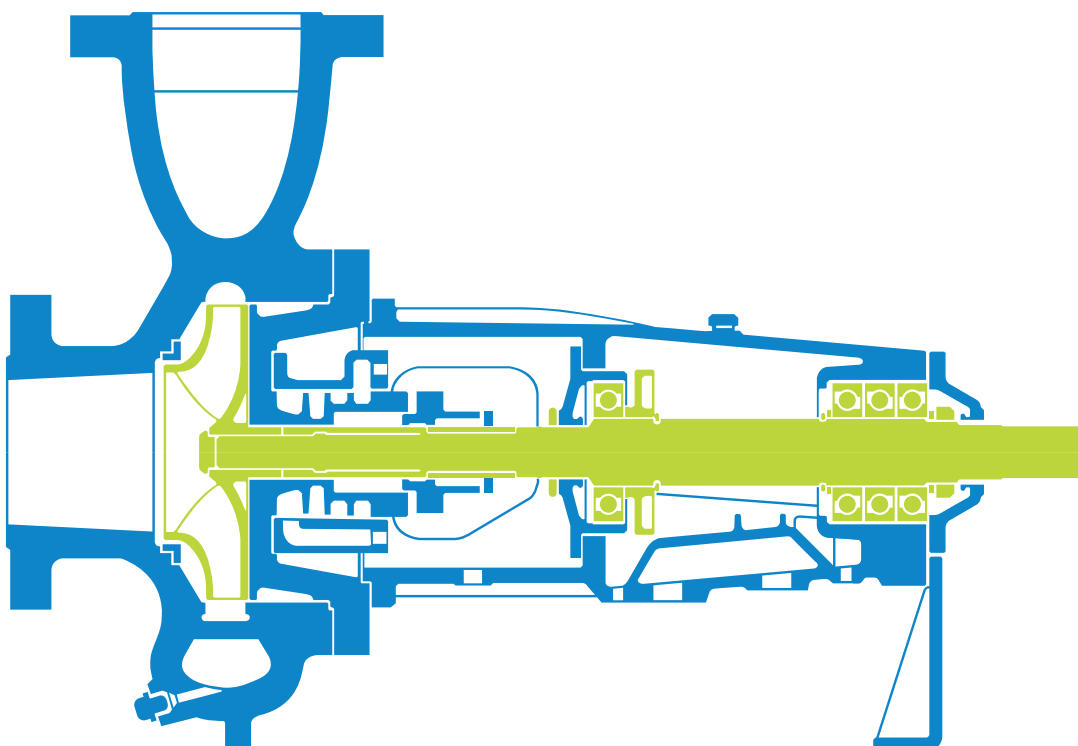


CHR

Hot Water Circulating Pumps



Field of Application

CHR pumps are used as hot water circulating pumps, particularly in the circuits of forced-circulation boilers.

Construction

Horizontal radially-split volute casing pump of process type construction with radial impeller, single-flow single stage. The casing cover and stuffing box housing form a single integral unit; pump feet are integrally cast to the volute casing in centreline height. Cooled baseplate pedestals for volute casing.

Bearings

Four bearing bracket sizes are provided, depending on the pump sizes. The bearing bracket is flanged to the casing cover; deep groove ball bearings are fitted at the impeller end, and three angular contact ball bearings are arranged at the drive end, which absorb the axial thrust in both directions. A supporting foot is arranged at the drive end.

Lubrication

Oil lubrication by lubricating disc and constant level oiler, oil cooling via cooling compartment and cooling fins in the bearing bracket.

Impeller

Closed radial impeller, overhung on the pump shaft.

Shaft Seal

Soft-packed stuffing box, designed in the form of a main stuffing box and auxiliary stuffing box, or mechanical seal. Soft-packed stuffing box and mechanical seal are interchangeable, without any remachining becoming necessary.

The soft-packed stuffing box is intensively cooled, both internally and externally. Cooling of the mechanical seal by circulation of cooled pumped product. The shaft is protected by renewable sleeves in the region of the shaft seal.

Nozzle Orientation

The suction nozzle is arranged axially (end suction) and the radial discharge nozzle points vertically upwards.

Flange machining:

Suction and discharge nozzle

ANSI, BS, JIS and other standards are also available.

