

CENTRALIZED LUBRICATION SYSTEMS

(SINGLE LINE ORIFICE SYSTEMS)

Oil is pumped into a main supply line at fixed pressure. The lubricant is metered at the fixed pressure across a preset orifice in a metering valve located at the lube point or mounted on a junction in which the output is tubed to the bearing point.

The metering valves are small brass fittings, with various size orifices which continuously or intermittently proportion oil in accordance with bearing requirements. Generally, these metering valves contain a filter, a metering orifice, and a check valve. Since oil viscosity is substantially a function of temperature, flow through these metering valves is temperature sensitive.

It is fairly difficult and expensive to monitor performance of this system at individual lube points. If however this is desired, a pressure switch and gauge can be installed to confirm that the main line is not broken, the pump is working properly, and the reservoir contains adequate lubricant.

Filters should be checked for contamination, since a blocked orifice eliminates flow to a bearing point. The constant pressure in an orifice system is usually less than 100 PSI.



**automatic
lubrication**

catalogue 01

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TABLE OF VISCOSITIES

Centl stokes	Red- wood No. 1	Say- bolt SUS*	Engler	Centl stokes	Red- wood No. 1	Say- bolt SUS*	Engler	Centl stokes	Red- wood No. 1	Say- bolt SUS*	Engler
2.0	30.76	32.64	1.119	23.0	96.96	110.40	3.215	140.0	570.10	647.90	18.43
2.1	31.01	33.00	1.129	24.0	100.80	114.70	3.335	145.0	590.40	671.10	19.08
2.2	31.26	33.36	1.139	25.0	104.60	119.00	3.455	150.0	610.70	694.20	19.75
2.3	31.51	33.72	1.149	26.0	108.50	123.40	3.575	155.0	631.00	717.20	20.40
2.4	31.76	34.08	1.159	27.0	112.40	127.80	3.695	160.0	651.40	740.40	21.05
2.5	32.01	34.44	1.169	28.0	116.30	132.30	3.820	165.0	671.80	763.40	21.72
2.6	32.26	34.76	1.178	29.0	120.20	136.70	3.945	170.0	692.40	786.60	22.38
2.7	32.51	35.08	1.188	30.0	124.20	141.10	4.070	175.0	712.60	809.70	23.03
2.8	32.76	35.41	1.198	31.0	128.10	145.50	4.195	180.0	733.10	832.90	23.70
2.9	33.01	35.73	1.207	32.0	132.10	149.90	4.320	185.0	753.50	856.10	24.35
3.0	33.26	36.05	1.217	33.0	136.10	154.40	4.445	190.0	774.00	879.30	25.00
3.1	33.51	36.37	1.226	34.0	140.0	158.90	4.570	195.0	794.30	902.50	25.67
3.2	33.76	36.69	1.235	35.0	144.0	163.40	4.695	200.0	814.60	925.60	26.32
3.3	34.01	37.01	1.244	36.0	147.90	167.90	4.825	210.0	855.20	971.80	27.65
3.4	34.27	37.33	1.253	37.0	151.90	172.40	4.955	220.0	896.30	1018.00	28.95
3.5	34.52	37.65	1.262	38.0	155.90	176.90	5.080	230.0	936.90	1065.00	30.28
3.6	34.77	37.95	1.274	39.0	160.00	181.40	5.205	240.0	978.00	1111.00	31.60
3.7	35.03	38.25	1.283	40.0	164.00	185.90	5.335	250.0	1018.00	1157.00	32.90
3.8	35.28	38.55	1.291	41.0	168.00	190.50	5.465	260.0	1059.00	1203.00	34.25
3.9	35.53	38.85	1.300	42.0	172.00	195.00	5.590	270.0	1099.00	1249.00	35.55
4.0	35.78	39.15	1.308	43.0	176.10	199.50	5.720	280.0	1140.00	1296.00	36.85
4.5	37.03	40.76	1.350	44.0	180.10	204.10	5.845	290.0	1181.00	1342.00	38.18
5.0	38.31	42.36	1.400	45.0	184.20	208.70	5.975	300.0	1222.00	1388.00	39.50
5.5	39.65	43.96	1.441	46.0	188.20	213.30	6.105	310.0	1263.00	1434.00	40.80
6.0	40.91	45.57	1.481	47.0	192.20	217.90	6.235	320.0	1303.00	1480.00	42.12
6.5	42.26	47.17	1.521	48.0	196.30	222.50	6.365	330.0	1344.00	1527.00	43.45
7.0	43.57	48.77	1.563	49.0	200.30	227.10	6.495	340.0	1385.00	1574.00	44.75
7.5	44.89	50.42	1.605	50.0	204.30	231.70	6.630	350.0	1425.00	1620.00	46.10
8.0	46.26	52.07	1.653	55.0	224.60	254.80	7.238	360.0	1465.00	1666.00	47.40
8.5	47.66	53.77	1.700	60.0	244.80	277.80	7.896	370.0	1505.00	1712.00	48.70
9.0	49.04	55.48	1.746	65.0	265.20	300.80	8.554	380.0	1546.00	1759.00	50.00
9.5	50.47	57.18	1.791	70.0	285.50	323.80	9.212	390.0	1587.00	1805.00	51.35
10.0	51.92	58.88	1.837	75.0	305.70	347.00	9.870	400.0	1628.00	1851.00	52.65
11.0	54.94	62.39	1.928	80.0	326.00	370.20	10.530	450.0	1832.00	2082.00	59.25
12.0	58.05	66.00	2.020	85.0	346.30	393.30	11.190	500.0	2036.00	2314.00	65.80
13.0	61.24	69.70	2.120	90.0	366.60	416.50	11.850	550.0	2239.00	2545.00	72.40
14.0	64.50	73.50	2.219	95.0	386.80	439.50	12.510	600.0	2443.00	2777.00	79.00
15.0	67.89	77.31	2.323	100.0	407.30	462.60	13.160	650.0	2646.00	3008.00	85.60
16.0	71.34	81.21	2.434	105.0	427.70	485.80	13.820	700.0	2850.00	3239.00	92.20
17.0	74.80	85.22	2.540	110.0	447.90	509.00	14.470	750.0	3054.00	3471.00	98.80
18.0	78.36	89.32	2.644	115.0	468.20	532.10	15.140	800.0	3258.00	3702.00	105.30
19.0	82.00	93.43	2.755	120.0	488.60	555.30	15.800	850.0	3462.00	3934.00	111.90
20.0	85.66	97.64	2.870	125.0	509.00	578.50	16.450	900.0	3666.00	4165.00	118.50
21.0	89.42	101.80	2.984	130.0	529.30	601.60	17.110	950.0	3871.00	4396.00	125.00
22.0	93.16	106.10	3.100	135.0	549.60	624.70	17.760	1000.0	4074.00	4628.00	131.60

*SUS = Saybolt Universal 100°F

INTRODUCTION

The *01 Single Line System* operates by distributing the output of a pump over a number of Meter Units.

This system provides a simple and very cost effective method of oil lubrication on small machine applications such as: Wood-working machines; shoe making machines; small machine tools and printing machines.

A typical system comprises of:

PUMP

The pump is used to develop pressure and feed the lubricant in the distribution line and can be Manual, Electric, Pneumatic or Hydraulic.

METER UNITS

Can be for Intermittent or Continuous Lubrication. Used to partition the oil between the lubrication points. All Meter Units contain a check valve to prevent back flow. The vast range amply covers all practical requirements.

JUNCTIONS

Meter Units may be fitted either directly to the bearing or grouped in Junctions.

FITTINGS, PLUGS, ADAPTERS AND ACCESSORIES

The primary and secondary lubrication lines may be in Nylon, Copper or Copper-plated tubing having an external diameter of 4 mm. (5/32").

Lubrication points will normally be 1/8" BSP.

RELATIVE VALUE

The *Relative Value* of the pump is important for calculating the number of Single Line Meter Units that the pump can continuously feed for a minimum time of 5 minutes.

The sum of the *Relative Values* of all the Meter Units used in the system must not exceed the 'Relative Value' of the Pump.



