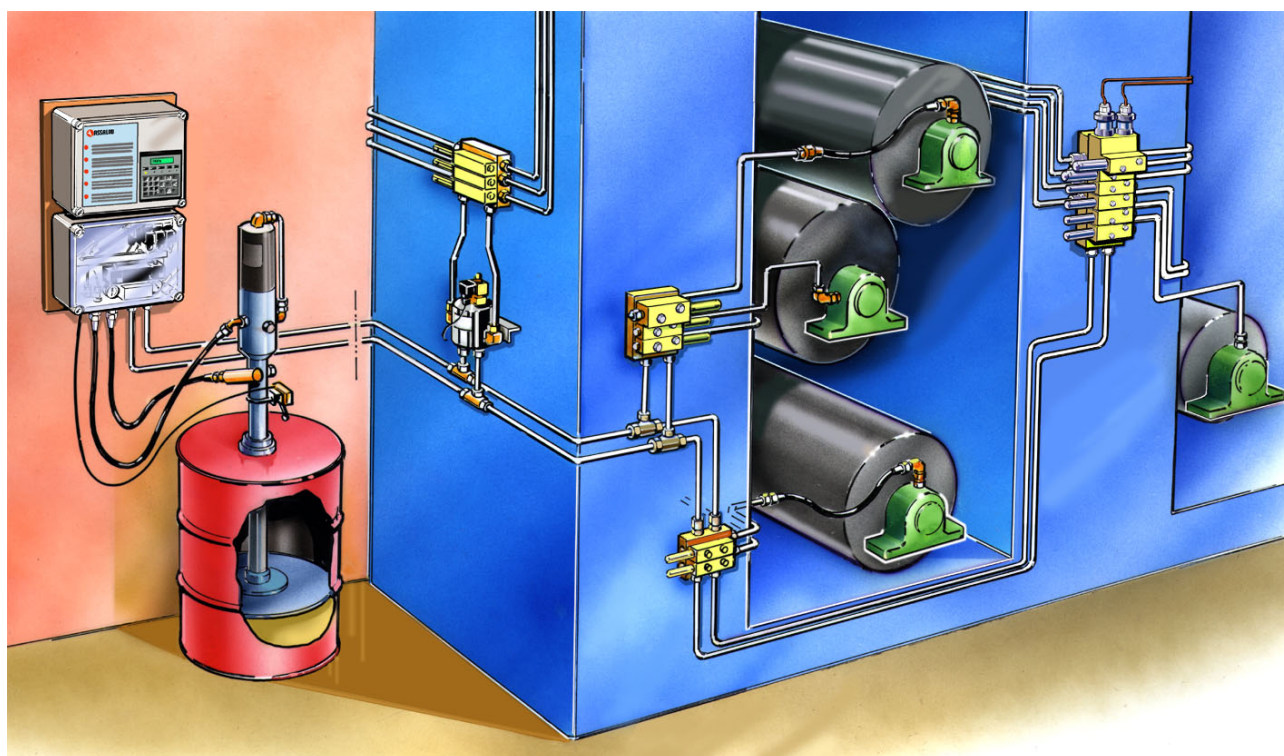


INSTRUCTION MANUAL

DUAL-LINE SYSTEM



CONTENTS

DEFINITIONS.....3

FUNCTION DESCRIPTION.....4

SYSTEM SETTINGS.....5

INSPECTION AND MAINTENANCE7

PUMP CONTROL CENTRE AG 2009

ADJUSTING THE DOSERS.....22

PRESSURE TRANSDUCER PACKAGE.....31

TROUBLESHOOTING36

MAINTAINING LUBRICATION DURING A CONTROL CENTRE BREAKDOWN37

DEFINITIONS

LUBRICATION CYCLE

The time between lubrications at each individual lubrication point, i.e. two pressure operation periods and two pause periods.

SET PUMPING PERIOD

The maximum time for pressure operation before an alarm is issued.

PRESSURE OPERATING PERIOD

The time from pump start-up until its set pressure is reached and the pump is stopped.

CENTRAL CONTROL UNIT

The PLC-based electronic unit which takes care of all of the functions in the grease lubrication system.

CENTRAL PUMP CONTROL

The pneumatic pump unit including pump, reversing valve, FRL unit and magnetic valves for distributing lubricant into the pipe system.

OR

Electrically-powered grease pump with an electrically-controlled reversing valve.

MAIN LINE

The pipe network through which the lubricant is conducted to the dosing groups.
The pipe network consists of two lines.

BRANCH PIPE NETWORK

The pipe network that branches out from the main pipe network to the dosing groups.

LUBRICATION PIPE

The pipe between dosers and lubrication point.

CHANNEL

A separate part of the lubrication system with its own settings for pressure and periods.

SHUT-OFF VALVE

The valve for shutting off the channel from the rest of the lubrication system.
Also used for machine control.

DOSERS

A component making it possible to determine a dosed volume for respective lubrication points.

BASE PLATE

The component on which 1-6 dosers can be mounted.

DOSING GROUP

This consists of a base plate and 1-6 dosers.

PRESSURE SWITCH

A component with an alternating microswitch function when the set pressure has been reached.

PRESSURE TRANSDUCER

A component that transmits the current pressure to the central control unit where the equalising pressure is set.

FUNCTION DESCRIPTION

FUNCTION

The grease lubrication system is hydraulic in function. The lubricant is pumped by a pneumatically-operated drum pump from the grease drum via a pipe system to the respective dosers. The dosers function in accordance with the hydraulic principle and feed a pre-set volume of lubricant to the respective lubrication points.

The lubrication system functions in accordance with the outline below. After a complete lubrication cycle, all lubrication points have been given a set volume of lubricant.

Pause period Line I	Pressure operating period Line I	Pause period Line II	Pressure operating period Line II
Complete lubrication cycle			

Lubrication is monitored by a PLC-based central control unit in accordance with the set pause periods and pumping periods.

The system covers monitoring of both the pressure and the level of lubricant. If, during the pressure operating period, the pressure does not reach the set equalising pressure or if the volume of lubricant drops below a set level on the level switch, the pressure operation is interrupted and the central control unit issues an alarm. If there is a central control unit with several channels and pumping stations, only those channels that are issuing the pressure and low-level alarms will stop, other channels will continue as normal.

The central control unit is fitted with a machine-locking device that stops lubrication of the current channel if the machine is not in operation.

SYSTEM SETTINGS

SETTING AIR PRESSURE

The drum pump, operated by air pressure, has an output ratio of 1:65.

The recommended air pressure is 3 - 5 bar, which means that the output system pressure is approx. 195 - 325 bar.

The air pressure is set using a pressure regulator.

SETTING THE PRESSURE TRANSDUCER

The pressure of the system is monitored by the pressure transducer pack installed most remotely in the system.

The desired equalisation pressure is set in the central control unit. The settings that can be made are between 0 and 250 bar, but usually the equalisation pressure is set at 80 to 120 bar.

SETTING THE PRESSURE OPERATION PERIOD

In conjunction with test-running the system, a measurement is made of the time taken for the respective pressure transducers to reach the desired equalisation pressure.

The time set as the maximum pressure operation period in the control centre must be approx. 1.5 times longer than the time measured during test-running.

The pause period is customised in order to cater for the lubrication points requiring most frequent lubrication.

Note that each channel can have individually customised times set for pause period as well as pressure operation period (on condition that a multi-channel central control unit is available). In the event of any questions, please contact ASSALUB AB.

VOLUME OF LUBRICANT

The volume of lubricant which a roller bearing requires can be extracted from the following formula:

$$\frac{\text{Bearing width (mm)} \times \text{outer diameter (mm)}}{600}$$

The result gives the amount of lubricant in grams required by the bearing over one week. Because of the above formula, a suitable pause period and size of dose can be determined.

Note that this formula is appropriate for a relatively rough setting. A fine adjustment will be made in situ on the basis of other operating conditions. We recommend that the system is checked every second month.

In the event of any questions, please consult ASSALUB AB.

Tel: +46 (0)120 358 40

Fax: +46 (0)120 152 11

E-mail: info@assalub.se

Web site: www.assalub.se

INSPECTION AND MAINTENANCE

GENERAL

Inspections and any potential remedial action should be carried out periodically:

- Inspect the FRL unit of the pump's central control unit. As required, the mist lubricator should be charged with the appropriate type of oil.
- In conjunction with a change of drum, clean the grease filter sitting on the pump.
- Inspect the condition of the pipes.
- Inspect doser function 1 - 2 times per month.

Warning: Always make a habit of choking the compressed air supply prior to charging the mist lubricator.

INSPECTION OF DOSER FUNCTION

When inspecting the function of the dosers, pressurise the system. Do this manually from the substation.

If a substation supplies several channels with lubricant, open the desired channel's line valve at the outset.

Next, open the LINE 1 magnetic valve in the substation, followed by the PUMP magnetic valve. The pump will then start to pump out the lubricant into Line 1. When the manometer for line 1 shows approx. 250 bar, close the PUMP magnetic valve.

Then, check that all indicator flags for the dosers are in the same end position.

Then, depressurise the system by closing the LINE 1 magnetic valve.

Wait a few minutes and carry out the same procedure on Line 2, differing in that LINE 2 should be opened instead of LINE 1.

When approx. 250 bar has been reached on Line 2, all indicator flags on the dosers should have moved to the second end position.

REMEMBER to reset all magnetic valves to the normal position after testing is completed, otherwise the system will not function correctly.

Inspect the dosers one week after start-up, and repeat every second week thereafter. In cases where there is over or underlubrication, adjust the respective dosers accordingly. Inspect lubrication pipes and hoses every second week.

REPLACING THE DRUM OF LUBRICANT

The lubricant is normally pumped out into the system by a drum pump mounted in the original drum.

Set the level sensor on the pump so that it gives a low-level indication before the drum is completely empty in order to avoid air being pumped out into the system.

LUBRICANTS

Lubricants are selected with regard to the type of bearing, sliding surface, etc., and the ambient temperature.

If conditions are cool in the location where the lubrication system has been installed, investigate whether the lubricant will be pumpable in these conditions also.

Consult the manufacturer of the lubricant in the case of any doubt.

PUMP CONTROL CENTRE AG 200

Pump control centre AG 200 (item no. 101800) consists of a pneumatically-operated drum pump, three magnetic valves, directional valve, an FRL unit and a hose to connect the grease drum and the directional valve.

The pump included is a pneumatically-operated drum pump designed to be installed in the drum.

The pump is designed for pumping grease up to NLGI 2 with a maximum air pressure of 10 bar.

Under normal operating conditions, the air pressure is set between 4-7 bar.

The pump's pressure ratio is 1:65, which means that the grease pressure is approx. 320 bar at the outflow, when the air pressure is 5 bar.

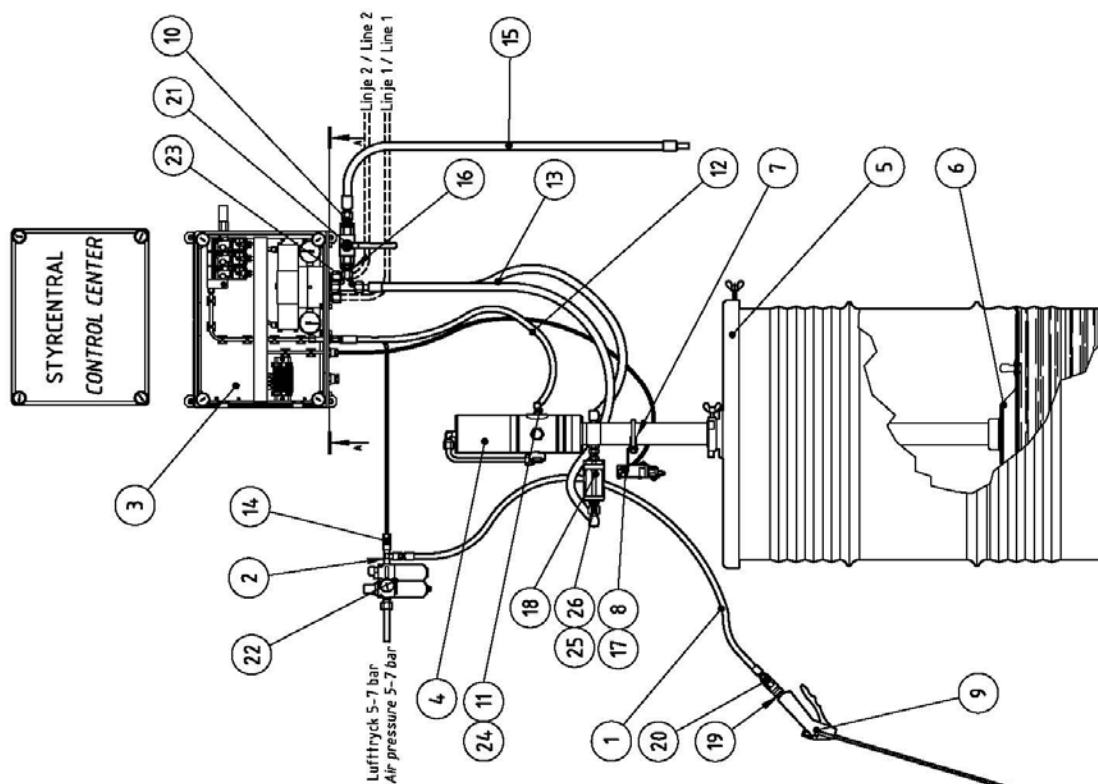
When the set pause period has passed, the **PUMP** magnetic valve is opened, opening up the air supply to the pump's air motor.

