RB 63 or RM 63 connectors with B 60 tee or M 60 coupling compression fittings.

FLOW RATE Flow rates are adjustable by means of metering screws from 0.10 to 0.40 cmc/cycle. With two different metering screws on the same section, a flow rate is obtained which is the arithmetical average of the flow rate indicated.

OPERATING PRESSURE The distributors allow normal operating pressures up to 150 bars.



The diagrams on the left and above indicate the delivery route of the lubricant in relation to the amount determined by each screw. The same details are given for each distributor in the series.

TYPES AND DIMENSIONS

Code	Symbol	Delivery lines	L
51220	DPX 6	6	70
51222	DPX 8	8	87
51224	DPX 10	10	104
51226	DPX 12	12	121
52295	DPX 14	14	138
52296	DPX 16	16	155
52291	DPX 18	18	172
52297	DPX 20	20	189
55139	DPX 22	22	206
52298	DPX 24	24	223

SUPPLY AND DELIVERY LINES

Threaded G1/4 connections with S 1482 seating for 8mm dia tube and G1/8 with S 1863 seating for 6 mm dia tubes.

Code	Symbol	Tube dia	Description	Code	Symbol	Tube dia	Description
90422	RB 63	6	Connector	90443	RB 43	4	Connector
90560	B 60	6	Tee	90540	B 40	4	Tee
90644	RM 63	6	Connector	90643	RM 43	4	Connector
90860	M 60	6	Coupling	90840	M 40	4	Coupling
90960	BS 60	6	Sleeve	90940	BS 40	4	Sleeve
90482	RB 82	8	Connector	91230	RD1882	8	Reduction
90682	B 82A	8	Tee	90976	RA 45	6	Seal
91205	RK 419	4	Reduction	93275	TED1014LK	10	Reduction
			Only for Metal tubes				Only for Metal tubes
			Only for Nylon tubes				Only for Nylon tubes
			Red. 6-4mm				Reduction 6-8mm
							Reduction 8-10mm



METERING SCREWS

The metering screws have the numbers 10, 20, 30 or 40 marked on their heads which correspond to the metering of each delivery as detailed in the table on the right. Unless indicated otherwise, the distributors are normally mounted with TX 20 screws.

Code	Symbol	Flow rate cmc/cycle
52259	TX 10	0.1
52260	TX 20	0.2
52261	TX 30	0.3
52262	TX 40	0.4
91288	RA 45T	Seal 10.2 x 12.6 x 1.5

SINGLE AND DUAL DELIVERY

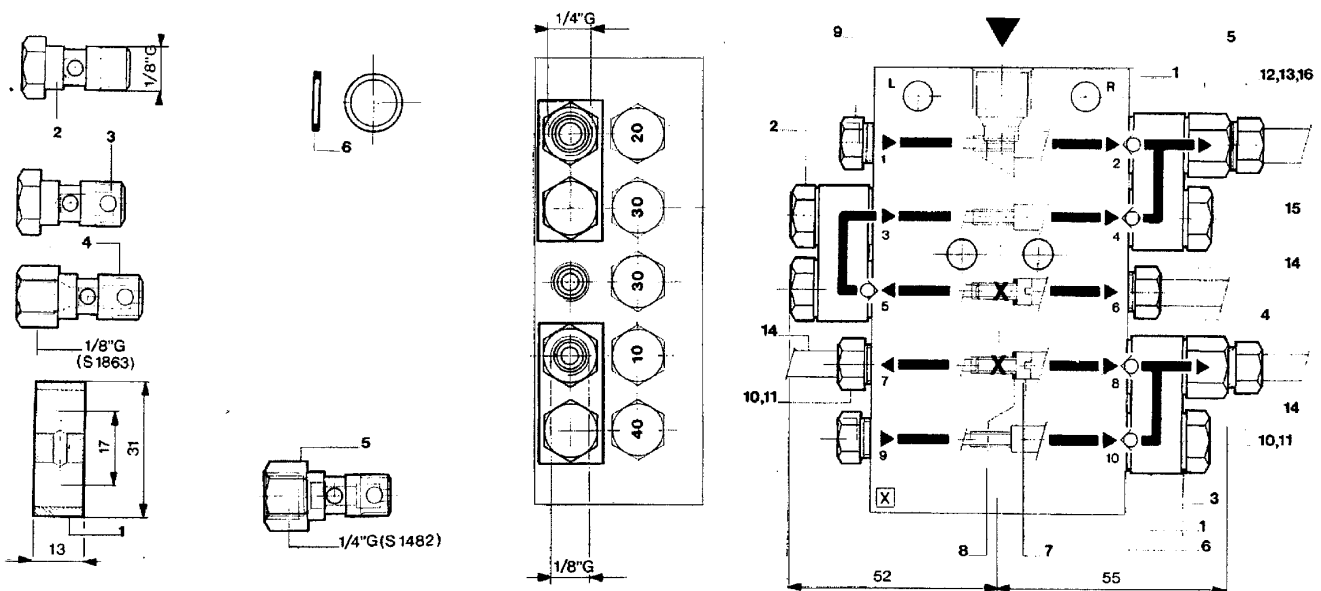
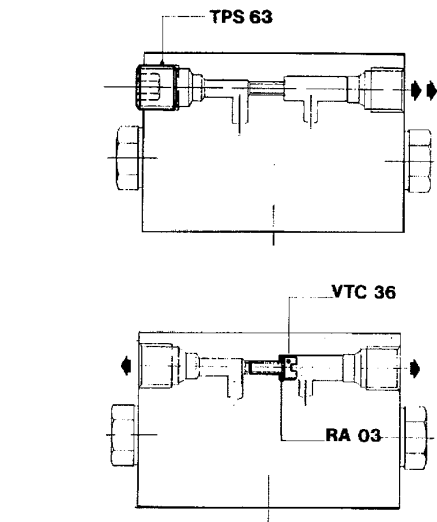
Each section of the distributor is set up for unilateral or bilateral distribution. This is enabled by the VTC 36 screw with RA 03 seal. Single distribution will occur on both sides when the screw is mounted. In any event, the flow rate is determined by the two **metering screws** and is identical for the two delivery lines. It is pointed out that the screws determine the quantity distributed by the delivery lines indicated by the arrow and not the one immediately above.

Dual distribution will however occur on one side only and therefore the delivery line not involved must be closed off with a plug TPS 63, see diagram on left, when the screw VTC 36 is not mounted.

Unless indicated otherwise, VTC 36 screws with seal RA 03 are always mounted.

PLUGS AND SEALS

Code	Symbol	Description
90367	VTC 36	VTC M 3 x 6 screws
90338	RA 03	Seal diam. 3.2 x 5.5 x 1
90638	TPS 63	Plug with counter-seating G1/8



CONNECTING PLATES, HOLLOW SCREWS, SEALS AND CONNECTORS

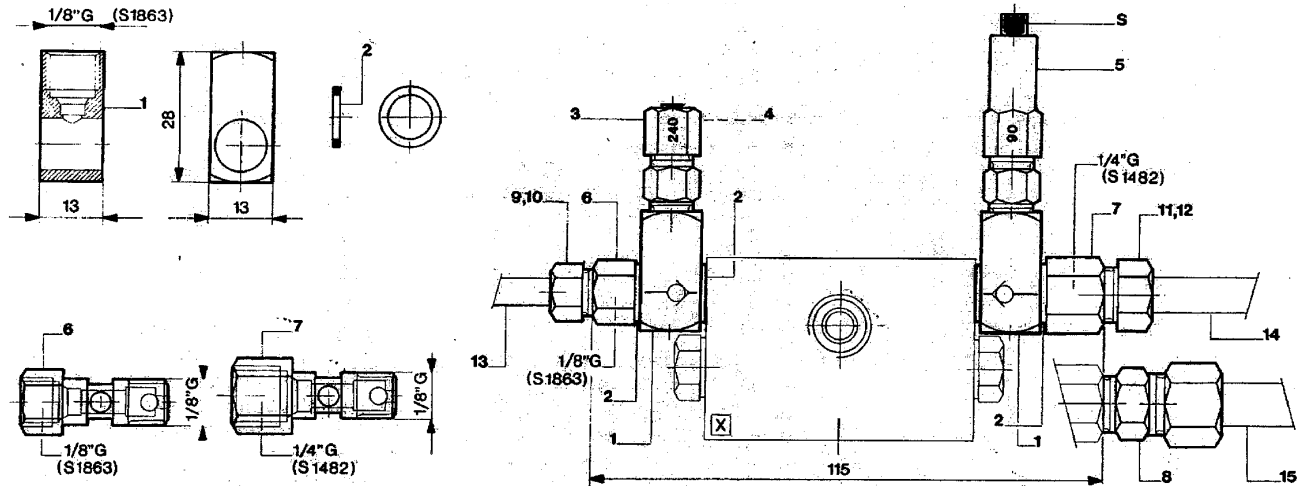
Item	Code	Symbol	Description
1	95358	CPX 18	Connecting plates 2 positions
2	91582	VO 63	G1/8 hollow valve screw
3	11819	VO 63.1	G1/8 normal hollow screw
4	91583	VOD 63	G1/8 hollow valve screw x 6mm
5	90315	VOD 84	G1/8 hollow valve screw x 8mm
6	90796	RA 45	Aluminium seal 10.2x12.6x1.5
7	90637	VTC 36	Cylindrical head screw M 3 x 6
8	90338	RA 03	Aluminium seal 3.2x5.5x1

Item	Code	Symbol	Description
9	90638	TPS 63	G1/8 plug with counterseating
10	90422	RB 63	G1/8 x 6mm connector
11	90560	B 60	Tee for 6mm tube
12	90482	RB 82	G1/4 x 8mm connector
13	90682	B 82A	Tee for 8mm tube
14	90064	TAC 64	6 x 4 mm steel tube
15	90086	TAC 86	8 x 6 mm steel tube
16	93275	TED1014LK	G1/4 x 10mm connector

**OVERPRESSURE INDICATORS**

The drawings which follow show the application of the overpressure indicators designed to indicate the blockage of any supply line to the lube points.

These indicate, in a different way depending on the type, an improper increase in the system pressure, also indicating in which direction and in which component this occurs (see table).

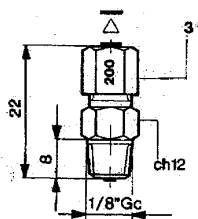
**HOLLOW SCREWS, SEALS AND CONNECTORS**

Item	Code	Symbol	Description
1	91584	OS 63	G1/8 Adjustable connector
2	90796	RA 45	Aluminium seal 10.2x12.6x1.5
6	91583	VOD 63	G1/8 hollow valve screw – 6mm
7	90315	VOD 84	G1/8 hollow valve screw – 8mm
8	93275	TED1014LK	G1/4 connector x 10 mm
9	90422	RB 63	G1/8 connector x 6 mm

Item	Code	Symbol	Description
10	90560	B 60	Tee for 6mm tube
11	90482	RB 82	G1/4 connector x 8mm
12	90682	B 82A	Tee for 8mm tube
13	90064	TAC 64	6 x 4 mm steel tube
14	90086	TAC 86	8 x 6 mm steel tube
15	90108	TAC 108	10 x 8 mm steel tube

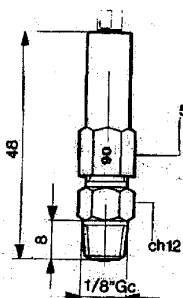
OVERPRESSURE INDICATORS (Items 3,5) All the threaded G1/8 compression fitting overpressure indicators are detailed below, produced for the various recommended pressures indicated in the table.

SERIES RPD 18/...(ITEM 3) This indicator is provided only with a rupture disc which, when subjected to pressures above the anticipated limit, breaks and lets the lubricant out. In this case the system does not block.



Indicator Code	Symbol	Rupture pressure /bar
95828	RPD 18. 60	60
95829	RPD 18. 90	90
96655	RPD 18.120	120
95830	RPD 18.150	150
95831	RPD 18.200	200
95832	RPD 18.240	240

Rupture disc code	Symbol	Colour
95858	D 60.1	black
95859	D 90.2	green
97153	D 120.3	red
95860	D 150.4	orange
95861	D 200.5	grey
95862	D 240.6	blue



SERIES RPS 19/...(ITEM 5) With memory, in the sense that red indicator **S** pops out, produced by overpressure as a result of a blockage, and remains out until such time as, after removal of the cause of the blockage, it is pushed back in manually.

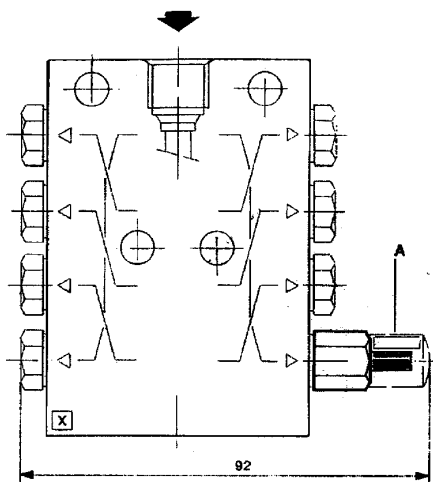
Indicator Code	Symbol	S exit pressure
95178	RPS 19/ 25	25 bar
95179	RPS 19/ 40	40 bar
95180	RPS 19/ 60	60 bar
95181	RPS 19/ 90	90 bar
95182	RPS 19/ 120	120 bar
95183	RPS 19/ 150	150 bar
95184	RPS 19/ 200	200 bar

**CYCLE VISUAL INDICATORS**

These are small plexiglass domes within which a coloured rod appears that becomes visible when the metering piston for the corresponding section has functioned.

With this coupling it is easy to check the cycle which has taken place, when movement of the indicator for the previous section involved is complete.

The table below details the codes for the **DPX...A** distributors, with control rod and the various metering screws with protective dome.

**DISTRIBUTORS**

With visual indicators

Code	Symbol	No. of delivery lines
51221	DPX 6A	6
51223	DPX 8A	8
51225	DPX 10A	10
51227	DPX 12A	12
52299	DPX 14A	14
52560	DPX 16A	16
52306	DPX 18A	18
53111	DPX 20A	20
52307	DPX 22A	22
52308	DPX 24A	24

METERING SCREWS

With seal

Indicator Code	Symbol	Flow rate cmc/cycle
52272	TXA 10	0.1
52273	TXA 20	0.2
52274	TXA 30	0.3
52275	TXA 40	0.4
91288	RA 45T	Seal

In standard types such as in the diagram, the visual control rod is normally located on the right hand side of the distributor. A non-standard configuration must be defined at the time of order.

