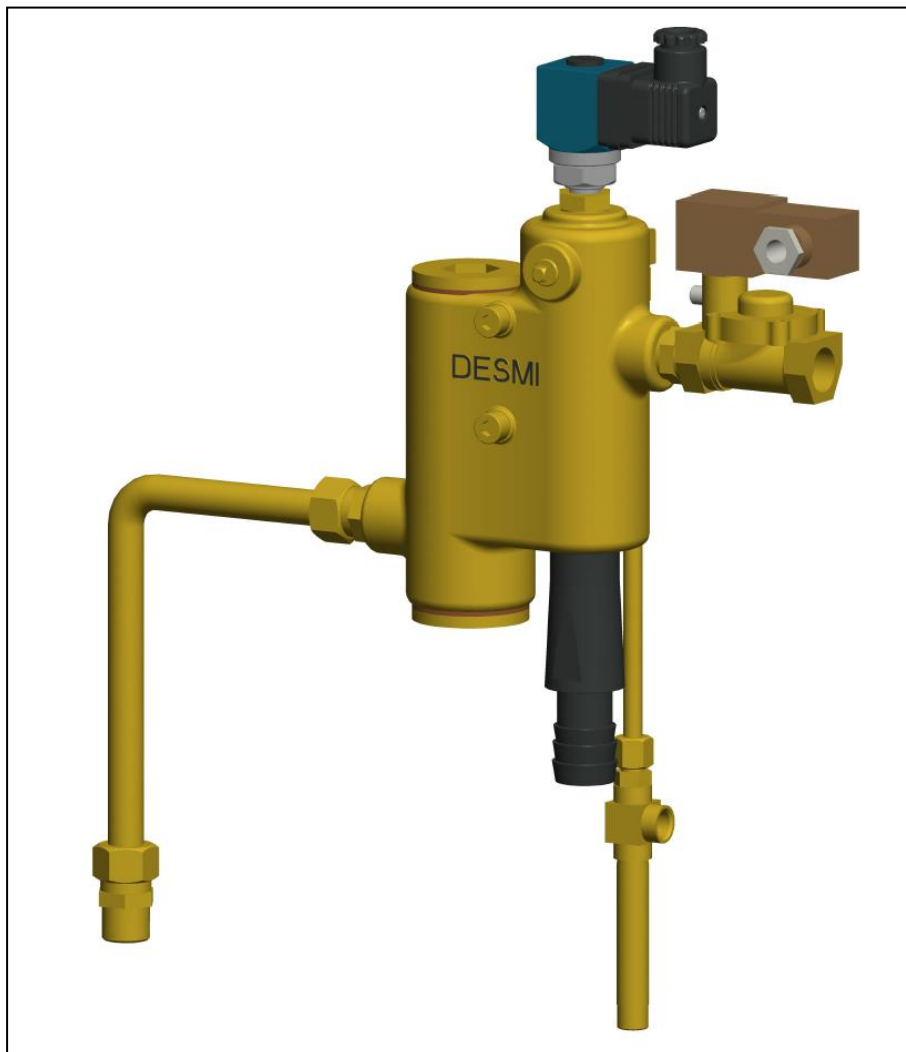


DESMI priming ejector



DESMI Pumping Technology A/S

Tagholm I, DK-9400 Nørresundby, Denmark

Tel.: +45 96 32 81 11

Fax: +45 98 17 54 99

E-mail: desmi@desmi.com

Internet: www.desmi.com

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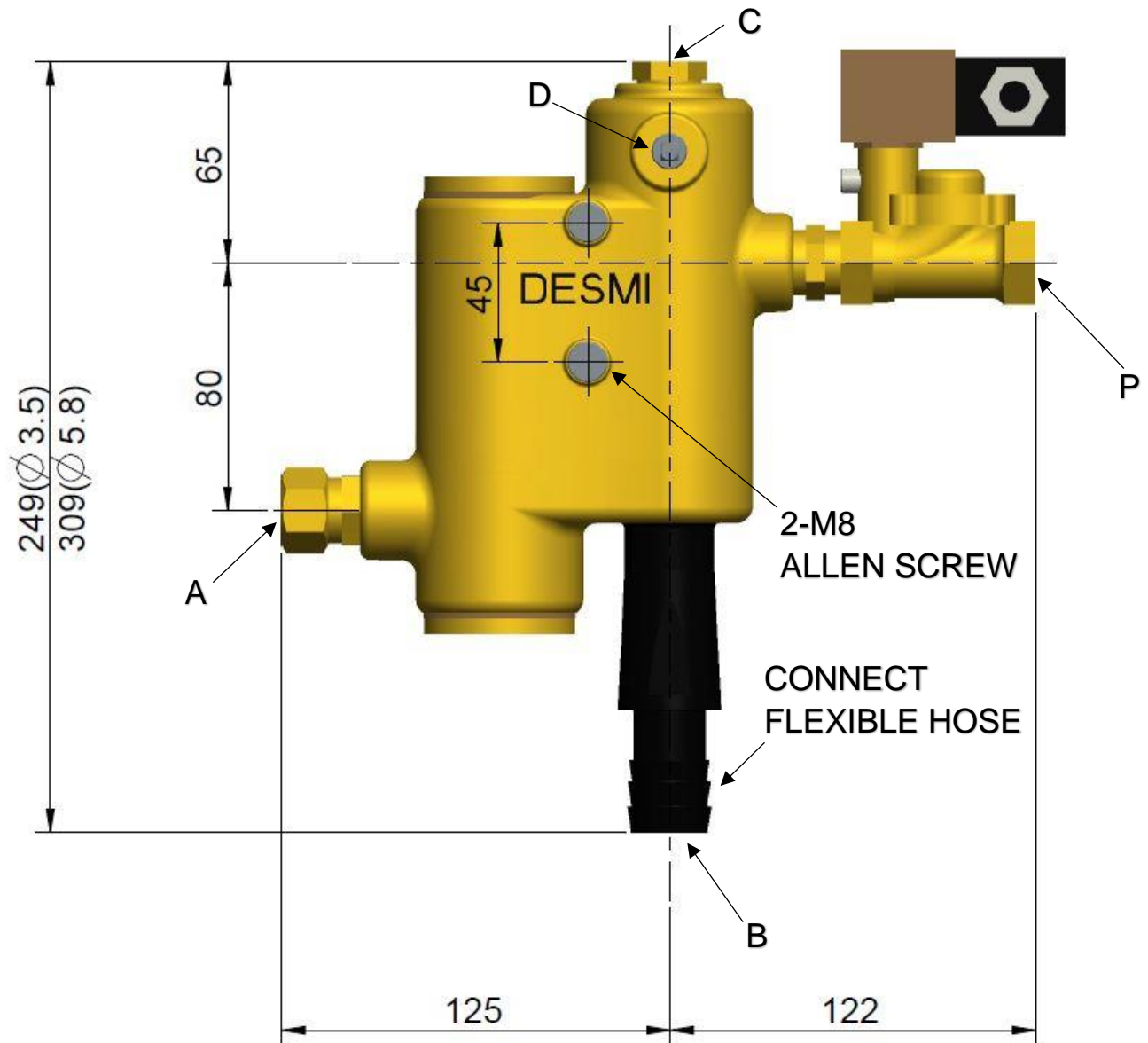


Special pump No.

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EJECTOR DIMENSIONS AND CONNECTIONS



Ejector connections				Option 1	
P	A	B		C	D
