

CombiSump

Sump pump



SOUTHERN PUMPS
SOUTH AFRICA (PTY) LTD

CombiSump

Centrifugal sump pump

CombiSump is the sump pump solution for thin liquids. The pump is part of Johnson Pump's Combi-system, a modular programme of single stage centrifugal pumps with a high degree of interchangeability of parts between the different pump constructions.

The CombiSump is a range of centrifugal sump pumps, with the pump casing submerged into the liquid and a dry motor construction.

The hydraulic parts of these submersible pumps consist of the pump casings and impellers of our CombiChem and CombiNorm pumps, its hydraulic field meeting ISO 2858/DIN 24256 and DIN 24255.

Special executions meeting API 610 standards are optional to above standard executions.

The pump is driven by a customer specified or standard IEC flange electric motor 'V1' placed on a lantern piece mounted on the base plate. The power is transmitted through a flexible coupling and an intermediate shaft.

The pump casings' pressure flange is connected to a discharge connection on the base plate.



CombiSump



Benefits

- Available in several materials
- High pump efficiency
- Suited for a wide span of duties
- Easy maintenance
- Compact, space saving construction
- Low maintenance cost

From know-how to finding solutions

■ General industry

CombiSump pumps can be used for all kinds of sump duties. Another known application is pumping cooling water when river or lake water is used.



■ Petrochemical industry

CombiSump pumps are often used for draining waste water collecting basins. Typical process duties are e.g. drain pump or hydrocarbon condensate.



■ Off Shore

In Off Shore industries CombiSump pumps are used for several duties where it is desirable to have a “dry” motor construction.



Dry part

Features and



Electric motor

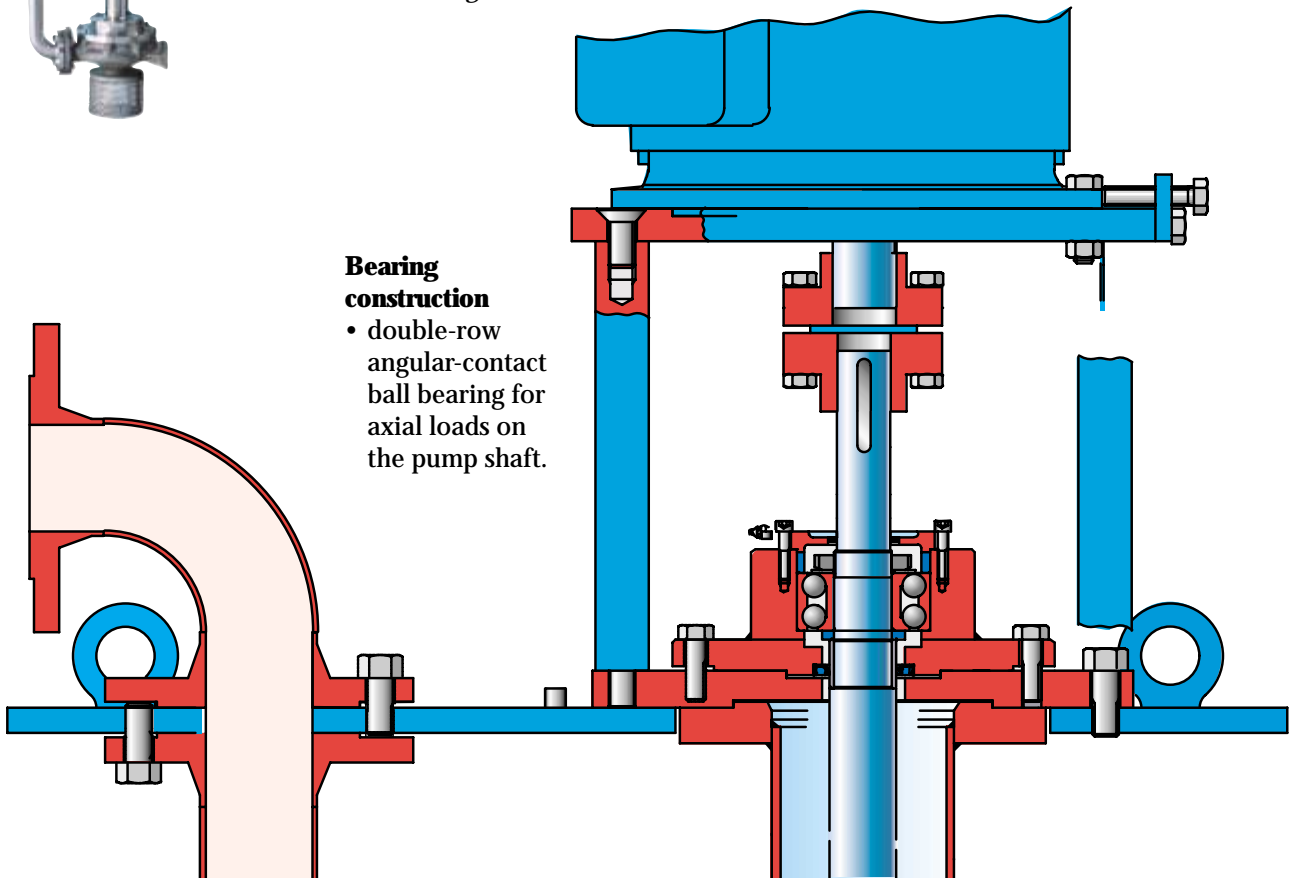
- mounted on a flange resting on supporting rods or lantern piece
- accurate alignment by means of adjusting bolts
- *customer specified or standard IEC flange motor 'V1'*

