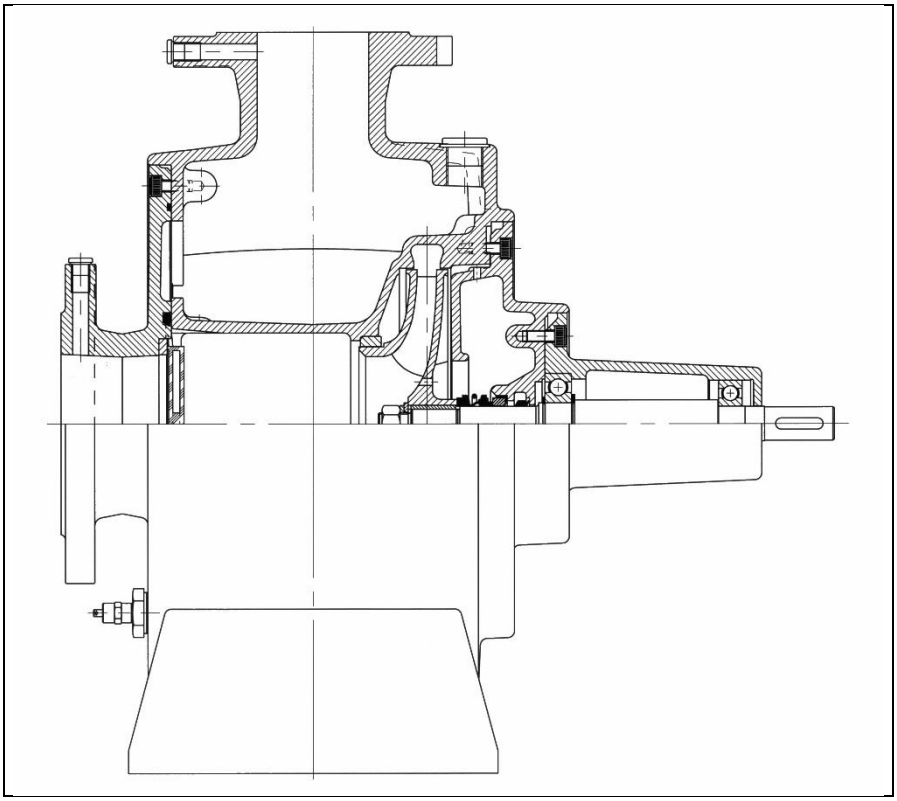
OPERATION AND MAINTENANCE INSTRUCTION

DESMI self-priming centrifugal pump

MODULAR S-N



DESMI Pumping Technology A/S
Tagholm l, 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

Manual:	Language:	Revision:
T1440	English	J(09/24)

DESMI

Table of contents:

1. PRODUCT DESCRIPTION

These operation and maintenance instructions apply to the DESMI MODULAR S-N pump series. The pumps are available in sizes ranging from 25 to 100 mm on the pressure flange. The suction flange is bigger than the pressure flange.

DESMI S is a single-stage self-priming centrifugal pump with stainless steel shaft and mechanical shaft seal. The smallest pumps, S32-25-110N and S50-32-135N, have open impeller, whereas all other sizes have closed impeller.

The pump is suitable for the pumping of clean and polluted liquids with temperatures between 0 and 80°C. With special shaft seal up to 140°C. Max. number of revolutions: 3600 RPM.

The pump has horizontal inlet on the centre line and vertical outlet at the top.

The back of the impeller is equipped with relief blades to reduce the load on the bearings.

Relief holes in the impeller ensure circulation of liquid for the shaft seal and prevent overheating of the shaft seal during normal operation.

The pump is particularly suitable for the pumping of water in connection with f.inst. cooling of diesel engines, as bilge pumps, ballast pumps, pumps for irrigation, washing plants, air conditioning, cooling systems, and sanitary systems, etc. Furthermore, in the majority of cases where the transport of liquid is required within industry.

1.1 DELIVERY

- Check on delivery that the shipment is complete and undamaged.
- Defects and damages, if any, to be reported to the carrier and the supplier immediately in order that a claim can be advanced.

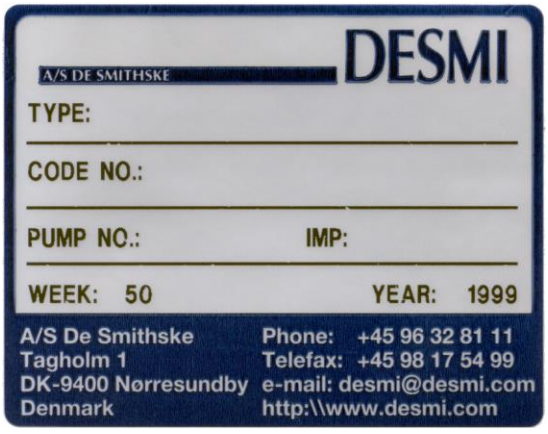
2. TECHNICAL DATA

The pumps are manufactured in various material combinations which appear from the type number on the name plate. See below.

2.1 NAME PLATE

Manufacturer:
DESMI
DK-9400 Nørresundby
Phone +45 96328111
Fax +45 98175499
e-mail: desmi@desmi.com
http:\\www.desmi.com

TYPE: Pump type number
CODE NO.: Pump item No.
PUMP NO.: Pump No.
IMP.: Impeller diameter
WEEK/YEAR: Production week and year



DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com www.desmi.com

2.2 EXPLANATION OF THE TYPE NUMBER

All the S-N pumps are provided with a name plate. The type number indicated on the name plate is built up as follows:

SXXX-YYY-ZZZN-MR
XXX, YYY, ZZZ : Pump size where

XXX = Suction branch diameter, YYY= Pressure branch diameter,
ZZZ = Standard impeller diameter.

M : The material combination of the pump.
R : The assembly combination of the pump.

M may be the following:

A : Standard. Casing: GG20. Impeller: AlBz.
C : All cast iron.
D : Casing: RG5, Impeller: AlBz.
E : Casing and shaft seal cover: NiAlBz and bronze alloy. Impeller and sealing rings: NiAlBz.
U : Nonmagnetic

The pumps can be delivered in other material combinations which are agreed with the supplier.

R may be the following:

01 : With electromagnetic clutch.
02 : Monobloc, flange-mounted with electric motor.
03 : With hydraulic motor.
04 : V-belt pulley and disengaging clutch.
07 : On base plate with petrol or diesel engine, or with electric motor.
08 : Mounted on trolley with petrol or diesel engine or with electric motor.
09 : With bare shaft end.
10 : Special-tailored according to task.