ELECTRIC CYCLE INDICATORS

Similarly to the visual indicators, a rod pops up when the metering piston for the corresponding section has functioned.

The rod causes intervention of the microswitch.

DISTRIBUTORS

With microswitch

Code	Symbol	No. of delivery lines
52599	DPX 6MH	6
53929	DPX 8MH	8
53935	DPX 10MH	10
53930	DPX 12MH	12
53932	DPX 14MH	14
53933	DPX 16MH	16
53934	DPX 18MH	18
53937	DPX 20MH	20
53928	DPX 22MH	22
52309	DPX 24MH	24

METERING SCREWS

With seal

Indicator Code	Symbol	Flow rate cmc/cycle
53039	TXHY 10	0.1
53040	TXHY 20	0.2
53041	TXHY 30	0.3
53042	TXHY 40	0.4
27812	MH	Microswitch
91288	RA 45T	Seal

In standard types such as in the diagram, the control microswitch is normally located on the right hand side of the distributor.

A non-standard configuration must be defined at the time of order.

CYCLE "PROXIMITY" INDICATORS

A proximity indicator is used which intervenes when the metering piston rod pops out as the piston has moved.

DISTRIBUTORS

With "proximity" (PNP)

Code	Symbol	No. of delivery lines
52479	DPX 6MY	6
54143	DPX 8MY	8
54142	DPX 10MY	10
54144	DPX 12MY	12
54145	DPX 14MY	14
54146	DPX 16MY	16
54147	DPX 18MY	18
54148	DPX 20MY	20
54149	DPX 22MY	22
52646	DPX 24MY	24

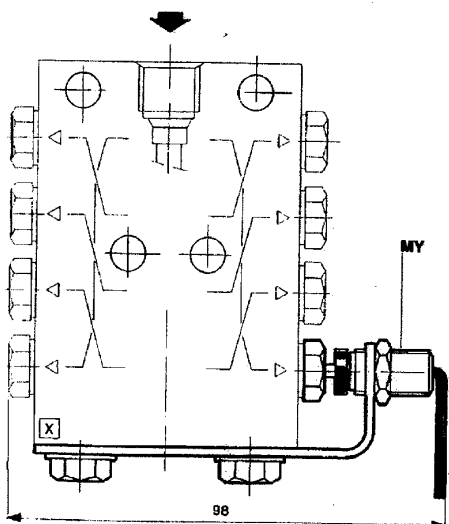
METERING SCREWS

With seal

Indicator Code	Symbol	Flow rate cmc/cycle
53039	TXHY 10	0.1
53040	TXHY 20	0.2
53041	TXHY 30	0.3
53042	TXHY 40	0.4
28070	MY	Proximity PNP
91288	RA 45T	Seal

In standard types such as in the diagram, the control "proximity" is normally located on the right hand side of the distributor.

A non-standard configuration must be defined at the time of order.





DESCRIPTION

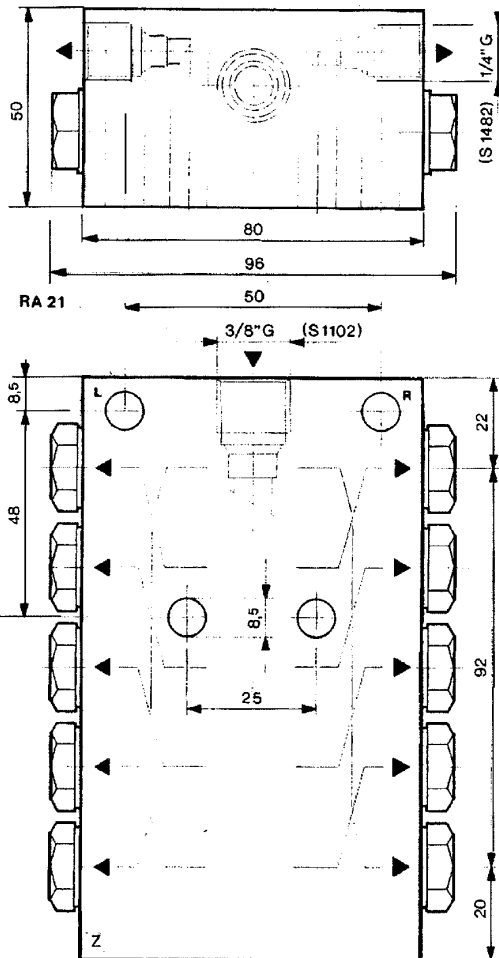
Distributors in the **DPZ** series are separation and metering units designed for a progressive sequence centralised lubrication system. They enable delivery of a predetermined quantity of oil or grease for each section to a corresponding number of lube points. This is achieved through the action of a series of pistons positioned in their housings, each one driven by the other in an interdependent sequence, generated by a flow of lubricant. The main characteristics of this series are the **single-unit construction** with the choice of ten different sizes which in turn enable **distribution and metering to a variable number of lube points from 3 to 24**.

DELIVERY LINES

The delivery lines are positioned on two sides of the unit and can be independent or coupled, as described in the following table. Threaded with G1/4, with seating S 1482 for tubes of 8mm in accordance with DIN 3854/3862 they require the use of RB 82 connectors with B 82A tee compression fittings.

FLOW RATE As already mentioned above, flow rates are adjustable by means of metering screws from 0.80 to 1.50 cmc/cycle. With two different metering screws on the same section, a flow rate is obtained which is the arithmetical average of the flow rate indicated on the same screws.

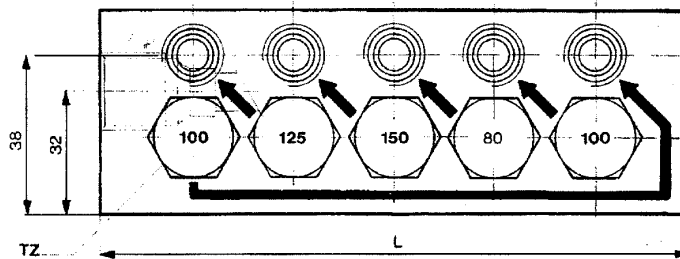
OPERATING PRESSURE The distributors allow normal operating pressures up to 150 bars.



SEAL. Code/Symbol for the metering screws seal
TZ:90329/RA 21

SUPPLY AND DELIVERY LINES

Threaded G3/8 connections with S 1102 seating for 10mm dia tube and threaded G1/4 connections with S 1482 seating for 8 mm dia tubes.



The diagram above indicates the delivery route of the lubricant in relation to the amount determined by each screw. The same details are given for each distributor in the series.

TYPES AND DIMENSIONS

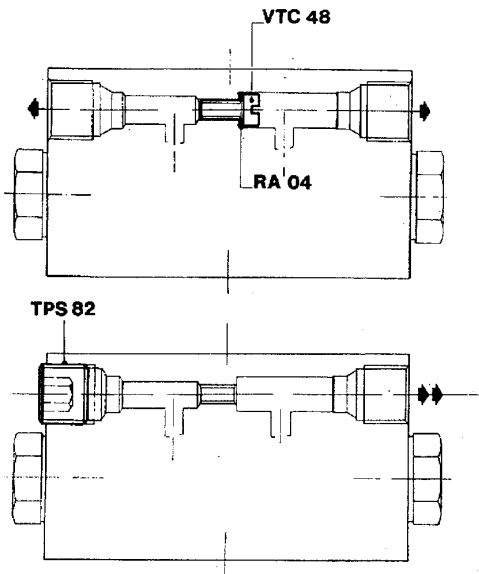
Code	Symbol	Delivery lines	L
51230	DPZ 6	6	88
51232	DPZ 8	8	111
51234	DPZ 10	10	134
51236	DPZ 12	12	157
52310	DPZ 14	14	180
53109	DPZ 16	16	203
52640	DPZ 18	18	226
53180	DPZ 20	20	249
53110	DPZ 22	22	272
53181	DPZ 24	24	295

METERING SCREWS

The metering screws have the numbers 75, 100, 125 or 150 marked on their heads which correspond to the metering of each delivery as detailed in the table below. It is important to remember that each screw enables the amount to be distributed to the delivery line indicated by the arrow as indicated above. Unless indicated otherwise, the distributors are normally mounted with TZ 80 screws.

Code	Symbol	Flow rate cmc/cycle
52269	TZ 80	0.80
52268	TZ 100	1.00
52267	TZ 125	1.25
52266	TZ 150	1.50
90329	RA 21	Seal

Code	Symbol	Tube dia	Description	Code	Symbol	Tube dia	Description
90411	RB 102	10	G3/8 connector	90422	RB 63	6	G1/8 6mm metal connector
90511	B102	10	10mm Tee	90560	B 60	6	Tee for 6mm tubes
90482	RB 82	8	G1/4 connector	90644	RM 63	6	G1/8 6mm nylon connector
90682	B 82A	8	8mm Tee	90860	M 60	6	Coupling for 6mm tubes
90066	RK 607	6	G1/4 - 6mm reduction	90960	BS 60	6	6mm reinforcement sleeve
90078	RK 14102	10	G1/4 - 10mm reduction	93270	TED1238LK	12	Reduction G3/8-12 mm

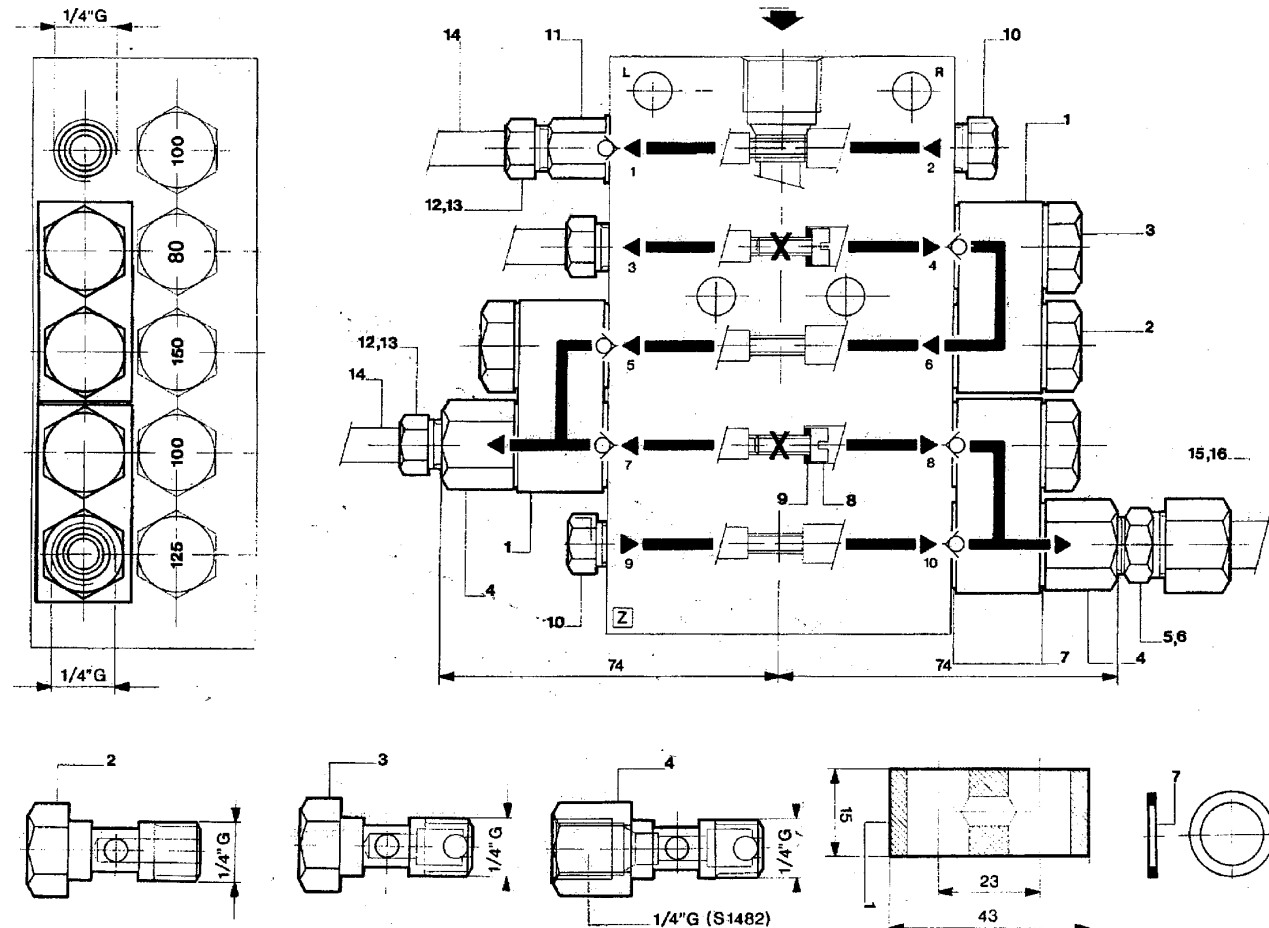


SINGLE AND DUAL DELIVERY Each section of the distributor is set up for unilateral or bilateral distribution. This is enabled by the screw VTC 48 with RA 04 seal. Single distribution occurs on both sides when the screw is mounted. In any event, the flow rate is determined by the two **metering screws** and is identical for the two delivery lines. It is pointed out that the screws determine the quantity distributed by the delivery lines indicated by the arrow and not the one immediately above. Dual distribution will however occur on one side only and therefore the delivery line not involved must be closed off with a plug TPS 82, see diagram on left, when the screw VTC 48 is not mounted. Unless indicated otherwise, VTC 48 screws with seal RA 04 are always mounted.

SCREW, PLUG, SEAL

Code	Symbol	Description
25085	VTC 48	VTC M 4x8 screws
90328	RA 04	Seal diam. 4.2 x 7.2 x 1
91506	TPS 82	Plug with counter-seating G1/4

CONNECTED DELIVERY LINES, MULTIPLE FLOWS In this series of distributors, coupling of sections is also allowed using connecting plates and the relative hollow screws.