At the same time, the **LINE 1** magnetic valve is opened, influencing Line 1 in the directional valve.

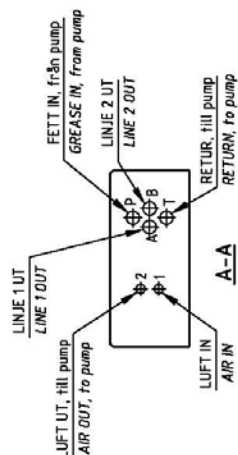
When all dosing modules are set for dosing a pre-set volume of grease, the pump continues to work until a set pressure is indicated on the pressure switch/pressure transducer, fitted on the end.

When the pressure is equalised, power is removed from all magnetic valves, after which the line valve returns to the mid-position and the excess grease is conducted via the return channel in the pump back to the grease drum.

After a further pause period, the same procedure is repeated for Line 2.

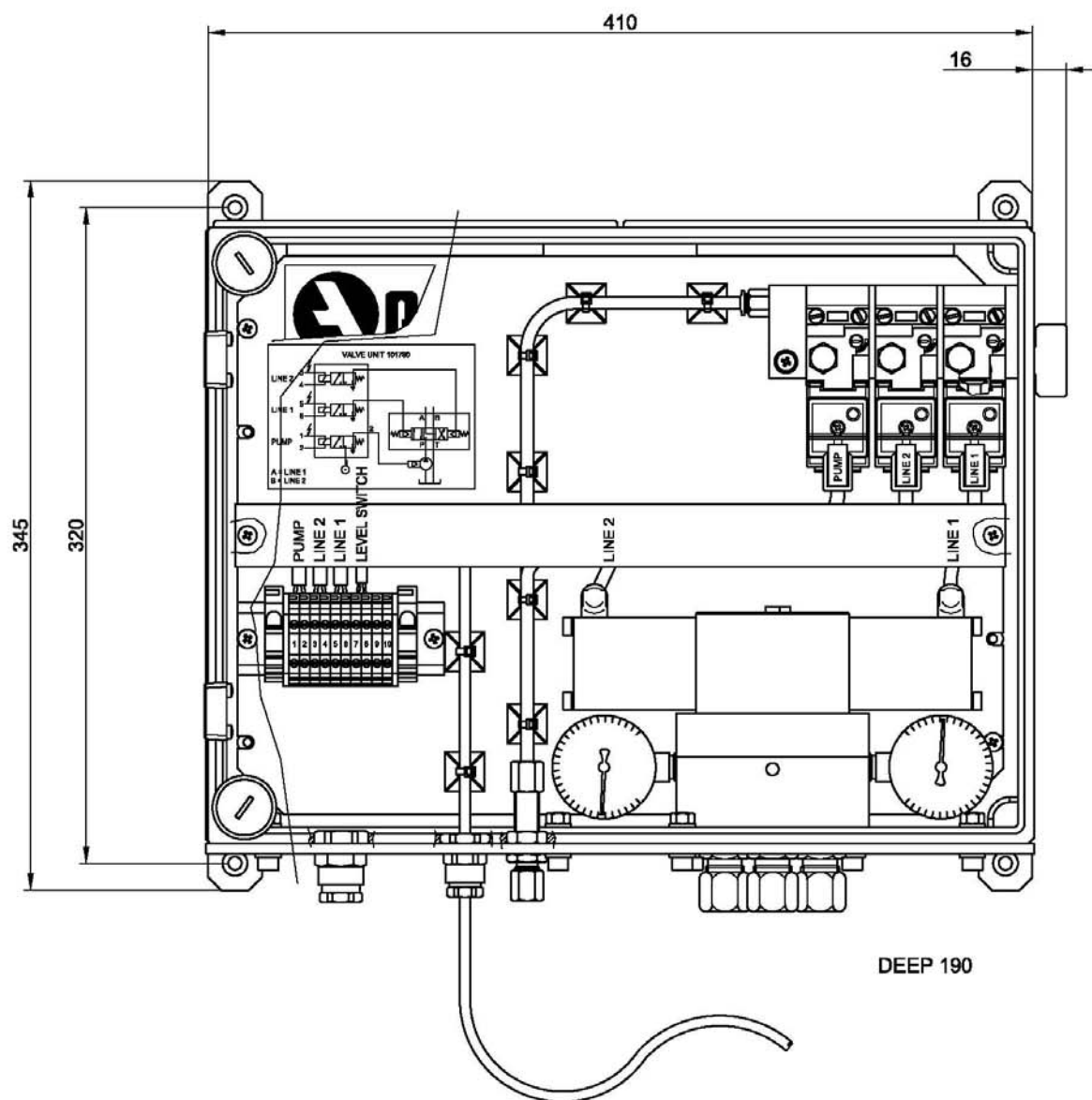


ÄNDRINGAR CHANGES			
NR	NO	DATUM DATE	SIGN. SIGN.
1		2002-12-04	kf
2		2003-06-18	kf
3		2004-06-09	kf

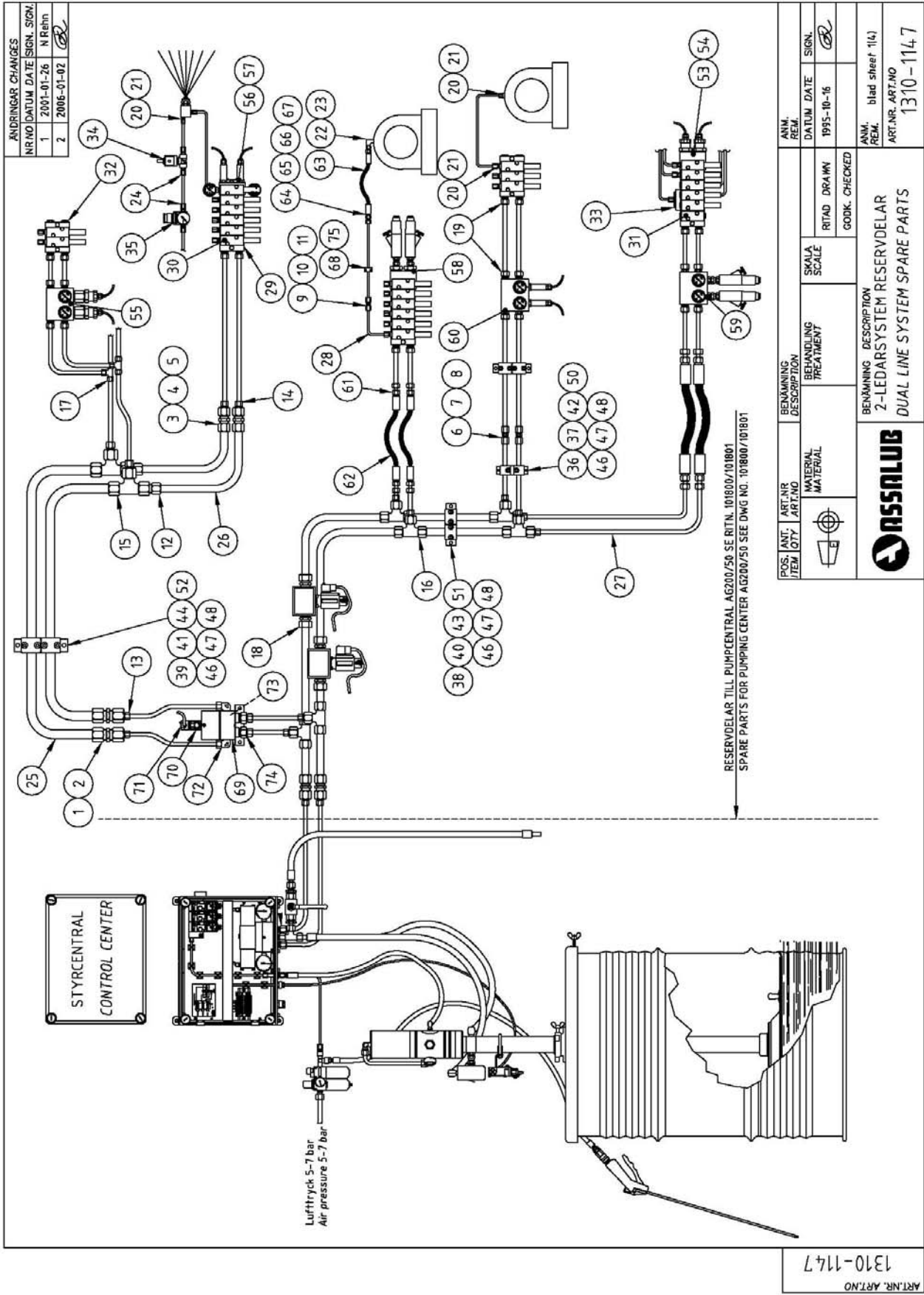
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VALVE UNIT 101780