Compressed air	Ejector Suction	Exhaust		Pressure switch On Ejector	To Pump Discharge
		Ø3.5	Ø5.8		
G 1/2"	G 1/2"	1"	1.25"	G 1/4"	G 1/4"

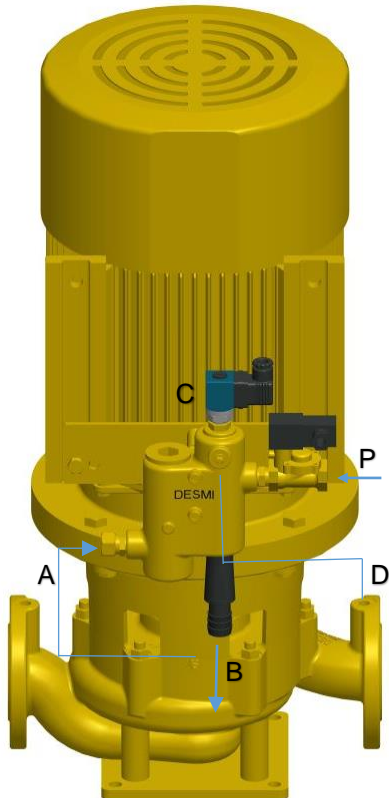
Main Material

Name	Casing	Sealing	Nozzle	Diffuser
Bronze	RG5	NBR	POM	PA6
Stainless steel	Super duplex stainless steel (1.4410)	EPDM	POM	PA6

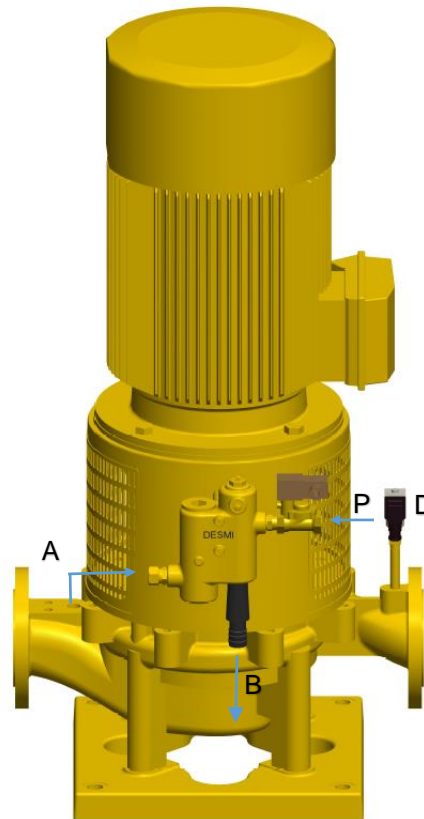
EJECTOR CONNECTION

Option 1 : Pressure switch on ejector

Option 2 : Pressure switch on pump



DESMI standard for ESL pumps
(ESL pumps with B35 motor)

