

CPC acc. to ISO2858

Chemical Process Pump



 **TORISHIMA**

End-Suction Volute Pump

TORISHIMA CPC is an end-suction volute pump in back pull-out design to ISO 2858-1975, specially applied for chemical and petrochemical industries, and widely used as process pumps in general chemical industries. The high efficient design provides high performance at a low running cost. There is a wide range of structural design to meet many different requirements for specification.

Features

- The highly efficient design enables very economical operation with a low running cost.
- High quality materials and structural designs are employed to meet specification requirements for a variety of applications, including chemical and petrochemical industries, oil refining, general industries, water desalination, and high temperature heating equipment applications.
- Covers a wide spectrum of specifications, such as high head, high capacity, high pressure, low temperature, and high temperature.
- Each component is designed with a special focus on compatibility, offering ease of maintenance.
- Stock management with an excellent quality control system enables short pump delivery times.
- The suction and discharge nozzles are arranged end-top to resist piping loads.
- Intake diameter is designed larger than discharge diameter to maximize the suction performance.
- A back pull-out structure allows disassembly of the pump when coupled with spacers, without dismantling the main piping and the motor.
- Center line support type volute casing is also available.
- Thrust is balanced using back vanes; the ball bearings only receive residual thrust.
- Roller bearings with oil bath are used with a constant level oiler and there is also a water cooling option.
- Combinations of heating jackets and cooling jackets are available, offering choices for the optimal configuration for various liquid types and liquid temperatures.
- Gland packing or Torishima mechanical seal is available for the shaft seal, both with proven performance with various liquid types.
- JIS-compliant standard flanges are employed, with other standards optionally supported.
- Configurations are also available in which the shaft is not directly in contact with pump liquid.

Materials

Casing	FC250, FCD400-15, SC450, CAC402, SCS13, SCS14, SCS16 etc.
Impeller	FC250, CAC402, SCS13, SCS14, SCS16
Shaft	S45C, SUS316, SUS316L
Gland Packing	Carbonized Fiber (~80°C) *
Casing Gasket	Valqua 6500 etc. (~100°C) *

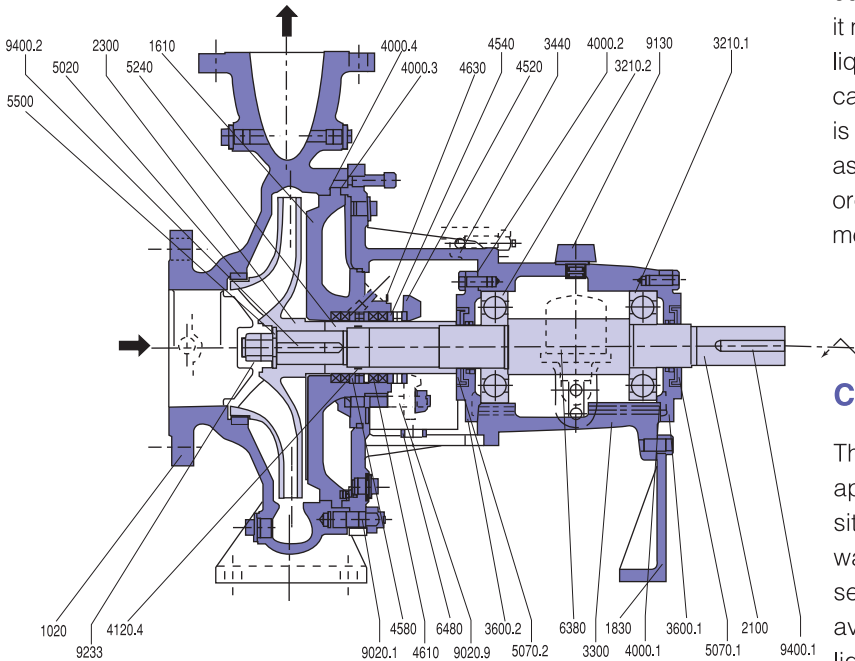
* Other materials are available for hot water or chemical liquid.



Sectional Drawing & List of Components

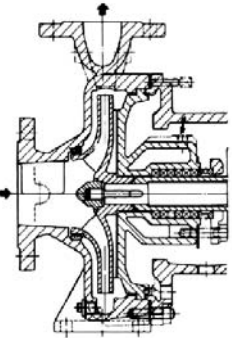
The wide variety of structure responds to every spec condition.

Standard



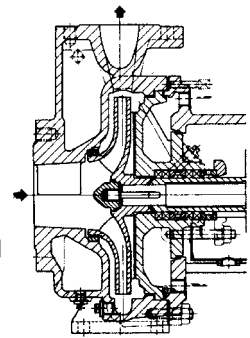
CPC-Y Stuffing box cooling jacket type

This type offers very powerful shaft seal cooling and moreover, it minimizes pump liquid heat loss in cases where warming is unnecessary, such as when transferring organic heating medium.