Any use of the pump is to be evaluated on the basis of the materials used in the pump. In case of doubt, contact the supplier.

Pumps in material combinations A and C are primarily used for fresh water.
Pumps in material combination D are primarily used for seawater.

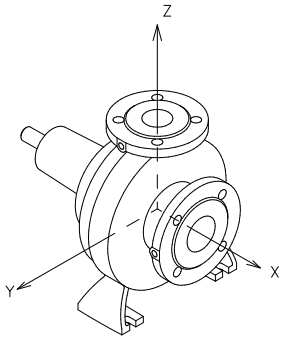
2.3 TECHNICAL DESCRIPTION

The noise level of the pump depends on the motor type supplied, as the noise from the pump can be calculated as the noise level of the motor + 2dB(A).

The capacity of the pump appears from the name plate on the pump. If the pump has been delivered without motor, the pump capacity is to be indicated on the plate when mounting the motor.

DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com
www.desmi.com

The permissible loads on the flanges appear from the following table:



Pump	Fv N	Fh N	F N	Mt Nm
S32-25-110N	1250	950	1550	200
S50-32-135N	1250	950	1550	200
S70-50-175N	1350	1000	1700	200
S70-50-220N	1350	1000	1700	200
S70-50-275N	1350	1000	1700	250
S80-70-175N	1450	1050	1800	270
S80-70-220N	1450	1050	1800	270
S80-70-275N	1450	1050	1800	270
S100-80-175N	1800	1250	2200	470
S100-80-220N	1800	1250	2200	470
S100-80-275N	1800	1250	2200	470
S125-80-220N	3200	1900	3750	950
S125-80-275N	3300	2000	3850	1020
S125-100-220N	3300	2000	3850	1020

In connection with the permissible loads on the flanges the following is to be observed:

$$\frac{2}{3}F_{zout} + F_{zin} \le F_v$$

$$\sqrt{F_{xin}^2 + F_{yin}^2} + \sqrt{F_{xout}^2 + F_{yout}^2} \le F_h$$

$$\sqrt{M_{xin}^2 + M_{yin}^2 + M_{zin}^2} + \sqrt{M_{xout}^2 + M_{yout}^2 + M_{zout}^2} \le M_t$$

$$\left(\frac{\sum F \quad calc}{\sum F}\right)^2 + \left(\frac{\sum M \quad calc}{\sum M_t}\right)^2 \prec 2$$

where index "in" is suction branch, "out" is pressure branch, and "calc" are the values calculated by the user

DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com
www.desmi.com

3. INSTALLATION

3.1 MOUNTING/FASTENING

The pump should be mounted and fastened on a solid base plate with a flat and horizontal surface to avoid distortion.

The pump must be installed with horizontal shaft and the pump casing discharge side vertically upwards.

The max. permissible loads on the flanges stated in paragraph 2.2 are to be observed.

When mounting a V-belt pulley on the pump a bore H7 is recommended. To facilitate the mounting the hub in the V-belt pulley may be heated to abt. 100 °C after which the V-belt pulley is easily lead over the shaft towards the shoulder. Alternatively, the V-belt pulley may be mounted with a TAPER LOCK bush.

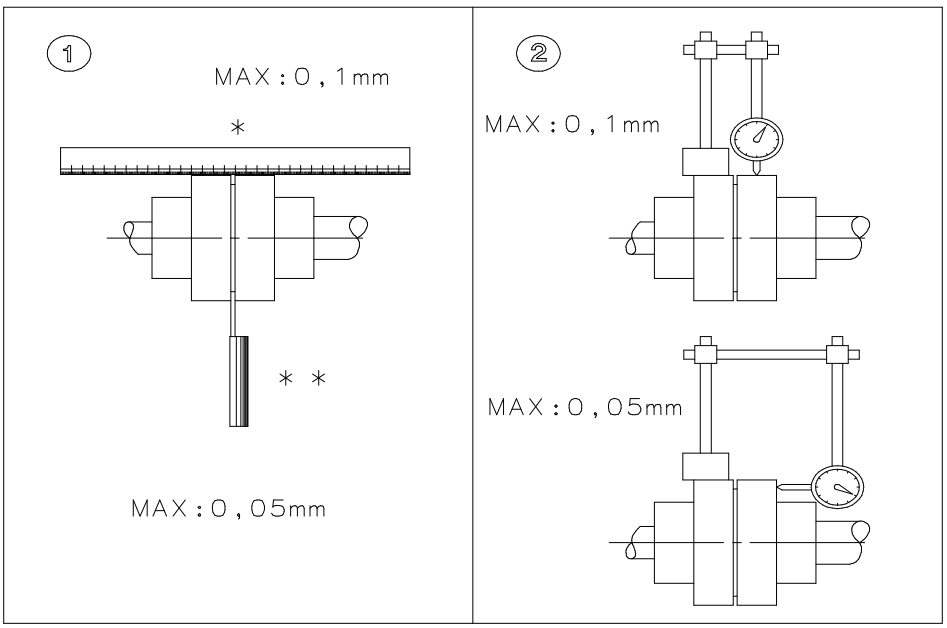
When dimensioning the V-belt pulley it is important to follow the rules of the DESMI nomograms for the pump size in question - contact DESMI.

Be careful when fitting the suction line to the pump so that it is absolutely tight, as even small leakages may impede the priming. When pumping polluted liquids a strainer is necessary. The strainer must be equipped with a sieve, the passage area of which is to be 3 x the area of the suction pipe. The mesh size is to be 1-3 mm smaller than the impeller gap of the pump in question.

If the pump is to be driven by a motor via a flexible coupling, motor and pump are to be placed on a common base plate. The following should be observed:

- Avoid distortion of the base plate.
- Avoid distortion in the piping system.
- Check that pump and motor are aligned correctly.

Below please find 2 proposals for alignment. The deviations mentioned cover a complete revolution of the coupling. The distance between the coupling halves is to be between 2 and 4 mm.



DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com www.desmi.com

At installations pumping hot or very cold liquids, the operator must be aware that it is dangerous to touch the pump surface, and, consequently, he must take the necessary safety measures.

When connecting the pump and a prime mover the power transmission is to be equipped with a guard in accordance with the provisions of the COUNCIL DIRECTIVE of June 14, 1989, on the safety of machines.