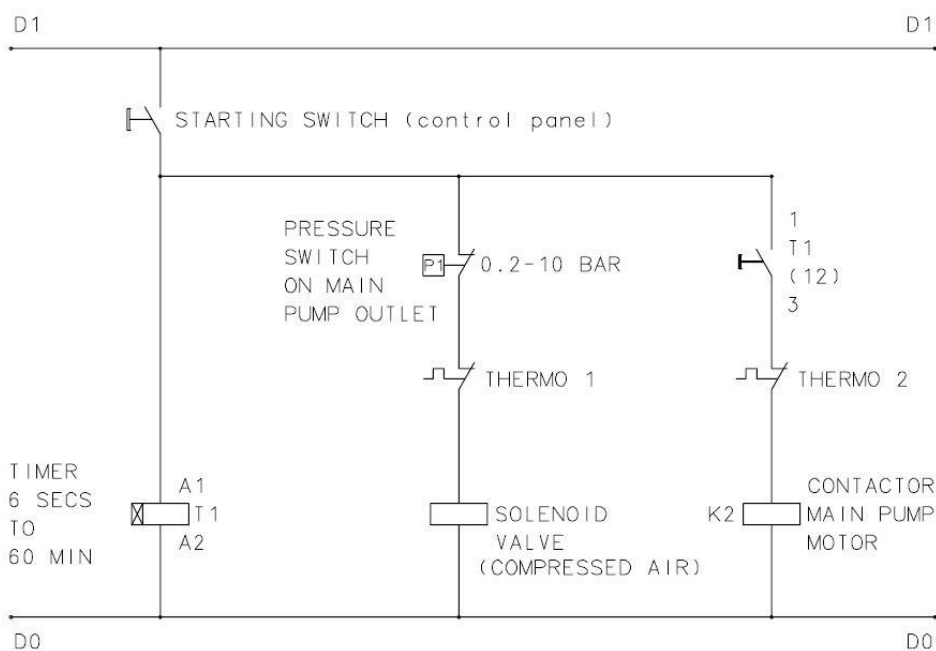
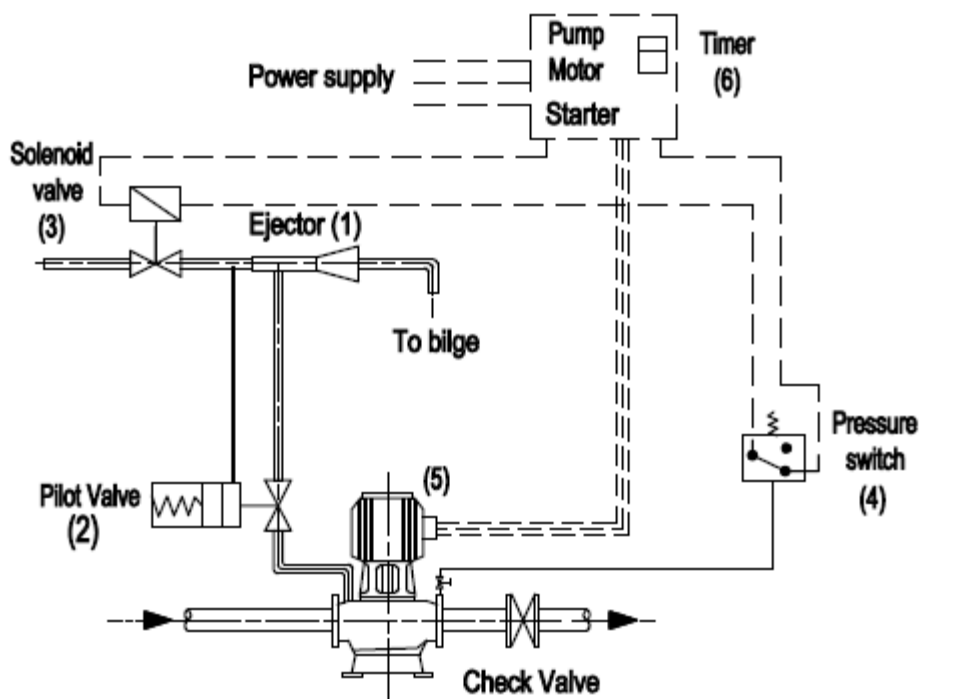


DESMI standard for NSL and DSL pumps

Notes (installation guide for loose supply):

1. Standard connection way is that ejector suction connected to pump suction side, but it can be connected to discharge side if there are enough holes (please don't use one hole for pressure switch and ejector suction).
2. Type ESL pump, please connect ejector suction to the venting hole on rear cover.
3. When suction pipe diameter is small than 40mm, please install ejector suction to discharge side.
4. Please ensure the place of suction side hole for ejector is higher than pump suction nozzle, also ensure there aren't raised pipe from the ejector connected place on pump suction pipe to pump suction flange.
5. Compressed air "P": pressure 5-7bar.

