

SYSTEM LUBRICATION SINGLE LINE 15

CATALOG No. 854/15



**ADVANCED FLUID
MANAGEMENT SOLUTIONS**





**ADVANCED FLUID
MANAGEMENT SOLUTIONS**



DESIGN IS AN

Art



Study, research and design

The real strength of a firm starts with the ability of its study and research departments to always find the most suitable solutions to address market demands.



Testing and inspections

A sophisticated test room enables careful testing of the quality of new products before they are sold on the market.



Assembly lines

Dedicated equipment specially designed to facilitate assembly operations, at the same time allowing an effective and automatic control of quality.



Storage of Components

Our automated storage enables quick and careful preparation of the components and spare parts.



Technology
Efficiency
Reliability

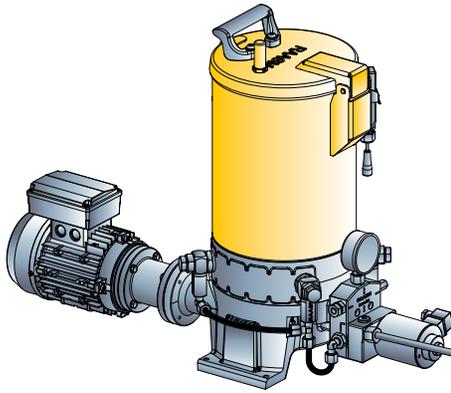


Technical Assistance

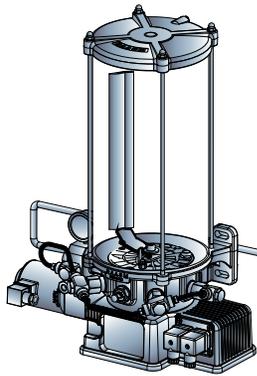
RAASM has one of the widest ranges of products for lubrication and the dispensing of fluids. The goal is to always respond fully to the questions of our customers and meet all their needs.



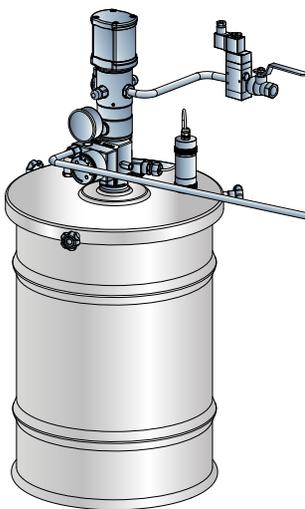
System 15 single line



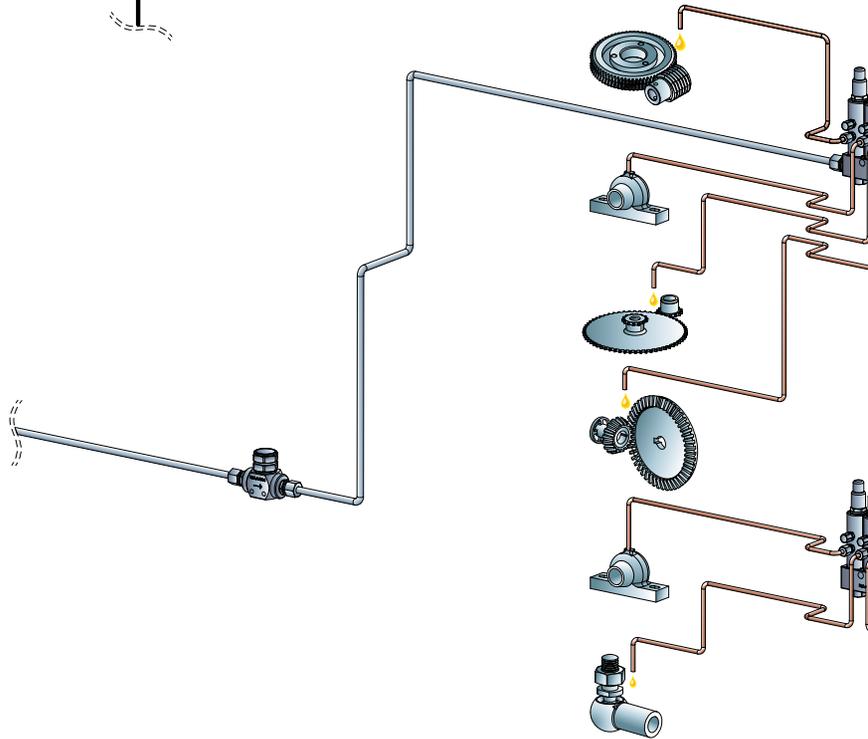
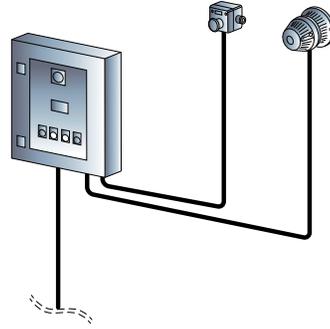
Series **C15S**
page 10

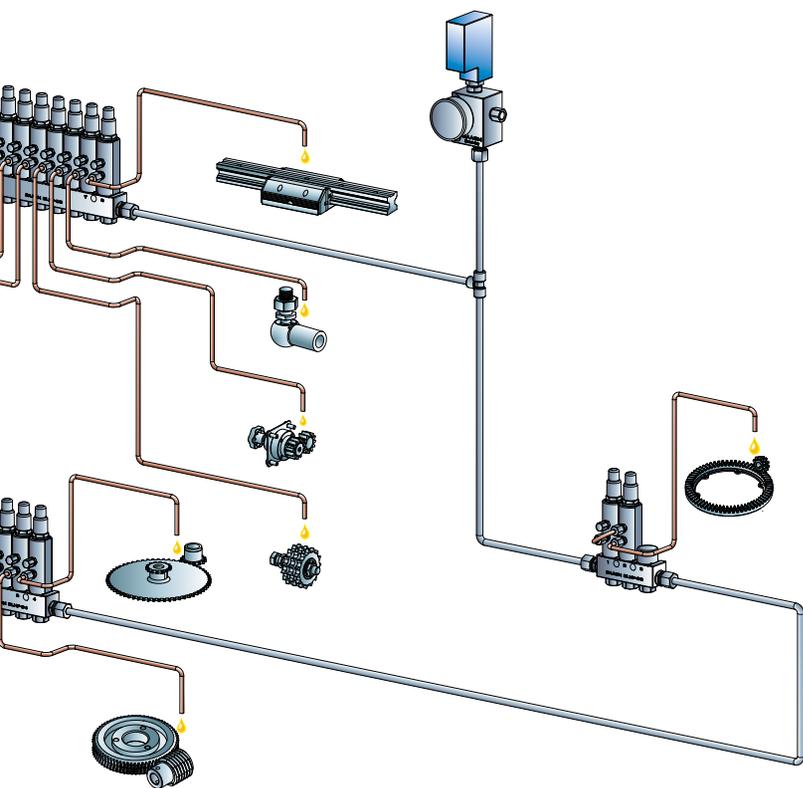


Series **C15B18**
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Series **C15F**
page 22





SINGLE LINE

The single-line decompression lubrication system consists of an independent pump assembly which delivers the lubricant (oil or grease) to direct response volumetric distributors (injectors) through a main line. System operation occurs through two phases:

- 1 - Injector filling (the system is not under pressure).
- 2 - Dispensing of the lubricant (the system is under pressure).

Each injector can be adjusted to deliver different amounts of lubricant. The pump assembly is equipped with a device (discharge valve) which enables rapid decompression of the system immediately after the action of the injectors. The system pressure and the configuration of the injectors in parallel enables the feeding of very large centralized systems with a high number of user points.

Verification of cycle operations is possible through pressure control.

Lubricating oils from 40 cSt and greases up to NLGI 2 can be used.

The pumps feeding these systems can be:

- air-operated pumps C15F for standard and rechargeable drums
- air-operated pumps C15F with 20 lb tank
- electric pumps C15S (with radial pistons - max. 4)
- electric pumps C15B18 (with radial pistons - max. 4)

Management and control of the system occurs through the application of modern electrical and electronic equipment (PLC, level sensors, microswitches, pressure switches).

ADVANTAGES

Longer life of lubricated components.

Reduced lubricant consumption and operating costs.

Programmed and precise dosing of the lubricant at each point to be lubricated.

System easily expandable without redesign.

System suitable for particularly demanding environments.

System easy to design (pump plus number of user points).

Injector delivery adjustable directly at installation or after. There are no lubrication stops/interruptions if an injector sticks.

Injectors with visual control of functionality.

Pumping unit offering easy maintenance and very safe operation, working with oil or grease.





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SERIES C15S MOTOR-OPERATED PUMP

230/400 V AC - 275/480 V AC

Compact motor-operated pump, equipped with an electromagnetic solenoid discharge valve that unloads the grease directly into the tank at cycle end.

It has a sturdy and compact base in nickel-plated aluminium alloy fitted with pumping elements in galvanized hardened steel. The tank is available in 3 different sizes: 20, 60 or 139 lb (2.6, 7.9 or 18.5 gal) and epoxy powder painted lubricant. Two electric motors (three-phase) are available with 4 poles or 6 poles, to which gearmotors with ratios of 35:1 and 70:1 are coupled. This allow a wide combination of tanks, motors and gear motors to meet all end-users' needs.



Technical characteristics

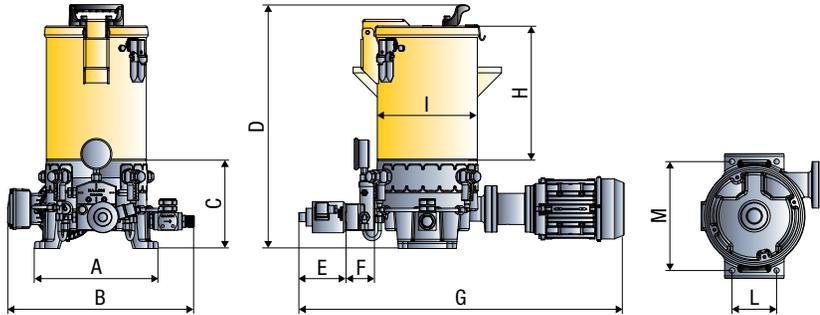
Max flow rate	*	6.6 inch ³ /min (108,1 cm ³ /min)
Max working pressure (adjustable)		4350 psi adjustable (300 bar)
Reservoir capacity (grease, oil)		20-60-139 lbs (grease) - 2.6-7.9-18.5 gal (oil)
Pump reducer ratio		35:1 - 70:1
Lubricant inlet connection		NPT 1/2" (f)
Lubricant outlet connection		NPT 3/8" (f)
Piston flow rate		P/N 2081100-55 - 0.06 inch ³ /cycle (0,98 cm ³ /cycle)
Working temperature		-13 °F / +140 °F (-25 °C / +60 °C)
Compatible fluids		Oil > 40 cSt - Greases max NLGI 2
Min level electric control		Standard
Max level electric control		Optional
Motor	Power	0,25 kW
	Volts - Hz	230/400 V AC - 50 Hz - 275/480 V AC - 60 Hz
	Poles - rpm	speed 6 poles: 870 ÷ 1100 rpm
	Poles - rpm	speed 4 poles: 1370 ÷ 1660 rpm
Materials	Protection	IP 55
	Base	nickel-plated aluminum alloy
	Moving Parts	steel
	Pumping piston	hardened steel
	Reservoir	epoxy powder painted steel

* Approx. delivery with grease NLGI 2 at 64 °F (18 °C). (The lubricant must have technical characteristics in compliance with working temperature).