3.2 WIRING

Wiring to be carried out by authorized skilled workmen according to the rules and regulations in force.

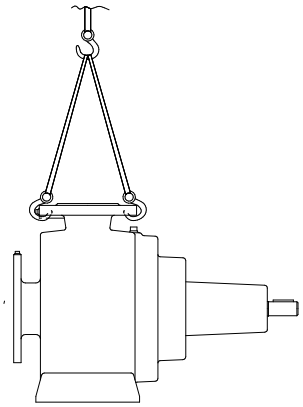
4. TRANSPORT/ STORAGE

The weights of the pumps (in A09 combination) are stated in the following table, and the pumps are to be lifted as shown.

Pump	Weight kg	Pump	Weight kg
S32-25-110N	21.5	S80-70-275N	86.0
S50-32-135N	22.0	S100-80-175N	79.0
S70-50-175N	42.0	S100-80-220N	92.5
S70-50-220N	58.0	S100-80-275N	107.0
S70-50-275N	72.0	S125-80-220N	116.0
S80-70-175N	53.0	S125-80-275N	122.0
S80-70-220N	59.0	S125-100-220N	138.0

The pump is to be stored in a dry area.
Before shipment the pump is to be fastened securely on pallets or the like.

The pump is to be lifted as shown here:



The lifting straps must not bear against sharp edges and corners.

5. DISMANTLING

5.1 ACCESS TO IMPELLER AND SHAFT SEAL
Remove Allen screws (22), which hold the shaft seal cover to the pump casing, and pull the bearing housing to remove the complete bearing housing with impeller, bearings, and shaft.

DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com
www.desmi.com

Only S32-25-110N and S50-32-135N:
Remove Allen screw (22) which holds the bearing housing to the pump casing and pull the bearing housing with impeller and guide vane piece out of the pump casing.
Then remove Allen screw (29) (only S32-25-110N), and guide vane piece and guide ring can be dismantled from the bearing housing.

5.2 DISMANTLING SHAFT SEAL
Remove nut (6). Pull off the impeller. Remove Allen screws (19), which hold the bearing housing to the shaft seal cover. Pull shaft seal cover and bearing housing apart, by which shaft seal and water deflector are pulled off the shaft.

Only S32-25-110N and S50-32-135N:
Unscrew impeller. Dismantle the oil seal ring (31) by puncturing the front to permit the oil seal ring to be pulled out with a hook. The oil seal ring cannot be used again. Dismantle the ring lock (30), and the shaft with bearings can be pulled out of the bearing housing. At the same time, the shaft seal and the water deflector are pulled off the shaft.

5.3 DISMANTLING SEAT
Press out the seat from behind the shaft seal cover (the bearing housing in S32-25-110N and S50-32-135N).

5.4 DISMANTLING SHAFT WITH BEARINGS
Before dismantling the shaft with bearings, remove the sunk key (16). The shaft can now be pulled out of the bearing housing allowing inspection of the bearings.

5.5 INSPECTION
When the pump has been dismantled, check the following parts for wear and damage:

- Sealing ring/impeller: Max. clearance 0.4-0.5 mm measured in radius.
  (There is no sealing ring in S32-25-110N and S50-32-135N)
- Shaft seal/shaft seal cover: Check the seat for flatness and cracks.
  Check the rubber parts for elasticity.
- Bearings: Replace in case of wear and noise.

- Non-return flap: Check for cracks and hardness

6. ASSEMBLING

6.1 FITTING SEALING RING IN PUMP CASING
When fitted, the sealing ring is to bear against the shoulder of the pump casing.

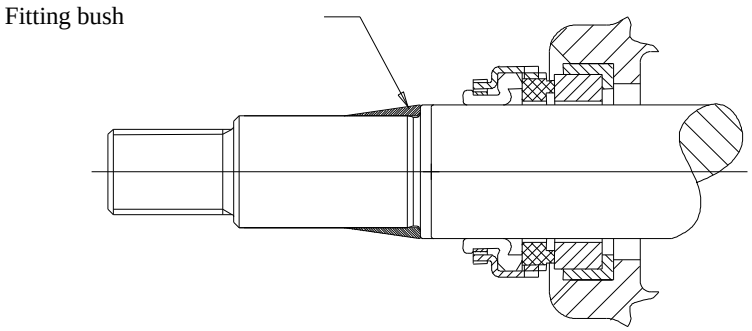
6.2 FITTING SHAFT WITH BEARINGS
Lead shaft with bearings into the bearing housing. Fit sunk key (16). (Fit ring lock (30) and a new oil seal ring (31) in S32-25-110N or S50-32-135N).

6.3 FITTING WATER DEFLECTOR
Assemble the bearing housing and the shaft seal cover. Lead the water deflector over the shaft until it touches the shaft seal cover and then further 1-1.5 mm into the shaft seal cover (the bearing housing in S32-25-110N or S50-32-135N).

DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com
www.desmi.com

6.4 FITTING SHAFT SEAL

Before fitting the seat, clean the recess in the shaft seal cover (bearing housing in S32-25-110N and S50-32-135N). When fitting the seat, remove the protective coating, if any, without scratching the lapped surface. Dip the outer rubber ring of the seat into soapy water. Now press the seat into place with the fingers and check that all parts are correctly imbedded. If it is necessary to use tools for assembling, then protect the sliding surface of the seat to prevent it from being scratched or cut. Lubricate the inner diameter of the slide ring rubber bellows with soapy water and push it over the shaft. The use of a fitting bush as shown on the below assembly drawing is recommended to avoid that the rubber bellows is cut. Push the slide ring over the shaft with the hand. If the rubber bellows is tight, use a fitting tool and take care that the slide ring is not damaged.



If the carbon ring is not fixed, it is important to check that it is fitted correctly, i.e. the chamfered/lapped side is to face the seat. The carbon ring can be held by a little grease.
When using oil on the shaft, the bellows will settle and seat in about 15 minutes, and until then tightness should not be expected. After start, check by viewing the leak hole that there are no leaks.

6.5 FITTING IMPELLER

Fit the sunk key in the shaft and lead the impeller towards the shoulder of the shaft. Take care that the ring at the end of the shaft seal spring locates in the recess of the impeller. Secure the impeller with a washer and a nut.

