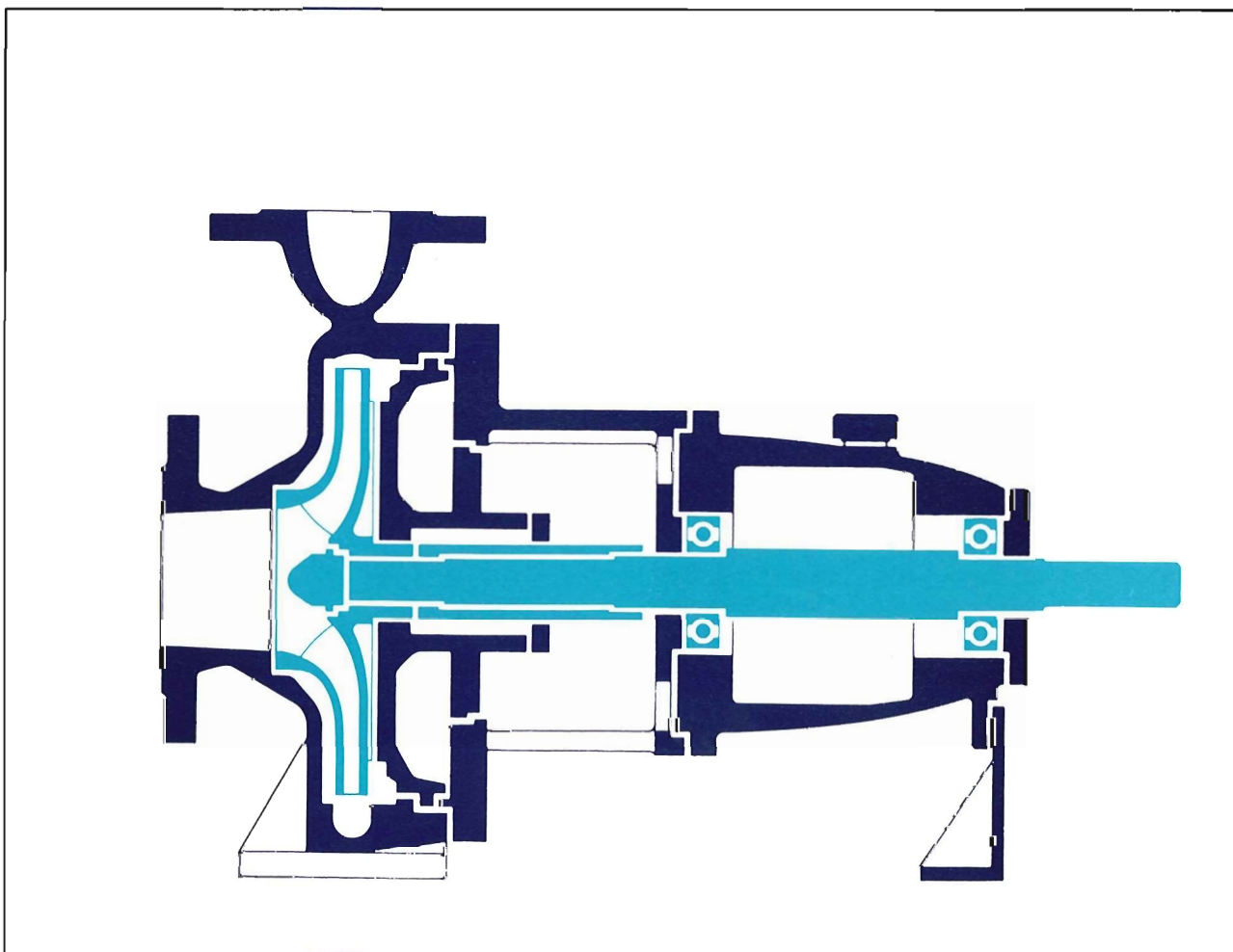


CPC

acc. to ISO2858

Chemical Process Pumps

Capacities	up to 26m ³ /min
Total heads	up to 220m
Temperatures	-100 to + 300 (350)°C
Pump discharge pressures	up to 16(25) bar
Sizes	DN. 32 to 250 mm



TORISHIMA PUMP

CPC have been developed as per ISO2858/DIN24256, specially to meet the requirements of the chemical and petrochemical industries, and are used to handle products employed in organic and inorganic chemistry.