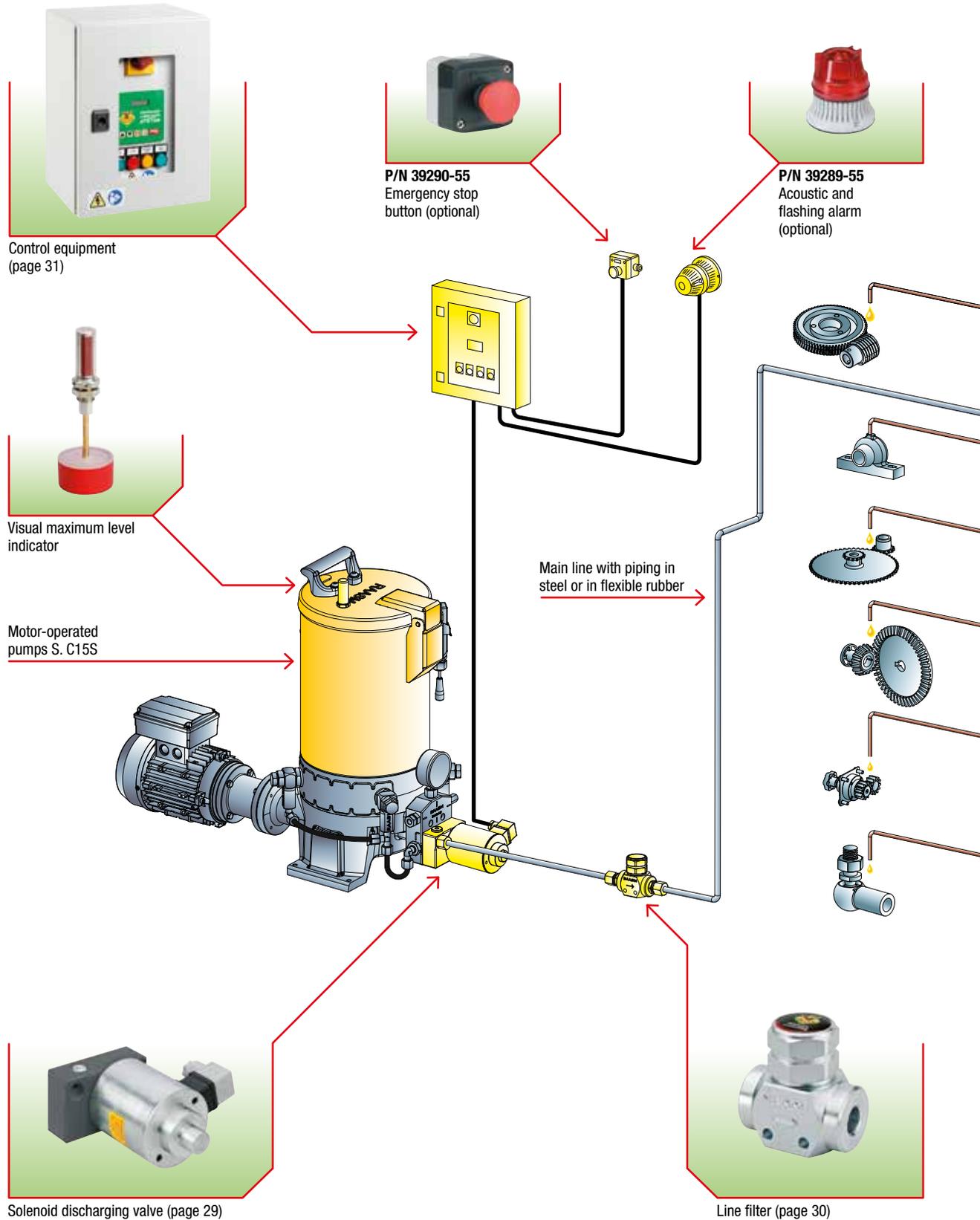
* Supply voltages different from the standard have to be specified during the purchase order.

GUIDE TO CHOOSING PUMP	P/N		Reservoir capacity		No. of pistons	Reducer ratio	Motor	Flow rate
	Grease	Oil	Grease	Oil				
	1570080-55	1570440-55	20 lb (9,1 kg)	2.6 gal (10 l)				
1570200-55	1570560-55	60 lb (27,2 kg)	7.9 gal (30 l)	2	70:1	6 pole	1.70 inch ³ /min (27,8 cm ³ /min)	
1570022-55	1570380-55	20 lb (9,1 kg)	2.6 gal (10 l)	2	70:1	4 pole	2.44 inch ³ /min (39,9 cm ³ /min)	
1570140-55	1570500-55	60 lb (27,2 kg)	7.9 gal (30 l)	2	70:1	4 pole	2.44 inch ³ /min (39,9 cm ³ /min)	
1570110-55	1570470-55	20 lb (9,1 kg)	2.6 gal (10 l)	4	70:1	6 pole	3.42 inch ³ /min (56,1 cm ³ /min)	
1570230-55	1570590-55	60 lb (27,2 kg)	7.9 gal (30 l)	4	70:1	6 pole	3.42 inch ³ /min (56,1 cm ³ /min)	
1570350-55	1570710-55	139 lb (63,1 kg)	18.5 gal (70 l)	4	70:1	6 pole	3.42 inch ³ /min (56,1 cm ³ /min)	
1570050-55	1570410-55	20 lb (9,1 kg)	2.6 gal (10 l)	4	70:1	4 pole	4.89 inch ³ /min (80,1 cm ³ /min)	
1570170-55	1570530-55	60 lb (27,2 kg)	7.9 gal (30 l)	4	70:1	4 pole	4.89 inch ³ /min (80,1 cm ³ /min)	
1570290-55	1570650-55	139 lb (63,1 kg)	18.5 gal (70 l)	4	70:1	4 pole	4.89 inch ³ /min (80,1 cm ³ /min)	
1570065-55	1570425-55	20 lb (9,1 kg)	2.6 gal (10 l)	2	35:1	6 pole	3.30 inch ³ /min (54,1 cm ³ /min)	
1570185-55	1570545-55	60 lb (27,2 kg)	7.9 gal (30 l)	2	35:1	6 pole	3.30 inch ³ /min (54,1 cm ³ /min)	
1570095-55	1570455-55	20 lb (9,1 kg)	2.6 gal (10 l)	4	35:1	6 pole	6.60 inch ³ /min (108,1 cm ³ /min)	
1570215-55	1570575-55	60 lb (27,2 kg)	7.9 gal (30 l)	4	35:1	6 pole	6.60 inch ³ /min (108,1 cm ³ /min)	
1570335-55	1570695-55	139 lb (63,1 kg)	18.5 gal (70 l)	4	35:1	6 pole	6.60 inch ³ /min (108,1 cm ³ /min)	

STANDARD EQUIPMENT	ON REQUEST
 <p>Low level capacitive sensor.</p>	 <p>High level capacitive sensor.</p>
 <p>Visual level indicator for oil and grease.</p>	
 <p>Visual max level indicator grease</p>	

OVERALL DIMENSIONS												
	Reservoir size	A	B	C	D	E	F	G	H	I	L	M
	20 lb (9,1 kg)	10.9" (276 mm)	16.6" (421 mm)	7.7" (195 mm)	21.6" (548 mm)	4.1" (104 mm)	2.6" (66 mm)	28.8" (731 mm)	11.9" (302 mm)	8.9" (226 mm)	3.9" (99 mm)	9.6" x ø 0.5" (243 x ø 12,7 mm)
	60 lb (27,2 kg)	10.9" (276 mm)	16.6" (421 mm)	7.7" (195 mm)	29" (736 mm)	4.1" (104 mm)	2.6" (66 mm)	28.8" (731 mm)	19.4" (492 mm)	13.0" (330 mm)	3.9" (99 mm)	9.6" x ø 0.5" (243 x ø 12,7 mm)
139 lb (63,1 kg)	10.9" (276 mm)	16.6" (421 mm)	7.7" (195 mm)	41.4" (1051 mm)	4.1" (104 mm)	2.6" (66 mm)	28.8" (731 mm)	31.7" (805 mm)	13.0" (330 mm)	3.9" (99 mm)	9.6" x ø 0.5" (243 x ø 12,7 mm)	
		Reservoir size	Net weight		Gross weight		Packing					
Grease		139 lb (63.1 kg)	92 lb (41.7 kg)		123 lb (55.8 kg)		11.8 ft ³ (0.334 m ³)					
		60 lb (27.2 kg)	82 lb (37.2 kg)		111 lb (50.3 kg)		8.3 ft ³ (0.235 m ³)					
		20 lb (9.1 kg)	70 lb (31.7 kg)		99 lb (44.9 kg)		6.2 ft ³ (0.175 m ³)					
Oil		18.5 gal (70 l)	90 lb (40.8 kg)		121 lb (54.9 kg)		11.8 ft ³ (0.334 m ³)					
		7.9 gal (30 l)	81 lb (36.7 kg)		111 lb (50.3 kg)		8.3 ft ³ (0.235 m ³)					
		2.6 gal (10 l)	70 lb (31.7 kg)		98 lb (44.4 kg)		6.2 ft ³ (0.175 m ³)					

Sample lubrication system with



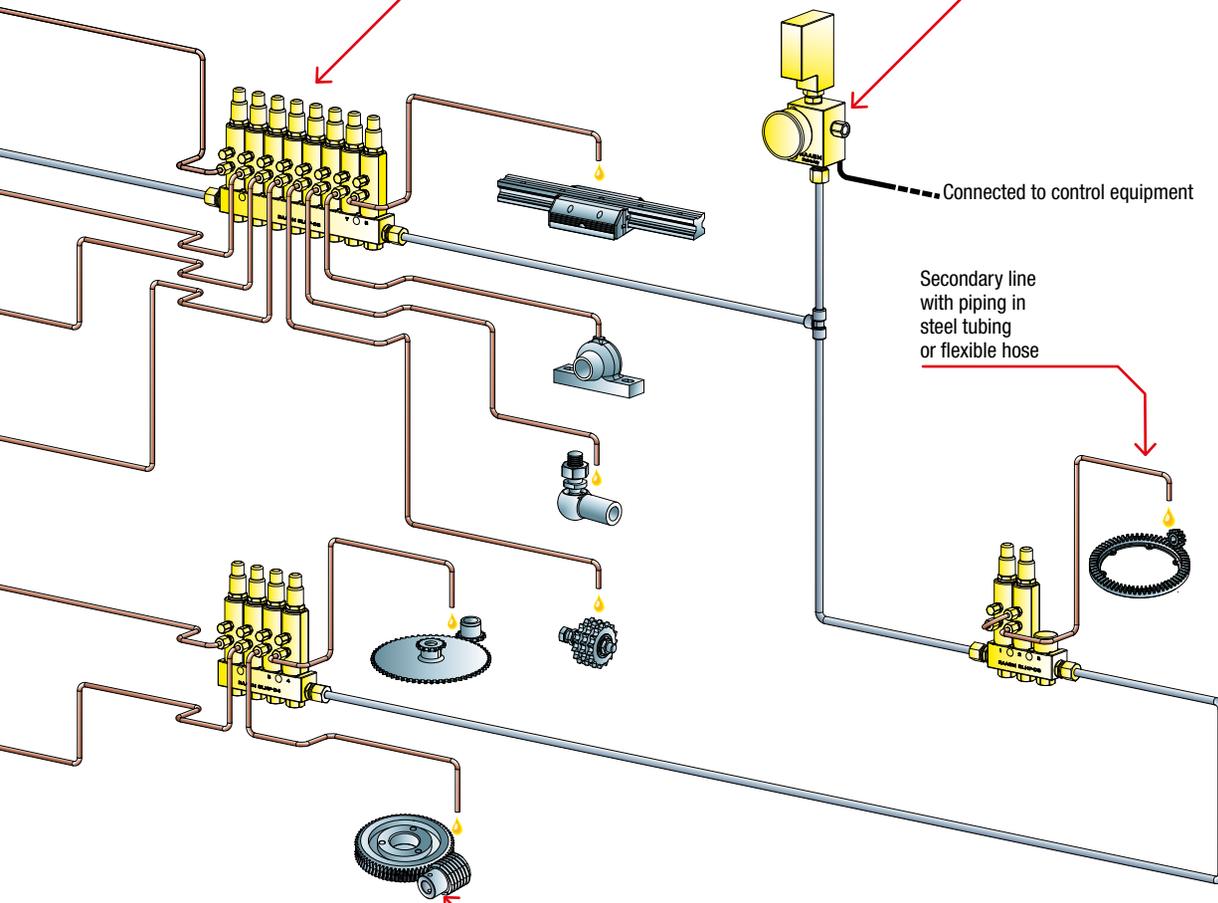
motor-operated pumps series C15S



Volumetric injectors
SLHP-D (page 26-27)



Line end pressure switch
(page 30)



Connected to control equipment

Secondary line
with piping in
steel tubing
or flexible hose

Lube point: the sample system illustrates some typical moving parts that require lubrication



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SERIES C15B18 MOTOR-OPERATED PUMP

24 V DC - ø 7.1"

It can be used in heavy conditions thanks to IP 55 protection rating, and is equipped with radially fitted pumping elements controlled by an eccentric wheel driven by a gearmotor.

