Lemind - Tehnomašina

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NOTICE: DRAWINGS AND TABLES SHOULD BE REFERRED TO IN THE CATALOGUE GIVEN IN SERBO-CROATIAN

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HORIZONTAL PUMPS

1. DESCRIPTION OF BASIC CHARACTERISTICS

Mining sand pumps designated RPM are intended for transportation of water and crushed solid material mixture, pupl, to the highest grain size of 4 mm. They are of specially high antiabrasive resistance, low power consumption, silent and noiseless operation having small number of spare parts subject to wear as a result of liquid abrasion.

These pumps are primarily intended for use in the process of flotation as well as in all fields of transportation of dirty and abrasive material.

The design of the pumps is such so that their primary application is within a system without geodetic suction head, i.e., with inflow of pulp, but they may also be installed with geodetic suction head of approximately 7 meters. The parts of the pump subject to wear during normal operation, runner and spiral housing are lined with rubber highly resistant to abrasion of hydromixture and reagents attack.

The pumps are made with open, half-open and closed runner.

2. GENERAL CONSIDERATIONS ON THE PUMP AND PUMPING PLANT

Pumps are operating machines. They transmit power supplied from a driving machine to the liquid which passes through the pump operating system to a place where it could not get to in a natural way. For determined capacity Q, total head H and pump revolutions n, the pump can operate perfectly within the pump plant when its total head is equal to the required total head

The required total head consists of geodetic head and the head of all resistances during the flow of the liquid through the pumping plant. It is, therefore, necessary, when making a choice, to determine its total head which consists of geodetic suction and discharging head and heads of all the local resistances, for example, resistances in straigtforward pipes, valves, pipe bends, etc. Five meters of head should be added to the local total head for the sake of elongation of liquid flow when leaving the discharge piping.

Pumping plant is usually composed of the pump, driving motor, suction and discharge piping with corresponding fixtures. Building of such a plant depends on the space where the plant enables proper pump operation.

3. PIPING

a. Suction piping

As the pump has been designed for operation with the negative suction head, i.e., inflow of the pulp and is supplied of that design, now, in order that its operation should be satisfactory, the dependence, among other things, is on that whether the suction pipe is properly done. Having in mind that the pump transports liquid taken from the reservoir laid above the axis of the pump, it is that the inflow pipe should be of mild fall slope in the direction of the suction, and at the same time it should be of cone mode in the same direction. In order to avoid formation of air funnels, »pockets«, the suction pipe must be perfectly sealed. Besides the perfectly done sealing of the suction pipe, formation of the air pockets may be encountered if the liquid level in the reservoir is very low in correspondence with the suction throat of the piping. In order to avoid this phenomen the level of the liquid must be at least 0.5 m above the suction throat of the piping.

In case that the pump has been built into the pumping plant of positive suctions head, i.e., if the pump sucks liquid, it is necessary that the pump should be provided with the suction basket. The suction pipe should be installed so as to be constantly rising towards the pump throat. The suction basket must be submerged at least 0.5 m below the liquid level and at the same distance in all directions except from the bottom for the pump is installed for operation with dirty liquid so that the suction of mud from the bottom is not detrimental. When putting the pump into operation for the first time, filling of the pump and suction piping with clear water should be enabled.

The pump should be installed as close to the reservoir as possible, taking care that there is enough space for operation control of the pump and its maintenance. Electromotors must be of design with P33 protection.

It is of importance to mention here that, regardless the fact that the pump has been built-in, precautions must be taken to prevent entering of air into the suction pipe for there may occur very great reduce in the capacity of the pump even interruption of the operation.

b. Discharge piping

Line for the discharge pipe should be so chosen that it rises by the shortest possible way and with the least possible number of pipe bends. Any lowering of the pipe should be avoided since some air may be collected at the bends which represents certain danger to the pump operation (may have detrimental effect to the pump operation). If, because of the configuration of terrain, a solution with bends must be accepted it is necessary that at the top of each bend an automatic valve should be built-in for the sake of discharge of air.

The discharge pipe should always be provided with slide valves in the vicinity of the pump. By means of slide valves or valves with smaller pumps, the flow may be adjusted to the required one, i.e., by damping the driving motor.

If the pump operates by means of long discharge piping or with a high total head of 15 meters, it is recommended that a back pressure valve should be built-in between the pump and the slide valve which, when an unexpected interruption in the pump operation occurs ,makes the pump sure of the liquid flowback and hydraulic impact during the return of the column of water.

c. Pipe diameter choice

Usual speeds of the water flow through the piping range between 0.5 to 3.0 m/sec. If higher speed of flow is accepted then pipe diameter should be less and vice versa. By the acceptance of higher speed, smaller diameter of the pipe is obtained and thus cheaper piping but losses due to the resistance of the liquid flow through the piping are greater. The required total head $H=h+hw$ is thus increased and the driving power consumption as well, i.e., more heavy duty motor is needed. On the contrary, by the acceptance of low speed, greater pipe diameter is obtained and as a result more expensive

piping but with less losses and lower driving power consumption, i.e., smaller and cheaper motor is needed. In reference with this it is necessary to see the economy for certain period of years, for example, for 10 years. It is desired that the diameter of the piping should be for 1" greater than that of the inlet and outlet diameter of the pump throat because of the reduction in resistance. Resistance coefficient should be taken as that for new pipes because the pipes are polished by sharp particles of the hydromixture during the operation.

4. DELIVERY AND INSTALLATION OF THE PUMP

Delivery covers the pump with electromotor fitted to the beam fastened to the base of the pump. The pump is rarely delivered without the electromotor. As for the drive, connection is done through V-belts. Driving part is protected by means of a shield made of sheet metal.

When installing the pump into a new or already existing pumping plant, you should follow the instructions which are as follows:

— Fasten the pump to the two beams of »U« profile on which jag bolts are fitted, then install the pump together with beams upon the foundation. There must be slots on the beams for the pump bolts of 15—20 cm lenght. The beams must be longer for about 20 cm than the part of the pump base which serves for fastening.

— Level the pump by putting pegs under the beam in the vicinity of the jag bolts at equal distance taking care that the pump is given a proper position related to the suction and discharge pipe.

— Groat the beams and jag bolts with cement mortar of 1:3 ratio.

— After binding of mortar, tightly fasten nuts of the jag bolts.

— Connect the pump on the suction and discharge connection to the pipeline by means of »Victualic«. In case that connections are with flanges, care should be taken to avoid considerable strain on the flanges.

The installation done and before putting belts or tightening them in as much they have been put on, direction of the electromotor rotation should be checked which must be observed from the side of the belt in clockwise direction, that is, in the direction of the discharge connection. The pump must be put into operation in opposite direction for unwinding of the runner will occur and as a result damage of the pump.

Distance between the pump and the reservior to which the pump has been connected must not be less than it is necessary for undisturbed operation on maintenance and control of the pump.