Only S32-25-110N and S50-32-135N:
Apply Loctite 243 or similar to the thread on the shaft. Screw the impeller towards the shoulder of the shaft. Take care that the ring at the end of the shaft seal spring locates in the recess of the impeller. Tighten the impeller with 60 Nm torque.

6.6 FITTING GUIDE RING AND GUIDE VANE PIECE (ONLY S32-25-110N)

Place the guide ring (35) in the recess of the bearing housing. Fit and fasten the guide vane piece on the guide ring. Note that the flat part of the inlet neck of the guide vane piece is to face upwards, i.e. opposite of the drain passage for the shaft seal in the bearing housing. If the shaft cannot rotate freely, dismantle the guide vane piece again, and place a shim (34) between bearing housing and guide ring.

6.7 FITTING BEARING HOUSING AND SHAFT SEAL COVER

Place the gasket between pump casing and shaft seal cover on the shaft seal cover where it can be held with a little grease. Lead bearing housing with shaft seal cover into place and fasten. Note that the drain hole for the shaft seal faces downwards.

DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com
www.desmi.com

S32-25-110N:
Place the gasket (21) between pump casing and bearing housing on the bearing housing. Check that the non-return flap is placed correctly in the pump casing. Lead the bearing housing into place and fasten. Note that the drain passage for the shaft seal faces downwards.

S50-32-135N:
Place the gasket (21) between pump casing and bearing housing on the bearing housing. Lead the bearing housing into place and fasten. Note that the drain passage for the shaft seal faces downwards. If the shaft cannot rotate freely, dismantle the bearing housing again, and place an extra gasket (21) between bearing housing and pump casing.

6.8 SHAFT
When the pump has been assembled, check that the shaft rotates freely.

7. FROST PROTECTION

Pumps which are not in operation during frost periods are to be drained to avoid frost damage. Remove the plug in the inlet cover to empty the pump. Alternatively, it is possible to use anti-freeze liquids in normal constructions.

8. DISMANTLING

Before dismantling the pump make sure that it has stopped. Empty the pump of liquid before it is dismantled from the piping system. If the pump has been pumping dangerous liquids you are to be aware of this and take the necessary safety measures. If the pump has been pumping hot liquids, take great care that it is drained before it is removed from the piping system.
If the pump has been pumping cold or very hot liquids, be aware that touching the pump surface is dangerous. Therefore, the necessary precautionary measures must be taken.

9. START-UP

A self-priming centrifugal pump will not function until the pump casing has been filled with liquid.

The liquid also serves as coolant for the shaft seal. In order to protect the shaft seal the pump must not run dry.

WARNING

For safety reasons the pump is only allowed to operate against closed discharge valve for a short time (max. 5 minutes and at a max. temperature of 80°C for standard pumps). Otherwise there is a risk of damage to the pump and, at worst, of a steam explosion. If the pump is not monitored, the installation of a safety device is recommended.
To protect the pump against unintentional operation it is equipped with a relief valve which opens at a preset pressure.
Be careful: When the valve opens, the escaping liquid will be hot.The relief valve must in **no** circumstances be removed or re-adjusted! As regards maintenance of the relief valve - see paragraph 11.

9.1 STARTING
Before starting the pump check that
- the shaft rotates freely without jarring sounds.
- the pump casing is filled with liquid.

Start the pump for a moment to check the direction of rotation. If the direction is correct (i.e. in the direction of the arrow), the pump may be started.

DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com
www.desmi.com

10. SYSTEM BALANCING

It is often difficult to calculate a manometric delivery head in advance. It is, however, decisively important to the quantity of liquid delivered. A considerably smaller delivery head than expected will increase the quantity of liquid delivered, causing increased power consumption and perhaps cavitation in pump and piping. In the pump the impeller may show signs of heavy erosion caused by cavitation (corrosion) which may at times render an impeller unfit for use in a very short time. Not unusually do similar erosions occur in pipe bends and valves elsewhere in the piping system.
Therefore, after start-up, it is necessary to check either the quantity of liquid delivered or the power consumption of the pump e.g. by measuring the current intensity of the connected electric motor. Together with a reading of the differential pressure the quantity of water delivered can be determined against the characteristics of the pump. Should the pump not function as intended, please proceed according to the fault-finding list. Bear in mind, though, that the pump was carefully checked and tested at the factory and that the majority of faults stem from the piping system.

FAULT	CAUSE	REMEDY
The pump does not Prime	1. The pump is not filled with liquid 2. Leaking non-return valve in pump 3. Wrong direction of rotation 4. Air is drawn in because of too little liquid or leaking suction line 5. Liquid lock in outlet line 6. Temperature of liquid too high 7. Air cannot escape on pressure side	Fill pump casing with liquid Remove foreign body in valve/Remove any coating on mating faces Change direction of rotation Lower suction pipe/ Tighten suction line Change the pressure line so that the air can pass out freely Replace liquid in pump casing/Wrong dimen-sioning/Contact DESMI Ventilate the system
The pump has no or too low capacity	1. Wrong direction of rotation 2. Piping system choked 3. The pump is choked 4. Suction line leaks Pump takes air 5. Suction lift too high 6. Pump and piping system wrongly dimensioned	Change direction of rotation to clockwise when viewed from shaft end (the direction of the arrow) Clean or replace Clean the pump Find the leakage/repair the fault, non-return valve not submerged Check data sheet Q/H curve and NPSH or contact DESMI As 5
FAULT	CAUSE	REMEDY

DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com
www.desmi.com

The pump uses too much power	1. Counter-pressure too low	Insert orifice plate or check valve/Contact DESMI
	2. The liquid is heavier than water	Contact DESMI
	3. Foreign body in pump	Dismantle the pump, remove the cause
	4. Electric motor is running on 2 phases	Check fuses, cable connection, and cable
The pump makes noise	1. Cavitation in pump	Suction lift too high/ Suction line wrongly dimensioned/Liquid temperature too high

11. INSPECTION AND MAINTENANCE

Inspect the shaft seal for leaks at regular intervals (leak through the hole in the lower part of the shaft seal cover)
Activate the relief valve at regular intervals in order to check the function. If the valve is choked, replace or clean it, if possible.

- Before inspection of a pump without guard check that the pump cannot be started unintentionally.

- The system is to be without pressure and drained of liquid.

- The repairman must be familiar with the type of liquid which has been pumped as well as the safety measures he is to take when handling the liquid.

11.1 DRAINING THE PUMP

When the piping system has been drained, note that there is still liquid in the pump. Remove the liquid by dismantling the pipe plug (75) in the inlet cover of the pump.