The lubricant is contained in a transparent tank of 10 - 16 - 20 lb (1.3 - 2.1 - 2.6 gal) capacity. A rotating follower plate, in conjunction with the eccentric wheel or a follower plate, facilitates suction of the lubricant even with high viscosity greases (NLGI 2). The support on the central body in aluminium enables wall mounting of the unit. Located on the central body is a greaser with filter (150 µm), for clean tank refills. The electrical parts are in the bottom of the unit, protected by a strong plastic cover.

Colore:

STANDARD

RAL 7035



Technical characteristics

Max working pressure	4350 psi (300 bar)
Number of piston	2 - 4
Piston	P/N 3081100-55 - piston ø 0.3"
Flow rate for 1 piston	0.007 inch ³ /cycle (0.122 cm ³ /cycle)
Flow rate for 2-4 pistons *	0.52 - 1.04 inch ³ /min (8.54 - 17.08 cm ³ /min)
Outlet connection	NPT 3/8" (f)
Reservoir capacity	10 - 16 - 20 lb (1.3 - 2.1 - 2.6 gal)
Working temperature	-13 °F / +140 °F (-25 °C / +60 °C)
Lubricant	Oil > 40 cst - Grease max NLGI 2
Reservoir refilling	By grease coupler
Motor reducer *	24 V DC
Power	36 W
Power (starting point)	72 W
Current	1.5 A
Current (starting point)	3 A
Working torque (starting point)	12 Nm
Rotation per min	35
Protection degree	IP55

* Approx. delivery with grease NLGI 2 at 64 °F (18 °C). (The lubricant must have technical characteristics in compliance with working temperature).
 * Testing done at 3625 psi (250 bar) at 68 °F (18 °C).

GUIDE TO CHOOSING PUMP

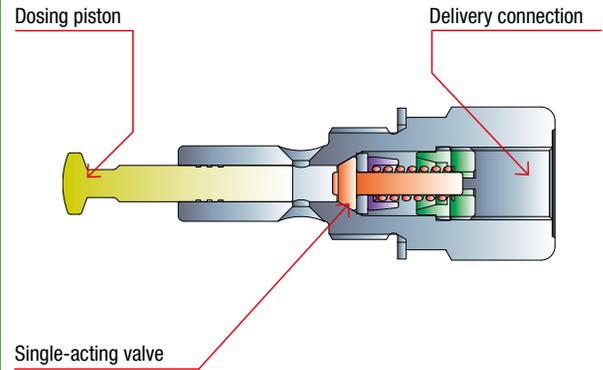
P/N		Reservoir capacity		No. of pistons	Flow rate
Grease	Oil	Grease	Oil		
1524565-55	1554235-55	10 lb (4.5 kg)	1.3 gal (5 l)	2	0.52 inch ³ /min (8.5 cm ³ /min)
1527805-55	1558015-55	16 lb (7.2 kg)	2.1 gal (8 l)	2	0.52 inch ³ /min (8.5 cm ³ /min)
1560645-55	1561005-55	20 lb (9.1 kg)	2.6 gal (10 l)	2	0.52 inch ³ /min (8.5 cm ³ /min)
1524835-55	1554505-55	10 lb (4.5 kg)	1.3 gal (5 l)	4	1.04 inch ³ /min (17.1 cm ³ /min)
1528075-55	1558285-55	16 lb (7.2 kg)	2.1 gal (8 l)	4	1.04 inch ³ /min (17.1 cm ³ /min)
1560825-55	1561185-55	20 lb (9.1 kg)	2.6 gal (10 l)	4	1.04 inch ³ /min (17.1 cm ³ /min)

STANDARD EQUIPMENT

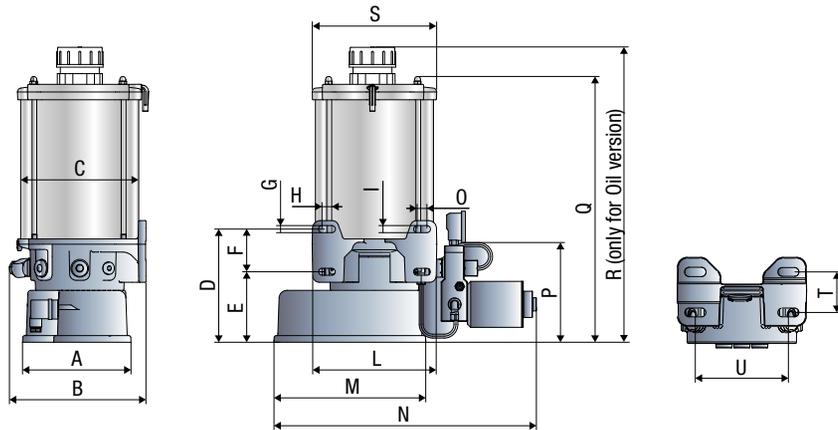


Magnetic low level indicator for grease.
Capacitive low level indicator for oil.

PUMPING UNIT



OVERALL DIMENSIONS

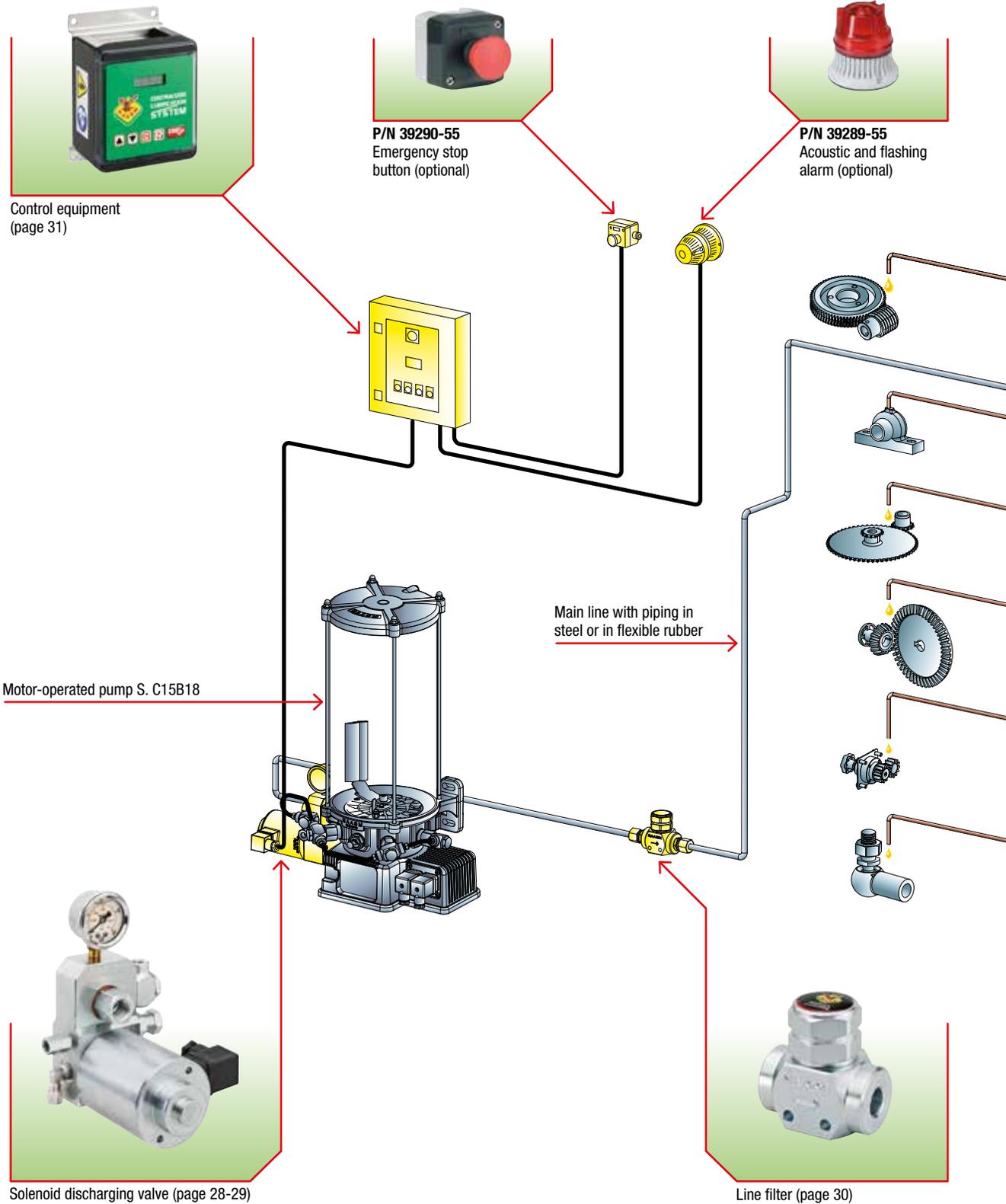


Reservoir size	A	B	C	D	E	F	G	H	I	L	M
10 lb (4,5 kg)	6.5" (165,4 mm)	8.2" (208,1 mm)	7.1" (480 mm)	6.8" (172 mm)	4.2" (107 mm)	2.6" (66 mm)	0.4" (10 mm)	0.6" (15 mm)	0.4" (10 mm)	7.5" (190 mm)	9.1" (231 mm)
16 lb (7,2 kg)	6.5" (165,4 mm)	8.2" (208,1 mm)	7.1" (480 mm)	6.8" (172 mm)	4.2" (107 mm)	2.6" (66 mm)	0.4" (10 mm)	0.6" (15 mm)	0.4" (10 mm)	7.5" (190 mm)	9.1" (231 mm)
20 lb (9,1 kg)	6.5" (165,4 mm)	8.2" (208,1 mm)	7.1" (480 mm)	6.8" (172 mm)	4.2" (107 mm)	2.6" (66 mm)	0.4" (10 mm)	0.6" (15 mm)	0.4" (10 mm)	7.5" (190 mm)	9.1" (231 mm)

Reservoir size	N	O	P	Q	R	S	T	U
10 lb (4,5 kg)	15.8" (400 mm)	0.6" (15 mm)	6.0" (152 mm)	15.9" (404 mm)	16.7" (423 mm)	7.9" (200 mm)	2.6" (65 mm)	5.7" (145 mm)
16 lb (7,2 kg)	15.8" (400 mm)	0.6" (15 mm)	6.0" (152 mm)	20.9" (530 mm)	21.6" (549 mm)	7.9" (200 mm)	2.6" (65 mm)	5.7" (145 mm)
20 lb (9,1 kg)	15.8" (400 mm)	0.6" (15 mm)	6.0" (152 mm)	24.2" (615 mm)	25.0" (634 mm)	7.9" (200 mm)	2.6" (65 mm)	5.7" (145 mm)

	Reservoir size	Net weight	Gross weight	Packing
Grease	20 lb (9.1 kg)	14.8 lb (6.7 kg)	26.9 lb (12.2 kg)	1.7 ft ³ (0.048 m ³)
	16 lb (7.2 kg)	14.1 lb (6.4 kg)	26.2 lb (11.9 kg)	1.6 ft ³ (0.045 m ³)
	10 lb (4.5 kg)	14.0 lb (6.3 kg)	16.0 lb (7.2 kg)	1.2 ft ³ (0.033 m ³)
Oil	2.6 gal (10 l)	14.1 lb (6.4 kg)	26.4 lb (12.0 kg)	1.7 ft ³ (0.048 m ³)
	2.1 gal (8 l)	13.7 lb (6.2 kg)	25.8 lb (11.7 kg)	1.6 ft ³ (0.045 m ³)
	1.3 gal (5 l)	13.0 lb (5.9 kg)	16.0 lb (7.2 kg)	1.3 ft ³ (0.036 m ³)