Coupling

- standard fitted with elastic coupling
- *optionally available with membrane coupling*

Bearing construction

- double-row angular-contact ball bearing for axial loads on the pump shaft.



Delivery connection

- placed on the baseplate
- flanges according to ISO 7005 PN 16
- flanges according to ANSI B16.5 150 lbs
- *horizontal or vertical position possible*

Baseplate

- standard version is a rectangular plate
- round flange shaped plate is also possible
- *can be adapted to the size of the pit according to customer specifications*

benefits

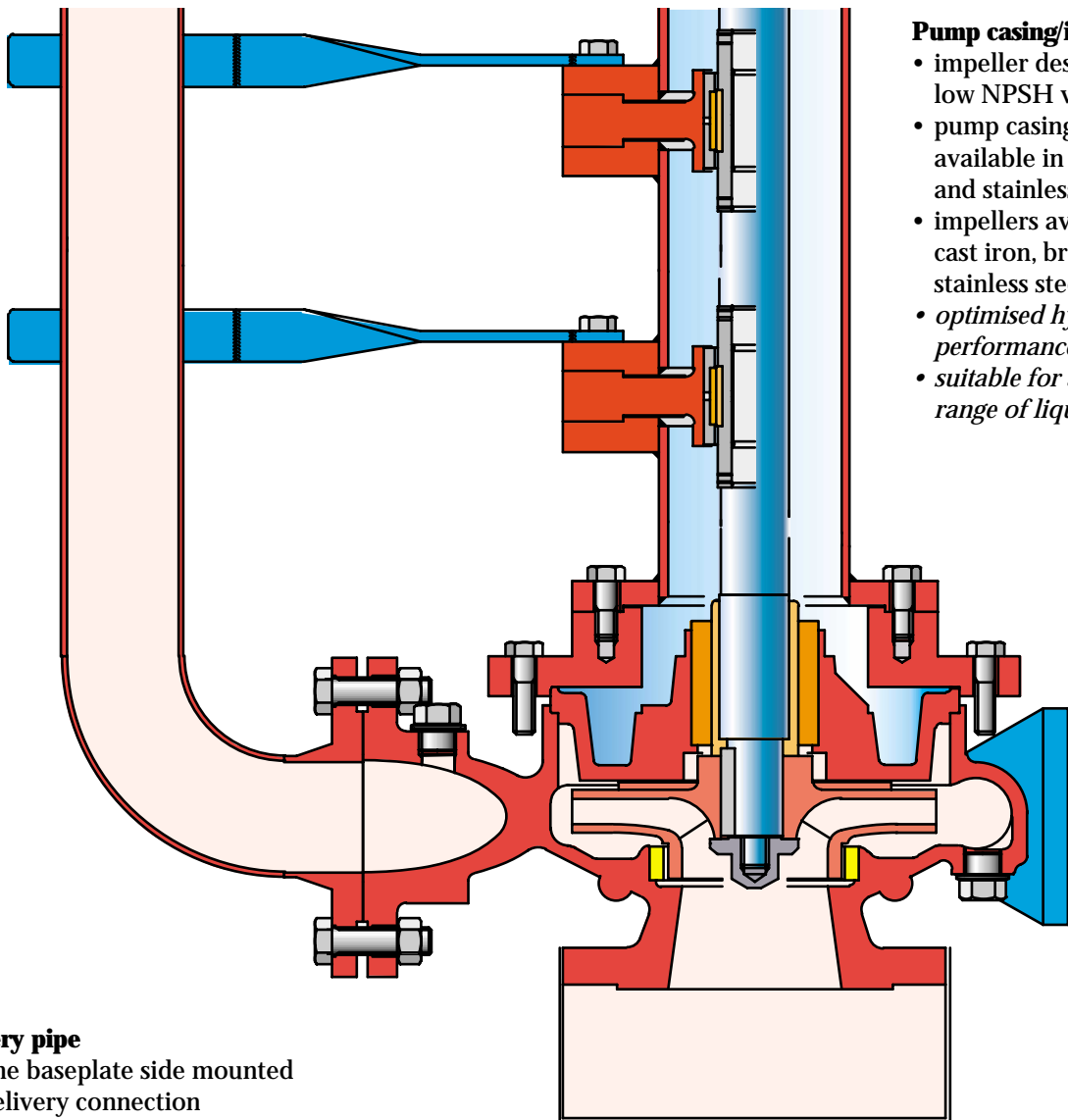
Submersible part

Column pipe

- situated below the baseplate
- consisting of one or more parts
- connects the pump casing with the baseplate
- *protects the shaft*
- *supports the intermediate bearings if applicable*
- *sump depth according to customer specification*

Slide bearings

