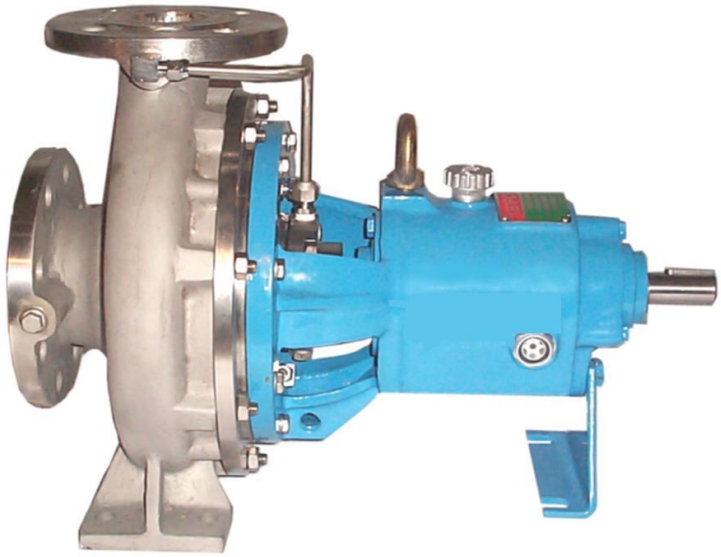
ISO KCC

Centrifugal Process Pump

To ISO 5199 / ISO 2858



Application

The ISO KCC centrifugal pump is suitable for handling water, seawater, chemicals, petroleum products, mainly used in the following applications:

- Chemical and Petrochemical Industries
- Refineries
- Paper Industry
- Sugar Industry
- Waste Water Treatment
- Pharmaceutical industry

Designation

ISO KCC 80 x 50 - 250

- Pump type
- Suction Flange diameter mm
- Discharge flange diameter mm
- Nominal impeller diameter mm

Design

- Horizontal, single stage, end suction centrifugal pump, complying with the requirements of ISO 5199.

- Back pull out design allows for easy maintenance.

- Fitted with high quality mechanical seal.

Operating Data

Pump sizes, mm		**25 to 300**
Flow, m3/h	up to	1,800
Head, m	up to	160
Temperature, °C	up to	175
Speed, rpm	up to	3600
Pressure, kPa	up to	2400