5. SEALING

Sealing the passage of the shaft through the pump housing is performed by the application of the special system of sealing elements with connecting of clear water supply of pressure which must be higher for 0.5 atm than the pump operating pressure.

Delivery of the pump includes fitted packing. Carefully fitted packing and its proper maintenace are the two of the conditions necessary for proper operation of the pump. Both when mounting a new pump or when replacing worn out packing, you should make sure that the space of the sealed chamber is completely clean.

When replacing packing made of asbestos and graphite braid which must be of the best quality, damaged sealing sleeves should be visually controlled. In as much it is a damage to a greater extent, open the housing of the pump and then unscrew the runner in counterclockwise direction. Release the pump housing fitted to the base and then remove the sealing sleeves from the shaft and housing. As it is already said, sealing sleeves and the sealing chamber must be carefully clean. When replacing the packing only, dismount the divided sleeve then take out damaged packing and replace it with new ones made

either in one piece and mounted like a spiral or like a ring whose joint, when mounting, should alternately be turned for 90° with reference one to another takingcare that there are at least 5 mm of free space left for leading of the divided sleeve. Its tightening must be easy and uniformly done.

As the pump has been designed for operation with abrasive and dirty liquid, it is an obligatory action to make a connection of clear water supply of the pressure of 1.0 to 6.0 atms depending on the pump total head.

This water seal has double aim, on one hand to protect the sealing system from penetration of abrasive material from the pump and at the same time from its immediate damage, and on the other hand for rinsing of the pump operating system when there is an interruption in the operation.

6. PUTTING THE PUMP INTO OPERATION

Centrifugal pump cannot »suck« water except when submerged. Therefore the pump and the suction pipe must be previously filled with water.

As the pump operates with the inflow of water it is that its first putting into operation should be done according to the procedure as follows:

— Before putting the pump into operation and before the above mentioned check, it is an obligatory action, when installing the pump, to let clear water in for the sake of sealing and then let the pulp in.

— Switch the electromotor on after half of the reservoir has been filled.

— If the slide valve has been built-into the discharge pipe it should be closed before putting the pump into operation by means of which initial unloading of the electromotor is being done.

— When the pressure gauge, if any shows that the pump produces enough pressure, gradually open the slide valve until the required, i. e., normal pressure has been estabilished. The pump must not be allowed to operate longer with the slide valve closed. The pump must not operate without water, pulp, too.

— If there is a slide valve in the suction piping it must not be used for any damping because an uneasy operation of the pump and large overloading of the electromotor, even burning, may occur.

— If, besides cooling, the packing is overloaded, nuts in the sleeve for tightening the packing should be loosened. During the operation it is desirable that drops of water ooze from the packing. Dry packing makes a load to the sleeve so that it may be stopped or even damaged.

If for any reason hardening of the residual material in the pump housing resultls, proceed as follows: fill the pump and half of the reservoir with clear water. After some time, when the material became soaked through, rotate the pump manually to better breaking of the hardened material.

Do not put the pump into operation if it cannot be rotated manually, for breaking of the runner blades and fracture of the shaft may result. If tne hardened material cannot be soaked through, open the pump housing and remove the hardened material.

7. STOPPING THE PUMP

Before stopping the electromotor, shut down supply of the liquid into the reservoir. Immediately after discharging the reservoir switch off the reservoir. Pull out the gland on the suction connection so that residual pulp may flow out from the pump housing. Rinse the pump housing by means of the sealing water or tap water and shout down the sealing water. Then replace the gland.

8. PLANT CONTROL AND MAINTENANCE

Operation of the pump should be controlled during its use. Control of the pump includes: level of the Liquid in the reservoir, pressure in the dischrage piping up to the discharge connection of the pump, tightness and damage of the belts, loading of the driving motor and the condition if the pump can easily be hand started. Packing should also be controlled, especially during the first period of use.

If there are spare pumps at the pump station they should be used from time to time. Thus you can make sure that they are in good condition. If periodical putting into operation is not convenient, then it is necessary to more frequently turn the pump shaft manually, avoiding thus a possibility that the pump, due to long storage, should rust at some parts.

— Bearing maintenance

Mining sand pumps designated RMP to which this Instruction refers are provided with ball bearings and bearing cylinders. Lubrication of the bearings is done by means of oil. Oil level on the control screw should be controlled before putting the pump into its first operation as well as during the driving. In case that there is no leakage of oil after unscrewing of the screw, refilling should be done. After 2.000 to 2,150 hours of normal driving, oil should be replaced taking care to clean the bearings and oil space. Cleaning of the bearing should be done by means of benzine (not naphtha). For lubricating purposes use »Hiphenol« SAE-90 oil. Maximum permissible temperature of the bearing heating is up to 80°C. In case that higher temperature of the bearing heating is observed, stop the pump and find out the cause of excessive heating.

— Packing maintenance

The packing should be given a compulsory control every day in order to prevent larger damages of the sealing sleeves due to possible penetration of the hydromixture from the pump. Its penetration into the sealing system of the pump may occur in case of: incorrect putting of the pump into operation, insufficient pressure of the sealing water and supply stoppage of the sealing water. This stoppage may be the result of clogging the supply pipe in the vicinity of the pump (penetration of solid materials from the pump, leaves, branches and other impurities in the sealing water) or any other stoppage in the waterworks line.

During normal driving, drops of clear water should ooze from the packing. If oozing is considerable careful thightening of the sleeves should be done.

When replacing packing care should be taken the packing to be of adequate quality and cross-section. Damaged sleeves should be controlled as well.

9. CHOICE OF THE PUMP

Choice of the pump is done according to the operating characteristics of the pump, Q,H, γ from the table given in this Instructio... If the pump has not adequately been chosen, operating characteristics change can be done by changing belts, that is, by changing the number of rotations of the pump. For changes included in the table for the specified pump no calculations should be done but new characteristics should be determined from the table.

As for changes of the characteristics not included in the table, estabilishing of the new pump characteristics may be done using formulas as follows:

Capacity change: $Q_1 = Q_0(n_1/n_0)$ — increase with the first power.
Total head change: $H_1 = H_0(n_1/n_0)^2$ — increase with the second power.
Power change: $N_1 = N_0(n_1/n_0)^3$ — increase with the third power.

Index »0« refers to the characteristics of the delivered pump while index »1« refers to the new characteristics of the pump.

If the need rises for far higher total head than that which the specified pump can achieve, pumps must be connected in series. Because of the construction, more than two pumps cannot be connected for there may occur damage of the pump operating system as a result of high pressure.

10. SEALING WATER CONSUMPTION

Clear water having pressure of 0.5 atm higher that the pump operating pressure must be continually applied to the connection intended for connecting water for sealing. In order to perform continuous control of the difference of pressure and its maintenance it is necessary to install a pressure gauge on the pump or in the immediate vicinity of the discharge connection and supply piping for the sealing water.