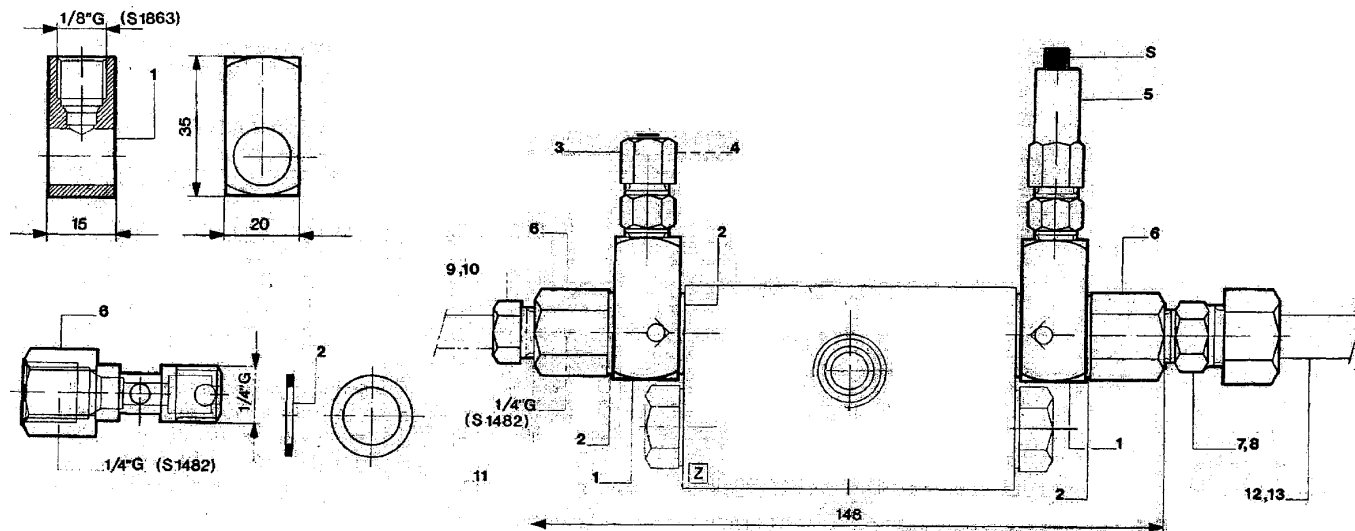
CONNECTING PLATES, HOLLOW SCREWS, SEALS AND CONNECTORS

Item	Code	Symbol	Description	Item	Code	Symbol	Description
1	95357	CPZ 14	Connecting plate 2 positions	9	90328	RA 04	Seal 4.2x7.2x1
2	11131	VO 83.1	G1/4 normal hollow screw	10	93532	TPSE 82	G1/4 plug with counterseating
3	91180	VO 83	G1/4 hollow valve screw	11	90188	RVD1482K	G1/4 - 8mm valve connector
4	91181	VOD 83	G1/4 hollow valve screw - 8mm	12	90482	RB 82	G1/4 x 8mm connector
5	91678	TED1014LLK	G1/4 reduction - 10mm	13	90682	B 82A	Tee for 8mm tube
6	91679	TED1214LLK	G1/4 reduction - 12mm	14	90086	TAC 86	8 x 6 mm steel tube (DIN 2391)
7	91159	RA 14	Seal 13.5x19x1.5	15	90108	TAC 108	10 x 8 mm steel tube (DIN 2391)
8	25085	VTC 48	VTC M4x8 screws	16	91209	TAC 129	12 x 9 mm steel tube (DIN 2391)

**OVERPRESSURE INDICATORS**

The drawings which follow show the application of the overpressure indicators designed to indicate the blockage of any supply line to the lube points.

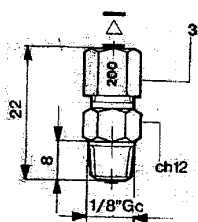
These indicate, in a different way depending on the type, an improper increase in the system pressure, also indicating in which direction and in which component this occurs.

**HOLLOW SCREWS, SEALS AND CONNECTORS**

Item	Code	Symbol	Description
1	91182	OS 83	G1/4 Adjustable connector
2	91159	RA 14	Aluminium seal 13.5x19x1.5
6	91181	VOD 83	G1/4 hollow valve screw – 8mm
7	91678	TED1014LLK	G1/4 reduction x 10 mm
8	91679	TED1214LLK	G1/4 reduction x 12 mm

Item	Code	Symbol	Description
9	90482	RB 82	G1/4 connector x 8mm
10	90682	B 82A	Tee for 8mm tube
11	90086	TAC 86	8 x 6 mm steel tube (DIN 2391)
12	90108	TAC 108	10 x 8 mm steel tube (DIN 2391)
13	91209	TAC 129	12 x 9 mm steel tube (DIN 2391)

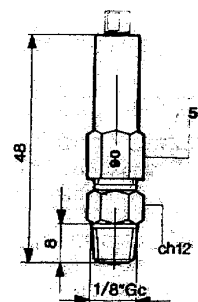
OVERPRESSURE INDICATORS (Items 3,5) All the threaded 1/8" G compression fitting overpressure indicators are detailed below, produced for the various recommended pressures indicated in the table.



SERIES RPD 18/...(ITEM 3) This indicator is provided only with a rupture disc which, when subjected to pressures above the anticipated limit, breaks and lets the lubricant leak out. In this case the system does not block.

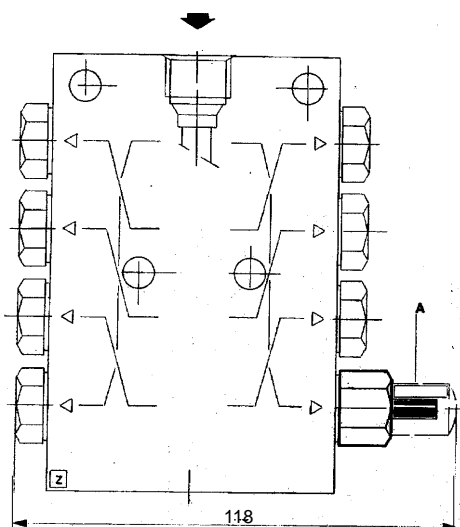
Indicator Code	Symbol	Rupture pressure /bar
95828	RPD 18. 60	60
95829	RPD 18. 90	90
96655	RPD 18.120	120
95830	RPD 18.150	150
95831	RPD 18.200	200
95832	RPD 18.240	240

Rupture disc code	Symbol	Colour
95858	D 60.1	black
95859	D 90.2	green
97153	D 120.3	red
95860	D 150.4	orange
95861	D 200.5	grey
95862	D 240.6	blue



SERIES RPS 19/...(ITEM 5) With memory, in the sense that red indicator **S** pops out, produced by overpressure as a result of a blockage, and remains out until such time as, after removal of the cause of the blockage, it is pushed back in manually.

Indicator Code	Symbol	S exit pressure
95178	RPS 19/ 25	25 bar
95179	RPS 19/ 40	40 bar
95180	RPS 19/ 60	60 bar
95181	RPS 19/ 90	90 bar
95182	RPS 19/ 120	120 bar
95183	RPS 19/ 150	150 bar
95184	RPS 19/ 200	200 bar

**CYCLE VISUAL INDICATORS**

These are small plexiglass domes within which a coloured rod appears that becomes visible when the metering piston for the corresponding section has functioned.

With this coupling it is easy to check the cycle which has taken place, when movement of the indicator for the previous section involved is complete.

The table below details the codes for the DPZ...A distributors, with control rod and the various metering screws with protective dome.

DISTRIBUTORS

With visual indicators

Code	Symbol	No. of delivery lines
52276	DPZ 6A	6
52277	DPZ 8A	8
52278	DPZ 10A	10
52279	DPZ 12A	12
53291	DPZ 14A	14
53292	DPZ 16A	16
53157	DPZ 18A	18
53158	DPZ 20A	20
53159	DPZ 22A	22
53160	DPZ 24A	24

METERING SCREWS

With seal

Indicator Code	Symbol	Flow rate cmc/cycle
52280	TZA 80	0.80
52281	TZA 100	1.00
52282	TZA 125	1.25
52283	TZA 150	1.50
90389	RA 21	Seal

In standard types such as in the diagram, the visual control rod is normally located on the right hand side (R) of the distributor. A non-standard configuration must be defined at the time of order.

ELECTRIC CYCLE INDICATORS

Similarly to the visual indicators, a rod pops up when the metering piston for the corresponding section has functioned.

The rod causes the microswitch to intervene.

DISTRIBUTORS

With microswitch

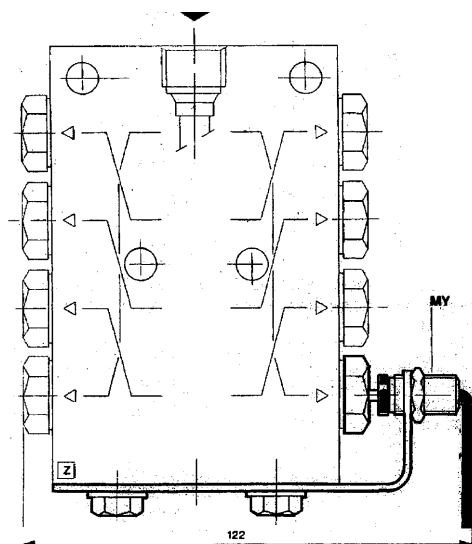
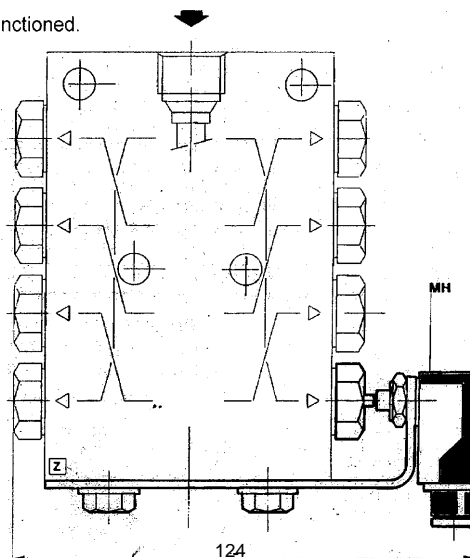
Code	Symbol	Delivery lines
52372	DPZ 6MH	6
52371	DPZ 8MH	8
52474	DPZ 10MH	10
52488	DPZ 12MH	12
52489	DPZ 14MH	14
52490	DPZ 16MH	16
53184	DPZ 18MH	18
53185	DPZ 20MH	20
53186	DPZ 22MH	22
53187	DPZ 24MH	24

METERING SCREWS

With seal

Indicator Code	Symbol	Flow rate cmc/cycle
52852	TZHY 80	0.80
52853	TZHY 100	1.00
52854	TZHY 125	1.25
52855	TZHY 150	1.50
27812	MH	Microswitch
90329	RA 21	Seal

In standard types such as in the diagram, the control microswitch is normally located on the right (R) hand side of the distributor. A non-standard configuration must be defined at the time of order.

**CYCLE "PROXIMITY" INDICATORS**

A proximity indicator is used which intervenes when the metering piston rod pops out as the piston has moved.

DISTRIBUTORS

With "proximity" (PND)

Code	Symbol	No. of delivery lines
52668	DPZ 6MY	6
52669	DPZ 8MY	8
52670	DPZ 10MY	10
52671	DPZ 12MY	12
52672	DPZ 14MY	14
52635	DPZ 16MY	16
53076	DPZ 18MY	18
53077	DPZ 20MY	20
53078	DPZ 22MY	22
53079	DPZ 24MY	24

A non-standard configuration must be defined at the time of order.

METERING SCREWS

With seal

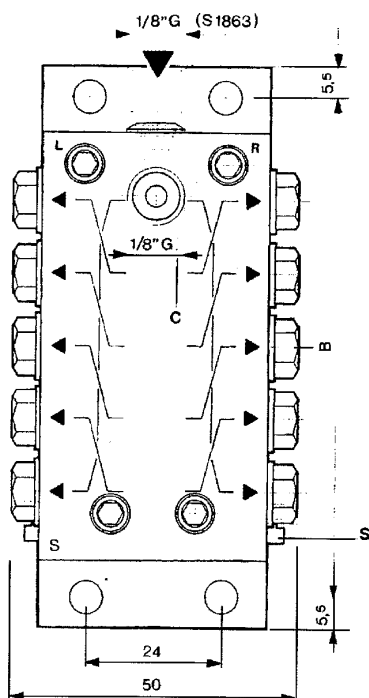
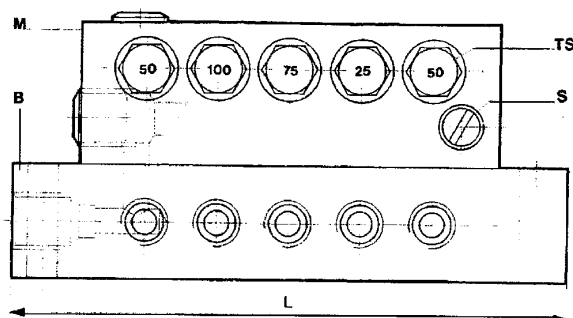
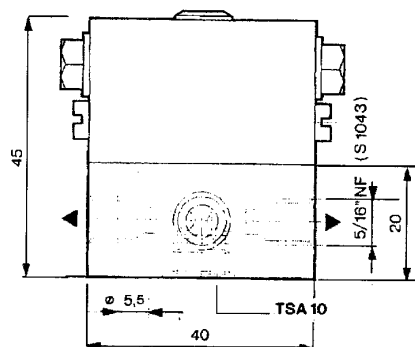
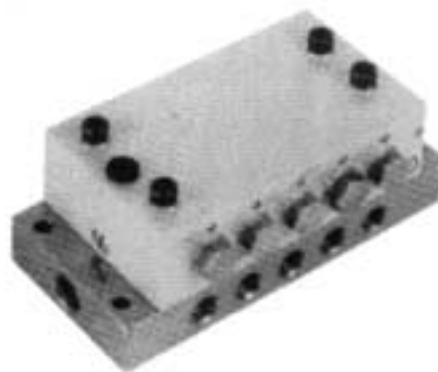
Indicator Code	Symbol	Flow rate cmc/cycle
52852	TZHY 80	0.80
52853	TZHY 100	1.00
52854	TZHY 125	1.25
52855	TZHY 150	1.50
28070	MY	Proximity PND
90329	RA 21	Seal

In standard types such as in the diagram, the control "proximity" is normally located on the right hand side (R) of the distributor.



DESCRIPTION

The single-unit modular distributors are derived from the previous series and comprise a base unit into which the supply and delivery connections lead and a second so-called "active" element, which contains the metering piston and the communication circuits. The second component is easily removable, so that quick maintenance replacement interventions are possible. The DMS series enables individual flow rates from 6 to 24, as for the DPS series from which it is derived.



Ref	Description
B	Progressive single-unit modular base
M	Single-unit metering module
TS	Metering plug 0.025-0.050-0.075-0.100cc
S	Bleed screws

TYPES AND DIMENSIONS

Code	Symbol	Delivery lines	B	L
58106	DMS 6	6	83	94
58108	DMS 8	8	100	111
58110	DMS 10	10	117	128
58112	DMS 12	12	134	145

METERING PLUGS

The metering plugs have numbers marked on their heads which correspond to the flow of each delivery. It is important to remember that each plug enables the amount to be distributed to the delivery line indicated by the arrow as indicated above. Unless indicated otherwise, the distributors are normally mounted with TS 50 screws.