AN ISO 9001 APPROVED COMPANY

01 SYSTEM

PUMPS



Manual Pump (p.6 - 7)



Microelectric Gear Pump (p.11)



Electric Micro Piston Pump (p.10)



Pneumatic/Hydraulic Pump (p.9)

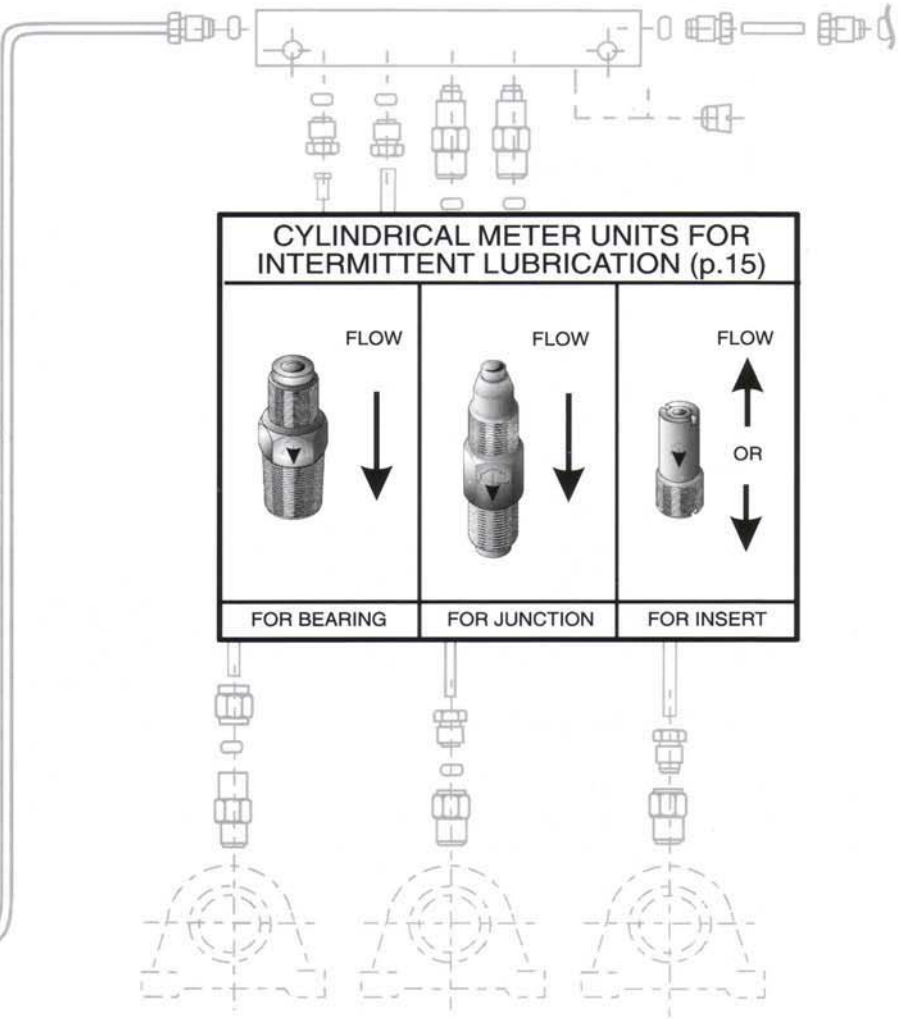


METER UNITS



SPIRAL METER UNITS FOR CONTINUOUS LUBRICATION (p.14)		
FOR BEARING	FOR JUNCTION	FOR INSERT

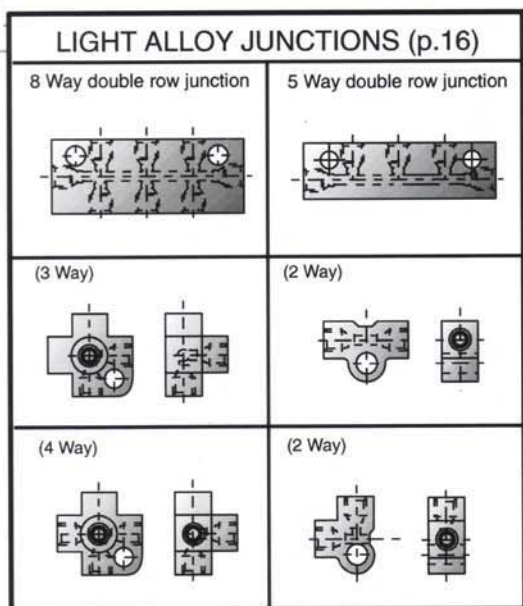
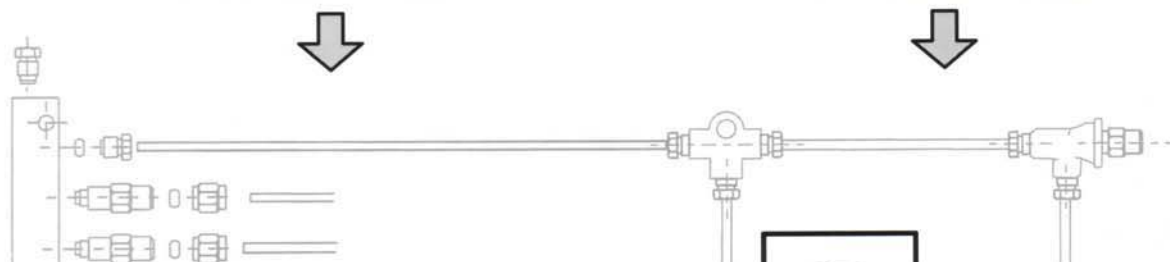
CYLINDRICAL METER UNITS FOR INTERMITTENT LUBRICATION (p.15)		
FOR BEARING	FOR JUNCTION	FOR INSERT



DIAGRAM

JUNCTIONS

ACCESSORIES



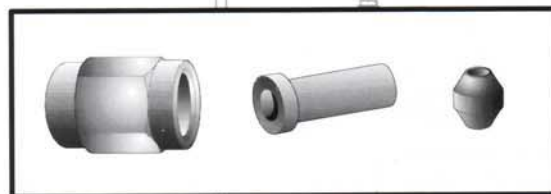
JUNCTION HEADERS FOR BEARING (p.17)



Rotary Connectors (p.18)



Adapters for Tube (p.18)



Nut - Insert - Cone (p.18 - 19)



Pressure Gauge (p.19)

**NYLON TUBING
COPPER TUBING**



Tubing Clips (p.19)

MANUALLY OPERATED "SINGLE STROKE" PUMPS

DESCRIPTION:

This range of manually operated "push or pull type" piston pumps are specifically designed for feeding installations with metering units of the *DROPSA Single Line 01 System*.

All the pumps have two outlets. The outlets have an integral adjustable control valve on pumps **Part No's. 12100, 216035 and 216055**.

Dual outlet ports permit system extension from both sides of the pump

The pumps can be operated with a single outlet by plugging the outlet not required.

CHARACTERISTICS:

Compatible Fluids: These pumps can handle a wide range of fluids, such as: vegetable oil; mineral oil; silicon oil; ink; glycols and many synthetic oils. Please contact our Technical Office for other applications.

Viscosity range: Min. 15 cSt - Max. 250 cSt (77 - 1150 SUS).

Outlet: 1/8" BSP
(An adapter Part No. 3077075 is available for 1/8" NPT).

Pump Part No. 12100 & 12105.

Delivery: 15 cm³ per stroke (.9 cu.in.)

Reservoir capacity: 400 cm³ (12.2 cu.in.)

Operating pressure: 3 bar (45 psi.)

Pumps Part No. 216035, 216040, 216055 and 216060

Delivery: 2 cm³ per stroke (.12 cu.in.)

Reservoir capacity: 200 cm³ (12.2 cu.in.)

Operating pressure: 5 bar (75 psi.)

INSTALLATION / OPERATION:

Installation:

The mounting location for the pump should be selected to provide access for the refilling of the reservoir, ease of installation, protection from damage and freedom of operation.

After having filled the reservoir with pure mineral oil operate the pump handle several times until a steady lubricant flow appears at the discharge ports.

Note: When operating the pump for the first time, it is advisable to plug the outlet ports during the suction phase to facilitate the priming of the pumping unit.

Maintenance.

Periodically check the suction filter to avoid clogging.