The sealing water consumption ranges from 1.0 to 2.3% of the pump capacity. At higher capacity, consumption is higher and vice versa. Larger quantity of water for sealing has no detrimental effect to the pump but care must be taken not to be detrimental to the technological process.

The sealing water consumption will vary during the use of the pump depending on the stage of the damage of the sealing system.

11. CAUSES OF THE PUMP MALFUNCTION AND TROUBLESHOOTING

a. The pump, having been put into operation, does not supply liquid into the discharge pipe:

- There is no enough liquid in the reservoir,
- Incorrect direction of the runner rotation,
- Too high discharge head,
- Insufficient number of revolutions of the pump,
- Runner clogged.

b. The pump supplies liquid into the discharge pipe but insufficiently:

- Check if the suction pipe is clogged,
- Check if air penetrates into the pump at spots where the suction pipes are joined or at the packing, which may be found out by careful investigation of the joint by means of soap or oil (by passing of air for 1% of the liquid volume, the flow may be reduced for 10% and 8 to 10% of air may cause interruption of the pump operation),
- Check for the liquid level in the reservoir to be enough,
- Check if the discharge head is lingher than that anticipated,
- Control if the number of the pump rotations is small; tihgten belt if loose; see if the voltage is adequate.

c. The pump produces insufficient pressure:

- Insufficient number of rotations of the pump,
- Air contained in water,
- Runner damaged or diameter reduced.

d. The pump operates well initially, but later loses the capacity of suction:

- Liquid level in the reservoir has fallen below that permissible so that air enters the pump,
- Packing worn out and allow air to pass; it should be replaced by a new one.

e. The pump consumates too much power:

— Too large number of rotations,

— Total head less than that anticipated so that the pump supplies more liquid than that anticipiated,

— Worn out bearings and packing,

— Packing tight too much,

— Runner damaged or shaft bent,

— Large friction between the runner and the pump housing; adjust end play between the runner and the suction half casing to the value of 1 to 2 mm; adjustment should be done by axial displacement of the pump body with shaft.

f. Hight temperature of bearings:

— Bearings poorely lubricated; insufficient oil or bad quality oil,

— Increased axial force or sealing rings worn out,

— Belts too tight.

12. FAULTS WHICH APPEAR AFTER LONG-TERM OPERATION OF THE PUMP

Wear of the pump parts is inevitable but there may be other reasons which make the pump to operate with more difficulty though it does not show signs of damage. Thus, for example, because of increased leakage and increased resistance of friction, flow and total head are decreased. Worn out sleeves and packing allow air to pass into the pump, while the cavitation effect, even of the least degree, destroys some parts and thus contributes the efficiency of the pump to be decreased.

Though causes of cavitation have not been completely explained it may be said that it is a phenomenon at which gaseous bubbles in the liquid flow are frequently formed and gone. External aspects of cavitation are as follows: noise (from that hardly audible to a strong one), etching of solids, vibrations of the machine to very strong shocks and decline of power interchange between the runner and liquid flow. Cavitation will appear at spots where the pressure decrease to a great extent is possible. That is why whirls are very unsuitable, for it is intheir centers that pressure is very low, therefore use of bodies whose geometry causes formation of whirls should be avoided. Rough surfaces of solids are detrimental, too. Hence, turbulent flow is more inconvenient than laminar one.

It may be supposed that there will be no cavitation with the rubber runner for it is not likely to corrode, and strokes to the blades of the runner as a result of collision of the parts of liquid may be damped because of the elasticity of rubber.

From the aforesaid reasons it is necessary, from time to time, to check the pump in details, especially the pump being in operation for a long time and if possible to eliminate estabilished disadvantages.

When the pump is damaged to such an extent that considerable repairs are necessary, it is a good practice to consider if it is better to buy a new pump or the old one to be given services.

11

VERTICAL PUMPS

The difference between the horizontal and vertical pumps is in the way of fastening the pump to the base, connecting of the driving motor and installation of the pump. The rest of consideration given for the horizontal pumps apply to the vertical pumps as well.

The pump is fastened to the flange of the vertical base which is of cylindrical shape. Vertical base with the pump RMPV 75/75 and RMPV 50/50 is made in three parts. Ball bearings are housed in the middle part of the vertical base so that they cannot be damaged when the pump is being submerged.

Shaft with the runner and bearing casings can axially be displaced so that an adequate clearance between the runner and the suction half casing of the spiral rubber liner will be maintained. Axial displacement is achieved by means of the nut built-into the shaft.

Vertical pumps are produced in two variations for connecting the driving motor, that is, electromotor. One variation is a direct connecting of the electromotor to the shaft of the pump by means of flexible coupling and the other one by means of V-belts and wedge friction wheel. The electromotor is placed upon the vertical plate parallel to the pump axis. To enable fastening of the belts during the use of the pump, vertical plate may be radially displaced in reference to the pump axis.

Vertical pumps are usually installed into hydrants, reservoirs, i.e., into a space where collecting of the liquid is done. During the pump operation the level of the liquid varies so that in most of the cases it is necessary to change the position of the pump in reference to the level of the floor and ground. In order to enable change of the pump position it is installed upon the movable arrangements like a jack, moving sledges and the like.

If the pump changes its position during the operation it is necessary to put a rubber ribbed hose on the discharge pipe in the immediate vicinity of the pump discharge joint of the lenght enough to permit undisturbed change of the pump position.