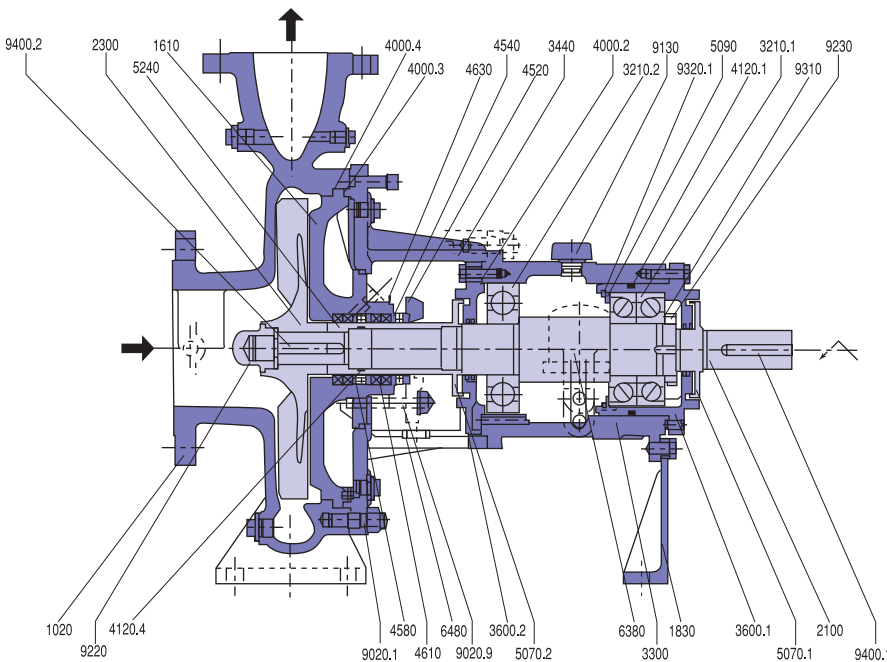
CPC-HS Casing heating jacket type

This type is applicable for situations in which warming of the shaft seal is required to avoid freezing of liquid due to cooling while pumping liquid at a temperature near its freezing point.



Semi-Open Impeller

This type is applicable for situations in which the pump liquid polymerizes, is easily solidified, or contains solids or gases.



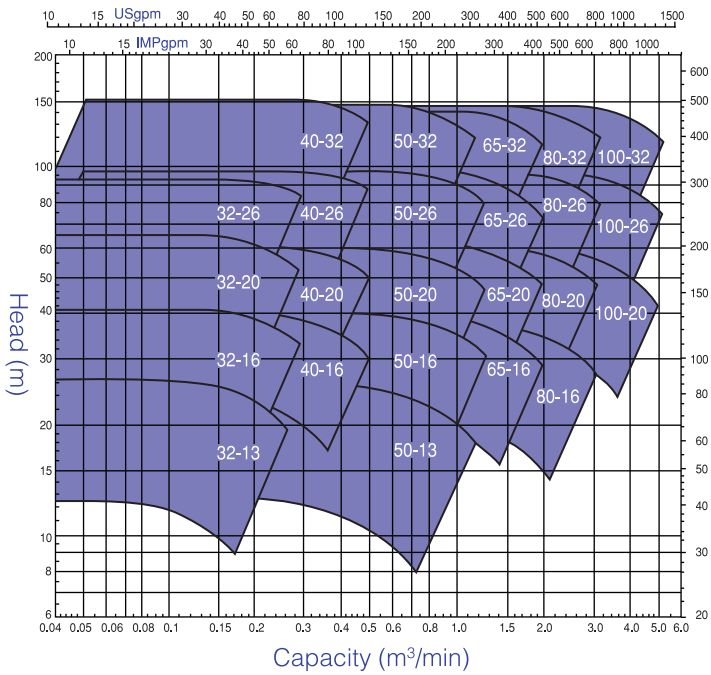
No.	Designation
1020	Volute casing
1610	Casing cover
1830	Support foot
2100	Shaft
2300	Impeller
3210.1/2	Deep groove ball bearing
3300	Bearing housing
3440	Bearing bracket lantern
3600.1/2	Bearing cover
4000.1/2/3/4	Flat gasket
4120.1/4	O-ring
4520	Shaft box gland
4540	Gland bushing
4580	Lantern ring
4610	Gland packing
4630	Apron
5020	Casing wear ring
5070.1/2	Deflector
5090	Adjust Ring
5240	Shaft protecting sleeve
5500	Washer
6380	Constant level oiler
6480	Drip plate
9020.1/9	Stud bolt
9130	Plug
9220	Impeller nut
9230	Bearing nut
9233	Lock nut
9310	Washer
9320.1/2	Snap ring
9400.1/2	Key