The filter should be cleaned at least twice a year. Remove the filter, wash in solvent and replace it into the pump.

To remove the filter dismantle the reservoir by turning it in a counter clockwise direction.



RELATIVE VALUE:

Refer to the following tables:

Pump Part No.	Relative value
12100 & 12105	90
216035 & 216040	12
216055 & 216060	12

MANUALLY OPERATED "SINGLE STROKE" PUMPS

Metering Units Part No.	Relative value	No. of metering units	
		Pump relative value 12	Pump relative value 90
00/aa	0,75	16	120
0/a	1	12	90
1/b	2	6	45
2/c	4	3	22
3/d	8	1	11
4/e	16	-	5
5/f	32	-	2

Note: The relative value of the metering units corresponds to the number of drops of lubricant discharged per minute. (1 drop = 33 mm³).

Dimensions.

Refer to Fig. 1.

ORDERING INFORMATION:

Pat No.	Reservoir	Delivery per stroke	Control Valve	Operation
12100	400cm ³	15cm ³	yes	pull
12105	400cm ³	15cm ³	no	pull
216035	200cm ³	2cm ³	yes	push
216040	200cm ³	2cm ³	no	push
216055	200cm ³	2cm ³	yes	cam driven
216060	200cm ³	2cm ³	no	cam driven

PUMP 216060 For mechanical control

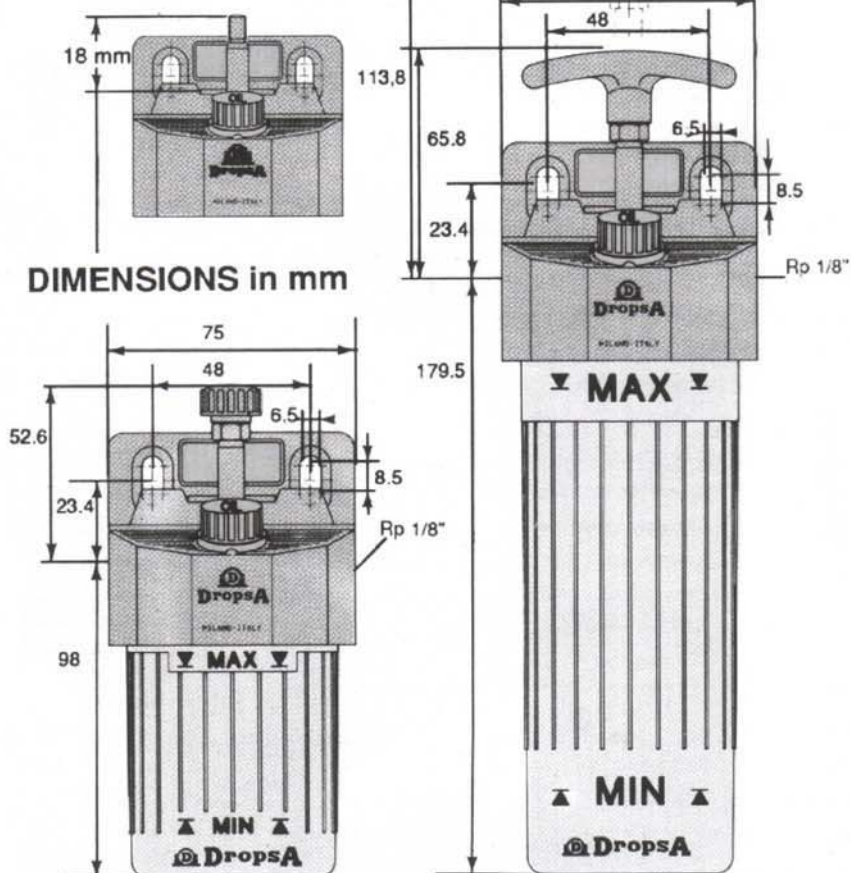
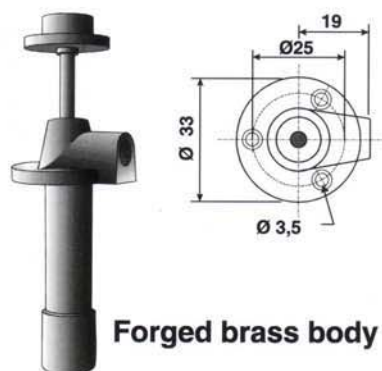


Fig. 1.

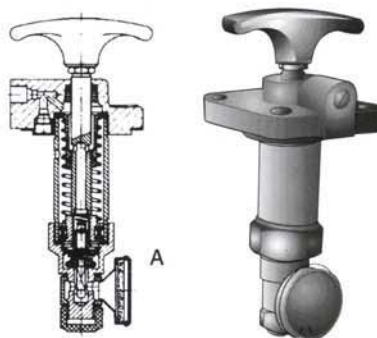
MANUAL PUMPS WITHOUT RESERVOIR

Suitable for machines which have a reservoir incorporated. Operating the handle draws the oil into the metering cylinder. Instant return of the handle indicates the absence of oil in the reservoir, or a leak in the system. The outlets for the tube fittings are threaded 5/16"-24 NF.

13000 with one outlet



Part No. 137000

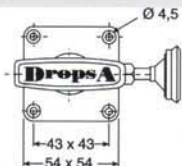


The stem of the handle is sealed. The pump is supplied with a gasket on the flange and may thus be mounted in any position. The pump, which has a rotatable filter, is supplied as indicated in the figure.

The four pump models may have the suction filter type "A" with a normal filter or type "B" filter with extended tube.

Length 200 mm

Maximum discharge per stroke: 1,5 c.c.
Average discharge pressure: 2 bar
Relative value: 15
Net weight: 0,100 kg

PART No.		FLANGE	FILTER	WEIGHT (kg)
137000		Square	normal A	0,350

MANUAL PUMPS WITH RESERVOIR

Operating the handle, loads the spring and the oil flows into the metering cylinder.

Instant return of the handle indicates the absence of oil in the reservoir, or that there is a leak in the main distribution tubing.

All the connection holes of the pumps have a taper seating with an angle of 54° and are threaded 5/8"-24 NF.



CHARACTERISTICS:

Maximum discharge per stroke: 30 cm³
Adjustable discharge: yes
Average discharge pressure: 3,2 bar
Reservoir capacity: 0,9 litre
Relative value: 170
Net weight:
Transparent reservoir; 1,4 kg.
Aluminium reservoir; 1,7 kg.

Part No.	Reservoir	Dimensions (Handle horizontal)			Dimensions (Handle vertical)		
		Height	Width	Depth	Height	Width	Depth
114000	aluminium	275	Ø100	180	365	Ø100	120
114050							
114060	transparent						
114070							

MOTORISED PUMPS

Gear pumps with a discharge of 0,5 L /m.

Three-phase motor 220/380 V-50 Hz.

Speed 1500 r.p.m.

Standard MEC 56

All the versions are equipped with a pressure reducing valve and may be controlled from the electric equipment **Part No.1641209 and 1641210.**

CHARACTERISTICS:

Reservoir capacity	(Litre)	3	1
Pressure	(bar)	5	2-5
Relative value	—	1500	1500
Motor power	(kw)	0,09	0,09
Electric level indicator		yes	no
Height	(mm)	300	365
Width	(mm)	240	110
Depth	(mm)	134	130
Weight:			
Without reservoir	(kg)	—	4,15
Transparent reservoir	(kg)	—	4,40
Metal reservoir	(kg)	6,1	4,65
Part No.			
Without reservoir		—	3404009
Transparent reservoir		—	3404010
Metal reservoir		3404033	3404012



Part No.3404033



Part No. 3404010

PNEUMATICALLY AND HYDRAULICALLY OPERATED PUMPS

A three way electric or mechanical valve is required for the line, cylinder and discharge.

The ratio between the operating pressure and the lubricant pressure is 1:1.

The reservoir is die-cast and is supplied with a sight gauge.

CHARACTERISTICS:

Discharge per stroke	15 c.c.
Operating pressure	from 2 to 8 bar
Reservoir capacity	0,8 Litre
Relative value	85
Dimensions	height 210 mm width 117 mm depth 90 mm.
Weight	1,78 Kgs.

