

# End Suction Pumps

For Industrial and Marine Applications





DanPumps S-DSP



## End Suction Pumps for Industrial and Marine Applications

SonFlow has expanded its range with a number of new DanPumps pumps ideal for industrial and marine applications. The energy-efficient pumps are designed for clean or slightly contaminated low viscosity liquids without solid and fibrous particles.

The industrial and marine pumps are available in 5 different variants with connections from DN32 to DN600 mm.

The pumps fit perfectly together with our plate heat exchangers.

### Energy-efficient total solution

SonFlow offers a complete range of highly powerful pumps, which combined with our plate heat exchangers can be delivered as a complete total solution.

When calculating a total solution, we consider all aspects for both the pump and plate heat exchanger, to ensure ideal pressure drop and flow rate - the solution becomes energy-efficient and environmentally friendly.

# End Suction Closed Coupled Pumps

DanPumps S-ECP (DN 32 - DN 150 mm)



## Application

- Water supply
- District heating
- HVAC
- Food and Beverage
- Maritime industry
- Building systems

The DanPumps S-ECP pump, standardised to EN 733, is designed for clean or slightly contaminated low viscosity liquids without solid and fibrous particles.

The pump is a single-stage, end suction centrifugal pump with closed impeller and rigidly-coupled. The pump can be used for a wide range of applications in industry and marine.

The compact rigidly coupled design makes the pump lighter and smaller compared to other norm centrifugal pumps of the same hydraulic specifications.

### Technical data

Discharge Flange	DN 32 - DN 150 mm
Capacity	up to 600 m <sup>3</sup> /h*
Head	up to 100 m*
Speed	up to 3000 rpm
Design Temperature	-10° C to +140° C**
Casing Pressure (Pmax***)	10 bar (16 bar)**

\* Contact company for higher capacity and head values.

\*\* The Material of pump diaphragms according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

\*\*\* Pmax: Suction Pressure + Shut off Head

### Design Features:

- Volute casing dimensions comply with EN 733.
- Complies EU547/2012 regulations.
- Suction and discharge flanges conform to EN 1092-2/PN 16. The flanges are according to EN 1092-1/PN 16 for steel or stainless steel casing. If requested, ANSI/ASME flanges can be supplied.
- The pumps can be manufactured in different materials: AISI316, bronze, cast iron, duplex, etc.
- The pumps are rigidly coupled with electric motors of IEC frame sizes with high efficiency class.
- All impellers are balanced dynamically or statically according to ISO 1940 grade 6.3.
- Axial thrust is balanced by an impeller balancing holes system.
- The direction of rotation is clockwise viewed from drive end.
- If requested, a wear ring and/or shaft sleeve can be supplied.
- The pump and motor have separate shafts connected by a rigid coupling or through a slide fit shaft. Axial and radial forces are absorbed by electric motor bearings.
- When the pump is installed vertically, the elbow is mounted on the suction of the pump and the name is changed to S-ECP-V.

### Shaft Sealing

- The standard shaft seal is a mechanical Carbon/Silicon carbide with EPDM.
- Different seal variants are available depending on customer requests and liquid types.

# End Suction Norm Pumps

DanPumps S-ENP (DN 32 - DN 150 mm)



## Application

- Water supply
- District heating
- HVAC
- Chemical
- Mining
- Food and Beverage
- Maritime industry
- Building systems
- Fire Extinguishing

The DanPumps S-ENP pump, standardised to EN 733, is designed for clean or slightly contaminated low viscosity liquids without solid and fibrous particles.

The horizontal single stage end suction centrifugal pump has closed impeller and radially split volute. The pump is a large heavy duty pump with high flow and high pressure capabilities, which can be used for a wide range of applications in industry and marine.

Due to the back-pull-out design, the complete bearing assembly, including impeller and casing cover, can be dismantled without removing the volute casing from the piping system. Take out the rotor group without dismantling the electric motor, with spacer coupling application.