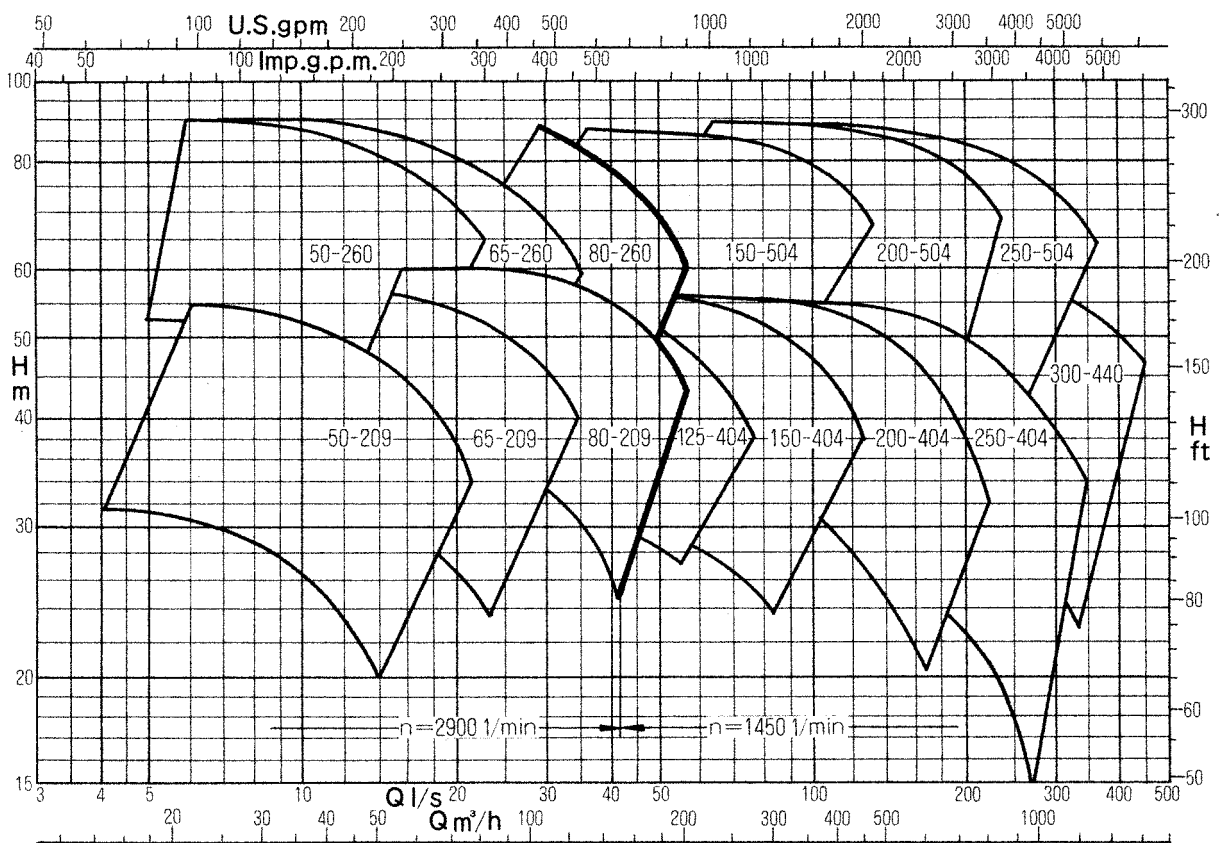
Drive

Drive by electric motor, by electric motor and gearbox or by steam turbine. Direction of rotation is clockwise (viewed from the drive end).

