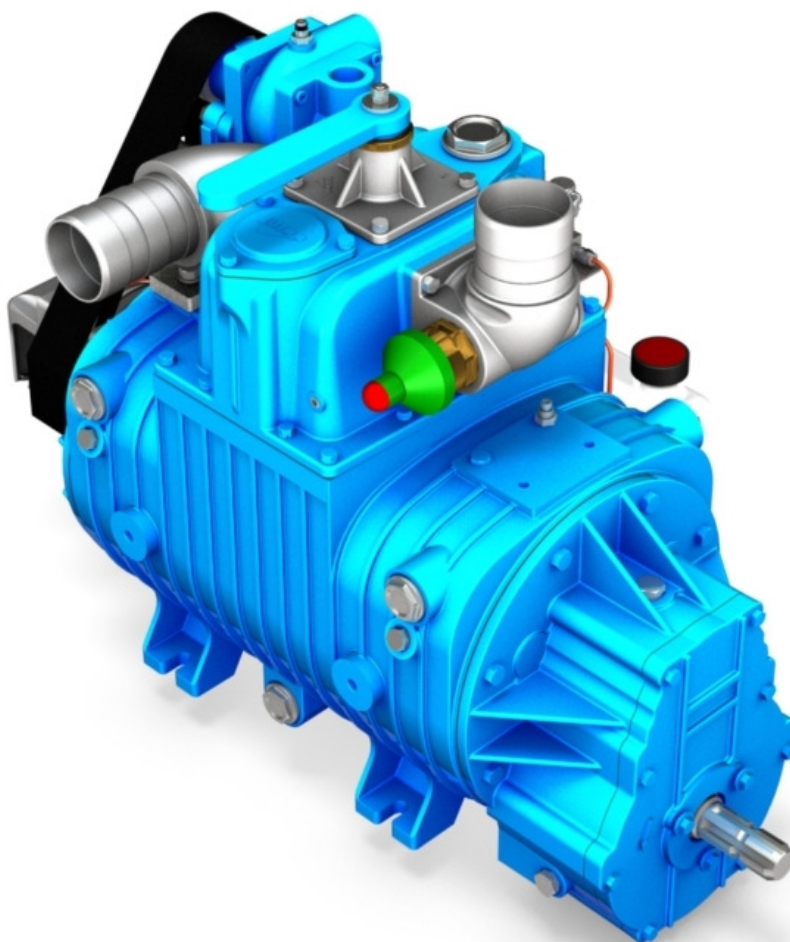


EN

LC 300 – LC 420



ORIGINAL INSTRUCTIONS



INSTALLATION, USE AND MAINTENANCE MANUAL



Rev. 04
27-04-2012

COMPANY WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY DNV
= ISO 9001:2008 =

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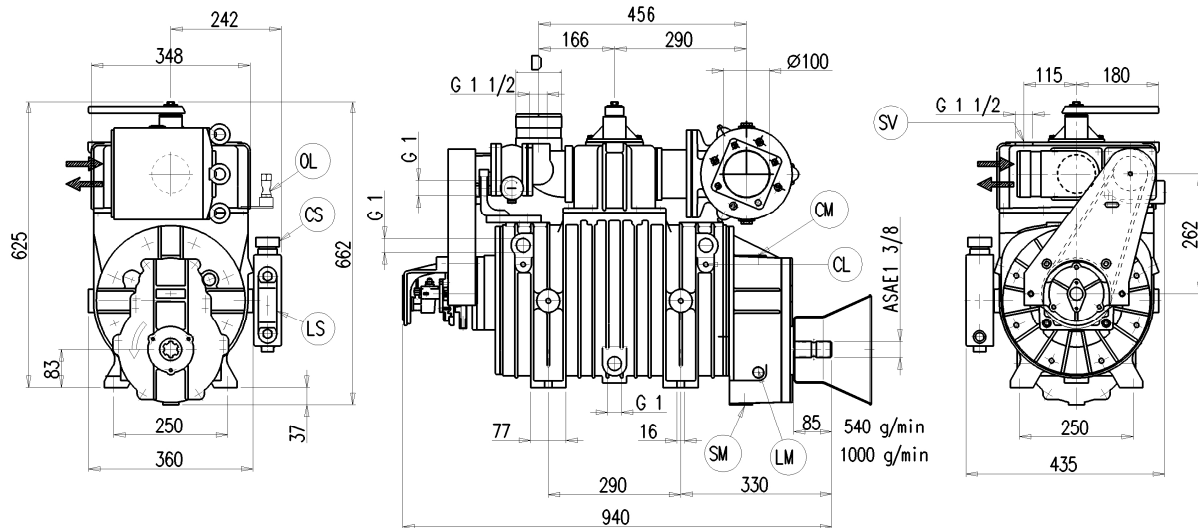
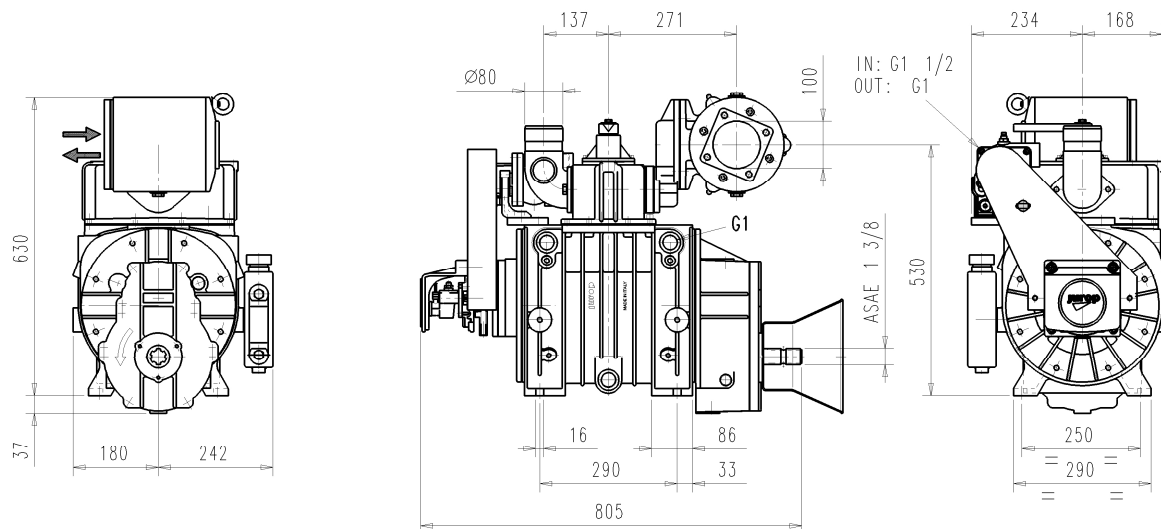
1. CONSTRUCTION FEATURES

- Four-vane rotary pump with liquid cooled housing, suitable even for major duty operating conditions with high volumetric efficiency and low noise. It has two inlet liquid points on the lower part of its body and four outlet points on the upper part. They do not interfere with the side mounted oil tank.
- Automatic lubricating pump, accessible from the outside for an easy and quick adjusting. Copper oil piping, complete with sight glass drip oilers for a continuous check of the lubrication system.
- Side mounted oil tank with level spy hole. The oil tank can be mounted either on the right or left side of the pump to grant an easy oil checking and filling up. The outside mounting of the oil tank grants a better cooling of the oil itself.
- Heavy duty vanes (asbestos free), radially disposed on the rotor: reduced wear for a long-lasting lifetime. Vanes wear checking ports on the pump body: they do not interfere with the side mounted oil tank.
- Built-in vacuum-pressure changeover 4-way valve, manually operated: on request, hydraulic or pneumatic operated actuators available.
- Non return valve (rubber ball) integrated in the pump manifold
- Swivelling conveyors, made of aluminium alloy: various sizes available.
- Cooling water temperature: a mechanic thermometer can be inserted into one of the outlet holes. A metal capillary operates the pointer that can be mounted on a visible point near the pump. Delivered on request. Exhaust air temperature: the manifold is equipped with a housing for the safety thermostat (intervention temperature: 150° C). Delivered on request.
- Built-in suction air filter. It can be mounted horizontally whereas the suction hole can be swivelled either towards the right or the left side, for an easy pump installation and the following cleaning operations and maintenances. The space required to remove the inner cartridge of the suction filter do not exceed the overall dimensions of the pump. Cleansing agents suction points for the internal wash-up of the pump (recommended in case sewage has been sucked).
- Drive system:
 - Direct with smooth shaft
 - With gear box (ASAE 1 3/8) 540 rpm o 1000 rpm, left rotation
 - With hydraulic motor

2. TECHNICAL DATA

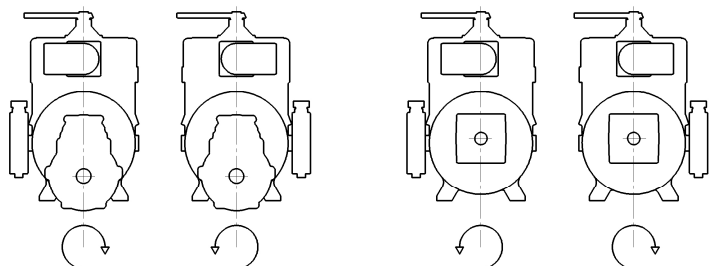
DIMENSIONS [mm]

LC420 M – SX

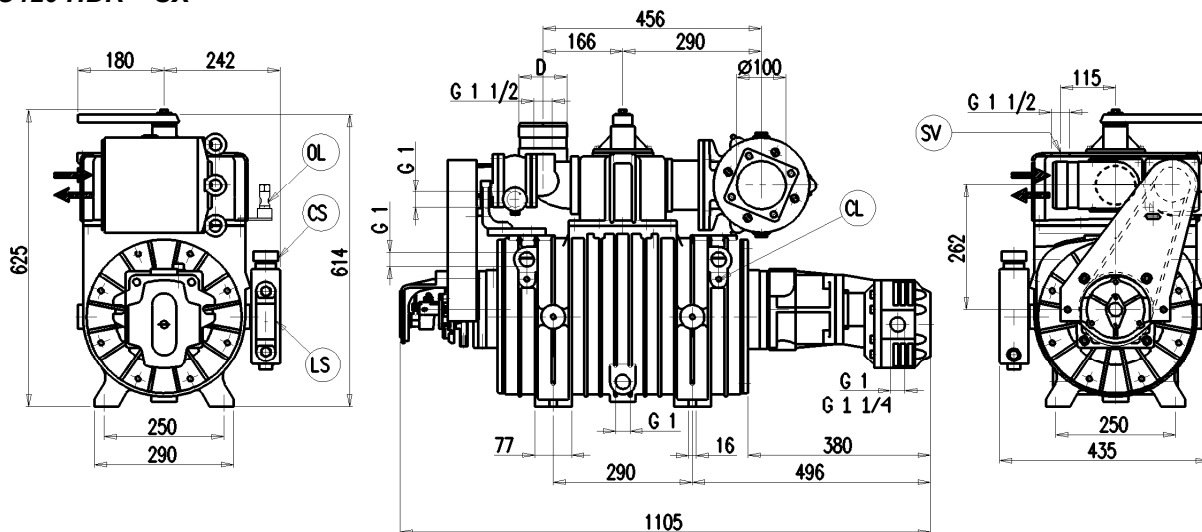
**LC300 M – SX**

NOTE

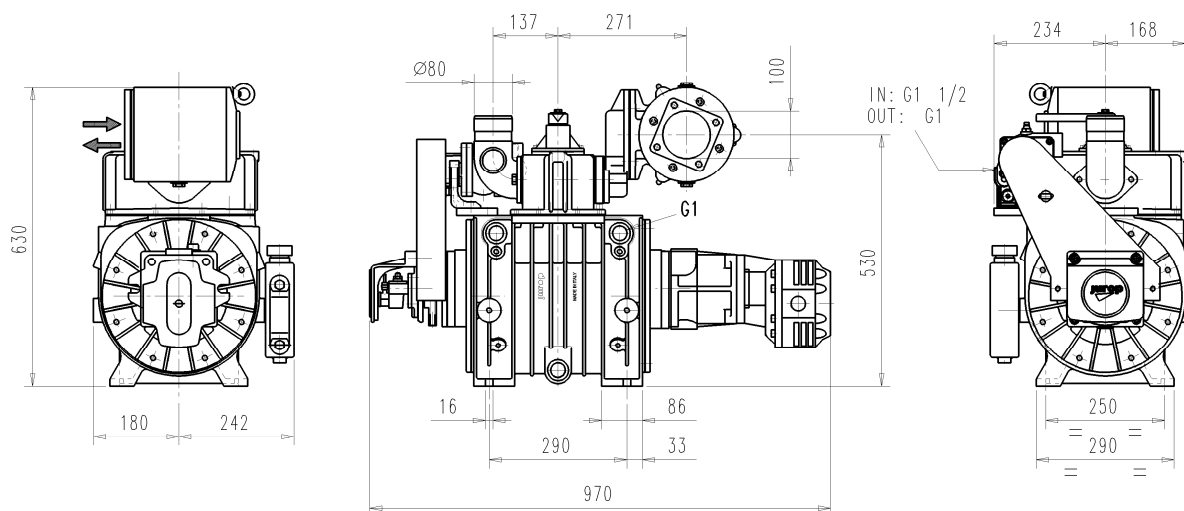
The position of the tank depends on the rotation direction of the pump. The illustration shows the standard position. On request, the pumps are delivered with the tank mounted on the opposite side.