Performance Range

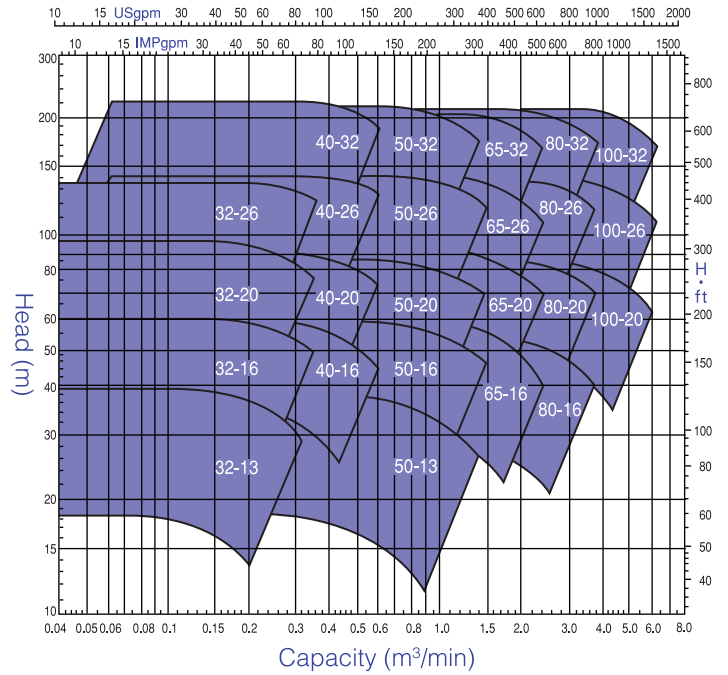
Standard, CPC-Y, CPC-HS

Capacity	~1,500m ³ /hr(~25m ³ /min)
Total Head	~220m
Temperature	-100°C~+350°C
Pressure	~2.45MPa
Size	32~250mm