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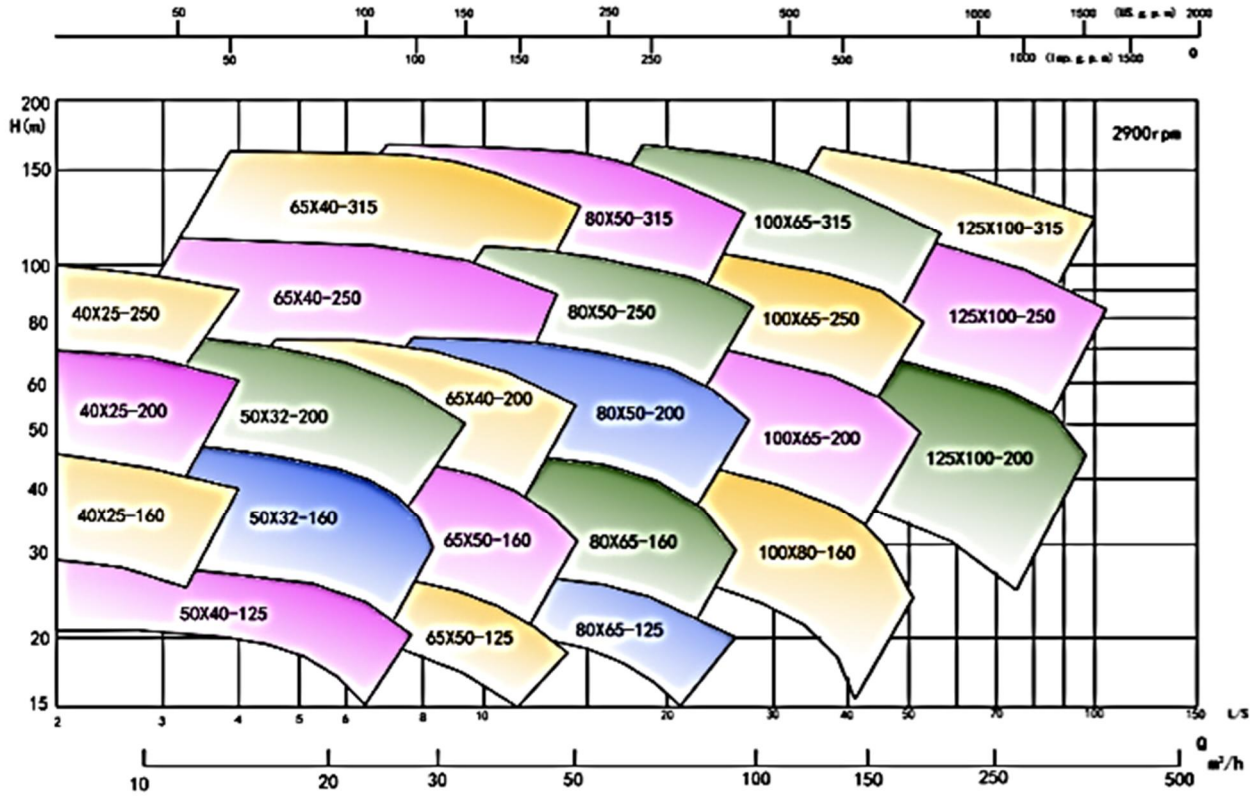
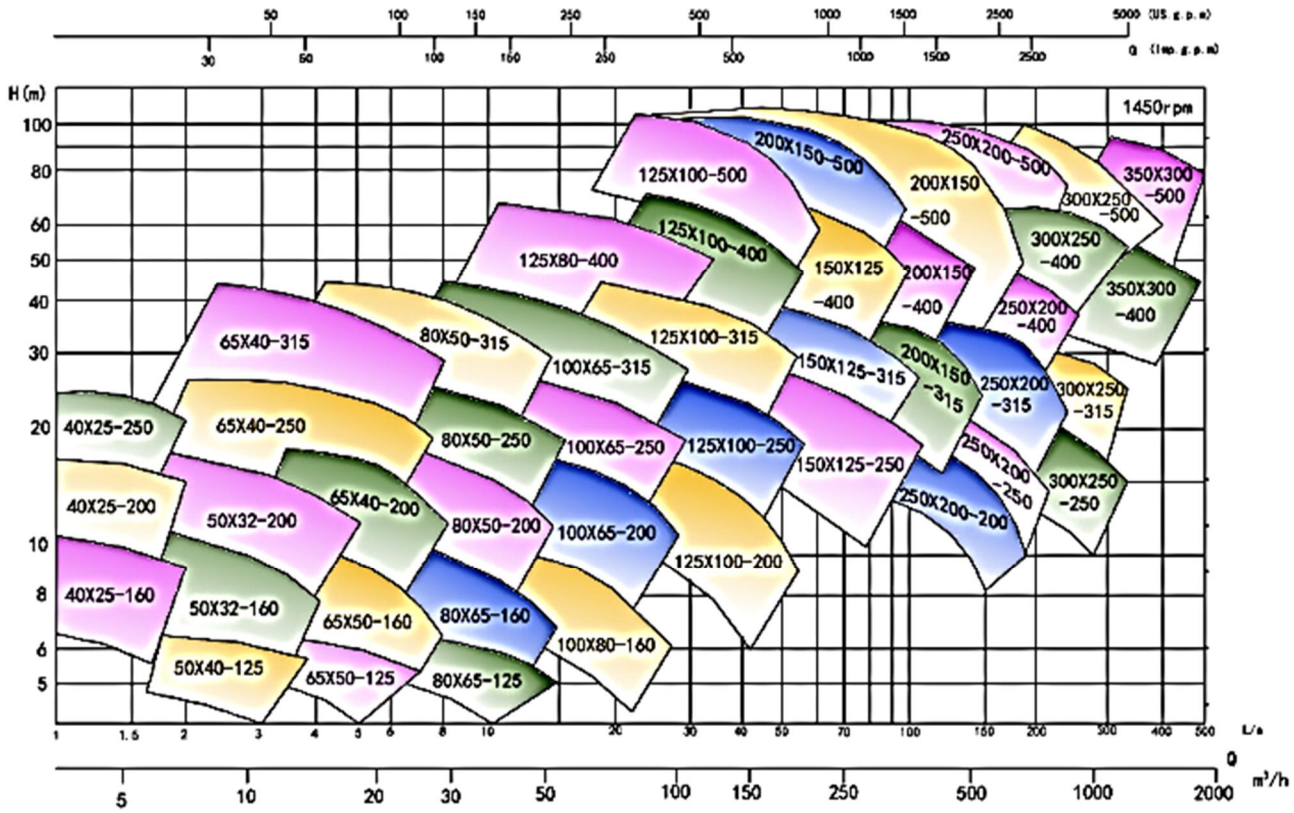
Selection Chart





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Construction

Horizontal single stage volute pumps with radial split casing and back pull out design to ISO2585. ISO KCC pumps are in compliance to international standard ISO 5199. The back pull out design allows for pump maintenance without disturbing the pipework connected to the casing and pump alignment.