The process type of pump, which has become thoroughly well established in the oil refining industry, and has proved its worth, has been adopted for the CPC pump design. The complete rotating assembly can be withdrawn without breaking any connections between the pump casing and the piping. If a spacer type flexible coupling is used, the motor does not have to be removed from the baseplate. This avoids any re-alignment of the pump after re-assembly (often a time wasting procedure).

The meccano-system which has proved successful in a variety of TORISHIMA pumps has been adopted once again for our CPC models. A carefully graded selection chart ensures that any operational requirement will be met with a very high efficiency and favourable NPSH-value.

All these pumps sizes are bolted onto a bearing housing comprising only 5 different sizes over the entire range, and this means that the shafts, shaft sleeves, the bearings and the bearing housings are identical and interchangeable for a large number of pumps sizes. Since the dimensions remain the same for each pump size, regardless of the construction material used, this results in a high degree of application, should the operating conditions or nature of the liquids pumped change, together with a minimum requirement of individual spare parts.

Pumps of the CPC-I type series, which are fitted with an inducer, are suited for low NPSH and standardized.

Design

Horizontal, single-stage.

Casing

One-piece volute casings, open towards the discharge end, with integral cast feet, end suction nozzle and top discharge nozzle pointing upwards. Center support also available. The suction nozzles are two sizes larger than the discharge nozzles, up to I.D. 80mm, and one size larger for pump sizes from I.D. 80mm upwards.

Heating jacket at discharge end or cooling possible.

Impeller

Closed radial impeller, hydraulically balanced by back vanes, which also relieve the pressure on the stuffing box almost entirely.

The impeller nut is provided with a threaded insert, which prevents any loosening of the nut. The impeller is sealed against the shaft by flat gasket.

Open impeller is also available on request. (CPC-O).

Shaft Seals

Soft-packed stuffing box with connections for sealing and flushing fluid. The stuffing box can be cooled for high temperature operation. Torishima mechanical seal as well as mechanical seals of various manufactures can be fitted. When single acting mechanical seals are used, the packed stuffing box can be replaced by a mechanical seal without any machining or adjustment to the stuffing box housing.

Shaft and Bearings

Standard bearing housing with a strong shaft (5 sizes for the whole series), oil-lubricated antifriction bearings.

Materials

CPC-C Chrome-Nickel Molybdenum Cast Steel, standard SCS14, 18Cr-12Ni-Mo, only max. 0,08%C

CPC-B Bronze, standard BC2

CPC-G Cast iron FC250

CPC-S Ductile iron, FCD400

CPC-E Unalloyed cast steel

CPC-D Ni-resist

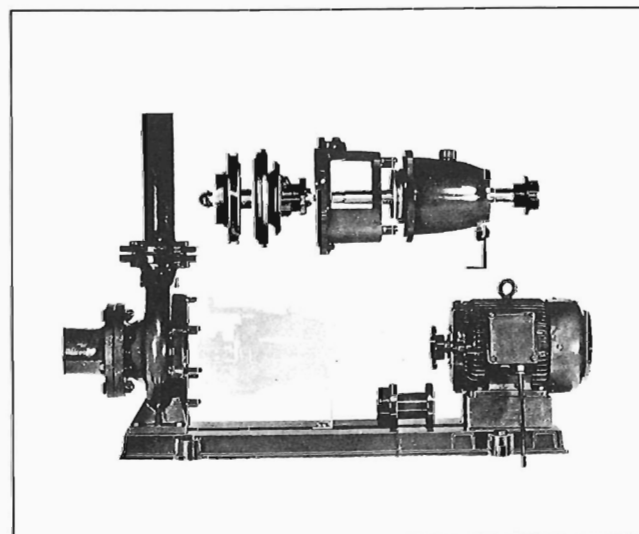
CPC-U Rubber lining

CPC-C and CPC-G pumps are available from stock, with very short deliveries.

