

MESOLUBE

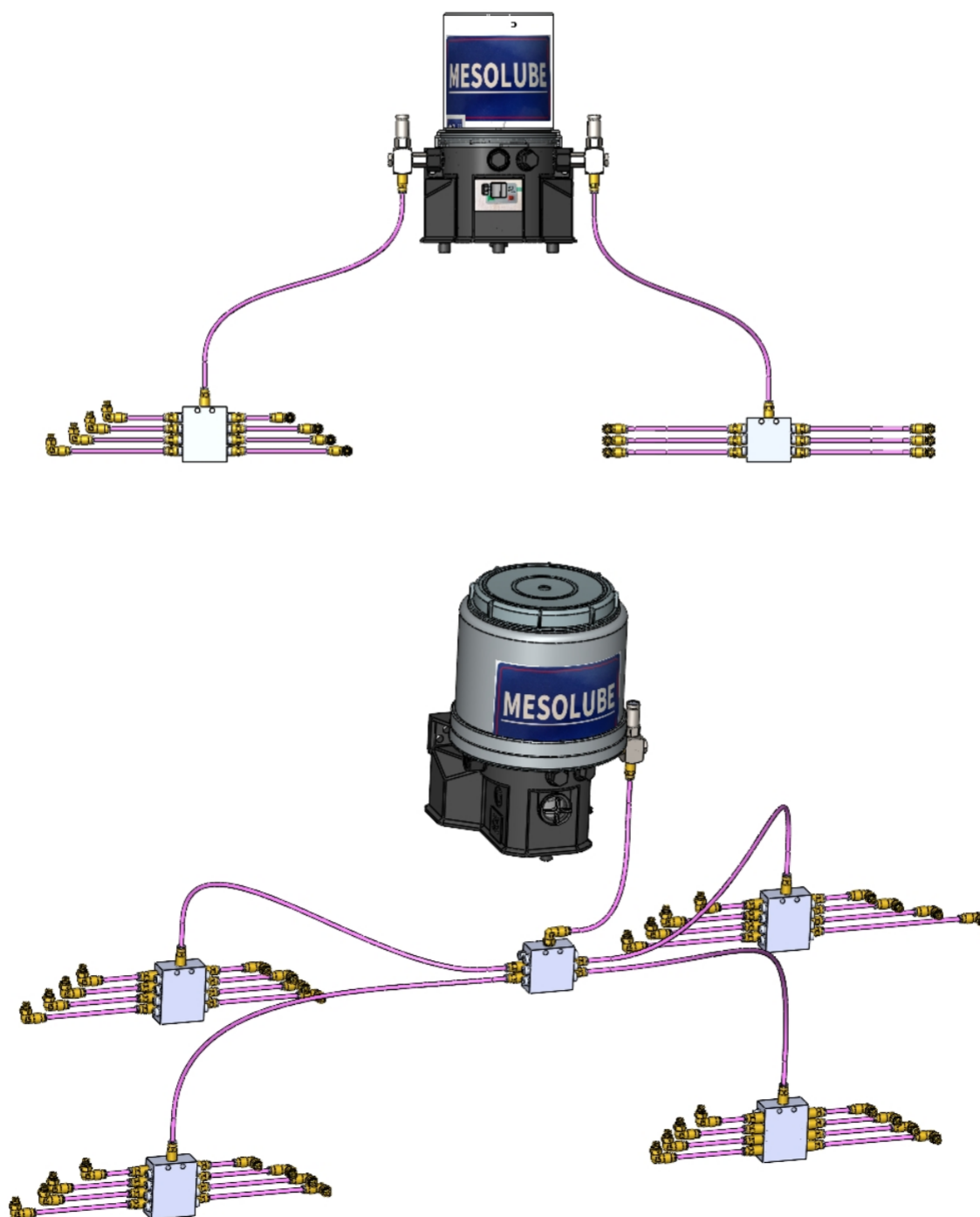
MESOLUBE Centralized lubrication system Owner Manual

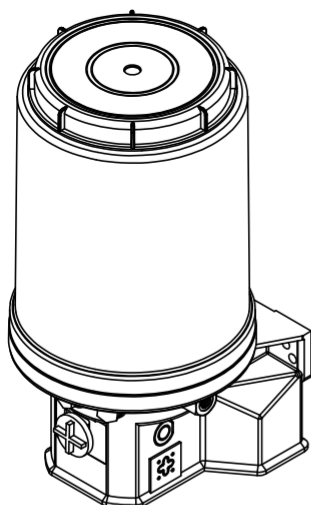


Dongguan Mingsheng Lubrication Technology Co. , Ltd.

System Overview

The P300 lubrication pump is versatile, compact and economical and can supply up to 150 lubrication points, depending on the line length. It consists of a housing with integrated motor, reservoir with stirring paddle, pump element (optionally incl. pressure-relief valve), filling nipple and electrical connection parts. This powerful pump can drive up to three pump elements and can be equipped with a low-level control (with or without control board). Features and benefits Optional control printed circuit boards with different operating settings Range of reservoir types offered For DC or AC applications Variety of pumping elements for different output available applications Mobile applications Wheel loaders Excavators Small- and medium-sized machinery General industries Combines, balers, forage harvesters.