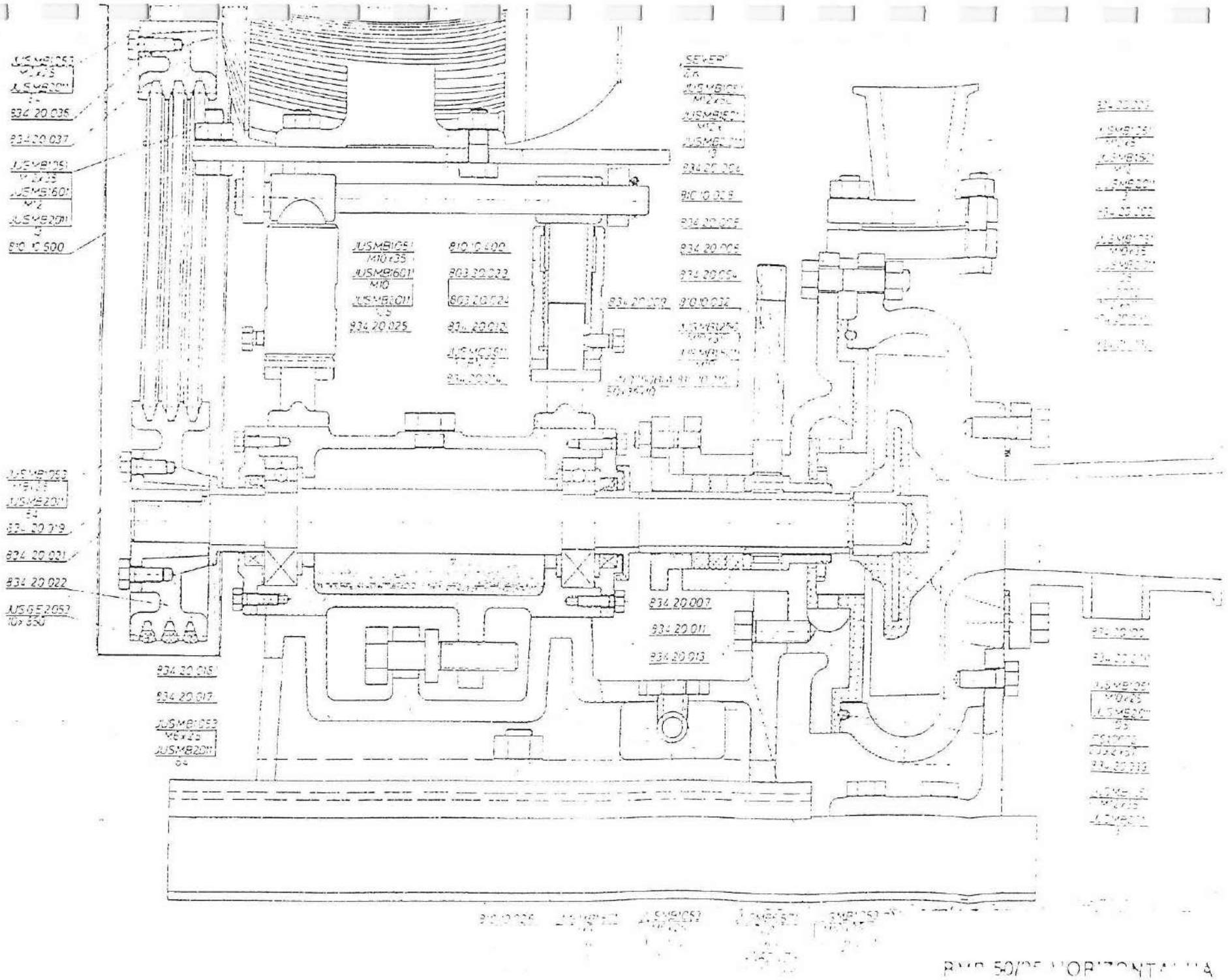
The pump operates as submerged, so that for its proper operation it is necessary to be submerged from 300 to 600 mm in reference to the suction joint.

Putting the pump into operation and its stopping is done according to the instructions given for horizontal pumps.

Life of the pump depends on proper maintenance so that maintenance should be given considerable attention. During normal operation vertical pumps are submerged in order to prevent external penetration of the liquid, pulp, into the pump. It is completely shielded so that external inspection of the parts and conclusions on their damage as a result of abrasion of the hydromixture is made impossible. In order to prevent larger damages of the parts of the sealing sleeves, bearing, shaft and the rest of the parts, frequent checks of the pump must be done. Checks should be done at least once a week in a way so that pump is separated from the base and packing inspected, space around the packing cleaned, packing sleeves tightened and, if necessary, packing replaced. After you had estabilished, during the check, that larger damages of the sealing sleeves, shafts or bearings had resulted they should be replaced by new ones or at least old ones repaired.

When replacing sleeves you must dismount the pump out of the base. First, do it with the suction part of the pump housing, unscrew the runner and then dismount the housing with the sealing sleeves and vertical base. Shaft on the bearings should be dismounted from the vertical base. When remounting the pump you should follow the procedure opposite to that when dismounting.

Replaced parts and all the parts of the pump must be perfectly clean when remounting the pump. The time period needed for checks may also be estabilished on the basis of experience during the use of the pump.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B10 10 400
803 30 033
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834 20 022
834 20 026
B10 10 026
834 20 005
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834 20 012
834 20 014
834 20 032
834 20 033

RADNE KARAKTERISTIKE PUMPE [illegible] 4/25 SA POLUOTVORENIM RADNIM KOLOM

Podaci za snagu dati su za čistu vodu [illegible] [1 kg/dm³] za druge vrednosti specifične težine snaga se uvećava množenjem sa [illegible]

UKUPAN NAPOR PUMPE H [illegible] (m)												
Kapacitet	6		9		12		15		18		21	
Q = l/min.	n	N	n	N	n	N	n	N	n	N	n	N
12	1200	0,8	1420	1,3	1625	1,8	1805	2,9	1910	3,8	2150	5,7
25	1220	1,0	1435	1,7	1650	2,6	1830	3,4	2005	4,3	2200	6,6
38	1235	1,2	1465	2,0	1695	2,9	1865	3,9	20040	5,2	2230	7,5
50	1260	1,5	1510	2,3	1725	3,4	1910	4,5	20080	5,8	2270	8,4
63	1300	1,8	1550	2,7	1780	3,8	1950	5,1	2120	6,5	2300	9,3
76	1340	2,1	1600	3,2	1820	4,3	1995	5,7	2165	7,3	2340	10,2
88	1400	2,5	1650	3,7	1855	4,6	2035	6,4	2200	8,2	2380	11,2
101	1470	3,0	1710	4,4	1910	5,9	2090	7,4	2250	9,2	2420	12,4
115	1480	3,5	1785	5,0	1955	6,6	2130	8,3	2300	10,2	2470	13,5

n — broj obrtaja pumpe (min^{-1})

N — pogonska snaga (KS)

SPECIFIKACIJA

REZERVNIH DELOVA ZA PUMPU RMP — 50/25

HORIZONTALNA

Red. broj.	NAZIV DELA	Pozicija
1.	Usisni priključak I	834.20.001
2.	Usisni priključak II	834.20.002
3.	Spiralno kućište	834.20.003
4.	Nosač spiralnog kućišta	834.20.004
5.	Navrtka	834.20.005
6.	Zaptivna čaura	834.20.006
7.	Čaura	834.20.007
8.	Dvodelna čaura	834.20.009
9.	Lavirintska čaura	834.20.011
10.	Stezni poklopac	834.20.012
11.	Poklopac	834.20.013
12.	Kućište	834.20.014
13.	Poklopac	834.20.017
14.	Čaura	834.20.018
15.	Konus remenice	834.20.019
16.	Klin	834.20.021
17.	Remenica pumpe	834.20.022
18.	Zavrtanj čep	803.20.024
19.	Vratilo	834.20.025
20.	Zavrtanj za štelovanje	834.20.026
21.	Postolje	834.20.027
22.	Potisna prirubnica	834.20.029
23.	Konus remenice EM	834.20.036
24.	Remenica EM	834.20.037
25.	Radno kolo	834.20.100
26.	Gumena obloga	834.20.200
27.	Nosač EM	810.10.400
28.	Zaštita	810.10.600
29.	Nosač pumpe	834.20.800
30.	Ležaj JUS M. C3. 611 30 BN 03 (3306)	
31.	Simering DIN. 3760 B-A	50 x 35 x 10
32	Gumeni prsten FS. 10002	209,2 x 5,7
33.	Cev	810.10.028
34.	Grafitno-azbestna pletenica	810.10.032.
35.	Odvodna cev	834.20.054
36.	Cev	834.20.058
37.	Gumeni prsten FS 10002	77,2 x 5,7