Code	Symbol	Flow rate cc/cycle
53104	TS 25	0.025
53105	TS 50	0.050
53106	TS 75	0.075
53107	TS 100	0.100
91289	RA 07T	Seal

SUPPLY AND DELIVERY LINES

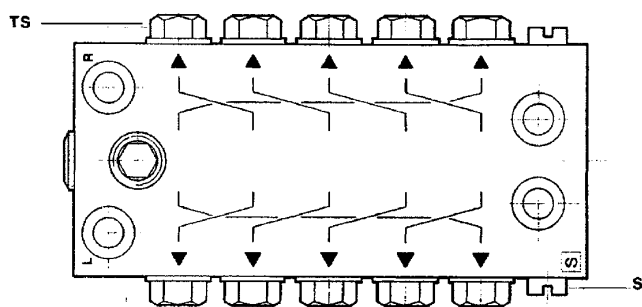
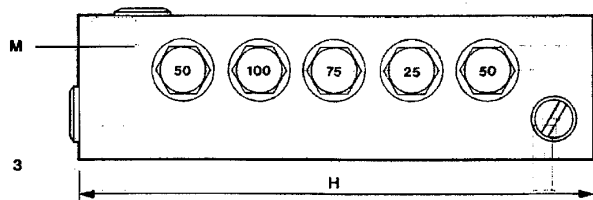
Threaded 1/8" G connections with S 1863 seating for 6mm dia tube and threaded 5/16" NF connections with S 1043 seating for 4 mm dia tubes.

Code	Symbol	Tube d	Description	Code	Symbol	Description
90422	RB 63	6	G1/8 connector - 6mm	91230	RD 1882	G1/8 reduction - 8mm
90560	B 60	6	Tee for 6mm tube	90796	RA45	Aluminium seal 10.2x12.6x1.5
90443	RB 43	4	5/16" NF connector - 4mm	90482	RB82	G1/4 connector - 8mm
90540	B 40	4	Tee for 4mm tube	90682	B82A	Tee for 8mm tubes
90643	RM 43	4	G1/8 connector - 4mm nylon	97980	RD51618	5/16" reduction NF - 6mm
90840	M 40	4	Coupling for 4mm tube	90542	RVD51618	5/16" valve reduction NF - 6mm
90940	BS 40	4	Sleeve, 4x3 mm tube	90218	RA516	Aluminium seal 8.2x10.6x1



METERING MODULE

The metering module contains the metering chambers onto which the adjustment screws are literally mounted. This is then mounted on the corresponding base module fixed with 4 or 6 screws. The need to pay particular attention when the distributors are mounted on the machine is referred to several times in this catalogue.



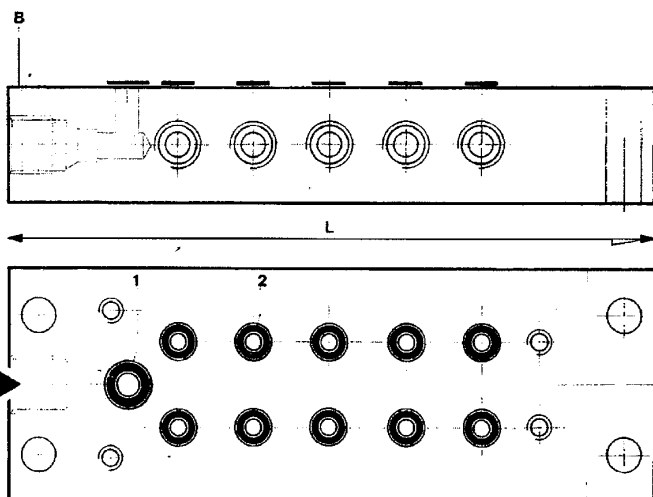
TYPES AND DIMENSIONS

Code	Symbol	No. of delivery lines	H
58104	MDS 6	6	70
58105	MDS 8	8	87
58107	MDS 10	10	104
58109	MDS 12	12	121

BASE MODULE

The base module comprises a unit which, when fixed to the machine will be connected "to the network" for supply and delivery lines. In this way the system design for distribution of the lubricant is produced.

The base module is designed for the metering module to be attached using 4 or 6 screws.



TYPES AND DIMENSIONS

Code	Symbol	No. of delivery lines	H
46046	BMS 6	6	94
46048	BMS 8	8	111
46050	BMS 10	10	128
46052	BMS 12	12	145

Ref	Description
B	Progressive single-unit modular base
M	Single-unit metering module
TS	Metering plug 0.025-0.050-0.075-0.100 cc
S	Bleed screws

Item	Code	Symbol	Description	Qty
1	26298	OR 2018	O- seal ring	1
2	26298	OR 2018	O- seal ring	6-24
3	27995	VTE 430	M4 x 30 screws – UNI 5737	4-6



SINGLE AND DUAL DELIVERY Each section of the distributor is set up for unilateral or bilateral distribution. The base module must be operated as indicated in the diagram. The Washer RSA 10 is flat on one side and hollow on the opposite side. When it is mounted with the open side facing downwards, delivery occurs separately for each side of the section. When mounted the opposite way round, with the open side facing upwards, dual delivery will occur on from one side only. The opposite output will be closed off with plug TPSE43.

The flow to separate delivery lines will be identical from both the parts and equal to the sum of the nominal flows indicated on the metering screws, divided by two. It is reminded the amounts prepared on one section are delivered by the delivery lines in the previous section.

B – Base module

M – Metering module

PLUGS AND SEALS

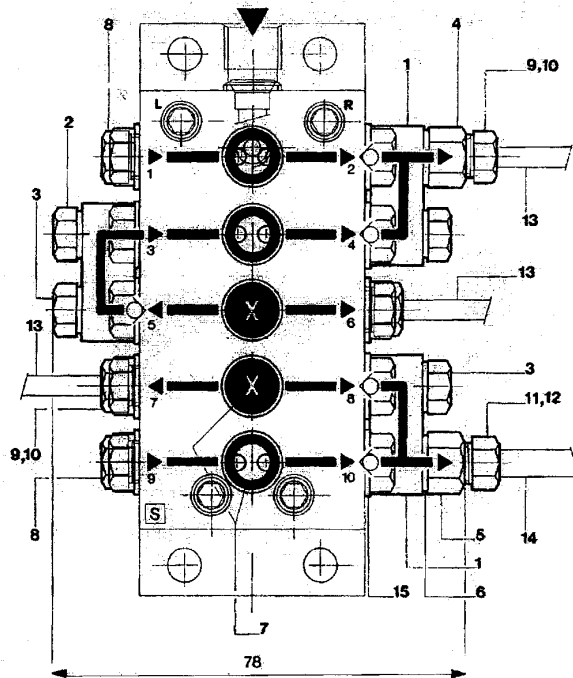
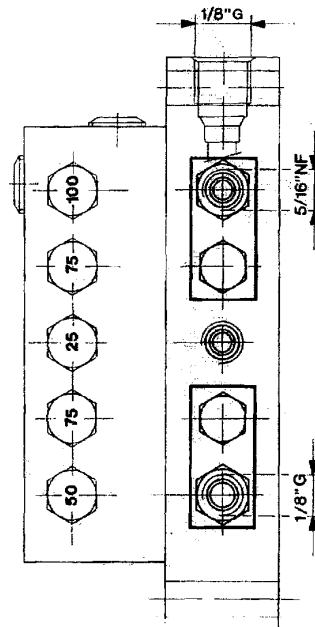
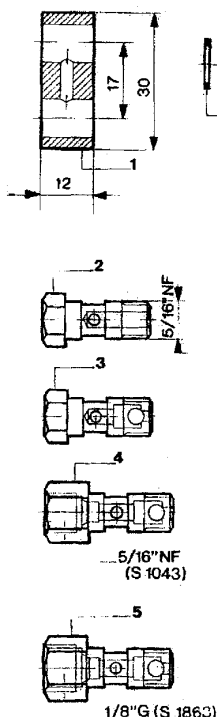
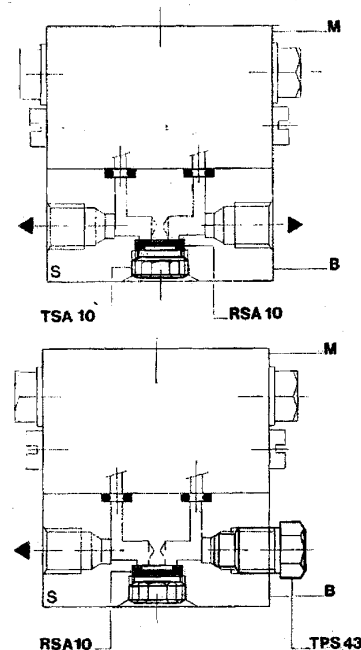
Code	Symbol	Description
53120	TSA 10	Threaded plug M10x1
90561	RSA 10	Flat socket washer
91513	TPSE43	Plug with counter-seating 5/16" NF

DELIVERY LINES CONNECTED IN SERIES

Also by modifying the base module it is possible to obtain fixed connections between one section and the adjacent section using connecting plate CPS 516 and hollow screws VO/VOD 516.

The diagrams given below illustrate this option. The example shows how it is possible to convey the delivery of the entire first section, the second and half of the third to a single delivery line.

It is as easy as this to satisfy even significant differences in requirements between the various lube points of the same machine from a single distributor.



CONNECTING PLATES, HOLLOW SCREWS, SEALS AND CONNECTORS

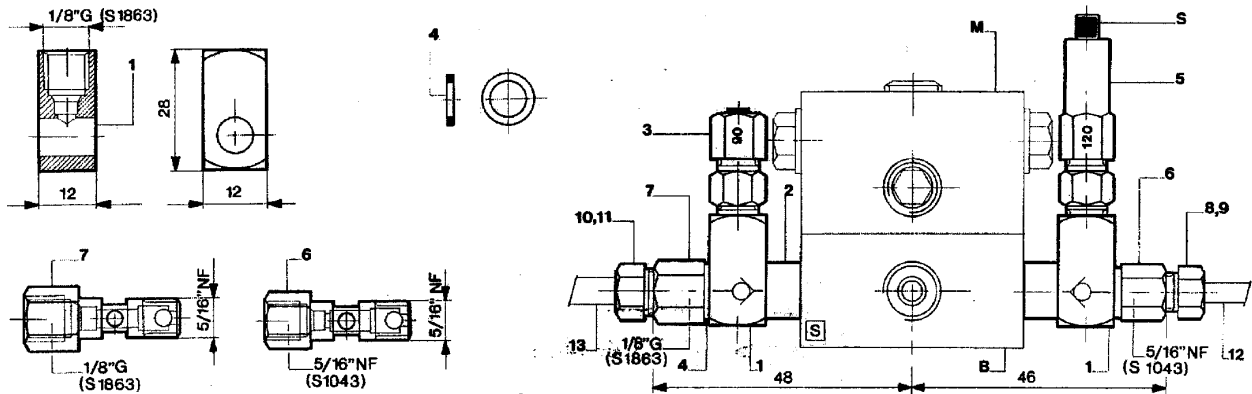
Item	Code	Symbol	Description	Item	Code	Symbol	Description
1	90562	CPS516	Connecting plate 2 positions	8	91513	TPSE43	5/16" NF plug with counterseating
2	11842	VO 516.1	5/16" NF normal hollow screw	9	90443	RB 43	5/16" NF connector x 4mm
3	90563	VO 516	5/16" NF hollow valve screw	10	90540	B 40	Tee for 4mm tube
4	90564	VOD 516	5/16" NF hollow valve screw – 4mm	11	90422	RB 63	G1/8 connector x 6mm
5	90427	VOD 518	5/16" NF hollow valve screw – 6mm	12	90560	B 60	Tee for 6mm tube
6	90218	RA 516	Aluminium seal 8.2x10.6x1	13	90043	TAC 43	4 x 3 mm steel tube
7	90561	RSA 10	Flat socket washer	14	90064	TAC 64	6 x 4 mm steel tube

**OVERPRESSURE INDICATORS**

The drawings below highlight the application of the overpressure indicators designed to indicate a blockage in the system and consequently failure to distribute lubricant to the lube points.
The indicators enable the blocked area to be quickly identified.

B – Base module

M – Metering module

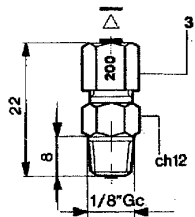
**HOLLOW SCREWS, SEALS AND CONNECTORS**

Item	Code	Symbol	Description
1	90565	OS 516	G1/8 Adjustable connector
2	97980	RD 51618	5/16" NF Valve reduction
4	90218	RA 516	Aluminium seal 8.2x10.6x1
5	95181	RPS 19/90	Overpressure indicator 90ar
6	90564	VOD 516	5/16" NF hollow valve screw – 4mm
7	90427	VOD 518	5/16" NF hollow valve screw – 6mm

Item	Code	Symbol	Description
8	90443	RB 43	5/16" NF connector x 4mm
9	90540	B 40	Tee for 4mm tube
10	90422	RB 63	G1/8 connector x 6mm
11	90560	B 60	Tee for 6mm tube
12	90043	TAC 43	4 x 3 mm steel tube
13	90064	TAC 64	6 x 4 mm steel tube

OVERPRESSURE INDICATORS (Items 3,5) All the threaded G1/8 compression fitting overpressure indicators are detailed below, produced for the various recommended pressures indicated in the table.

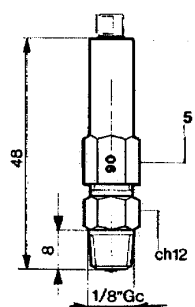
SERIES RPD 18/...(ITEM 3) This indicator is provided only with a rupture disc which, when subjected to pressures above the anticipated limit, breaks and lets the lubricant leak out.
In this case the system does not block.