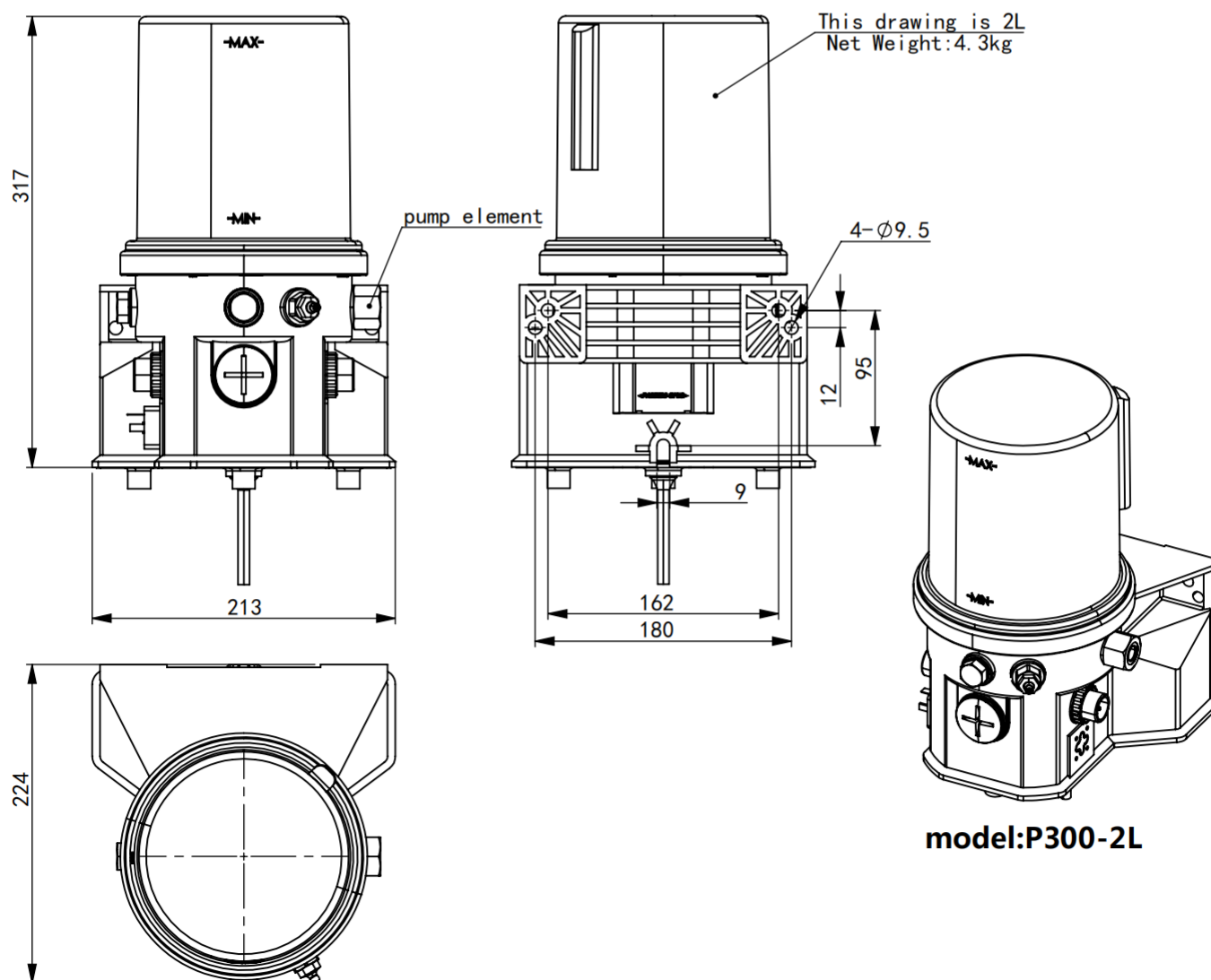
Technical Parameter

Input Voltage:	94 - 265 VAC
Operating Temperature:	-13° to 158°F / -25° to 70°C
Number and Element Size:	1 - 6mm
Reservoir Capacity:	2-, 4-, 8- or 15-liter *
Output per Minute:	Approx. 2.8 cc / 0.171 cu. in. per min.
Lubricant:	Greases up to NGLI #2/Oil with at least 40 cSt
On Time with PC Board:	2 to 30 minutes
Factory Set on Time:	6 minutes
Factory Set Pause Time:	6 hours
Max. Operating Pressure:	5076 psi / 350 bar
Connection Thread:	G ¹ / ₄ " for 6mm or 8mm diameter tube

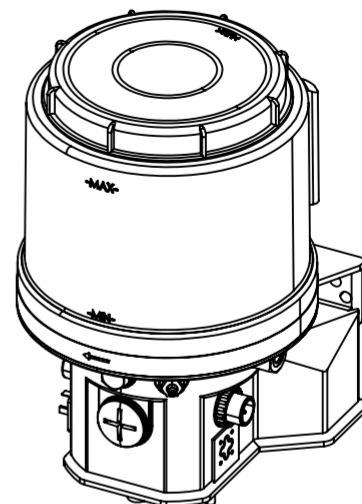
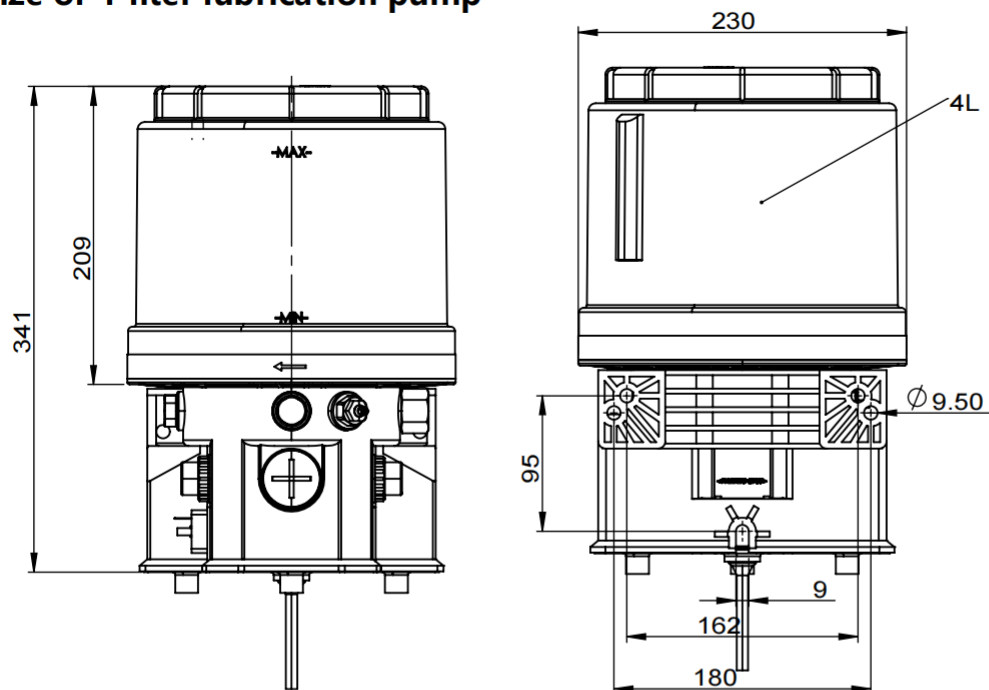
* Contact Lincoln for 15-liter reservoir models.