DIAGRAM FOR EJECTOR



PRESSURE SWITCH : OPTIONAL DESMI SUPPLY
 SOLENOID VALVE : OPTIONAL DESMI SUPPLY
 OTHER ITEMS : NOT DESMI SUPPLY

1. Control voltage: DC12-24V or AC24V, 110V, 220V-50HZ or 60HZ. Standard control voltage is AC 220V-50HZ or 60HZ
2. Pressure switch terminals give closed circuit below set pressure
3. Pressure switch and solenoid valve cable glands accept electric cable diameters from $\varnothing 6$ to $\varnothing 10$ mm.

FUNCTIONAL DESCRIPTION

When the starting switch is ON, the timer S1 is supplied with a control current, which activates it (see wiring diagram). The solenoid valve on the priming ejector is connected, and the ejector is activated.

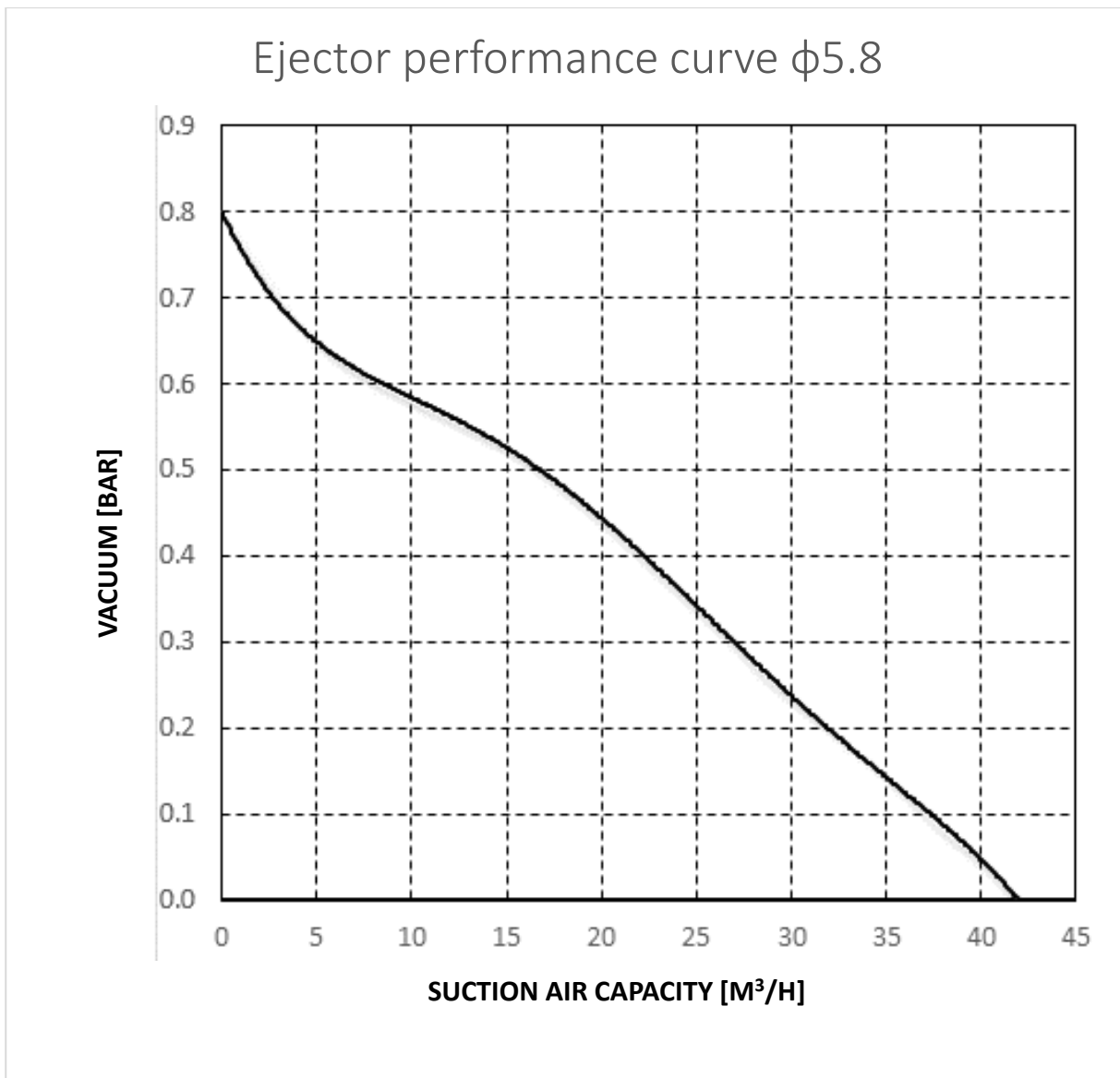
When the time period set on the timer expires, the switch T1 is ON, and the relay coil K2 to the main pump is activated by which the electric motor for the main pump is started up.


When the main pump produces a pressure corresponding to the value set on the pressure sensitive switch P1, the latter switches off the current to solenoid valve on the priming ejector.

The priming ejector is designed for mounting on non-selfpriming centrifugal pumps thus making the pump unit self-priming. **NOTE:** The priming system only works if the delivery pipe on the main pump is shut off, e.g. by means of a non-return valve !