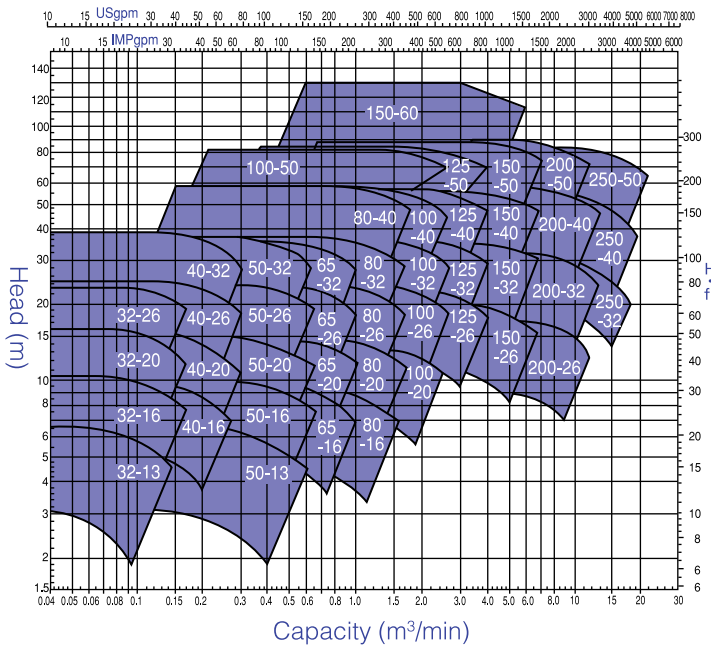
50Hz-2P



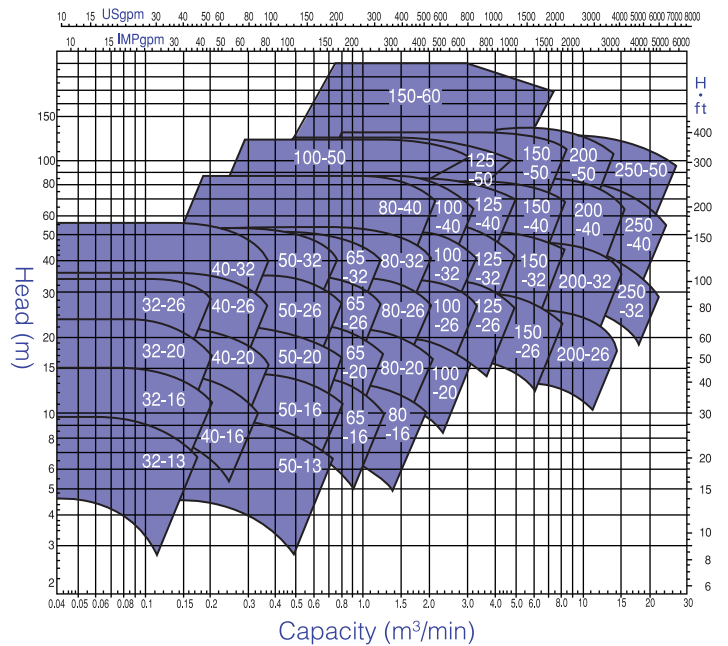
60Hz-2P



50Hz-4P



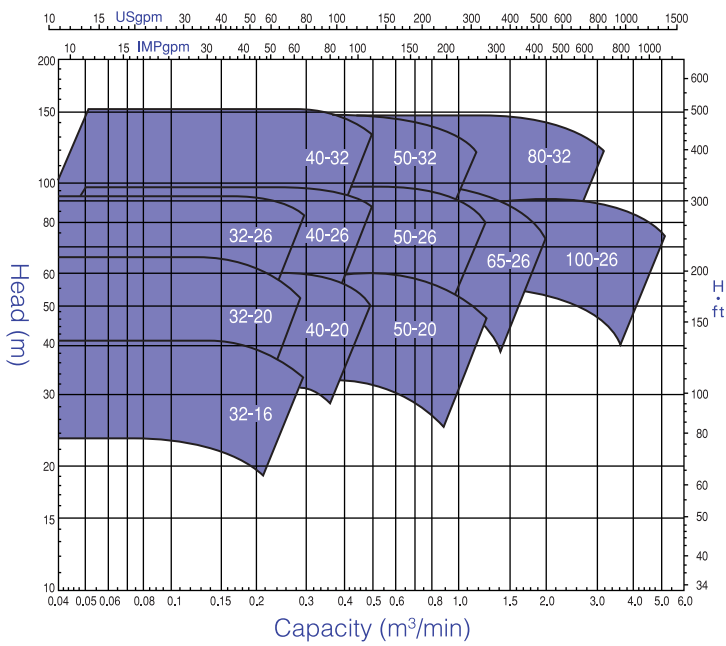
60Hz-4P



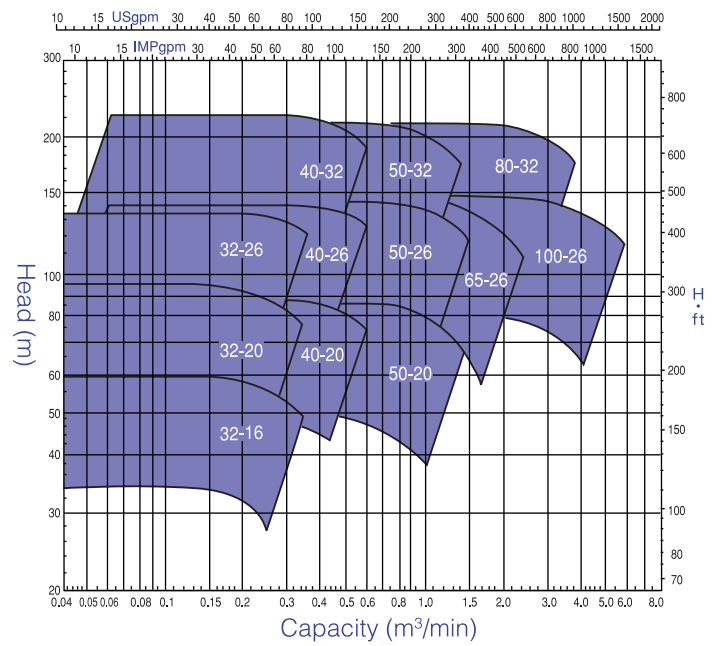
Semi-Open Impeller

Capacity	~336m ³ /hr(~5.6m ³ /min)
Total Head	~220m
Temperature	-100°C ~+300°C
Pressure	~2.45MPa
Size	32~100mm