Basic model and size

Size of 2-liter lubrication pump

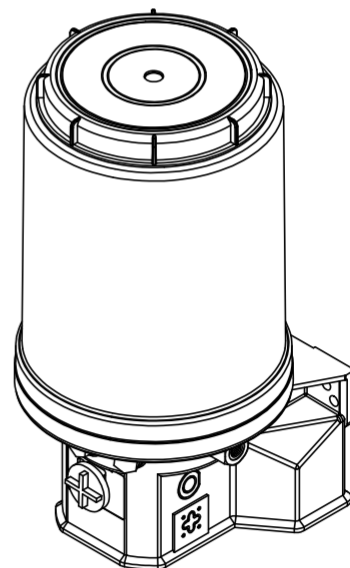
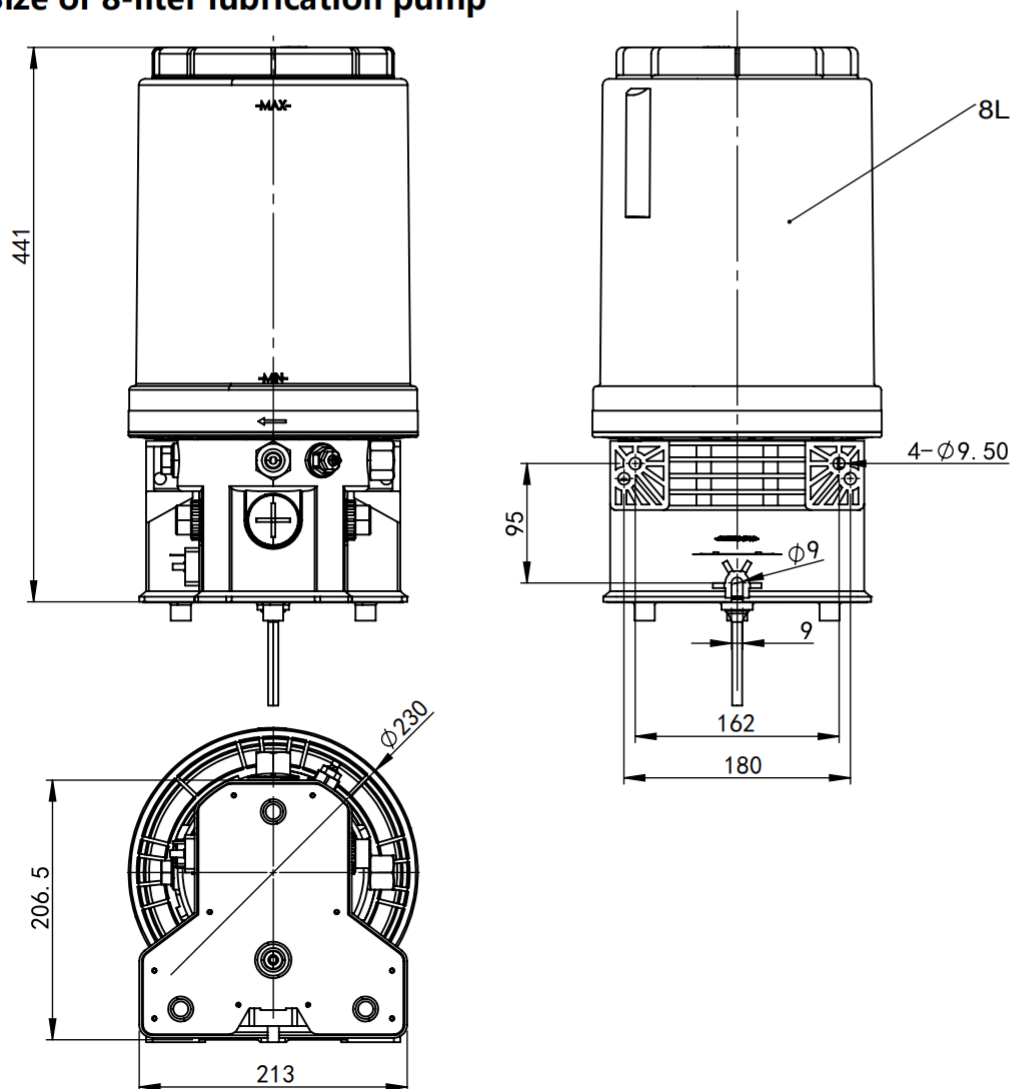


Size of 4-liter lubrication pump



model:P300-4L

Size of 8-liter lubrication pump



model:P300-8L

Examples of Codes

Note

Any pumps combination other than the above standard pumps can be composed and ordered in accordance with the valid model identification code

Basic pump model for grease or oil with 1-3 outlets

Reservoir Design

2 = 2 l transparent plastic reservoir

4 = 4 l transparent plastic reservoir

8 = 8 l transparent plastic reservoir

15 = 15 l transparent plastic reservoir

X = reservoir for grease

Y = reservoir for oil

N = standard design

L = low-level control

without designation = standard reservoir (2 l)

BO = filling from top

FL = flat type reservoir (for 2l, no low level)

Pumping Element

1 - 3 number of elements

Piston Type - Piston Diameter (selection see page 20)

K5 - 5 mm

K6 - 6 mm

K7 - 7 mm

KR adjustable - 7 mm

B7 - 7 mm (outlet same as K5)

S7 - 7 mm (food industry)

Operating Voltage

12 VDC or 24 VDC (DC motor)

AC = 94 - 265 VAC (47 - 63 HZ) with 24 VDC motor

Number of Connection Possibilities

1A = 1 connector (left), power supply ¹

1A = 1 connector (left), power supply ²

1A = 1 connector, power supply left + illuminated push button for additional lubrication, low level ^{3,c}

2A = 2 connectors, power supply (left) ^{1,*} illuminated push button for additional lubrication, low-level (right) ^{1,c} (V10 - V13, V20 - V23, H)

2A = 2 connectors, power supply (left) + illuminated push button for additional lubrication, low-level (left) ^{3,c} and piston detector (right) ⁴ (M08 - M23)

Type of Connection

1 = square type connector (DIN 43650, type A) ¹

5 = bayonet plug, 4/3, DIN 72585-1 ² (V10-V13, V20-V23, H)

6 = bayonet plug, 7/5, DIN 72585-13) (M08-M23)

7 = bayonet plug, 7/6, DIN 72585-1 ³ (V10-V13, V20-V23)

Connection Outside the Pump

00 = without socket outlet, without cable

01 = socket outlet, without cable ¹

10 = socket outlet, with 10 m cable ¹

11 = socket outlet, with 10 m ADR cable ^{A,1}

14 = socket for bayonet, with 10 m cable, 4/3 ², V10-V13, V 20-V23, no low level, no illuminated push button ^c

15 = socket for bayonet with 10 m cable, 7/5 ³, M08-M23

16 = socket for bayonet, with 10 m cable, 7/6g ³, V10-V13, V 20-V23, with low level or illuminated push button ^c

17 = socket for bayonet with 10 m ADR-Cable ^A, 4/3 ², (V10-V13, H)

P.C.B. for 12 / 24 VDC

V10 - V13 = adjustable pause and operating time ^{1,2,3}

H = for trailers and semi trailers ^{1,2}

without designation = without p.c.b. ^{1,2}

M08 - M23 = with microprocessor control ³ different model in accordance to the jumper position

No designation, pump without control p.c.b.

The Figures ^{1,2,3} are in conjunction with those of the "Type of connection" determining the connector you could use