Part No. 3107001

Supplied with a right hand outlet as standard but can be supplied with a left hand outlet if required.



MOTORISED GEAR PUMPS "DRAGON" SERIES

MOTORISED GEAR PUMPS "DRAGON" SERIES FOR LUBRICATION WITH OIL OR NLGI 000 GREASE.

Motorised gear pumps for lubrication systems equipped with meter units or control units and for recirculating lubrication systems - max. operating pressure 290 psi (20 bar).

TECHNICAL INFORMATION:

Gear pump:

Delivery - 350 or 500 cm³ at 1500 r.p.m.

Relative Value:

350 cm ³	2000
500 cm ³	3000

Max. operating pressures - 70 bar (1015 psi.) with three-phase motor, 40 bar (580psi.) with Single phase motor. (intermittent service). 30 bar (435psi.) (continuous service).

Pumpable lubricant - Oil with viscosity from 15 to 1000 cSt or Grease grade NLGI000 at the operating temperature:

Operating temperature - from -20°C to +100°C

Electric motor :

Standard motor: three phase at 4 poles multivoltage or single phase as specified.

Special three phase motor with the following voltages: 220/380V - 240/415V - 255/440V - 50/60 Hz. 90 Watts

Single phase motor 220V - 50/60 Hz 90 Watts.

or 110V - 50/60 Hz. 90 Watts.

Frame size 56 - Protection degree IP 55.

Insulation class F - Continuous operation S1.

12V and 24V dc motors available on request.

Reservoir:

Capacity:

3 - 6 litres (.79 - 1.59 US gallons) in Moplen semi-transparent.

3 litres (.79 US gallons) in Aluminium with level sight glass.

6 litres (1.59 US gallons) in Steel with level sight glass.

Suction filter:

Filtering grade 260 micron.

Low level indicator, magnetic type:

Reversible float with contact normally closed on the minimum level.

Max. commutable power 50W - 50VA

Max. voltage 220 ac - 150V dc - max. current: 3A

Reserve and min. lubricant level indicator is available on demand;

Equipped with floats and two switches: the upper one is used for minimum level signal (reserve) the lower one for the absolute minimum level signal.



Minimum level with inductive sensor (for oil and light grease, for 3 litre reservoir only).

Min voltage 30V ac - max. voltage 250V ac

Min peak current 15 mA - max. 300 mA

Valve block:

Fitted inside the reservoir, consists of:

By pass valve, easily adjustable from the outside.

Relief valve for systems equipped with positive metering valves.

ORDERING INFORMATION:

Standard Motor:

Electric motor.	Part No.	Delivery c.c./min.	Moplen reservoir capacity.
Three phase. 220/380V, 240/415V, 255/440V, 50/60 Hz.	3901050	350	3
	3901052		6
	3901054	500	3
	3901056		6

Electric motor.	Part No.	Delivery c.c./min.	Moplen reservoir capacity.
Single phase. 220V 50/60 Hz. or 110V 50/60 Hz.	3901070	350	3
	3901072		6
	3901074	500	3
	3901076		6

Additional motor variants available on request.

Optional accessories:

See optional accessories for **PRIMA** Pump on previous page.

SPIRAL METER UNITS FOR CONTINUOUS LUBRICATION

For use on high precision mechanisms, or for high speed rotating bearings where it is necessary to maintain a continuous film.

They are available for flow rates of a few mm³/hour up to very high flow rates where recovery and re-cycling the oil is necessary.

They are suitable for use with pure mineral oil with a maximum viscosity of 1500 cSt at the working pressure.

Pressure: 1 to 10 bar.

$$\text{Delivery in cc per minute} = \frac{P \times cf}{V}$$

P = Working pressure in bar

Cf. = flow coefficient

V = Viscosity in Engler degrees at the working pressure

The delivery of the pump must not be lower than the sum of the deliveries of the used metering units.

SPIRAL



Type	cf
5/0	0,1224
4/0	0,245
3/0	0,49
00	1,02
0	2,14
1	4,08
2	8,16
3	16,32
4	32,65
5	65,39

FOR BEARING

CAD



Type	Part No.
5/0	33220
4/0	33221
3/0	33222
00	33223
0	33224
1	33225
2	33226
3	33227
4	33228
5	33229

spanner 10 mm.
height 24,2 mm.
ØA 1/8" BSP taper
ØB 5/16" - 24 NF
seating for
compression cone
tube 4mm. o.d.



height 18,2 mm
Ø 1/8" BSP

FOR INSERT

CED

CFD

Type	Part No.	Type	Part No.
5/0	33260	5/0	33270
4/0	33261	4/0	33271
3/0	33262	3/0	33272
00	33263	00	33273
0	33264	0	33274
1	33265	1	33275
2	33266	2	33276
3	33267	3	33277
4	33268	4	33278
5	33269	5	33279

FOR JUNCTION

CCD

CBD

CDD



Type	Part No.
5/0	33240
4/0	33241
3/0	33242
00	33243
0	33244
1	33245
2	33246
3	33247
4	33248
5	33249

10 mm
spanner
height 30,9 mm
Ø A 5/16"-24 NF
Ø B 5/16"-24 NF
seating for
compression
cone
tube
2,5 mm o.d.

Type	Part No.
5/0	33230
4/0	33231
3/0	33232
00	33233
0	33234
1	33235
2	33236
3	33237
4	33238
5	33239

10 mm
spanner
height 30,9 mm
Ø A 5/16"-24 NF
Ø B 5/16"-24 NF
seating for
compression
cone
tube
4 mm o.d.

Type	Part No.
5/0	33250
4/0	33251
3/0	33252
00	33253
0	33254
1	33255
2	33256
3	33257
4	33258
5	33259

8 mm spanner
height 27,7 mm
Ø A 5/16"-24 NF
Ø B 1/4" -28 NF
seating for
compression
cone
tube
2,5 mm o.d.

CYLINDRICAL METER UNITS FOR INTERMITTENT LUBRICATION

For use on mechanisms that work intermittently, or are lightly loaded.
The sum of the relative values of all the meter units used in the plant must not exceed the relative value indicated for the selected pump.

Suitable for use with pure mineral oil with a maximum viscosity of 1000 cSt at 40°C.

Pressure: from 1 to 10 bar.

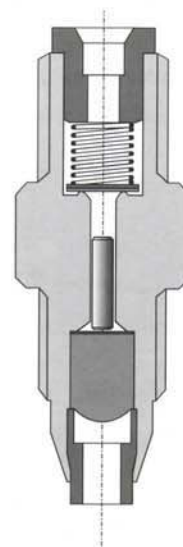
For each meter unit the type and calibration is indicated by initials and by a letter, or by a number according to the relative value (00 / aa = 0,75 ; 0 / a = 1 ; 1/b = 2 ; 2 / c = 4 ; 3 / d = 8 ; 4 / e = 16 ; 5 / f = 32).

The relative value corresponds to the number of drops delivered per minute (drop = 33 cmm).

The pump must be chosen with a relative value being not equal to or higher than the sum of values of the metering units used.

In this way the metering units will feed for 5 minutes and this lapse of time will ensure a uniform pressure in the installation, which ensures that the lubricant flows to all points.

CYLINDRICAL



FOR BEARING



Type	Part No.
00	31200
0	31201
1	31202
2	31203
3	31204
4	31205
5	31206

10 mm spanner
height 27,5 mm
Ø A 1/8" BSP
taper
Ø B 5/16"-24 NF
seating for
compression cone
tube 4 mm o.d.
weight 12 gr.

D 11
height 26,5 mm
Ø 10 MB
weight 11 gr.



D 15
height 26,5 mm
Ø 1/8" BSP
weight 9 gr.

FOR INSERT

Type	Part No.
00	35011
0	35012
1	35013
2	35014
3	35015
4	35016
5	35017

Type	Part No.
00	35801
0	35802
1	35803
2	35804
3	35805
4	35806
5	35807

FOR JUNCTION



Type	Part No.
00	31400
0	31401
1	31402
2	31403
3	31404
4	31405
5	31406

10 mm spanner
height 31,5 mm
Ø A 5/16"-24 NF
Ø B 5/16"-24 NF
seating for
compression cone
tube 4 mm o.d.
weight 11 gr.