Sample lubrication system with



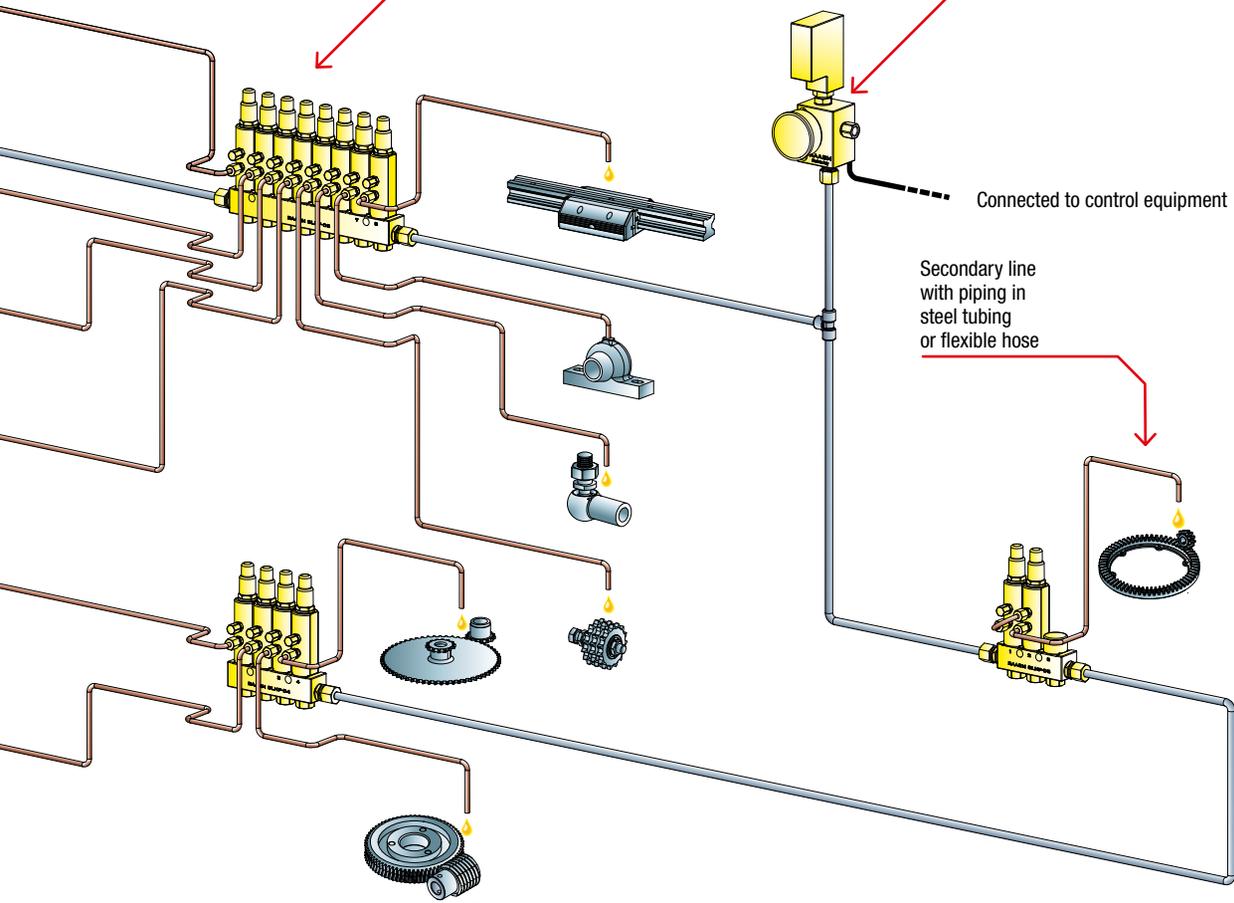
motor-operated pumps series C15B18



Volumetric injectors
SLHP-D (page 26-27)



Line end pressure switch (page 30)



Connected to control equipment

Secondary line
with piping in
steel tubing
or flexible hose

Lube point: the sample system illustrates some typical moving parts that require lubrication



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SERIES C15F AIR-OPERATED PUMP

20 lb - 2.6 gal

ON DRUM

If a compressed air source is available, an air-operated pump may be preferred.

Various solutions are available:

with 20 lb (2.6 gal) tank or suitable for 35, 120 or 400 lb drums (20, 50 or 200 kg), provided with drum cover and grease follower plate (if necessary).

If commercial drums are used, once the lubricant is finished the end user can replace the drum or fill it up again through the specific inlet, on request with a special kit (filling filter).

Oil pumps are provided with drum cover for open drums (up to 120 lb (50 kg)) or with ring nut for closed drums (usually from 120 lb to 400 lb (from 50 kg to 200 kg)).

High compression ratio (50:1) and adjustable feeding pressure allow users to set system's pressure to its specific requirements (from 1450 to 5075 psi (from 100 bar to 350 bar)).



Technical characteristics

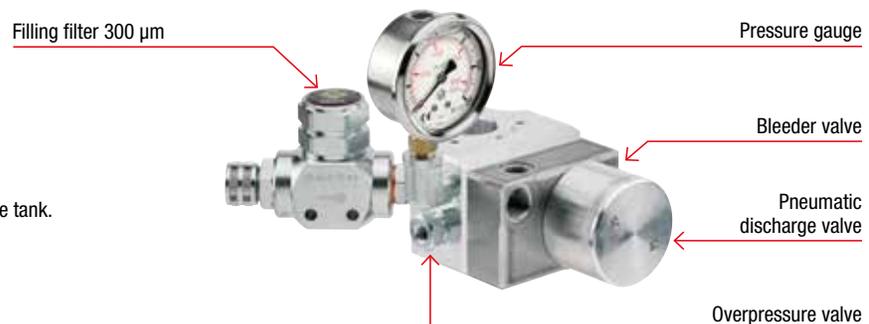
Max flow rate	*	81.15 inch ³ /min (1330 cm ³ /min)
Max working pressure		120 psi (8 bar)
Pressure ratio		50:1
Air inlet connection		NPT 1/4" (f)
Lubricant outlet connection		NPT 3/8" (f)
Overpressure valve (adjustable)		from 1450 to 5075 psi (from 100 to 350 bar)
Working temperature		-13 °F / +140 °F (-25 °C / +60 °C)
Lubricant		Oil > 40 cSt - Grease max NLGI 2

* Approx. delivery with grease NLGI 2 at 64 °F (18 °C).

DELIVERY DISCHARGE AND CONTROL ASSEMBLY

This group is composed by:

- **Pressure gauge**: to check the line pressure.
- **Overpressure valve**: allows to check the system pressure and to discharge the lubricant in case of overpressure.
- **Filling filter** (optional): for filling the lubricant in the tank.
- **Bleeder valve**: during the filling phase, it allows to remove the air inside.
- **Pneumatic discharge valve**



GUIDE TO CHOOSING PUMP	P/N	Reservoir capacity	Drum inside ø	Pump (R 50:1)	Drum cover	Follower plate	Discharging valve
	Grease						
	1500020-55	20 lb (9 kg)	8.7" (220 mm)	62541-55	-	10/617-55	1581200-55
	1500200-55	35 lb (20 kg)	10.0" - 11.8" (260 - 330 mm)	62548-55	10/507-55	10/63-55	1581200-55
	1500380-55	120 lb (50 kg)	13.2" - 14.2" (340 - 385 mm)	62574-55	10/503-55	10/62-55	1581200-55
	1500470-55	120 lb (60 kg)	14.2" - 15.8" (370 - 420 mm)	62574-55	10/502-55	10/61-55	1581200-55
	1500560-55	400 lb (200 kg)	21.3" - 22.9" (550 - 600 mm)	62595-55	10/501-55	10/60-55	1581200-55
	P/N	Reservoir capacity	Drum outside ø	Pump (R 50:1)	Drum cover	Bung adaptor	Discharging valve
	Oil						
	1500650-55	2.6 gal (10 l)	9.5" (220 mm)	62541-55	-	-	1581200-55
1500830-55	4.8 gal (18 l)	10.2"/13.0" (260 - 330 mm)	62548-55	10/507-55	-	1581200-55	
1501010-55	16 gal (60 l)	13.4"/15.2" (340 - 385 mm)	62574-55	10/503-55	-	1581200-55	
1501100-55	16 gal (60 l)	closed - thread 2"	62574-55	level 39650-55	10/14-55	1581200-55	
1501190-55	55 gal (210 l)	closed - thread 2"	62595-55	level 39650-55	10/14-55	1581200-55	

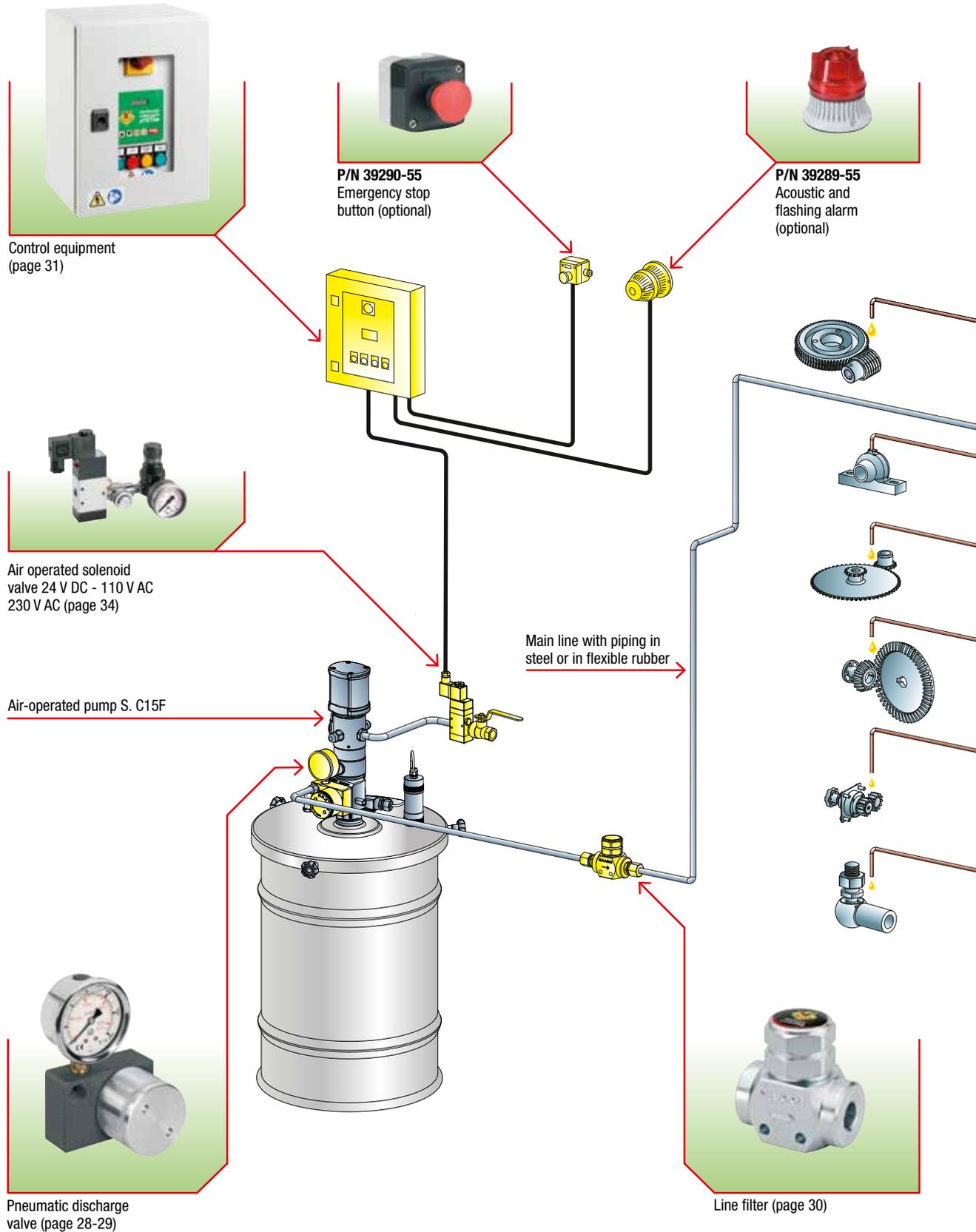
STANDARD EQUIPMENT	Only for 20 lb model	Only for 20 lb model	ON REQUEST	
				