DIMENSIONS



101780-dim-en.dwg

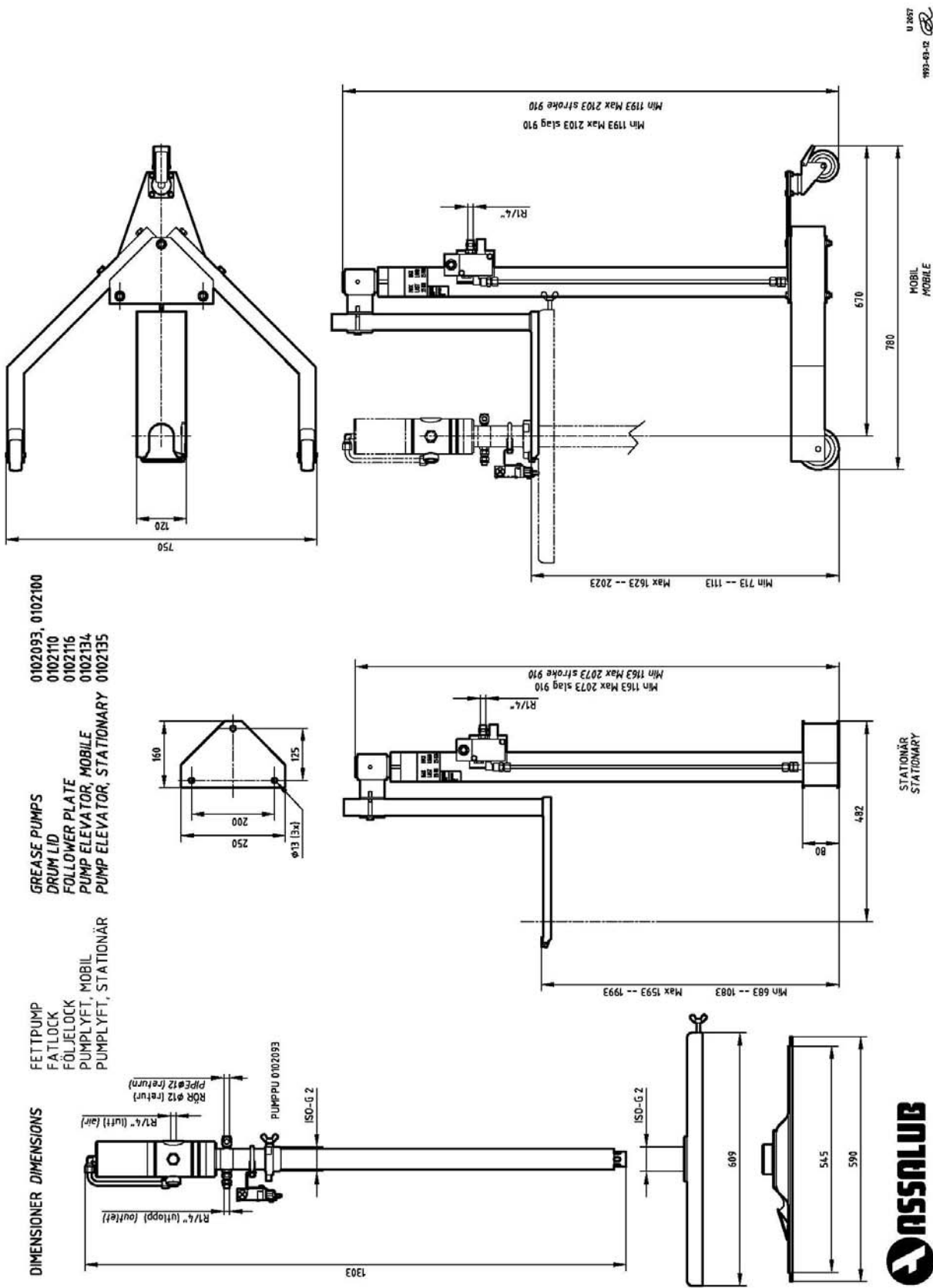


POS	ART.NO	BENÄMNING	DESCRIPTION
1	3201039	G 28 L FZ RÖRKOPPLING	G 28 L ZC STRAIGHT COUPLING
1	3204039	G 28 L SF RÖRKOPPLING	G 28 L AISI 316 STRAIGHT COUPLING
2	3204073	DPR 28 L FZ SKÄRRING	DPR 28 L ZC CUT RING
2	3204073	DPR 28 L SF SKÄRRING	DPR 28 L AISI 316 CUT RING
3	3201037	G 22 L FZ RÖRKOPPLING	G 22 L ZC STRAIGHT COUPLING
3	3204037	G 22 L SF RÖRKOPPLING	G 22 L AISI 316 STRAIGHT COUPLING
4	3201071	DPR 22 L FZ SKÄRRING	DPR 22 L ZC CUT RING
4	3204071	DPR 22 L SF SKÄRRING	DPR 22 L AISI 316 CUT RING
5	3201170	M 22 L FZ MUTTER	M 22 L ZC NUT
5	3204047	M 22 L SF MUTTER	M 22 L AISI 316 NUT
6	903992	G 12 L FZ RÖRKOPPLING	G 12 L ZC STRAIGHT COUPLING
6	3204034	G 12 L SF RÖRKOPPLING	G 12 L AISI 316 STRAIGHT COUPLING
7	3201070	DPR 12 L FZ SKÄRRING	DPR 12 L ZC CUT RING
7	3204070	DPR 12 L SF SKÄRRING	DPR 12 L AISI 316 CUT RING
8	3201062	M 12 L FZ MUTTER	M 12 L ZC NUT
8	3204046	M 12 L SF MUTTER	M 12 L AISI 316 NUT
9	3201235	G 6 L FZ RÖRKOPPLING	G 6 L ZC STRAIGHT COUPLING
9	3204201	G 6 L SF RÖRKOPPLING	G 6 L AISI 316 STRAIGHT COUPLING
10	3204066	DPR 6 L FZ SKÄRRING	DPR 6 L ZC CUT RING
10	3201066	DPR 6 L SF SKÄRRING	DPR 6 L AISI 316 CUT RING
11	3201062	M 6 L FZ MUTTER	M 6 L ZC NUT
11	3204046	M 6 L SF MUTTER	M 6 L AISI 316 NUT
12	3201046	KOR 28/22 FZ RÖRREDUCERING	KOR 28/22 ZC TUBE REDUCTION
12	3204027	KOR 28/22 SF RÖRREDUCERING	KOR 28/22 AISI 316 TUBE REDUCTION
13	3201095	KOR 28/12 FZ RÖRREDUCERING	KOR 28/12 ZC TUBE REDUCTION
13	3204093	KOR 28/12 SF RÖRREDUCERING	KOR 28/12 AISI 316 TUBE REDUCTION
14	3201043	KOR 22/12 FZ RÖRREDUCERING	KOR 22/12 ZC TUBE REDUCTION
14	3204043	KOR 22/12 SF RÖRREDUCERING	KOR 22/12 AISI 316 TUBE REDUCTION
15	3201008	T 28 L FZ T-KOPPLING	T 28 L ZC T-COUPLING
15	3204008	T 28 L SF T-KOPPLING	T 28 L AISI 316 T-COUPLING
16	3201005	T 22 L FZ T-KOPPLING	T 22 L ZC T-COUPLING
16	3204005	T 22 L SF T-KOPPLING	T 22 L AISI 316 T-COUPLING
17	3201004	T 12 L FZ T-KOPPLING	T 12 L ZC T-COUPLING
17	3204004	T 12 L SF T-KOPPLING	T 12 L AISI 316 T-COUPLING
18	3201172	GE 22 LR 1/2 FZ RÖRKOPPLING	GE 22 LR 1/2 ZC STRAIGHT COUPLING
18	906430	GE 22 LR 1/2 SF RÖRKOPPLING	GE 22 LR 1/2 AISI 316 STRAIGHT COUPLING
19	3201019	GE 12 LR 1/4 FZ RÖRKOPPLING	GE 12 LR 1/4 ZC STRAIGHT COUPLING
19	3204019	GE 12 LR 1/4 SF RÖRKOPPLING	GE 12 LR 1/4 AISI 316 STRAIGHT COUPLING
20	900016	GE 6 LR 1/8 FZ RÖRKOPPLING	GE 6 LR 1/8 ZC STRAIGHT COUPLING
20	3204200	GE 6 LR 1/8 SF RÖRKOPPLING	GE 6 LR 1/8 AISI 316 STRAIGHT COUPLING
21	903997	GE 6 LLR KR 1/8 FZ RÖRKOPPLING	GE 6 LLR KR 1/8 ZC STRAIGHT COUPLING
21	3204014	GE 6 LLR 1/8 SF RÖRKOPPLING	GE 6 LLR 1/8 AISI 316 STRAIGHT COUPLING
22	904062	WE 6 LLR 1/8 FZ RÖRKOPPLING	WE 6 LLR 1/8 ZC STRAIGHT COUPLING
22	3204024	WE 6 LLR 1/8 S SF RÖRKOPPLING	WE 6 LLR 1/8 S AISI 316 STRAIGHT COUPLING
23	3201139	WE 6 LR 1/8 FZ RÖRKOPPLING	WE 6 LR 1/8 ZC STRAIGHT COUPLING
23	3204090	WE 6 LR 1/8 SF RÖRKOPPLING	WE 6 LR 1/8 AISI 316 STRAIGHT COUPLING
24	906143	GE 6 LR 1/4 FZ RÖRKOPPLING	GE 6 LR 1/4 ZC STRAIGHT COUPLING
24	903013	GE 6 LR 1/4 SF RÖRKOPPLING	GE 6 LR 1/4 AISI 316 STRAIGHT COUPLING
25	3102009	Rör 28x2,5 FZ	Tube 28x2,5 ZC
25	3104006	Rör 28x2,5 SF	Tube 28x2,5 AISI 316

26	3102007	Rör 22x2 FZ	Tube 22x2 ZC
26	3104003	Rör 22x2 SF	Tube 22x2 AISI 316
27	900172	Rör 12x1 FZ	Tube 12x1 ZC
27	3104002	Rör 12x1 SF	Tube 12x1 AISI 316
28	900169	Rör 6x1 FZ	Tube 6x1 ZC
28	902579	Rör 6x1 SF	Tube 6x1 AISI 316
29	101764	BOTTENPLATTA BP1 AL	BASEPLATE BP1 AL
29	101765	BOTTENPLATTA BP1 SF	BASEPLATE BP1 AISI 316
29	101766	BOTTENPLATTA BP2 AL	BASEPLATE BP2 AL
29	101767	BOTTENPLATTA BP2 SF	BASEPLATE BP2 AISI 316
29	101768	BOTTENPLATTA BP3 AL	BASEPLATE BP3 AL
29	101769	BOTTENPLATTA BP3 SF	BASEPLATE BP3 AISI 316
29	101770	BOTTENPLATTA BP4 AL	BASEPLATE BP4 AL
29	101771	BOTTENPLATTA BP4 SF	BASEPLATE BP4 AISI 316
29	101772	BOTTENPLATTA BP5 AL	BASEPLATE BP5 AL
29	101773	BOTTENPLATTA BP5 SF	BASEPLATE BP5 AISI 316
29	101774	BOTTENPLATTA BP6 AL	BASEPLATE BP6 AL
29	101775	BOTTENPLATTA BP6 SF	BASEPLATE BP6 AISI 316
30	101728	FETDOSERARE, GD012 FZ	GREASE DOSER, GD012 ZC
30	101729	FETDOSERARE, GD012 SF	GREASE DOSER, GD012 AISI 316
30	101730	FETDOSERARE, GD011 FZ	GREASE DOSER, GD011 ZC
30	101731	FETDOSERARE, GD011 SF	GREASE DOSER, GD011 AISI 316
30	101732	FETDOSERARE, GD12 FZ	GREASE DOSER, GD12 ZC
30	101733	FETDOSERARE, GD12 SF	GREASE DOSER, GD12 AISI 316
30	101734	FETDOSERARE, GD11 FZ	GREASE DOSER, GD11 ZC
30	101735	FETDOSERARE, GD11 SF	GREASE DOSER, GD11 AISI 316
30	101736	FETDOSERARE, GD22 FZ	GREASE DOSER, GD22 ZC
30	101737	FETDOSERARE, GD22 SF	GREASE DOSER, GD22 AISI 316
30	101738	FETDOSERARE, GD21 FZ	GREASE DOSER, GD21 ZC
30	101739	FETDOSERARE, GD21 SF	GREASE DOSER, GD21 AISI 316
31	101796	TÄCKPLATTA GD 0 AL	COVER PLATE GD 0 AL
31	101797	TÄCKPLATTA GD 0 SF	COVER PLATE GD 0 AISI 316
32	121113	PLUGG 1/4" FZ	PLUG 1/4 ZC
32	121114	PLUGG 1/4" SF	PLUG 1/4 AISI 316
33	101803	SAMMANBINDNINGSBLOCK 2-1 AL	CROS PORTING BAR 2-1 AL
33	101804	SAMMANBINDNINGSBLOCK 2-1 SF	CROS PORTING BAR 2-1 AISI 316
33	101805	SAMMANBINDNINGSBLOCK 3-1 AL	CROS PORTING BAR 3-1 AL
33	101806	SAMMANBINDNINGSBLOCK 3-1 SF	CROS PORTING BAR 3-1 AISI 316
34	906299	MAGNETVENT 3/2 NC 1/4" 24V DC 10BAR	SOLENOID VALVE 3/2 NC 1/4" 24V DC 10BAR
35	230447	TRYCKREGULATOR ISO-G 1/4" 0-10 BAR	PRESSURE REGULATOR ISO-G 1/4" 0-10 BAR
36	101601	SKENA FÖR RÖRKLAMMER 1x12	MOUNTING RAIL FOR STAUFF 1x12
37	101602	SKENA FÖR RÖRKLAMMER 2x12	MOUNTING RAIL FOR STAUFF 2x12
38	101603	SKENA FÖR RÖRKLAMMER 2x22	MOUNTING RAIL FOR STAUFF 2x22
39	101604	SKENA FÖR RÖRKLAMMER 2x28	MOUNTING RAIL FOR STAUFF 2x28
40	101605	SKENA FÖR RÖRKLAMMER 1x22	MOUNTING RAIL FOR STAUFF 1x22
41	101606	SKENA FÖR RÖRKLAMMER 1x28	MOUNTING RAIL FOR STAUFF 1x28
42	3413005	RÖRHÅLLARE Ø12MM	TUBE CLAMP Ø12MM
43	3413002	RÖRHÅLLARE Ø22MM	TUBE CLAMP Ø22MM
44	3413004	RÖRHÅLLARE Ø28MM	TUBE CLAMP Ø28MM
45	3402031	EXPANDERBULT M6x100 FZ	EXPANDING SCREW M6X100 ZC
46	3402030	EXPANDERBULT M6x65 FZ	EXPANDING SCREW M6X65 ZC
47	3402073	SKRUV 6KSS 4,5 X30,0 FZ	SCREW 6KSS 4,5 X30,0 ZC