Special constructions of other types of alloyed cast steel than those listed above. In certain sizes, chrome cast steel pump can also be supplied.

In order to select the most suitable materials we require a precise analysis of the liquid pumped, including concentration, specific gravity, temperature, and an indication of any foreign substances present.

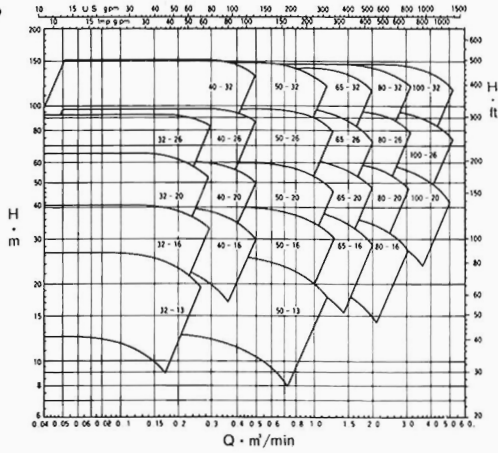
The volute casing, impeller, stuffing box housing and shaft sleeve are made from the materials listed above, whereas the bearing bracket lantern and the bearing housing are always of cast iron, and the pump shaft is of carbon steel. For applications involving very aggressive liquids, bearing bracket lantern can be made of the same material as the parts in contact with the liquid pumped.



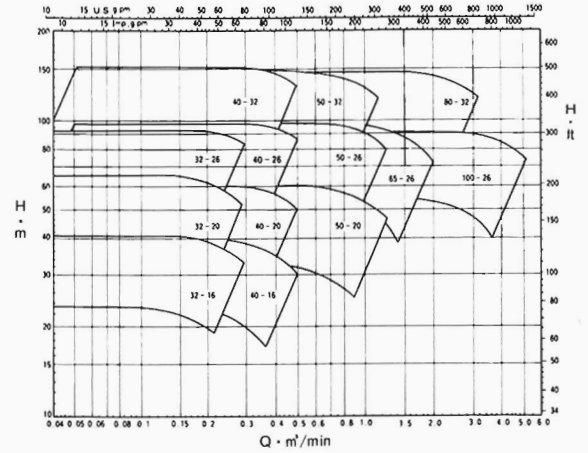
Selection Charts

For Standard, Y, HB, HS and HD types

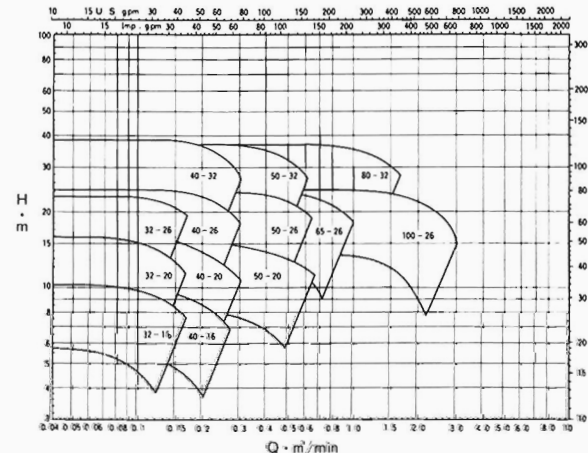
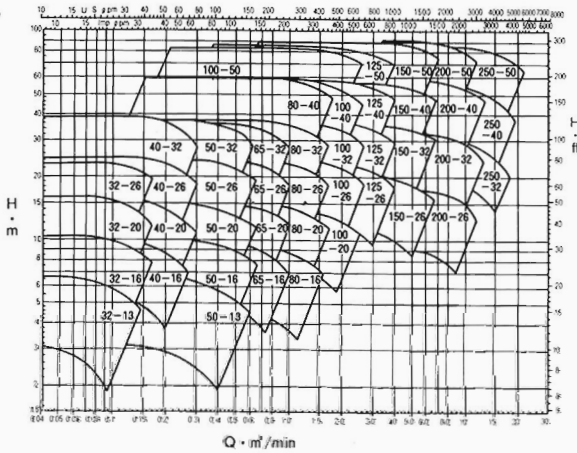
50Hz 2P