	Ultrasonic min/max level indicator	Visual max level indicator oil		Visual max level indicator grease
				
			Charging filter for filling standard drums when empty	

OVERALL DIMENSIONS	20 lb (9 kg)		35 lb (20 kg)		120 lb (50 kg)		120 lb (60 kg)		400 lb (200 kg)		
	Grease	Oil	Grease	Oil	Grease	Oil	Grease	Oil	Grease	Oil	
	Packing-ft ³ (m ³)	1-2.0 (0,056)	1-2.0 (0,056)	2-3.1 (0,089)	2-3.1 (0,089)	2-2.8 (0,080)	2-2.8 (0,080)	2-2.8 (0,080)	2-1.4 (0,040)	2-4.1 (0,116)	2-1.8 (0,050)
	Net weight lb (kg)	39.4 (17,9)	37.7 (17,1)	29.1 (13,2)	26.4 (12)	32.8 (14,9)	28.9 (13,1)	33.9 (15,4)	24.7 (11,2)	50.7 (23)	28.4 (12,9)
	Gross weight lb (kg)	40.1 (18,2)	39.3 (17,4)	30.6 (13,9)	28.0 (12,7)	34.1 (15,5)	30.2 (13,7)	35.2 (16)	26.0 (11,8)	52.7 (23,9)	30.2 (13,7)

P/N Grease	A	B	C
1500020-55	13.8" (351 mm)	13.2" (355 mm)	11.5" (292 mm)
1500200-55	14.0" (355 mm)	14.2" (361 mm)	13.4" (341 mm)
1500380-55	14.0" (355 mm)	24.5" (621 mm)	15.3" (389 mm)
1500470-55	14.0" (355 mm)	24.5" (621 mm)	16.7" (424 mm)
1500560-55	14.0" (355 mm)	32.9" (835 mm)	23.8" (604 mm)

P/N Oil	A	B	C
1500650-55	13.8" (351 mm)	13.2" (355 mm)	11.5" (292 mm)
1500830-55	14.0" (355 mm)	14.2" (361 mm)	13.4" (341 mm)
1501010-55	14.0" (355 mm)	24.5" (621 mm)	15.3" (389 mm)
1501100-55	14.0" (355 mm)	24.5" (621 mm)	16.7" (424 mm)
1501190-55	14.0" (355 mm)	32.9" (835 mm)	23.8" (604 mm)

Sample lubrication system with



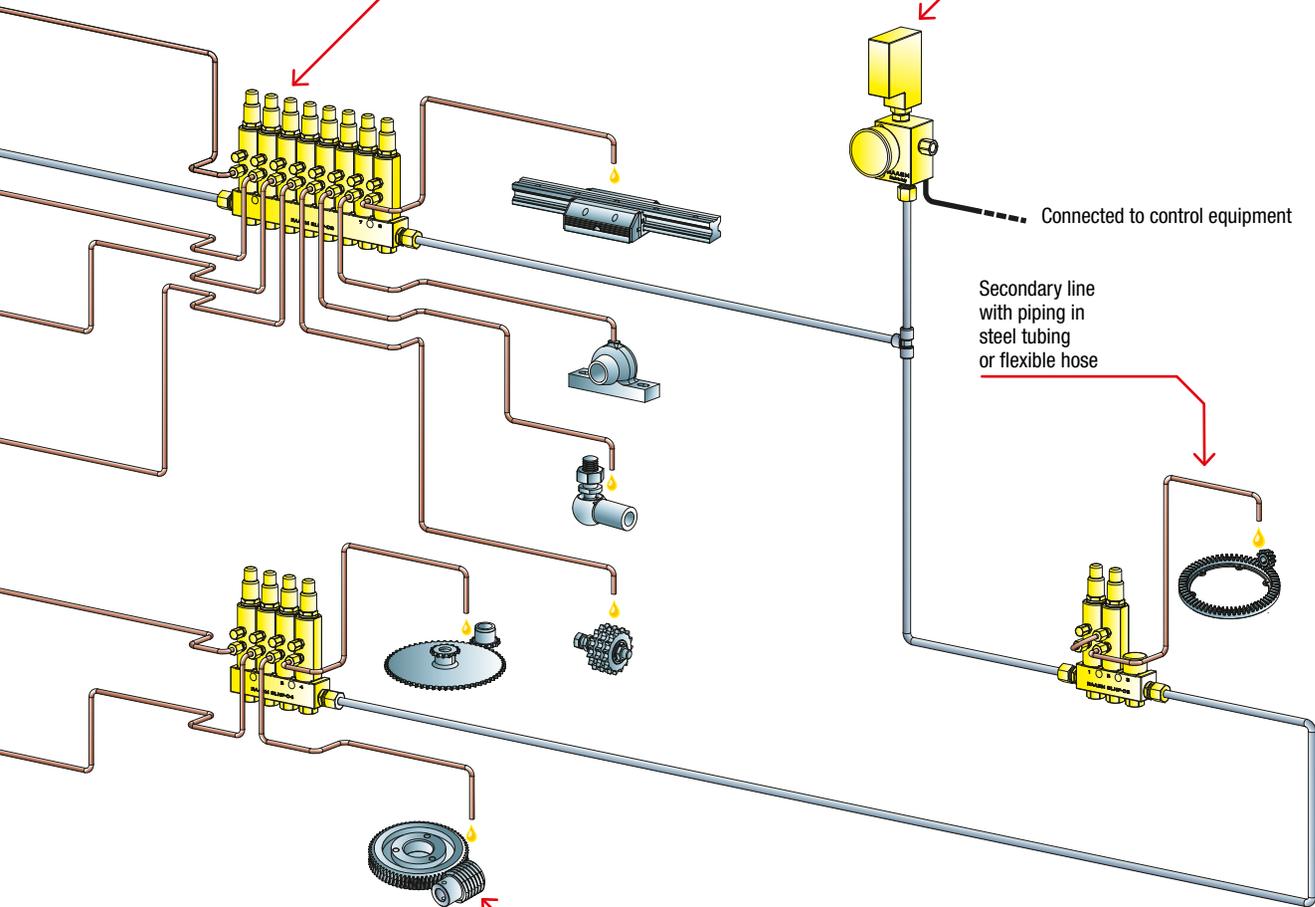
air-operated pump series C15F



Volumetric injectors
SLHP-D (page 26-27)



Line end pressure switch (page 30)



Lube point: the sample system illustrates some typical moving parts that require lubrication



SLHP-D VOLUMETRIC INJECTOR

The volumetric injectors are entirely in steel with white galvanizing, and equipped with Viton® seals.

Their operating pressure varies from 580 - 2175 psi (40 - 150 bar) for oil to 1015 - 4350 psi (70 - 300 bar) for grease.

In the upper part there is an adjusting screw regulate the amount of lubricant delivered by the injector (from 0 to 0.10 inch³/cycle (from 0 to 1.7 cm³/cycle)).

In the upper part there's also a visual indicator which allows to check correct injector operations. The size the SLHP-D injectors enables easy replacement (if necessary) of models already existing on the market. Their design allows for expansion of the system and its easy maintenance. Viscosity from oil 40 cSt oil to grease NLGI 2 max.



Technical characteristics

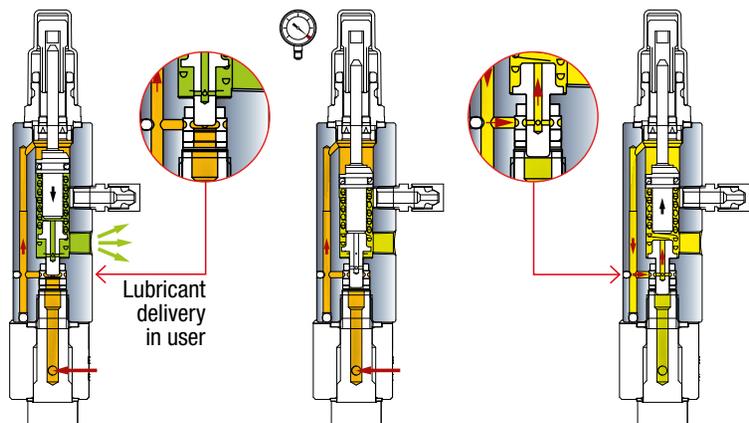
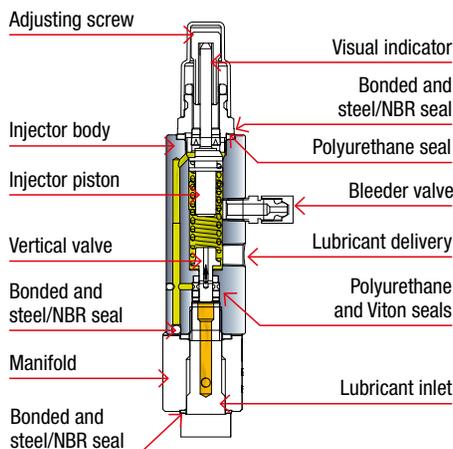
Injector flow rate adjustable	from 0 to 0.10 inch ³ /cycle (from 0 to 1.7 cm ³ /cycle)
Working pressure	Oil: 580 - 2175 psi (40 - 150 bar) - Grease: 1015 - 4350 psi (70 - 300 bar)
Lubricant inlet connection	NPTF 3/8" (f)
Lubricant outlet connection	NPTF 1/8" (f)
Material	Galvanized steel
Lubricant	Oil > 40 cSt - Grease max NLGI 2

Pressurised lubricant inlet

Lubricant delivery to user

Lubrication end and max pressure signal

Decompression and distributor refill



● Lubricant under pressure
● Lubricant in delivery

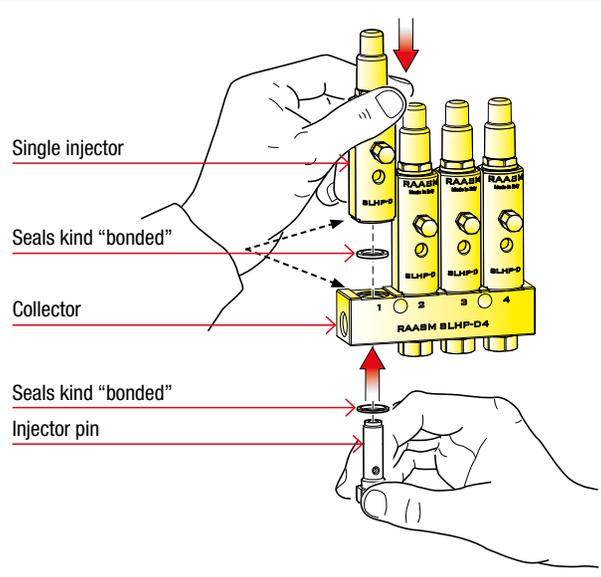
● Lubricant without pressure
● Lubricant in circulation for refill

