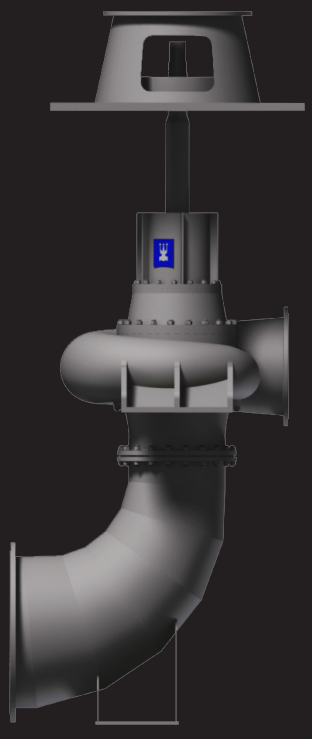
SIGMA



BQOW

Vertical diagonal pumps

VERTICAL DIAGONAL PUMPS BQOW

APPLICATION

Vertical diagonal pumps BQOW are intended for pumping of raw water in water stations, cooling water in power plants, sewage and rain water in waste water plants and so on. Maximum temperature of pumped water is 50OC, acidity 6,5-9 pH.

In case of using a special material, it is possible to use the BQOW pump for pumping of aggresive liquids such as sea water and so on.

The BQOW pumps shall be used in dry pits only.

DESIGN

BQOW pump is of vertical, diagonal, non - regulation dry pit design. The pumped media goes into suction elbow and then through impeller and volute to delivery pipe.

The pump consists of these installation parts: stator, removable part of the stator with rotor and hanger. The pumps run clockwise from the electric motor ´s view .

Pump stator

Consists of suction elbow, suction converter and volute. Volute branch is equipped with delivery converter ended with flange.

Stator removable part

Consists of volute cover, stand and bearing housing. On the volute cover there is a seal with container for leaked water through the seal. The water from the container is drained by a pipe ended with screwing. On the bottom of the cover a sealing ring may placed for lowering of pump axial thrust. Inside bearing housings there are journal rolling bearings located.

Rotor

Parts of the rotor are: shaft (in case of longer construction length two shafts connected through rigid coupling), impeller, impeller nut and coupling (connecting the pump and electric motor rotors). The coupling may be of rigid or flexible design, depending on hanger bearing´s position (on electric motor or on pump).

Stator removable part with rotor

Both parts (stator removable part and rotor) make together one installation unit. The unit itself may be, if needed, removed after electric motor dismounting without removal of the pump stator. This is advantageous from time reasons in case of eventual pump repair of inspection.

Hanger

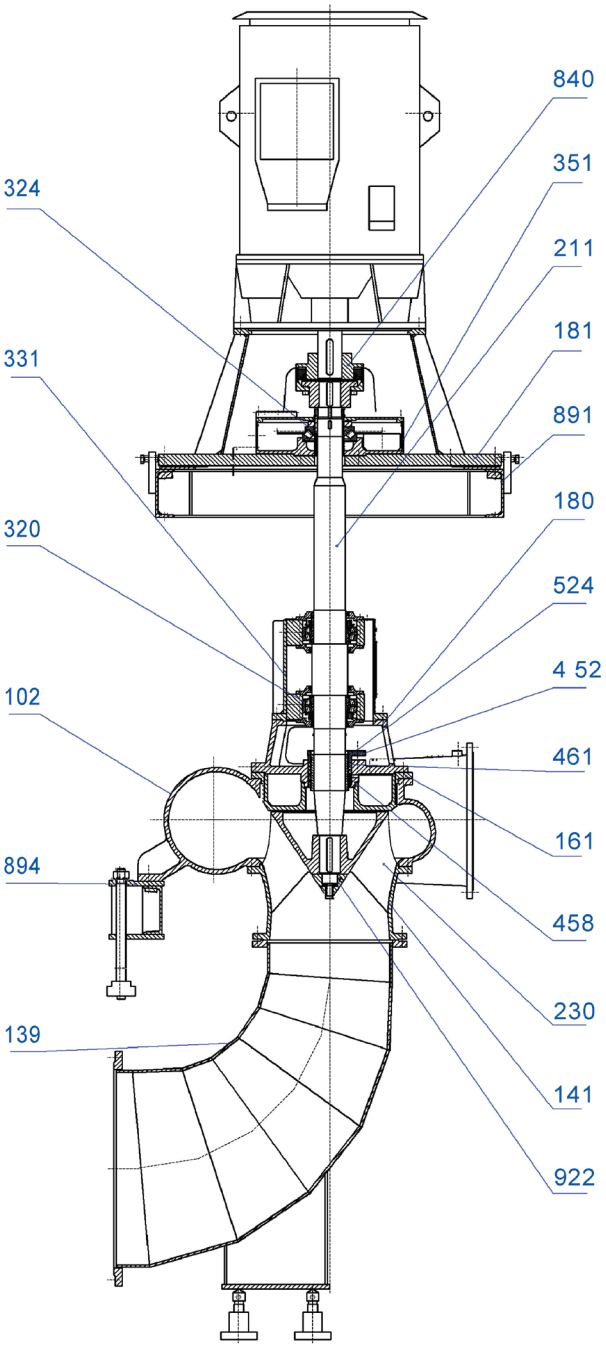
The pump axial thrust caused by the impeller and the rotor mass are absorbed by a journal bearing. It may be located inside electric motor or pump. In the latter case a typical bearing design (bearing placed in oil container with cooling option) is adapted.