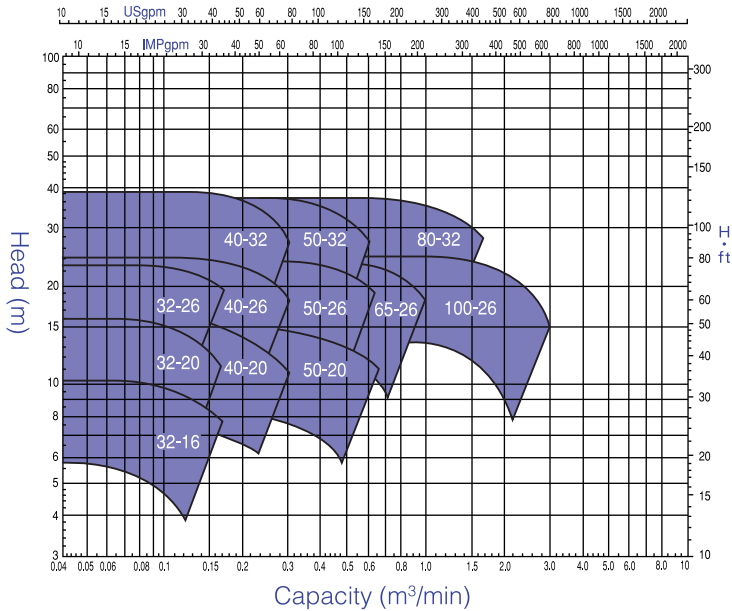
50Hz-2P



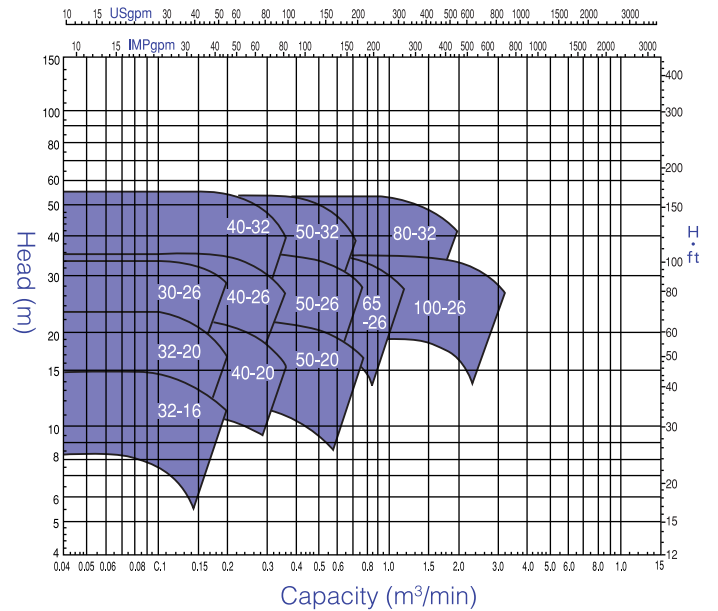
60Hz-2P



50Hz-4P

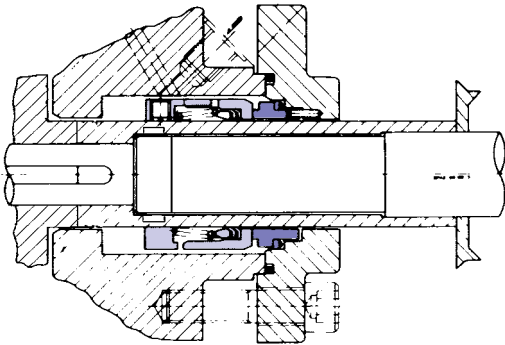


60Hz-4P



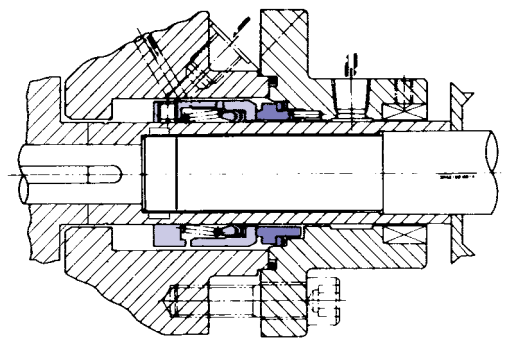
Mechanical Seal

The most suitable mechanical seal provided in response to your spec condition



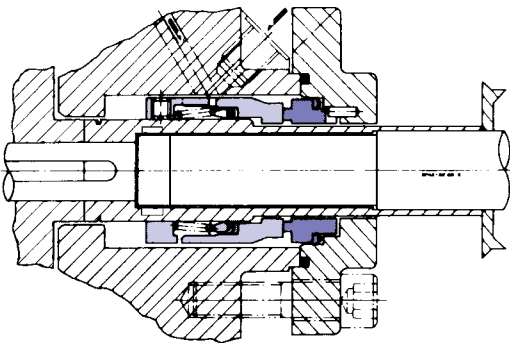
HU2100NN

Seal Pressure MPa: $0 < P \leq 0.49$
 Seal Temperature °C : $-40 \leq T \leq 250$



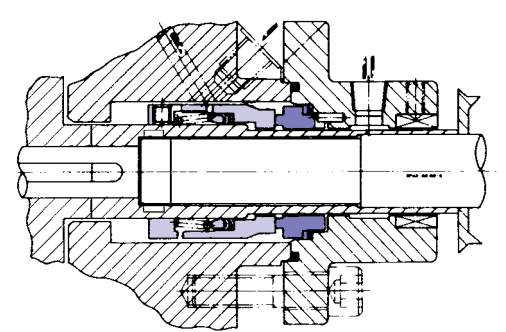
HU2100NB

Seal Pressure MPa: $0 < P \leq 0.49$
 Seal Temperature °C : $-40 \leq T \leq 250$
 with dry gas or cooling water quenching



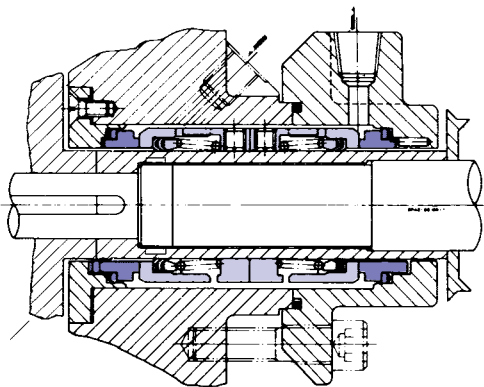
HU2100NN

Seal Pressure MPa: $0.94 < P \leq 2.49$
 Seal Temperature °C : $-40 \leq T \leq 250$
 This type is applicable for the high pressure case of more than 0.49MPa pressure.