GUIDE TO CHOOSING PUMP

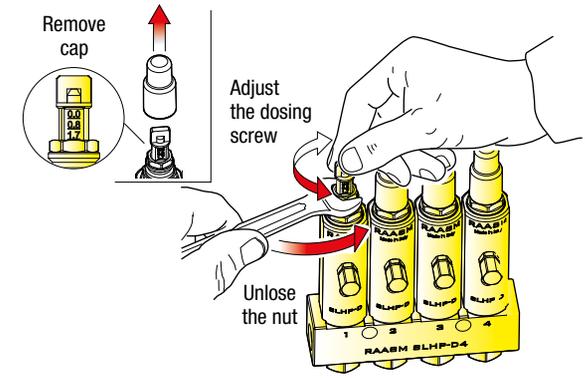
Grease	P/N	Abbreviation	Outlets	Inlet outlet	Working pressure	Materials
Single injector	1532541-55	-	1	1/8" NPTF (f)	1015-4350 psi (70-300 bar)	Zinc plated steel
Injector + manifold	1532540-55	SLHPGD1/1N	1	3/8" NPTF (f) 1/8" NPTF (f)	1015-4350 psi (70 - 300 bar)	Zinc plated steel
	1532580-55	SLHPGD1/2N	2			
	1532620-55	SLHPGD1/3N	3			
	1532660-55	SLHPGD1/4N	4			
	1532700-55	SLHPGD1/5N	5			
	1532740-55	SLHPGD1/6N	6			
	1532780-55	SLHPGD1/8N	8			

Oil	P/N	Abbreviation	Outlets	Inlet outlet	Working pressure	Materials
Single injector	1538421-55	-	1	1/8" NPTF (f)	580-2175 psi (40-150 bar)	Zinc plated steel
Injector + manifold	1538420-55	SLHPOD1/1N	1	3/8" NPTF (f) 1/8" NPTF (f)	580-2175 psi (40 - 150 bar)	Zinc plated steel
	1538460-55	SLHPOD1/2N	2			
	1538500-55	SLHPOD1/3N	3			
	1538540-55	SLHPOD1/4N	4			
	1538580-55	SLHPOD1/5N	5			
	1538620-55	SLHPOD1/6N	6			
	1538660-55	SLHPOD1/8N	8			

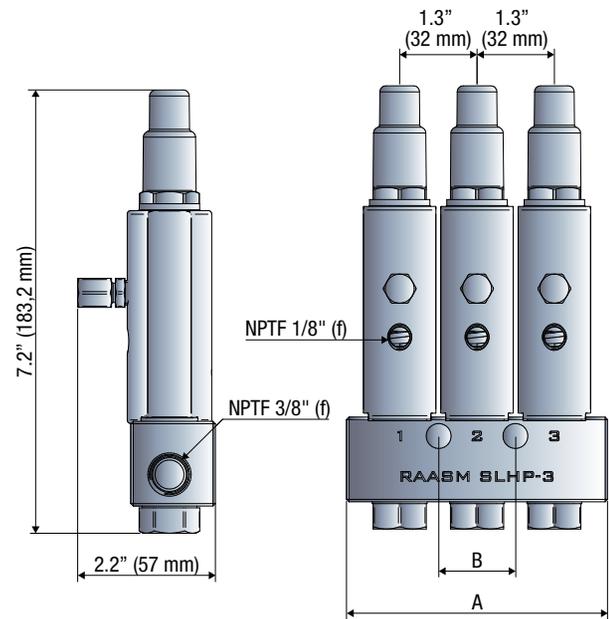
APPLICATION OF THE SINGLE INJECTOR ON THE MANIFOLD



ADJUSTING OF DELIVERY INJECTOR



OVERALL DIMENSIONS



Abbreviation	A	B
SLHPGD1/1N SLHPOD1/1N	2.5" (63,5 mm)	1.3" (31,75 mm)
SLHPGD1/2N SLHPOD1/2N	3.0" (76,25 mm)	1.3" (31,75 mm)
SLHPGD1/3N SLHPOD1/3N	4.3" (108 mm)	1.3" (31,75 mm)
SLHPGD1/4N SLHPOD1/4N	5.5" (139,7 mm)	2.5" (63,5 mm)
SLHPGD1/5N SLHPOD1/5N	6.8" (171,5 mm)	3.8" (95,25 mm)
SLHPGD1/6N SLHPOD1/6N	8.0" (203,2 mm)	5.0" (127 mm)
SLHPGD1/8N SLHPOD1/8N	10.5" (266,7 mm)	7.5" (190,5 mm)



PRESSURE DISCHARGING PNEUMATIC VALVE

FOR C15F

This pneumatic valve is normally open during feeding in the compression stage, and opens when the feed is turned off, discharging the system's pressure.



Technical characteristics

P/N	1581200-55
Air max working pressure	120 psi (8 bar)
Air min working pressure	30 psi (2 bar)
Lubricant max pressure	4350 psi (350 bar)
Assembly	On pump body
Material	Hardened steel and aluminum
Lubricant	Oil > 40 cSt - Grease max NLGI 2

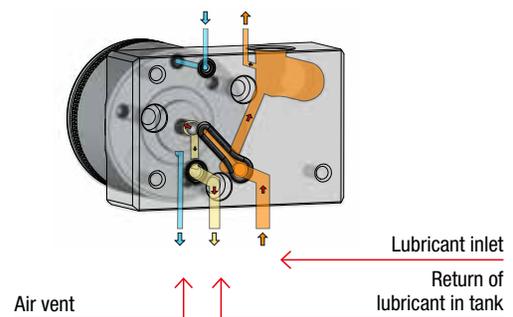
HOW IT WORKS

Phase 1

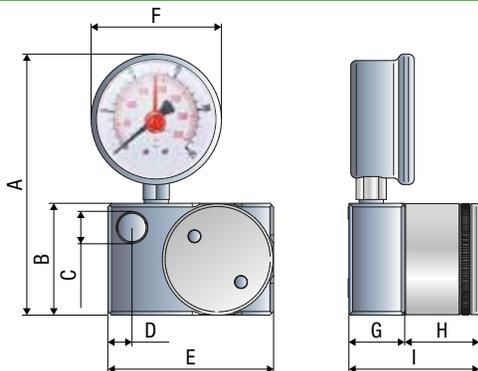
During the system pressurization stage, the valve (normally-open) is fed in order to close the drain hole.

Phase 2

After the maximum pressure is reached in the system, the line end pressure switch stops the pumps, closing the supply also at the valve which, on opening, discharges (decompression) the lubrication system.



OVERALL DIMENSIONS



A	B	C	D	E
5.5" (140 mm)	2.4" (60 mm)	NPTF 3/8" (f)	0.5" (13 mm)	3.5" (89 mm)

F	G	H	I
∅ 2.8" (70 mm)	1.2" (30 mm)	1.6" (40 mm)	2.8" (70 mm)



PRESSURE DISCHARGE SOLENOID VALVE

This valve is fed by 24 V DC. Like the pneumatic valve, it closes when fed, during the compression stage, and opens when the feed is turned off, discharging the system pressure. Both models allow volumetric distributors to charge for a new cycle. Solenoid valve (P/N 1581300-55), according with the flow rate and the number of pumping elements required, is linked with specific kit to 2 or 4 pumping elements (page 16).

FOR C15S

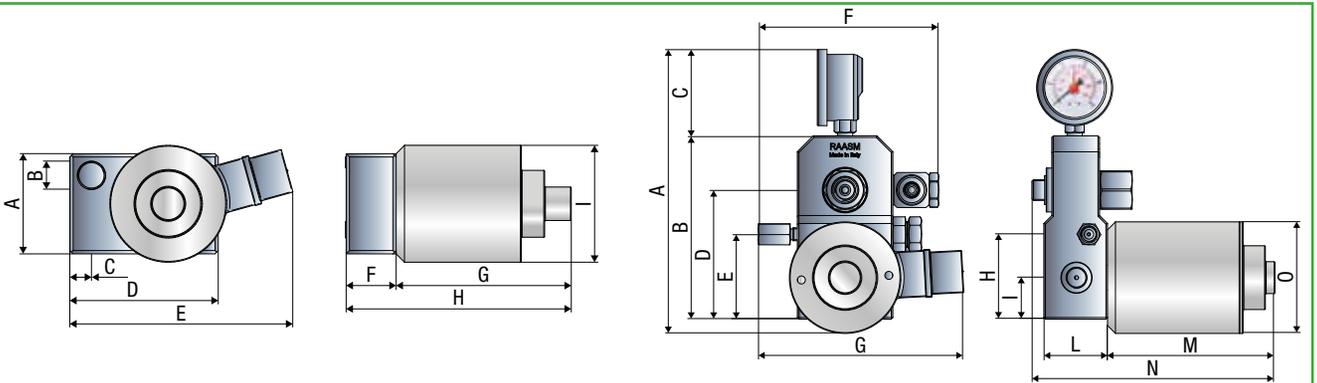
FOR C15B18



Technical characteristics

P/N	1581250-55	1581300-55
Lubricant max pressure	4350 psi (300 bar)	4350 psi (300 bar)
Assembly	On pump body	On pump body
Material	Hardened steel	Hardened steel
Lubricant	Oil > 40 cSt - Grease max NLGI 2	Oil > 40 cSt - Grease max NLGI 2
Power	24 V DC - 6 A	24 V DC - 6 A
Electrical input a 68 °F (20 °C)	3.1 A	3.1 A
Electric power 68 °F (20 °C)	75.8 W	75.8 W
Working temperature (with environment temperature 68 °F (20 °C))	150 °F (65 °C)	150 °F (65 °C)
Protection rating	IP55	IP55
On/Off time ratio	1/8 (1 min working time and 8 min pause)	1/8 (1 min working time and 8 min pause)

OVERALL DIMENSIONS



A	B	C	D	E
2.4" (60 mm)	NPT 3/8" (f)	0.5" (13 mm)	3.5" (89 mm)	5.3" (134 mm)

F	G	H	I
1.2" (30 mm)	4.1" (105 mm)	5.3" (135 mm)	2.8" (70 mm)

A	B	C	D	E	F
7" (179 mm)	4.5" (115 mm)	2.2" (55 mm)	3.2" (81 mm)	2.0" (53 mm)	4.4" (113 mm)

G	H	I	L	M	N	O
5.0" (129 mm)	2.0" (53 mm)	1.0" (26 mm)	1.6" (40 mm)	4.1" (105 mm)	6.0" (152.7 mm)	2.7" (70 mm)



PRESSURE SWITCH AND FILTERS

FILTERS

PRESSURE SWITCH

End of line pressure switches

The end of line pressure switches are used to control and check the correct operation of the centralized system, to confirm reaching of maximum pressure and cycle end command.

Filter

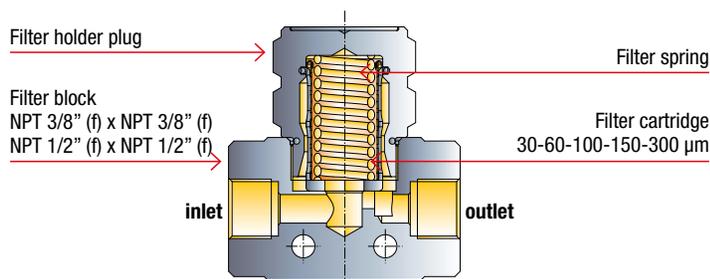
The installation of appropriate filters at the control unit inlet (for filling) and outlet is recommended. In order to ensure proper functioning of the system and that the lubricant intended for user points is free of impurities. The steel filters ensures a sure sealing and allows their use in centralized lubrication systems where high operating pressures (7250 psi (500 bar)).