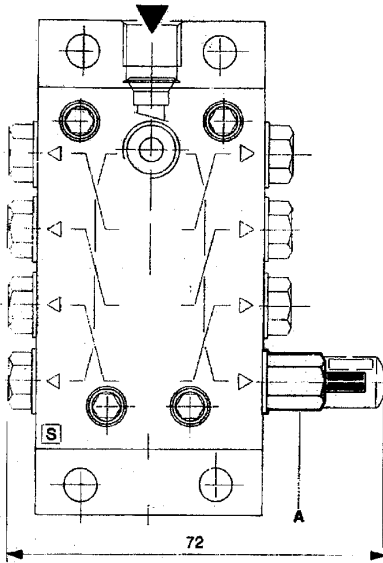
Indicator Code	Symbol	Rupture pressure / bar
95828	RPD 18. 60	60
95829	RPD 18. 90	90
96655	RPD 18.120	120
95830	RPD 18.150	150
95831	RPD 18.200	200
95832	RPD 18.240	240

Rupture disc code	Symbol	Colour
95858	D 60.1	black
95859	D 90.2	green
97153	D 120.3	red
95860	D 150.4	orange
95861	D 200.5	grey
95862	D 240.6	blue

SERIES RPS 19/...(ITEM 5) With memory, in the sense that red indicator **S** pops out, produced by overpressure as a result of a blockage, and remains out until such time as, after removal of the cause of the blockage, it is pushed back in manually.



Indicator Code	Symbol	S exit pressure
95178	RPS 19/ 25	25 bar
95179	RPS 19/ 40	40 bar
95180	RPS 19/ 60	60 bar
95181	RPS 19/ 90	90 bar
95182	RPS 19/ 120	120 bar
95183	RPS 19/ 150	150 bar
95184	RPS 19/ 200	200 bar



CYCLE VISUAL INDICATORS

These are small plexiglass domes within which a coloured rod is seen that becomes visible when the metering piston for the corresponding section has functioned. With this coupling it is easy to check the cycle which has taken place, when movement of the indicator for the previous section involved is complete. The table below details the codes for the **DMS...A** distributors, with control rod and the various metering screws with protective dome.

DISTRIBUTORS

With visual indicators

Code	Symbol	No. of delivery lines
58113	DMS 6A	6
58114	DMS 8A	8
58115	DMS 10A	10
58116	DMS 12A	12

METERING SCREWS

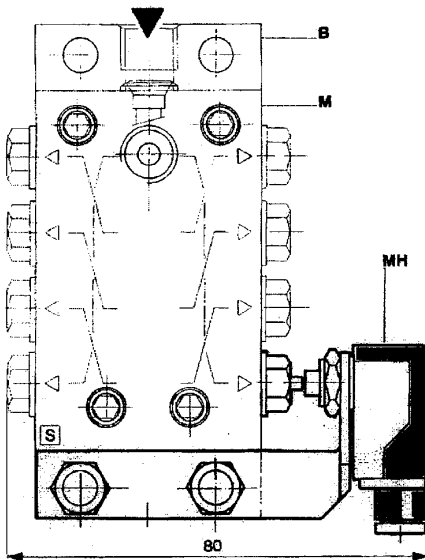
With seal

Indicator Code	Symbol	Flow rate cmc/cycle
53116	TSA 25	0.025
53117	TSA 50	0.050
53118	TSA 75	0.075
53119	TSA 100	0.100
91289	RA 07T	Seal

In standard types such as in the diagram, the visual control rod is normally located on the right hand side of the distributor. A non-standard configuration must be defined at the time of order.

B – Base module

M – Metering module



ELECTRIC CYCLE INDICATORS

Similarly to the visual indicators, a rod pops up when the metering piston for the corresponding section has functioned. The rod causes the microswitch to intervene.

DISTRIBUTORS

With microswitch

Code	Symbol	No. of delivery lines
58138	DMS 6MH	6
58139	DMS 8MH	8
58140	DMS 10MH	10
58141	DMS 12MH	12

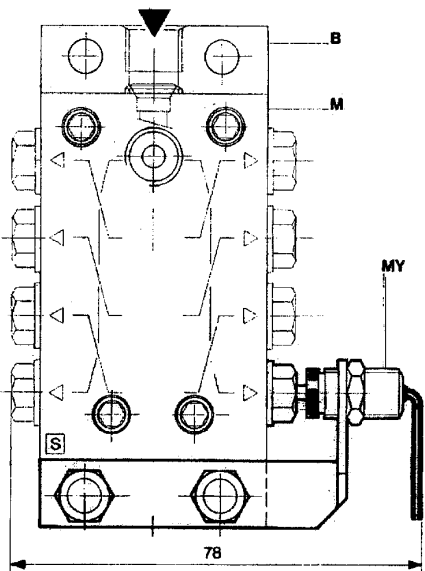
METERING SCREWS

With seal

Indicator Code	Symbol	Flow rate cmc/cycle
53035	TSHY 25	0.025
53036	TSHY 50	0.050
53037	TSHY 75	0.075
53038	TSHY 100	0.100
27812	MH	Microswitch
91289	RA 07T	Seal

In standard types such as in the diagram, the control microswitch is normally located on the right hand side of the distributor.

A non-standard configuration must be defined at the time of order.



CYCLE "PROXIMITY" INDICATORS

A proximity indicator is used which intervenes when the metering piston rod pops out as the piston has moved.

DISTRIBUTORS

With "proximity" (PNP)

Code	Symbol	No. of delivery lines
58142	DMS 6MY	6
58143	DMS 8MY	8
58144	DMS 10MY	10
58145	DMS 12MY	12

METERING SCREWS

With seal

Indicator Code	Symbol	Flow rate cmc/cycle
53035	TSHY 25	0.025
53036	TSHY 50	0.050
53037	TSHY 75	0.075
53038	TSHY 100	0.100
28070	MY	Proximity PNP
91289	RA 07T	Seal

In standard types such as in the diagram, the control "proximity" is normally located on the right hand side of the distributor.

A non-standard configuration must be defined at the time of order.

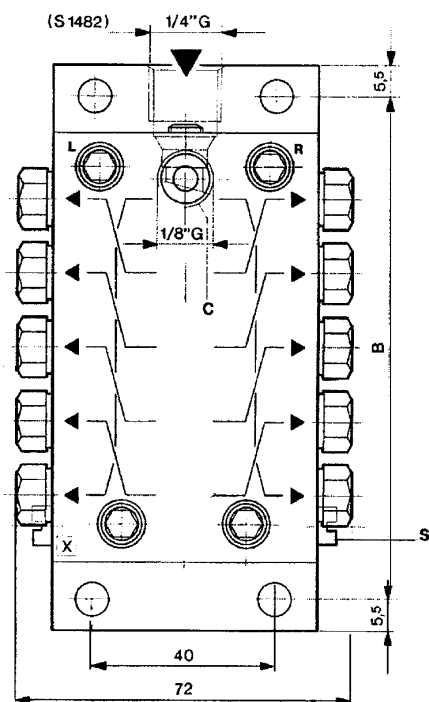
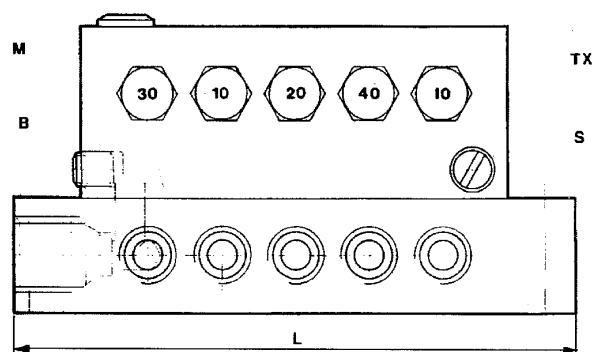
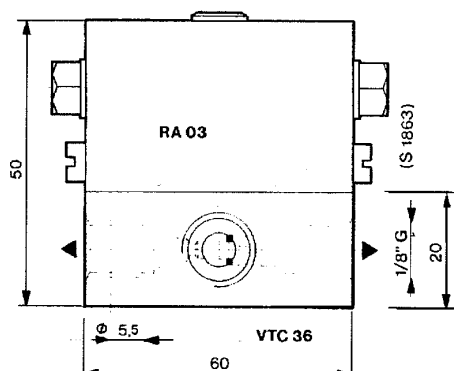


DESCRIPTION

The single-unit modular distributors are derived from the previous series and comprise a base unit into which the supply and delivery connections lead, and a second so-called "active" element, which contains the metering piston and the communication circuits.

The second component is easily removable, so that quick maintenance replacement interventions are possible.

The DMX series enables individual flow rates from 6 to 24, as is found in the DPX series from which it is derived.



Ref	Description
B	Base module
M	Metering module
TX	Metering plug
S	Bleed

TYPES AND DIMENSIONS

Code	Symbol	Delivery lines	B	L
58126	DMS 6	6	83	94
58128	DMS 8	8	100	111
58130	DMS 10	10	117	128
58132	DMS 12	12	134	145

METERING PLUGS

The metering plugs have numbers marked on their heads which correspond to the flow of each delivery. It is important to remember that each plug enables the amount to be distributed to the delivery line indicated by the arrow as indicated above. Unless indicated otherwise, the distributors are normally mounted with TX 20 screws.

Code	Symbol	Flow rate cc/cycle
52259	TX 10	0.1
52260	TX 20	0.2
52261	TX 30	0.3
52262	TX 40	0.4
91288	RA 45T	Seal

SUPPLY AND DELIVERY LINES

Threaded 1/4" G connections with S 1482 seating for 8mm dia tube and threaded 1/8" G connections with S 1863 seating for 6 mm dia tubes.

Code	Symbol	Tube d	Description	Code	Tube d	Symbol	Description
90422	RB 63	6	Connector	90443	4	RB 43	Connector
90560	B 60	6	Tee	90540	4	B 40	Tee
90644	RM 43	6	Connector	90643	4	RM 43	Connector
90860	M 60	6	Coupling	90840	4	M 40	Coupling
90960	BS 60	6	Sleeve	90940	4	BS 40	Sleeve
90482	RB 82	8	Connector	91230	8	RD1882	Reduction
90682	B 82A	8	Coupling	90796	6	RA 45	Seal
91205	RK419	4	Reduction	93275	10	TED1014LK	Reduction
			For metal tubes only				For metal tubes only
			For nylon tubes only				For nylon tubes only
			Reduction				Reduction
			Red. 4-6mm				6-8mm
							8-10mm



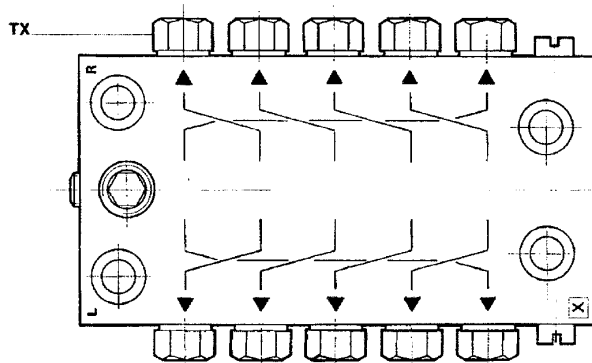
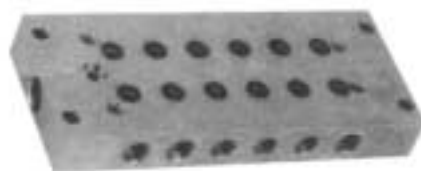
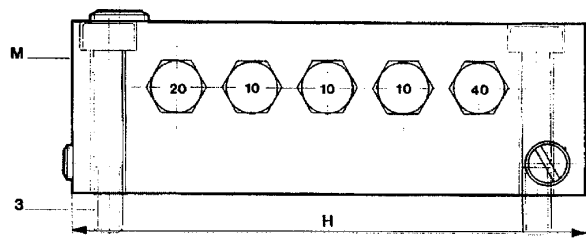
PROGRESSIVE MODULAR SINGLE-UNIT DISTRIBUTORS

DMX Series

Table
011 038
April 2006

METERING MODULE

The metering module contains the metering chambers onto which the adjustment screws are literally mounted. This is then mounted on the corresponding base module fixed with 4 or 6 screws. The need to pay particular attention when the distributors are mounted on the machine is referred to several times in tables in this catalogue.

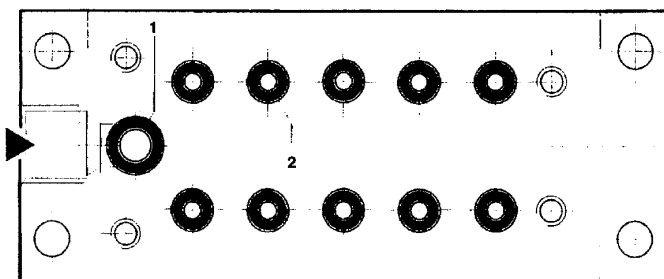
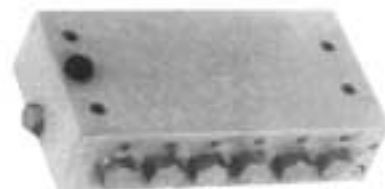
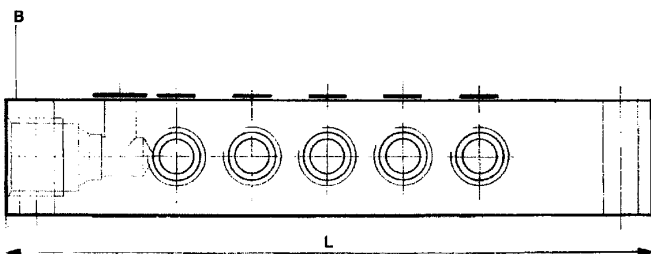


TYPES AND DIMENSIONS

Code	Symbol	No. of delivery lines	H
58127	MDX 6	6	70
58129	MDX 8	8	87
58131	MDX 10	10	104
58133	MDX 12	12	121

BASE MODULE

The base module comprises a unit which, when fixed to the machine, will be connected "to the network" for supply and delivery lines. In this way the system design for distribution of the lubricant is produced. The base unit is designed for the metering module to be attached using 4 or 6 screws.

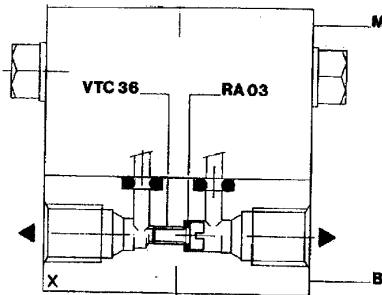


TYPES AND DIMENSIONS

Code	Symbol	No. of delivery lines	H
46027	BMX 6	6	94
46028	BMX 8	8	111
46029	BMX 10	10	128
46030	BMX 12	12	145

Item	Code	Symbol	Description	Qty
1	25322	OR 2021	O- seal ring	1
2	25322	OR 2021	O- seal ring	6-24
3	27932	VTE 540	M5 x 40 screws – UNI 5737	4-6

Ref	Description
B	Progressive single-unit base module
M	Single-unit metering module
TX	Metering plug 0.1-0.2-0.3-0.4 cc
S	Bleed screws



SINGLE AND DUAL DELIVERY LINES

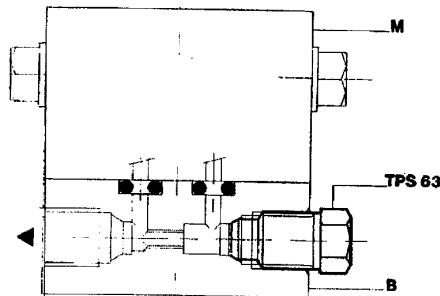
Each section of the distributor is set up for unilateral or bilateral distribution. This is enabled by the screw **VTC 36** with **RA 03** seal.