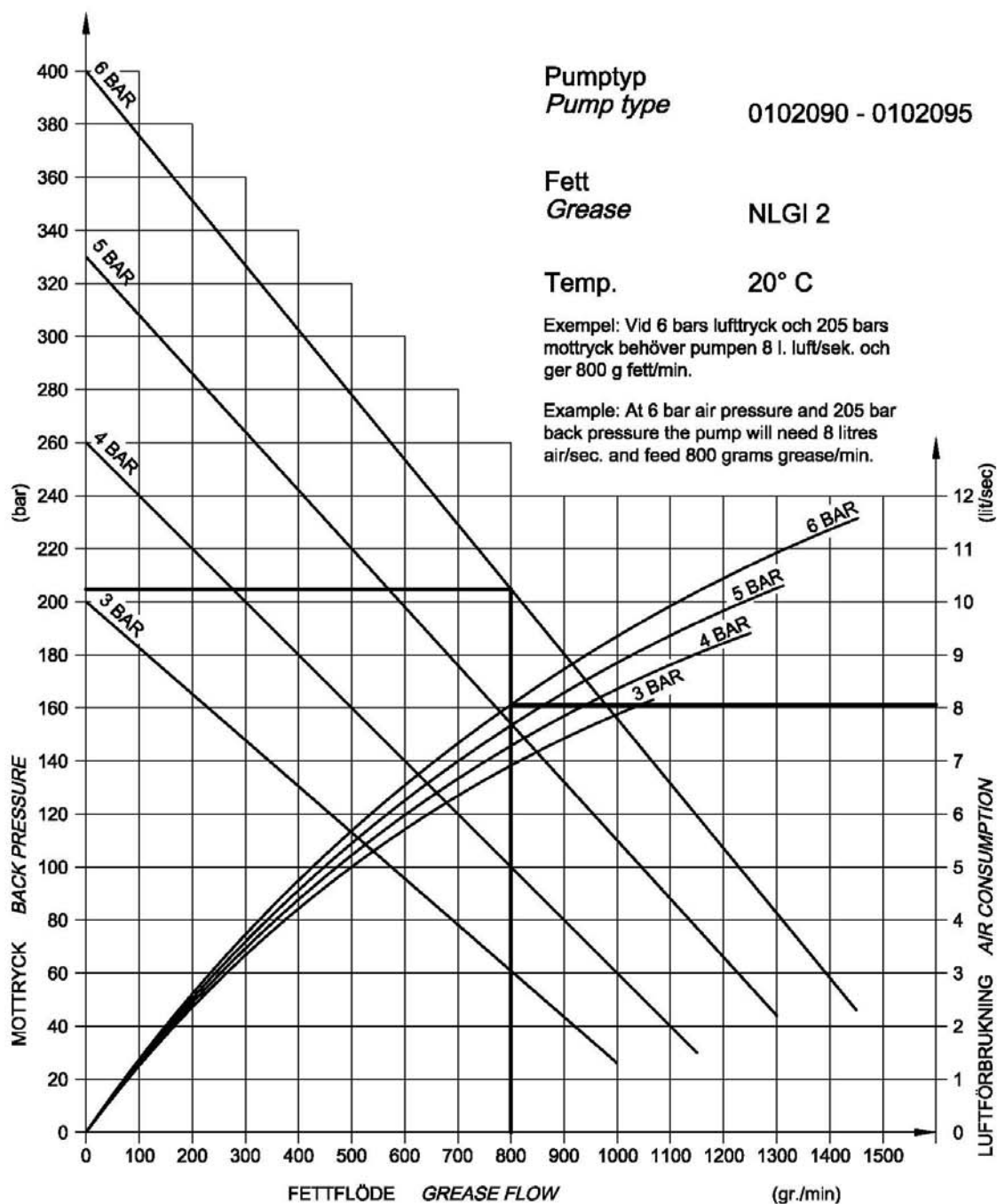
48	3413073	PLASTPLUGG S-6 KRAGE 6X30	PLASTIC PLUG 6x30
49	903088	M8x40 SKRUV	M8x40 SCREW
50	903370	SKRUV 6x20 FZ	SCREW 6x20 ZC
51	3402021	SKRUV 6x30 FZ	SCREW 6x30 ZC
52	3402023	SKRUV 6x35 FZ	SCREW 6x35 ZC
53	101782	TRYCKGIVARPAKET AL ISO-G 3/4	PRESSURE TRANSDUCER KIT AL ISO-G 3/4
	121068	HUS AL	HOUSING AL
	906234	O-RING 6,3X2,4	O-RING 6,3X2,4
	906275	TRYCKGIVARE ISO-G 3/4 0-250 BAR SF	PRESSURE TRANSDUCER ISO-G 3/4 0-250 BAR AISI 316
	906277	M6S 6x80 FZ	M6S 6x80 ZC
	906279	M6S 6x90 FZ	M6S 6x90 ZC
	906582	PLUGG ISO-G 1/4 INSEX FZ	PLUGG ISO-G 1/4 HEXAGONAL ZC
54	101782	TRYCKGIVARPAKET AL ISO-G 3/4	PRESSURE TRANSDUCER KIT AL ISO-G 3/4
	121064	HUS SF	HOUSING AISI 316
	906234	O-RING 6,3X2,4	O-RING 6,3X2,4
	906275	TRYCKGIVARE ISO-G 3/4 0-250 BAR SF	PRESSURE TRANSDUCER ISO-G 3/4 0-250 BAR AISI 316
	906278	M6S 6x80 SF	M6S 6x80 AISI 316
	906280	M6S 6x90 SF	M6S 6x90 AISI 316
	906582	PLUGG ISO-G 1/4 INSEX SF	PLUGG ISO-G 1/4 HEXAGONAL AISI 316
55	101907	TRYCKGIVARPAKET RÖRMONTERAT ISO-G 3/4	PRESSURE TRANSDUCER UNIT, PIPE MOUN ISO-G 3/4
	121183	HUS AL	HOUSING AL
	906929	ADAPTER RI 1/4" - 3/4" FZ	ADAPTER RI 1/4" - 3/4" FZ
	906275	TRYCKGIVARE ISO-G 3/4 0-250 BAR SF	PRESSURE TRANSDUCER ISO-G 3/4 0-250 BAR AISI 316
	S12600850	MANOMETER 0-315 BAR Ø40MM ISO-R 1/8	MANOMETER 0-315 BAR Ø40MM ISO-R 1/8
56	101929	TRYCKGIVARPAKET ISO-G 1/4 AL	PRESSURE TRANSDUCER KIT ISO-G 1/4 AL
	121131	HUS AL	HOUSING AL
	906234	O-RING 6,3X2,4	O-RING 6,3X2,4
	907153	TRYCKGIVARE 0-250 BAR ISO-G 1/4 SF	PRESSURE TRANSDUCER 0-250 BAR ISO-G 1/4 AISI 316
	907133	KONTAKT M12x1 5M KABEL PUR	CONTACT M12x1 5M CABLE PUR
	906277	M6S 6X80 FZ	M6S 6x80 ZC
	3402001	M6S 6X70 FZ	M6S 6x70 ZC
	907152	MANOMETER 0-250 BAR Ø40MM ISO-G 1/8	MANOMETER 0-250 BAR Ø40MM ISO-G 1/8
	906582	PLUGG ISO-G 1/4 INSEX FZ	PLUGG ISO-G 1/4 HEXAGONAL ZC
57	101930	TRYCKGIVARPAKET ISO-G 1/4 SF	PRESSURE TRANSDUCER KIT ISO-G 1/4 AISI 316
	121232	HUS SF	HOUSING AISI 316
	906234	O-RING 6,3X2,4	O-RING 6,3X2,4
	907153	TRYCKGIVARE 0-250 BAR ISO-G 1/4 SF	PRESSURE TRANSDUCER 0-250 BAR ISO-G 1/4 AISI 316
	907133	KONTAKT M12x1 5M KABEL PUR	CONTACT M12x1 5M CABLE PUR
	906278	M6S 6X80 SF	M6S 6x80 AISI 316
	907154	M6S 6X70 SF	M6S 6x70 AISI 316
	907152	MANOMETER 0-250 BAR Ø40MM ISO-G 1/8	MANOMETER 0-250 BAR Ø40MM ISO-G 1/8
	906582	PLUGG ISO-G 1/4 INSEX SF	PLUGG ISO-G 1/4 HEXAGONAL AISI 316
58	101808	TRYCKVAKTSPAKET MODULMONTERAT	PRESSURE SWITCH KIT
	121068	HUS AL	HOUSING AL
	906234	O-RING 6,3X2,4	O-RING 6,3X2,4
	906981	TRYCKVAKT 25 - 250 BAR ISO-G 1/4	PRESSURE SWITCH 25 -250 BAR ISO -G 1/4
	906277	M6S 6x80 FZ	M6S 6x80 ZC
	906279	M6S 6x90 FZ	M6S 6x90 ZC
	900619	TÄTNINGSRING TREDO 14	143 SEALING RING

	902498	ADAPTER ISO-G 1/4 - ISO-G 1/4	ADAPTER ISO-G 1/4 - ISO-G 1/4
	906547	NIPPEL ISO-G 1/4 - ISO-G 3/4 FZ	NIPPLE ISO-G 1/4 - ISO-G 3/4 FZ
	0002326	PACKNING 27x32 CU	PACKING 27x32 CU
		NYTT UTFÖRANDE	NEW EDITION
	121131	HUS AL	HOUSING AL
	907152	MANOMETER 0-250 BAR Ø40MM ISO-G 1/8	MANOMETER 0-250 BAR Ø40MM ISO-G 1/8
59	101858	TRYCKVAKTSPAKET RÖRMONTERAT	PRESSURE SWITCH KIT
	121183	HUS	HOUSING
	S12600850	MANOMETER 0-315 BAR Ø40MM ISO-R 1/8	MANOMETER 0-315 BAR Ø40MM ISO-R 1/8
	904757	ADAPTER R1/4-1/4 FZ	ADAPTER R1/4-1/4 ZC
	902498	ADAPTER ISO-G 1/4 - ISO-G 1/4	ADAPTER ISO-G 1/4 - ISO-G 1/4
	900619	TÄTNINGSRING TREDIO 14	143 SEALING RING
60	101858	TRYCKGIVARPAKET ISO-G 1/4 RÖRMONTERAT AL	PRESSURE TRANSDUCER KIT ISO-G 1/4 AL
	121183	HUS AL	HOUSING AL
	S12600850	MANOMETER 0-315 BAR Ø40MM ISO-R 1/8	MANOMETER 0-315 BAR Ø40MM ISO-R 1/8
	907153	TRYCKGIVARE 0-250 BAR ISO-G 1/4 SF	PRESSURE TRANSDUCER 0-250 BAR ISO-G 1/4 AISI 316
61	3204058	STUDS+HYLSA 12MM SF	STUD 12MM AISI 316
61	3201058	STUDS+HYLSA 12MM FZ	STUD 12MM ZC
62	3508009	SLANG R2T 3/82	HOSE R2T 3/8"
63	903023	HÖGTRYCKSSLANG 840 BAR 8,3x2,1	HP HOSE 840 BAR, dia 8.3 x 2.1 mm
64	903024	SKRUVHYLSA FZ / FÖR SLANG 903023	SLEEVE for hose 903023 / Zinc coat
65	903025	RÖRNIPPEL 6MM FZ / FÖR SLANG 903023	HOSE NIPPLE 6mm / zinc coated
66	903026	SKRUVHYLSA SS 2343 TILL 903023	SLEEVE for HP hose 903023 / SS 2343
67	903027	RÖRNIPPEL 6MM SS 2343 TILL 903023	HOSE NIPPLE 6MM / SS 2343
68	3402046	RÖRKLAMMER 6x1 FZ	CLAMP 6x1 ZC
68	3402047	RÖRKLAMMER 6x2 FZ	CLAMP 6x2 ZC
68	3402048	RÖRKLAMMER 6x3 FZ	CLAMP 6x3 ZC
68	3402049	RÖRKLAMMER 6x4 FZ	CLAMP 6x4 ZC
68	3402050	RÖRKLAMMER 6x5 FZ	CLAMP 6x5 ZC
68	3402051	RÖRKLAMMER 6x6 FZ	CLAMP 6x6 ZC
68	3404046	RÖRKLAMMER 6x1 FZ	CLAMP 6x1 AISI 316
68	3404047	RÖRKLAMMER 6x2 FZ	CLAMP 6x2 AISI 316
68	3404048	RÖRKLAMMER 6x3 FZ	CLAMP 6x3 AISI 316
68	3404049	RÖRKLAMMER 6x4 FZ	CLAMP 6x4 AISI 316
68	3404050	RÖRKLAMMER 6x5 FZ	CLAMP 6x5 AISI 316
68	3404051	RÖRKLAMMER 6x6 FZ	CLAMP 6x6 AISI 316
69	101890	FETTVENTIL NC 24V DC	SHUT-OFF VALVE FOR GREASE NC
69	101890-1	FETTVENTIL NC 230V AC	SHUT-OFF VALVE FOR GREASE NC
69	101891	FETTVENTIL NO 24V DC	SHUT-OFF VALVE FOR GREASE NO
69	101891-1	FETTVENTIL NO 230V AC	SHUT-OFF VALVE FOR GREASE NO
70	906224	MAGN. VENTIL 24 V DC NC 5W CNOMO 3/2	SOLENOID VALVE 24V DC NC 5W CNOMO 3/2
70	906936	MAGN. VENTIL 230 V AC NC 8W CNOMO	SOLENOID VALVE 230 V AC NC 8W CNOMO
70	906937	MAGN. VENTIL 230V AC NO 8W CNOMO	SOLENOID VALVE 230 V AC NO 8W CNOMO
70	906862	MAGN. VENTIL 24V DC NO 8W CNOMO 3/2	SOLENOID VALVE 24V DC NO 8W CNOMO 3/2
71	906238	HIRSCMANNKOPPL. M KABEL, DIOD 24V	HIRSCMANN INCL. CABLE, DIOD 24V
71	3201150	HIRSCMANNKOPPL. 230V	HIRSCMANN 230V
72	904071	VINKELKOPPLING WE 12 LR 3/8 FZ	WE 12 LR 3/8 ZC
73	904064	VINKELKOPPLING WE 8 LLR 1/8 FZ	WE 8 LLR 1/8 FZC
74	101892	BACKVENTIL	CHECK VALVE
75	3404104	M6SF-TT 4x10 SF	M6SF-TT 4x10 SF