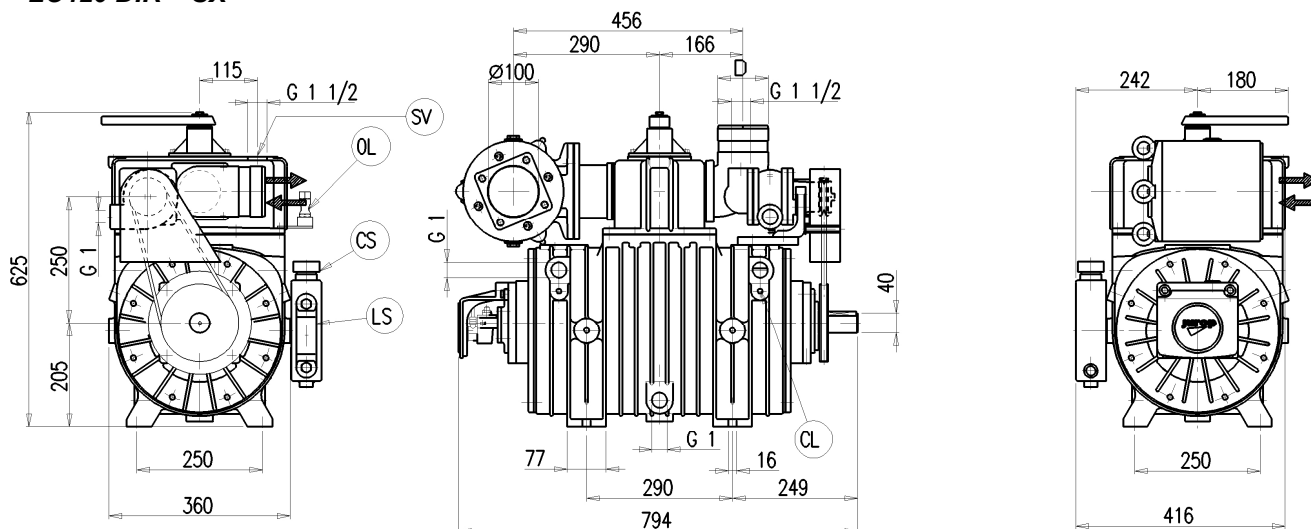
LC420 HDR – SX



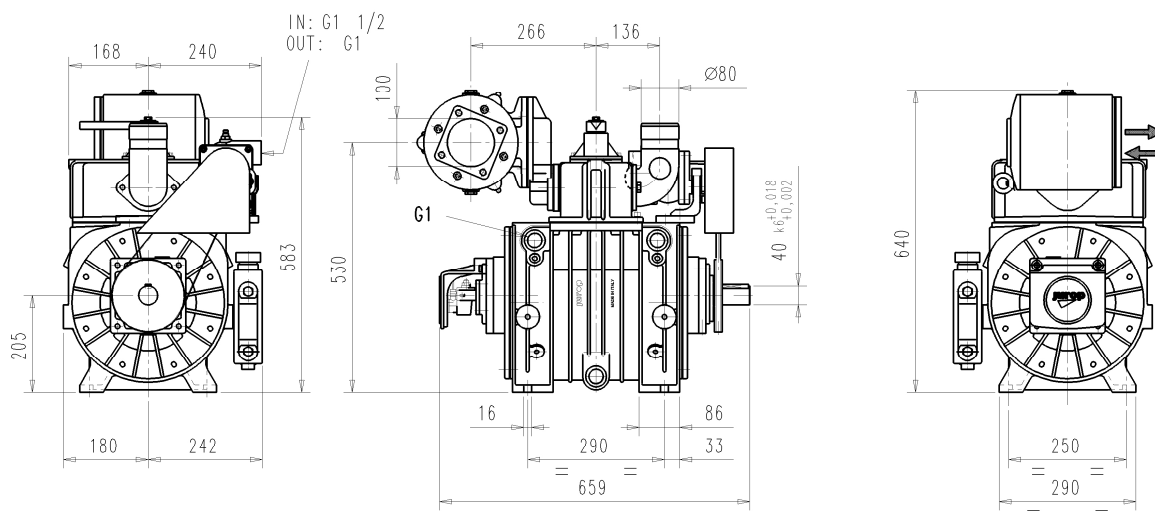
LC300 HDR – SX



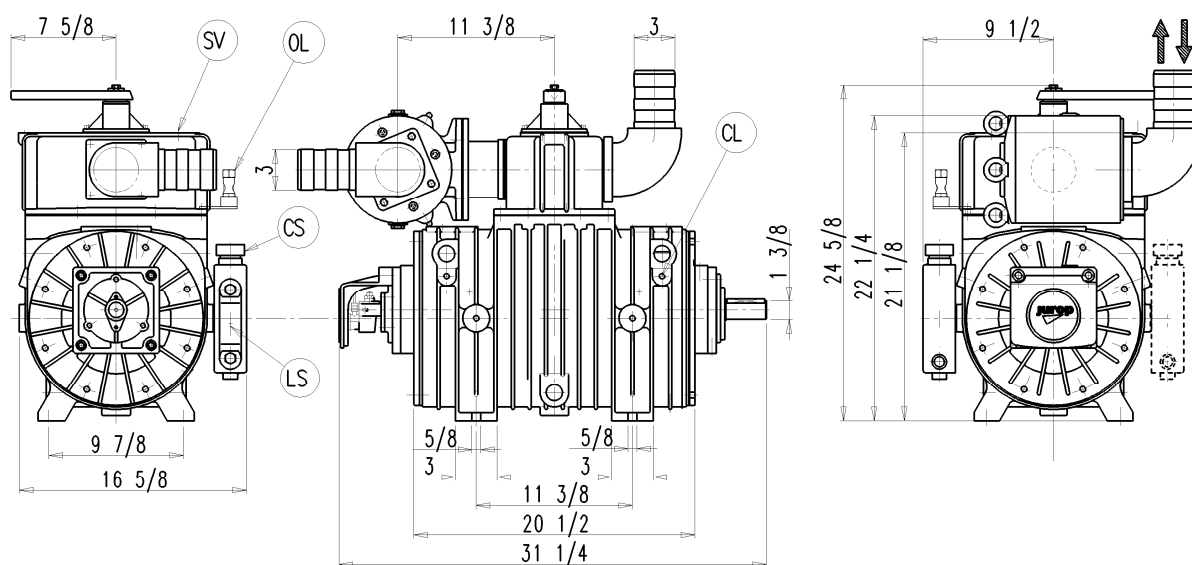
LC420 DIR – SX



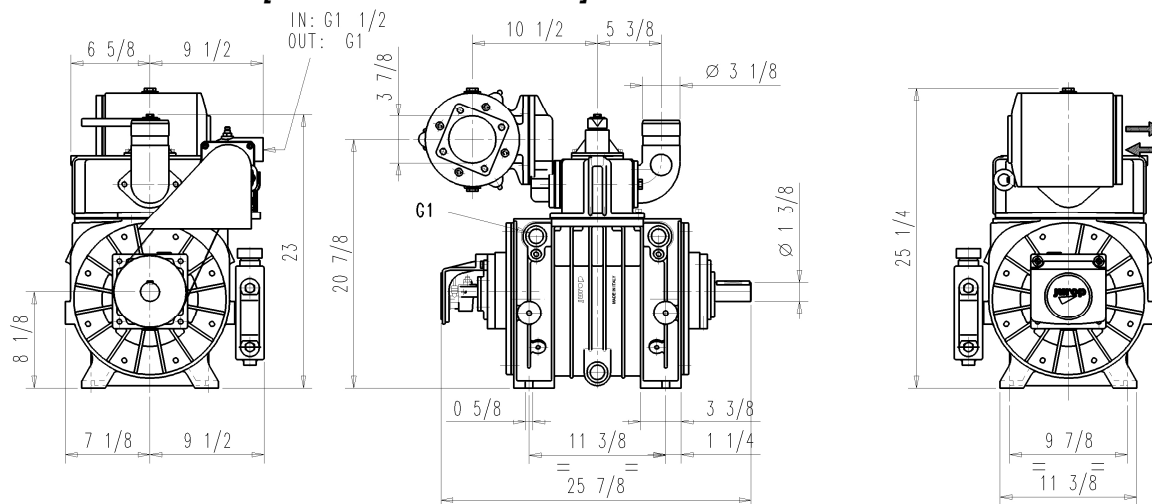
LC300 DIR – SX



LC420 D USA – SX [all dimensions in inches]



LC300 D USA – SX [all dimensions in inches]



LEGEND OF LUBRICATION AND VANES WEAR CHECK-POINTS

PUMP LUBRICATION			HOUSING	GEARBOX		
LS: Tank level	CS: Tank filling point	OL: Oilers	CL : Vanes wear checking	LM: Oil level	SM: Outlet plug	CM: Inlet plug

WEIGHT

Model	LC300 D	LC300 M	LC300 HDR	LC420 D	LC420 M	LC420 HDR
Weight (kg)	195	200	205	210	215	220

NORMAL USE OF THE PUMP



The LC pumps are designed to convey filtered air into plants for vacuum production or for the suction of powders or liquid wastes. Do not suck toxic substances and inflammable or explosive gasses since the internal components of the pump may reach high temperatures.
Liquids or solids infiltrations can seriously damage the pump.

USAGE LIMITATIONS

MAX. SPEED – OPERATING SPEED				P₂ (ABS bar)	T₂ (°C)	T₂- T₁ (°C)
LC ... M 540	LC ... M 1000	LC ... DIR	LC ... HDR	Max	Max	Max
540 - 460	1000 - 850	1300 - 1100	1300 - 1100	2.0	150°C	130°C

P₁ : absolute pressure during suction
P₂ : absolute pressure during delivery

T₁ : temperature during suction
T₂ : temperature during delivery

PERFORMANCES

		LC300	LC420
Air flow under free air condition	l/min m ³ /h	8500 510	12000 720
Air flow 60% vacuum rate	l/min m ³ /h	6415 385	9000 540
Air flow 80% vacuum rate	l/min m ³ /h	3450 207	4833 290
Max. vacuum at continuous duty (*)	%	80	
Max. vacuum	%	92	
Power required at max. vacuum	kW	14	18
Power required at 0.5 relative bar (1.5 abs.)	kW	12	16
Power required at 1.0 relative bar (2.0 abs.)	kW	17	24
Max. relative pressure (abs.)	bar	1 (2,0)	
Air flow at 0.5 relative bar (1.5 abs.)	l/min m ³ /h	7500 454	10830 650
Air flow at 1.0 relative bar (2,0 abs.)	l/min m ³ /h	7000 420	9830 590
Oil consumption	g/h	200	220
Oil tank capacity	litres	4	
Circulating pump speed	rpm	2700	
Circulating flow rate	l/min	55	
Heat exchange rate	Kcal/h	6000	8000
Mass moment of inertia	Kgm2	0.15	0.21

(*): at nominal speed and room temperature of 20° C.

Pressure operation: free inlet

Vacuum operation: free outlet

FLOW - POWER

		Free port	Vacuum						Pressure		
		0%	20%	40%	60%	70%	80%	90%	1.4 bar	1.8 bar	2.0 bar
LC 420	m ³ /h	720	670	620	540	400	290	16	650	610	590
	l/min	12000	11170	10330	9000	6670	4833	270	10830	10170	9830
	kW	11	12	14	15	16	16,5	17	16	21	24
LC 300	m ³ /h	510	480	444	385	285	207	10	460	435	420
	l/min	8500	8000	7400	6420	4760	3450	190	7660	7250	7000
	kW	8	9	10	11	12	13	14	11	15	17

Room condition: P = 1013 mbar, T = 20° C

Conveyed fluid: air density 1.2 kg/m³.

Vacuum pump at max. speed.

SOUND PRESSURE LEVEL

	LC300	LC420
Max. speed, 60% vacuum rate	70 db(A)	73 db(A)
Max. speed, 90% vacuum rate	73 db(A)	75 db(A)

(*): Noise of pump + exhaust silencer 15470D2CB0.
Distance: 7m in open field.

