



COOLING WATER PUMPS

P

P pumps are designed as vertical
single-stage propeller pumps
with a vane diffusers



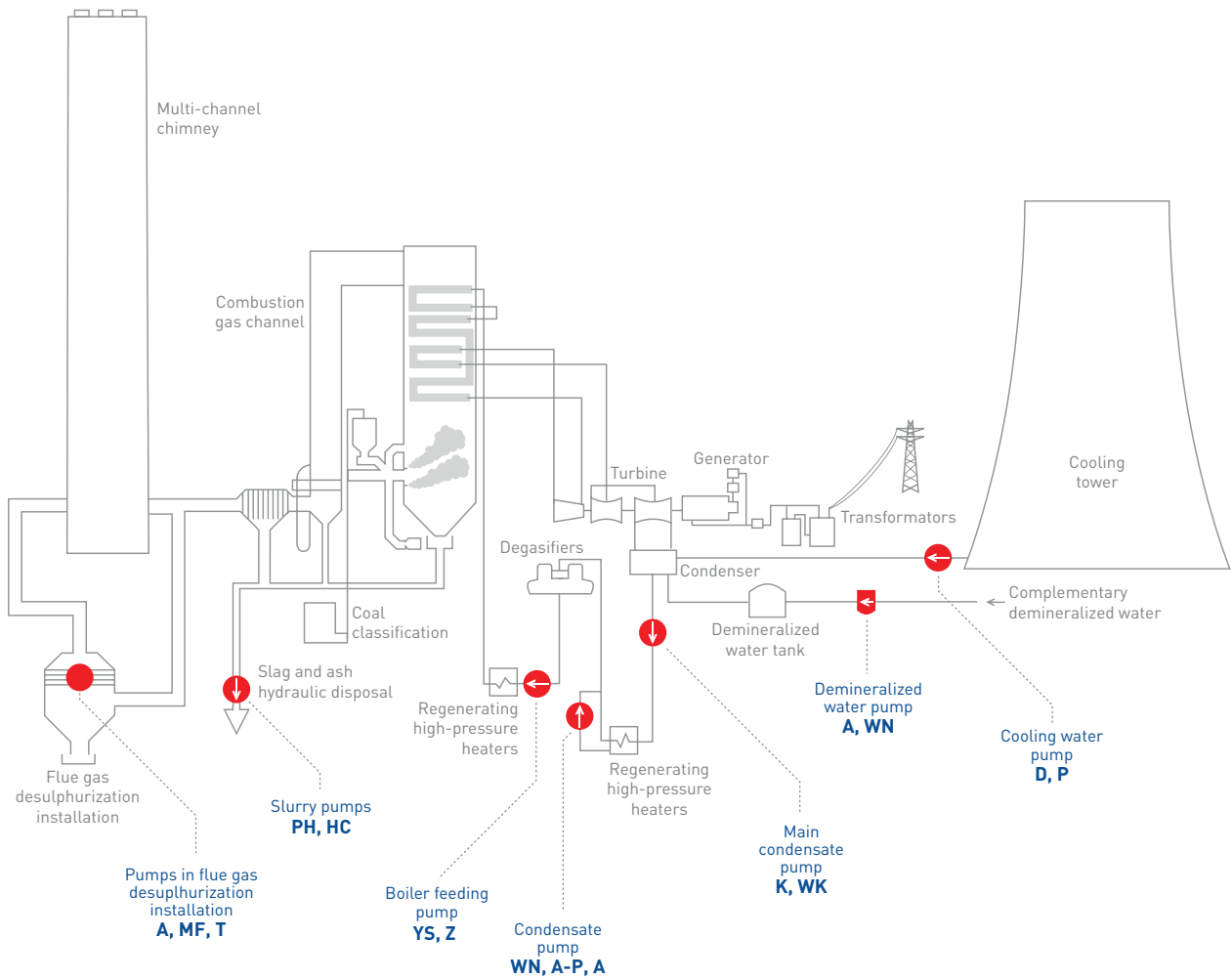
*Pumps for Power and Heat
Supplying Industries*

Please visit our web page <http://www.megapompa.com> or get in contact with us directly via +90 216 684 05 24 for further assistance about related application!