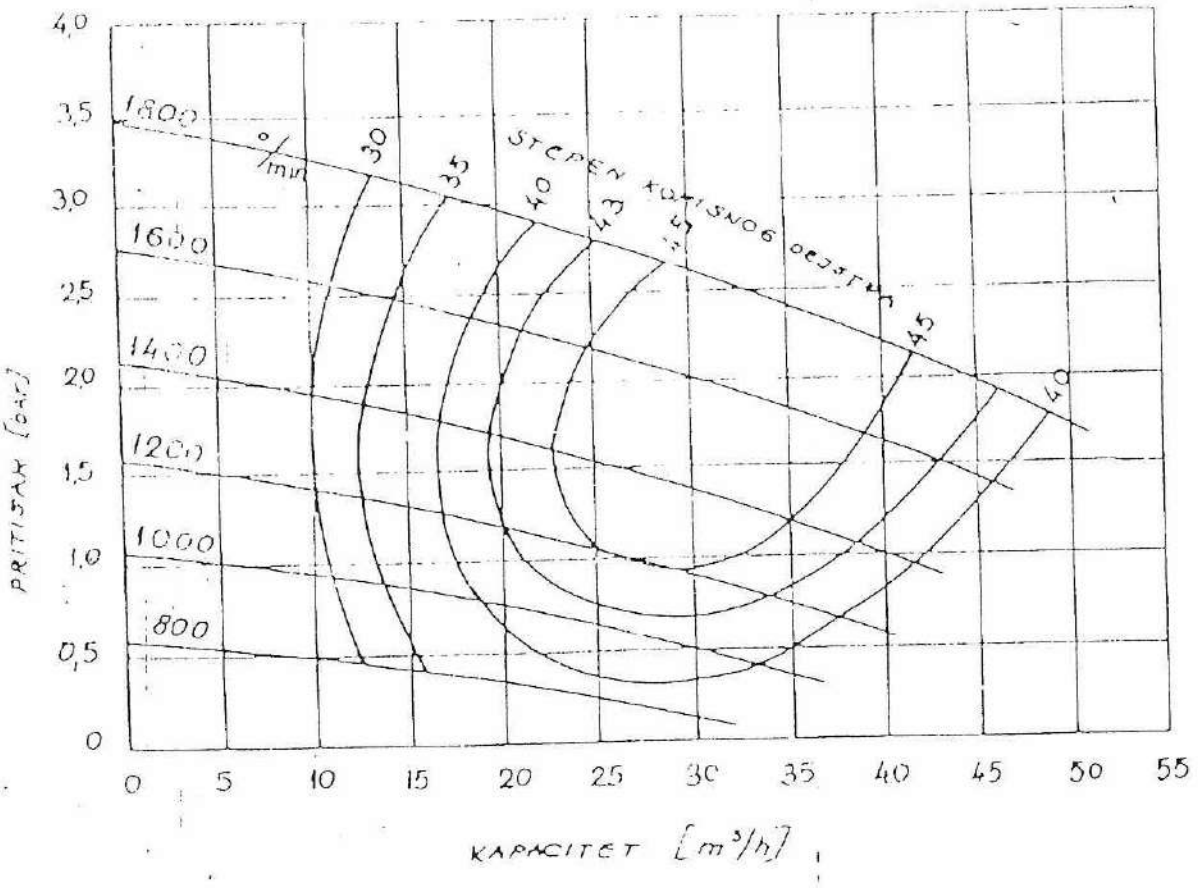
Napomena:

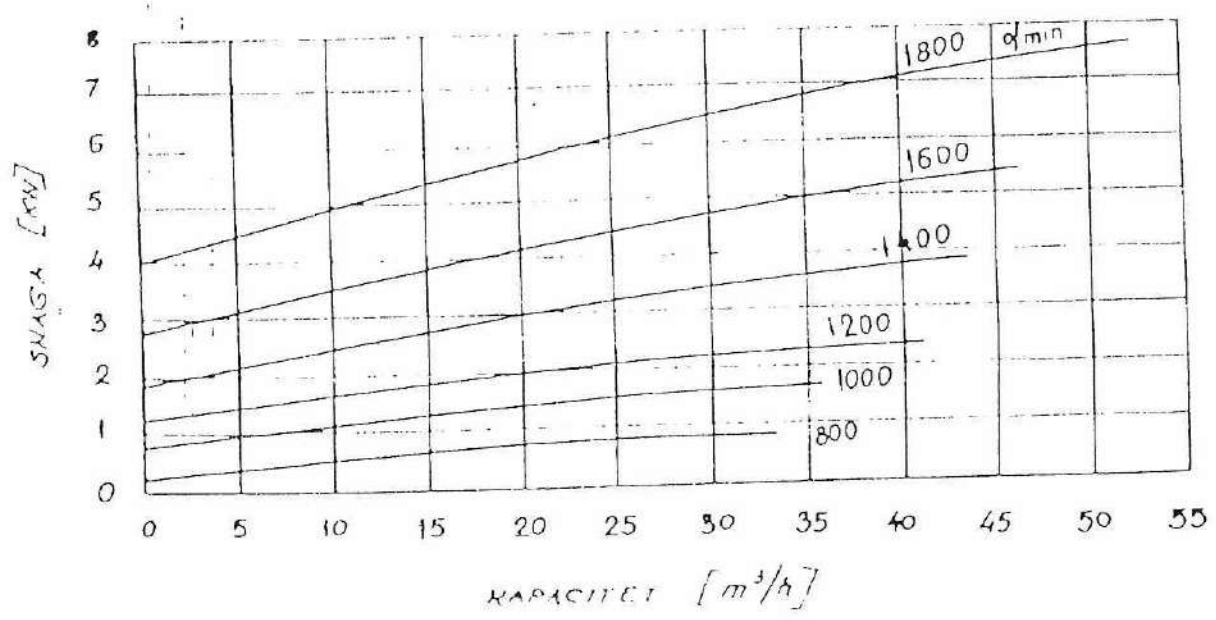
Pri narudžbi klinastih remenica poslati najveći prečnik remenice broj i poprečni presek klinastog remena.