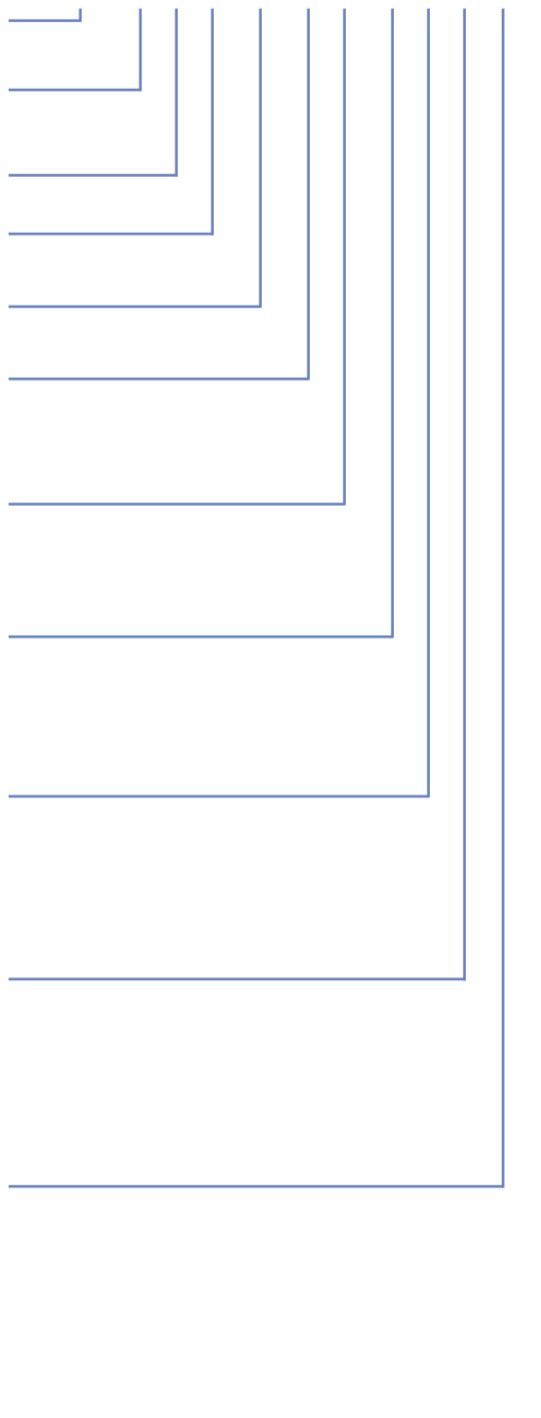
^A For hazardous material transport

^B C7 = for supply of chisel paste

^c low level for oil; the connection for low level is not taken into consideration

Special order Quicklub pumps require a delivery time of six to eight weeks.

P 300	2	X	N		1	K6	24	1A	1	10	
P 300	4	X	N	BO	1	KR	24	2A	6	15	M13
P 300	2	X	N		2	K5	12	1A	1	10	H
P 300	8	X	N	BO	1	K6	24	1A	5	14	V13
P 300	4	Y	L	BO	1	K7	24	1A	1	10	V20
P 300	2	X	L		1	K6	24	1A	7	16	V10



2-I reservoir for grease, closed without low-level control

P.c.b. models V10 - V13, V20 - V23, H, V10 - V13 ADR and H ADR

Filling from bottom

Connection types 1A1.01/10 or 2A1.01/10

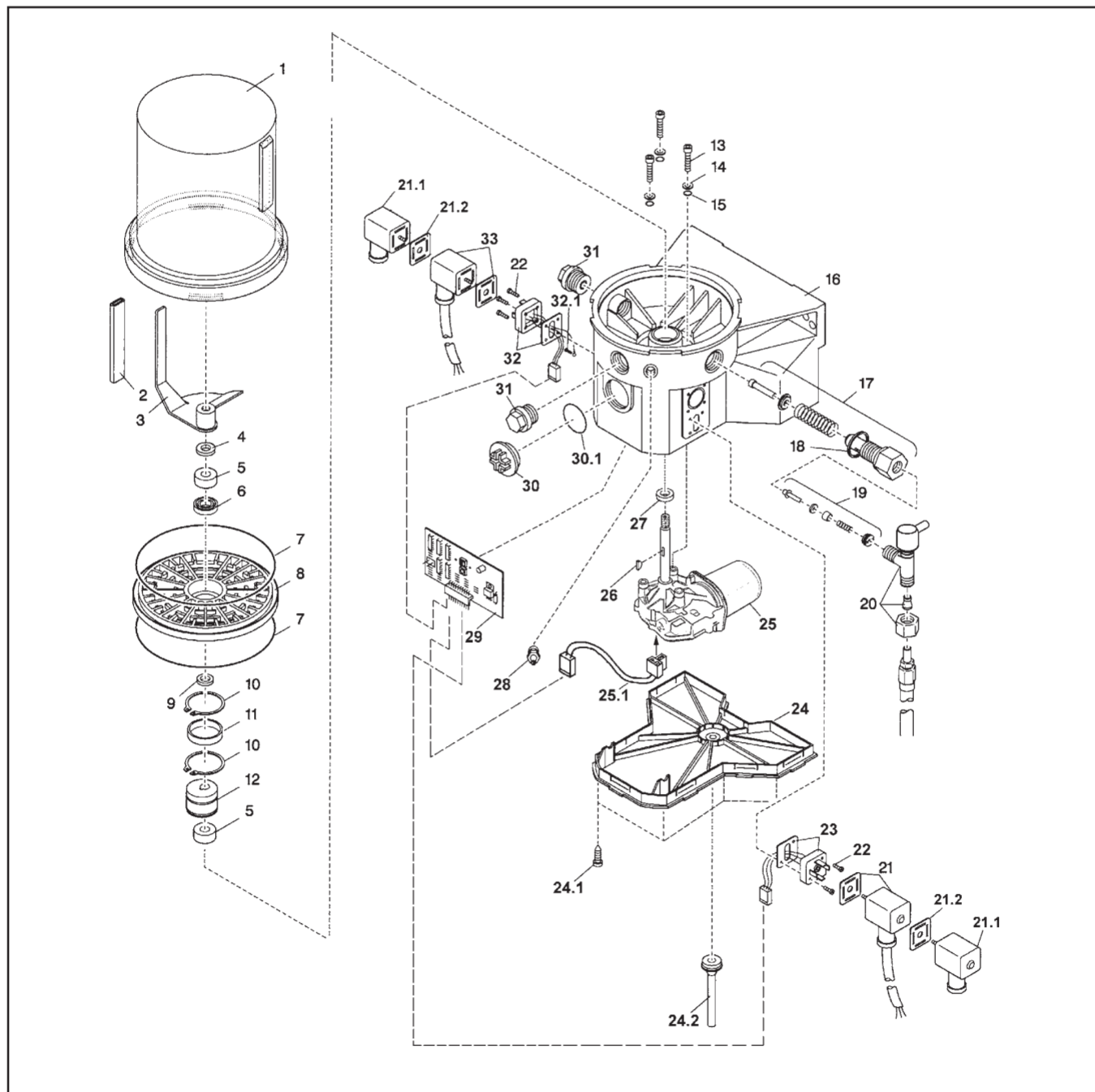
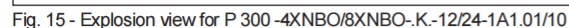


Fig. 3 - Explosion view for P 300 -2XN-K.-12/24-1/2A1.01/10-V..., H, V... ADR, H ADR