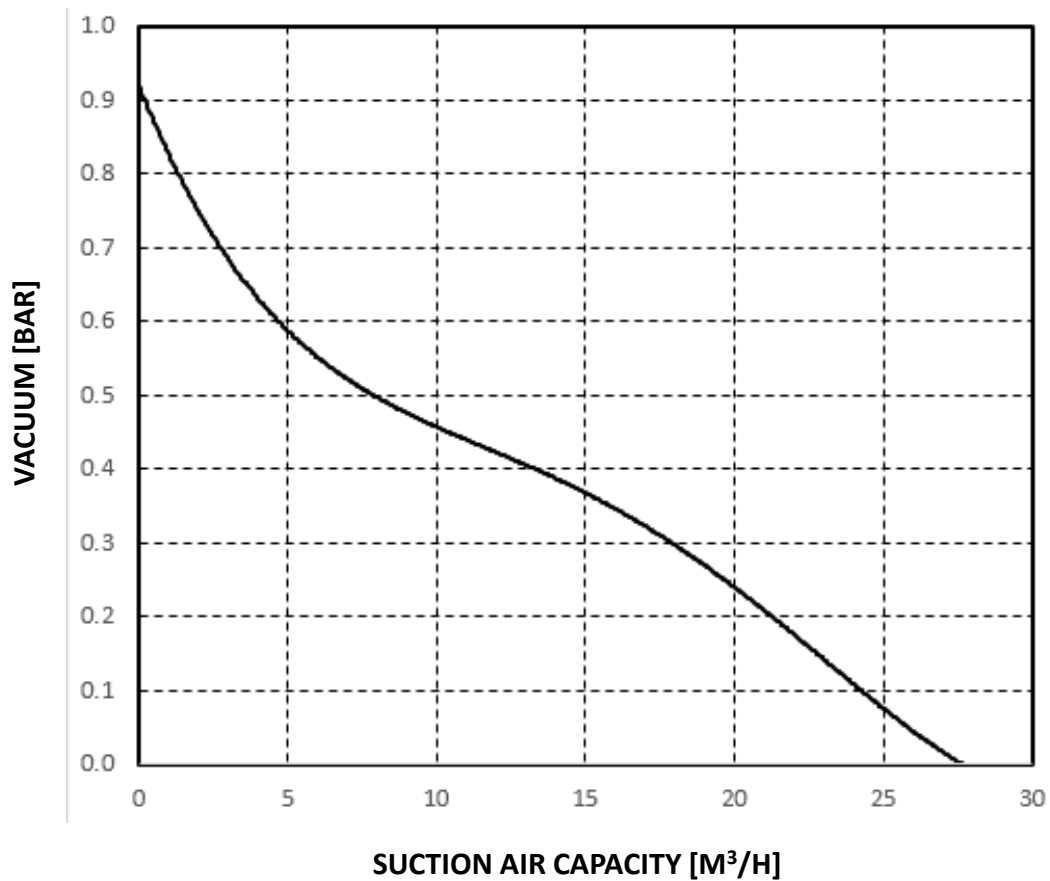
Operation fault-finding list:
Make sure that air pressure and flow is sufficient to operate the ejector. Maybe the solenoid valve (controlling the pressurized air supply) mounted on the ejector is defect or blocked.
Make sure that the air exhaust pipe is connected and pointing downwards or connected to bilge / a suitable drain. There should be little or no flow resistance (back pressure) in the drain connection – otherwise the ejector performance will be significantly reduced.
A non-return valve mounted on the discharge side of the main pump is required – if not mounted then it's impossible to create vacuum in the suction side piping.
Check if ejector wiring / control system is installed / working correctly.
If a timer is installed together with the motor starter, please make sure that the time is adjusted according to the length of the actual priming operation (sufficient vacuum should be created in suction piping and all air evacuated, so water finally comes up to the main pump before it's started)
Is the ejector capable of evacuating the air inside the suction line ? (maybe suction lift is too high – or maybe other piping systems (maybe open to atmosphere) are connected by accident)
Adjust the pressure switch so that the priming starts when the pump loses suction. And stops when the pump has gained suction and is building up pressure.
Is the ejector or main pump clogged up / blocked by foreign items.
If the ejector will not stop working when the main pump starts then check the release adjustment of the pressure switch mounted on the main pump discharge side (or on top of ejector casing for small pumps). The release pressure can be adjusted with a small Allen screw hidden below a cap on top of the pressure switch housing.
Are the main pump suction piping / flange connections sufficiently vacuum tight (check if a suction side mounted manometer can stay at a given vacuum level when the ejector is not working ? If not, then atmospheric air enters the pump / suction side piping – or through a defect mechanical shaft seal in the main pump.