RMP 50/50

Poluotvoreno radno kolo

KRIVE KARAKTERISTIKA





SNAGE VREDE ZA ČISTU VODU

ZA ODUBE VREDNOSTI SPEC. MASE SNAGA SE UVEĆAVA MNOŽENJEM SA β^3

SPECIFICATIONS
OF SPARE PARTS FOR THE RMP 50.50 HORIZONTAL PUMP

No.	Part denotation	Item
1.	Flange I	810.10.001
2.	Nut	„ 006
3.	Flange	„ 004
4.	Sealing sleeve	„ 007
5.	Tube	„ 008
6.	Divided sleeve	„ 009
7.	Sleeve	„ 010
8.	Base	„ 013
9.	Rubber liner housing, left	„ 014
10.	Rubber liner housing, right	„ 015
11.	Peg	„ 016
12.	Double sleeve	„ 017
13	Shaft	„ 018
14.	Sleeve	„ 019
15.	Tighting cover	„ 020
16.	Cover	„ 021
17.	Cover	„ 022
18.	Housing	„ 023
19.	Adjusting screw	„ 024
20.	Wedge friction wheel conic sleeve	„ 025
21.	Wedge friction wheel	„ 026
22.	Pump base	„ 029
23.	Runner	„ 100
24.	Rubber liner, right	„ 200
25.	Rubber liner, left	„ 300
26.	Electromotor bearing plate	„ 400
27.	Shaft	„ 401
28.	Washer	„ 402
29.	Screw	„ 403
30.	Bolt	„ 404
31.	Nut	„ 405
32.	Beam	„ 410
33.	Coupling	„ 500
34.	Rubber gland	„ 502
35.	Ball bearing	„ 3305
36.	V-belt	13x150
37.	Oil ring — semering	54x38x10
38.	Graphite asbestos braid	10x10
39.	Runner	810.10.100-1
40.	Runner	810.10.100-2

Radne karakteristike pumpe RMP 50/50 sa otvorenim radnim kolom

...daci za snagu dati su za čistu vodu (... 1 kg/dm³ za druge ...sove ti specijalne težine snage se uvećava množenjem sa ...

Q [l/s]	Ukupan napor pumpe H u [m]																			
	6		8		10		12		14		16		18		20		22		24	
	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N
40	800	0,55	872	0,62	955	0,79	1053	1,05	1130	1,2	1209	1,42	1285	1,80	1349	1,9	1417	2,1	1495	2,25
80	815	0,56	885	0,70	968	0,89	1068	1,15	1142	1,35	1220	1,60	1295	1,90	1360	2,1	1429	2,27	1505	2,30
120	825	0,59	895	0,77	980	0,97	1073	1,25	1153	1,45	1231	2,72	1305	2,10	1365	2,25	1440	2,52	1515	2,33
160	830	0,65	902	0,85	987	1,18	1083	1,35	1162	1,66	1232	1,91	1315	2,30	1380	2,40	1448	2,70	1520	3,05
200	840	0,65	914	0,95	995	1,21	1093	1,55	1172	1,81	1250	2,1	1325	2,40	1387	2,60	1456	2,90	1530	3,25
240	845	0,75	925	1,025	1006	1,30	1105	1,65	1179	1,99	1256	2,3	1335	2,60	1398	2,80	1465	3,11	1540	3,45
280	860	0,86	935	1,14	1017	1,42	1115	1,79	1187	2,1	1264	2,41	1345	2,80	1407	3,00	1474	3,31	1548	3,70
320	875	0,98	955	1,28	1038	1,53	1125	1,95	1196	2,22	1272	2,55	1355	2,80	1417	3,17	1485	3,50	1562	3,95
360	890	1,09	968	1,35	1055	1,66	1138	2,15	1206	2,36	1282	2,70	1365	3,25	1431	3,36	1510	3,70	1580	4,25
400	910	1,25	988	1,47	1062	1,82	1150	2,30	1224	2,55	1292	2,90	1375	3,40	1442	3,55	1515	3,92	1600	4,50
440	930	1,42	999	1,68	1076	1,92	1165	2,45	1233	2,65	1305	3,00	1385	3,60	1452	3,75	1530	4,16	1630	4,85
480	940	1,60	1013	1,83	1092	2,07	1180	2,60	1240	2,77	1315	3,12	1395	3,80	1487	3,97	1552	4,45	1660	5,25