3. SAFETY AND ACCIDENTS PREVENTION



CAREFULLY OBSERVE THE FOLLOWING RULES

- When transporting the pump, use proper slinging. Store the pump in stable places.
- Installation and maintenance must be operated only by qualified personnel wearing the proper clothes and the necessary tools as well as protection devices.
- Before each maintenance operation:
 - Stop the pump and restore the atmospheric pressure.
 - Disengage the drive system.
 - Only operate after the pump has cooled down.
- When the pump is running, some parts may reach very high temperatures (above 100°C). Use all necessary precautions to avoid contact.
- Operators working nearby must avoid prolonged exposure to the noise emitted by the aspirator, if not equipped with the proper ear-protection devices.
- Avoid accidental suction of solids: solids may be projected at high speed through the exhaust manifold and injure the operators.
- Do not start the machine if the protection devices provided for transmissions are removed. Replace damaged parts.
- Pressure relief valve: point the air flux away from the operators.
- Do not use the aspirator over its design limits: the machine may be damaged and the operator may be injured.

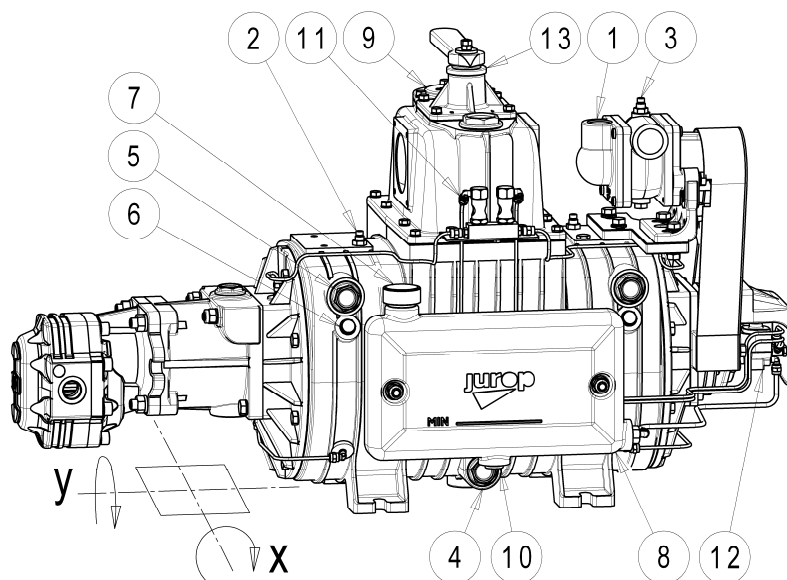


Dispose of exhausted oil (accumulated in the silencer's separator at the exhaust) and the oil used in the vacuum pump maintenance (internal wash-up or periodical replacement in the gear box) as provided by current specifications.

4. INSTALLATION

LEGEND OF MAIN COMPONENTS

1. Water recycle pump
2. Venting valve on pump housing
3. Venting valve on water recycle pump
4. Cooling water inlet
5. Cooling water outlet
6. Vanes check-port
7. Oil filling port
8. Lubricating oil tank
9. Check valve
10. Oil tank emptying port
11. Oilers
12. Self-lubricating pump
13. Vacuum – pressure change valve

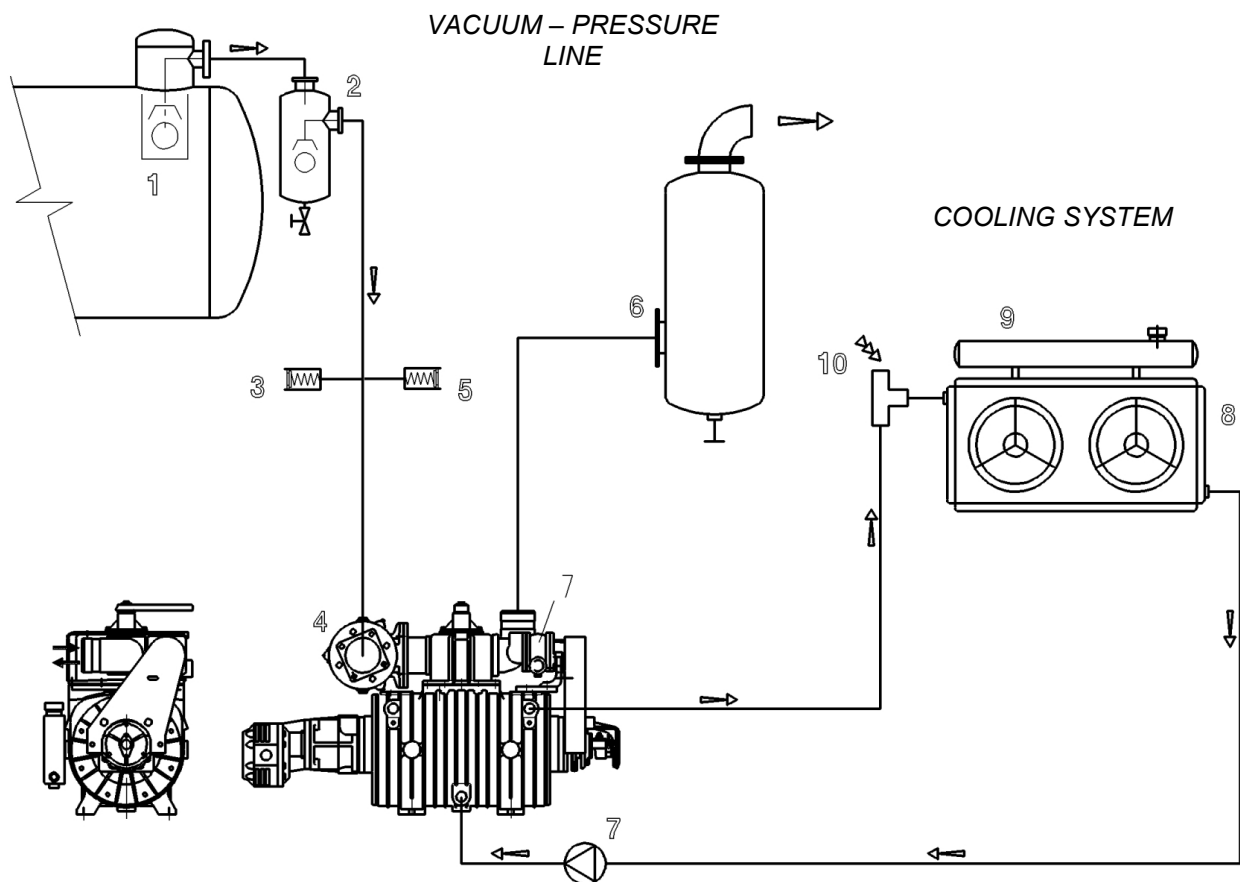


MOUNTING

- The mounted aspirator must be accessible for maintenance and firmly fixed on a frame or angled base with a 3° max inclination on x and y axes (see picture above). The structure must be fit to avoid flexions or vibrations.
- Make sure that there is enough free room around the pump for a correct air cooling circulation and protect the pump from the exposure to dirt and debris.
- Prepare the necessary space for an easy access to the lubrication check-points (tank level and gear box, oilers) and to the oil tank filling port, the four-way manifold handle, and the vane wear inspection ports.

VACUUM – PRESSURE LINE

- To avoid accidental suction of liquids inside the pump, install a primary (pos. 1) and a secondary flow shutoffs (pos. 2). If necessary, install also a suction filter (pos. 4) to protect from solids infiltration.
- The exhaust silencer (pos. 6) is designed to reduce the noise level and to separate the oil mist coming out from the pump outlet port. The separator must be periodically drained from oil and condensate accumulated in the separator during the normal pump functioning.
- The diameter of the vacuum/pressure line pipes must be properly dimensioned to the pump flow and, in any case, larger than the diameter of the ports.
- The pipes weight must not solicit the body of the pump. Use high temperature resistant rubber connections.
- Before mounting the vacuum line to the pump, remove the port protections. Pipes and all line components must be clean.
- Avoid restrictions and tight curves as much as possible if not strictly necessary.
- Exhaust pipes can reach high temperatures. Hence, they must be properly isolated.



Pos.	Description
1	Primary flow shutoff valve
2	Secondary shutoff
3	Vacuum relief valve*
4	Suction filter*
5	Over-pressure safety relief valve

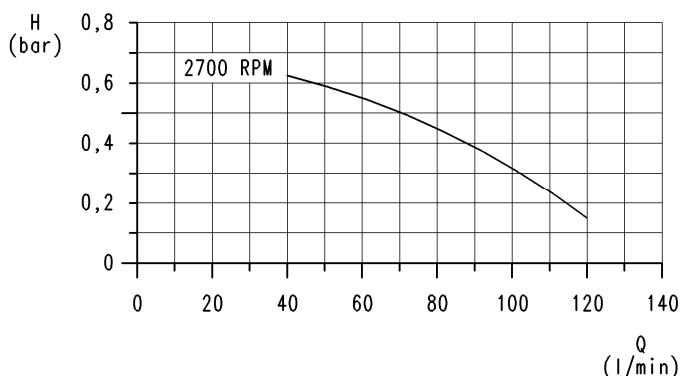
Pos.	Description
6	Silencer - oil separator
7	Recycle pump
8	Water – air heat exchanger
9	Expansion tank
10	Exchanger inlet port

- Safety valves:
 - Overpressure safety valve (pos. 5): mount it close to the pump. The valve flow must prevent the LC 420 pump from exceeding the absolute pressure of 2.0 bars or the maximum pressure allowed by the system. Do not apply gate valves on the line.
 - Vacuum control valve (pos. 6): install if necessary to limit the vacuum rate of the system.

COOLING SYSTEM

- It is composed of:
 - Centrifugal recycle pump.
 - Heat exchanger with electric fans operated by a thermostat.
 - Expansion tank.

The heat exchanger must dissipate the heat power indicated in paragraph “Performances”.



Characteristic curve "Flow – Head" of the recycle pump.

The cooling liquid temperature must not exceed 60° C.

The air flow generated by the exchanger fans must be kept free of obstacles.

5. DRIVE

CARDAN SHAFT DRIVE

Use telescopic cardan shafts. In order to achieve a uniform motion of the driven shaft, the following requirements must be met:

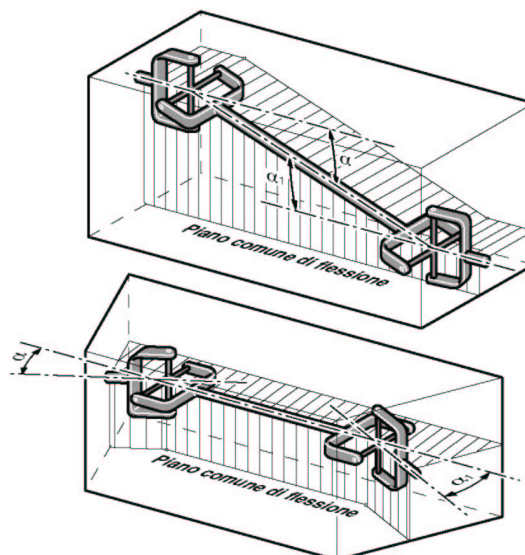
- Equal working angle α and α_1 of both couplings.
- The internal fork joints must be coplanar.
- Both driven and driving shafts must be coplanar.

It is also recommended working with limited articulated joint angles (max 15°@1000rpm , max 11°@1300rpm) and disengaging the transmission for those operations requiring great angles (steering or lifting).

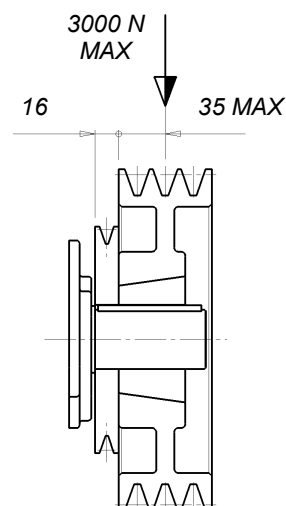
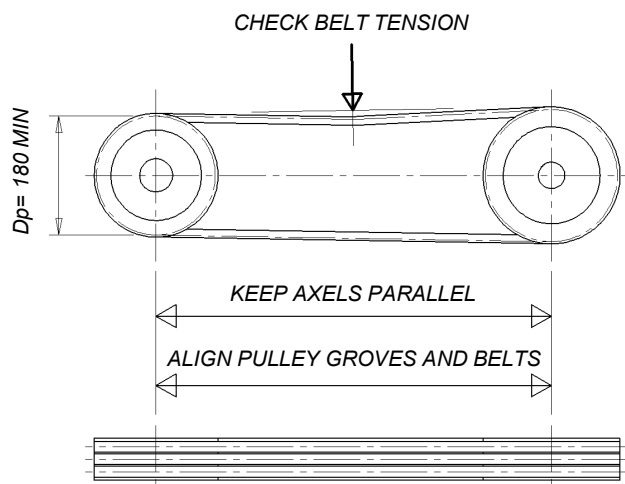
Follow the rotation direction as indicated on the front flange. Follow the instructions of the cardan shaft's manufacturer.