DDJ

Type	Part No.
00	31301
0	31302
1	31303
2	31304
3	31305
4	31306
5	31307

8 mm spanner
height 28,7 mm
Ø A 5/16"-24 NF
Ø B 1/4"-28 NF
seating for
compression cone
tube 2,5 mm o.d.
weight 8 gr.

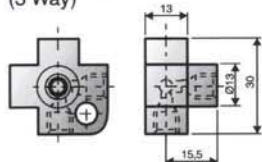
LIGHT ALLOY JUNCTIONS

These junctions are produced from extruded light alloy sections and have two fixing holes. All holes are interconnected and threaded 5/16"-24 NF with a 54° seating to suit compression cone **Part No.93004** and bushing **Part No. 92009** (hex. 8) or **92004** (hex. 9). Suitable only for 4mm (5/32") tubing.

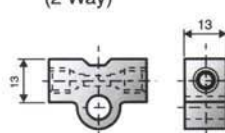
Junction meter units type D21 and DDJ may be screwed directly in the junction.

Junctions of different length and fixing centres can be supplied to special order.

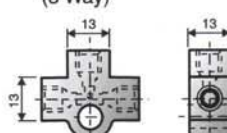
Part No. 30001
(3 Way)



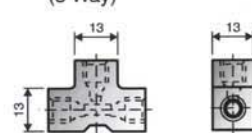
Part No. 42133
(2 Way)



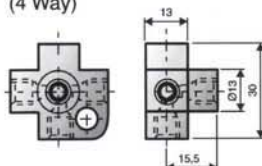
Part No.42135
(3 Way)



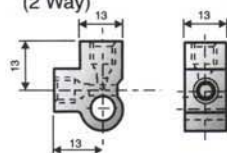
Part No.42137
(3 Way)



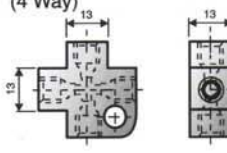
Part No.40001
(4 Way)



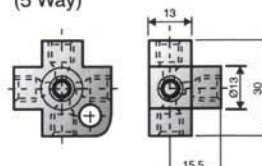
Part No.42134
(2 Way)



Part No.42136
(4 Way)

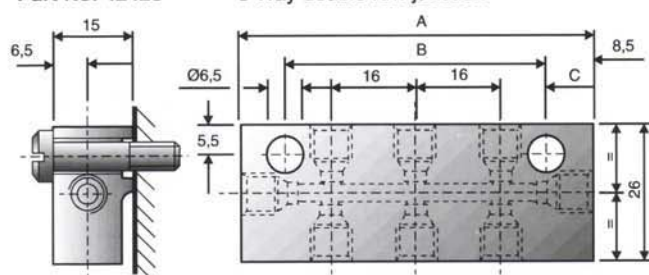


Part No.42142
(5 Way)



Part No. 42426

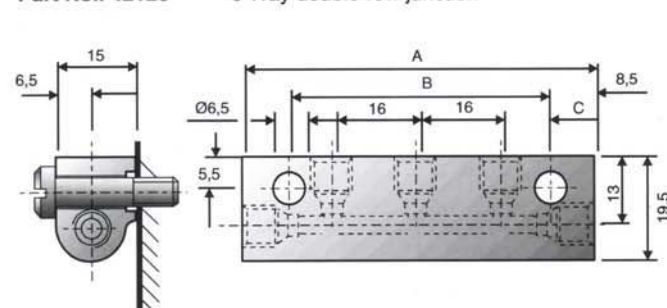
8 Way double row junction



Outlets	A (mm)	B (mm)	C (mm)	Weight Kg.	Part No.
6	50,3	33,3	8,65	0,038	42425
8	66,2	49,2	8,60	0,050	42426
10	82	65	8,50	0,062	42427
14	116	99	9,5	0,090	42428

Part No.. 42126

5 Way double row junction

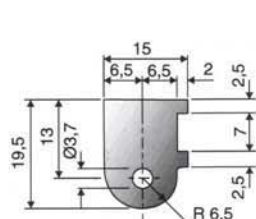


Outlets	A (mm)	B (mm)	C (mm)	Weight Kg.	Part No.
4	50,3	33,3	8,65	0,028	42125
5	66,2	49,2	8,60	0,037	42126
6	82	65	8,50	0,045	42127
7	98	81	8,50	0,054	42128
8	113,8	96,8	8,40	0,064	42129
10	149	132	10	0,085	42130
12	177,2	160,2	8,10	0,098	42131

BAR PROFILE SECTIONS

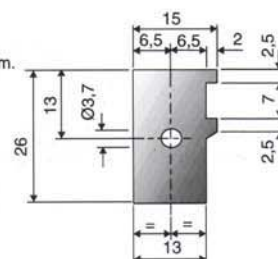
The profile sections from which the junctions are produced may be supplied in bars in commercial lengths from 4 to 6 m.

The bar has a 3,7 mm diameter hole which corresponds to the internal diameter of a tube having 6 mm external diameter.

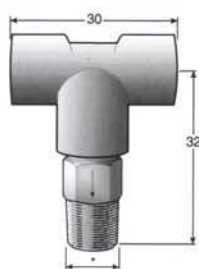


Material in bars
Part No. 5422801
Weight 0,930 Kgs/m.

Material in bars
Part No. 5422800
Weight 0,650 Kgs/m.



JUNCTION HEADERS WITH METER UNITS FOR BEARING



2-way T at 180°

CAT

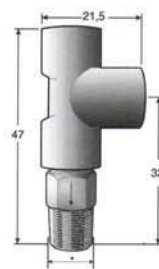
Type	Part No.
5/0	40060
4/0	40061
3/0	40062
00	40063
0	40064
1	40065
2	40066
3	40067
4	40068
5	40069



2-way L at 90°

CBT

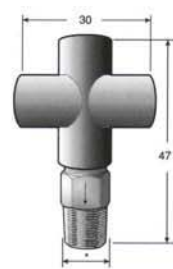
Type	Part No.
5/0	40070
4/0	40071
3/0	40072
00	40073
0	40074
1	40075
2	40076
3	40077
4	40078
5	40079



2-way L at 90°

CCT

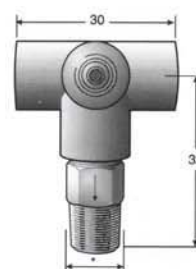
Type	Part No.
5/0	40080
4/0	40081
3/0	40082
00	40083
0	40084
1	40085
2	40086
3	40087
4	40088
5	40089



3-way cross at 90°

CDT

Type	Part No.
5/0	40090
4/0	40091
3/0	40092
00	40093
0	40094
1	40095
2	40096
3	40097
4	40098
5	40099

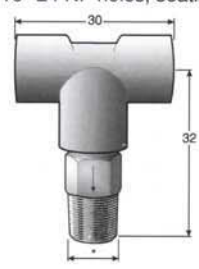


3-way T at 90°

CET

Type	Part No.
5/0	40100
4/0	40101
3/0	40102
00	40103
0	40104
1	40105
2	40106
3	40107
4	40108
5	40109

5/16"-24 NF holes, seating for compression sleeve tube 4 mm. o.d.



2-way T at 180°

D 16

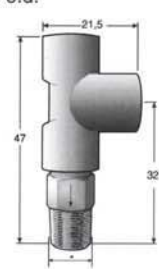
Type	Part No.
aa	40540
a	40550
b	40560
c	40570
d	40580
e	40590
f	40600



2-way L at 90°

D 18

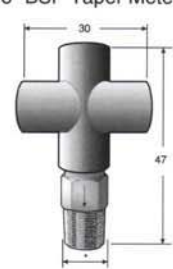
Type	Part No.
aa	40440
a	40450
b	40460
c	40470
d	40480
e	40490
f	40500



2-way L at 90°

D 17

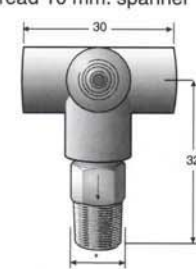
Type	Part No.
aa	40290
a	40300
b	40310
c	40320
d	40330
e	40340
f	40350



3-way T at 90°

D 20

Type	Part No.
aa	40140
a	40150
b	40160
c	40170
d	40180
e	40190
f	40200



3-way cross at 90°

D 19

Type	Part No.
aa	39990
a	40000
b	40010
c	40020
d	40030
e	40040
f	40050

* 1/8" BSP Taper Meter unit thread 10 mm. spanner

Note: Junction Headers consist of a Meter Unit and a Junction and are supplied disassembled.