### Technical data

Discharge Flange	DN 32 - DN 150 mm
Capacity	up to 600 m <sup>3</sup> /h*
Head	up to 100 m*
Speed	up to 3000 rpm
Design Temperature	-10° C to +140° C**
Casing Pressure (Pmax***)	10 bar (16 bar)**

\* Contact company for higher capacity and head values.

\*\* The Material of pump diers according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

\*\*\* Pmax: Suction Pressure + Shut off Head

### Design Features:

- Dimensionally complies with EN 733.
- Complies EU547/2012 regulations.
- In addition to 29 basic sizes conforming with EN 733, there are 9 additional sizes. Dimensions of additional sizes may differ from other suppliers.
- S-ENP 40-315, 50-315, 65-315, 80-315, 100-315, 125-250 pumps are given with 3000 rpm only for fire fighting applications.
- Suction and discharge flanges conform to EN 1092-2/PN 16. (EN 1092-1/PN16 for steel or stainless steel casing). If requested, ANSI/ASME flanges can be supplied.
- The pumps can be manufactured in different materials: AISI316, bronze, cast iron, duplex, etc.
- All impellers are balanced dynamically or statically according to ISO 1940 grade 6.3.
- Axial thrust is balanced by impeller balancing holes system.
- The direction of rotation is clockwise viewed from drive end. If requested, a wear ring and/or shaft sleeve can be supplied.
- Bearings of S-ENP pumps are normally "lifetime grease-lubricated" ball bearings. If requested, oil lubrication or re-greasable bearing can be supplied.

### Shaft Sealing

- The standard shaft seal is a mechanical Carbon/Silicon carbide with EPDM.
- Different seal variants are available depending on customer requests and liquid types.

# End Suction Norm Pumps

DanPumps S-ELP (DN 150 - DN 250 mm)



## Application

- Water supply
- District heating
- HVAC
- Chemical
- Mining
- Food and Beverage
- Maritime industry
- Building systems

The DanPumps S-ELP pump, standardised to EN 1092, is designed for clean or slightly contaminated low viscosity liquids without solid and fibrous particles.

The horizontal single stage end suction centrifugal pump has closed impeller and radially split volute. The pump is a large heavy duty pump with high flow and high pressure capabilities, which can be used for a wide range of applications in industry and marine.

Due to the back-pull-out design, the complete bearing assembly, including impeller and casing cover, can be dismantled without removing the volute casing from the piping system. Take out the rotor group without dismantling the electric motor, with spacer coupling application.

### Design Features:

- Suction and discharge flanges conform to EN 1092-2/PN 16. (EN 1092-1/PN 16 for steel or stainless steel casing)
- The pumps can be manufactured in different materials: AISI316, bronze, cast iron, duplex, etc.
- All impellers are balanced dynamically or statically according to ISO 1940 class 6.3.
- Axial thrust is balanced by impeller balancing holes system.
- Direction of rotation is clockwise viewed from drive end.
- Bearings of S-ELP type pumps are normally "life time grease lubricated" ball bearings, except S-ELP 200-500 and S-ELP 250-500 pumps, which are always oil lubricated.

### Shaft Sealing

- The standard shaft seal is a mechanical Carbon/Silicon carbide with EPDM.
- Different seal variants are available depending on customer requests and liquid types.

### Technical data

Discharge Flange	DN 150 - DN 250 mm
Capacity	up to 1500 m <sup>3</sup> /h
Head	up to 100 m
Speed	up to 1500 rpm
Design Temperature	-10° C to +140° C*
Casing Pressure (Pmax <sup>***</sup> )	10 bar (16 bar)*

\* The Material of pumps differ according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

\*\* Pmax: Suction Pressure + Shut off Head



S-ENP & S-ELP with bottom plate, coupling and motor.

# End Suction Multistage Pumps

DanPumps S-EMP (DN 40 - DN 150 mm)



## Application

- Water supply
- District heating
- HVAC
- Chemical
- Mining
- Food and Beverage
- Building systems

The DanPumps S-EMP pump is designed for clean or slightly contaminated low viscosity liquids without solid and fibrous particles.