Use the cardan protection supplied with the pump. The pump installation must fulfil the current EC injury prevention specifications.



BELT DRIVE





- Install a suitable pulley on the smooth shaft as close as possible to the pump: max 35 mm.
- Apply an adequate belt tension (see manufacturer's data). Max 3000N.
- Do not use driven or driving pulleys with a pitch diameter inferior to 180 mm. Small pulleys require a high belt tension which may cause premature wear to the bearing or transmission troubleshooting.

Drive min. pulley pitch diam.	Belts	LC pump max. speed
mm		rpm
180	XPB x 3	1300

NOTE

A limited speed ratio allows a longer belts life while reducing stress on the shafts. When possible, prefer:

- pulleys with a pitch diameter bigger than the one indicated;
- motors or power take-offs with a speed similar to the one of the pump.

HYDRAULIC DRIVE

• Motor features

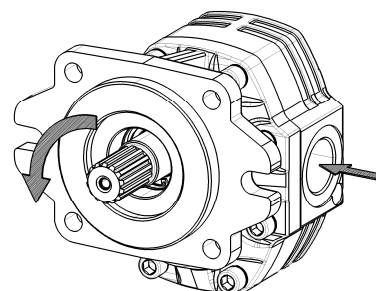
Model	Displacement cc/rev	Operating pressure (max. vac.) bar	Operating pressure (1 rel. bar) bar	Flow (at 1300 rpm) l/min	Max pressure draining line bar	Max. pressure motor exhaust bar	Max pressure bar
LC300	61	125	150	83	5	5	200
LC420	72	135	175	98			200

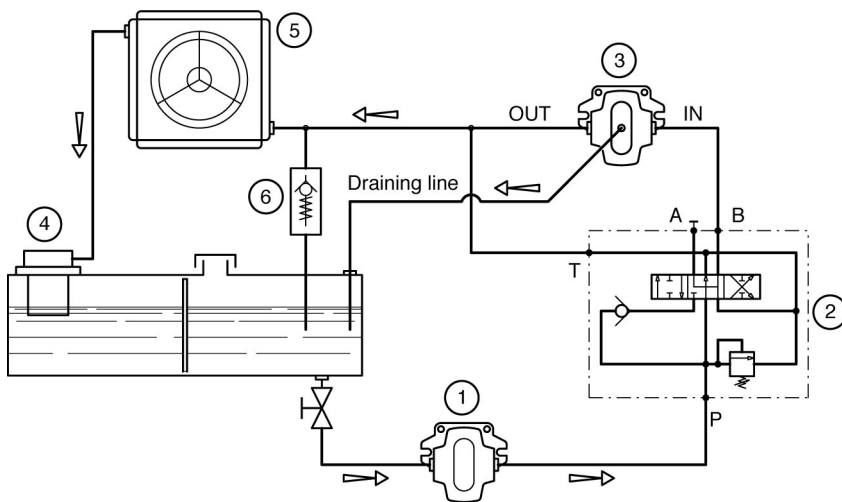
- **Fluid:** mineral oil for hydraulic systems in compliance with ISO/DIN.

Temperature ° C	Optimum viscosity cSt	Max. viscosity allowed cSt
-20 / +80	12 - 100	750

- **Filtration:** class 19/16 contamination according to ISO 4406 to be obtained with a $\beta_x = 75$ filter
- **Check circuit connections:** they must be applied in the same rotation direction as that indicated by the arrow on the pump front flange.
- **Draining:** connect directly to the tank above the maximum oil level. Operating without draining line may damage the motor.

DRAINING PORT





Pos	Description
1	Hydraulic pump
2	Distributor
3	Hydraulic motor
4	Oil filter
5 *	Heat exchanger
6 *	Safety valve

*: optional components

- **Distributor:** open-centre distributor in central idle position (vacuum pump off). It must be equipped with an adjustable overpressure safety valve.
- **Motor pipeline:** outlet pipe must not be of a smaller diameter than that of the inlet port. Inlet pipes always have a diameter smaller than outlet pipes. Choose preferably flexible pipes to avoid vibration transmission.
- **Tank:** with suction pipe and return separated by baffles. If necessary, use a heat exchanger to avoid oil heating above 70-80°C and protect it from extreme pressure with a pressure relief valve. Minimum approximate capacity: as twice as the circulation flow.
- **Starting-up:** be sure that the system is well cleaned and pour oil into the tank and into the motor housing (necessary to lubricate the internal bearings).
 - Vent the circuit and adjust the overpressure safety valve to the lowest possible value.
 - Check the oil tank level.
 - Increase pressure and rotation speed until operating values are reached.

6. START-UP

Lubrication.

- Fill in the oil tank to its maximum capacity.
- Check the oil level in the gear box (if the pump is provided with it)
- In order to choose the most suitable oil, see paragraph "Lubrication".

Cooling.

- Unscrew the vent valves on the housing and recycling pump, pour the cooling fluid through the port near the exchanger.
- Screw the vent valves and start running the cooling system in order to expel the air bubbles inside it. Then, adjust the level by filling up the expansion tank on the exchanger: it must be half filled (approximately).
- The cooling system we designed has a capacity of 25-30 litres. Use a mixture of demineralised water and antifreeze liquid at a concentration suitable to room temperature (usually between 25 and 50%).



Carefully vent the cooling circuit with the recycling pump stopped.

Vacuum line

- Open all valves of the vacuum-pressure system.
- Open all gate valves and remove any possible obstacle from the line.

PRECAUTIONS WHEN STARTING THE SYSTEM

Check oil levels in gearbox and side mounted tank.

Check that all protection devices are correctly installed.

Check that there are no obstacles in the vacuum line.

Check rotation direction: open all system valves and start running slowly.



Do not rotate in the wrong direction: this may damage the vacuum pump. Follow the arrow indicated on the front flange.

Check which position of the four-way integrated valve lever allows vacuum or pressure functioning.

Close the valve and increase vacuum rate (or operating pressure).

Check that the lubricating pump works properly. Oil must regularly drip into the oilers. Typically 40 drops/min (at maximum speed).

Check loading and operating speed for vibrations or unusual noises.

WARNING



This vacuum pump is designed to work at maximum speed, but for longer operating we recommend the pump be run at working speed (see par. "Usage limitations"). Adequately prepare the transmission.

7. OPERATING PRECAUTIONS



- Do not make the vacuum pump overheat: maximum air temperature on exhaust (or delivery) side: 150°C.
- Do not operate it without lubrication: it may cause quick wear and possible breakdown of vanes.
- Do not start running the pump under load: this may damage the drive system or the hydraulic motor.
- Check the rotation speed: it must never exceed the operating limits indicated on the identification plate of the vacuum pump.
- Do not accidentally operate the pump in the wrong direction: it may break the vanes.
- Do not convey the exceeding delivery outlet towards the suction port, otherwise it will suck warm gas.
- Control the air flow by adjusting the rotation speed: do not use the pressure relief valve to discharge the exceeding flow.
- Do not point the end of the pump exhaust line through the motor suction in case of truck installation.
- Internal wash-up is necessary after prolonged inactivity, after working in dusty environments or in case of accidental suction of liquids. Such operation must be carried out only on cooled pumps.
 - Disconnect the exhaust silencer, if possible.
 - Start running the pump at low speed.
 - Suck some water (about 1-2 litres) through the inlet port.
 - Then suck oil (about 1 litre) to complete the wash-up and lubricate internal components.



In case the exhaust line cannot be disconnected, drain the liquids accumulated in the separator of the exhaust silencer.

WARNING



Rotation speed.

Once the needed vacuum rate has been reached, we recommend reducing the vacuum pump speed to its working speed (see paragraph "Usage limitations"): this allows keeping the achieved vacuum/pressure rate constant. The pump speed can also be reduced to values lower than the working speed during the tank discharging phase (with the 4-way valve in pressure mode) without increasing the draining time. Thus, exhaust temperature is reduced, vane durability is increased and both oil consumption and power absorption are reduced.

8. ORDINARY MAINTENANCE



Before starting any maintenance operation, follow the safety prescriptions as described in paragraph "Safety and accidents prevention".

Pump operation condition	CHECKING	FREQUENCY
Operating	Lubrication: dripping into oilers	D
	Rotating speed	D
	Working pressure	D
Standstill	Side mounted tank oil level	D
	Empty the oil gathered in the exhaust silencer.	D
	Check vanes wear	W
	Clean filter and vacuum line shutoff	W
	Check pressure relief valve condition	M
	Gear box oil level	M
	Venting of the pump water cooling circuit	M
	Gear box oil change	1500 h

Frequency: **D:** daily **W:** weekly **M:** monthly

CHECKING THE DRIP OILERS

Check dripping into the oilers.

Be sure it is regular (app. 40 drops/min at max. speed) to grant a correct lubrication of the pump. At lower speeds, the number of drops must be directly proportional.



If the pump is run without lubrication, the internal components may quickly damaged due to overheating. Stop the vacuum pump and check the oil level and the lubricating pump.



Do not use the exhausted oil gathered on the bottom of the exhaust silencer again. Dispose of the oil as provided by current specifications.

CHECKING THE SIDE MOUNTED OIL TANK LEVEL

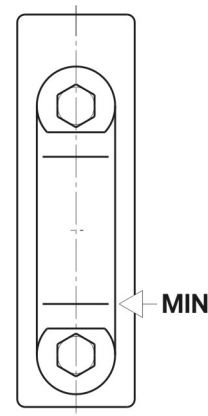


Do not run the pump with oil level under the minimum level: that may lead to dry functioning and cause serious damages. Tank capacity: 4 litres. Use pure mineral oil.

Recommended lubricants

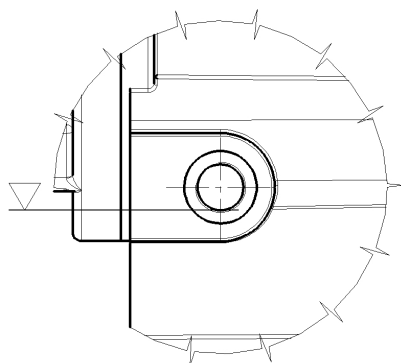
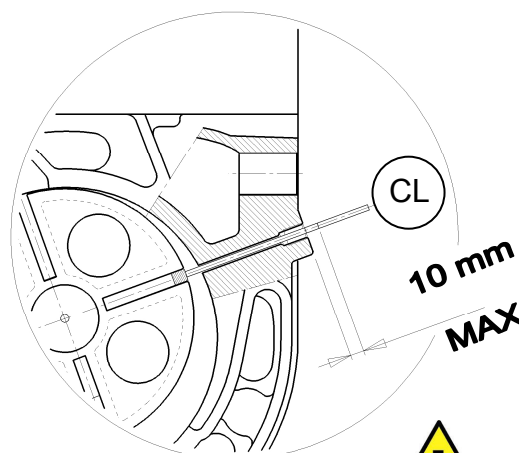
Room temp.	Viscosity		ENI	ESSO	SHELL	TOTAL	MOBIL	BP
Below 10°C	ISO VG 46	Mineral oil	RADULA 46	NUTO 46	MORLINA OIL 46	DROSERA MS 46	NUTO H 46	BARTRAN HV 46
Above 10°C	ISO VG 150	Mineral oil	RADULA 150	NUTO 150	MORLINA OIL 150	DROSERA MS 150	NUTO H 150	BARTRAN HV 150

Use **SAE 15W-40** mineral oil as an alternative to the lubricants written above.



CHECKING THE VANES WEAR

- Unscrew the vanes wear check-plug (pos. CL) on the housing.
- Turn the shaft until you see the vane.
- The vanes should slide to the bottom of the seat due to gravity: check they really do.
- Insert a rod of 6 mm Ø with its conic end towards the pump (rod supplied with pump).
- Turn the shift manually and touch the outside diameter of the rotor with the checking rod, mark it a first time. Keep turning the shift till the rod falls inside a vane groove. Mark it again and measure the gap between the two marks.
- If this gap exceeds 10 mm, then the vanes must be replaced.
- At the end of this procedure, do not forget to replace the plug.
- Replace all vanes at the same time.



CHECKING THE GEAR BOX OIL LEVEL

Check the level when the pump is cooled: it must almost reach the threaded port. Refill if necessary.

For a complete replacement, 0.7 litres are required. Use mineral oil with EP additives for gears and transmissions.

Dispose of exhausted oil as prescribed by current specifications.

Recommended lubricants

Viscosity	Type	ENI	ESSO	SHELL	TOTAL	MOBIL	BP
ISO VG 220	EP mineral oil	BLASIA 220	SPARTAN EP 220	OMALA OIL 220	CARTER EP 220	MOBILGEAR 630	ENERGOL GR XP 220

Use **SAE 80W-90** mineral oil as an alternative to the lubricants written above.