Single distribution occurs on both sides when the screw is mounted (see diagram on left).

Dual distribution will however occur on one side only and therefore the delivery line not involved must be closed off with a plug **TPS 63**, see diagram on lower left.

The flow rate to separate delivery lines will be identical from both sections and equal to the sum of the nominal flow rates indicated on the metering screws, divided by two.

It is once again pointed out that the amounts prepared in one section are distributed by the delivery lines of the previous section.

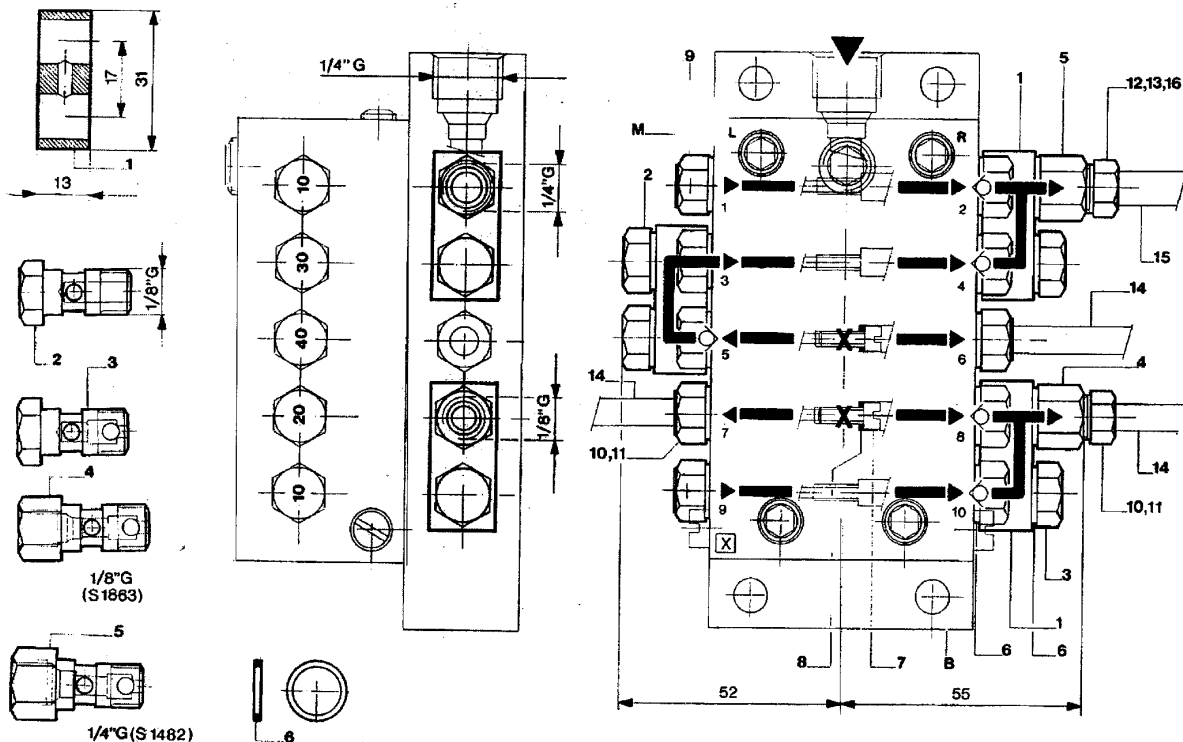


SCREW, PLUG AND SEAL

Code	Symbol	Description
90637	VTC 36	Screw VTC M3 x 6
90338	RA 03	Seal 3.2x5.5x1.0 mm
90638	TPS 63	Plug with counterseating G1/8

B – Base module

M – Metering module



CONNECTING PLATES, HOLLOW SCREWS, SEALS AND CONNECTORS

Item	Code	Symbol	Description	Item	Code	Symbol	Description
1	95358	CPX18	Connecting plate 2 positions	9	90638	TPS63	G1/8 plug with counterseating
2	91582	VO63	G1/8 hollow valve screw	10	90422	RB 63	G1/8 connector x 6mm
3	11819	VO63.1	G1/8 normal hollow screw	11	90560	B 60	6mm dia tee
4	91583	VOD63	G1/8 hollow valve screw x 6mm	12	90482	RB 82	G1/4 connector x 8mm
5	90315	VOD84	G1/8 hollow valve screw x 8mm	13	90682	B 82A	8mm dia tee
6	90796	RA 45	Aluminium seal 10.2x12.6x1.5mm	14	90064	TAC 64	6 x 4 mm steel tube
7	90637	VTC 36	M3x6 cylindrical head screw	15	90086	TAC 86	8 x 6 mm steel tube
8	90338	RA 03	Aluminium seal 3.2x5.5x1.0mm	16	93275	TED1014LK	G1/4 connector x 10mm

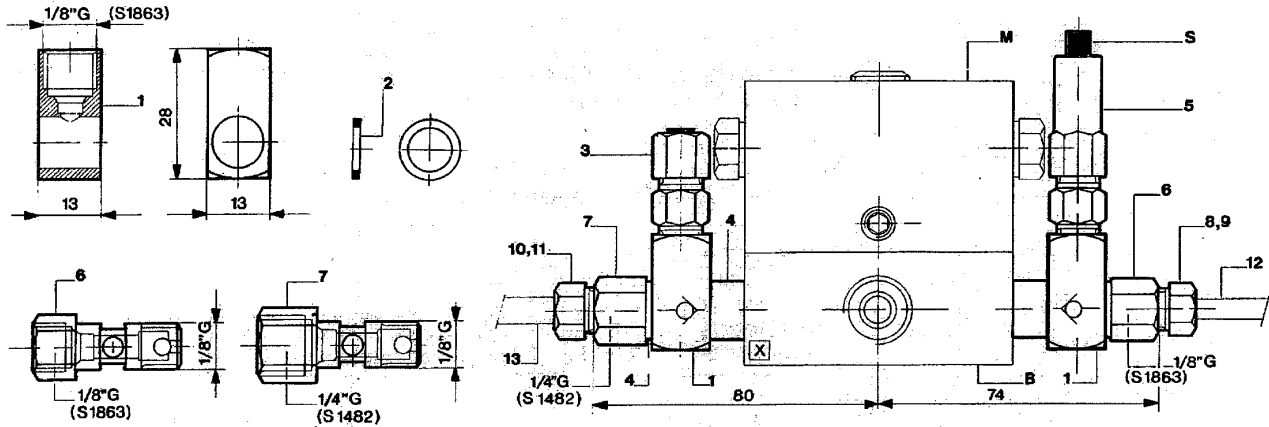
**OVERPRESSURE INDICATORS**

The drawings below highlight the application of the overpressure indicators designed to indicate a blockage in the system and consequently failure to distribute lubricant to the lube points.

The indicators enable the blocked area to be quickly identified.

B – Base module

M – Metering module

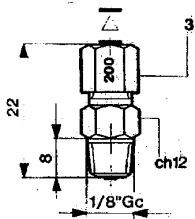
**HOLLOW SCREWS, SEALS AND CONNECTORS**

Item	Code	Symbol	Description
1	91584	OS 63	G1/8 Adjustable connector
2	90796	RD 45	Aluminium seal 10.2x12.6x1.5
4	95156	RA 628	Reduction
6	91583	VOD 63	G1/8 hollow valve screw x 6mm
7	90315	VOD 84	G1/8 hollow valve screw x 8mm
8	93275	TED1014LK	G1/4 connector x 10mm
9	90422	RB 63	G1/8 connector x 6mm

Item	Code	Symbol	Description
10	90560	B 60	6mm dia tee
11	90482	RB 82	G1/4 connector x 8mm
12	90682	B 82A	8mm dia tee
13	90064	TAC 64	6 x 4 mm steel tube (DIN 2391)
14	90086	TAC 86	8 x 6 mm steel tube (DIN 2391)
15	90108	TAC 108	10 x 8 mm steel tube (DIN 2391)

OVERPRESSURE INDICATORS (ITEMS 3,5) All the threaded G1/8 compression fitting overpressure indicators are detailed below, produced for the various recommended pressures indicated in the table.

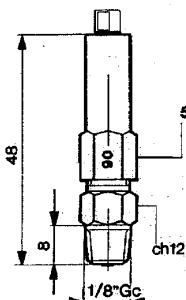
SERIES RPD 18/...(ITEM 3) This indicator is provided only with a rupture disc which, when subjected to pressures above the anticipated limit, breaks and lets the lubricant leak out. In this case the system does not block.



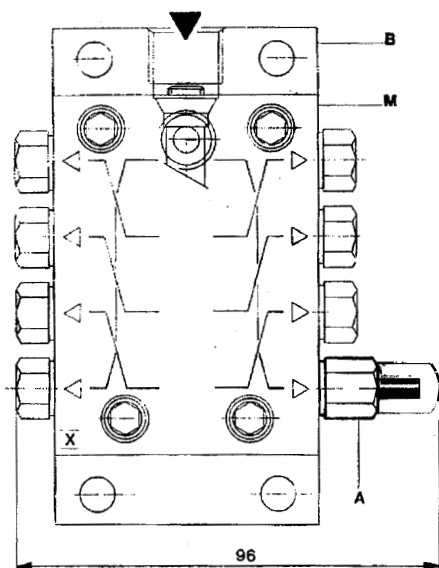
Indicator Code	Symbol	Rupture pressure / bar
95828	RPD 18. 60	60
95829	RPD 18. 90	90
96655	RPD 18.120	120
95830	RPD 18.150	150
95831	RPD 18.200	200
95832	RPD 18.240	240

Rupture disc code	Symbol	Colour
95858	D 60.1	black
95859	D 90.2	green
97153	D 120.3	red
95860	D 150.4	orange
95861	D 200.5	grey
95862	D 240.6	blue

SERIES RPS 19/...(ITEM 5) With memory, in the sense that red indicator **S** pops out, produced by overpressure as a result of a blockage, and remains out until such time as, after removal of the cause of the blockage, it is pushed back in manually.



Indicator Code	Symbol	S exit pressure
95178	RPS 19/ 25	25 bar
95179	RPS 19/ 40	40 bar
95180	RPS 19/ 60	60 bar
95181	RPS 19/ 90	90 bar
95182	RPS 19/ 120	120 bar
95183	RPS 19/ 150	150 bar
95184	RPS 19/ 200	200 bar

**CYCLE VISUAL INDICATORS**

These are small plexiglass domes within which a coloured rod is seen that becomes visible when the metering piston for the corresponding section has functioned.

With this coupling it is easy to check the cycle which has taken place, when movement of the indicator for the previous section involved is complete.

The table below details the codes for the **DMX...A** distributors, with control rod and the various metering screws with protective dome.

DISTRIBUTORS

With visual indicators

Code	Symbol	No. of delivery lines
58134	DMX 6A	6
58135	DMX 8A	8
58136	DMX 10A	10
58137	DMX 12A	12

METERING SCREWS

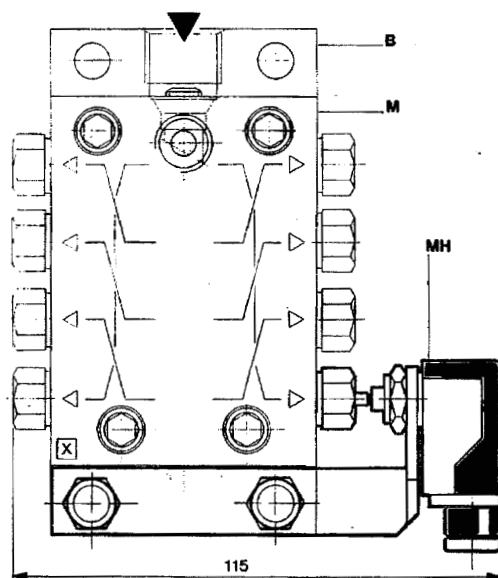
With seal

Indicator Code	Symbol	Flow rate cmc/cycle
52272	TXA 10	0.1
52273	TXA 20	0.2
52274	TXA 30	0.3
52275	TSA 40	0.4
91288	RA 45T	Seal

In standard types such as in the diagram, the visual control rod is normally located on the right hand side of the distributor. A non-standard configuration must be defined at the time of order.

B – Base module

M – Metering module

**ELECTRIC CYCLE INDICATORS**

Similarly to the visual indicators, a rod pops up when the metering piston for the corresponding section has functioned.

The rod causes intervention of the microswitch.

DISTRIBUTORS

With microswitch

Code	Symbol	No. of delivery lines
58146	DMX 6MH	6
58147	DMX 8MH	8
58148	DMX 10MH	10
58149	DMX 12MH	12

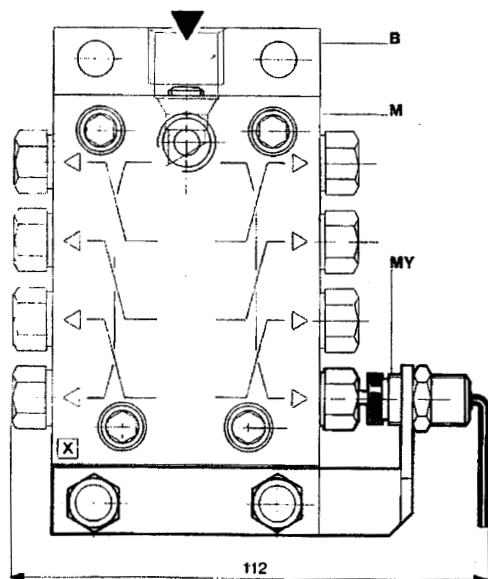
METERING SCREWS

With seal

Indicator Code	Symbol	Flow rate cmc/cycle
53039	TXHY 10	0.1
53040	TXHY 20	0.2
53041	TXHY 30	0.3
53042	TXHY 40	0.4
27812	MH	Microswitch
91288	RA 45T	Seal

In standard types such as in the diagram, the control microswitch is normally located on the right hand side of the distributor.

A non-standard configuration must be defined at the time of order.