EJECTOR PERFORMANCE CURVES



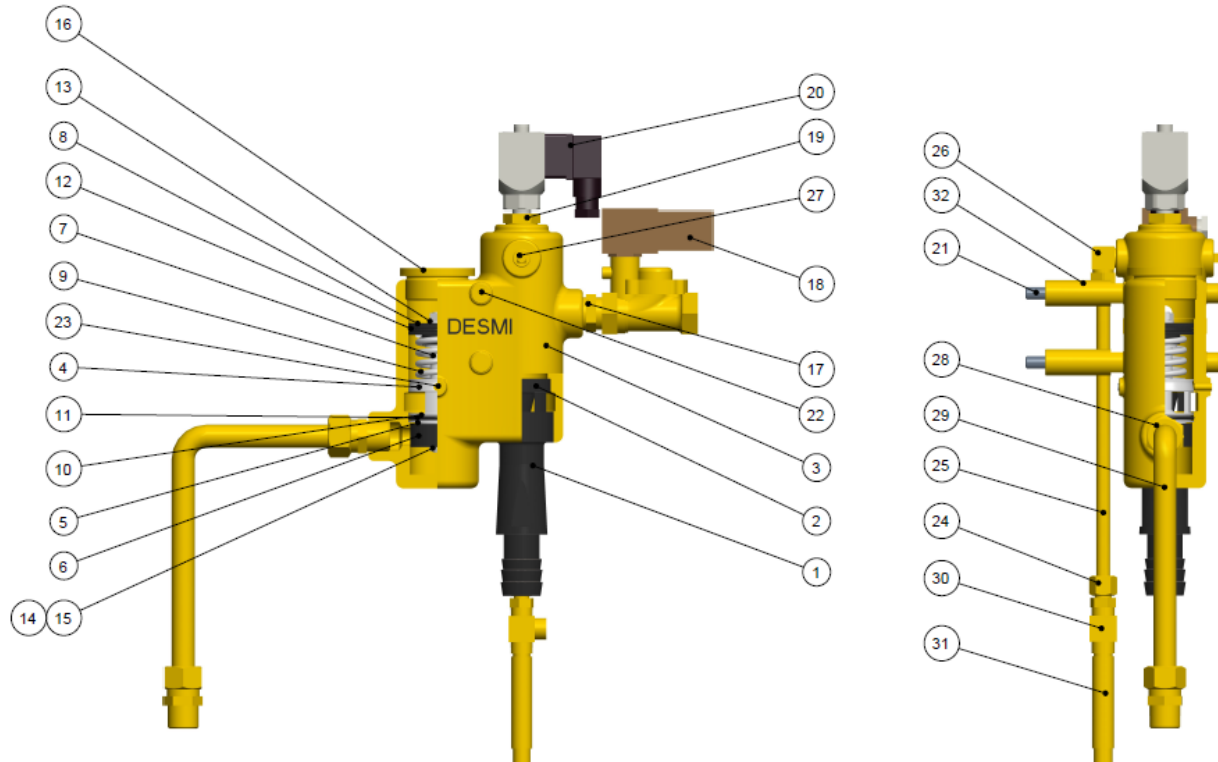
 www.desmi.com	TYPE	DESMI NEW EJECTOR	PROJECT	
	Application	Priming Ejector $\phi 5.8$	Test data	11/28/2016
	Air consumption at 6 Bar 1850 N liter/min. (=111 Nm³/h)		Date	12/02/2016
			Sign	Vincent Wen

Ejector performance curve $\phi 3.5$



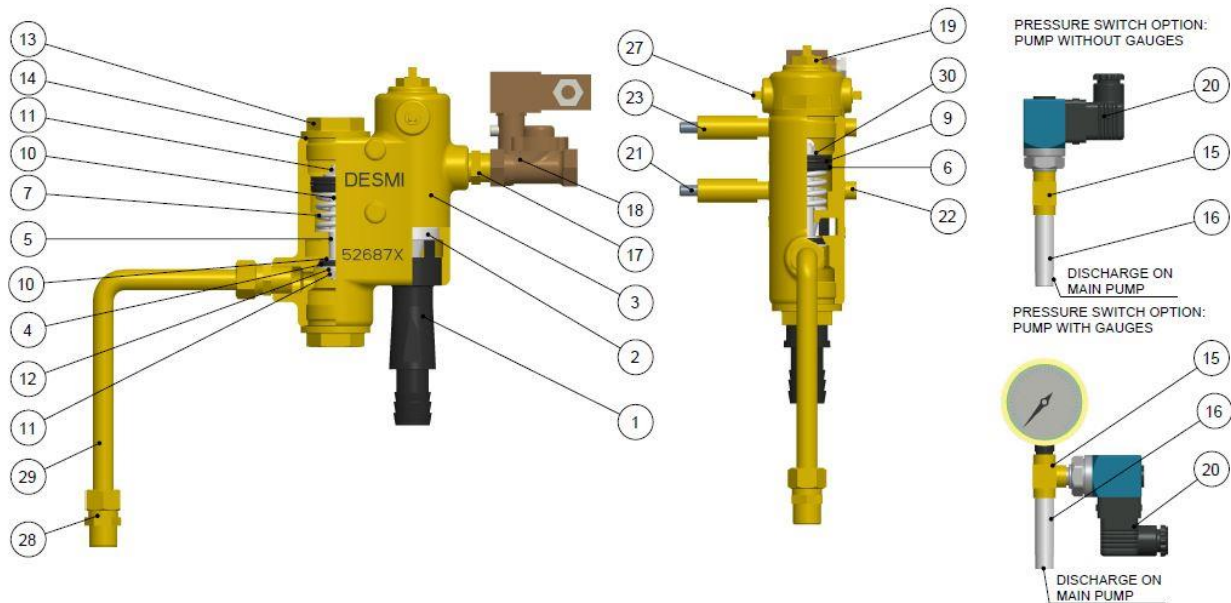
 www.desmi.com	TYPE	DESMI NEW EJECTOR	PROJECT	
	Application	Priming Ejector $\phi 3.5$	Test data	11/14/2016
	Air consumption at 6 Bar		Date	12/02/2016
	717 N liter/min. (=43 Nm³/h)		Sign	Vincent Wen