- pump shaft provided with slide bearings
- number depending on the sump depth of the pump shaft
- *can be provided with grease- or liquid lubrication*



Pump casing/impeller

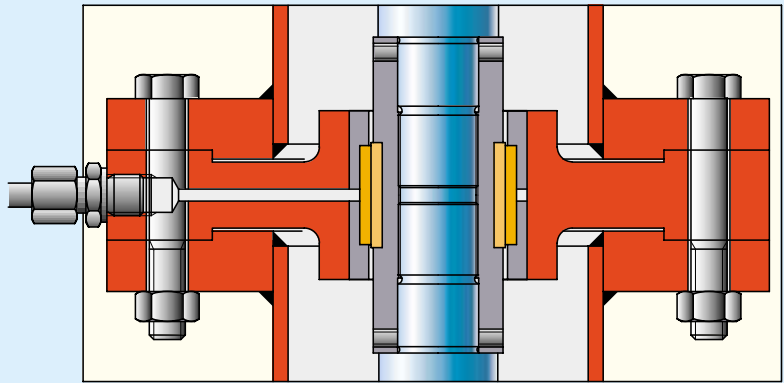
- impeller design for low NPSH values
- pump casings available in cast iron and stainless steel
- impellers available in cast iron, bronze and stainless steel
- *optimised hydraulic performance*
- *suitable for a wide range of liquids*

Delivery pipe

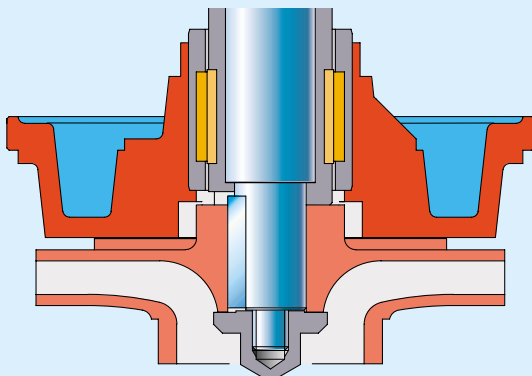
- on the baseplate side mounted to delivery connection
- mounted to delivery flange of the pump casing by means of bend

Bearing

- In the part below the baseplate (the 'wet' part) the pump shaft is provided with slide bearings.
- The number of slide bearings depends on the length of the pump shaft and the rotating speed.
- The slide bearings can be provided with grease- or liquid lubrication.