Flanges
Pump flanges are to standards AS/NZS 4331.2, ISO 7005.2 16 bar as standard. Other flanges (including ANSI Flanges) are available. Gauge tapping provided on both suction and discharge flanges.

Impellers
The impeller and shaft are fitted with taper and o-ring, which not only increases the strength of the shaft but also prevent the shaft from contacting the liquid being pumped. Stainless Steel impellers are fitted as standard.

Casing
All pump casings are radially split, self-venting and offered as standard in 2 materials: Ductile Cast Iron or Duplex Stainless Steel.

Shaft
420 stainless steel and duplex stainless steel shafts are standard.

Bearings
Cylindrical roller bearing at the impeller end (non-drive end), two angular contact ball bearings at the drive end.

Shaft Seal
The shaft sealing is by single or double acting mechanical seal. Standard seal materials are: ceramic stationary face and carbon rotating face, nitrile elastomers, 304 stainless steel metal parts. The standard seal elastomer is suitable for water application from minus 20°C to 95°C.
Other mechanical seals are available on request for different liquids, higher temperature and suction pressure, and slightly contaminated liquids. Cyclone separator can also be fitted.
Gland packing is also available on request.

Accessories

Drive
The pump is normally direct driven via a flexible spacer coupling. Where belt drives are required a separate jack shaft with bearings may be necessary to accommodate the belt loads.

Pump Selection

For pump selection, the performance curves should be used. The curves are based on water at 15°C and SG of 1.0.

NPSHR values are indicated on the performance curves. At least 1m should be added as a safety margin.

Motor power should exceed the absorbed power at the pump duty point, with the following margin of power:

Absorbed power at duty point [kW]	Recommended motor power margin
Up to 9	Approx. 20%
9 - 39	Approx. 15%
Above 39	Approx. 10%

Pump Material Combination Options

Part	Ductile Cast Iron	Duplex Stainless Steel
Description	**Code C**	**Code D**
Casing	Ductile Cast Iron	Duplex SS
Impeller	304 Stainless Steel	Duplex SS
Shaft	420 Stainless Steel	Duplex SS

No bronze or brass parts are used in pump construction.

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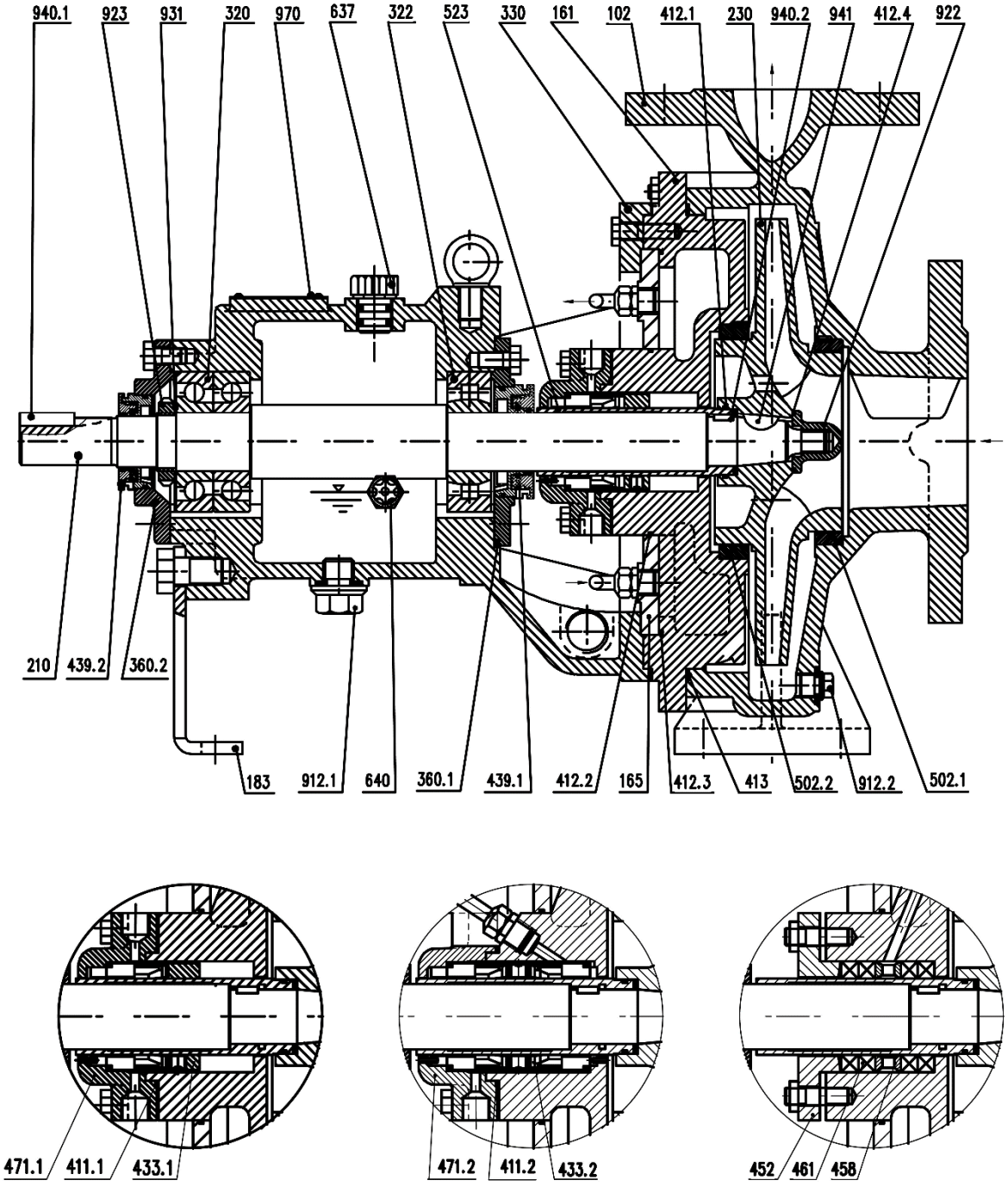
Parts List and Material Identification