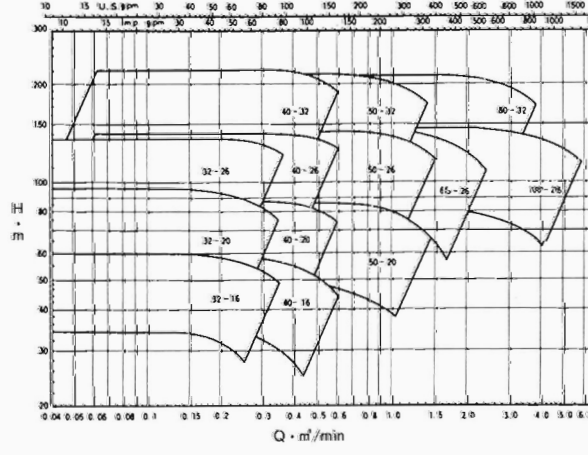
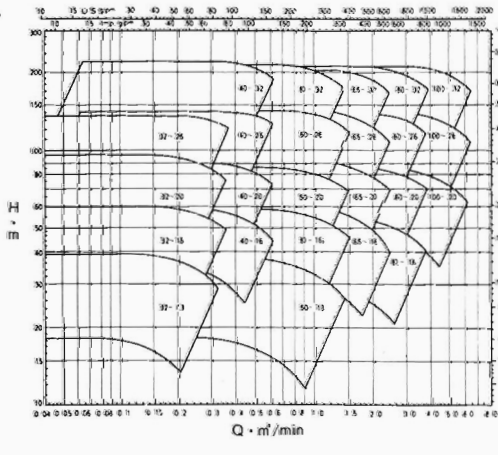
For O type (Open impeller)



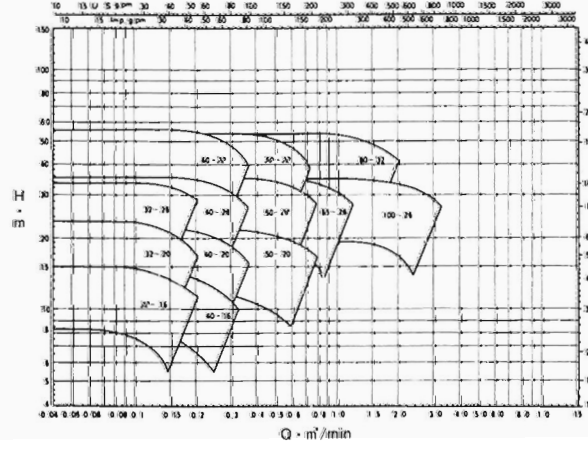
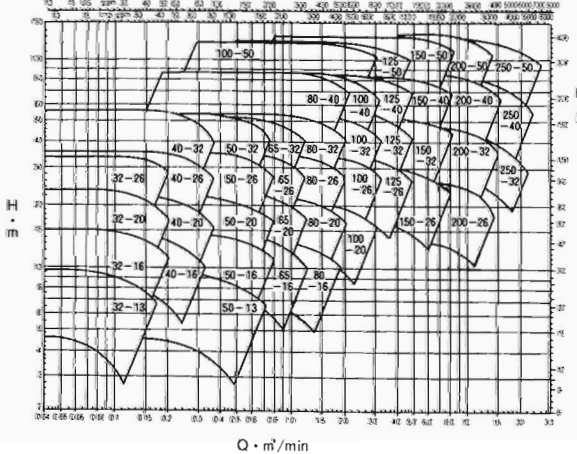
50Hz 4P



