

300-QHX
Centrifugal volute-casing boiler feed pump

CENTRIFUGAL VOLUTE-CASING BOILER FEED PUMP 300-QHX

APPLICATION

Pump 300-QHX is intended for feeding secondary feed circuit of steam generators of nuclear power plants with unit power output 1,000 MW.

PUMPED LIQUID

Treated feed water up to max. temperature 184 °C, that must not form sediments and must not contain any mechanical impurities and must be without any acid reactions. Negative logarithm of hydrogen ions concentration for feed water with temperatures from 20 to 180 °C must be within pH 6.8 – 10.2.

DESCRIPTION

It has been designed as a centrifugal horizontal single-stage pump, with double discharge volute and double-entry impeller. Rotor is supported on two journal bearings. Rotor residual axial force is taken up with a tilting-pad bearing. Bearings are lubricated with foned oil. Rotor sealing against the stator is provided with rotodynamic seals with rotating seats.

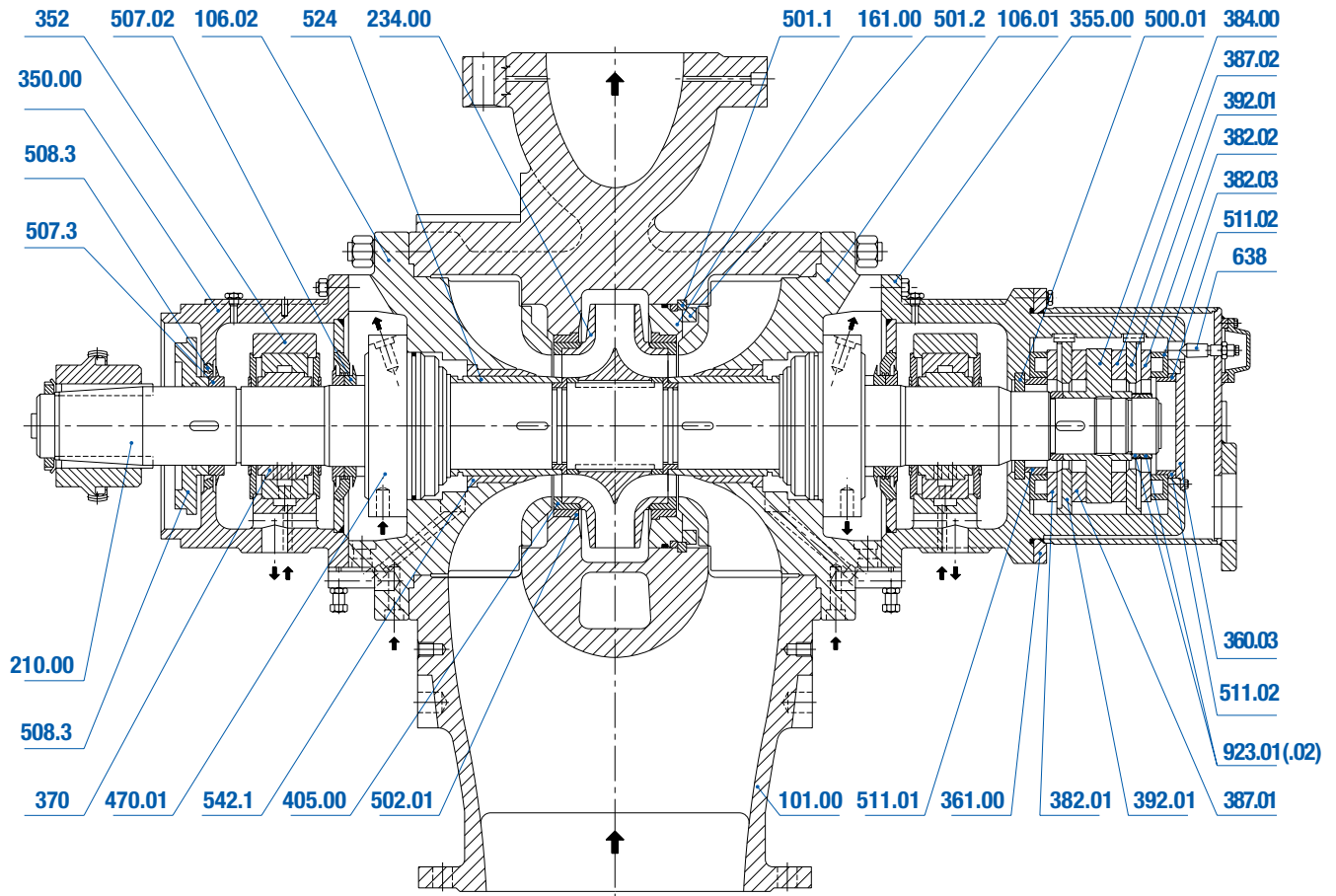
Max. permissible operating pressure:

- at pump inlet section 30 bar;
- at pump outlet section 115 bar

MATERIAL OPTIONS

There favourable combinations of corrosion-proof materials have been used to guarantee resistance of hydraulic parts against corrosion and cavitation.

INFORMATORY CROSS-SECTIONAL ARRANGEMENT

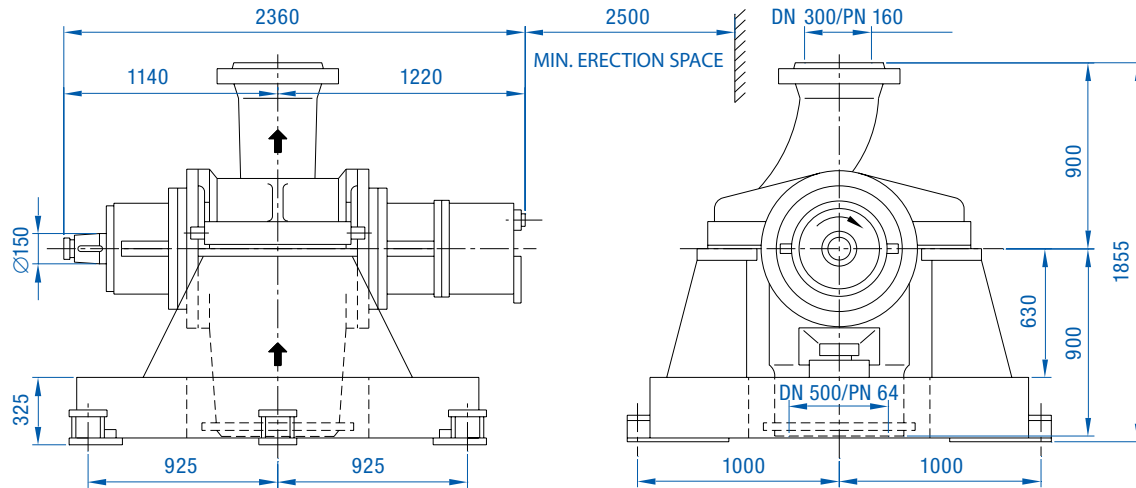


101.00	Pump casing
106.01	Casing rear cover
106.02	Casing front cover
161.00	Inside cover
210.00	Shaft
234.00	Impeller
350.00	Journal bearing housing
352	Yoke
355.00	Thrust bearing housing
360.03	Cover
361.00	Thrust bearing cover
370	Journal bearing

380.02	Plate of front support plate
382.01	Plate of rear support plate
382.03	Support plate
384.00	Thrust bearing disc
387.01	Front segment
387.02	Rear segment
392.01	Front support plate
392.02	Rear support plate
405.00	Impeller wear ring
470.01	Hydraulic seal
500.01	Floating ring
501.1	Carrier ring

501.2	Segment-type thrust ring
502.01	Stator wear ring
507.02	Thrower
507.3	Thrower
508.3	Disc
511.01	Front ring
511.02	Rear ring
524	Shaft sleeve
542.01	Cover bush
638	Oil controller screw
923.01	Shaft nut
923.02	Shaft nut