Reg.No 106.32.38
Rev. 2

PUMPDIAGRAM FETTPUMP 1:65 PUMPING GRAPH GREASE PUMP 1:65



DOSERS AND BASEPLATES

DOSERS – TYPE DESIGNATION

Doser with one outlet

GD 011
GD 11
GD 21

Doser with two outlets

GD 012
GD 12
GD 22

GD XXY ZZ

GD Doser designation

XX Doser size

Y No. of outlets

1 = 1 outlet

2 = 2 outlets

ZZ Material

SS = Acid-resistant steel SS 2343

FZ = Galvanised steel

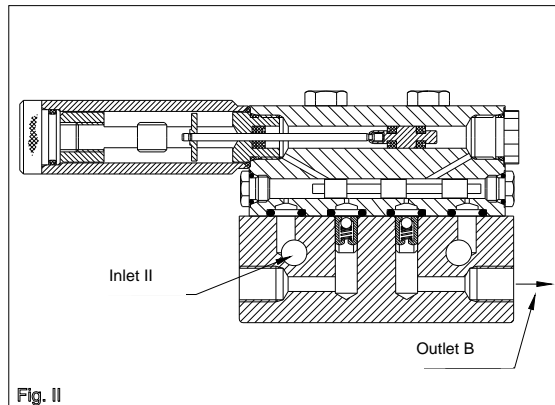
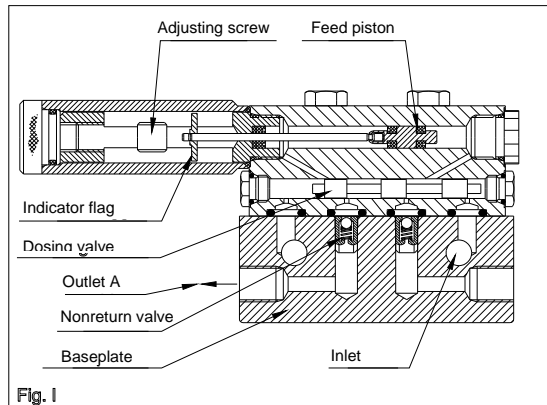
Doser size

DOSER- SIZE	MAX VOLUME OF LUBRICANT PER LUBRICATION CYCLE PER OUTLET	MAX VOLUME OF LUBRICANT PER LUBRICATION CYCLE PER OUTLET
01	0.73 g	1.45 g
1	1.27 g	2.55 g
2	4.5 g	9 g

The dosers are fitted onto the baseplate using two bolts.
Installed dosers can easily be replaced by unscrewing the old one and then screwing down a new one.

DOSERS - FUNCTION

Doser with two outlets GD 012, GD 12, GD 22



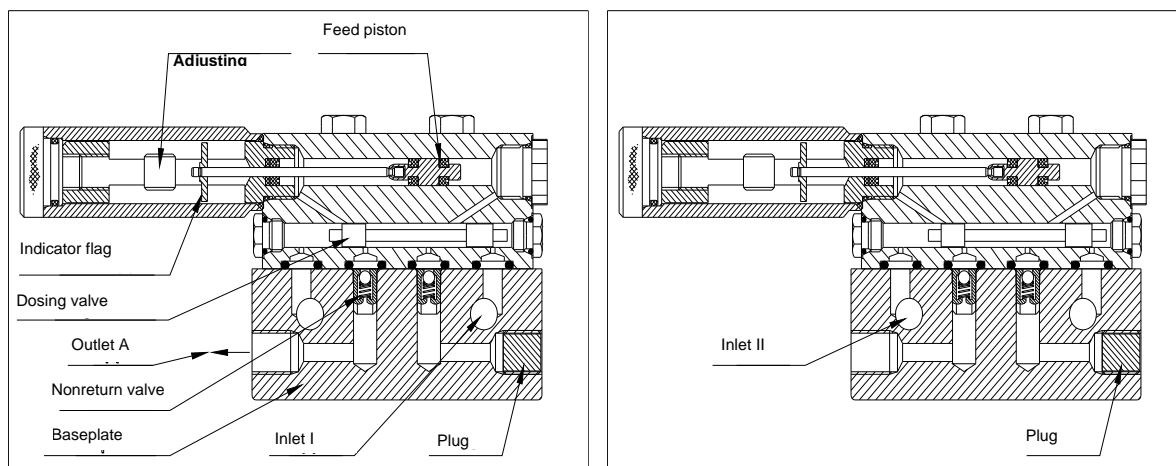
I2812-1

Fig. I

The lubricant is fed in through inlet I on the baseplate. The valve and feed piston are forcibly moved to the left (refer to Fig. 1). The lubricant is then pushed via the feed piston past the nonreturn valve at outlet A on the baseplate to the lubrication point.

Fig. II

Depending on the set pause period, the pressure operation is repeated, differing this time in that the lubricant is fed in at inlet II, after which the valve and feed piston are forced to the right. The feed piston pushes the lubricant through the nonreturn valve via outlet B on the baseplate to the lubrication point. An indicator flag moves at the same time as the feed piston. The indicator flag is connected to the feed piston and can be observed on the doser. Regular control of the movement of the indicator flag provides assurance that the doser is working.

Dosers with one outlet GD 011, GD 11, GD 21

When installing dosers with one outlet, the remaining outlet on the baseplate must be plugged. At the same time as the lubricant is being pushed into Inlet 1 on the baseplate, the dosing valve is forced to its left position. Because of the design of the dosing valve, the dosed lubricant is conducted out through the unplugged outlet.

When setting the pressure on Inlet II, the dosing valve is forced to the right and the lubricant is conducted to the same outlet as above.

During a complete lubrication cycle (covering two pause periods and one pressure setting for each of Lines I and II), the volume of lubricant is twice as large from a doser with one outlet in comparison with an equivalent doser with two outlets. (On condition that the number of set revolutions of the adjustment screw on both dosers is the same.)

ADJUSTING THE DOSERS

The doser settings are made separately on each doser by setting the stroke length of the feed piston using a socket head cap screw (for GD 01 and GD 1 : 2.5 mm and for GD 2 4.0 mm).

Method of setting the dosers

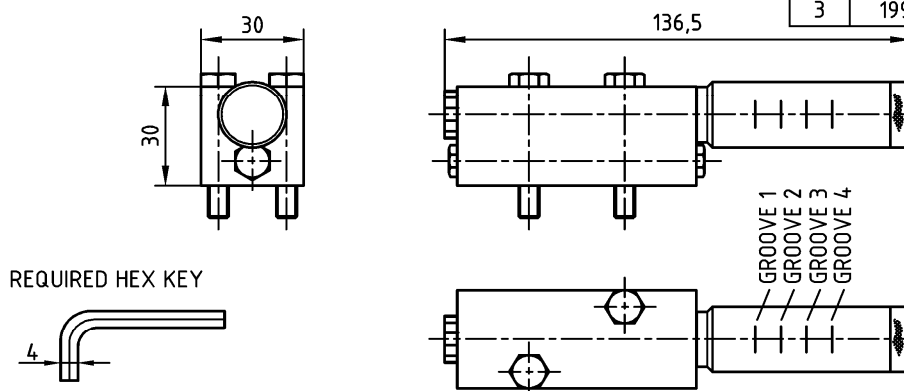
- Screw the adjusting screw to the baseplate.
- Unscrew the adjusting screw to the desired position in accordance with the enclosed settings graphs.

NOTE:

To avoid separation of the lubricant, the adjusting screw should be set so that the bottom of it is not inside the inner line on the indicator housing.

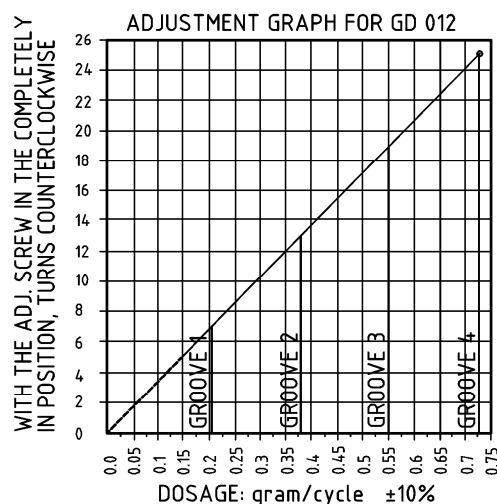
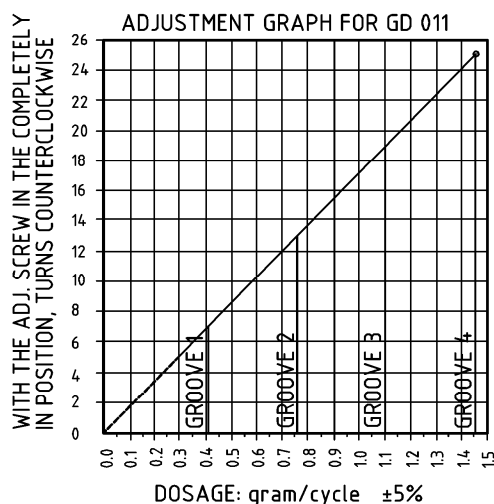
CHANGES




No	DATE	SIGN.
1	1994-11-30	
2	1998-09-28	N.R
3	1999-12-21	H-E.A



Art. No.	PREVIOUS Art. No.	DESCRIPTION	Number of LUB. POINTS	MATERIAL	DOSAGE RANGE
101728	S12387510	GD 012 FZ	2	STEEL	0,15-0,70g/cycle
101729	S12386610	GD 012 SS	2	AISI 316	0,15-0,70g/cycle
101730	S12387460	GD 011 FZ	1	STEEL	0,30-1,45g/cycle
101731	S12386560	GD 011 SS	1	AISI 316	0,30-1,45g/cycle
101784	S12388800	SEAL KIT			
101788	S12388840	REPAIR KIT FOR ZN DOSERS			
101789	S12388850	REPAIR KIT FOR AISI 316 DOSERS			

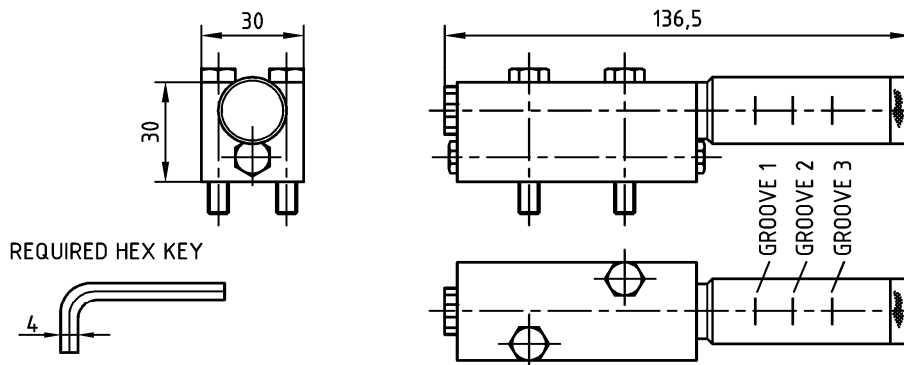
DOSING MODULES INCLUDE ALL NECESSARY FASTENING SCREWS AND PLUGS

GREASE DENSITY: 0,88g/cm³

Art.No. 1410-1045		MATERIAL	TREATMENT	SCALE 1:2		DATE	SIGN.	
					DRAWN	1993-03-30		
	CHECKED	1993-03-30	NR					
		DESCRIPTION GREASE DOSING MODULE GD 011 FZ, GD 012 FZ GD 011 SS, GD 012 SS			GROUP	REM. autoCAD		
						Art.No. 1410-1045		

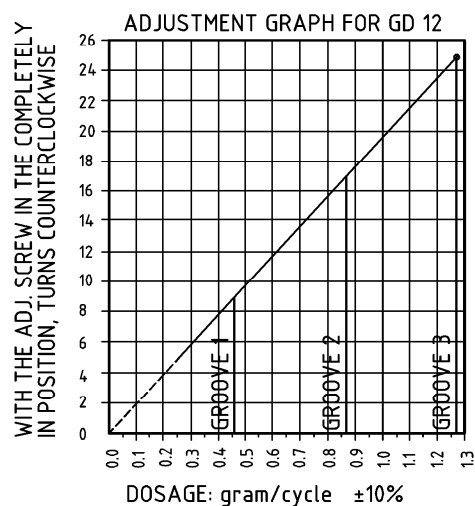
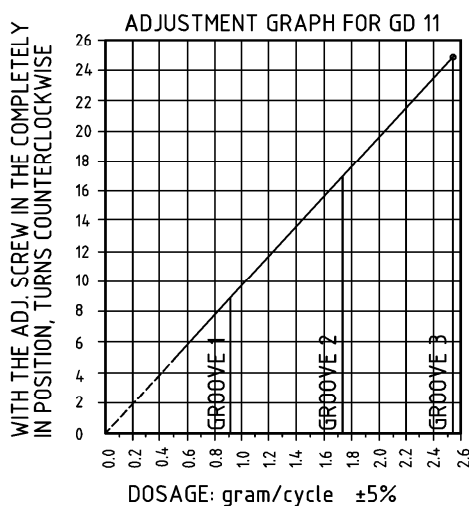
CHANGES