**CYCLE "PROXIMITY" INDICATORS**

A proximity indicator is used which intervenes when the metering piston rod pops out as the piston has moved.

DISTRIBUTORS

With "proximity" (PNP)

Code	Symbol	No. of delivery lines
58150	DMX 6MY	6
58151	DMX 8MY	8
58152	DMX 10MY	10
58153	DMX 12MY	12

METERING SCREWS

With seal

Indicator Code	Symbol	Flow rate cmc/cycle
53039	TXHY 10	0.1
53040	TXHY 20	0.2
53041	TXHY 30	0.3
53042	TXHY 40	0.4
28070	MY	Proximity PNP
91288	RA 45T	Seal

In standard types such as in the diagram, the control "proximity" is normally located on the right hand side of the distributor.

A non-standard configuration must be defined at the time of order

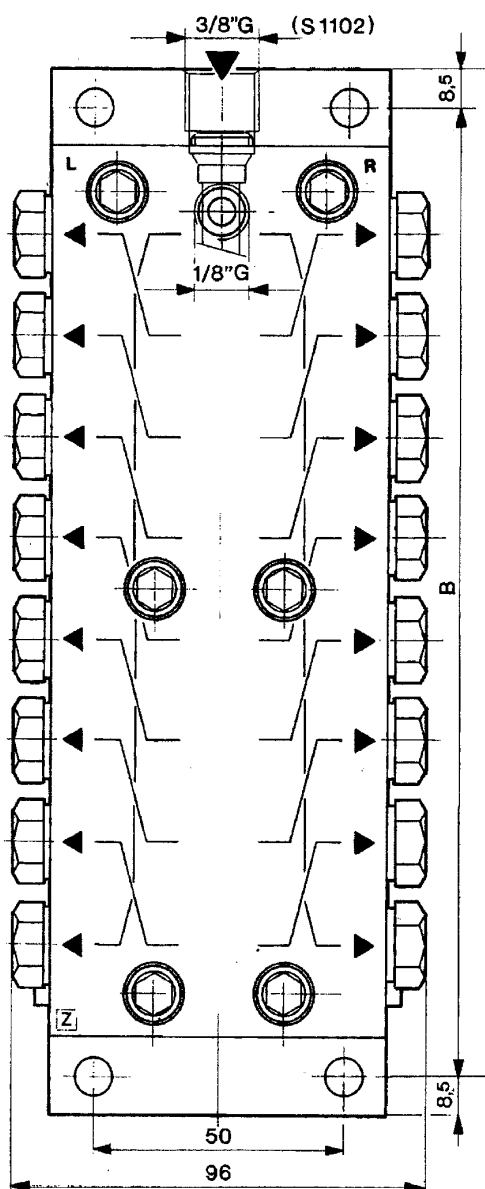
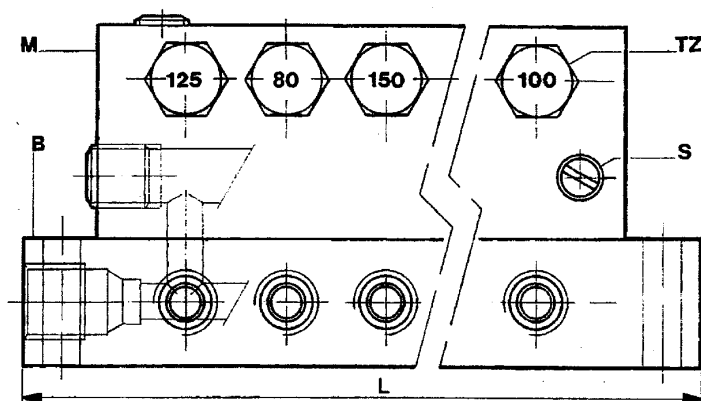
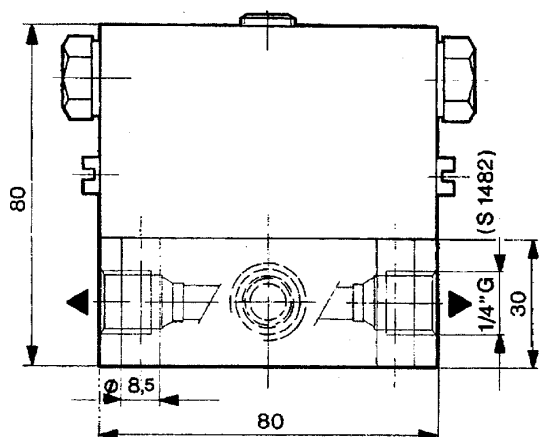


DESCRIPTION

The single-unit modular distributors are derived from the previous series, and comprise a base unit into which the supply and delivery connections lead, and a second so-called "active" element, which contains the metering piston and the communication circuits.

The second component is easily removable, so that quick maintenance replacement interventions are possible.

The DMZ series enables individual flow rates from 6 to 24, as is found in the DPZ series from which it is derived.



Ref	Description
B	Base module
M	Metering module
TZ	Metering plug
S	Bleed

TYPES AND DIMENSIONS

Code	Symbol	Delivery lines	B	L
58384	DMZ 6	6	107	126
58385	DMZ 8	8	130	149
58386	DMZ 10	10	153	172
58387	DMZ 12	12	176	195

METERING PLUGS

The metering plugs have numbers marked on their heads which correspond to the flow of each delivery. It is important to remember that each plug enables the amount to be distributed to the delivery line indicated by the arrow as indicated above. Unless indicated otherwise, the distributors are normally mounted with TZ 100 screws.

Code	Symbol	Flow rate cc/cycle
52269	TZ 80	0.80
52268	TZ 100	1.00
52267	TZ 125	1.25
52266	TZ 150	1.50
90329	RA 21	Seal 152 x 180 x 1.5

SUPPLY AND DELIVERY LINES

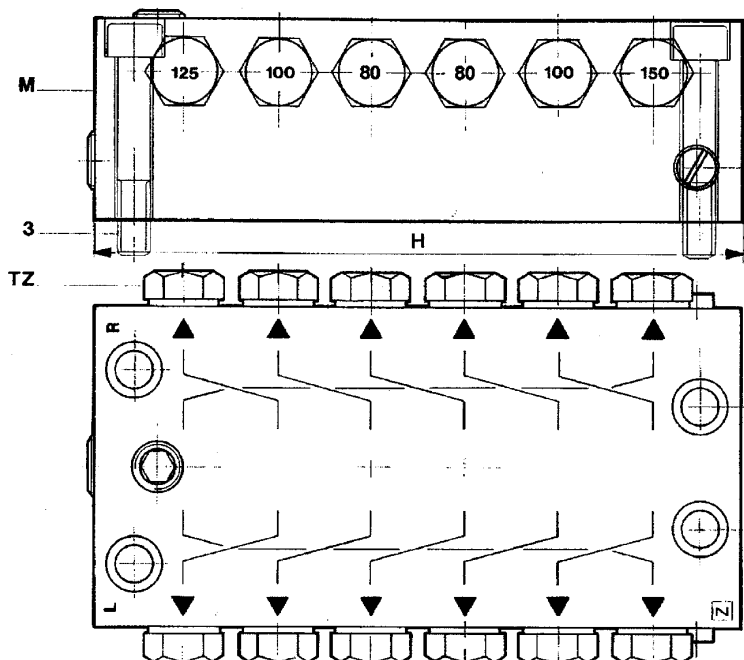
Threaded G3/8 connections with S 1102 seating for 10mm dia tube and threaded G1/4 connections with S 1482 seating for 8 mm dia tubes.

Code	Symbol	Tube d	Description
90411	RB 102	10	G3/8 connector
90511	B 102	10	10mm tee
90482	RB 82	8	G1/4 connector
90682	B 82A	8	8mm tee
90066	RK 607	8	G1/4 reduction - 6mm
90078	RK 14102	10	G1/4 reduction - 10mm
90422	RB 63	6	G1/8 connector 6mm metal
90560	B 60	6	Tee for 6mm tubes
90644	RM 63	6	G1/8 connector 6mm nylon
90860	M 60	6	Coupling for 6mm tubes



METERING MODULE

The metering module contains the metering chambers onto which the adjustment screws are literally mounted. This is then mounted on the corresponding base module fixed with 4 or 6 screws. The need to pay particular attention when the distributors are mounted on the machine is referred to several times in tables in this catalogue.



TYPES AND DIMENSIONS

Code	Symbol	No. of delivery lines	H
58394	MDZ 6	6	88
58395	MDZ 8	8	111
58396	MDZ 10	10	134
58397	MDZ 12	12	157

BASE MODULE

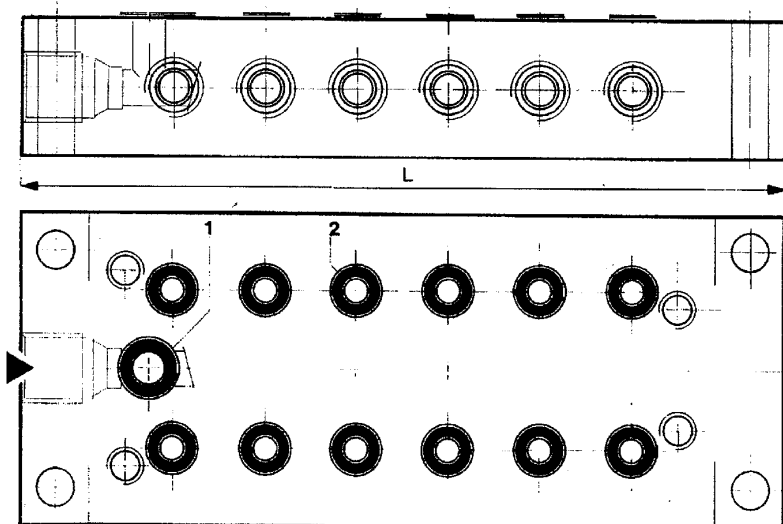
The base module comprises a unit which, when fixed to the machine will be connected "to the network" for supply and delivery lines. In this way the system design for distribution of the lubricant is produced. The base module is designed for the metering module to be attached using 4 or 6 screws.

B

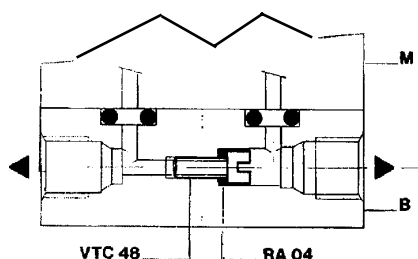
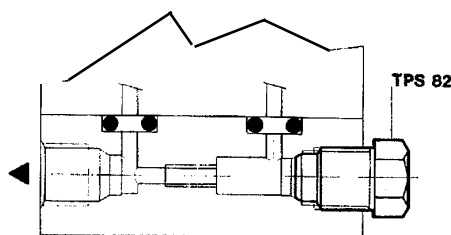
TYPES AND DIMENSIONS

Code	Symbol	No. of delivery lines	L
53137	BMZ 6	6	126
53138	BMZ 8	8	149
53139	BMZ 10	10	172
53140	BMZ 12	12	195

Ref	Description
B	Progressive single-unit base module
M	Single-unit metering module
TZ	Metering plugs
S	Bleed screws



Item	Code	Symbol	Description	Qty
1	26298	OR 2018	O- seal ring	1
2	26298	OR 2018	O- seal ring	6-24
3	26048	VTE 645	M5 x 45 screws – UNI 5737	4-6



SINGLE AND DUAL DELIVERY LINES

Each section of the distributor is set up for unilateral or bilateral distribution. The base module must be operated as indicated in the diagram. The Washer RSA 10 is flat on one side and hollow on the opposite side. When it is mounted with the open side facing downwards, delivery occurs separately for each side of the section. When mounted the opposite way round, with the open side facing upwards, dual delivery will occur on from one side only. The opposite output will be closed off with plug TPS 82.

B – Base module

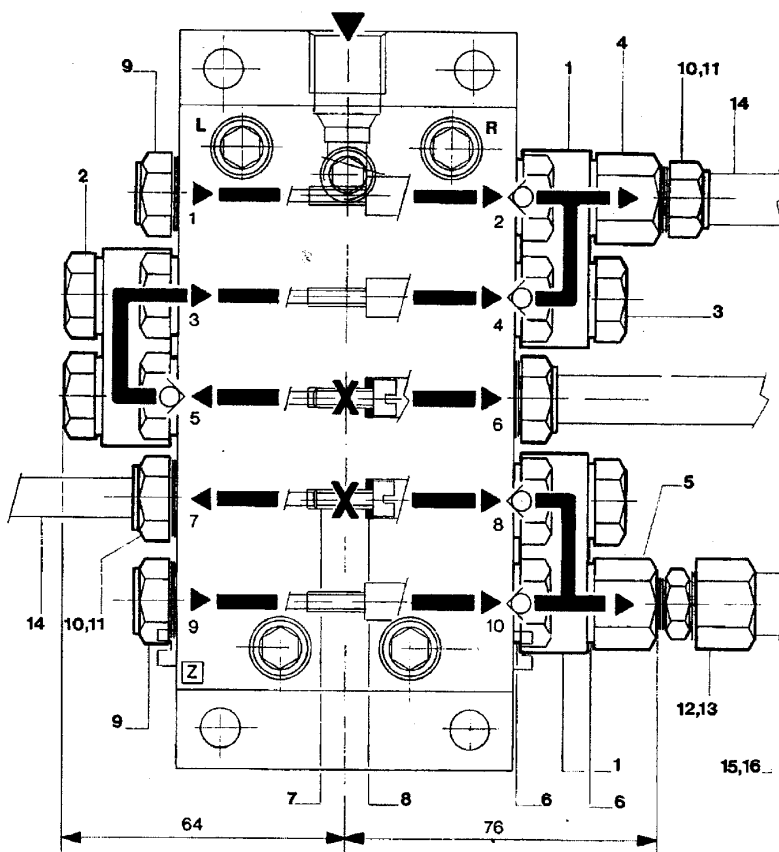
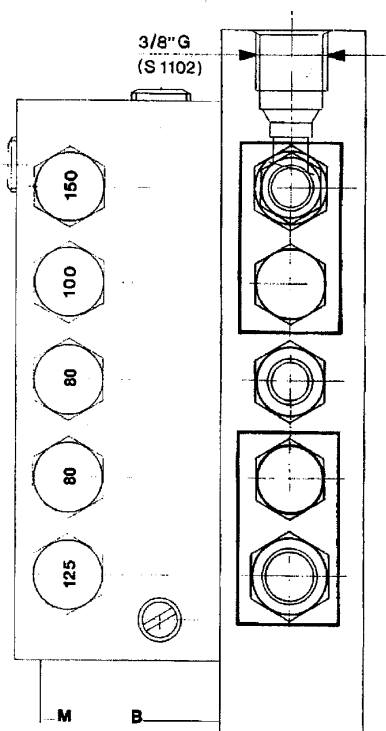
M – Metering module

PLUGS AND SEALS

Code	Symbol	Description
25085	VTC 48	Screw VTC M4 x 8
90328	RA 04	Seal 4.2x7.2x1
91506	TPS 82	G1/4 plug with counterseating

DELIVERY LINES CONNECTED IN SERIES

Also by modifying the base module it is possible to obtain fixed connections between one section and the adjacent section using connecting plate CPZ 14 and hollow screws VOVOD 83.