DIMENSIONS

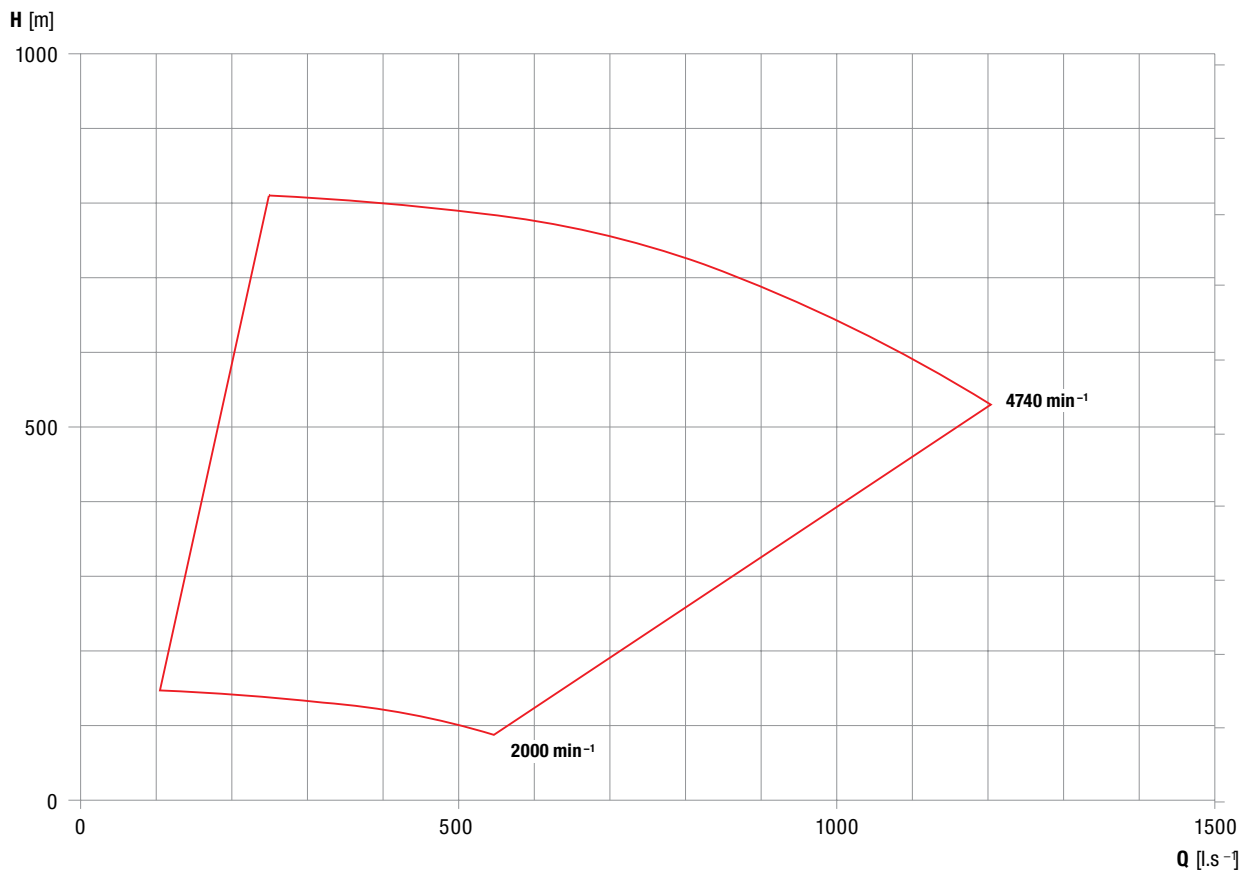


More detailed dimensional drawing of the pump or the pump with drive, will be supplied upon request after receipt of official order.

MAIN PERFORMANCE DATA FOR PUMP 300-QHX

Informatory working zone:		
• Flowrate Q (l.s ⁻¹)		250–1200
• Specific energy (delivery head)	Y (m)	540–820
Speed of rotation	(min ⁻¹)	4740
Max. temperature of a pumped liquid	t (°C)	184
Nominal inside dia and nominal pressure of branches		
• suction	DN/PN	500/64
• discharge	DN/PN	300/160
Amount of filtered cooling water of max. hardness 2° with temperature 30 °C	(l.s ⁻¹)	3,33
Min. overpressure of cooling water	(MPa)	0,3
Amount of demineralized water with temperature 30 °C	(l.s ⁻¹)	5,7
Overpressure of lubricating oil	(MPa)	0,2
Informatory pump weight inclusive of base frame	(kg)	7100

PERFORMANCE RANGE





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