The horizontal multistage end suction centrifugal pumps with closed impellers and diffusers can be used for a wide range of applications in industry and marine.

The DanPumps S-EMP is a very robust pump, capable of high pressures. The pump is installed with bearings in the pump head, which remove strain from the motor during operation.

### Technical data

Discharge Flange	DN 40 - DN 150 mm
Capacity	up to 400 m <sup>3</sup> /h
Head	up to 450 m
Speed	up to 3000 rpm
Design Temperature	-10° C to +140° C*
Casing Pressure (Pmax <sup>***</sup> )	30 bar (63 bar) <sup>†</sup>

\* The Material of pumps dier according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

\*\* Pmax: Suction Pressure + Shut off Head

### Design Features:

- 7 Models from DN 40 up to DN 150 discharge flange diameter.
- Suction nozzle flanges conform to EN 1092-2/PN 16 and discharge nozzle flanges conform to EN 1092-2/PN 40 (PN 63) (For steel or stainless steel casing pumps, flanges conform to related pressure class ratings defined in EN 1092-1).
- Discharge flange is on top for standard production, upon request different discharge flange positions can be applied.
- The pumps can be manufactured in different materials: AISI316, bronze, cast iron, duplex, etc.
- All impellers are balanced dynamically or statically according to ISO 1940 class 6.3.
- Axial thrust is balanced by impeller balancing holes system.
- The direction of rotation is always counterclockwise viewed from drive end. That is why these pumps can not be accoupled directly with diesel engines.
- Bearings of S-EMP type pumps are grease lubricated. Journal bearing used in the suction side is lubricated by the pumping liquid.

### Shaft Sealing

- The standard shaft seal is a mechanical Carbon/Silicon carbide with EPDM.
- Different seal variants are available depending on customer requests and liquid types.

# Double Suction Pumps

DanPumps S-DSP (DN 65 - DN 600 mm)



## Application

- Water supply
- District heating
- HVAC
- Chemical
- Mining
- Food and Beverage
- Maritime industry
- Building systems

The DanPumps S-DSP pump is designed for clean or slightly contaminated low viscosity liquids without solid and fibrous particles.

The single stage, double suction centrifugal pump can be used for a wide range of applications in industry and marine, and is available in both a horizontal and vertical design.

The pump has a high flow rate, due to the double suction impeller design. The casing is split into two chambers, which increases the suction performance and balances the hydraulic axial forces. And also increases the bearing life and improves reliability.

### Technical data

Discharge Flange	DN 65 - DN 600 mm
Capacity	up to 6000 m <sup>3</sup> /h
Head	up to 180 m
Speed	up to 2900 rpm
Design Temperature	-10° C to +110° C*
Casing Pressure (Pmax <sup>***</sup> )	16 - 25 bar <sup>†</sup>

\* The Material of pumps dier according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

\*\* Pmax: Suction Pressure + Shut off Head

### Design Features:

- Suction and discharge flanges are on the same axis on the bottom casing. Split case design permits easy disassembly of the rotor group for maintenance or repair without distorting pump alignment and suction/discharge piping.
- Suction and discharge flanges are conform to EN 1092-2/PN 16 or PN 25. (EN 1092-1/PN 16 or PN 25 for steel or stainless steel casing).
- The pumps can be manufactured in different materials: AISI316, bronze, cast iron, duplex, etc.
- All impellers are balanced dynamically or statically according to ISO 1940 class 6.3.
- In standard construction, the direction of rotation is clockwise when it is looked from drive end. In this case, suction flange is on right and discharge flange is on left. Upon request, the direction of rotation can be reversed. This time the position of the suction and discharge flanges are also reversed.
- Grease lubricated ball bearings are used in horizontal installation. In case of vertical installation, pumping liquid lubricated journal bearings on top and grease lubricated ball bearings on bottom are used.

### Shaft Sealing

- The standard shaft seal is a mechanical Carbon/Silicon carbide with EPDM.
- Different seal variants are available depending on customer requests and liquid types.