Parts List acc. to Fig. 3

Pos.	Designation	Qty.	Part no.	Pos.	Designation	Qty.	Part no.
1	Reservoir 2 XN	1	544-31996-1	24	Housing cover	1	444-24667-1
2	Hose 12.5 cm	1	111-35089-2		Housing cover, assy. since 1996	1	544-32217-1
3	Stirring paddle, assy.	1	544-31882-1	24.1	Screw f. KF, 3x25	10	206-13796-7
4	Washer 8.4	1	209-13072-6	24.2	Drain hose	1	444-24310-1
5	Inner ring	2	444-24168-1	25	Motor, new ^{1,6}		
6	Grooved ball bearing D 10/26x8	1	250-14009-7		with pos. 7, 13, 15, 25.1, 27		
7	O-ring Ø142x4	2	219-13730-7		12 VDC	1	544-36913-6
8	Intermediate bottom	1	444-24167-1		24 VDC	1	544-36913-7
9	Shim 10x16x0.5	1	209-13047-5		24 VDC for VAC connection ¹	1	544-36913-8
10	Snap ring SW 32	2	211-14100-1	25.1	Motor connection, old ³	1	664-36862-3
11	Pressure ring Ø33x37x13	1	444-24439-1		Motor connection, new	1	664-34195-2
12	Eccentric	1	444-24170-2	26	Woodruff key 3x5	1	214-13123-1
13	Hexagon socket head screw M6x25, self-tapping	3	206-13710-8	27	Rotary shaft seal BA 10x22x7	1	220-12231-3
14	Washer	3	444-24169-1	28	Hydraulic lube fitting AR 1/4 Z	1	251-14045-9
15	O-ring Ø6x2	3	219-13084-2	29	Control p.c.b. 12/24 VDC ¹ for industrial application and commercial vehicles		
16	Housing	1	44424666-1		Model V10 - V13	1	236-13891-1
	Kit: housing assy. with housing cover and tightening screws	1	544-32191-1		Model V20 - V23 ⁴	1	236-13891-2
17	Pump element with				Model H	1	236-13857-1
	K5=piston Ø5 mm, assy.	1	600-26875-2		Model M... ¹	1	236-13870-2
	K6=piston Ø6 mm, assy.	1	600-26876-2	30	Sealing plug, M33x2 incl.	1	
	K7=piston Ø7 mm, assy.	1	600-26877-2		30.1 O-ring ø31x2	1	544-32851-1
	KR=Pump element, adjustable	1	655-26178-1	31	Closure plug M22x1.5x12	2	303-19285-1
18	Sealing ring Ø22.2x27x1.5	1	306-17813-1	32	Appliance plug 1 with cable ¹	1	664-36917-9
19	Check valve Ø5 mm, assy.	1	504-36071-8	32.1	Self-tapping screw 3.9x6.5 C	1	206-13725-7
	Check valve Ø6 mm, assy.	1	504-36071-4	33	Socket 1 (black) ¹ with		
	Check valve Ø7 mm, assy.	1	504-36071-9		-flat packing and 10 m cable	1	664-36078-7
20	Pressure relief valve ⁵				-flat packing and 10 m cable, for ADR-pump	1	664-36862-1
	SVTE - 350 - 1/4 - D 6	1	624-28894-1				
21	Socket 2 (grey) ^{1,2} with					1	544-36961-4
	- flat packing and 10 m cable	1	664-36078-9			1	810-55106-1
	- flat packing and 10 m cable, for ADR-pump	1	664-36862-2			1	810-55087-1
21.1	Socket 1/2 (black) ^{1,2}	2	236-13277-9			1	236-13898-1
21.2	Flat packing	2	236-13294-3				
22	Screw BZ 3x10 C	8	206-13796-6				
23	Plug 2 with cable ²	1	664-36862-5				

**Without control p.c.b.
Filling from bottom or top
Connection type 1A1.01/10**



Parts List acc. to Fig. 15

Pos.	Designation	Qty.	Part no.	Pos.	Designation	Qty.	Part no.
1	Lid	1	444-24234-1	25	Pressure relief valve ⁴		
2	Fixed paddle, assy.4XNBO/4YNBO	1	444-70490-1		SVTE - 350 - 1/4 - D 6	1	624-28894-1
2.1	Fixed paddle, assy.8XNBO/8YNBO	1	444-70491-1	26	Housing cover	1	444-24667-1
3	Reservoir 4XNBO/4YNBO	1	544-31998-1		Housing cover, assy. since 1996	1	544-32217-1
3a	Reservoir 8XNBO/8YNBO	1	544-31999-1	26.1	Screw f. KF, 3x25	10	206-13796-7
4	Hose 10 cm	1	111-35089-2	26.2	Drain hose	1	444-24310-1
5	Stirring paddle, assy.	1	544-31928-1	27	Motor, new ^{1,5}		
6	O-ring, Ø210x5	1	219-13730-9		with pos. 11, 17, 19, 27.1, 29		
7	Adapter ring	1	444-24235-1		12 VDC	1	544-36913-3
8	Washer 8.4	1	209-13072-6		24 VDC	1	544-36913-4
9	Inner ring	2	444-24168-1		24 VDC for VAC connection ¹	1	544-36913-8
10	Grooved ball bearing D 10/26x8	1	250-14009-7	27.1	Adapter cable ²	1	664-34195-8
11	O-ring Ø142x4	2	219-13730-7	28	Woodruff key 3x5	1	214-13123-1
12	Intermediate bottom	1	444-24167-1	29	Rotary shaft seal BA 10x22x7	1	220-12231-3
13	Shim 10x16x0.5	1	209-13047-5	30	Hydraulic lub. fitting AR 1/4 Z	1	251-14045-9
14	Snap ring SW 32	2	211-14100-1	31	Sealing plug, M33x2 incl.	1	
15	Pressure ring Ø33x37x13	1	444-24439-1		31.1 O-ring Ø31x2	1	544-32851-1
16	Eccentric	1	444-24170-2	32	Closure plug M22x1.5x12	2	303-19285-1
17	Hexagon socket head screw M6x25, self-tapping	3	206-13710-8	33	Appliance plug 1 with cable, old ²	1	664-36917-8
18	Washer	3	444-24169-1		Appliance plug 1 with cable, new ³	1	664-34195-5
19	O-ring Ø6x2	3	219-13084-2	33.1	Self-tapping screw 3.9x6.5 C	1	206-13725-7
20	Housing	1	444-24666-1	34	Screw BZ 3x10 C	8	206-13796-6
	Kit: housing assy. with housing cover and tightening screws	1	544-32191-1	35	Socket 1 (black) ¹		
21	Pump element with				with flat packing and 10 m cable,	1	664-36078-7
	K5=piston Ø5 mm, assy.	1	600-26875-2	35.1	Socket 1 (black) ¹	1	236-13277-9
	K6=piston Ø6 mm, assy.	1	600-26876-2	35.2	Flat packing	1	236-13294-3
	K7=piston Ø7 mm, assy.	1	600-26877-2				
	C7=piston Ø7 mm, assy.					1	544-36961-4
	for chisel paste					1	810-55106-1
	KR=Pump element, adjustable	1	600-28750-1			1	810-55087-1
			655-26178-1				
22	Sealing ring Ø22.2x27x1.5	1	306-17813-1				
23	Check valve Ø5 mm, assy.	1	504-36071-8				
	Check valve Ø6 mm, assy.	1	504-36071-4				
	Check valve Ø7 mm, assy.	1	504-36071-9				
24	Nipple S 2520-1/4-1/4-25	1	226-14105-5				

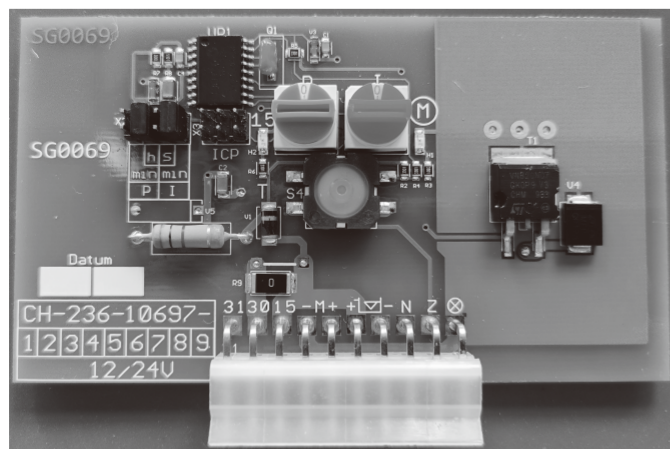


Fig. 1 - Printed circuit board

- The printed circuit board automatically controls the sequence of the pause and operating times of the model P300 central lubrication pump as a function of the vehicle or machine working hours t_B (Fig. 1).
- The sequence of the pause and operating times is activated when the machine contact or driving switch is switched on.