PUMPS IN A POWER PLANT AND HEAT GENERATING PLANT

examples of application



APPLICATION

P type pumps are applicable in any case when high capacity is required at low head. Typically P type pumps are applied as cooling water pumps in power plants with external source of cooling water and in melioration pumping stations.

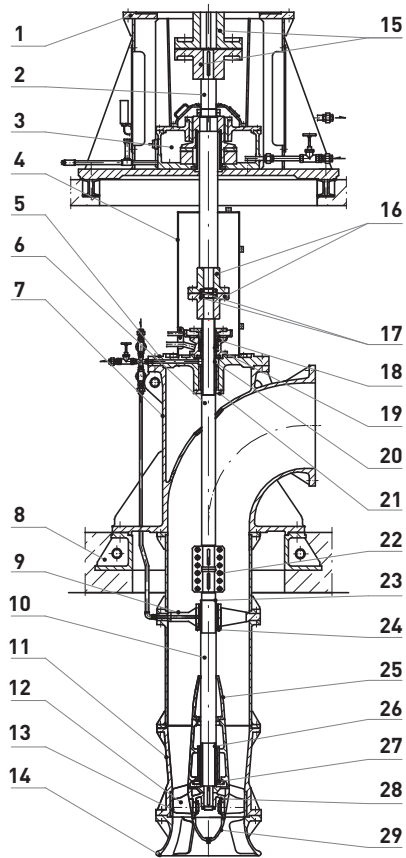
DESIGN

P-type pumps are vertical, axial flow propeller pumps. The pump inlet is at the bottom of the pump. Impellers are assembled on the end of the vertical shaft. Water flows through the vane diffuser and then through the vertical column along the shaft with radial bearings lubricated by the pumped water. The delivery flange is directed horizontally over the floor on which the pump is supported. The axial bearing mounted over the elbow leading to the delivery flange is a roller type for smaller sizes and Mitchell type for bigger pumps. The axial bearings are oil lubricated and cooled by water if necessary. For smaller pumps the motor is supported on the pump, while for biggest units it is assembled on a separate floor.

MATERIALS OF CONSTRUCTION

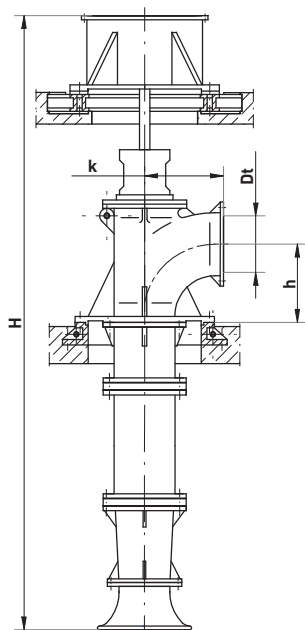
The impellers are made of bronze or stainless cast steel. The other elements in standard version are made of cast iron or steel.