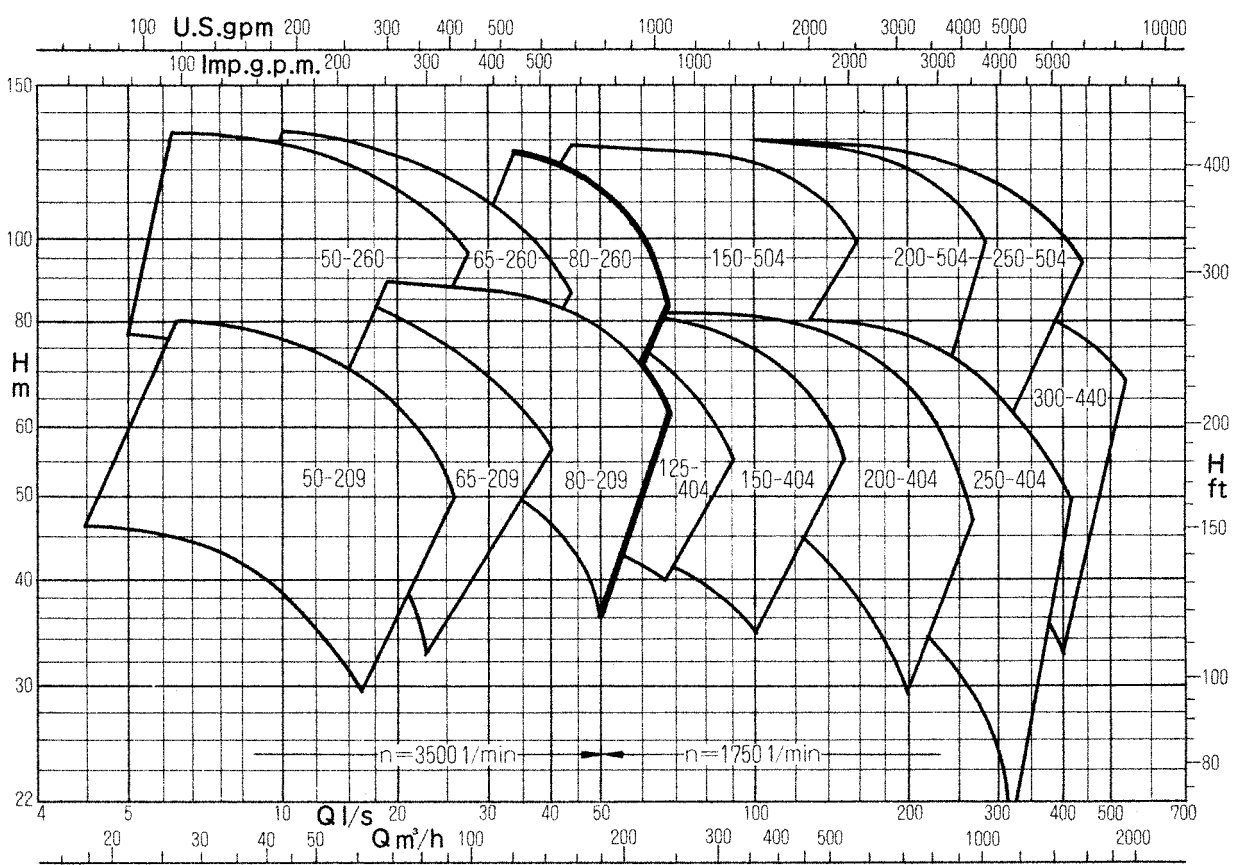
Materials

Part designation	Materials
Volute casing	Cast steel, cast chrome steel
Casing cover with stuffing box housing	Cast steel, cast chrome steel
Cooling housing	Cast iron
Impeller	Cast iron, cast chrome steel
Casing wear ring	Ni-cast iron, cast chrome steel
Bearing bracket	Cast iron
Shaft	Steel, chrome steel
Shaft protecting sleeve	Chrome steel
Stuffing box gland	Cast steel, cast chrome steel