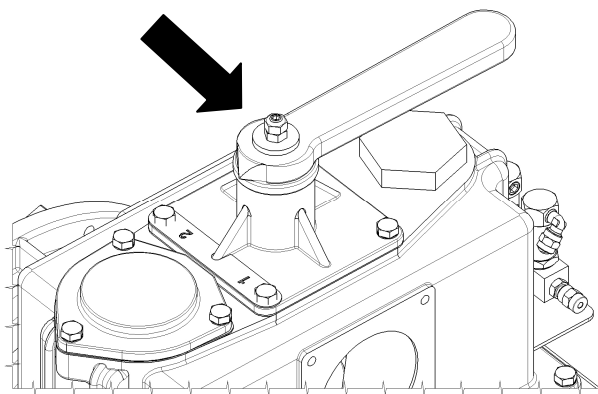


Dispose of exhausted oil as provided by current specification.
When changing the oil, also replace the outlet plug washer.

9. EXTRAORDINARY MAINTENANCE



Before starting any extraordinary maintenance operation, be sure the pump stands still and follow the safety prescriptions as described in paragraph "Safety and accidents prevention".



ADJUSTING THE 4-WAY VALVE

For pumps equipped with handle for manual operation or hydraulic actuator.

Adjust the screws to avoid the valve blocking in its seat.
Do not exceed with the adjustment: possible vacuum loss.

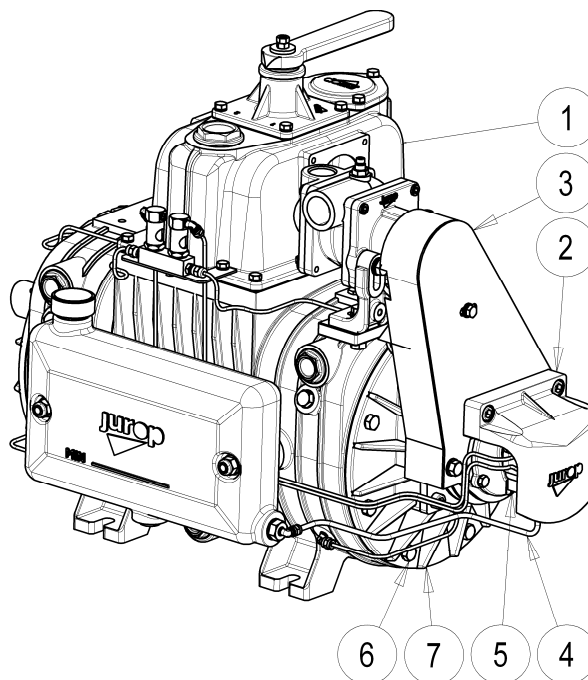


For pumps equipped with changeover valve with hydraulic actuator: see the integrated part at the end of these instructions.

REPLACING VANES

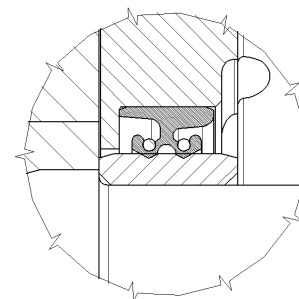
When replacing the vanes proceed as follows:

- Remove the vacuum pump from its bearing frame and wash it before disassembling.
- Drain the cooling liquid from the pump housing (1)
- Remove the water pump cover (2) and the carter (3)
- Disconnect lubricating pipes (4).
- Remove the lubricating pump (5).
- Remove the screws (6) fixing the rear flange (7) and use the two threaded holes to remove the flange – bearing – seal housing. If necessary, hold the rotor by inserting a wooden block, protecting the internal bearings from damage.
- Remove the bearing from the rear flange and replace the seal if broken.
- Lubricate with oil the new vanes before inserting those inside each groove of the rotor.
- Reinstall all the components in the following order: rear flange, seal ring (non), bearing, compensation ring, gasket and flange with lubricating pump (we recommend to fit correctly the pivot-key on the shaft groove).
- Tighten the nuts (pos. 6) by means of a dynamometric wrench adjusted at 88 Nm.
- Refill the cooling system and re-install the pipeline.



CAUTION

Do not damage components during assembly by forcing them exceedingly. Do not flip the seal ring during rotation of the shaft. Do not leave objects inside the pump.



ADJUSTING THE LUBRICATING PUMP

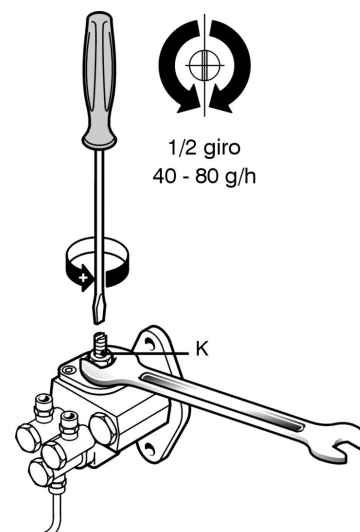
The automatic lubricating pump is adjusted by the manufacturer before the shipping. If consumption is different from the indicated value, adjust as follows.

- Remove the upper protection cover.
- Using a screwdriver and a 10 mm wrench, adjust the adjusting screw (K). Close the nut and put back the upper protection cover. It is advisable to turn the screw of 1/4 of turn and verify the actual consumption.

CAUTION



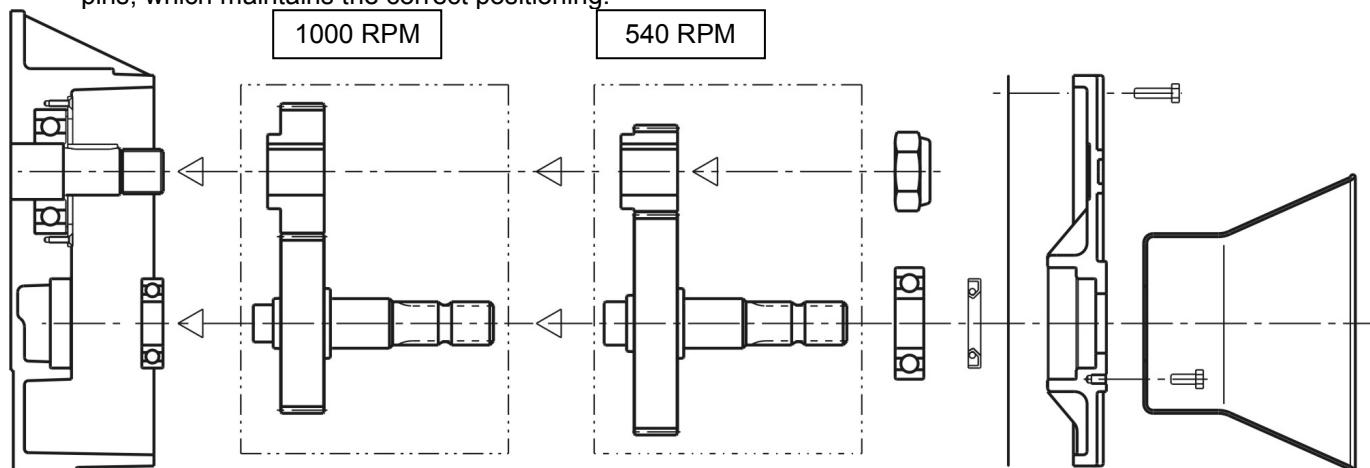
Do not reduce oil consumption below the value indicated in the "Performance" paragraph (for functioning at speeds different from the maximum, flow is proportionate to the rotating speed). 1/2 turn of the adjusting screw causes a flow variation of about 40 - 80 d/h, depending on using conditions.



REPLACING GEAR BOX COMPONENTS

The pump with a 540 rpm gear box can be transformed into a pump with a 1000 rpm gear box (and vice versa).

- Remove the gearbox as above described. Remove also the pinion from the drive shaft.
- Install the new pinion and tight the nut as prescribed.
- Mount the new gear wheel including bearings and seals on their housings in the front cover, properly aligned. This assembly can now be installed in the gear box: fit the front bearing in the specific seat of the flange/cover.
- Properly engage gears, replace the cover's gaskets to complete correctly the job. Insert the aligning pins, which maintains the correct positioning.



10. TROUBLE SHOOTING

The vacuum pump overheats

Insufficient or absent lubrication	Verify oil and rings. Check oil pump efficiency
Low oil level	Fill the oil tank
Too high rotation speed	Reduce rpm to the prescribed one
Prolonged functioning at the max vacuum rate	Reduce vacuum rate
Vacuum and/or exhaust line of insufficient diameter	Check dimensionino

The vacuum pump does not rotate

Broken vanes:	Clean inside chambers, replace vanes
- due to infiltrated solids	Check the secondary shutoff and filters of the suction line
- due to insufficient lubrication	Check the oil pump
Power transmission breakdown	Check and replace the damaged parts
Ice inside the pump (during the cold season)	Remove ice and slowly start. Avoid suction of water

Performances loss

Four way changeover valve in idle position	Move the lever in vacuum or in pressure mode
Worn vanes	Replace vanes

The non-return valve leaks	Clean or replace if necessary
Worn seal rings	Replace
Tank gate valves or gaskets leak	Replace damaged or worn parts
Tank connection pipes leak or are obstructed	Replace damaged pipes
Obstructed primary shutoff or suction filter	Remove and clean
Encrusted exhaust port	Remove and clean
Vacuum line components are too small dimensioned	Verify dimensions for the pump's maximum performances
Obstructed rubber couplings	Replace
Unusual oil consumption	
Insufficient or absent lubrication	Check and adjust the lubricating pump

11. SCRAPPING

Before dismantling, the following components must be properly disassembled and divided:

- Lubricating oil
- Rubber and plastic parts
- Cast iron, steel and aluminium parts

Do not leave in the environment.

Do not use dismantled parts as spare parts

12. SPARES PARTS

REQUETING SPARE PARTS

To order spare parts, give the following information

Find in the parts list:

- code
- name
- quantity

(Ex. : cod. 1601606200 ; Vane; 4 pz

Find on the suction plate:

- model
- serial number

(Es. : LC 420 ; H60013

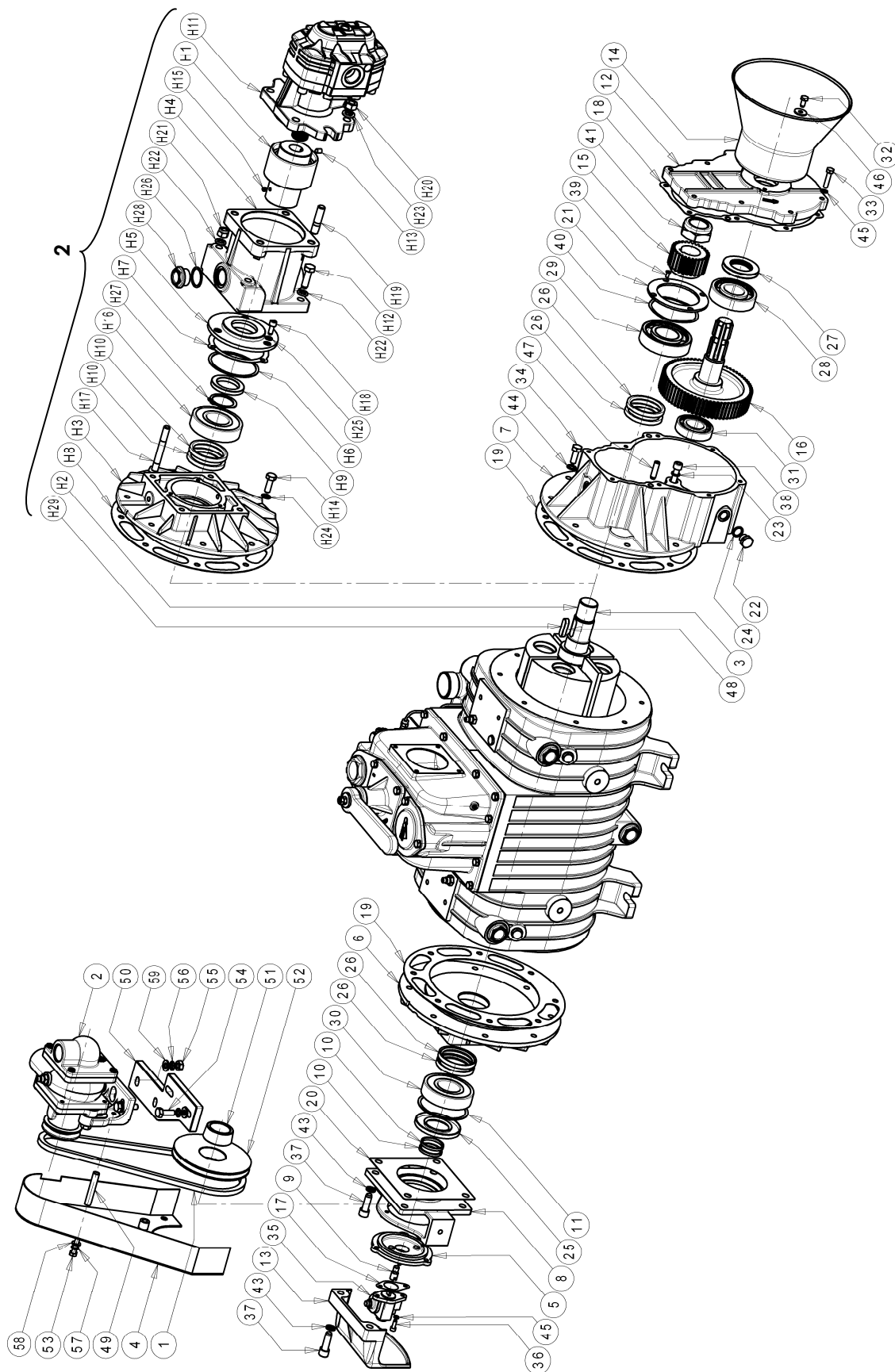
Spare parts LC 300 D

Pos	Code	Description	Q.ty	Pos	Code	Description	Q.ty
1	1401200700	OIL DRIPPER	2	49	4022300001	OIL FILTER	1
2	1407200900	WATER PUMP SX (LC D SX)	1	50	4023100047	BEARING 6309 C3	1
	1407200800	WATER PUMP DX (LC D DX)	1	51	4023110098	BEARING NU 309 ECJ/C3	1
3	1521506500	ROTOR LC300 D	1	52	4023250501	RUBER BALL D80	1
	1521506400	ROTOR LC300 D USA	1	53	4024251000	OIL PUMP CW ROTATION (LC D DX)	1
4	154201TWB0	BELT PROTECTION LC D SX	1		4024251500	OIL PUMP CCW ROTATION (LC D SX)	1
	154201TVB0	BELT PROTECTION LC D DX	1	54	4025350019	BELTSPZ 925	1
5	1601606400	VANE LC300	4	55	4026101301	SCREW M6X10	2
6	1605500000	HANDLE	1	56	4026102806	SCREW M8X20	7
7	1608100000	DISTRIBUTOR	1	57	4026102807	SCREW M8X25	16
8	1608501700	CONVEYOR	1	58	4026102819	SCREW M8X90	2
9	1610051700	FLANGE	1	59	4026102908	SCREW M10X30	18
10	1610508200	FLANGE	1	60	4026103030	SCREW M12x16	4
11	1610510800	FLANGE	1	61	4026120301	SCREW M6X12	4
12	1610512900	OIL PUMP FLANGE	1	62	4026121305	SCREW M6X16	2
13	1610513500	FLANGE	2	63	4026121405	SCREW M8X20	3
14	161201X4B0	PUMP SUPPORT	1	64	4026121710	SCREW M12X35	2
15	1622002600	SHAFT M10	1	65	4026135414	SCREW M8X45	1
16	1623100000	CONVEYOR FLANGE	1	66	4026135504	SCREW M10X10	1
17	1624027500	SPACER	1	67	4026171211	SCREW M12X80	2
18	1624037700	SPACER	2	68	4026305508	NUT M12 SELFLOCKING	2
19	1624042800	SPACER	2	69	4026308005	NUT M8	2
20	1624202300	4 WAYS SPACER	1	70	4026308006	NUT M10	2
21	1627505300	MANIFOLD	1	71	4026350503	WASHER GROWER M6 Q	6
22	1642100200	REAR PROTECTION	1	72	4026350505	WASHER GROWER M8 Q	6
23	165351TXB0	DRIVEN PULLEY	1	73	4026350508	WASHER GROWER M12 Q	2
24	16630D5SB0	LUBRICATION LINE	1	74	4026350706	WASHER GROWER M8 P	21
	16630D5PB0	LUBRICATION LINE	1	75	4026350708	WASHER GROWER M10 P	4
25	16630D5IB0	LUBRICATION LINE USA	1	76	4026351504	TOOTHED WASHER M6	2
26	166301SZB0	LUBRICATION LINE	1	77	4026351506	TOOTHED WASHER M10	16
27	166301T0B0	LUBRICATION LINE	1	78	4026357005	WASHER M8	2
28	16630D5TB0	LUBRICATION LINE	1	79	4026357006	WASHER M10	4
29	16630D5XB0	LUBRICATION LINE	1	80	4026357007	WASHER M12	2
	16630D5WB0	LUBRICATION LINE USA	1	81	4026359001	WASHER 40X33.5X1.5 AL	6
30	16630D61B0	LUBRICATION LINE	1	82	4026359006	WASHER 13.5X18X1.5 AL	4
31	1673001000	OIL FILTER PLUG	1	83	4026501008	TAB 12X8X70	1
32	1680609700	OIL PUMP GASKET	1	84	4026510032	SEEGER E45	2
33	1680611600	MANIFOLD GASKET	1	85	4026702000	FITTING	6
34	1680611400 + 1680611500	MANIFOLD GASKET	1	87	4026706000	FITTING	4
35	1680707300	FLANGE GASKET	2	88	4026706003	FITTING	2
36	1680700200	FLANGE GASKET	1	89	4026706101	FITTING	2
37	1680709700	GASKET	1	90	4026904003	PLUG 1"	6
38	1680709800	HOUSING GASKET	2	92	4026904300	VENT PLUG 1/2"	2
39	16120CJ5B0	OIL DRIPPER FLANGE	1	93	4026904503	PLUG M20X1.5	1
40	1685002800	WASHER 30X8.5X4	1	94	4026905002	PLUG 1/4"	2
41	1685100000	WASHER 14X20X1.5 AL	2	95	4026910103	PLUG	1
42	1685100300	WASHER D 20	2	96	4026910601	PLUG 1/8	2
43	16875BHDB0	HOUSING LC300	1	97	16630D5MB0	LUBRICATION LINE	1
44	1687600000	OIL TANK	1		16630D5IB0	LUBRICATION LINE USA	1
45	1691000000	SPRING	1		16630D60B0	LUBRICATION LINE	1
46	4022200030	Y-SEAL 41X27X10	1		16630D60B0	LUBRICATION LINE USA	1
47	4022200044	Y-SEAL 65X45X8	1	98	16630D5WB0	LUBRICATION LINE	1
48	4022200416	Y-SEAL 60X75X8	4	99	16630D5WB0	LUBRICATION LINE USA	1

Spare parts LC 420 D

Pos	Code	Description	Q.ty	Pos	Code	Description	Q.ty
1	1401200700	OIL DRIPPER	2	50	4023100047	BEARING 6309 C3	1
2	1407200900	WATER PUMP SX (LC D SX)	1	51	4023110098	BEARING NU 309 ECJ/C3	1
	1407200800	WATER PUMP DX (LC D DX)	1	52	4023250502	RUBBER BALL D90	1
3	1521505900	ROTOR LC420 D	1		4024251000	OIL PUMP CW ROTATION (LC D DX)	1
	1521505700	ROTOR LC420 D USA		53	4024251500	OIL PUMP CCW ROTATION (LC D SX)	
4	154201TWB0	BELT PROTECTION LC D SX	1	54	4025350019	BELTSPZ 925	1
	154201TVB0	BELT PROTECTION LC D DX	1	55	4026101301	SCREW M6X10	2
5	1601606300	VANE LC420	4	56	4026102806	SCREW M8X20	7
6	1605500100	HANDLE	1	57	4026102807	SCREW M8X25	16
7	1608100000	DISTRIBUTOR	1	58	4026102819	SCREW M8X90	2
8	1608502500	CONVEYOR	1	59	4026102908	SCREW M10X30	18
9	1610051700	FLANGE	1	60	4026103030	SCREW M12X16	4
10	1610508200	FLANGE	1	61	4026120301	SCREW M6X12	4
11	1610509800	FLANGE	1	62	4026121305	SCREW M6X16	2
12	1610512900	OIL PUMP FLANGE	1	63	4026121405	SCREW M8X20	3
13	1610513500	FLANGE	2	64	4026121710	SCREW M12X35	2
14	161201X4B0	PUMP SUPPORT	1	65	4026135414	SCREW M8X45	1
15	1622002600	SHAFT M10	1	66	4026135504	SCREW M10X10	1
16	1623100500	CONVEYOR FLANGE	1	67	4026171211	SCREW M12X80	2
17	1624027500	SPACER	1	68	4026305508	NUT M12 SELFLOCKING	2
18	1624037700	SPACER	2	69	4026308005	NUT M8	2
19	1624042800	SPACER	2	70	4026308006	NUT M10	2
20	1624202300	4 WAYS SPACER	1	71	4026350503	WASHER GROWER M6 Q	6
21	1627504600	MANIFOLD	1	72	4026350505	WASHER GROWER M8 Q	6
22	1642100200	REAR PROTECTION	1	73	4026350508	WASHER GROWER M12 Q	2
23	165351TXB0	DRIVEN PULLEY	1	74	4026350706	WASHER GROWER M8 P	21
24	166301STB0	LUBRICATION LINE	1	75	4026350708	WASHER GROWER M10 P	4
	166301SXB0	LUBRICATION LINE					
25	166303QXB0	LUBRICATION LINE USA	1	76	4026351504	TOOTHED WASHER M6	2
26	166301SZB0	LUBRICATION LINE	1	77	4026351506	TOOTHED WASHER M10	16
27	166301T0B0	LUBRICATION LINE	1	78	4026357005	WASHER M8	2
28	166301T1B0	LUBRICATION LINE	1	79	4026357006	WASHER M10	4
29	166301T5B0	LUBRICATION LINE	1	80	4026357007	WASHER M12	2
30	166301T8B0	LUBRICATION LINE	1	81	4026359001	WASHER 40X33.5X1.5 AL	6
31	1673001000	OIL FILTER PLUG	1	82	4026359006	WASHER 13.5X18X1.5 AL	4
32	1680609700	OIL PUMP GASKET	1	83	4026501008	TAB 12X8X70	1
33	1680610500	MANIFOLD GASKET	1	84	4026510032	SEEGER E45	2
34	1680614300	MANIFOLD GASKET	1	85	4026702000	FITTING	6
35	1680707300	FLANGE GASKET	2	86	4026702708	WASHER 1"1/2 CU	1
36	1680707800	FLANGE GASKET	1	87	4026706000	FITTING	4
37	1680709700	GASKET	1	88	4026706003	FITTING	2
38	1680709800	HOUSING GASKET	2	89	4026706101	FITTING	2
39	1681100200	OIL DRIPPER FLANGE	1	90	4026904003	PLUG 1"	6
40	1685002800	WASHER 30X8.5X4	1	91	4026904005	PLUG 1"1/2	1
41	1685100000	WASHER 14X20X1.5 AL	2	92	4026904300	VENT PLUG 1/4"	2
42	1685100300	WASHER D 20	2	93	4026904503	PLUG M20X1.5	1
43	1687508200	HOUSING LC420	1	94	4026905002	PLUG 1/4"	2
44	1687600000	OIL TANK	1	95	4026910103	PLUG	1
45	1691000000	SPRING	1	96	4026910601	PLUG 1/8	2
46	4022200030	Y-SEAL 41X27X10	1		166301SWB0	LUBRICATION LINE	1
47	4022200044	Y-SEAL 65X45X8	1		166303QWB0	LUBRICATION LINE USA	
48	4022200416	Y-SEAL 60X75X8	4	98	1663062600	LUBRICATION LINE	1
49	4022300001	OIL FILTER	1	99	1663062700	LUBRICATION LINE	1