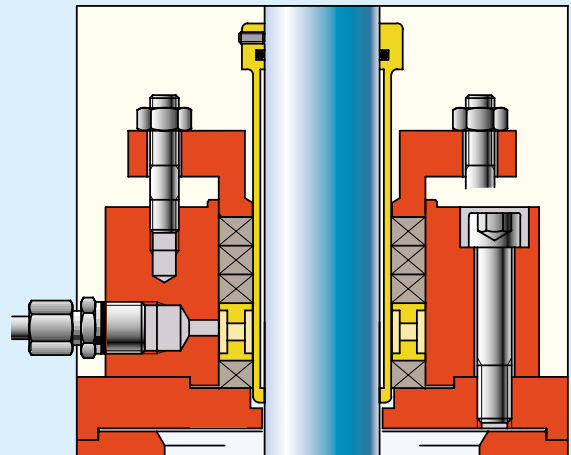
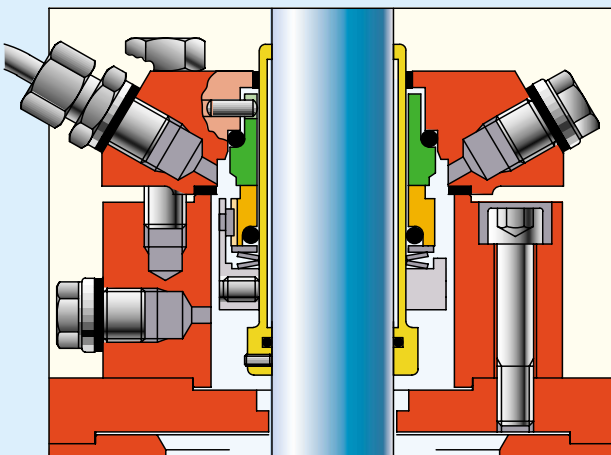
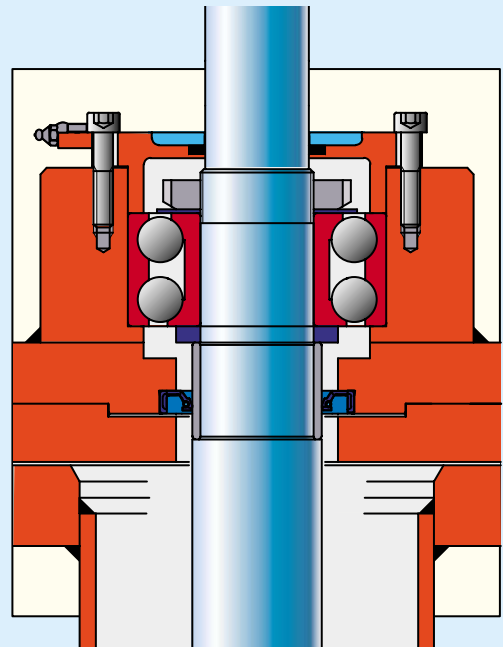


- The part above the baseplate (the 'dry' part) is provided with a double-row angular-contact ball bearing for the pump shaft.



Shaft sealing

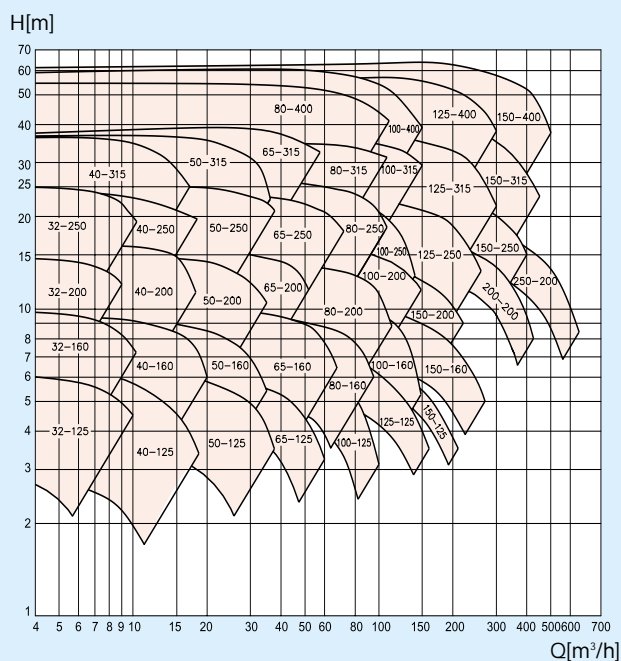
- At the location of the shaft passage the baseplate is provided with a shaft sealing. Standard this is an oil baffle.
- A mechanical seal or gland packing is also possible, for example to prevent harmful odours from emerging into the atmosphere.