Technical characteristics

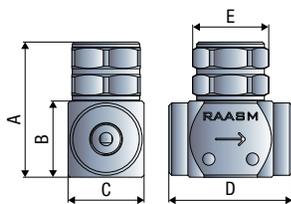
Type	Oil and grease	Oil and grease
Work pressure	7250 psi (500 bar)	5800 psi (400 bar)
Filtration degree	30 - 60 - 100 - 150 - 300 µm	-
Lubricant inlet connection	NPT 3/8" (f) - NPT 1/2" (f)	NPT 3/8" (f)
Lubricant outlet connection	NPT 3/8" (f) - NPT 1/2" (f)	-
Electric contact	-	On clamps
Working temperature	-13 °F / +140 °F (-25 °C / +60 °C)	-13 °F / +140 °F (-25 °C / +60 °C)
Lubricant	Oil > 40 cSt - Grease max NLGI 2	Oil > 40 cSt - Grease max NLGI 2

HOW IT WORKS



Lubricant	P/N	Connection	Filtration degree (µm)
Oil and Grease	2080900-55	NPT 3/8" (f)	30
	2080930-55		60
	2080950-55		100
	2080800-55	NPT 3/8" (f)	150
	2080801-55		300
	2080901-55		30
	2080931-55	NPT 1/2" (f)	60
	2080951-55		100
	2080850-55		150
	2080851-55	NPT 1/2" (f)	300

OVERALL DIMENSIONS



A	B	C	D	E
2.8" (71 mm)	ø 1.6" (40 mm)	ø 1.6" (40 mm)	2.6" (65 mm)	1.5" (38 mm)

Technical characteristics	P/N	Working pressure (psi)	Protection degree	Type
pressure switch with manometer	2080600-55	from 435	IP55	without box
	2080605-55	to 5800	IP65	with box

A	B	C	D	E
7.9" (200,7 mm)	3.2" (80 mm)	0.4" (10,1 mm)	2.4" x ø 0.3" (60 x 8,5 mm)	2.4" (60 mm)

F	G	H	I
2.0" (50 mm)	1.0" (25 mm)	2.0" (50 mm)	3.8" (96,5 mm)



CONTROL EQUIPMENT

200÷500 V AC 50/60 Hz

System control board

The control equipment is dedicated to the management and control of centralized single-line lubrication. The dedicated card installed inside controls the inlet and outlet signals of the whole system.



Technical characteristics

P/N	1670011-55	2170033-55	1670017-55	2170037-55	1670016-55
Proper for pump	C15S - C15P	C15F - C15B18	C15S - C15P	C15F - C15B18	C15S - C15P
Voltage	200÷500 V AC				
Power consumed	* 1500 W max	1500 W max	1500 W max	1500 W max	1500 W max
Button start /stop	NO	NO	YES	YES	YES
Light allarm	NO	NO	YES	YES	YES
Light filling	NO	NO	YES	YES	NO
Tank full light	NO	NO	YES	YES	NO
Trasparent window	NO	NO	YES	YES	YES
Filling control	NO	YES	YES	YES	NO
Protection rating	IP54	IP54	IP55	IP55	IP55
Working temperature	- 13°F / +140 °F (-25 °C / +60 °C)	- 13°F / +140 °F (-25 °C / +60 °C)	- 13°F / +140 °F (-25 °C / +60 °C)	- 13°F / +140 °F (-25 °C / +60 °C)	- 13°F / +140 °F (-25 °C / +60 °C)

* Depends on the type of motor applied to the pump

The card is installed in a metal box provided with or without transparent window and communicates with a display integrated into an easy to use flexible membrane keyboard. Within the enclosure all the components (connections, remote control switches, fuses, etc.) are easy accesable.

- Display integrated into the flexible membrane keyboard
- Simple user interface based on a menu, easy to start configure and programme
- Rugged and waterproof cover, meets the requirements of IP55
- Ability to customize the lubrication intervals, pause and the cycle count
- Programming of the operating parameters protected by password
- Call system filling tank (on request) with high level light indicator.

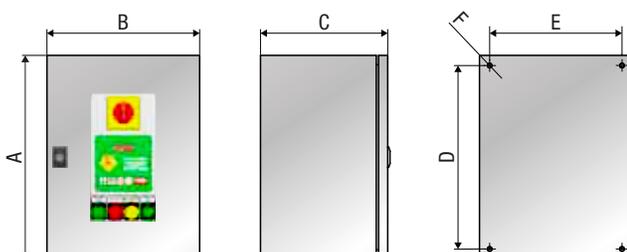


INPUT AND OUTPUT SIGNALS

Input signals
Start/Stop remote
Cycle-counter/Pressure switch L1
Cycle-counter/Pressure switch L2
Low level tank
Safety pressure switch maximum pressure
Thermal protection three-phase motors
Remote stand by cycle
Micro-inverter L1
Micro-inverter L2
Remote emergency button

Output signals
Power motor pump
Power
- motor inverter
- pressure discharge valve
- solenoid inverter 1
Power relay solenoid inverter 2
Remote operation lamp
Remote warning lamp

OVERALL DIMENSIONS



Packing		1-1.1 ft ³ (0.03 m ³)
Net weight		33.0-34.0 lb (15,2-15,4 kg)
Gross weight		34.4-34.9 lb (15,5-15,7 kg)

A	B	C	D	E	F
15.7" (400 mm)	11.8" (300 mm)	9.8" (250 mm)	14.2 (360 mm)	10.2" (260 mm)	ø 0.3" (9 mm)



CONTROL EQUIPMENT

12-24 V DC

120-230 V AC 50/60 Hz

This unit of management and control is composed of an electrical panel in polycarbonate in reduced dimensions. Inside is connected an electronic card that communicates with a display integrated in the practice flexible membrane keypad located on the front of the unit.



Technical characteristics

P/N	1670035-55	1670036-55
Proper for pump	C15F - C15B18	C15F
Voltage	12/24 V DC	120-230 V AC 60/50 Hz
Power consumed	200 W max	600 W max
Inlet	9	9
Outlet	5	5
Protection rating	IP64	IP64
Working temperature	- 13°F / +140°F (-25 °C / +60 °C)	- 13°F / +140°F (-25 °C / +60 °C)

The dedicated card installed inside controls the inlet and outlet signals of the whole system. The hardware part is composed of the removable terminal blocks located inside of the unit to facilitate removal of the card in case of maintenance

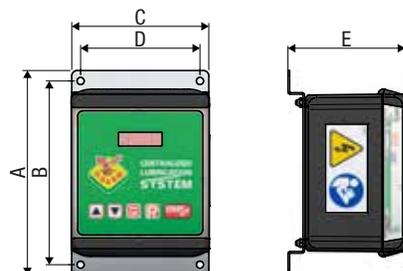
- Display integrated into the flexible membrane keyboard
- Simple user interface based on a menu, easy to start, and use configure and programme
- Rugged and waterproof cover, meets the requirements of IP64
- Ability to customize the lubrication intervals, pause and the cycle count
- Programming of the operating parameters protected by password



INPUT AND OUTPUT SIGNALS

Input signals	Output signals
Start/Stop remote	Power motor pump
Cycle-counter/ Pressure switch L1	Power - pressure discharge valve - solenoid inverter 1
Cycle-counter/ Pressure switch L2	Power relay solenoid inverter 2
Low level tank	Remote operation lamp
Safety pressure switch maximum pressure	Remote warning lamp
Thermal protection three-phase motors	
Remote stand by cycle	
Micro-inverter L1	
Micro-inverter L2	

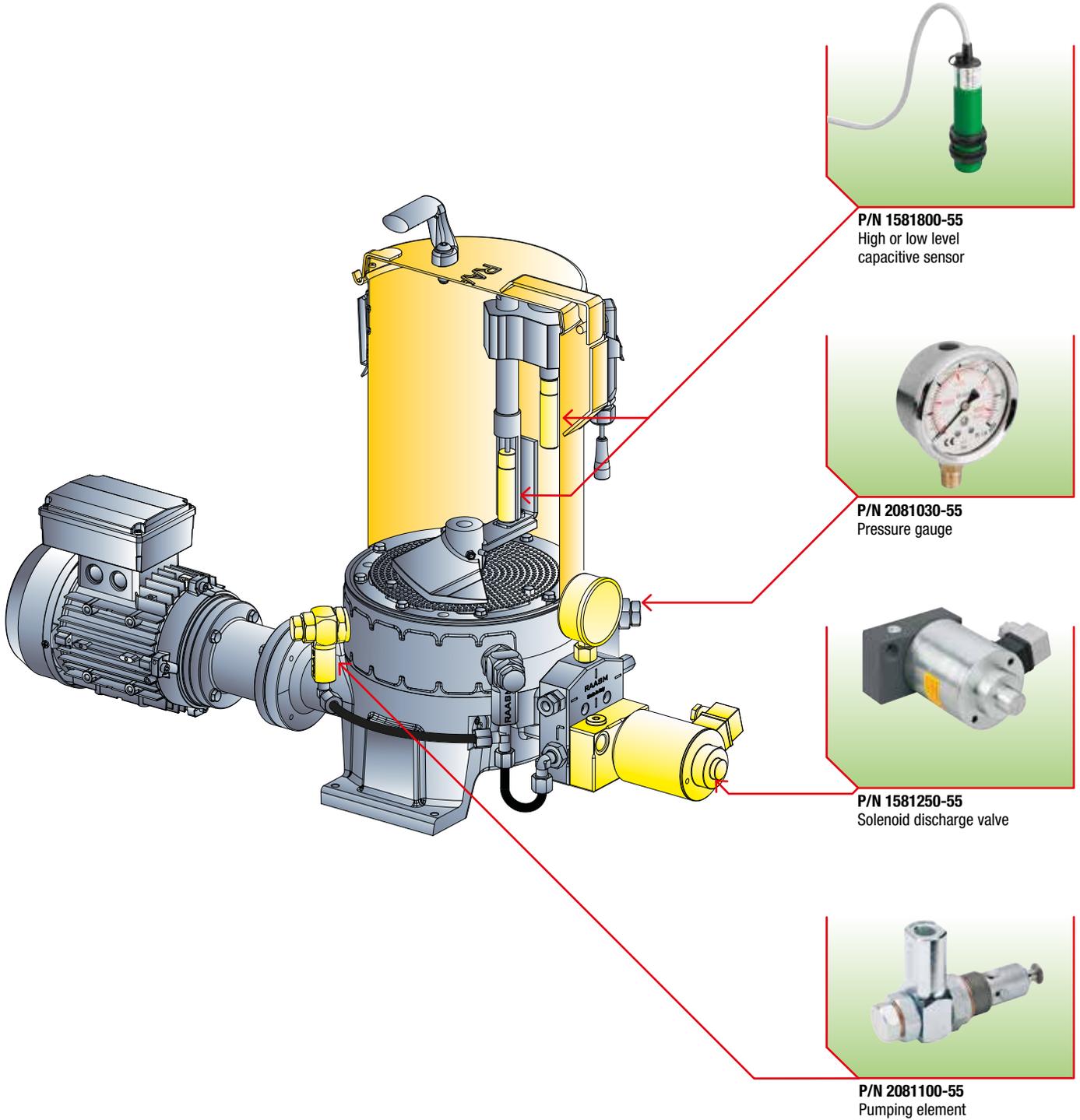
OVERALL DIMENSIONS



Packing		1-0.2 ft ³ (1 - 0.005 m ³)
Net weight		2.7-3.1 lb (1.2 - 1.4 kg)
Gross weight		2.4-2.9 lb (1.1 - 1.3 kg)

A	B	C	D	E
7.3" (185 mm)	6.5" (166 mm)	4.8" (124 mm)	4.2" (108 mm)	4.2" (108 mm)

Pump Accessories for Series C15S



P/N 1581800-55
High or low level
capacitive sensor

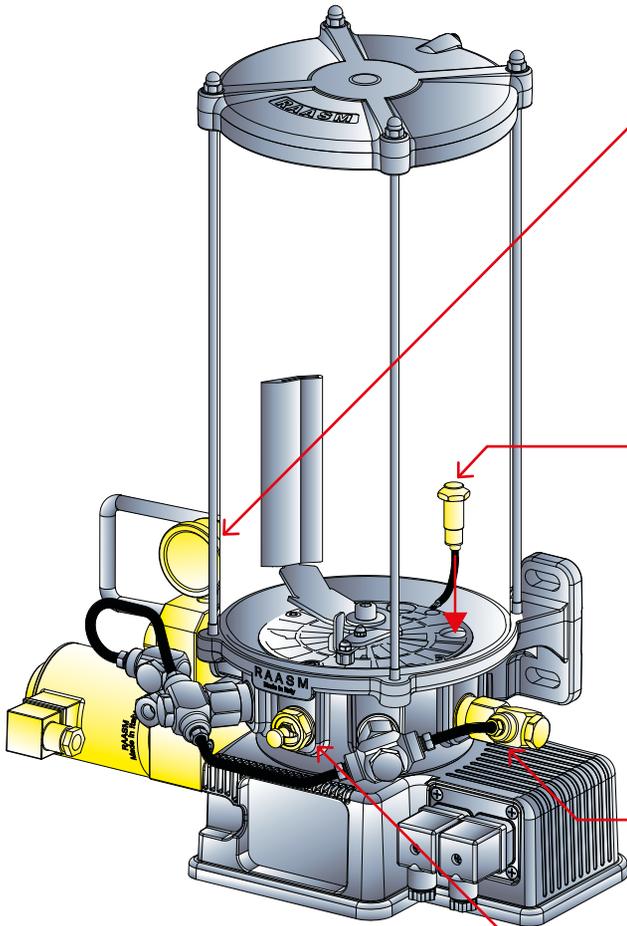
P/N 2081030-55
Pressure gauge

P/N 1581250-55
Solenoid discharge valve

P/N 2081100-55
Pumping element

P/N	Description	Connection	Flow rate/Pressure
1581800-55	High or low level capacitive sensor	M 18 x 1	-
2081030-55	Pressure gauge \varnothing 2.5" - 8700 psi (\varnothing 63 mm - 600 bar)	NPT 1/4" (m)	8700 psi (600 bar)
1581250-55	Solenoid discharge valve	NPT 3/8" (f) on pump body	4350 psi (300 bar)
2081100-55	Pumping element \varnothing 0.5" (\varnothing 12 mm)	M27 x 1.5	0.06 inch ³ /cycle (1 cm ³ /cycle)