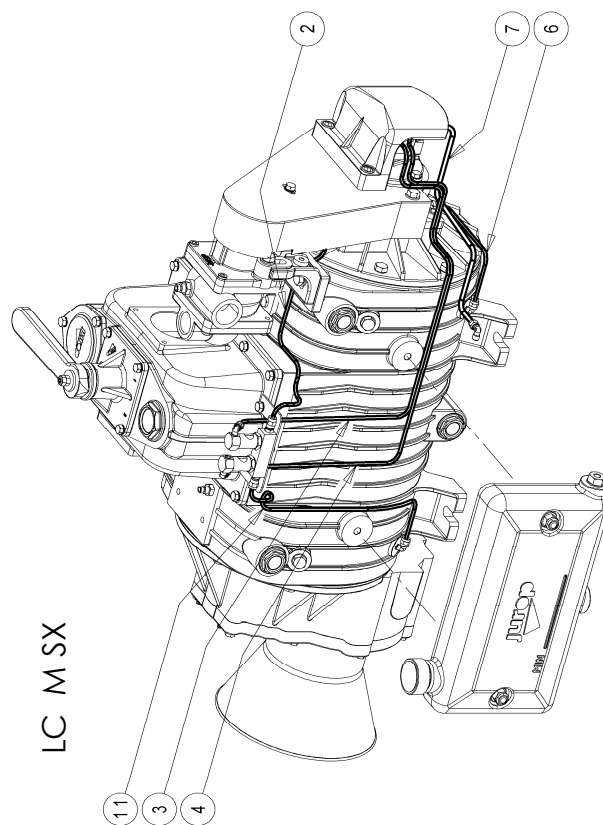
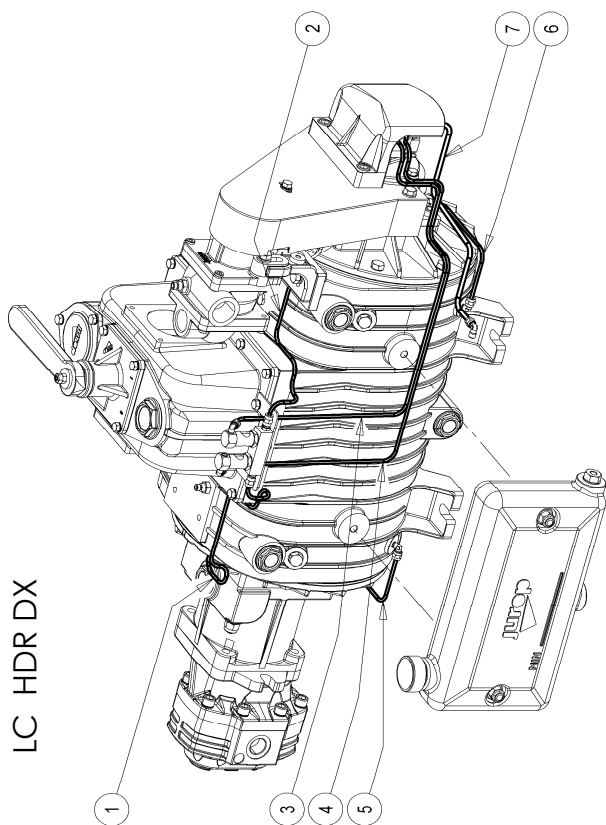
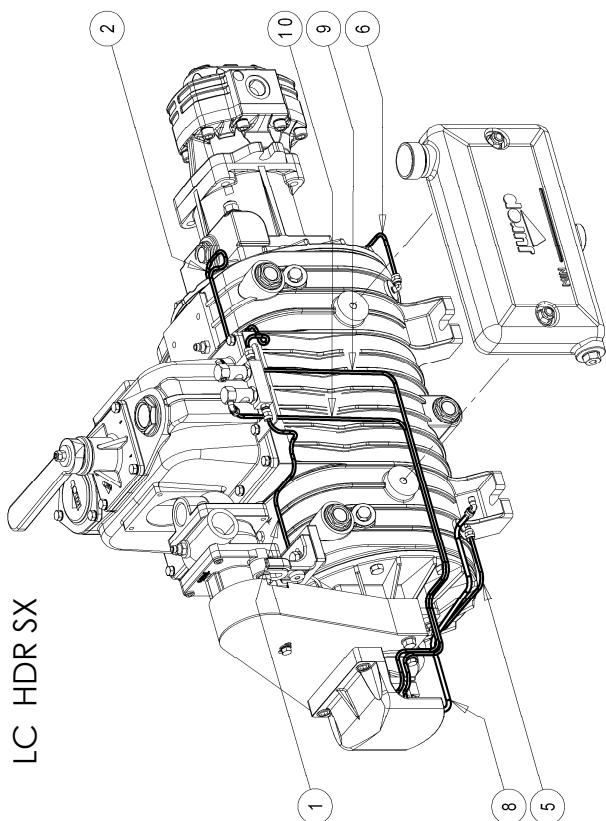
12.2 LC 300-420 M540 - M1000 - HDR



Spare parts LC 300-420 M540 - M1000 - HDR

Pos	Code	Description	Q.ty	Pos	Code	Description	Q.ty
1		GEARBOX 540 – 1000 RPM		44	4026351506	TOOTHED WASHER M10	15
1	4025350019	BELT SPZ 925	1	45	4026351505	TOOTHED WASHER M8	11
2	1407200900	WATER PUMP SX (LC M SX - LC HDR DX)	1	46	4026356002	FLAT WASHER 8X24	3
	1407200800	WATER PUMP DX (LC M DX - LC HDR SX)		47	4026401806	PIN10X36	2
3	1521506800	ROTOR LC300 M	1	48	4026501003	TAB 12X8X40	1
	1521505800	ROTOR LC420 M		49	162403N3B0	SPACER	1
4	154201TUB0	PROTECTION (LC M SX – HDR DX)	1	50	161201X4B0	WATER PUMP SUPPORT	1
	154201TSB0	PROTECTION (LC M DX – HDR SX)		51	4025426003	BUSHING	1
5	1610512900	OIL PUMP SUPPORT	1	52	4025426209	PULLEY 150X1 SPZ	1
6	1610513500	FLANGE	1	53	4026102819	SCREW M8X90	1
7	1610513600	GEARBOX M	1	54	4026102908	SCREW M10X30	1
8	1613501400	OIL PUMP FLANGE	1	55	4026308006	NUT M10	2
9	1622002600	SHAFT M10	1	56	4026350708	WASHER GROWER M10 P	4
10	1624037500	SPACER	2	57	4026350706	WASHER GROWER M8 P	21
11	1624037700	SPACER	1	58	4026357005	WASHER M8	1
12	1640501200	GEARBOX FLANGE	1	59	4026357006	WASHER M10	6
13	1642100200	REAR PROTECTION	1				
14	4029602806	DRIVE SHAFT PROTECTION	1				
15	1651005500	PINION Z28 (540 RPM)	1	2		HYDRAULIC DRIVE	
	1651010700	PINION Z42 (1000 RPM)		H1	1470102300	JOINT	1
16	1651010500	GEAR Z70 (540 RPM)	1	H2	1521506700	ROTOR LC300 HDR	1
	1651010600	GEAR Z56 (1000 RPM)			1521506000	ROTOR LC420 HDR	
17	1680609700	OIL PUMP GASKET	1	H3	1610513500	FLANGE	2
18	1680614100	GEARBOX GASKET	1	H4	1612501000	BRACKET HDR	1
19	1680709800	HOUSING GASKET	2	H5	1610021600	FLANGE HDR	1
20	1680710000	GASKET	1	H6	1624037700	SPACER	1
21	1681006500	COMP. RING FLANGE	1	H7	1680707300	GASKET	1
22	1684000000	PLUG 3/8"	3	H8	1680709800	GASKET	1
23	1685100100	WASHER 10X16X1.5 CU	2	H9	4022200044	Y-SEAL 65X45X8	1
24	1685100200	WASHER 17X22X1.5 AL	3	H10	4022200416	Y-SEAL 60X75X8	2
25	4022200008	Y-SEAL 90X45X8	1	H11	4024107009	MOTOR LC300	1
26	4022200416	Y-SEAL 60X75X8	4		4024107001	MOTOR LC420	
27	4022200040	Y-SEAL 72X40X10	1	H12	4026101613	SCREW M12X40	2
28	4023100040	BEARING 6308	1	H13	4026136006	SCREW M8X14	1
29	4023100047	BEARING 6309 C3	1	H14	4026102908	SCREW M10X30	8
30	4023110098	BEARING NU 309 ECJ/C3	1	H15	4026136003	SCREW M8X8	1
31	4023100020	BEARING 6207	1	H16	4023110098	BEARING NU309 ECJ/C3	2
32	4026102804	SCREW M8X16	3	H17	4026171211	SCREW M12X80	4
33	4026102809	SCREW M8X35	8	H18	4026121405	SCREW M8X20	3
34	4026102908	SCREW M10X30	16	H19	4026171304	SCREW M14X40	4
35	4024251000	OIL PUMP DX (LC M SX - LC HDR DX)	1	H20	4026308008	NUT M14	4
	4024251500	OIL PUMP SX (LC M DX - LC HDR SX)		H21	4026305508	NUT M12 SELFLOCKING	4
36	4026121305	SCREW M6X16	2	H22	4026350609	WASHER GROWER M12 P	4
37	4026121710	SCREW M12X35	6	H23	4026350610	WASHER GROWER M14 P	4
38	4026121813	SCREW M10X50	2	H24	4026351506	WASHER M10	8
39	4026155503	SCREW M5X12	4	H25	4026351505	WASHER M8	3
40	4026300025	COMPENSATION RING	1	H26	4026359001	WASHER 40X33.5X1.5 AL	1
41	4026306115	BOLT M36X3 SELFLOCKING	1	H27	4026510032	SEEGER E45	1
42	4026350503	WASHER GROWER M6 Q	6	H28	4026904003	PLUG 1"	1
43	4026350508	WASHER GROWER M12 Q	6	H29	4026501004	TAB 12X8X45	1

Lubrication lines LC 300-420 HDR – M



Lubrication lines LC 300 HDR - M

Pos	Code	Description	Q.ty
1	166301D5SB0	LUBRICATION LINE	1
2	166301D5TB0	LUBRICATION LINE	1
3	16630D5UB0	LUBRICATION LINE	1
4	16630D5YB0	LUBRICATION LINE	1
5	166301T0B0	LUBRICATION LINE	1
6	166301SZB0	LUBRICATION LINE	1

Pos	Code	Description	Q.ty
7	16630D5LB0	LUBRICATION LINE	1
8	16630D5JB0	LUBRICATION LINE	1
9	166301T7B0	LUBRICATION LINE	1
10	166301T4B0	LUBRICATION LINE	1
11	16630D5QB0	LUBRICATION LINE	1

Lubrication lines LC 420 HDR - M

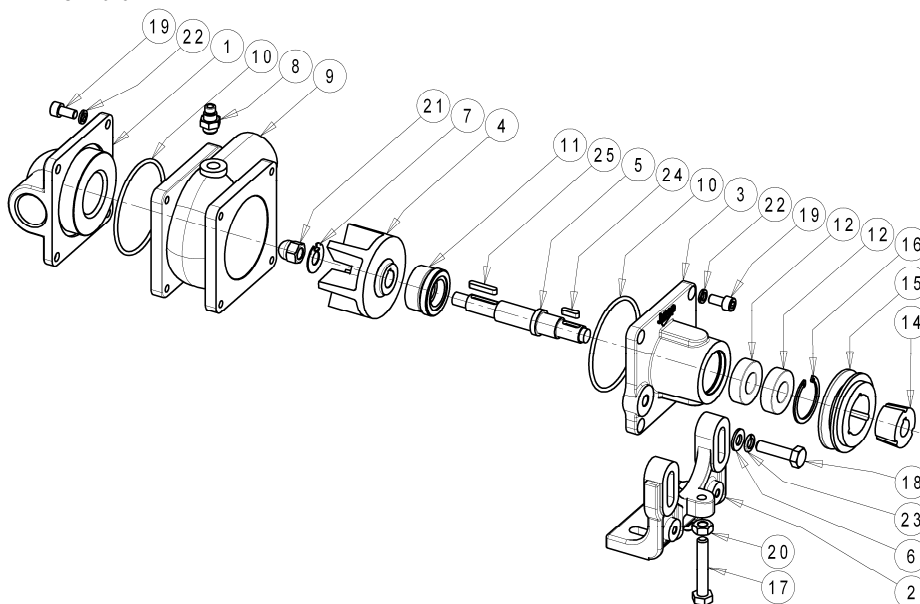
Pos	Code	Description	Q.ty
1	166301STB0	LUBRICATION LINE	1
2	166301T1B0	LUBRICATION LINE	1
3	166301T2B0	LUBRICATION LINE	1
4	166301T6B0	LUBRICATION LINE	1
5	166301T0B0	LUBRICATION LINE	1
6	166301SZB0	LUBRICATION LINE	1

Pos	Code	Description	Q.ty
7	166301SVB0	LUBRICATION LINE	1
8	166301SUB0	LUBRICATION LINE	1
9	16630D5ZB0	LUBRICATION LINE	1
10	16630D5VB0	LUBRICATION LINE	1
11	166301SYB0	LUBRICATION LINE	1