CROSS-SECTION / LIST OF PUMP PARTS



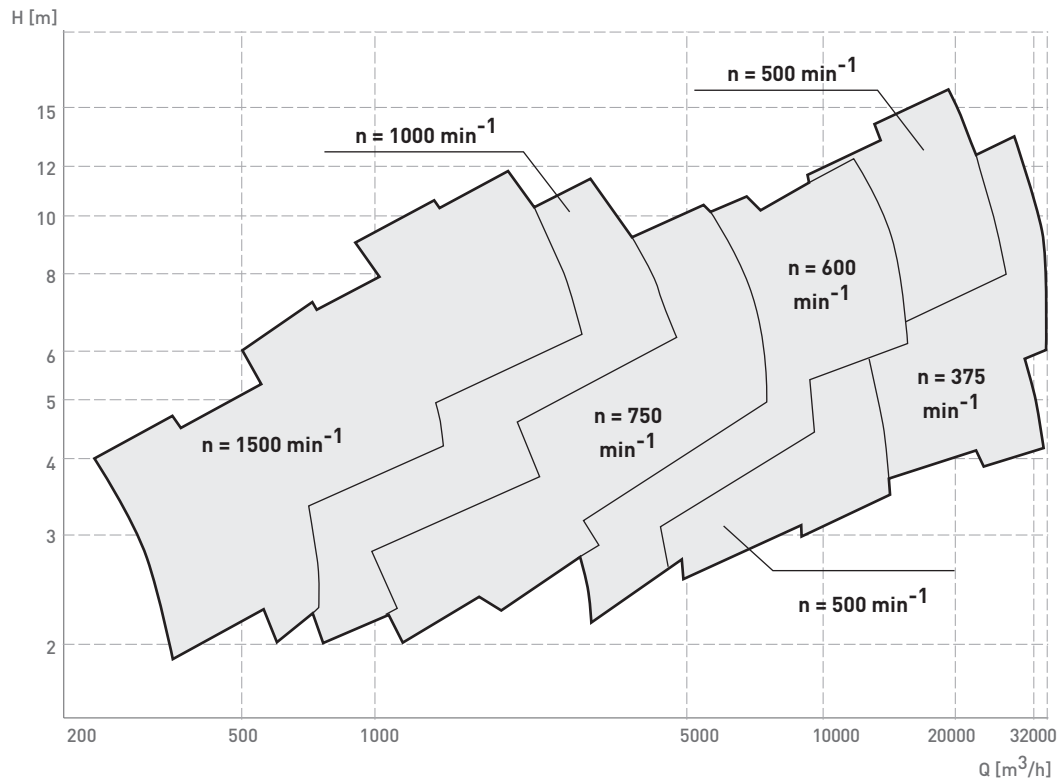
No.	Part name
1	Motor support
2	Upper shaft
3	Thrust bearing subassembly
4	Coupling guard
5	Elbow cover
6	Intermediate shaft
7	Discharge elbow
8	Ceiling ring
9	Bearing insert
10	Lower shaft
11	Diffuser
12	Impeller vane
13	Diffuser layer
14	Inlet bell
15	Elastic coupling
16	Rigid coupling
17	Slotted nut
18	Gland seal
19	Gland sleeve
20	Slide bearing
21	Bushing
22	Split-muff coupling
23	Slide bearing
24	Bushing
25	Fairwater cone
26	Slide bearing
27	Bushing
28	Impeller hub
29	Impeller cup

DIMENSIONS



Pump type	Dimensions [mm]			
	H	h	k	Dt
25P	2350÷5240	350	350	250
30P	2540÷5560	400	400	300
40P	2700÷6950	500	500	400
50P	2900÷8500	550	550	500
60P	3200÷9170	600	600	600
80P	3770÷10150	800	800	800
100P	5165÷11895	900	900	1000
120P	5600÷12130	1000	1000	1200
160P	7150÷14750	1250	1250	1600
180P	7550÷15485	1350	1500	1800

RANGE OF OPERATION



NOMINAL PARAMETERS

Pump hydraulic type size - Number of stages	Capacity Q [m³/h]	Head H [m]	Rotation speed n [rpm]	Motor rated power P _s [kW]
25P21-2	420	4	1500	7,5
30P23-2	650	4,5	1500	15
30P19-2	900	5,8	1500	22
40P23-2	1250	6	1500	37
40P21-2	1400	9,2	1500	55
40P21-3	900	4,2	1000	18,5
40P19-2	2100	9,6	1500	90
50P17-3	2100	5,7	1000	45
50P17-4	1600	3,2	750	22
60P23-4	2700	4	750	45
60P18-3	3520	9,5	1000	160
60P18-4	2900	5,7	750	75
80P23-5	3800	4,5	600	75
80P17-4	6100	9,5	750	250
80P17-5	4900	5,8	600	125
100P17-5	8500	8	600	320
100P17-6	7000	5,5	500	160
120P23-5	13200	9	600	500
120P23-6	11200	6	500	320
160P19-6	21200	10,5	500	1000
160P19-8	17000	5,5	375	400
180P19-8	32000	9,5	375	1250
180P27-8	27000	5,5	375	630

The parameters are specified for clean water of density $\rho = 1000 \text{ kg/m}^3$ and temperature $T = 15^\circ\text{C}$.