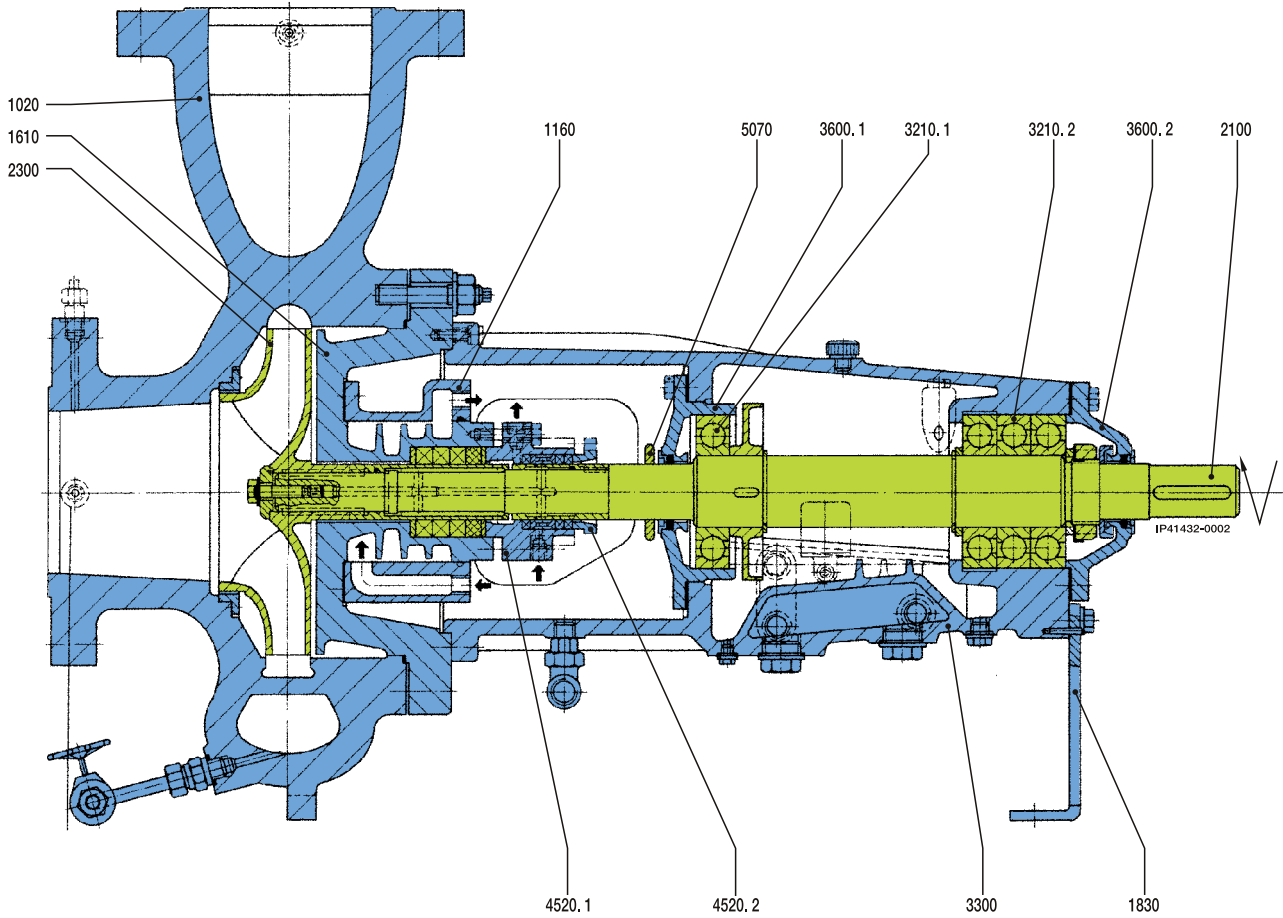
50Hz-2,900、1,450 1/min



60Hz-3,500、1,750 1/min



Sectional Drawing



Part No.	Part designation
1020	Volute casing
1160	Cooling housing
1610	Casing cover
1830	Support foot

Part No.	Part designation
2100	Shaft
2300	Impeller
3210.1	Ball bearing
3210.2	Ball bearing

Part No.	Part designation
3300	Bearing housing
3600.1	Bearing cover
3600.2	Bearing cover
4520.1	Stuffing box gland

Part No.	Part designation
4520.2	Stuffing box gland
5070	Thrower



TORISHIMA PUMP MFG. CO., LTD.

Head Office & Works:

1-1-8, Miyata-cho, Takatsuki City, Osaka, Japan. Phone: 072-695-0551 Telefax: 072-693-1288

**TORISHIMA SINGAPORE
SINGAPORE BRANCH**

30 Ubi Crescent #01-02 Ubi Techpark Singapore 408566 Phone: (65)6779-0123 Telefax: (65)6779-6900

**TORISHIMA HONG KONG
TORISHIMA (HONG KONG) LIMITED**

Unit 603, 6/F., Tower III, Enterprise Square, 9 Sheung Yuet Road, Kowloon Bay, Kowloon, Hong Kong
Phone: (852)2795-1838 Fax: (852)2754-3293

**TORISHIMA MALAYSIA
TORISHIMA MALAYSIA SDN.BHD**

Suite 1906, 19th Floor Kenanga International Jalan Sultan Ismail 50250 Kuala Lumpur, Malaysia
Phone: (603)2715-0068 Fax: (603)2715-0019

**TORISHIMA INDONESIA
P.T. TORISHIMA GUNA INDONESIA**

JL Rawa Sumur Timur No.1, Pulogadung Industrial Estate, P.O. Box.:1160 JAT., Jakarta 13930, Indonesia
Phone: (62)21-460-3963,(62)21-460-3964,(62)21-480-0205 Fax:(62)21-460-3937

P.T. TORISHIMA GUNA ENGINEERING

JL Rawa Sumur Timur No.1, Pulogadung Industrial Estate, P.O. Box.:1160 JAT., Jakarta 13930, Indonesia
Phone: (62)21-460-3963,(62)21-460-3964,(62)21-480-0205 Fax:(62)21-460-3937

P.T. GETEKA FOUNINDO

JL Rawa Sumur Timur No.1, Pulogadung Industrial Estate, P.O. Box.:1160 JAT., Jakarta 13930, Indonesia
Phone: (62)21-460-3936,(62)21-460-3937 Fax: (62)21-460-3937

**TORISHIMA U.A.E
MIDDLE EAST OFFICE**

5th Floor, office No.503, Al Salmeeen Golden Tower, P.O. Box.:72197, Electra Street, Abu Dhabi, U.A.E
Phone: (971)2-6743880 Fax:(971)2-6743881

**TORISHIMA U.K.
EUROPE OFFICE**

20/23 Woodside place Glasgow G3 7QF Scotland United Kingdom Phone: (44)141-304 4546 Fax:(44)141-332 4927

**TORISHIMA U.S.A.
U.S.A. OFFICE**

82B Daniels Road, Charlton, MA01507, United States of America Phone: (1)866-374-1130 Fax:(1)508-248-9321