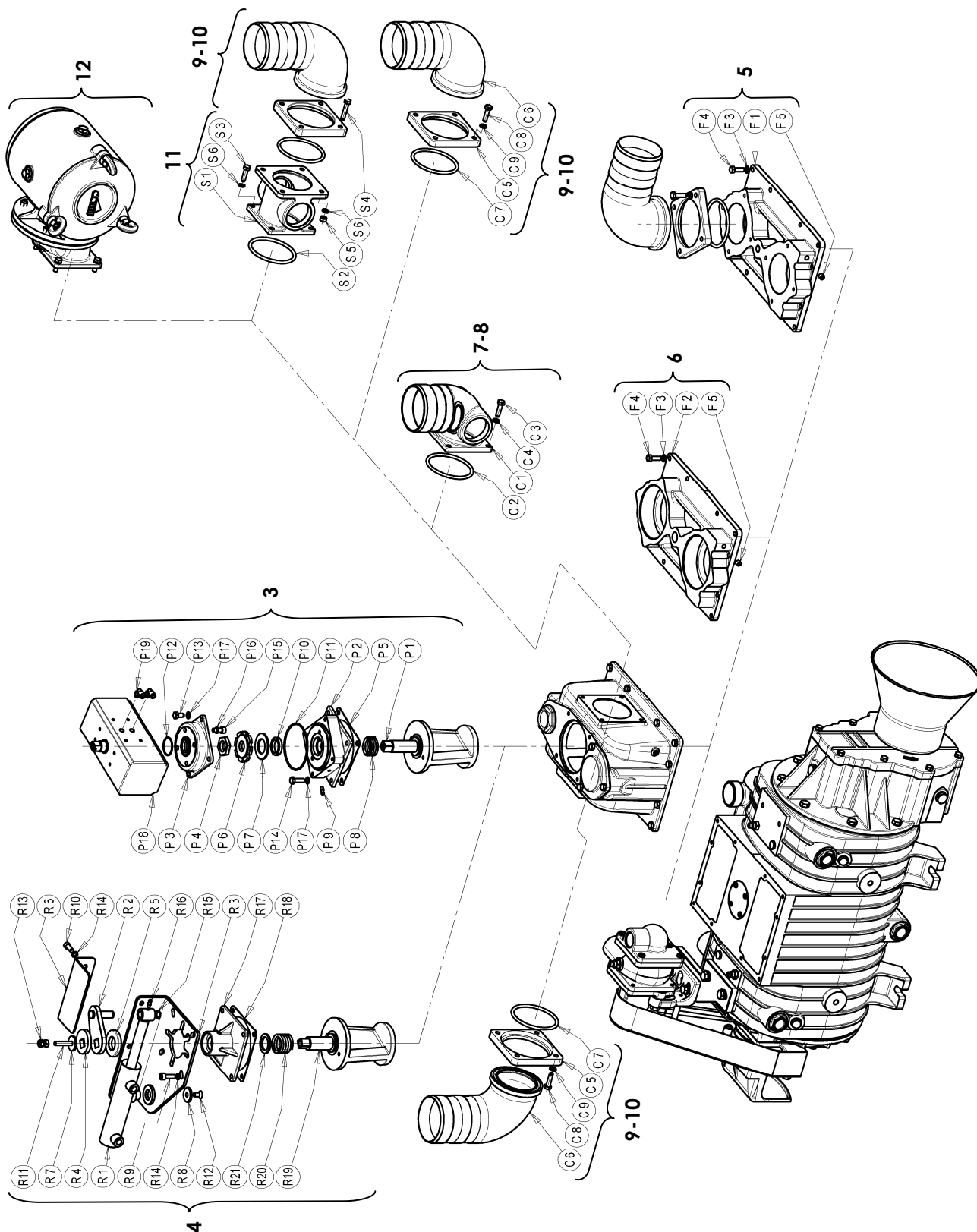
LC Water pump spare parts

Pos	Codice	Descrizione	Q.tà
1	1610506500	REAR FLANGE	1
2	1613500900	LOWER SUPPORT	1
3	1613501000	FRONT SUPPORT	1
4	1621502800	IMPELLER	1
5	1650009700	SHAFT	1
6	4026357006	WASHER M10	6
7	1685002400	SAFETY WASHER	1
8	4026904300	VENT PLUG 1/4	1
9	1687504500	HOUSING	1
10	4022200235	OR 4325	2
11	4022216915	MECHANICAL SEAL	1
12	4023100516	BEARING 6004 RS1	2
13	4025350021	BELT SPZ 975	1

Pos	Codice	Descrizione	Q.tà
14	4025422300	BUSHING 2820 Ø 16	1
15	4025422402	PULLEY SPZ 71 X 1	1
16	4026510525	SEEGER I 42 UNI 7437	1
17	4026102914	SCREW M8 x 60	1
18	4026107214	SCREW M8 x 10	4
19	4026120401	SCREW M8 x 16	10
20	4026308006	NUT M 10	1
21	4026322106	NUT M 12	1
22	4026350505	WASHER GROWER M8	10
23	4026350608	WASHER GROWER M10	4
24	4026500605	TAB 5 x 5 x 18	1
25	4026500609	TAB 5 x 5 x 28	1



12.3 Accessories LC 300-420



Accessories LC300

Pos	Code	Description	Q.ty	Pos	Code	Description	Q.ty
3	143028B7B0	PNEUMATIC OPERATED 4-WAY KIT		6		THREADED MANIFOLD	
P1	160858KNB0	CONVEYOR	1	F2	1627505600	THREADED MANIFOLD	1
P2	161258B4B0	ACTUATOR SUPPORT	1	F3	4026350706	WASHER GROWER M8	12
P3	1640580QB0	ACTUATOR COVER	1	F4	4026102807	SCREW M8X25	12
P4	167007ZAB0	CONVEYOR NUT	1	F5	4026135504	SCREW M10X10	1
P5	1680700200	FALNGE GASKET	1				
P6	168409PQB0	RING NUT	1	7	1852108600	FIXED SUCTION CONVEYOR Ø80 KIT	
P7	168529TFB0	SPACER	1	C1	1627100300	CONVEYOR Ø80	1
P8	1691000200	SPRING	1	C2	4022200307	OR 6287	1
P9	4022100100	GREASING NIPPLE M6X1	1	C3	4026103002	SCREW M12X30	2
P10	4022200005	Y-SEAL 37X27X7	1	C4	4026350709	WASHER GROWER M12	2
P11	4022200330	OR 3375	1				
P12	4022200331	OR 2137	1	8	1852108900	FIXED SUCTION CONVEYOR Ø76 KIT	
P13	4026102804	SCREW M8X16	4	C1	1627100200	CONVEYOR Ø76	1
P14	4026102807	SCREW M8X25	4	C2	4022200307	OR 6287	1
P15	4026121405	SCREW M8X20	4	C3	4026103002	SCREW M12X30	2
P16	4026350505	WASHER GROWER M8	4	C4	4026350709	WASHER GROWER M12	2
P17	4026351505	TOOTHED WASHER M8	8				
P18	4027100405	PNEUMATIC ACTUATOR	1	9	1852109000	TURNING CONVAYOR Ø76 KIT	
P19	4027421206	FITTING R15 6XG1/8	2	C5	1610100000	CONVEYOR FLANGE	1
				C6	1627100500	CONVEYOR Ø76	1
4	143029K2B0	HYDRAULIC OPERATED 4-WAY KIT		C7	4022200307	OR 6287	1
R1	143027T6B0	HYDRAULIC ACTUATOR	1	C8	4026103002	SCREW M12X30	2
R2	150206XXB0	ACTUATOR LEVER	1	C9	4026350709	WASHER GROWER M12	2
R3	151309JVB0	ACTUATOR SUPPORT	1				
R4	16240A0IB0	SPACER	1	12	18521CNGB0	SUCTION FILTER KIT	
R5	1624202300	SPACER	1				
R6	164206XYB0	PROTECTION	1				
R7	16850A0YB0 + 168509LLB0	WASHER	1				
R8	168509U0B0	WASHER	1				
R9	4026121407	SCREW M8X25	4				
R10	4026121405	SCREW M8X20	2				
R11	4026135414	SCREW M8X45	1				
R12	4026155705	SCREW M8X16	1				
R13	4026308005	NUT M8	4				
R14	4026350505	WASHER GROWER M8	6				
R15	4026510012	SEEGER E14 7435	1				
R16	4022100100	GREASING NIPPLE M6X1	1				
R17	1623100800	CONVEYOR FLANGE	1				
R18	1680700200	FLANGE GASKET	1				
R19	1608503200	CONVEYOR	1				
R20	1691000000	SPRING	1				
R21	1624027500	SPRING SPACER	1				
5		FLANGED MANIFOLD					
F1	1627505500	FLANGED MANIFOLD	1				
F3	4026350706	WASHER GROWER M8	12				
F4	4026102807	SCREW M8X25	12				
F5	4026135504	SCREW M10X10	1				
				18920F3XB0	GASKETS KIT LC300 M	1	
				18920F3YB0	GASKETS KIT LC300 D	1	

Accessories LC420

Pos	Code	Description	Q.ty	Pos	Code	Description	Q.ty
3	143028GZB0	PNEUMATIC OPERATED 4-WAY KIT		6		THREADED MANIFOLD	
P1	160858KBB0	CONVEYOR	1	F2	1627504900	THREADED MANIFOLD	1
P2	161258H0B0	ACTUATOR SUPPORT	1	F3	4026351505	TOOTHED WASHER M8	12
P3	1640580QB0	ACTUATOR COVER	1	F4	4026102807	SCREW M8X25	12
P4	167007ZAB0	CONVEYOR NUT	1	F5	4026135504	SCREW M10X10	1
P5	1680707800	FALNGE GASKET	1				
P6	168409PQB0	RING NUT	1	7	1852103400	FIXED SUCTION CONVEYOR Ø80 KIT	
P7	168529TFB0	SPACER	1	C1	1627101300	CONVEYOR Ø80	1
P8	1691000200	SPRING	1	C2	4022200310	OR 6362	1
P9	4022100100	GREASING NIPPLE M6X1	1	C3	4026102807	SCREW M8X25	4
P10	4022200005	Y-SEAL 37X27X7	1	C4	4026350706	WASHER GROWER M8	4
P11	4022200330	OR 3375	1				
P12	4022200331	OR 2137	1	8	1852103500	FIXED SUCTION CONVEYOR Ø100 KIT	
P13	4026102804	SCREW M8X16	4	C1	1627101200	CONVEYOR Ø100	1
P14	4026102807	SCREW M8X25	4	C2	4022200310	OR 6362	1
P15	4026121405	SCREW M8X20	4	C3	4026102807	SCREW M8X25	4
P16	4026350505	WASHER GROWER M8	4	C4	4026350706	WASHER GROWER M8	4
P17	4026351505	TOOTHED WASHER M8	8				
P18	4027100405	PNEUMATIC ACTUATOR	1	9	1852103900	TURNING CONVAYOR Ø80 KIT	
P19	4027421206	FITTING R15 6XG1/8	2	C5	1610101100	CONVEYOR FLANGE	1
				C6	1627102700	CONVEYOR Ø80	1
4	143029KRB0	HYDRAULIC OPERATED 4-WAY KIT		C7	4022200310	OR 6362	1
R1	143027T6B0	HYDRAULIC ACTUATOR	1	C8	4026102808	SCREW M8X30	4
R2	15020A10B0	ACTUATOR LEVER	1	C9	4026350706	WASHER GROWER M8	4
R3	151307TJB0	ACTUATOR SUPPORT	1				
R4	1624043400	SPACER	1	10	1852104000	TURNING CONVAYOR Ø100 KIT	
R5	1624202300	SPACER	1	C5	1610101100	CONVEYOR FLANGE	1
R6	164206XYB0	PROTECTION	1	C6	1627102400	CONVEYOR Ø100	1
R7	1685002800	WASHER 30X8.5X4	1	C7	4022200310	OR 6362	1
R8	168509U0B0	WASHER	1	C8	4026102808	SCREW M8X30	4
R9	4026121408	SCREW M8X35	4	C9	4026350706	WASHER GROWER M8	4
R10	4026121405	SCREW M8X20	2				
R11	4026135414	SCREW M8X45	1	11	1852104100	KIT FOR SAFETY VALVE	
R12	4026155705	SCREW M8X16	1	S1	1627102500	CONVEYOR	1
R13	4026308005	NUT M8	4	S2	4022200310	OR 6362	1
R14	4026350505	WASHER GROWER M8	6	S3	4026102807	SCREW M8X25	4
R15	4026510012	SEEGER E14 7435	1	S4	4026102810	SCREW M8X40	4
R16	4022100100	GREASING NIPPLE M6X1	1	S5	4026308005	NUT M8	4
R17	1623100500	CONVEYOR FLANGE	1	S6	4026350706	WASHER GROWER M8	8
R18	1680707800	FLANGE GASKET	1				
R19	1608502500	CONVEYOR	1	12	185212L4B0	SUCTION FILTER KIT	
R20	1691000000	SPRING	1				
R21	1624027500	SPRING SPACER	1				
5		FLANGED MANIFOLD					
F1	1627504800	FLANGED MANIFOLD	1				
F3	4026351505	TOOTHED WASHER M8	12				
F4	4026102807	SCREW M8X25	12	189207X0B0	GASKETS KIT LC420 M	1	
F5	4026135504	SCREW M10X10	1	189207X2B0	GASKETS KIT LC420 D	1	

Model	Issue date	Revision No.	Revision date	Filled out by	Viewed by
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