EJECTOR PARTS LIST FOR UNITS WITH ITEM NO. 679340-XXXX AND 678965



Position number	Description	Position number	Description	Position number	Description	Position number	Description
1	DIFFUSER	10	O-RING	19	NIP.BELL	28	HEX.NIPPLE
2	NOZZLE	11	O-RING	20	PRESSURE SWITCH	29	TUBE COPPER
3	AIR EJECTOR	12	O-RING	21	POINT SCREW	30	TEE
4	SEAL SEAT	13	WASHER	22	ALLEN SCREW	31	NIPPLE
5	SEAL DISC	14	NUT	23	POINT SCREW	32	FIX SLEEVE
6	WATER PISTON	15	WASHER	24	HEX.NIPPLE		
7	POLE	16	PLUG	25	TUBE		
8	AIR PISTON	17	HEX.NIPPLE	26	MALE ELBOW		
9	SPRING	18	SOLENOID VALVE	27	PLUG		

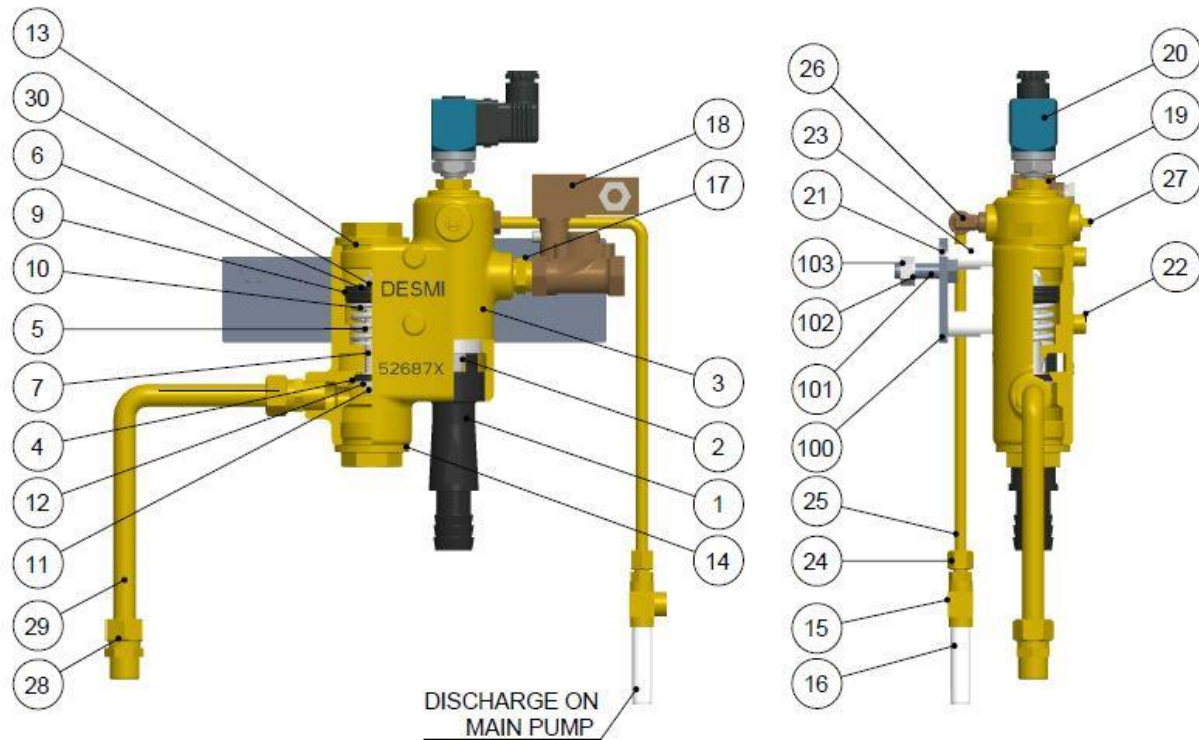
NSL AND DSL EJECTOR PARTS LIST FOR UNITS WITH ITEM NO. 656852-XXXX AND 657376



Position number	Description	Position number	Description	Position number	Description
1	DIFFUSER	11	NUT	20	PRESSURE SWITCH
2	NOZZLE	12	WASHER	21	POINT SCREW
3	AIR EJECTOR	13	PLUG	22	ALLEN SCREW
4	RUBBER COATED SEAT	14	O-RING	23	FIX SLEEVE
5	SHAFT	15	TEE	27	PLUG
6	AIR PISTON	16	NIPPLE	28	HEX.NIPPLE
7	SPRING	17	HEX.NIPPLE	29	TUBE
9	O-RING	18	SOLENOID VALVE	30	WASHER
10	WASHER	19	NIP.BELL		