MATERIAL VERSION

Pump main parts are made of materials shown in the following table:

Pump part	Material
Suction elbow	gray cast iron or steel
Suction converter, volute, volute cover, stand	gray cast iron
Bearing housing	gray cast iron or steel
Impeller	stainless steel
Shaft	steel

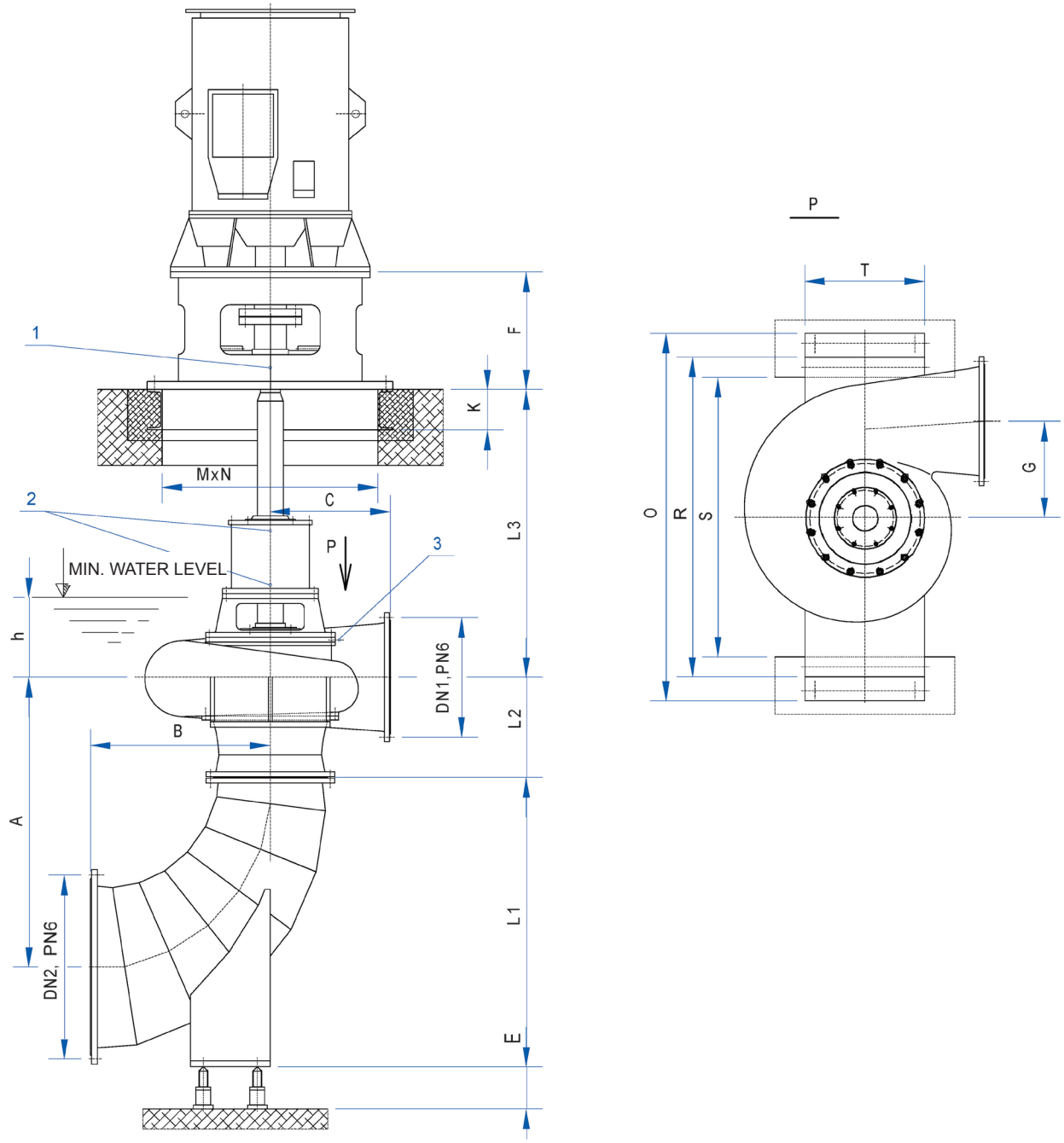
INFORMATIVE CROSS - SECTION OF THE PUMP 500 – BQOW



Position numbering acc. DIN 24 250

Position number	Name
102	volute
139	suction elbow
141	inlet piece
161	volute cover
180	stand
181	electric drive stand
211	shaft
230	impeller
320	bearing 23 030
324	bearing
331	bearing housing
351	bearing container
452	cover 150
458	flooding ring 150
461	packing 15x15
524	sealing bushing
840	N-EUPEX coupling
891	base frame
894	foot frame
922	impeller nut

DIMENSIONAL DRAWING



1. Journal bearing lubricated with oil OL 46 ČSN 65 6610

2. Thrust bearings lubricated with grease LQHQ 3

3. Sealing flushing with clean water from separate source

DIMENSIONS OF ALREADY MANUFACTURED PUMP SIZES

PUMP TYPE	500-BQOW	650-BQOW	800-BQOW	1000-BQOW
A	1450	1700	1950	2300
B	900	1100	1100	1500
C	600	1100	1000	1200
DN1	500	1000, PN10	800	1000
DN2	800	800, PN10	1000	1400
E	21	300	250	450
F	59	–	650	–
G	480	600	800	870
h	400	1500	500	1000
K	205	–	330	–
L1	145	960	170	1320
L2	500	740	850	980
L3	CUSTOMER GIVEN DATA			
MxN	1080x1080	–	2200x2800	–
O	1840	2500	2850	3400
R	1600	2450	2700	3380
S	1400	2000	2100	2660
T	600	900	1000	1200

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