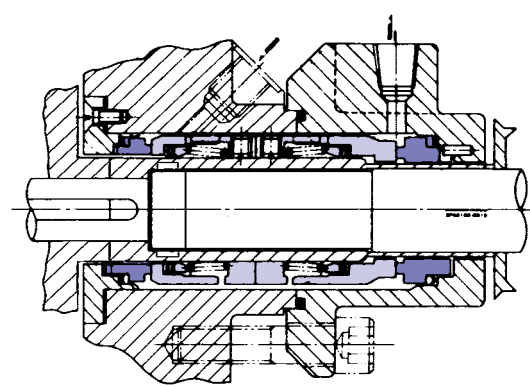
HU2100NB

Seal Pressure MPa: $0.49 < P \leq 2.94$
 Seal Temperature °C : $-40 \leq T \leq 250$
 This type is applicable for the high pressure case of more than 0.49MPa pressure. with dry gas or cooling water quenching



HU2100NA x HU2100NN

Seal Pressure MPa: $P \leq 0.49$
 Seal Temperature °C : $-40 \leq T \leq 250$
 This type is applicable for the case of less than 0.49MPa pressure and seal of liquid including less than 3% slurry, gas or negative pressure. Sealing liquid required.



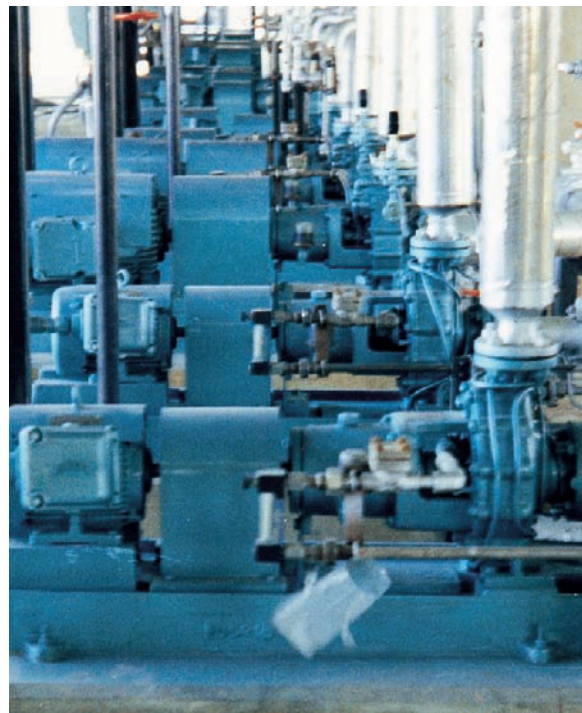
HU2100NA x HB2100NN

Seal Pressure MPa: $0.49 < P \leq 2.94$
 Seal Temperature °C : $-40 \leq T \leq 250$
 This type is applicable for the case of more than 0.49MPa pressure and liquid including less than 3% slurry.