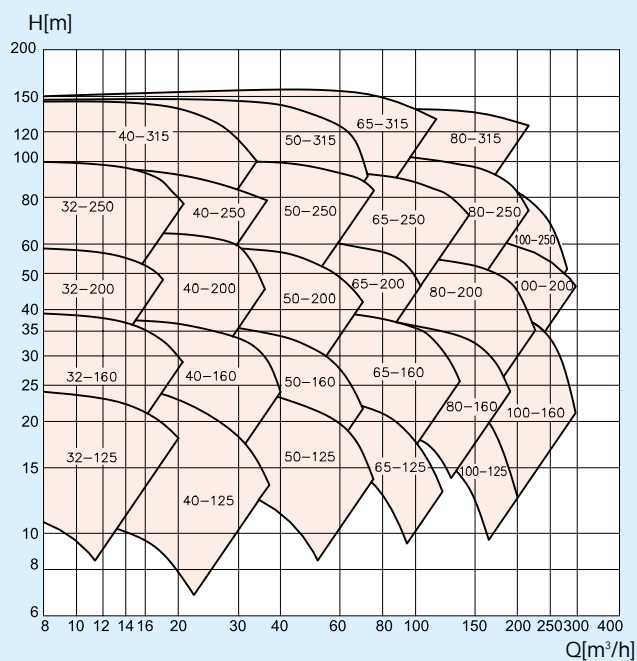
Technical data

Max. capacity	800 m ³ /h
Max. head	160 m
Max. working pressure	16 bar
Max. temperature	160 °C
Max. speed	3600 rpm

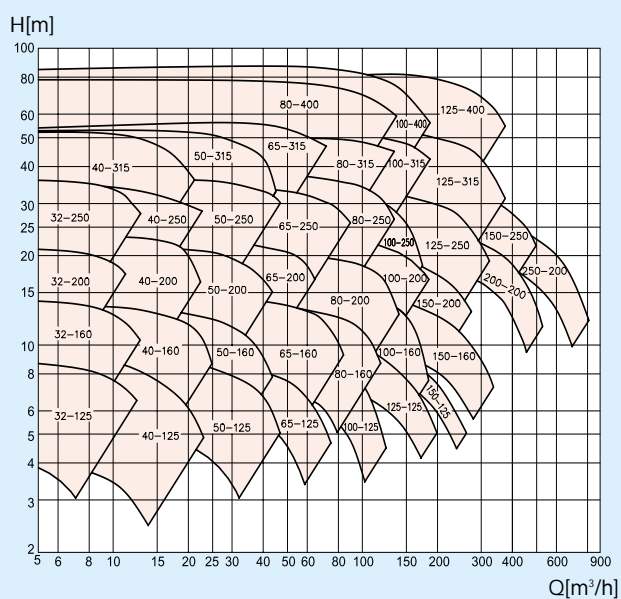
Performance overview



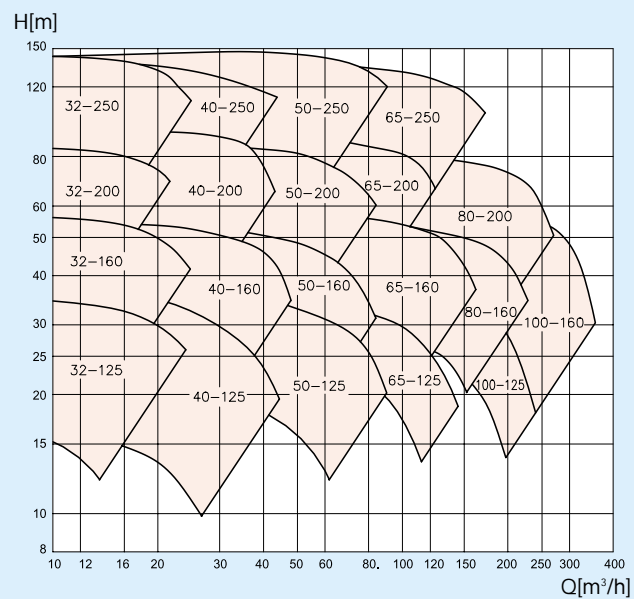
1500 rpm



3000 rpm



1800 rpm



3600 rpm

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