ADAPTERS FOR TUBE Ø 4 mm

With seating for compression fitting.



8 mm. spanner **Part No. 92009**
9 mm. spanner **Part No. 92004**
5/16"-24 NF threading.

Without compression bushing



8 mm spanner **Part No. 94741**
Height 12,5 mm
5/16"-24 NF threading.

Taper fitting



8 mm spanner **Part No. 95004**
(For holes which cannot be threaded)

ADAPTERS FOR TUBE Ø 4 mm

	Taper thread	Span. (mm)	Part No.		Span (mm)	Part No.		Span (mm)	Part No.	
			Adapter only	Compl. fitting		Adapter only	Compl. fitting		Adapter only	Compl. fitting
Without compression cone	1/8" BSP	10	91822	910077	14	92603	914021	12	93243	911046
	1/4" BSP	14	91823	91826	14	92604	914023	14	93245	911048
With compression fitting	1/8" BSP	10	910005	92069	10	914005	92686	10	911005	93061
	1/4" BSP	14	92068	92067	-	-	-	14	93060	93059
With check valve	1/8" BSP	12	94370	94373	-	-	-	10	94050	94052
	M 8	12	94390	94392	-	-	-	10	94070	94072

ROTARY CONNECTORS

					
Maximum speed 100 r.p.m.			Maximum speed 500 r.p.m. 90° OUTLET		
Thread	Weight Kg.	Part No.	Thread	Weight Kg.	Part No.
1/8" BSP taper m.	0,078	1168000	1/8" BSP taper m.	0,130	936500
1/8" BSP taper f.			1/8" BSP f.		
1/4 " BSP taper m.	0,142	2712000	1/4" BSP taper m.	0,128	936400
1/8" BSP taper f.			1/8" BSP f.		
			AXIAL OUTLET		
			1/4" BSP taper m.	0,130	936350
			1/8" BSP f.		

ADAPTERS FOR A METER UNIT

Part No. 914024

at 45°



1/8" BSP taper thread.

Part No. 911049

at 90°



1/8" BSP taper thread.

TUBING

Material	Weight (g/m)	Diameter (mm)		Part No.
		ext.	int.	
Copper in coils	50	4	3	5501201
Nylon in coils	6	4	3	5717300

PLUGS

5/16" -24 NF



8 mm spanner **Part No. 91004**
9 mm spanner **Part No. 91001**
Height 15 mm

5/16" -24 NF WITH SCREW-DRIVER SLOT



Height 9 mm **Part No. 91005**

NUT

FOR METER UNIT



Threading	Ø Tube (mm.)	Span (mm.)	Part No.
1/4"-28 NF	2,5	8	94006
5/16"-24 NF	4	10	94007

INSERT

FOR NYLON TUBING



Ø Tube mm. 4x3
Part No. 3008117

COMPRESSION CONE

Ø Tube mm. 2,5
Part No. 93002



Ø Tube mm. 4
Part No. 93004

VALVE

CHECK



5/16" -24 NF threading
Part No. 1111000
10 mm. spanner

ACCESSORIES

SELF-THREADING RIVETS



Ø Bore (mm.)	Ø A (mm)	Ø L (mm)	Part No.
3	3,5	8	18065
3,6	4,2	9,5	18067

SELF-TAPPING SCREWS



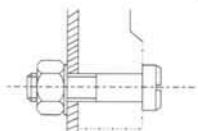
Ø Bore (mm)	Ø A (mm)	Ø L (mm)	Part No.
2,7	M 3	8	14352
3,6	M4	10	14355
3,6	M 4	18	14356

TUBING CLIPS



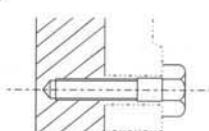
Quantity of tubes	Ø Tube (mm)	Part No.
With one fixing hole		
1	4	111151
2	4	111152
3	4	111153
With two fixing holes.		
4	4	111154
5	4	111155
6	4	111156
8	4	111158

SCREWS TO MOUNT JUNCTIONS



For a through hole.

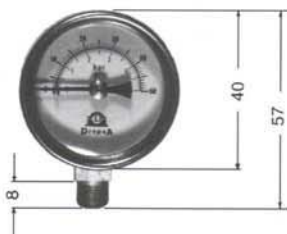
Screw	M6x28	12528
Washer	6,4	16129
Nut	M6	16404



For a blind hole

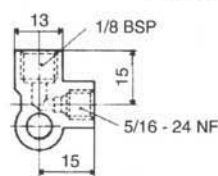
Screw	M6x25	12527
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PRESSURE GAUGE

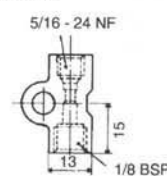


Scale	Part No.
0-6 bar	20557
0-16 bar	20566

Pressure Gauge connections:



Part No. 42140



Part No. 42139

TOOLS

TUBE CUTTER Part No.2038452

To cut copper and steel tubing.

The knob adjusts the position of the disc, a retractable de-burring device is fitted on the opposite side of the disc. the de-burring device itself, rotated through 180°, frees the housing where a spare disc is fitted. Spare wheel **Part No. 2038453**

N.B. Nylon tubes on the other hand should be cut using a very sharp knife.