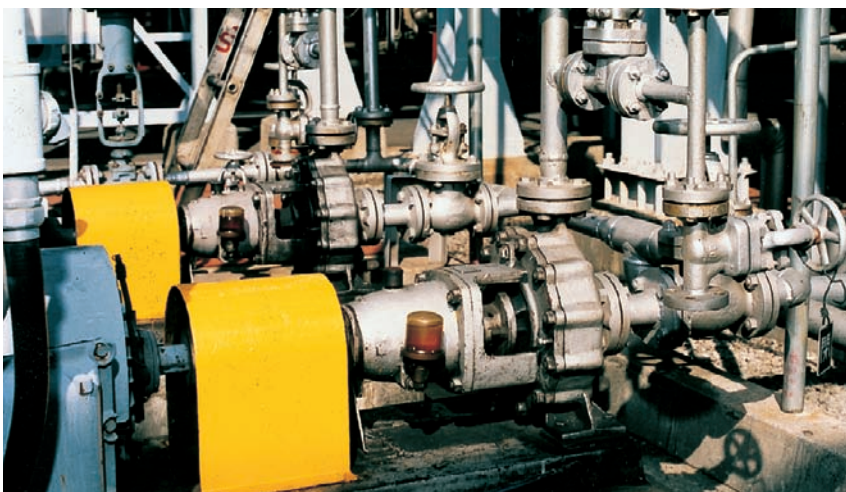
References



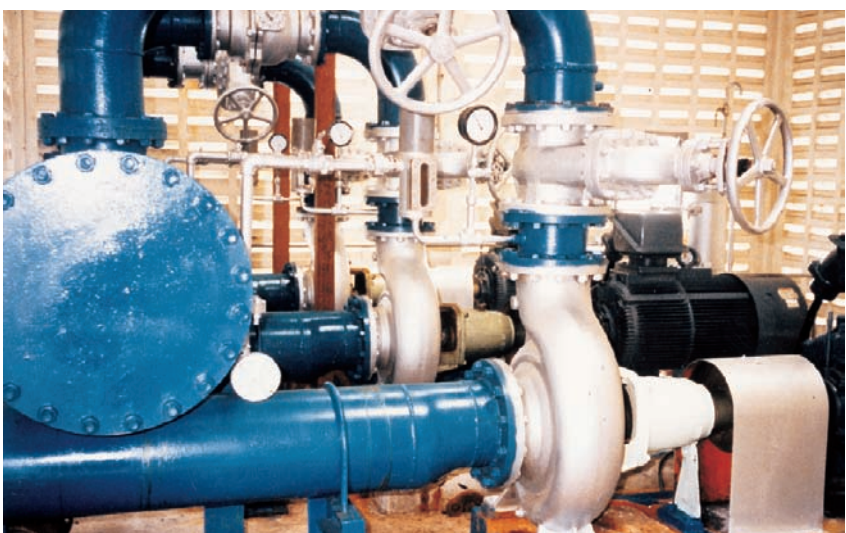
Cooling Water Pump / District Heating and Cooling Plant



Process Pump / DMT Plant

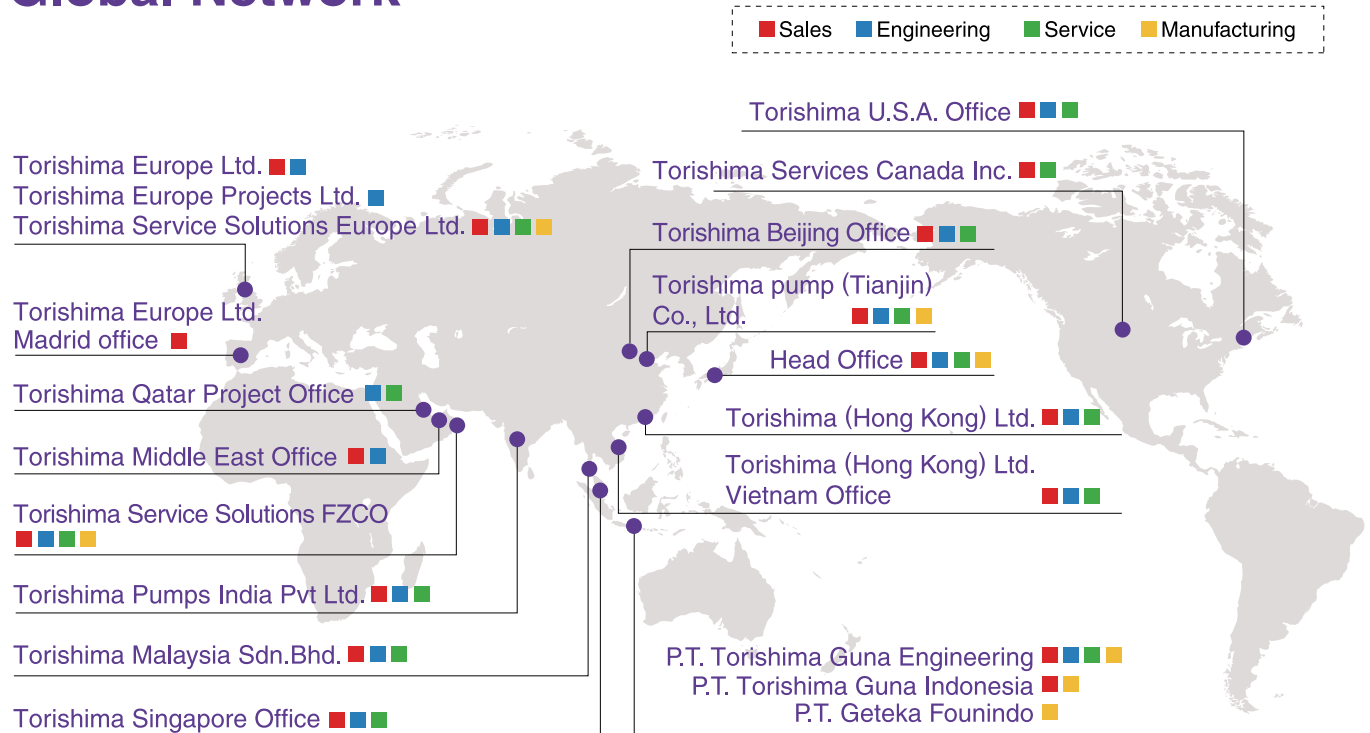


Process Pump / Chemical Plant



Cooling Water Pump / Oil Refinery Plant

Global Network



TORISHIMA PUMP MFG. CO., LTD.