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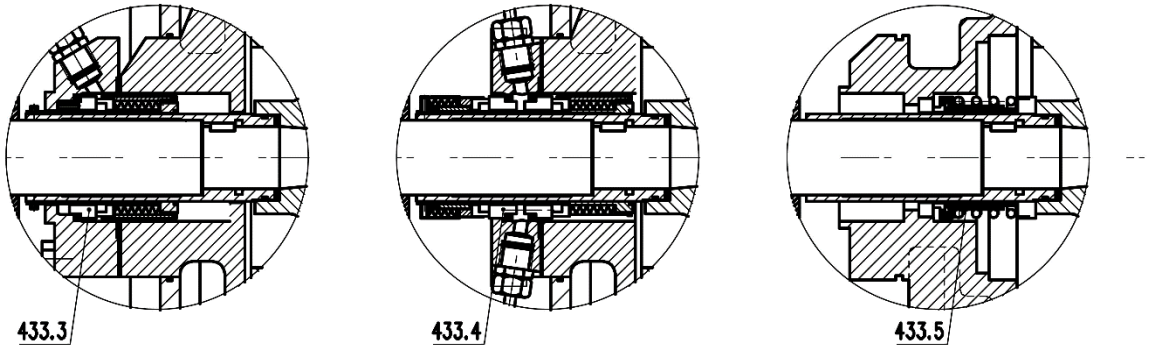

Spare part code	Spare part name	Spare part code	Spare part name	Spare part code	Spare part name
102	Pump casing	413	Wound gasket	*638	Constant level oil cup
161	Casing cover	415	Expanded PTFE joint sealant	640	Oil indicator
*165	Cooling chamber Cover	433.1 433.2	Single and double mechanical seal	912.1 912.2	Hexagonal plug screw
183	Support foot	433.3 433.4	Single and double cartridge mechanical seal	922	Impeller nut
210	Shaft	433.5	T 2100 mechanical seal	923	Round nut
230	Impeller	452	Packing gland	931	Tab washer
320	Angular contact ball bearing	458	Lantern ring	940.1	Key
322	Cylindrical roller bearing	461	Packing	940.2	Key
330	Bearing housing	471	Mechanical seal cover	941	Woodruff keys
360.1 360.2	Bearing cover	502.1 502.2	Wearing ring	970	Nameplate
411	Gasket	523.1 523.2	Shaft sleeve of mechanical seal		
412.1-412.4	O-ring	637	Oil cover		

* optional

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For a copy of ISO KCC Operating Manual please contact AFH

Head Office:

Factory 1, 25 – 27 Burns Road, Altona, Victoria 3018

NSW / QLD Office:
Phone: +61 4 48 209 714
Fax: +61 3 9369 6233
Email: nswsales@afhpl.com.au

VIC / SA Office:
Phone: +61 3 9369 6200
Fax: +61 3 9369 6233
Email: salesvic@afhpl.com.au

WA / NT Office:
Phone: +61 8 9494 1675
Fax: +61 3 9369 6233
Email: wasales@afhpl.com.au

Website:
www.afhpl.com.au

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