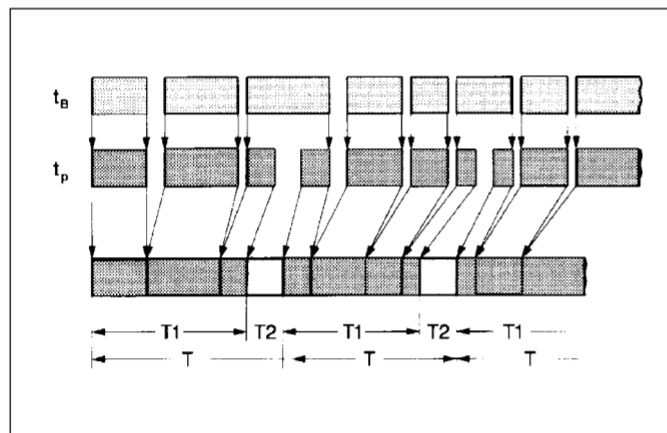


Fig.2 - Time sequence diagram

- A lubrication cycle consists of one pause time and one operating time. Once the pause time has elapsed, the operating time starts to run. This lubrication cycle is repeated permanently after the machine or vehicle has been put into operation. Refer to Fig. 2.
- During the operating time the pump element dispenses the lubricant to the lubrication points via progressive metering devices.

t_B - Working hours
 t_P - Various pause times

T - Lubrication cycle
 T_1 - Stored pause times
 T_2 - Operating times

Time Setting



Fig. 3 - The cover to access the printed circuit board has been removed

* To set the pause or operating time, remove the cover on the pump housing.

Note: To reset a jumper (Fig. 3), remove the printed circuit board.

Important: After having set the pause time or operating time, screw the cover on the pump housing again

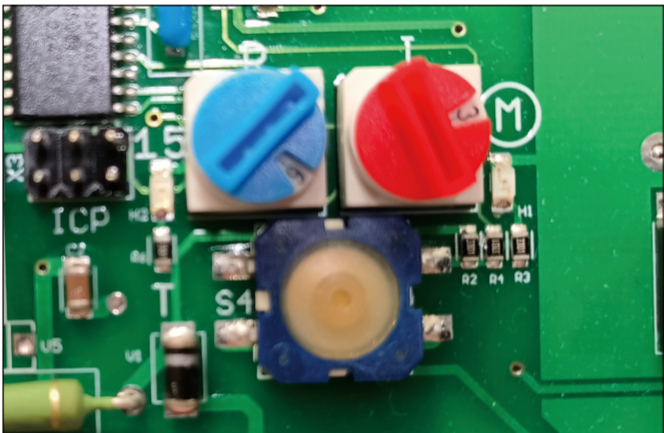


Fig. 4 - Rotary switch - Pause time

To set the pause time

The pause time can be set to 15 different settings by means of the **blue rotary switch**.

Time ranges: Minutes or hours

Switch position	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Minutes	3,75	7,5	11,25	15	18,75	22,5	26,25	30	33,75	37,5	41,25	45	48,75	52,5	56,25
Hours	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

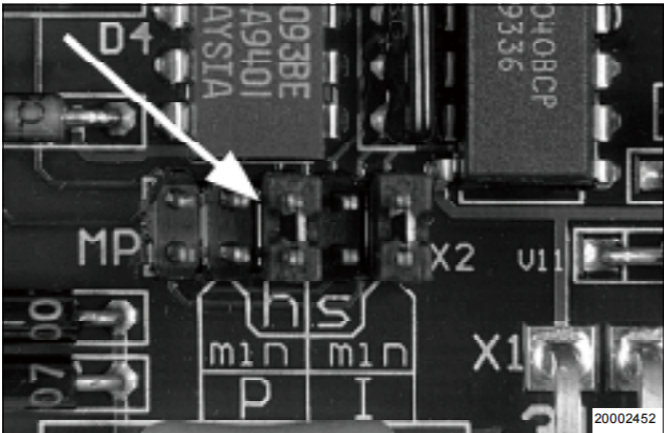


Fig. 5 - Preselection of the time range

Note: The 0 setting has no function.

Factory setting

Rotary switch on : 6 hours
or 22.5 minutes

- The time ranges can be modified by replugging the jumper (Fig. 5) on the printed circuit board.
- Factory setting of the jumper The combination number can be learnt from the pump type designation code mentioned on the nameplate of each pump.

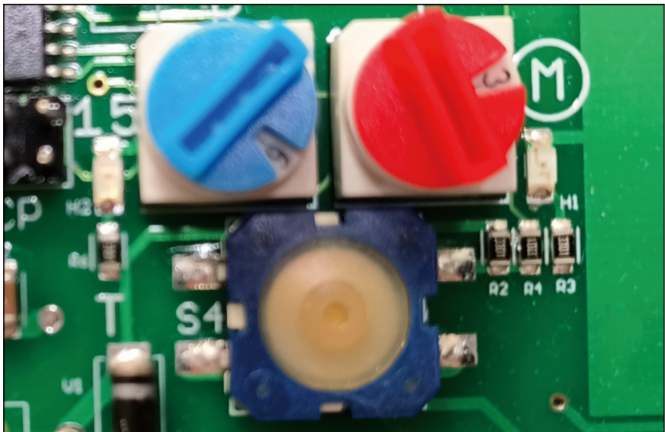


Fig. 6 - Rotary switch - Operating time

To set the operating time

- The operating time can be set to 15 different setting by means of the red rotary switch.

Time ranges: Seconds or minutes

Switch position	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Seconds	7,5	15	22,5	30	37,5	45	52,5	60	67,5	75	82,5	90	97,5	105	112,5
Minutes	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30

Note: The 0 setting has no function.