11.2 BEARINGS

The pump is equipped with ball bearings with a nominal life of 25,000 working hours when direct coupled to electric motor, whereas the nominal life with overhanging V-belt drive is about 10,000 working hours. The bearings are lubricated for life and require no attention but are to be replaced in case of noise or bearing wear.

12. REPAIRS

12.1 ORDERING SPARE PARTS

When ordering spare parts please always state pump type and pump No. (appears on the name plate of the pump). See also spare parts drawing with item Nos.

DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com
www.desmi.com

13. OPERATING DATA

The following working pressures are allowed:

Pump	S32-25-110N	S50-32-135N	S70-50-175N	S70-50-220N	S70-50-275N
PRESSURE mWC	45	45	65	100	150
Pump	S80-70-175N	S80-70-220N	S80-70-275N	S100-80-175N	S100-80-220N
PRESSURE mWC	65	100	160	65	100
Pump	S100-80-275N	S125-80-220N	S125-80-275N	S125-100-220N	
PRESSURE mWC	150	100	150	100	

(10.2 mWC = 1 bar)

The above-mentioned max. working pressure is **NOT** valid for pumps approved by a classification society. Pumps approved by classification societies have been pressure tested according to the requirements of these societies, i.e. a test pressure of 1.5 x the permissible working pressure. The test pressure is stated in the test certificate and stamped into the discharge flange of the pump.

The powers stated in the table below are the highest possible absorbed by the pump, whereas the min./max. values for flow and pressure indicate DESMI's recommended operating range for the pump with the biggest impeller.

Pump	Max. Power kw 1450/1750/-2950/3500 RPM	Min. Flow m3/h 1450/1750/-2950/3500 RPM	Max. Fflow m3/h 1450/1750/-2950/3500 RPM	Min. Pressure mVS 1450/1750/-2950/3500 RPM	Max. Pressure mVS 1450/1750/-2950/3500 RPM
S32-25-110N	0.2/0.3/0.9/1.4	2.5/3.0/4.5/5.5	6.0/7.0/12.0/13.5	1.7/2.8/8.0/12.5	3.6/5.3/15.0/21
S50-32-135N	0.3/0.5/2.1/3.5	4,0/4,5/8,0/9,0	11,0/13,5/23/27	3.0/4.2/12.0/17.0	6.0/8.7/25/35
S70-50-175N	0.8/1.2/6.0/10.0	8.0/10.0/17.5/20	20/24/45/53	5.6/8.4/19.0/27	9.2/13.5/38/53
S70-50-220N	1.6/2.7/12.3/20.5	8,0/9,0/15/20	24/27/45/55	5.5/9.5/31/40	14.2/21/63/86
S70-50-275N	3.5/6.0/22/35	10,0/12,0/14,0/16,0	26/32/32/38	16.0/21/88/123	24/34/103/143
S80-70-175N	1.1/1.8/8.3/13.5	16,0/17,5/30/35	39/48/80/95	4.6/6.0/16.5/23	8.7/12.5/36/50
S80-70-220N	2.4/4.2/18.5/31	15,5/18,5/30/35	43/53/80/95	9.5/13.0/42/59	15.5/22/64/90
S80-70-275N	4.4/7.4/32/53	15,0/18,0/30/35	40/50/80/95	16/22/67/94	25/36/103/143
S100-80-175N	1.6/2,8/12.5/21	30/35/60/70	70/85/150/170	4.6/6.2/15.0/24	8.3/12.2/34/48
S100-80-220N	3.5/6.1/27/47	28/37/58/80	85/97/170/190	7.0/9.2/31/48	14,6/21/60/82
S100-80-275N	6.8/12.0/55/92	35/40/70/80	85/100/160/180	13.5/19.5/60/90	23/33/93/130
S125-80-220N	4.5/8.0/36.5/61	60/65/100/120	135/150/240/250	5.3/10.0/30/54	12.4/19.0/55/77
S125-80-275N	8.5/15.0/70/118	50/60/100/120	120/145/220/260	14.0/19.8/62/88	24/34/94/131
S125-100-220N	5.4/9.5/46/74	70/85/140/140	170/200/300/320	6.7/10.2/34/54	12.2/17.8/51/73

DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com
www.desmi.com

14. EC DECLARATION OF CONFORMITY

DESMI PUMPING TECHNOLOGY A/S, hereby declare that our pumps of the type Modular S-N are manufactured in conformity with the following essential safety and health requirements in the COUNCIL DIRECTIVE 2006/42/EC on machines, Annex 1.

The following harmonized standards have been used:

EN/ISO 13857:2019	Safety of machinery. Safety distances to prevent danger zones being reached by the upper limbs
EN 809:1998 + A1:2009	Pumps and pump units for liquids – Common safety requirements
EN12162:2001+A1:2009	Liquid pumps – Safety requirements – Procedure for hydrostatic testing
EN 60204-1:2006/A1:2018	Safety of machinery – Electrical equipment of machines (item 4, General requirements)

Pumps delivered by us connected with prime movers are CE-marked and comply with the above requirements.

Pumps delivered by us without prime movers (as partly completed machinery) must only be used when the prime mover and the connection between prime mover and pump comply with the above requirements.