60Hz 2P

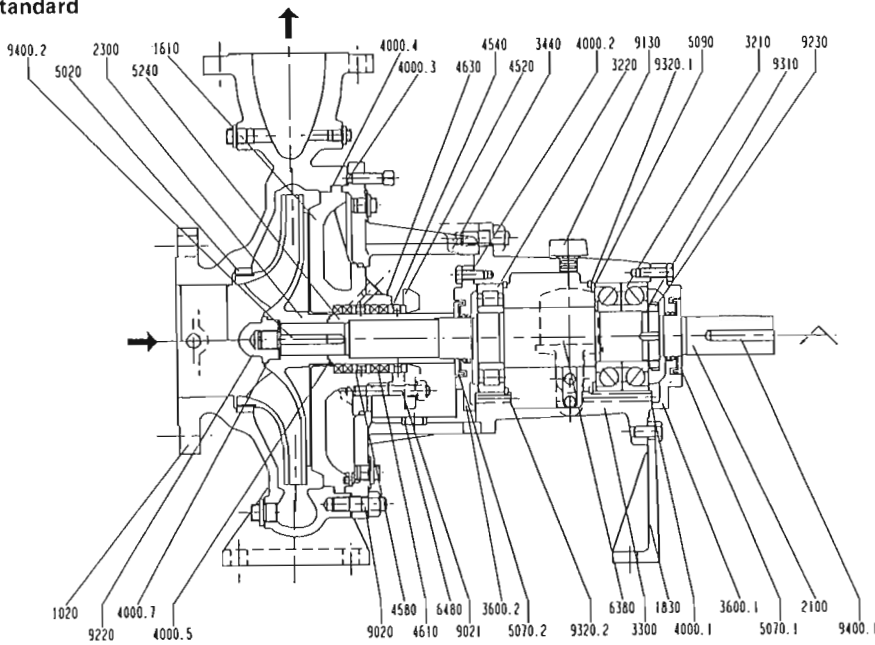


60Hz 4P



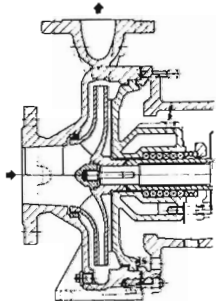
Sectional Drawings & List of Components

Standard



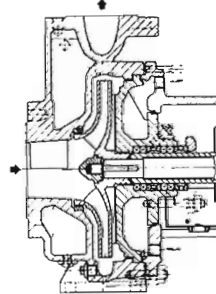
No.	Designation
1020	Volute casing
1610	Casing cover
1830	Support foot
2100	Shaft
2300	Impeller
3210.1	Deep groove ball bearing
3300	Bearing housing
3440	Bearing bracket lantern
3600.1	Bearing cover
3600.2	Bearing cover
4000.1	Flat gasket
4000.2	Flat gasket
4000.3	Flat gasket
4000.4	Flat gasket
4000.5	Flat gasket
4000.7	Flat gasket
4520	Stuffing box gland
4540	Gland bushing
4580	Lantern ring
4610	Stuffing box packing
4630	Apron
5020	Casing wear ring
5070.1	Deflector
5070.2	Deflector
5240	Shaft protecting sleeve
6380	Constant level oiler
6480	Drip plate
6800	Cladding
9020	Stud bolt
9021	Gland bolt
9130	Plug
9220	Impeller nut
9400.1	Key
9400.2	Key

CPC-Y



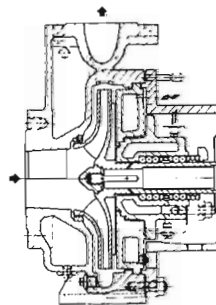
With extended stuffing box housing to reduce heat losses within the pump system.
For heat transfer oils of temperatures up to 350°C

CPC-HB



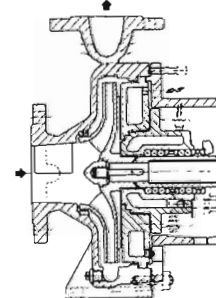
With integrally cast heating chambers at the suction side and heatable casing cover at the discharge side.
For liquids which are characteristic of freezing.

CPC-HS



With integrally cast heating chamber at the suction side and additionally installed heating chamber at the discharge side.
For liquids which are not cool down while passing through the pump.

CPC-HD



With heating chamber at the discharge side.
For pitch or tar.



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