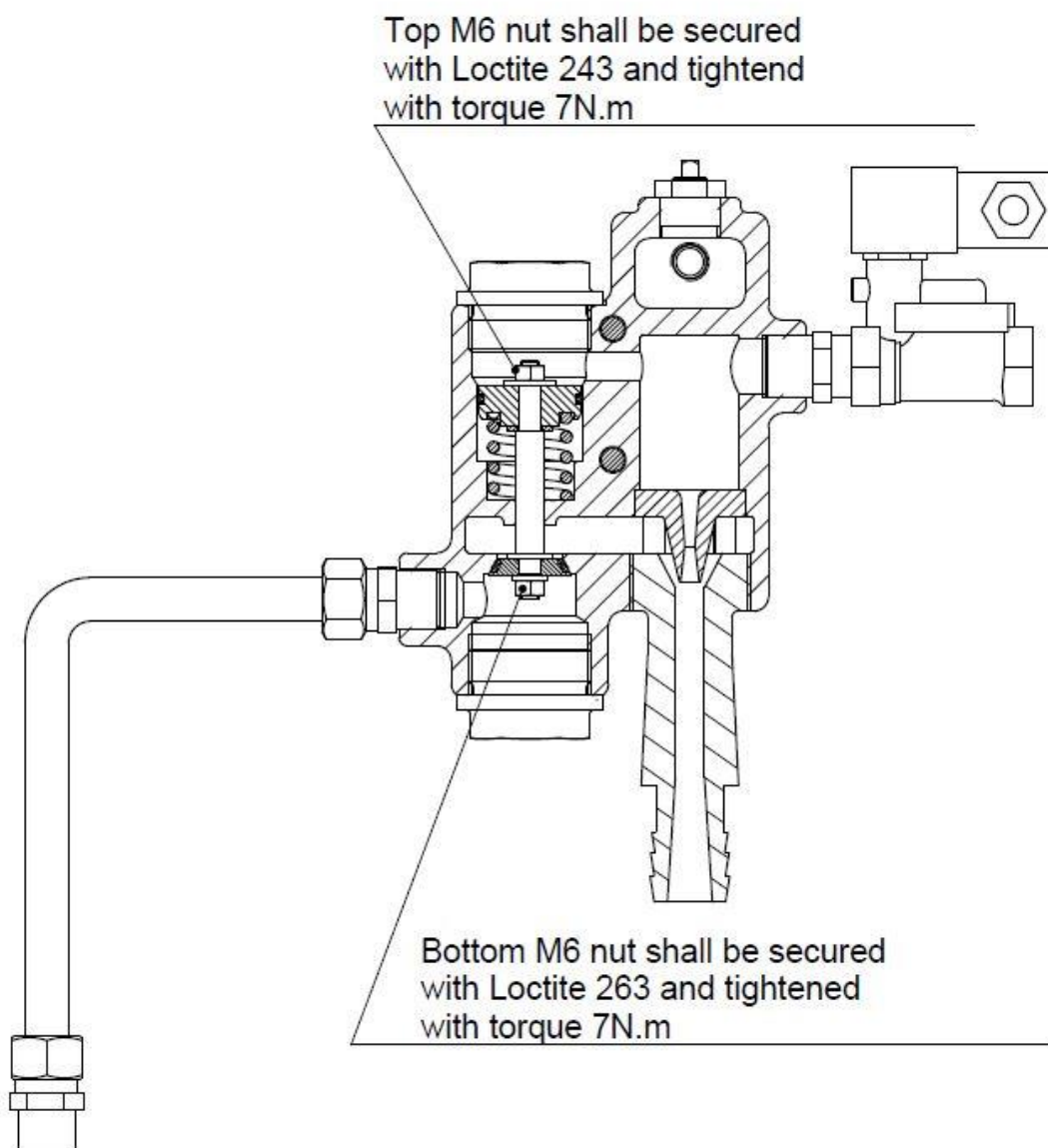
ESL EJECTOR PARTS LIST

FOR UNITS WITH ITEM NO. 656852-XXXX AND 657376



Position number	Description	Position number	Description	Position number	Description	Position number	Description
1	DIFFUSER	11	NUT	20	PRESSURE SWITCH	29	TUBE
2	NOZZLE	12	WASHER	21	POINT SCREW	30	WASHER
3	AIR EJECTOR	13	PLUG	22	ALLEN SCREW	100	ESL PLATE
4	RUBBER COATED SEAT	14	O-RING	23	FIX SLEEVE	101	SCREW
5	SHAFT	15	TEE	24	HEX.NIPPLE	102	WASHER
6	AIR PISTON	16	NIPPLE	25	TUBE	103	NUT
7	SPRING	17	HEX.NIPPLE	26	MALE ELBOW		
9	O-RING	18	SOLENOID VALVE	27	PLUG		
10	WASHER	19	NIP.BELL	28	HEX.NIPPLE		

NOTICE FOR EJECTOR ASSEMBLY



INFORMATION RELEVANT FOR DISASSEMBLY OR DISPOSAL AT END-OF-LIFE:

No damage materials are used in DESMI pumps – please refer to DESMI Green Passport (can be sent on request – contact a DESMI sales office) – i.e. common recycling companies can handle the disposal at end-of-life. Alternatively the pump and motor can be returned to DESMI at end-of-life for safe recycling.