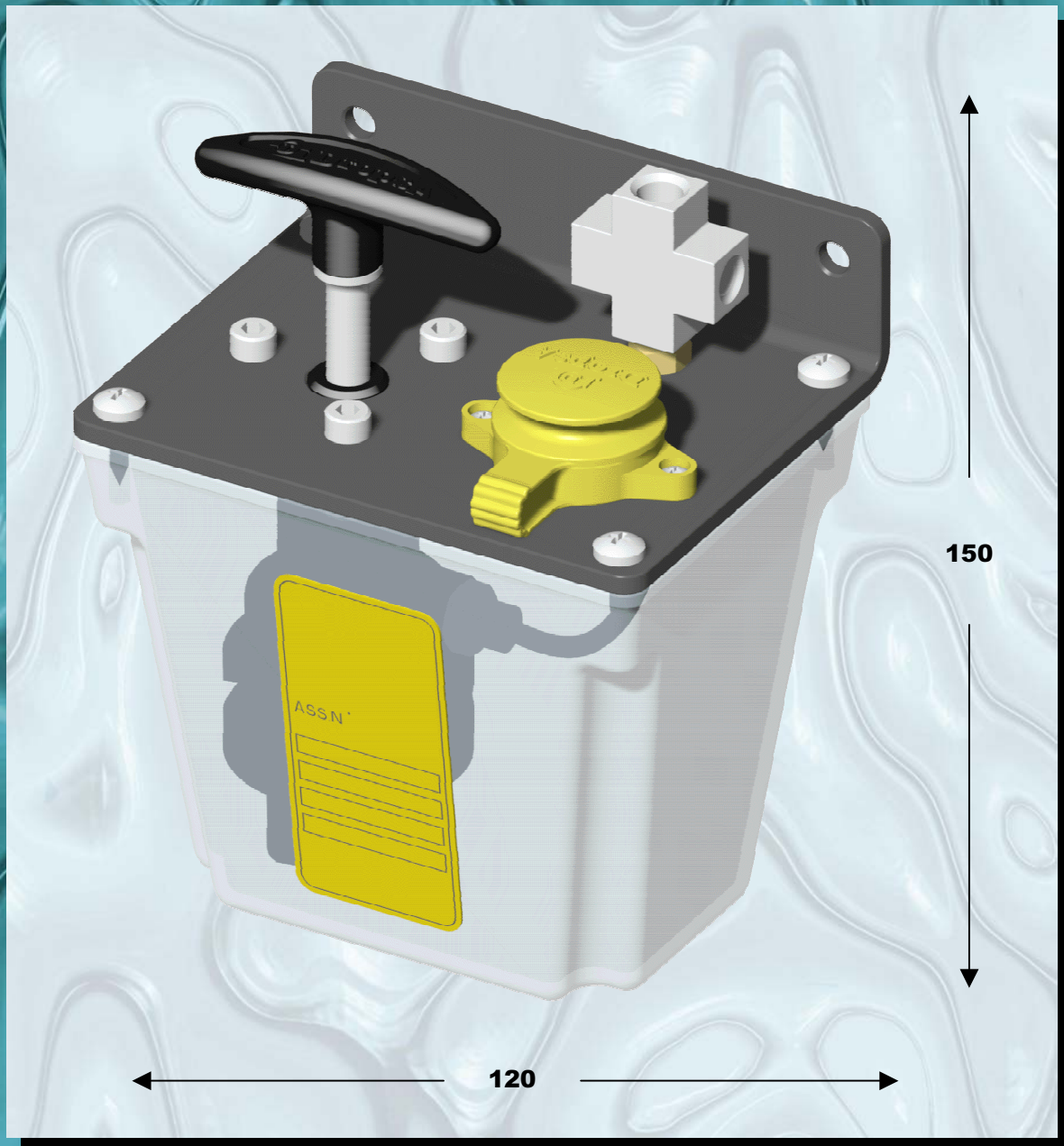


TUBE BENDER Part No. 2038468
for Ø 4 mm tube

SMILE ☺

The most effective entry level
manual oil lubrication pump
for small machinery.

Dropsa®



Automatic Lubrication System

GB SMILE

SMILE, for low cost oil lubrication.

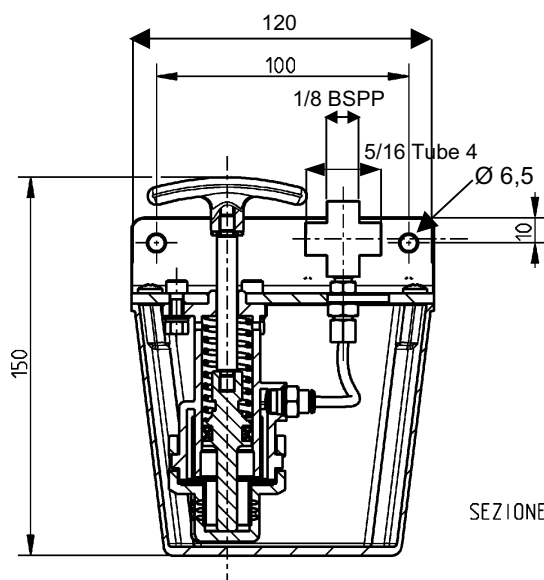


The **SMILE** Manual Pump is one of the most effective low-cost entry level manual pumps available offering exceptional quality, compactness and reliability at an unbeatable price.

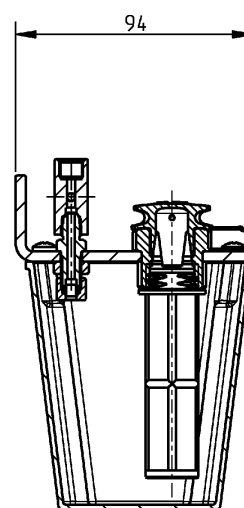
It can be used as a single point lubrication pump or on an Orifice Metering System to provide oil lubrication on many small machines.

Features:

- Up to 5 cm³ per cycle.
- Practical and Elegant 500 cm³ transparent reservoir.
- Incorporates Outlet Manifold block
- Standard Pressure gauge can be fitted on outlet
- Snap on Refilling cap and filter for safe operation.
- Patented Pump mechanism is both simple and reliable
- Number of parts reduced by over 50% over previous versions.



SEZIONE A-A



SEZIONE B-B

Characteristics	SMILE Manual Pump Part Number: 12140
Oil Delivery	5 cm ³ /Cycle
Max Pressure	3 BAR
Min Pressure	1 BAR
Reservoir Capacity	500 cm ³
Operating Temperature Range	-5 ÷ +55 °C
Humidity	90% max
Permissible Lubricant	Mineral Oils
Oil Viscosity at Working Temperature	32 ÷ 220 cSt
Storage Temperature	-20 ÷ +65 °C

U.S. PATENT 6095
775 AND OTHER
INTERNATIONAL
PATENTS

Web site:
<http://www.dropsa.com>

E-mail:
sales@dropsa.com

WK 04/02
C2042PE

ITALIA
Dropsa SpA
t.(+39) 02-250791
f.(+39) 02-25079767

ESPAÑA
Polydrop, S.A.
t.(+34) 3-260-22-50
f.(+34) 3-260-22-51

U.S.A.
Dropsa Corporation
t.(+1) 810-566-1540
f.(+1) 810-566-1541

U.K.
Dropsa (UK) Ltd
t.(+44) 01784-431177
f.(+44) 01784-438598

BRAZIL
Dropsa
t.(+55) 011-563-10007
f.(+55) 011-563-19408

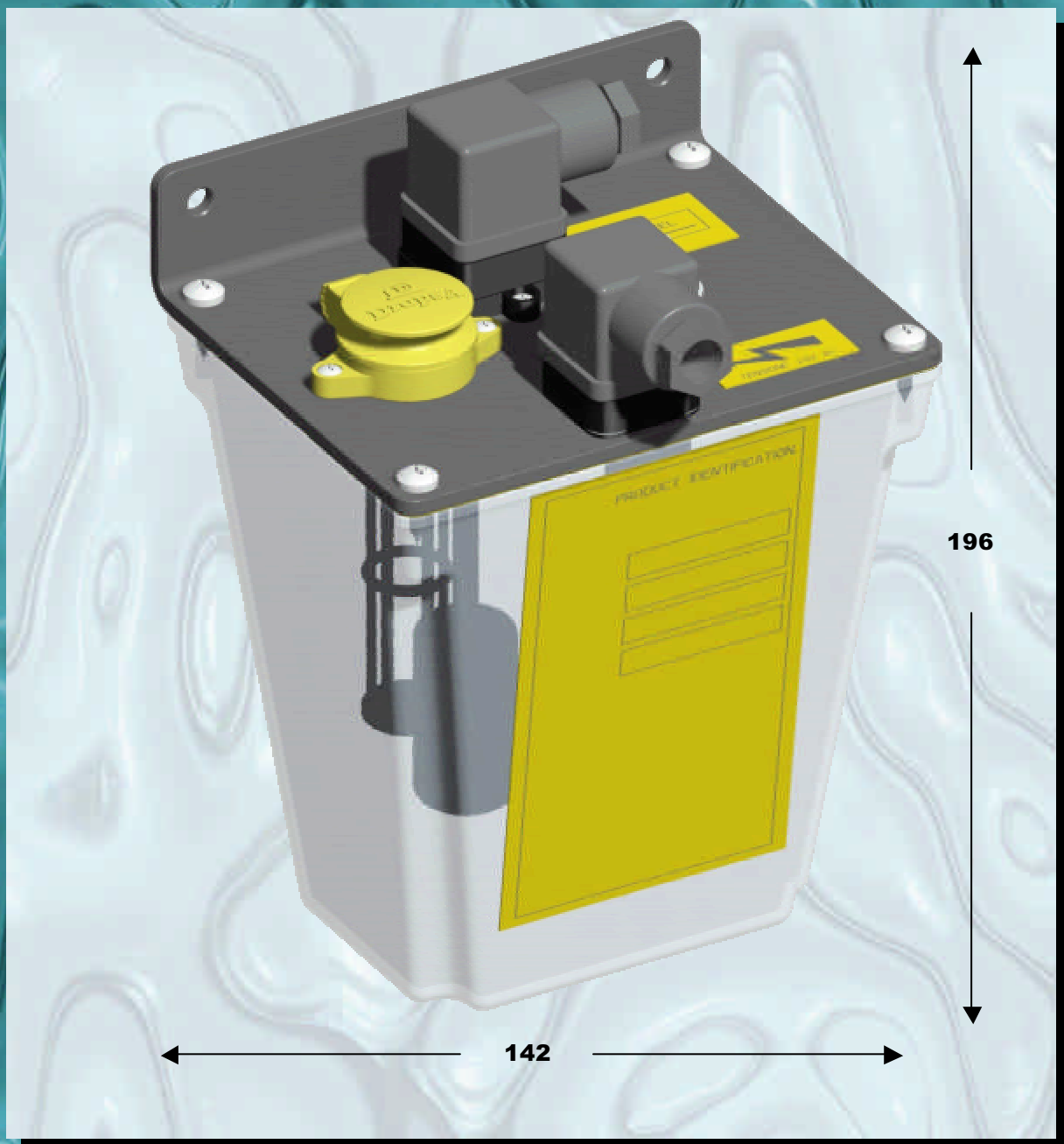
GERMANY
Dropsa GmbH
t.(+49) 0211-394-011
f.(+49) 0211-394-013

AUSTRALIA
Dropsa Australia Ltd.
t.(+61) 2-9938-6644
f.(+61) 2-9938-6611

FRANCE
Dropsa Ame
t.(+33) 1-3993-003
f.(+33) 1-3986-2636

PICCOLA

**Entry Level Oil Lubrication Pump
for use with Metered Orifice
Systems (01).**



Automatic Lubrication System

PICCOLA: The Low cost way into Automatic Oil Lubrication.