No	DATE	SIGN.
2	1998-09-28	N.R
3	1999-11-15	N.R
4	1999-12-21	H-E.A

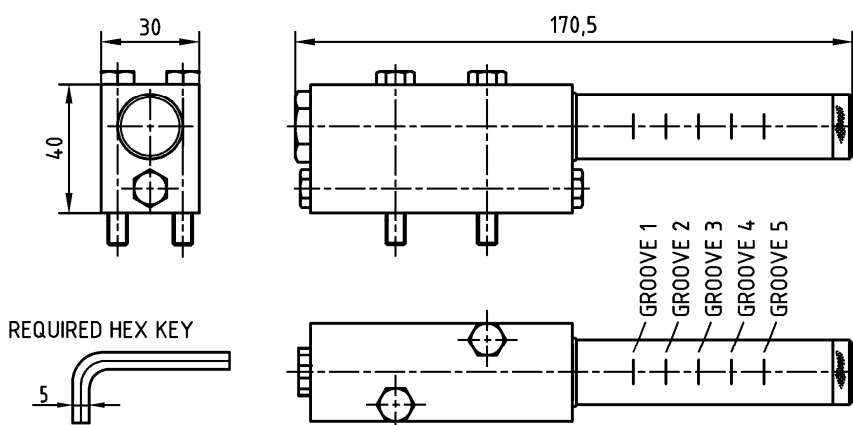


Art. No.	PREVIOUS Art. No.	DESCRIPTION	Number of LUB. POINTS	MATERIAL	DOSAGE RANGE
101732	S12387610	GD 12 FZ	2	STEEL	0,25-1,25g/cycle
101733	S12386710	GD 12 SS	2	AISI 316	0,25-1,25g/cycle
101734	S12387560	GD 11 FZ	1	STEEL	0,50-2,55g/cycle
101735	S12386660	GD 11 SS	1	AISI 316	0,50-2,55g/cycle
101785	S12388810	SEAL KIT			
101790	S12388860	REPAIR KIT FOR ZN DOSERS			
101791	S12388870	REPAIR KIT FOR AISI 316 DOSERS			

DOSING MODULES INCLUDE ALL NECESSARY FASTENING SCREWS AND PLUGS

GREASE DENSITY: 0,88g/cm³

Art.No. 1410-1046							
		MATERIAL	TREATMENT	SCALE 1:2		DATE	SIGN.
					DRAWN	1993-03-30	
					CHECKED	1993-03-30	NR
	DESCRIPTION GREASE DOSING MODULE GD 11 FZ, GD 12 FZ GD 11 SS, GD 12 SS			GROUP	REM. autoCAD		
					Art.No. 1410-1046		



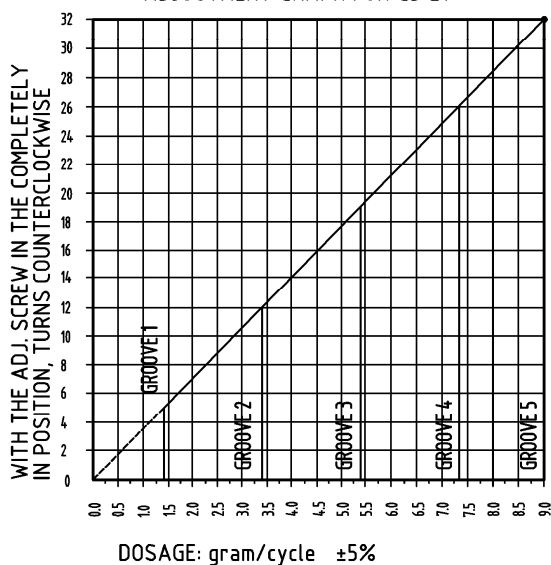
CHANGES

No	DATE	SIGN.
1	1994-12-02	
2	1998-09-28	N.R
3	1999-12-21	H-E.A

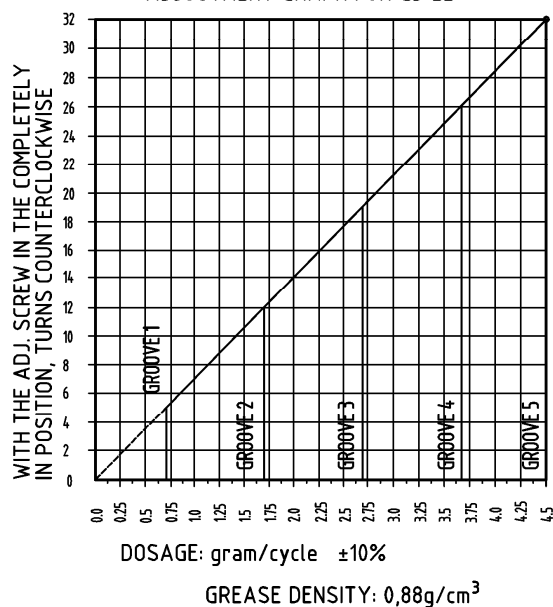
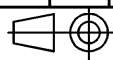
Art. No.	PREVIOUS Art. No.	DESCRIPTION	Number of LUB. POINTS	MATERIAL	DOSAGE RANGE
101736	S12387710	GD 22 FZ	2	STEEL	0,7-4,5 g/cycle
101737	S12386810	GD 22 SS	2	AISI 316	0,7-4,5 g/cycle
101738	S12387660	GD 21 FZ	1	STEEL	1,5-9,0 g/cycle
101739	S12386760	GD 21 SS	1	AISI 316	1,5-9,0 g/cycle
101786	S12388820	SEAL KIT			
101792	S12388880	REPAIR KIT FOR ZN DOSERS			
101793	S12388890	REPAIR KIT FOR AISI 316 DOSERS			

DOSING MODULES INCLUDE ALL NECESSARY FASTENING SCREWS AND PLUGS

ADJUSTMENT GRAPH FOR GD 21



ADJUSTMENT GRAPH FOR GD 22

Art.No.
1410-1047**ASSALUB**

MATERIAL

TREATMENT

SCALE
1:2

DATE

DRAWN

1993-03-31

SIGN.

CHECKED

1993-03-31

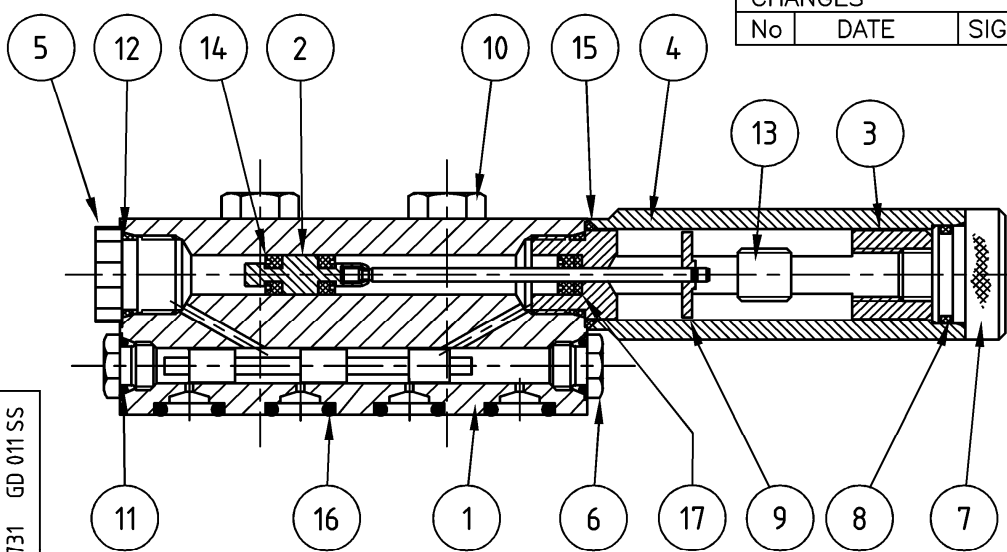
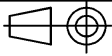

NR

GROUP

REM. autoCAD

Art.No.

1410-1047DESCRIPTION
GREASE DOSING MODULE
GD 21 FZ, GD 22 FZ
GD 21 SS, GD 22 SS

					CHANGES			
					No	DATE	SIGN.	
								
101728	GD 012 FZ	101729	GD 012 SS	101730	GD 011 FZ	101731	GD 011 SS	
-	-	-	1		906291	SOCKET HEAD CAP PLUG 1/8" AISI 316		
-	-	1	-		906290	SOCKET HEAD CAP PLUG 1/8" ZN		
1	1	1	1	17	906235	BACK UP RING		
4	4	4	4	16	906234	O-RING 6,3x2,4		
1	1	1	1	15	906233	O-RING 13,1x1,6		
3	3	3	3	14	906227	U-RING 2x6-2,5		
-	1	-	1	13	906237	SCREW SK6SS 8x8 AISI 316		
1	-	1	-	13	906141	SCREW SK6SS 8x8 ZN		
2	2	2	2	12	906140	O-RING 10,1x1,6		
2	2	2	2	11	906139	O-RING 6,1x1,6		
-	2	-	2	10	3404019	SKRUV M6S 6x40 AISI 316		
2	-	2	-	10	903077	SCREW M6S 6x40 ZN		
1	1	1	1	9	901320	PLASTIC FLAG		
1	1	1	1	8	900210	O-RING 12,1x1,6		
-	1	-	1	7	121118	PLUG AISI 316		
1	-	1	-	7	121117	PLUG ZN		
-	2	-	2	6	121096	PLUG AISI 316		
2	-	2	-	6	121095	PLUG ZN		
-	1	-	1	5	121090	PLUG AISI 316		
1	-	1	-	5	121089	PLUG ZN		
1	1	1	1	4	121082	CAP		
-	1	-	1	3	121077	INDICATOR BODY AISI 316		
1	-	1	-	3	121076	INDICATOR BODY ZN		
1	1	1	1	2	101760	PISTON, COMPLETE		
-	-	-	1	1	101747	BODY, COMPLETE GD 011 AISI 316		
-	-	1	-	1	101746	BODY, COMPLETE GD 011 ZN		
-	1	-	-	1	101745	BODY, COMPLETE GD 012 AISI 316		
1	-	-	-	1	101744	BODY, COMPLETE GD 012 ZN		
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					MATERIAL		TREATMENT	SKALA
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					DESCRIPTION		GROUP	REM. AutoCAD
					GREASE DOSER, GD 0			Art.No. 101728-101731
								DATE 1998-08-27
								SIGN. N.R
								CHECKED

					CHANGES		
					No	DATE	SIGN.
101732	GD 12 FZ				11		
101733	GD 12 SS				16		
101734	GD 11 FZ				1		
101735	GD 11 SS				6		
-	-	-	1		906291	SOCKET HEAD CAP PLUG 1/8" AISI 316	
-	-	1	-		906290	SOCKET HEAD CAP PLUG 1/8" ZN	
1	1	1	1	18	906229	U-RING 3x7-5	HNBR
1	1	1	1	17	906236	BACK UP RING 3x7-1	PTFE
4	4	4	4	16	906234	O-RING 6,3x2,4	HNBR
1	1	1	1	15	906233	O-RING 13,1x1,6	HNBR
2	2	2	2	14	906228	U-RING 4x8-2	HNBR
-	1	-	1	13	906237	SCREW SK6SS 8x8 AISI 316	
1	-	1	-	13	906141	SCREW SK6SS 8x8 ZN	
2	2	2	2	12	906140	O-RING 10,1x1,6	HNBR
2	2	2	2	11	906139	O-RING 6,1x1,6	HNBR
-	2	-	2	10	3404019	SCREW M6S 6x40 AISI 316	
2	-	2	-	10	903077	SCREW M6S 6x40 ZN	
1	1	1	1	9	901320	PLASTIC FLAG	
1	1	1	1	8	900210	O-RING 12,1x1,6	NBR
-	1	-	1	7	121118	PLUG AISI 316	
1	-	1	-	7	121117	PLUG ZN	
-	2	-	2	6	121096	PLUG AISI 316	
2	-	2	-	6	121095	PLUG ZN	
-	1	-	1	5	121090	PLUG AISI 316	
1	-	1	-	5	121089	PLUG ZN	
1	1	1	1	4	121082	CAP	
-	1	-	1	3	121079	INDICATOR BODY AISI 316	
1	-	1	-	3	121078	INDICATOR BODY ZN	
1	1	1	1	2	101761	PISTON, COMPLETE	
-	-	-	1	1	101751	BODY, COMPLETE GD 11 AISI 316	
-	-	1	-	1	101750	BODY, COMPLETE GD 11 ZN	
-	1	-	-	1	101749	BODY, COMPLETE GD 12 AISI 316	
1	-	-	-	1	101748	BODY, COMPLETE GD 12 ZN	
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					DRAWN		
					1998-08-27		
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					GROUP		
					REM. AutoCAD		
					Art.No.		
					101732-101735		

CHANGES		
No	DATE	SIGN.