Pump Accessories for Series C15B18



P/N 1581300-55 - 1581301-55
P/N 1581302-55
 Solenoid discharge valve



P/N 3081900-55
 Low level capacitive sensor for oil
P/N 3081950-55
 Low level magnetic sensor for grease



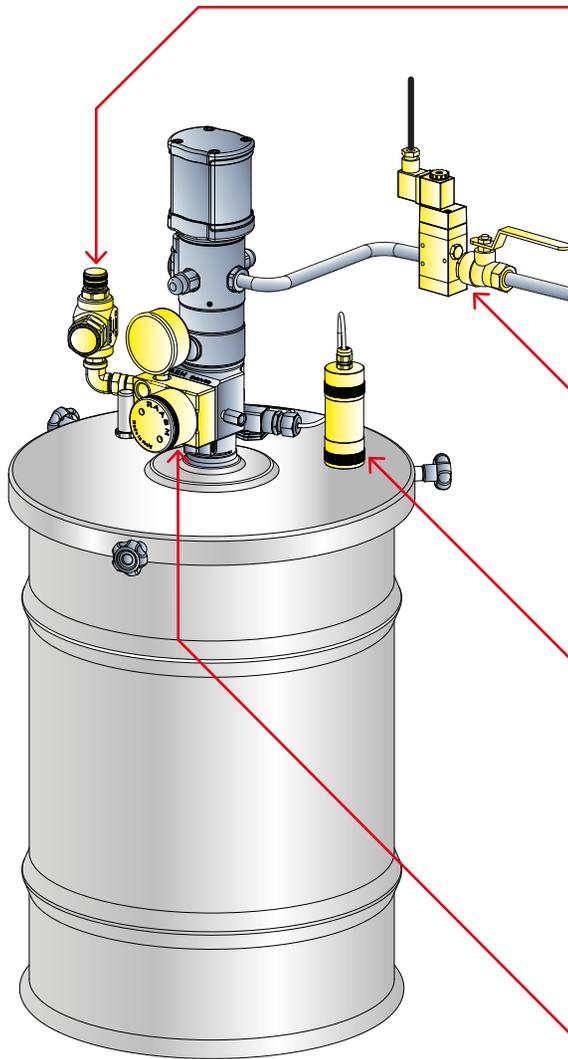
P/N 3081100-55
 Pumping element



P/N 3081150-55
 150 µm charging filter

P/N	Description	Connection	Flow rate/Pressure
1581300-55	Solenoid discharge valve	NPT 3/8" (f) on pump body	4350 psi (300 bar)
1581301-55	Solenoid discharge valve + 2 pumping element union kit	NPT 3/8" (f) on pump body	4350 psi (300 bar)
1581302-55	Solenoid discharge valve + 4 pumping element union kit	NPT 3/8" (f) on pump body	4350 psi (300 bar)
3081100-55	Pumping element \varnothing 0.26" (\varnothing 6,5 mm)	on pump body M20 x 1.5 outlet NPT 1/4" (f)	0.007 inch ³ /cycle (0.122 cm ³ /cycle)
3081150-55	150 µm charging filter	M 20 x 1.5	-

Pump Accessories for Series C15F



P/N 1581150-55
Filling filter 300 µm



P/N 1582000-55 - 1582001-55
Air operated solenoid valve 24 V DC
P/N 1582002-55 - 1582003-55
Air operated solenoid valve 110 V AC
P/N 1582004-55 - 1582005-55
Air operated solenoid valve 230 V AC



P/N 1581850-55
Minimum and maximum ultrasonic level



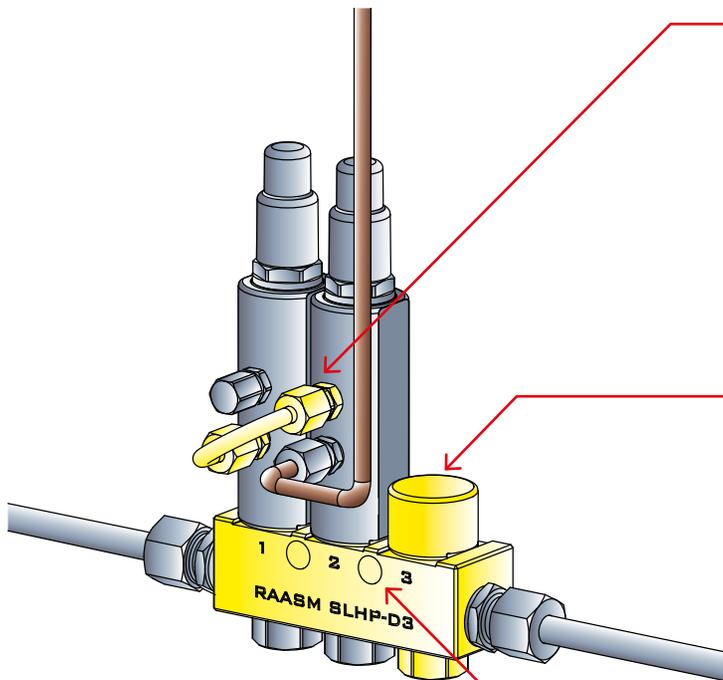
P/N 39650-55
Minimum level indicator
(optional only for oil)



P/N 1581200-55
Pneumatic discharge valve

P/N	Description	Connection	Flow rate/Pressure
1581150-55	Filling filter 300 µm	NPT 3/8" (m)	-
1582000-55	Air operated solenoid valve 24 V DC	NPT 1/4" (f) x NPT 1/4" (f)	36-120 psi (2,5 - 8 bar)
1582001-55	Air operated solenoid valve 24 V DC	NPT 1/2" (f) x NPT 1/2" (f)	36-120 psi (2,5 - 8 bar)
1582002-55	Air operated solenoid valve 110 V AC	NPT 1/4" (f) x NPT 1/4" (f)	36-120 psi (2,5 - 8 bar)
1582003-55	Air operated solenoid valve 110 V AC	NPT 1/2" (f) x NPT 1/2" (f)	36-120 psi (2,5 - 8 bar)
1582004-55	Air operated solenoid valve 230 V AC	NPT 1/4" (f) x NPT 1/4" (f)	36-120 psi (2,5 - 8 bar)
1582005-55	Air operated solenoid valve 230 V AC	NPT 1/2" (f) x NPT 1/2" (f)	36-120 psi (2,5 - 8 bar)
1581850-55	Minimum and maximum ultrasonic level	wole on drum cover ø 1.22" (ø 31 mm)	-
1581200-55	Pneumatic discharge valve	NPT 3/8" (f) on pump body	5800 psi (400 bar)
39650-55	Minimum level indicator (optional only for oil)	Oil	-

Accessories volumetric injector for Series SLHP-D



P/N 1580000-55
Injectors junction



P/N 1532539-55
Plug for injector replacement



P/N 1532542-55 - 1532581-55
P/N 1532621-55 - 1532661-55
P/N 1532701-55 - 1532741-55
P/N 1532781-55
Manifolds

P/N	Description	Connection	Flow rate/Pression
1580000-55	Injectors junction	NPTF 1/8" (m)	-
1532539-55	Plug for injector replacement	M 14 x 1,5	-
1532542-55	Manifold for 1 injector	NPTF 3/8" (f)	Max 4350 psi (300 bar)
1532581-55	Manifold for 2 injector	NPTF 3/8" (f)	Max 4350 psi (300 bar)
1532621-55	Manifold for 3 injector	NPTF 3/8" (f)	Max 4350 psi (300 bar)
1532661-55	Manifold for 4 injector	NPTF 3/8" (f)	Max 4350 psi (300 bar)
1532701-55	Manifold for 5 injector	NPTF 3/8" (f)	Max 4350 psi (300 bar)
1532741-55	Manifold for 6 injector	NPTF 3/8" (f)	Max 4350 psi (300 bar)
1532781-55	Manifold for 8 injector	NPTF 3/8" (f)	Max 4350 psi (300 bar)

Customized pumps selection guide

Should the specific requirements be different from the ones of standard pumps, follow this model to customize your own pump.

series C15S

Series	Lubricant type		Tank capacity			Poles		No. Pumping elements		Ratio		Level control		
	G	O	10	30	70	4	6	2	4	3	7	O	L	Y
System 15 single line	Grease (max NLGI 2)	Oil (> 40 cSt)	20 lb	60 lb	139 lb	4 poles	6 poles	2 pumping elements	4 pumping elements	R 35:1	R 70:1	without minimum level	with minimum level	with minimum and maximum level

C15S	G		10			6		/		2		7		L
------	---	--	----	--	--	---	--	---	--	---	--	---	--	---

Example of pump code

series C15B18

Series	Lubricant type		Ø cilinder	Tank capacity			Rated voltages	No. Pumping elements		Control type	Tank attachment			Level control	
	G	O		5	8	10		2	4		P	R	M	L	O
System 15 single line	Grease (max NLGI 2)	Oil (> 40 cSt)	7.1"	10 lb	16 lb	20 lb	24 V DC low power applications	2 pumping elements	4 pumping elements	remote version	without fix grease blade	with fix grease blade	with follower plate	with minimum level	without minimum level

C15	G		180		8		3	/		4		R		R	L
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Example of pump code

series C15F

Series	Lubricant type		Tank Ø and capacity	External drum Ø					Ratio			Level control			
	G	O		28	35	37	38	42	60	5	6	7	0	1	2
System 15 single line	Grease (max NLGI 2)	Oil (> 40 cSt)	10 lb	from 9.5" to 11"	from 11.8" to 13.8"	from 10.2" to 13"	from 13.4" to 15.2"	from 14.6" to 16.5"	from 21.7" to 23.6"	R 50:1	R 65:1	R 75:1	without minimum level ultrasonic	with minimum level ultrasonic	with minimum and maximum level ultrasonic + visual maximum level + filling filter

C15F	G		10					/		5				1
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Example of pump code





**ADVANCED FLUID
MANAGEMENT SOLUTIONS**

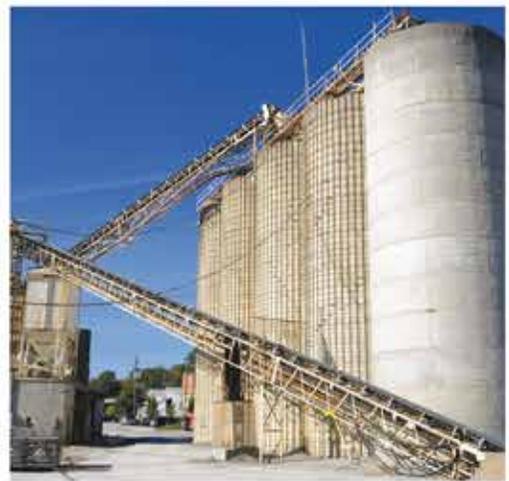


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