n [min-1] — broj obrtaja pumpe

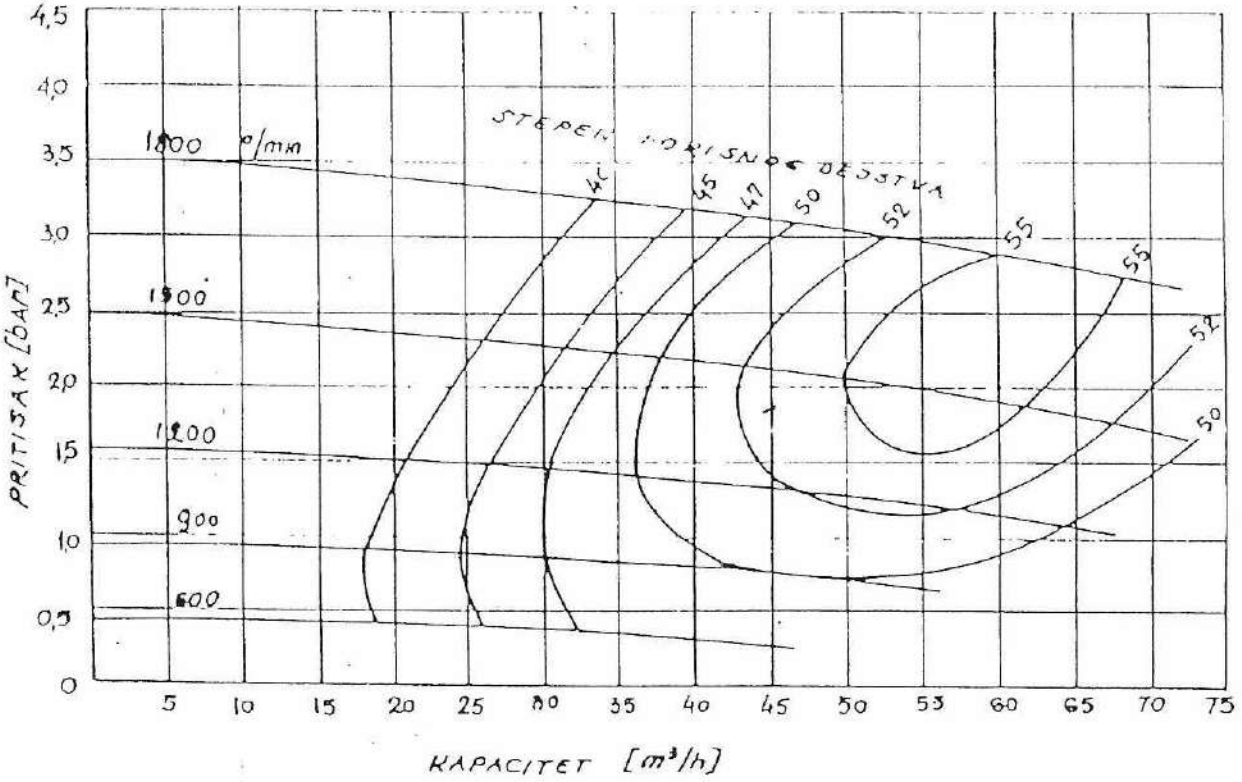
N [KS] — pogonska snaga

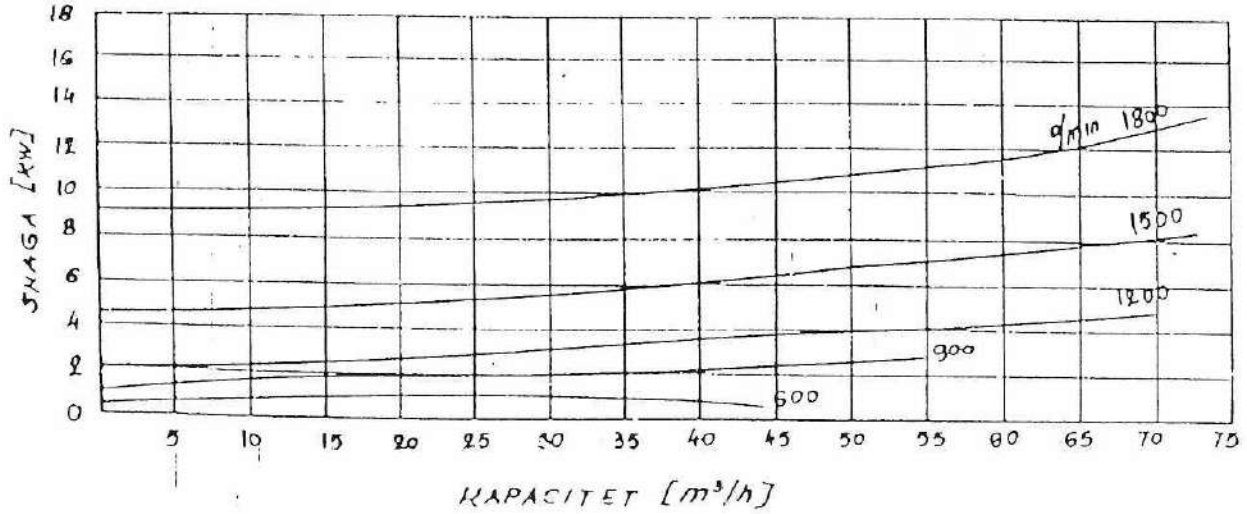
RMP 50/50 HORIZONTALNA

RMP 75/75

Otvoreno rudno kolo

KRIVE KARAKTERISTIKA





SNAGE VREDE ZA ČISTU VODU.

ZA DRUGE VREDNOSTI SPEC TEŽINE SNAGA SE UVEĆAVA MNOŽENJEM SA f^{μ}

SPECIFICATIONS OF SPARE PARTS FOR THE RMP
75 75 AND 100 75 HORIZONTAL PUMP

No.	Part	Item
1.	Flange	802.10.001
2.	Rubber liner housing	,, 004
3.	Sleeve II	,, 005
4.	Rubber liner housing	,, 006
5.	Tube	,, 007
6.	Sleeve I	,, 008
7.	Nut	,, 009
8.	Sealing sleeve	,, 010
9.	Divided sleeve	,, 012
10.	Cover	,, 013
11.	Double sleeve	,, 014
12.	Housing	,, 015
13.	Base	,, 016
14.	Shaft	,, 017
15.	Adjusting screw	,, 018
16.	Tightening cover	,, 020
17	Screw	,, 022
18.	Cover	,, 023
19.	Sleeve	,, 024
20.	Peg	,, 025
21.	Wedge friction wheel conic sleeve	,, 026
22.	Wedge friction wheel	,, 027
23.	Flange II	,, 028
24.	Runner	,, 100
25.	Rubber liner, left	,, 200
26.	Rubber liner, right	,, 300
27.	Belt shield	,, 500
28.	Electromotor hearing plate	,, 600
29.	Shaft	,, 601
30.	Vasher	802.10.602
31.	Screw	,, 603
32.	Bolt	,, 604
33.	Nut	,, 605
34.	Beam	,, 610
35.	Runner	802.20.100
36.	Rubber liner, left	,, 200
37.	Rubber liner, right	,, 300
38.	Ball bearing	Broj 3307
39.	V-belt	13x1150
40.	Oil ring — semering	65x45x10
41.	Graphite asbestos braid	10 x 10
42.	Runner	802.20.100-1
43.	Runner	802.20.100-2

Radne karakteristike pumpe RMP 75/75 sa otvorenim radnim kolom

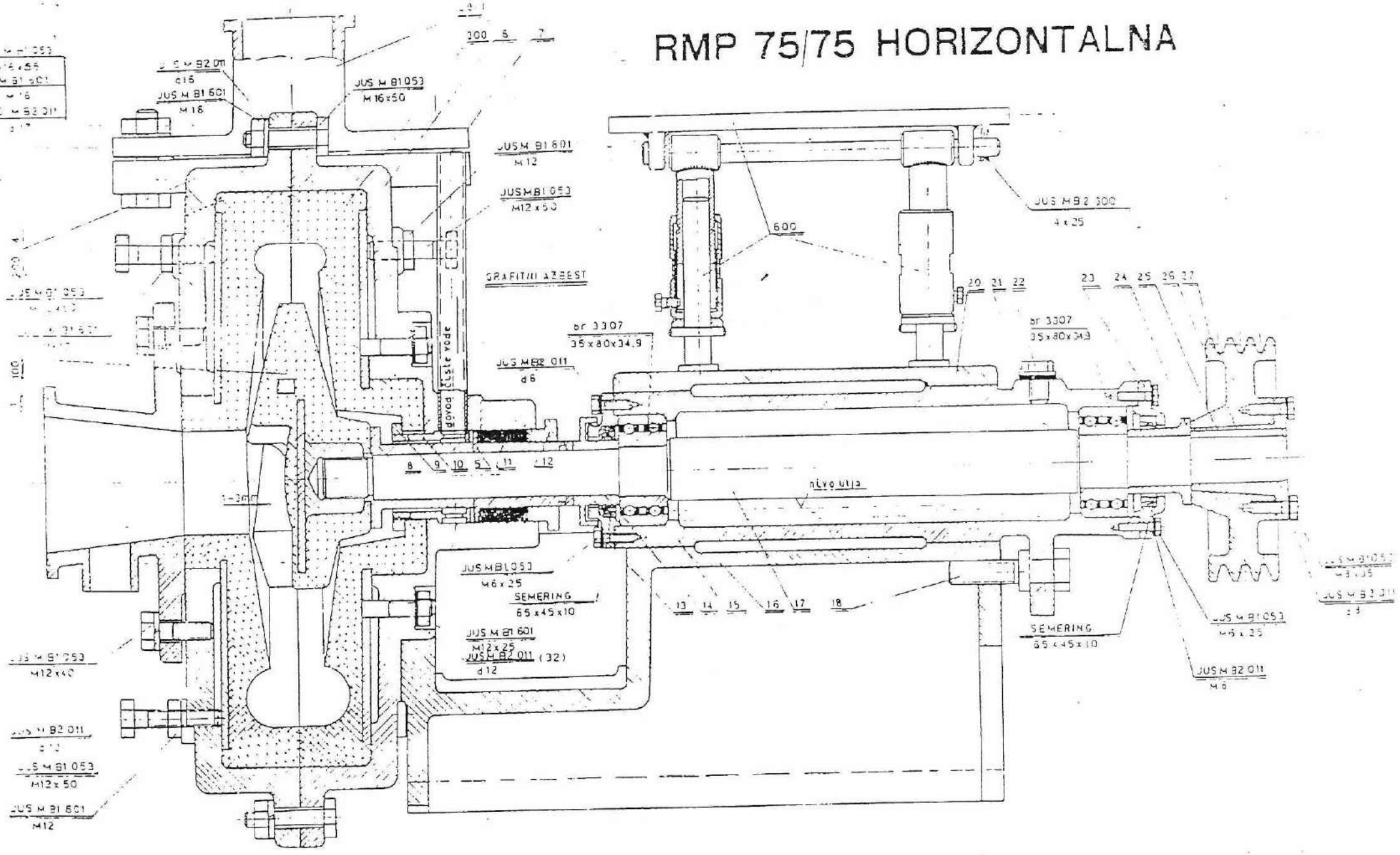
Podaci za snagu dati su za $\gamma = 1$ [kg/dm³] za druge vrednosti specifične težine snaga se uvećava množenjem sa γ