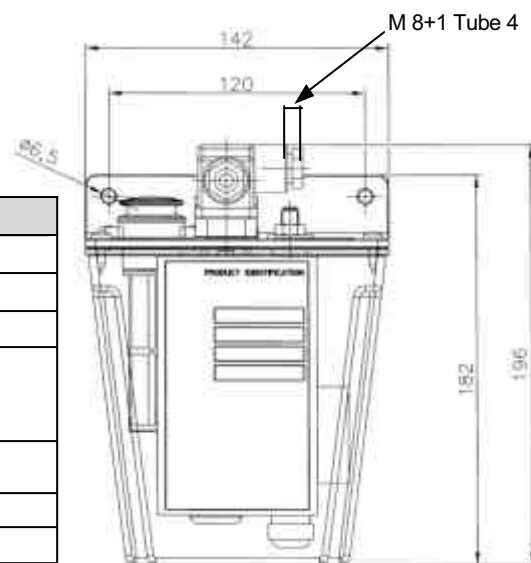
This compact pump has been designed to cater for the low cost entry-level automatic Oil lubrication systems market and incorporates the essential components for such systems.

The pump can be used on a single lubrication point or as part of a Metered Orifice Oil distribution System (01). It is ideal for small machine tools or general industrial machinery requiring basic low cost oil lubrication.

The pump continuously delivers lubricant when it is powered on. Optionally, a timer module can be fitted onto the Power connector that cycles the pump at regular time intervals allowing it to function as standalone unit.

Features:

- Delivery changes according to pressure. Up to **15 Bar** Pressure or **90cm³/min** output.
- **24V, 110V and 230V** Versions Available.
- Optional **Timer Module** allows pump to operate in standalone with cycle-test button.
- Practical, Transparent 1 liter reservoir.
- Snap on Refilling cap and filter for safe operation.
- Incorporates Dropsa's Samba NO/NC **Low Level Switch**
- Small Space Envelope



TECHNICAL INFORMATION	
Max Pressure	15 Bar
Max Output Volume	90 cm ³ per minute
Reservoir Size	1 Liter
Maximum Operating Time	2 min max 25% of Pause time.
Compatible Lubricants	Mineral Oils 15 – 220 CSt
Working Temperature	- 5 °C + 60 °C
Storage Temperature	- 20 °C + 60 °C
Max Humidity	90% max
Protection Grade	IP-44
Voltage (Single Phase)	24 / 110 / 230 V 50/60 Hz
Power Consumption	90 W
Optional Timer Module (110/230V only)	ON Timer : - Settable to 0,5 ÷ 120 seconds Standby Timer: - Settable to 40 sec ÷ 180 min.

ORDERING INFORMATION	
P/N	Description
3600300	Piccola 24V AC, 90cc/min, 15 Bar
3600301	Piccola 110V AC 90cc/min, 15 Bar
3600302	Piccola 230V AC, 90cc/min, 15 Bar
1524492	Timer for 110/230 V Versions

Web site:
<http://www.dropsa.com>

E-mail:
sales@dropsa.com

WK 04/02
C2045PE

ITALIA
Dropsa SpA
t.(+39) 02-250791
f.(+39) 02-25079767

ESPAÑA
Polydrop, S.A.
t.(+34) 3-260-22-50
f.(+34) 3-260-22-51

U.S.A.
Dropsa Corporation
t.(+1) 810-566-1540
f.(+1) 810-566-1541

U.K.
Dropsa (UK) Ltd
t.(+44) 01784-431177
f.(+44) 01784-438598

BRAZIL
Dropsa
t.(+55) 011-563-10007
f.(+55) 011-563-19408

GERMANY
Dropsa GmbH
t.(+49) 0211-394-011
f.(+49) 0211-394-013

AUSTRALIA
Dropsa Australia Ltd.
t.(+61) 2-9938-6644
f.(+61) 2-9938-6611

FRANCE
Dropsa Ame
t.(+33) 1-3993-003
f.(+33) 1-3986-2636



SMART



Electromagnetic and **G**ear Pump solutions for Low Pressure Orifice and Injector Oil Lubrication Systems.

OIL LUBRICATION PUMPS



SMART **E**



for the Orifice System (Dropsa 01)

SMART **G**



for the Injector System (Dropsa 06)

INNOVATIVE PUMP PACKAGE FOR THE MACHINE TOOL INDUSTRY

All units are fitted as standard with built in Pressure Switch, New Low Level Switch and Pressure Gauge.

Units are available with an integral VIP Controller or Manual Push Button and Pump-on LED

SMART MODELS	E lectromagnetic Pump	G ear Pump
110V Manual	3600100	3600200
230V Manual	3600101	3600201
110V VIP Controlled	3600102	3600202
230V Vip Controlled	3600103	3600203
Discharge:	90 cc./min. 5.5 cu.in./min.	100 cc./min. 6 cu.in./min.
Max. Pressure:	15 Bar 218 psi	35 Bar 507 psi
Default Bypass Setting:	5 Bar 72 psi	25 Bar 362 psi
Compatible Systems:	Dropsa 01 System.	Dropsa Systems 01 and 06.
Reservoir:	3 Litre 0.79 US Gallons.	
Oil Viscosity:	Min. 40 cSt/185 SUS Max. 250 cSt/1157 SUS	
Max. Operating Time:	5 Minutes (minimum 15 minutes pause).	

Vip
Versatile Infrared Programmable
TECHNOLOGY

Features:

CE

- * Cycle time: 10 seconds to 5 minutes (10 second increments).
- * Pause time: 1 minute to 60 Hours (1 minute increments).
- * Cycle and Level monitoring capabilities.
- * Progressive System monitoring capability
- * 4 Digit Display for easy operation and setting.
- * Infra red program download function.
- * External Cycle Counting Capability.
- * Suspend function.

U.K.
Dropsa (UK) Ltd.
Unit 6, Egham Business Village,
Egham,
Surrey. TW20 8RB
Tel: (+44) 01784 - 431177
Fax: (+44) 01784 - 438598
E-mail: salesuk@dropsa.com

U.S.A.
Dropsa Corporation
50679 Wing Drive
Utica,
Michigan 48315,
Tel: (+1) 810-566-1540
Fax: (+1) 810-566-1541
E-mail: salesusa@dropsa.com

AUSTRALIA
Dropsa Australia Pty.
No. 7 Warringah Road
Dee Why
NSW 2099
Tel: (+61) 2 9905 0410
Fax: (+61) 2 99394142
E-mail: sales@dropsa.com

GERMANY
Dropsa GmbH.
Volmerswerther Strasse 80
40221 Dusseldorf 1,
Deutschland
Tel: (+49) 0211-394-011
Fax: (+49) 0211-394-013
E-mail: sales@dropsa.de

ITALY
Dropsa Spa
Via B. Croce, 1 - 20090
Vimodrone (MI)
Tel: (+39) 02 - 250.79.1
Fax: (+39) 02 - 250.79.767
E-mail: sales@dropsa.it (Export)
E-mail: vendite@dropsa.it (National)

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<http://www.dropsa.com/smart>

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