HEADQUARTERS

1-1-8 Miyata-cho, Takatsuki-city, Osaka 569-8660 Japan
Tel : +81-72-690-2308 / Fax : +81-72-690-2329

KYUSHU TORISHIMA

9857-13, Ohaza Kawako, Wakagi-cho, Takeo-city, Saga 840-0813 Japan
Tel : +81-954-26-3081 / Fax : +81-954-26-3080

TORISHIMA CHINA

BEIJING

Rm707, Building 1, KUNSHA CENTER,
No.16 Xinyuanli, Chaoyang District, Beijing,
P.R.China PC:100027
Tel : +86-10-84682891 / Fax : +86-10-84682890

TIANJIN

No.9 Gaoxin Road, Wuqing Development Zone,
Tianjin, China P. R
Tel : +86-22-59695601 / Fax : +86-22-59695609

TORISHIMA HONG KONG

Unit A, 21/F., Tower A, Billion Centre, 1 Wang Kwong Road,
Kowloon Bay, Kowloon, Hong Kong
Tel : +852-2795-1838 / Fax : +852-2754-3293

TORISHIMA VIETNAM

No.76 Bui Thi Xuan Street, Hai Ba Trung District,
Hanoi, Socialist Republic of Vietnam
Tel : +84-4-943-7880 / Fax : +84-4-943-7876

TORISHIMA SINGAPORE

30 Ubi Crescent #01-02 Ubi Techpark, Singapore 408566
Tel : +65-6779-0123 / Fax : +65-6779-6900

TORISHIMA MALAYSIA

Lot 19, 1st Floor Bangunan Ipemuda Jalan 13/2 46200
Petaling Jaya Selangor, Malaysia
Tel : +60-3-7960-5771 / Fax : +60-3-7960-5772

TORISHIMA INDIA

Tower B 1106, Millennium Tower, Sector27
Gurgaon-122002, Haryana, India
Tel : +91-124-4728950 / Fax : +91-124-4728950

TORISHIMA INDONESIA

TORISHIMA GUNA ENGINEERING

Jalan Rawa Sumur Timur No.1
Pulogadung Industrial Estate,
P.O.Box 1160, Jakarta, Indonesia
Tel : +62-21-460-3963 / Fax : +62-21-460-3937

TORISHIMA GUNA INDONESIA

Jalan Rawa Sumur Timur No.1
Pulogadung Industrial Estate,
P.O.Box 1160, Jakarta, Indonesia
Tel : +62-21-460-3963 / Fax : +62-21-460-3937

GETEKA FOUNINDO

JL Pulo Ayang Kav. AA2 Pulogadung Industrial Estate,
P.O.Box 1160 JAT, Jakarta 13011 Indonesia
Tel : +62-21-460-3963 / Fax : +62-21-460-3937

TORISHIMA U.A.E.

MIDDLE EAST OFFICE

5th Floor Office No.503 Al Salmee Golden Tower
Electra Street, P.O.Box 53567, Abu Dhabi, U.A.E.
Tel : +971-2-674-3880 / Fax : +971-2-674-3881

TORISHIMA SERVICE SOLUTIONS

Plot of Land TP010501 Techno Park-Jebel Ali
PO Box. 37603 Dubai, U.A.E.
Tel : +971-4-886-5622 / Fax : +971-4-886-5633

TORISHIMA QATAR

Office No.11, 1st Floor, West corner centre,
Salwa Road, P.O.Box 37027 Doha, Qatar
Tel : +974-4450-6915 / Fax : +974-4450-6916

TORISHIMA EUROPE

Sunnyside Works, Gartsherrie Rd,
Coatbridge, Scotland ML5 2DJ
Tel : +44-1236-443951 / Fax : +44-1236-702875

MADRID OFFICE

Avda, Fuente Nueva 12A Edif, Monterrey, 28703
San Sebastian de los Reyes, Madrid, Spain
Tel : +34-91-284-6909 / Fax : +34-91-284-6901

TORISHIMA EUROPE PROJECTS

Hartham Park, Corsham,
Wiltshire, England SN13 ORP
Tel : +44-1249-700-290

TORISHIMA SERVICE SOLUTIONS EUROPE

Sunnyside Works, Gartsherrie Rd,
Coatbridge, Scotland ML5 2DJ
Tel : +44-1236-442390 / Fax : +44-1236-702875

TORISHIMA U.S.A.

100 Grove Street, Suite 217,
Worcester MA 01605-2654 U.S.A.
Tel : +1-508-753-6600 / Fax : +1-508-753-8276

TORISHIMA SERVICES CANADA

Suite 2800, 350-7th Ave S.W.
Calgary, Alberta T2P 3N9, Canada
Tel : +1-403-705-1933