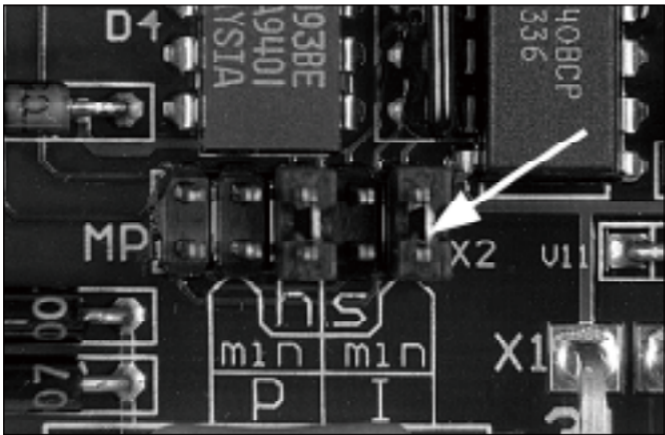


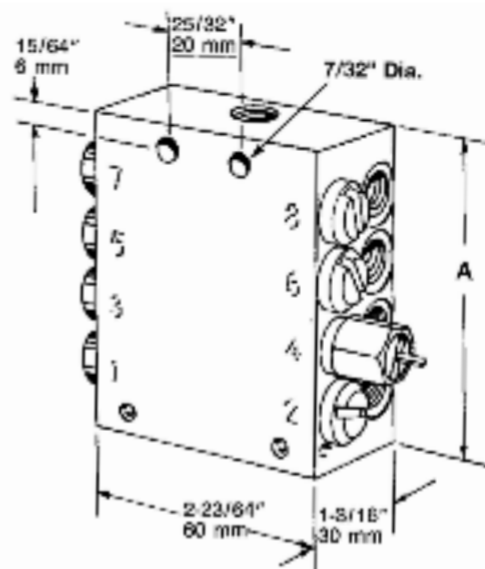
Fig. 7 - Preselection of the time range

Factory setting

Rotary switch on : 6 minutes
or 22.5 seconds

- The time ranges can be modified by replugging the jumper (Fig. 7) on the printed circuit board.

SSV Divider Valves MESOLUBE



The SSV Divider Valve is the “heart” of a manual or automated Quicklub system. Featuring from six to 18 outlets, the SSV valve is available in carbon steel and 303 stainless steel for corrosive environments. Valves are available with cycle indicator pins to provide visual indication of system operation.

Specifications:

Construction Material	Max. Operating Pressure Min. Operating Pressure	Output/Cycle per Outlet cu. in. / cc	Lubricant Inlet	Operating Temperature	
				Min.	Max.
Carbon Steel	5076 psig / 350 bar 350 psig / 20 bar	.012 / .2	1/8" NPTF(F)	-22°F (-30°C)	212°F (100°C)
Stainless Steel			1/8" BSPP(F)*		

Note: Lubricant outlet must use Lincoln Quicklub fittings. See Divider Valve Accessories section.

* 241650 stainless steel adapter available to convert inlet to 1/8" NPTF (F).

Model No.		Maximum Number of Outlets	Cycle Indicator Pin	Dimension A in. / mm
Carbon Steel	303 Stainless Steel			
619-27121-1		6	No	2.36 / 60
619-27122-1	619-27472-1		Yes	
619-26396-2		8	No	2.95 / 75
619-26646-2	619-27474-1		Yes	
619-26844-1		10	No	3.54 / 90
619-26845-2	619-27476-1		Yes	
619-26398-2		12	No	4.14 / 105
619-26648-2	619-27478-1		Yes	
619-29400-1		14	No	4.8 / 120
619-28899-1			Yes	
619-29401-1		16	No	5.4 / 135
619-28900-1			Yes	
619-28901-1		18	Yes	6.50 / 165

Note: You must use outlets 1 and 2 for each of the above referenced models to allow the system to operate properly.

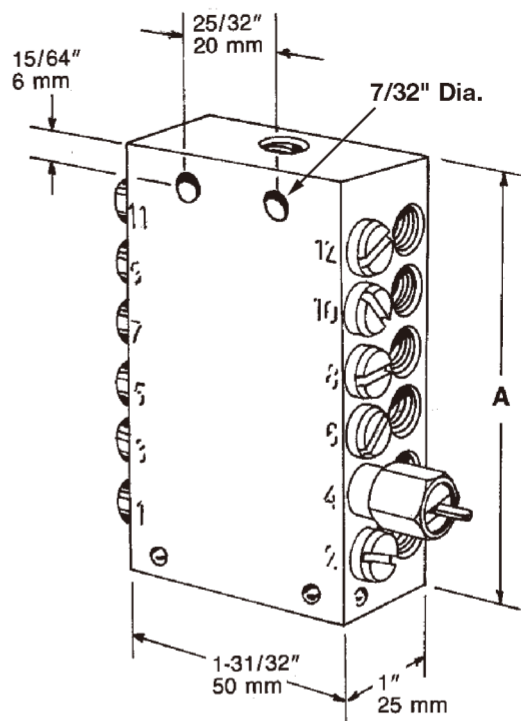
SSV Divider Valve Accessories

Model Number	Description
249010	Cycle switch for providing feedback monitoring for SSV systems - 11" cable / 26-gauge wire
249982	Cycle switch for providing feedback monitoring for SSV systems - 32" cable / 22-gauge wire
234-13178-1	Proximity switch with open-end plug

Note: Cycle switch can only be used with SSV Series Quicklub valves that have indicator pins. Remove slotted plug from indicator assembly on valve prior to installing switch.

SSVM Divider Valves

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The SSVM Divider Valve is smaller in overall size than the SSV series and provides smaller volume output per outlet. Available with six to 12 outlets, the SSVM series valve is used primarily in oil system applications.

Specifications:

Construction Material	Maximum Operating Pressure	Output/Cycle per Outlet cu. in. / cc	Lubricant Inlet	Operating Temperature	
				Min.	Max.
Carbon Steel	2900 psig / 200 bar	.0037 / .07	1/8" NPTF(F)	-22°F (-25°C)	212°F (70°C)

Model No.	Maximum Number of Outlets	Cycle Indicator Pin	Dimension A in. / mm
Carbon Steel			
619-26764-1	6	No	1.91 / 48.5
619-26765-3		Yes	
619-26650-1	8	No	2.36 / 60
619-26651-3		Yes	
619-26848-1	10	No	2.81 / 71.5
619-26849-2		Yes	
619-26653-1	12	No	3.26 / 83
619-26654-3		Yes	

Note: You must use outlets 1 and 2 in all systems.