Nørresundby, September 20 2024

Henrik Mørkholt Sørensen
Managing Director

DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby

DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com
www.desmi.com

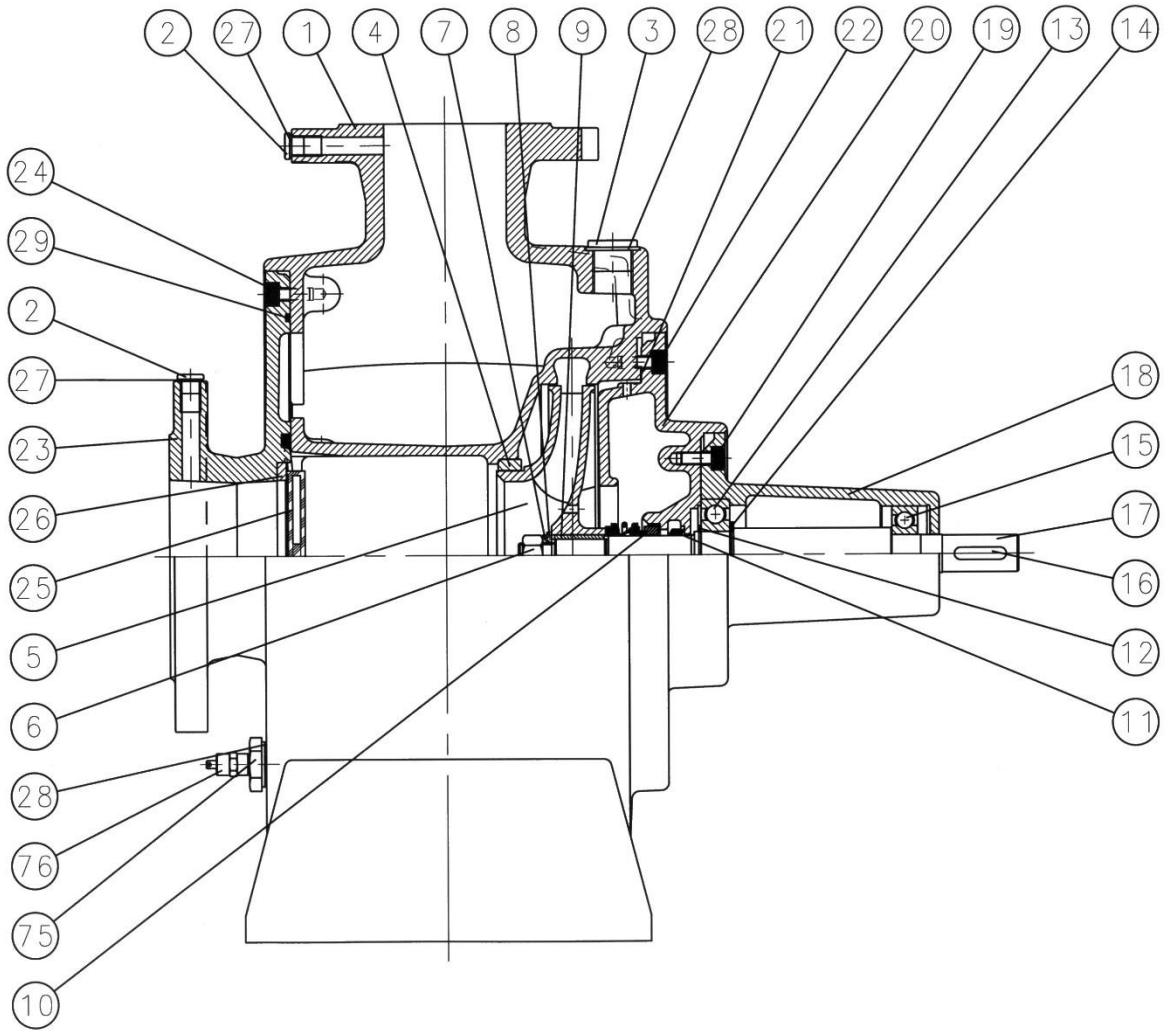
15. INFORMATION RELEVANT FOR DISASSEMBLY OR DISPOSAL AT END-OF-LIFE

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.

DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com
www.desmi.com

16. ASSEMBLY DRAWINGS

For all pump sizes except S32-25-110N and S50-32-135N (shown on next pages).



17. SPARE PARTS LISTS

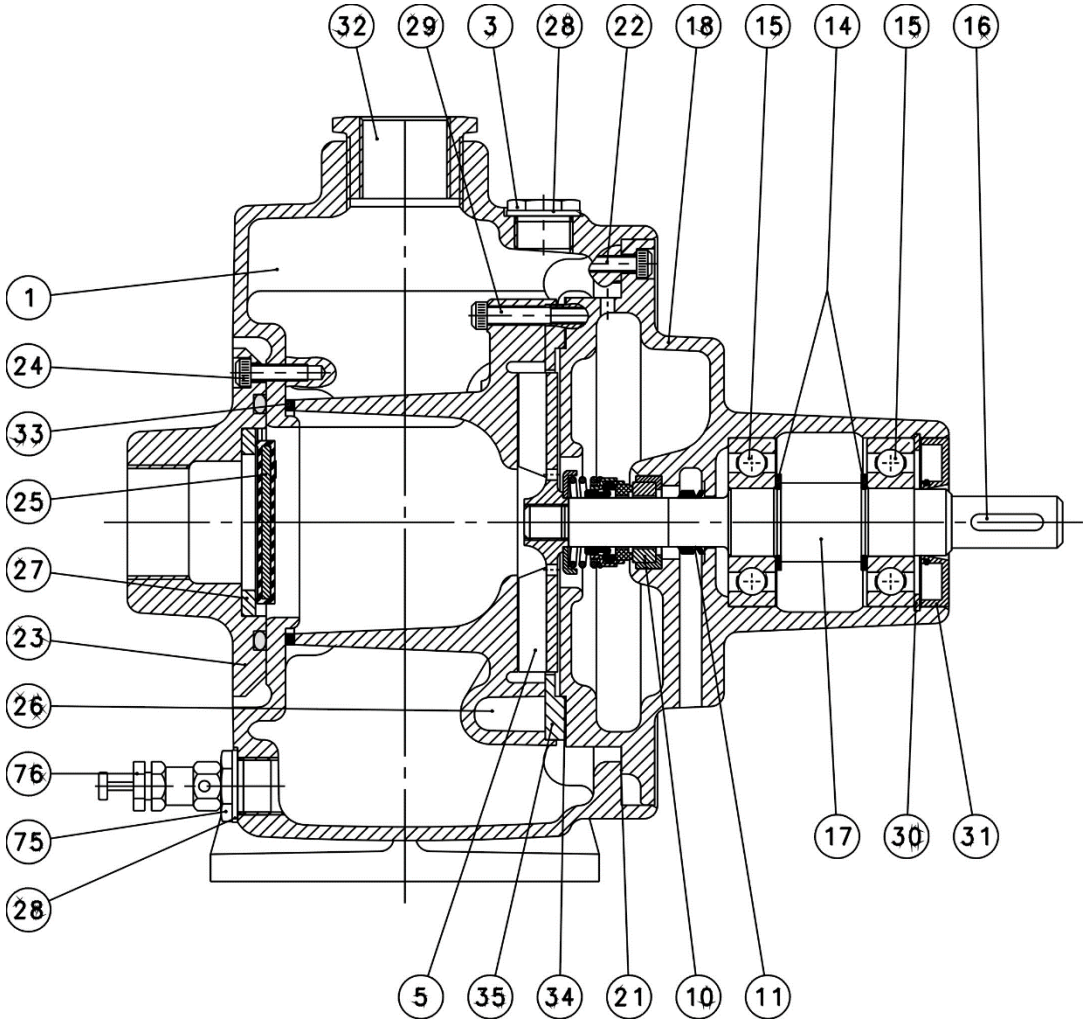
For all pump sizes except S32-25-110N and S50-32-135N (shown on next pages).