CONNECTING PLATES, HOLLOW SCREWS, SEALS AND CONNECTORS

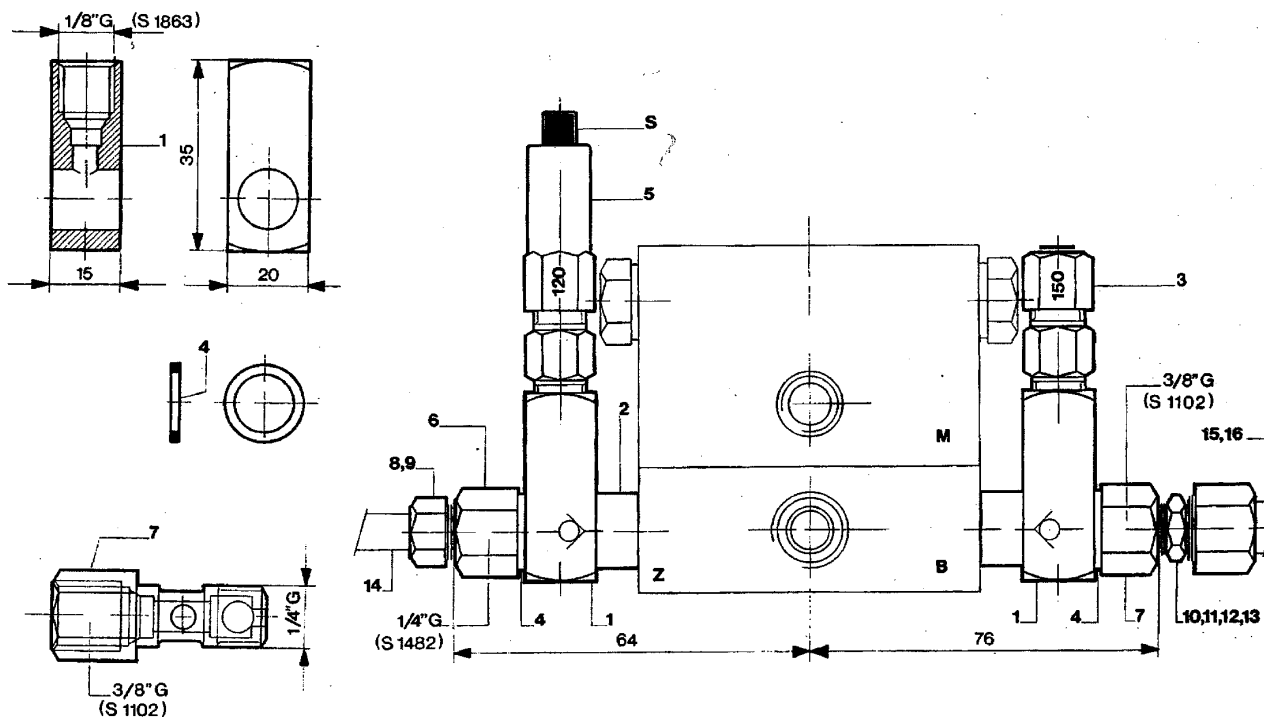
Item	Code	Symbol	Description	Item	Code	Symbol	Description
1	95357	CPZ14	Connecting plate 2 positions	9	93532	TPSE82	G1/4 plug with counterseating
2	11131	VO83.1	G1/4 normal hollow screw	10	90482	RB82	G1/4 connector - 8mm
3	91180	VO83	G1/4 hollow valve screw	11	90682	B 82A	8mm dia tee
4	91181	VOD83	G1/4 hollow valve screw - 8mm	12	91678	TED1014LLK	G1/4 reduction - 10mm
5	91181	VOD83	G1/4 hollow valve screw - 8mm	13	91679	TED1214LLK	G1/4 reduction - 12mm
6	91159	RA 14	Aluminium seal 13.5x19x1.5mm	14	90086	TAC 86	8 x 6 mm steel tube (DIN 2391)
7	25085	VTC 48	M4x8 VTC screw	15	90108	TAC 108	10 x 8 mm steel tube (DIN 2391)
8	90328	RA 04	Seal 4.2x7.2x1	16	91209	TAC 129	12 x 9 mm steel tube (DIN 2391)

**OVERPRESSURE INDICATORS**

The drawings below highlight the application of the overpressure indicators designed to indicate a blockage in the system and consequently failure to distribute lubricant to the lube points. The indicators enable the blocked area to be quickly identified.

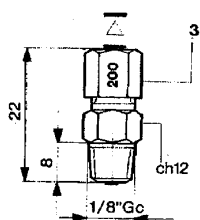
B – Base module

M – Metering module



OVERPRESSURE INDICATORS (ITEMS 3,5) All the threaded G1/8 compression fitting overpressure indicators are detailed below, produced for the various recommended pressures indicated in the table.

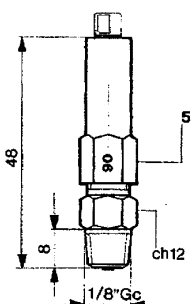
SERIES RPM 18/...(ITEM 3) This indicator is provided only with a rupture disc which, when subjected to pressures above the anticipated limit, breaks and lets the lubricant leak out. In this case the system does not block.



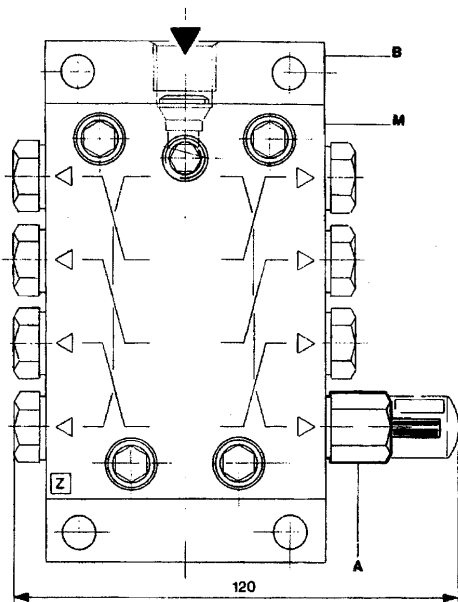
Indicator Code	Symbol	Rupture pressure / bar
95828	RPD 18. 60	60
95829	RPD 18. 90	90
96655	RPD 18.120	120
95830	RPD 18.150	150
95831	RPD 18.200	200
95832	RPD 18.240	240

Rupture disc code	Symbol	Colour
95858	D 60.1	black
95859	D 90.2	green
97153	D 120.3	red
95860	D 150.4	orange
95861	D 200.5	grey
95862	D 240.6	blue

SERIES RPS 19/...(ITEM 5) With memory, in the sense that red indicator **S** pops out, produced by overpressure as a result of a blockage, and remains out until such time as, after removal of the cause of the blockage, it is pushed back in manually.



Indicator Code	Symbol	S exit pressure
95178	RPS 19/ 25	25 bar
95179	RPS 19/ 40	40 bar
95180	RPS 19/ 60	60 bar
95181	RPS 19/ 90	90 bar
95182	RPS 19/ 120	120 bar
95183	RPS 19/ 150	150 bar
95184	RPS 19/ 200	200 bar



CYCLE VISUAL INDICATORS

These are small plexiglass domes within which a coloured rod is seen that becomes visible when the metering piston for the corresponding section has functioned. With this coupling it is easy to check the cycle which has taken place, when movement of the indicator for the previous section involved is complete. The table below details the codes for the DPZ...A distributors, with control rod and the various metering screws with protective dome.

DISTRIBUTORS

With visual indicators

Code	Symbol	No. of delivery lines
58404	DMZ 6A	6
58405	DMZ 8A	8
58406	DMZ 10A	10
58407	DMZ 12A	12

METERING SCREWS

With seal

Indicator Code	Symbol	Flow rate cmc/cycle
52280	TZA 80	0.80
52281	TZA 100	1.00
52282	TZA 125	1.25
52283	TZA 150	1.50
90329	RA 21	Seal

In standard types such as in the diagram, the visual control rod is normally located on the right hand side (R) of the distributor. A non-standard configuration must be defined at the time of order.

ELECTRIC CYCLE INDICATORS

Similarly to the visual indicators, a rod pops up when the metering piston for the corresponding section has functioned. The rod causes intervention of the microswitch.

DISTRIBUTORS

With microswitch

Code	Symbol	No. of delivery lines
58414	DMZ 6MH	6
58415	DMZ 8MH	8
58416	DMZ 10MH	10
58417	DMZ 12MH	12

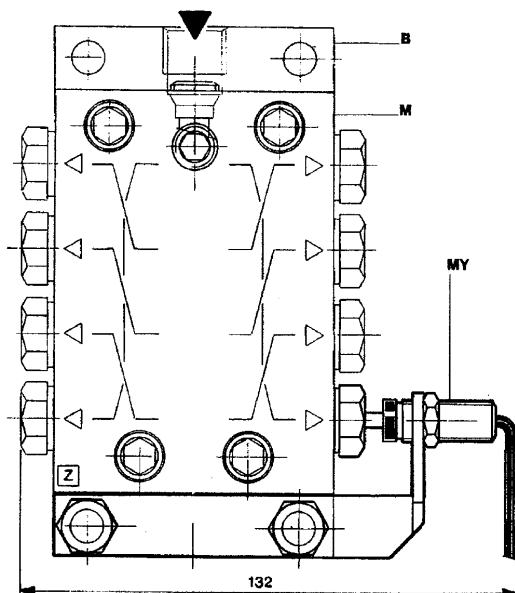
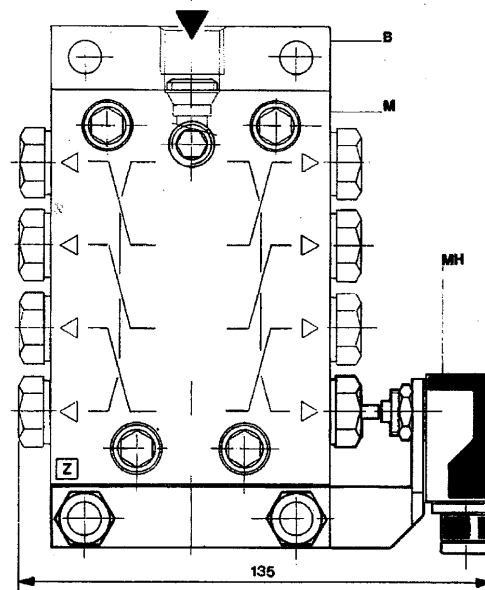
METERING SCREWS

With seal

Code	Symbol	Flow rate cmc/cycle
52852	TZHY 80	0.80
52853	TZHY 100	1.00
52854	TZHY 125	1.25
52855	TZHY 150	1.50
27812	MH	Microswitch
90329	RA 2T	Seal

In standard types such as in the diagram, the control microswitch is normally located on the right hand side of the distributor.

A non-standard configuration must be defined at the time of order.



CYCLE "PROXIMITY" INDICATORS

A proximity indicator is used which intervenes when the metering piston rod pops out as the piston has moved.

DISTRIBUTORS

With "proximity" (PNP)

Code	Symbol	No. of delivery lines
58424	DMZ 6MY	6
58425	DMZ 8MY	8
58426	DMZ 10MY	10
58427	DMZ 12MY	12

METERING SCREWS

With seal

Indicator Code	Symbol	Flow rate cmc/cycle
52852	TZHY 80	0.80
52853	TZHY 100	1.00
52854	TZHY 125	1.25
52855	TZHY 150	1.50
28070	MY	Proximity PND
90329	RA 21	Seal

In standard types such as in the diagram, the control "proximity" is normally located on the right hand side (R) of the distributor.

A non-standard configuration must be defined at the time of order.



CERTIFICATO n. 0771/2
CERTIFICATE No. _____

SI CERTIFICA CHE IL SISTEMA DI GESTIONE PER LA QUALITA' DI
WE HEREBY CERTIFY THAT THE QUALITY MANAGEMENT SYSTEM OPERATED BY

TECHNOSYSTEMS S.r.l.

UNITA' OPERATIVE
OPERATIVE UNITS

Via Bruno Buozzi, 15
20090 Fizzonasco di Pieve Emanuele (MI)
Italia

E' CONFORME ALLA NORMA
IS IN COMPLIANCE WITH THE STANDARD

UNI EN ISO 9001:2000

PER LE SEGUENTI ATTIVITA'
FOR THE FOLLOWING ACTIVITIES

EA: 18

Progettazione, produzione e assistenza di
sistemi di lubrificazione per macchine industriali.

*Design, production and servicing of
lubrication systems for industrial machinery.*

Riferirsi al Manuale della Qualità per l'applicabilità dei requisiti della Norma ISO 9001:2000.
Refer to Quality Manual for details of application to ISO 9001:2000 requirements.

Il presente certificato è soggetto al rispetto del regolamento per la certificazione dei sistemi di gestione per la qualità delle aziende.
The use and the validity of this certificate shall satisfy the requirements of the rules for the certification of company quality management systems.

Data emissione
First issue
18/07/1997

Emissione corrente
Current issue
24/06/2003

Data scadenza
Expiring date
23/06/2006

ICIM S.p.A. - PIAZZA A. DIAZ, 2 - 20123 MILANO

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of management system
Certification Bodies*





THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

IQNet and its partner
CISQ/ICIM
hereby certify that the organization

TECHNOSYSTEMS S.r.l.

**Via Bruno Buozzi, 15
I-20090 FIZZONASCO DI PIEVE EMANUELE (MI)**

for the following field of activities

**Design, production and servicing of
lubrication systems for industrial machinery.**

has implemented and maintains a

Quality Management System

which fulfills the requirements of the following standard

ISO 9001:2000

Issued on: **2003-06-24**

Validity date: **2006-06-23**

Registration Number: **IT-3778**



Fabio Roversi
President of IQNet



Gianrenzo Prati
President of CISQ

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