101736	GD 22 FZ	101737	GD 22 SS	101738	GD 21 FZ	101739	GD 21 SS	
-	-	-	1		906291	SOCKET HEAD CAP PLUG 1/8" AISI 316		
-	-	1	-		906290	SOCKET HEAD CAP PLUG 1/8" ZN		
1	1	1	1	18	906231	U-RING 4x10-4		HNBR
1	1	1	1	17	906274	BACK UP RING 4x10-1		PTFE
4	4	4	4	16	906234	O-RING 6,3x2,4		HNBR
1	1	1	1	15	900215	O-RING 17,1x1,6		NBR
2	2	2	2	14	906230	U-RING 8x12-2		HNBR
-	1	-	1	13	906273	SCREW SK6SS 10x10 AISI 316		
1	-	1	-	13	906272	SCREW SK6SS 10x10 ZN		
2	2	2	2	12	906233	O-RING 13,1x1,6		HNBR
2	2	2	2	11	906139	O-RING 6,1x1,6		HNBR
-	2	-	2	10	906269	SCREW M6S 6x50 AISI 316		
2	-	2	-	10	906268	SCREW M6S 6x50 ZN		
1	1	1	1	9	901321	PLASTIC FLAG		
1	1	1	1	8	900213	O-RING 15,1x1,6		NBR
-	1	-	1	7	121120	PLUG AISI 316		
1	-	1	-	7	121119	PLUG ZN		
-	2	-	2	6	121100	PLUG AISI 316		
2	-	2	-	6	121099	PLUG ZN		
-	1	-	1	5	121092	PLUG AISI 316		
1	-	1	-	5	121091	PLUG ZN		
1	1	1	1	4	121083	CAP		
-	1	-	1	3	121081	INDICATOR BODY AISI 316		
1	-	1	-	3	121080	INDICATOR BODY ZN		
1	1	1	1	2	101762	PISTON, COMPLETE		
-	-	-	1	1	101755	BODY, COMPLETE GD 21 AISI 316		
-	-	1	-	1	101754	BODY, COMPLETE GD 21 ZN		
-	1	-	-	1	101753	BODY, COMPLETE GD 22 AISI 316		
1	-	-	-	1	101752	BODY, COMPLETE GD 22 ZN		

ART.NR. 101736- 101739	QTY.	ITEM	Art.No.	DESCRIPTION	REM.		
		MATERIAL	TREATMENT	SCALE	DATE	SIGN.	
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	CHECKED						
			DESCRIPTION	GROUP	REM. AutoCAD		
			GREASE DOSER, GD 2		Art.No. 101736-101739		

BASE PLATES

The dosers are fitted individually onto the baseplate by means of two bolts.

All pipe connections are made on the baseplate, which means that any change of doser will not give rise to any piping work.

If any lubricating points were to be added, a baseplate would be installed with the required dosers in direct connection with the existing baseplate.

If any lubricating point should be removed, then the vacant place will be 'blanked' with a special cover-plate.

All baseplates are equipped with nonreturn valves in each outlet.
This guarantees that no lubricant will be forced back into the doser because of small doses and high counter-pressure at the lubricating point.

Baseplates – type designation

BP-XX-ZZ

XX No. of dosers

ZZ AL anodised aluminium

SS acid-resistant steel SS 2343

No. of doser	Baseplate
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-01	60
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-02	92
-----	----

-03	124
-----	-----

-04	156
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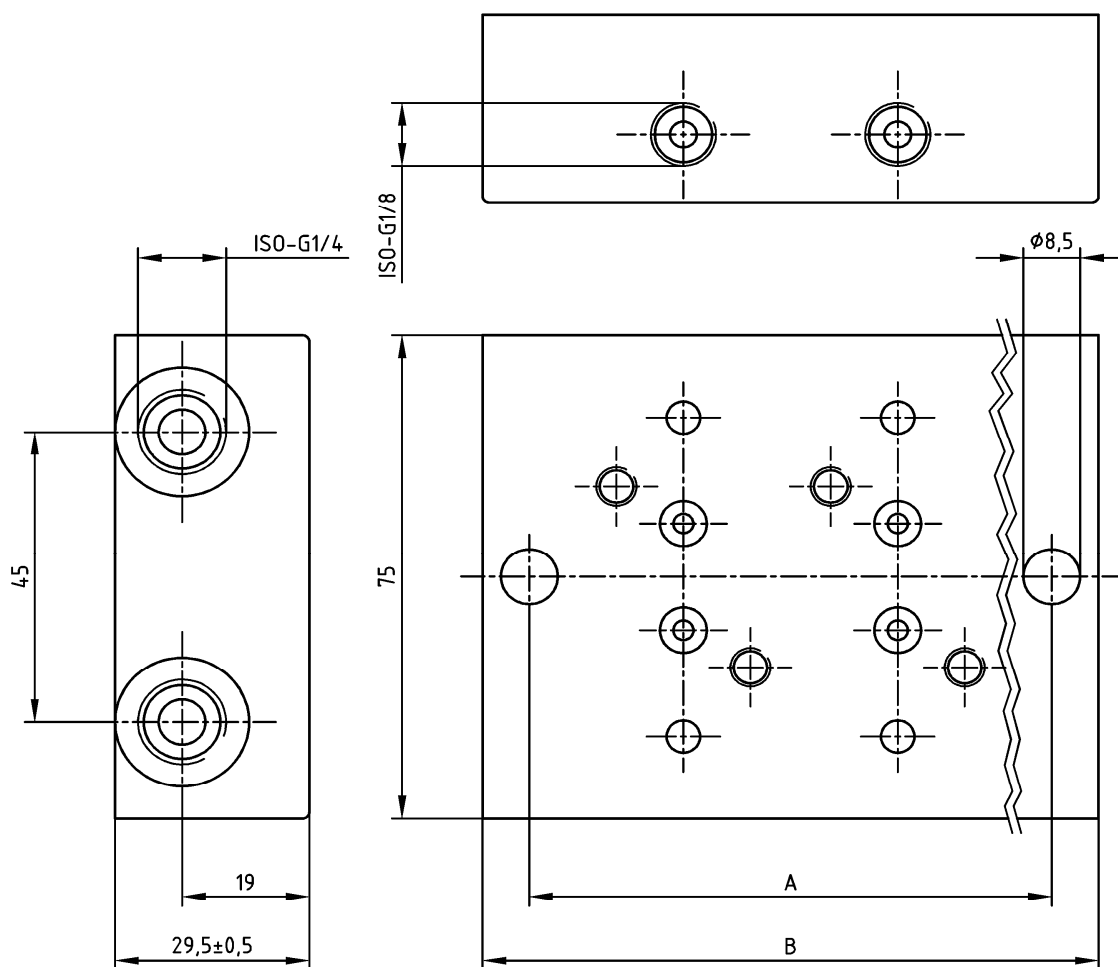
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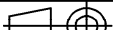

-06	220
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NOTE:

When mounting dosers with only one outlet (GD 011, 11, 21), the remaining outlet on the baseplate must be plugged.

ART.No.	DESIGNATION	MATERIAL	A $\pm 0,2$	B $\pm 0,5$	PREVIOUS ART.No.	CHANGES		
101764	BP 1 AL	AL 6082-T6	46	60	S12383250	N.o	DATE	SIGN.
101765	BP 1 SS	AISI 316	46	60	S12384300			
101766	BP 2 AL	AL 6082-T6	78	92	S12383300			
101767	BP 2 SS	AISI 316	78	92	S12384350			
101768	BP 3 AL	AL 6082-T6	110	124	S12383350			
101769	BP 3 SS	AISI 316	110	124	S12384400			
101770	BP 4 AL	AL 6082-T6	142	156	S12383400			
101771	BP 4 SS	AISI 316	142	156	S12384450			
101772	BP 5 AL	AL 6082-T6	174	188	S12383450			
101773	BP 5 SS	AISI 316	174	188	S12384500			
101774	BP 6 AL	AL 6082-T6	206	220	S12383500			
101775	BP 6 SS	AISI 316	206	220	S12384550			



ART.No. 1410-1315	ITEM	QTY	ART.No	DESIGNATION		REM.			
				MATERIAL	TREATMENT	SCALE		DATE	SIGN.
				---	---	1:1	DRAWN	1998-09-17	N.R
				DESIGNATION		GROUP	REM.		
				BASEPLATE BP			autoCAD		
DIMENSIONS				ART.No.	1410-1315				

PRESSURE TRANSDUCER PACKAGE

The pressure transducers have the task of transmitting the system pressure to the central control unit.

DESIGN

The two pressure transducers are installed in a shared housing made of acid-resistant steel or anodised aluminium, between the last dosers in the lubricating system and base plate. The housing is designed such that new grease is constantly flowing past the membrane on the pressure transducers, thus avoiding any separation of the soap and the oil in the grease. The pressure transducers also have a flat front membrane so that no grease is pushed into the transducer causing it to cease functioning due to separation.

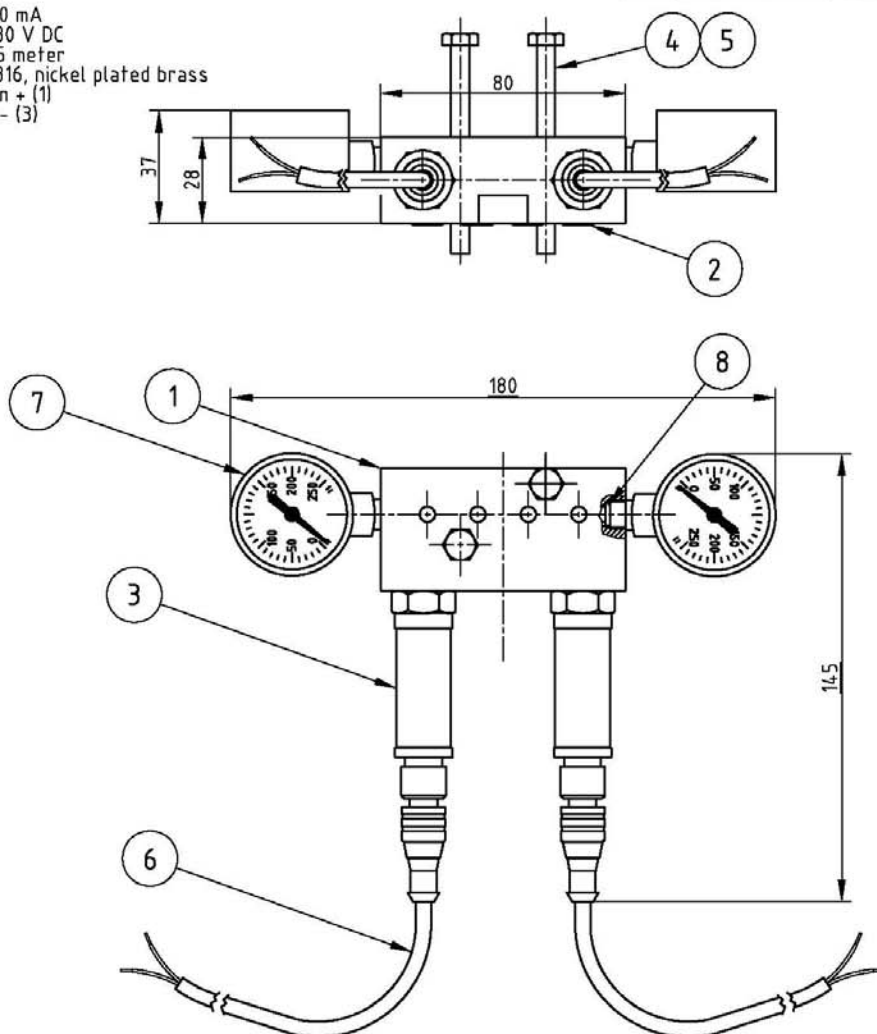
DATA, PRESSURE TRANSDUCER

Pressure 0-250 bar
 IP-rating IP 67
 Outsignal 4 - 20 mA
 Voltage 12 - 30 V DC
 Cable PUR 5 meter
 Material AISI 316, nickel plated brass
 Connection Brown + (1)
 Blue - (3)

CHANGES

No	DATE	SIGN.
1	2007-06-05	

ART. NO.	MATERIAL	TREATMENT	ART. NO.	ART. NO.	ART. NO.	ART. NO.
121929	SS 4.212-06	Anodized	121231	906277	3402001	907152
101930	SS 234.3	--	121232	906278	907154	907247



8	2	907176	PACKING FOR MANOMETER Cu 1/8"	
7	2	se tabell	MANOMETER 40 250 BAR ISO-G1/8	For 101930 is man. in SS edition
6	2	907159	CABLE 9 m 4-pol KONTAKT PUR L=5	
5	2	se tabell	SCREW M6S 6x70	For GD 0xx och 1x doser
4	2	se tabell	SCREW M6S 6x80	For GD 2x doser
3	2	907153	PRESSURE TRANSDUCER	0-250 BAR SF ISO-G 1/4
2	4	906234	O-RING 6,3x2,4	HNBR
1	1	see table	PRESSURE TRANSDUCER BODY	

Art.No. 101929- 101930	TEM	QTY.	Art.No.	DESCRIPTION	REM.
				MATERIAL	TREATMENT
				SCALE	DATE
				1:2	2006-04-13
				CHECKED	SIGN.
				GROUP	REM. AutoCAD
					Art.No. 101929 - 101930



DATA, PRESSURE TRANSDUCER

Pressure 0-250 bar
 IP-rating IP 65
 Outsignal 4 - 20 mA
 Voltage 12 - 36 V DC
 Cable PUR 2 meter
 Material AISI 316
 Connection White +
 Brown -

The technical drawing shows two views of the pressure transducer. The top view is a front view showing a square body with a width of 80 mm and a height of 40 mm. It features two vertical screws on top, labeled 4 and 5, and two horizontal cable entries on the sides, labeled 2. The bottom view is a side view showing a height of 113 mm. It features two vertical cable entries, labeled 1 and 3, and two horizontal cable entries at the bottom. The body is made of AISI 316 stainless steel.