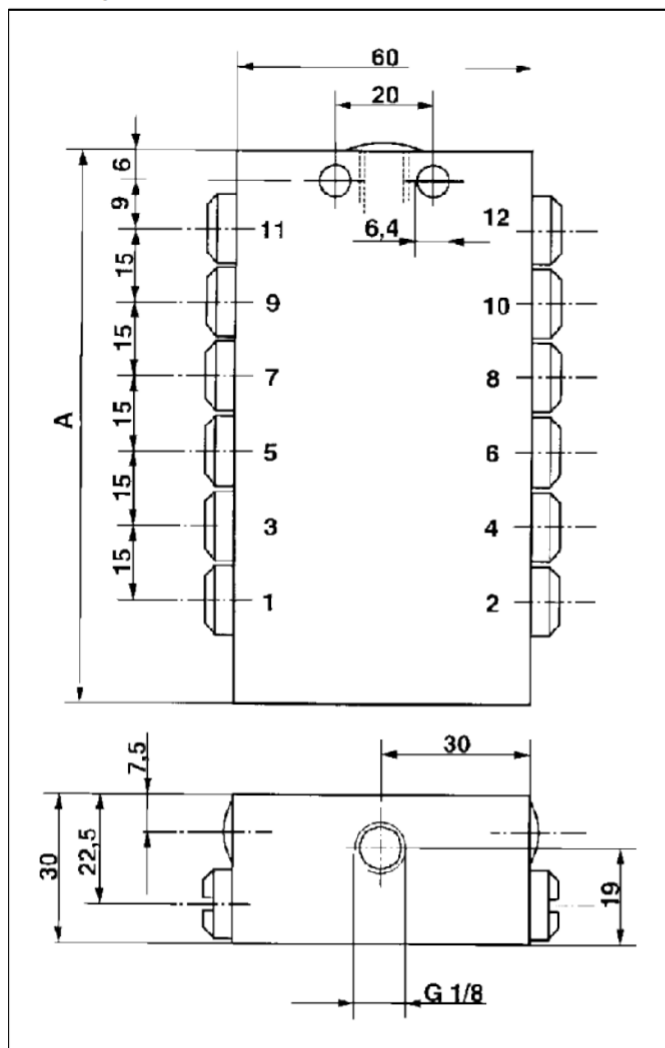
Divider Valve Accessories

Model Number	Description
619-36732-1	Demonstration Valve

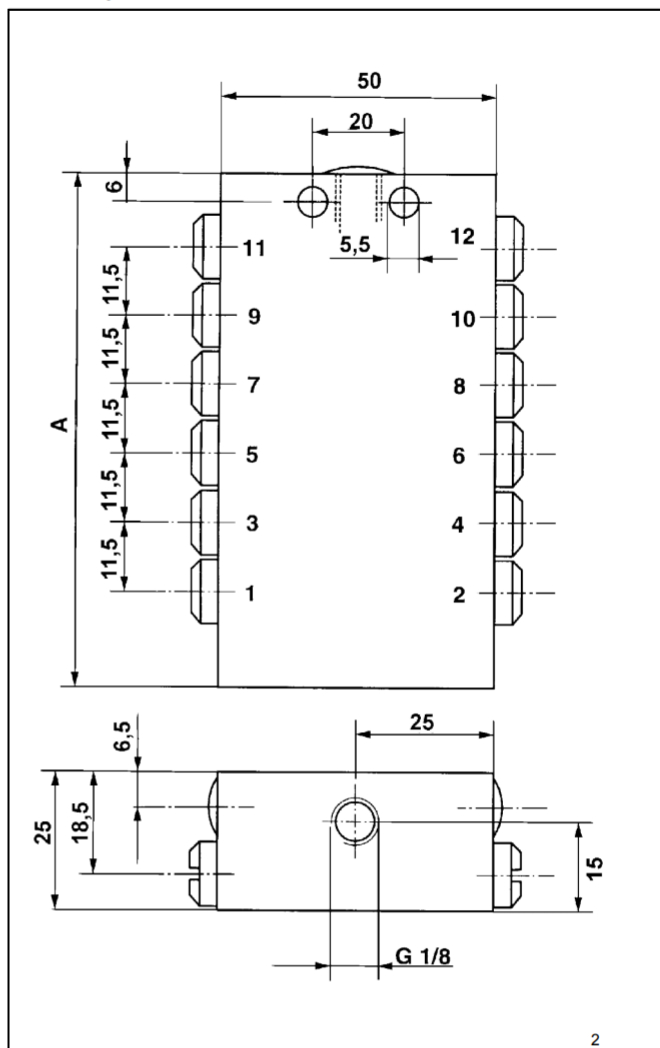
Technical Data, continuation

Dimensions

Metering Devices Model SSV6 to 22 & SSV6-E to 22-E



Metering Devices Model SSV M 6 to SSV M 12



Model SSV & SSV-E	Dimensions A in
	<u>mm</u>
6	60
8	75
10	90
12	105
14	120
16	135
18	150
20	165
22	180

Model SSV M	Dimensions A in mm
6	48,5
8	60
10	71,5
12	83

Examples: Standard and preassembled metering devices

Metering device	SSV	6										
Metering device	SSV	6	- KS	BU -								1.4305
Metering device	SSV	12	- KN	DI -					A			
Metering device	SSV	10	- K									
Metering device	SSV	8	- KA	-						EX		
Metering device	SSV	8	S - KN	TE								
Metering device	SSV	6	S - NP	- RV 6			/ WEKV 6					
Metering device	SSV	8	S - K	-		RWV 6	/ WEKV 6					
¹⁾ Metering device	SSV	8	- K	- RV 6			/ GEKV 6*					
Metering device	SSV	8	- KN	TU - RV 6			/ GE 10					
¹⁾ Metering device	SSV	10	S - N	- RV 6			/ WE 6*					
Metering device	SSV	10	S - KN	SI - RV 6 +		RWV 6	/ GEKV					

- SSV = Lubricant metering device

- 6-22

- without designation = screw type

- S = push-in type

- without = no monitoring

- K = with indicator pin
- KS = with indicator pin and limit switch
- KN = with indicator pin and proximity switch
- KA = with indicator pin and adapter
(proximity switch on the part of the user)
- N = with piston detector (2-wire, with cable)
- NE = with piston detector and bayonet plug
- NP = with piston detector (3-wire, plug with M12, plug-type)

Internal identification symbol for switch design ²⁾

- Without designation = Standard metering device without mounted outlet fitting

- RV 6 = Check valve for tube $\varnothing$ 6 mm, screw type
- for SSV.. S = RV 6 check valve for tube $\varnothing$ 6 mm, push-in type, knurled pliers
- for SSV.. S = RVV 6 check valve for tube $\varnothing$ 6 mm, push-in type, reinforced pliers

e. G. GE 6/8/10, WE 6/8/10

- inlet fitting, screw type for tube $\varnothing$ 6, 8 or 10 mm
for SSV..S push-in fitting for tube $\varnothing$ 6 mm

- e. G. GEKV 6, WEKV 6
push-in fitting, for main and secondary metering devices
always with reinforced pliers

- A = 1/8 NPTF internal thread

- Ex = Switch, explosion-proof

- Without designation = standard design (steel)

- 1.4305 = steel V2A
- 1.4571 = steel V4A

Progressive Metering Devices SSV& Connecting Elements

Progressive Metering Device SSV (Standard Version)

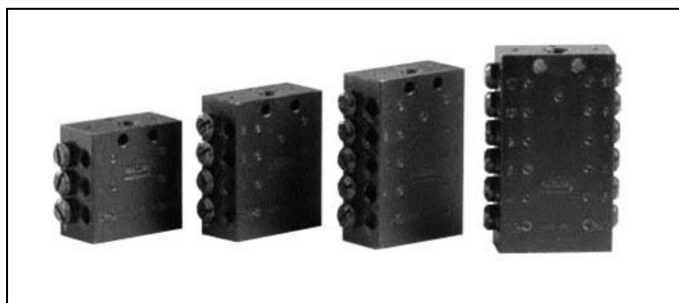


Fig. 6-1 Assortment progressive metering devices SSV (standard version)

Model	Fixing $\square$ in mm	Part no.
SSV 6	6,4	619-26473-1
SSV 8	6,4	619-25730-2
SSV 10	6,4	619-26841-1
SSV 12	6,4	619-25731-2
SSV 14	6,4	619-28862-1
SSV 16	6,4	619-28863-1
SSV 18	6,4	619-28864-1
SSV 20	6,4	619-28865-1
SSV 22	6,4	619-28866-1
		303-19716-1

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