1	Pump casing	11	Water deflector	21	Gasket
2	Pipe plug	12	Ring lock	22	Allen screw
3	Pipe plug	13	Ball bearing	23	Suction piece
4	Sealing ring	14	Support disc	24	Allen screw
5	Impeller	15	Ball bearing	25	Non-return flap
6	Nut	16	Sunk key	26	Contact ring
7	Spring collar	17	Shaft	27	Gasket
8	Washer	18	Bearing housing	28	Gasket
9	Sunk key	19	Allen screw	29	O-ring
10	Mechanical shaft seal	20	Shaft seal cover	75	Drain plug
				76	Relief valve

DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com
www.desmi.com

ASSEMBLY DRAWING S32-25-110N

Assembly drawing of S50-32-135N is shown on the next page.



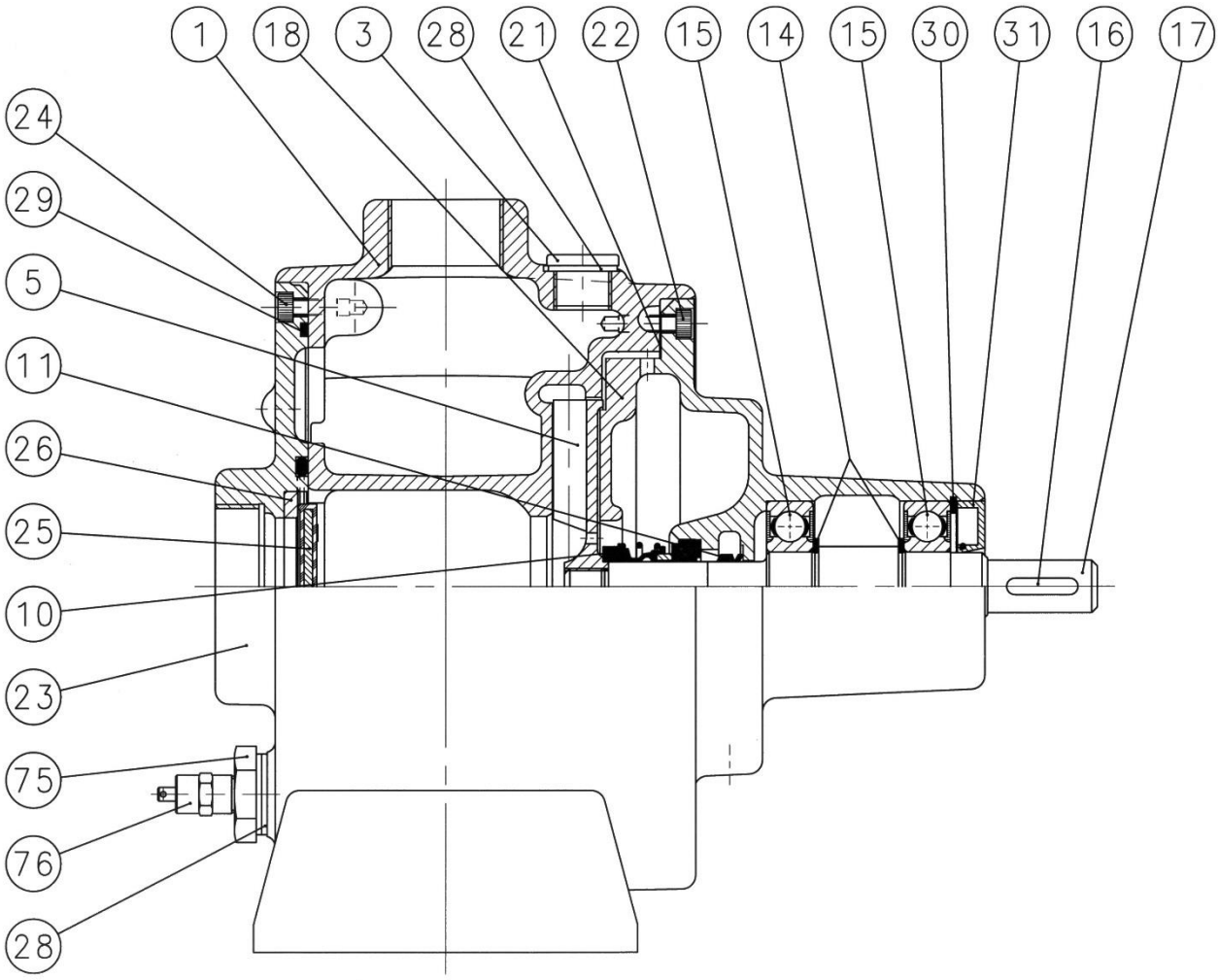
SPARE PARTS LIST S32-25-110N

Spare parts list for S50-32-135N is shown on the next page.

1 Pump casing	18 Bearing housing	29 Allen screw
3 Pipe plug	21 Gasket	30 Ring lock
5 Impeller	22 Allen screw	31 Oil seal ring
10 Mech. shaft seal	23 Suction piece	32 Reducing bush
11 Water deflector	24 Allen screw	33 Gasket
14 Support disc	25 Non-return flap	34 Shim
15 Ball bearing	26 Guide vane piece	35 Guide ring
16 Sunk key	27 Contact ring	75 Drain plug
17 Shaft	28 Sealing washer	76 Relief valve

DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com
www.desmi.com

ASSEMBLY DRAWING S50-32-135N

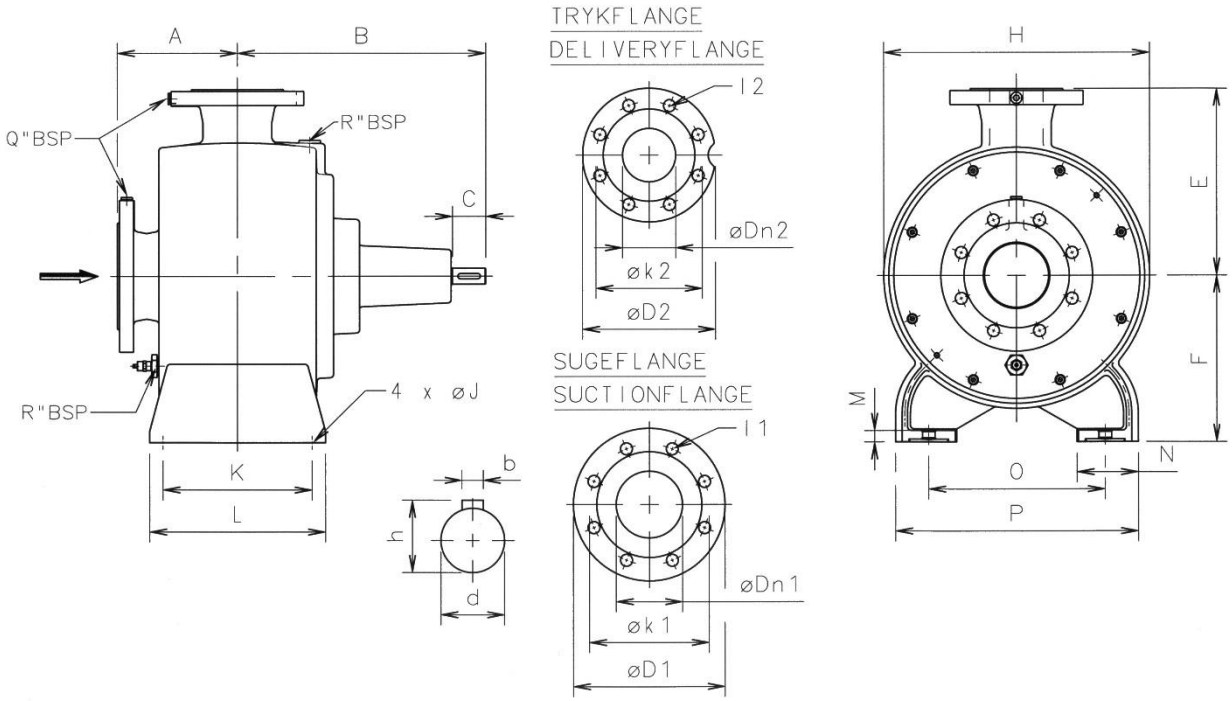


SPARE PARTS LIST S50-32-135N

1	Pump casing	16	Sunk key	25	Non-return flap
3	Pipe plug	17	Shaft	26	Contact ring
5	Impeller	18	Bearing housing	28	Sealing washer
10	Mech. shaft seal	21	Gasket	29	O-ring
11	Water deflector	22	Allen screw	30	Ring lock
14	Support disc	23	Suction piece	31	Oil seal ring
15	Ball bearing	24	Allen screw	75	Drain plug
				76	Relief valve

DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com
www.desmi.com

18. DIMENSIONAL SKETCH



See also table on the next page

Type	A	B	C	H	E	F	d	h	b	J	K	L	M	N
S32-25-110N	100	237	40	234	155	132	19j6	21,5	6	12	110	140	10	56
S50-32-135N	84	237	40	234	140	132	19j6	21,5	6	12	110	140	10	56
S70-50-175N	125	355	50	270	180	160	24j6	27	8	15	145	175	10	55
S70-50-220N	134,5	352	50	330	220	190	24j6	27	8	15	170	200	12	68
S70-50-275N	140	350	50	390	240	225	24j6	27	8	19	170	210	12	75
S80-70-175N	150,5	363	50	295	200	180	24j6	27	8	15	190	220	13	69
S80-70-220N	155	365	50	330	220	190	24j6	27	8	15	190	220	12	70
S80-70-275N	150	360	50	390	250	225	24j6	27	8	19	170	210	12	75
S100-80-175N	175,5	374	50	344	240	200	24j6	27	8	15	220	270	13	72
S100-80-220N	180	376	50	400	280	250	24j6	27	8	19	225	265	15	90
S100-80-275N	180	465	80	425	280	250	32j6	35	10	19	225	265	14	90
S125-80-220N	204	480	80	424	280	250	32j6	35	10	19	260	300	16	95
S125-80-275N	202	480	80	454	300	260	32j6	35	10	19	260	300	14	90
S125-100-220N	235	500	80	476	315	280	32j6	35	10	19	330	370	16	105

DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com
www.desmi.com

Type	O	P	D1	K1	Dn1	l1	D2	k2	Dn2	L2	Q	R
S32-25-110N	160	230	—	—	1¼" BSP	—	—	...	1" BSP	—	...	1/2" BSP
S50-32-135N	160	230	—	—	2" BSP	—	—	-	1¼" BSP	."	-	1/2" BSP
S70-50-175N	190	250	185	145	70	4x18	165	125	50	4x18	1/4" BSP	1/2" BSP
S70-50-220N	230	300	185	145	70	4x18	165	125	50	4x18	1/4" BSP	1/2" BSP
S70-50-275N	280	360	185	145	70	4x18	165	125	50	4x18	1/4" BSP	1/2" BSP
S80-70-175N	200	273	200	160	80	8x18	185	145	70	4x18	1/4" BSP	3/4" BSP
S80-70-220N	230	305	200	160	80	8x18	185	145	70	4x18	1/4" BSP	3/4" BSP
S80-70-275N	280	360	200	160	80	8x18	185	145	70	4x18	1/4" BSP	3/4" BSP
S100-80-175N	230	319	220	180	100	8x18	200	160	80	8x18	1/4" BSP	3/4" BSP
S100-80-220N	265	365	220	180	100	8x18	200	160	80	8x18	1/4" BSP	3/4" BSP
S100-80-275N	280	380	220	180	100	8x18	200	160	80	8x18	1/4" BSP	3/4" BSP
S125-80-220N	280	382	250	210	125	8x18	200	160	80	8x18	1/4" BSP	3/4" BSP
S125-80-275N	320	414	250	210	125	8x18	200	160	80	8x18	1/4" BSP	3/4" BSP
S125-100-220N	320	445	250	210	125	8x18	220	180	100	8x18	1/4" BSP	3/4" BSP

DESMI Pumping Technology A/S
Tagholm 1
9400 Nørresundby – Dänemark
Tlf. nr.: +45 96 32 81 11
Fax +45 98 17 54 99
E-mail: desmi@desmi.com
www.desmi.com