ART. NO.	MATERIAL	TREATMENT	ART. NO. POS.1	ART. NO. POS.4	ART. NO. POS.5	
101782	SS 4212-06	Anodiserad	121068	906277	906279	906582
101783	SS 2343	--	121064	906278	906280	906581

6	2			
5	2	se table	SCREW M6S 6x90	For GD 2x doser
4	2	se table	SCREW M6S 6x80	For GD 0xx och 1x doser
3	2	906275	PRESSURE TRANSDUCER	
2	4	906234	O-RING 6,3x2,4	HNBR
1	1	se table	PRESSURE TRANSDUCER BODY	

ITEM	QTY.	Art.No.	DESCRIPTION	REM.
			MATERIAL	TREATMENT
			SCALE 1:2	DATE 1998-10-26
			CHECKED	SIGN. N.R.

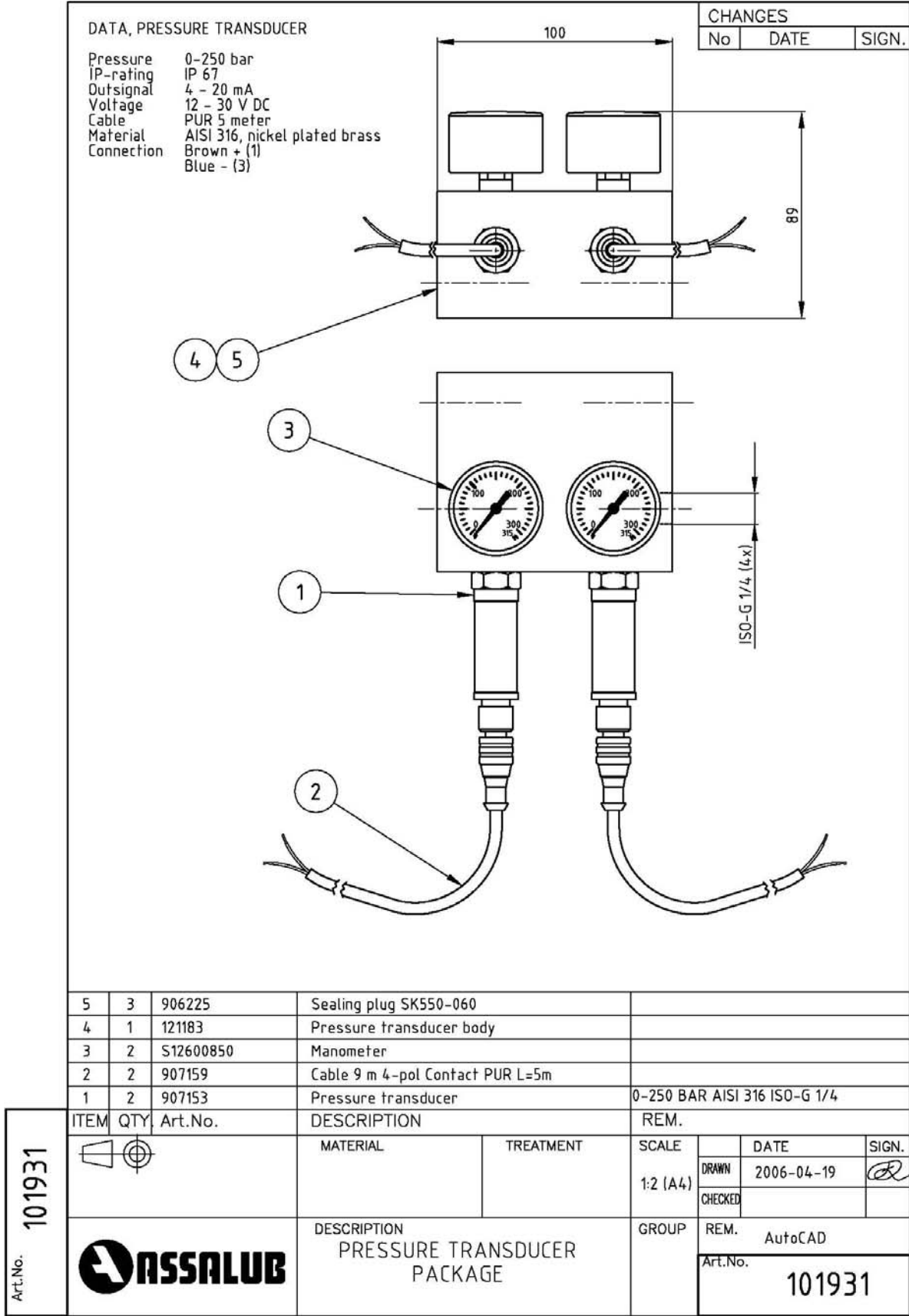
	DESCRIPTION	GROUP	REM.
	PRESSURE TRANSDUCER PACKAGE		AutoCAD
			Art.No. 101782 - 101783

CHANGES

No	DATE	SIGN.
1	2001-05-21	N.R.

101782-
101783

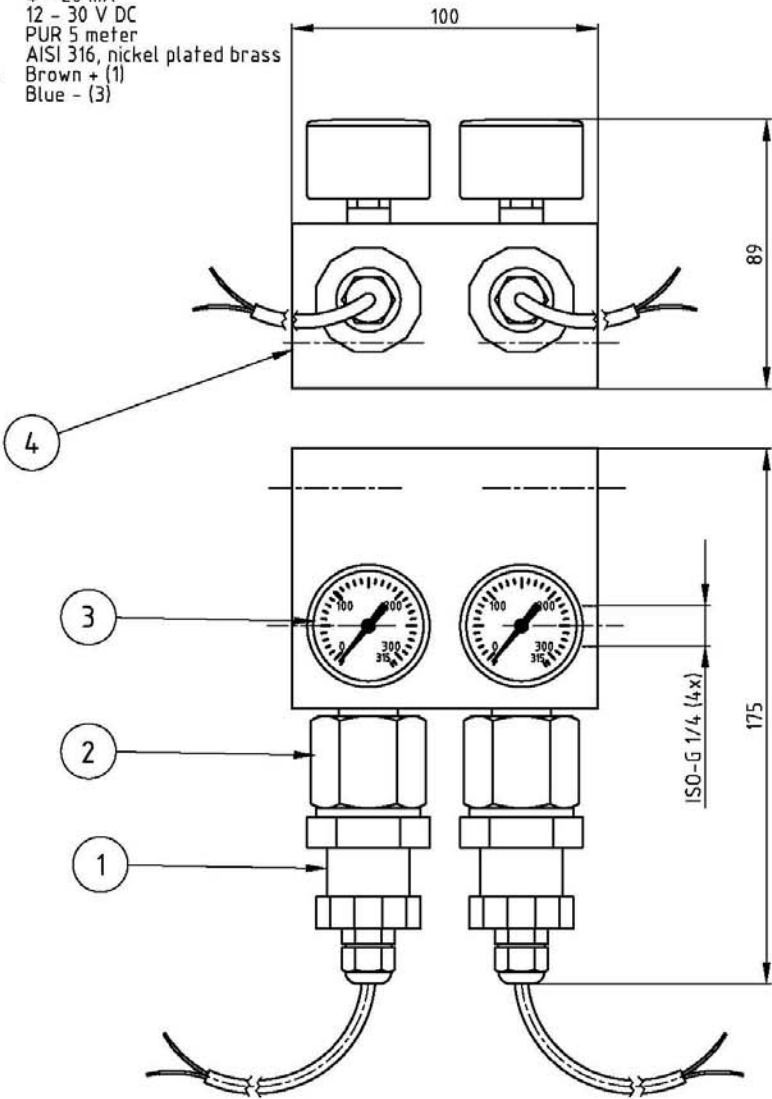
Art.No.





DATA, PRESSURE TRANSDUCER

Pressure 0-250 bar
IP-rating IP 67
Outsignal 4 - 20 mA
Voltage 12 - 30 V DC
Cable PUR 5 meter
Material AISI 316, nickel plated brass
Connection Brown + (1)
Blue - (3)

CHANGES		
No	DATE	SIGN.



4	1	121183	Pressure transducer body					
3	2	S12600850	Manometer					
2	2	906929	Adaptor RI 1/4" - 3/4"					
1	2	906275	Pressure transducer		0-250 BAR AISI 316 ISO-G 3/4			
ITEM	QTY	Art.No.	DESCRIPTION		REM.			
			MATERIAL	TREATMENT	SCALE		DATE	SIGN.
					1:2 (A4)	DRAWN	2003-06-17	kf
					CHECKED			
						DESCRIPTION		GROUP
PRESSURE TRANSDUCER PACKAGE						AutoCAD		
						Art.No.		
						101907		

Art.No. 101907

TROUBLESHOOTING

FAULT	TYPE OF FAULT	ACTION
Control centre is not working		Refer to the separate instruction book for the control centre.
Control centre issues an alarm.	The drum of lubricant is empty. Leak in the main pipeline. Air in the system. Blocked grease filter. Low air pressure.	Replace the drum. Locate and repair the leak. Vent the system. Clean or replace the filter. Check that the air pressure is at least 4-5 bar for small systems and 6-7 bar for large systems. NB: Sometimes a temporary pressure drop can mean that the set pump period is insufficient, which in turn gives rise to an alarm. Afterwards, the cause can be difficult to locate.
One of the bearings is getting too little lubricant or none at all.	Dose too small. The lubrication pipe between the doser and the lubrication point has been damaged. A stoppage in the bearing causing the counter-pressure to be too high in the pipeline, resulting in insufficient pressure in the normal system. The doser is not working. The grease has congealed (e.g. with cold) which means that the necessary system pressure has not been attained.	Inspect and increase the dose volume. Inspect and repair. Increase the system pressure by means of the compressed air regulator. Clean the bearing.
The bearing gets too much lubricant in relation to the set value.	The doser has been damaged.	Replace the doser. Replace the grease with a grade pumpable at that temperature. Temporarily increase the system pressure. Repair the doser if possible, otherwise replace it.

If these actions do not produce a result, please contact:

ASSALUB AB
Prästängsvägen 15
Tel. +46 (0)120 358 40
Fax. +46 (0)120 152 11
e-mail: info@assalub.se
Web site: www.assalub.se

MAINTAINING LUBRICATION DURING A CONTROL CENTRE BREAKDOWN

If for some reason the control centre should cease to function, lubrication can be maintained by manually operating lubrication from the substation.

METHOD

- Turn the screw clockwise on the LINE 1 magnetic valve. This makes the directional valve conduct the lubricant out into Line 1.
- Turn the PUMP screw clockwise to start up the pump.
- When the pressure in the substation has reached approx. 250 bar, all dosers will have fed out the set volume of lubricant, then turn the PUMP and LINE 1 magnetic valves back counter-clockwise to stop pressure operation.
- Wait until the system has been depressurised. A new pressure operation can be started after approx. 30 minutes depending on the size of the system.
- Turn the screw clockwise on the LINE 2 magnetic valve. This makes the directional valve conduct the lubricant out into Line 2.
- Turn the PUMP screw clockwise to start up the pump.
- When the pressure in the substation has reached approx. 250 bar, all dosers will have fed out the set volume of lubricant, then turn the PUMP and LINE 2 magnetic valves back counter-clockwise to stop the pressure operation.

A complete lubrication cycle has now been carried out manually.

If the breakdown of the control centre could not be rectified, manual lubrication must be repeated at the same intervals as the automatic lubrication.