Kapacitet Q = lit/min.	Ukupan napor pumpe H u [m]																					
	6		8		10		12		14		16		18		20		22		24		25	
	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N
300	740	0,9	845	1,2	945	1,4	1030	1,7	1115	1,9	1200	2,3	1275	3,0	1335	3,3	1390	3,6	1435	3,9	1460	4,1
400	760	1,1	860	1,4	960	1,7	1050	2,0	1135	2,2	1220	2,6	1295	3,4	1350	3,8	1400	4,1	1445	4,4	1470	4,5
500	780	1,4	880	1,7	975	1,9	1065	2,2	1155	2,5	1240	3,0	1310	3,8	1365	4,2	1410	4,6	1455	4,8	1480	4,9
600	810	1,7	905	2,0	995	2,2	1080	2,4	1175	2,9	1260	3,5	1330	4,2	1380	4,8	1420	5,2	1465	5,3	1485	5,4
700	840	1,8	925	2,2	1010	2,5	1095	2,7	1190	3,3	1270	4,0	1340	4,7	1390	5,3	1430	5,7	1475	5,9	1495	6,0
800	860	2,1	945	2,4	1030	2,8	1125	3,1	1205	3,7	1285	4,4	1355	5,3	1400	5,8	1440	6,3	1490	6,6	1505	6,7
900	895	2,4	970	2,8	1060	3,1	1145	3,5	1225	4,1	1300	4,9	1370	5,8	1415	6,4	1455	6,7	1500	7,1	1520	7,2
1000	935	2,6	1015	3,0	1100	3,5	1175	3,9	1245	4,6	1315	5,4	1390	6,2	1430	6,9	1470	7,4	1520	7,7	1530	7,9

n [min⁻¹] — broj obrtaja pumpe

N [KS] — pogonska snaga

RMP 75/75 HORIZONTALNA



RADNE KARAKTERISTIKE PUMPE RMP 100/75

Podaci za snagu dati su za čistu vodu $\gamma = 1$ [kgr./dm^3] za druge vrednosti specifične težine snaga se uvećava množenjem sa γ

Kapacitet Q - lit/min	UKUPAN NAPOR PUMPE H u (m)																													
	6		8		10		12		14		16		18		20		22		24		26		28		30		32		34		36	
	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N
475	665	1,2	796	1,7	932	2,1	1070	2,5	1152	3,0	1226	3,4	1320	3,8	1388	4,4	1454	4,9	1520	5,4	1585	6,0	1650	6,5	1715	7,0	1770	7,6	1824	8,2	1880	8,8
575	700	1,4	832	1,9	966	2,4	1095	2,9	1176	3,5	1256	4,0	1335	4,5	1400	5,2	1465	5,9	1535	6,5	1600	7,0	1665	7,5	1735	7,9	1788	8,6	1844	9,3	1895	9,9
665	720	1,6	850	2,1	980	2,7	1115	3,2	1190	3,8	1275	4,4	1350	5,0	1420	5 6	1488	6,3	1560	6,9	1624	7,6	1685	8,2	1750	8,9	1804	9,6	1856	10 4	1910	11 1
755	760	1,8	884	2,4	1008	3,0	1135	3,6	1212	4,3	1292	5,0	1370	5,6	1440	6,2	1512	6,9	1585	7,6	1645	8,4	1710	9,1	1775	9,9	1824	10,6	1872	11,5	1925	12,2
850	800	2,0	924	2,7	1046	3,5	1175	4 1.	1248	4,8	1324	5,5	1400	6,1	1450	6,9	1540	7,7	1610	8,4	1672	9,2	1736	10,0	1800	10,9	1845	11,7	1892	12,6	1940	13 4
945	850	2,3	970	3,1	1090	3,9	1210	4,5	1284	5,3	1354	6,1	1430	6,8	1492	7,6	1556	8,3	1620	9,0	1690	9,9	1760	10,8	1825	11,7	1872	12,7	1916	13,7	1960	14 6
1040	910	2,6	1022	3,5	1134	4,3	1245	5,1	1318	6,0	1384	6,7	1460	7,5	1532	8,3	1605	9,1	1680	9,9	1736	10,8	1796	11,6	1855	12,6	1900	13,7	1948	15,8	2000	15,8
1150	968	3,0	1076	3,9	1188	4,7	1300	5 6	1375	6,5	1445	7 2	1520	8 3	1585	8 9	1660	9,5	1725	10,1	1780	11,3	1830	12 4	1880	13,6	1932	14,7	1980	16,8	2030	17 0
1230	1016	3,2	1128	4,7	1240	5,5	1330	6 4	1424	7,3	1496	8 1	1570	9 1	1638	10,0	1704	10,9	1775	11 8	1824	12,8	1876	13 7	1930	14,7	1980	15,8	2028	17,0	2080	18 0
1330	1065	3,8	1178	5,9	1290	6,6	1400	7 6	1475	8 6	1552	9,5	1622	10,2	1684	11,2	1756	12,2	1822	13,1	1875	14,1	1928	15,0	1980	16,1	2030	17,2	2080	17,3	2108	19 4

n [min^{-1}]- broj obrtaja pumpe

N (KS) — pogonska snaga

SPECIFIKACIJA
REZERVNIH DELOVA ZA PUMPU RMP 75/75 i 100/75

HORIZONTALNA

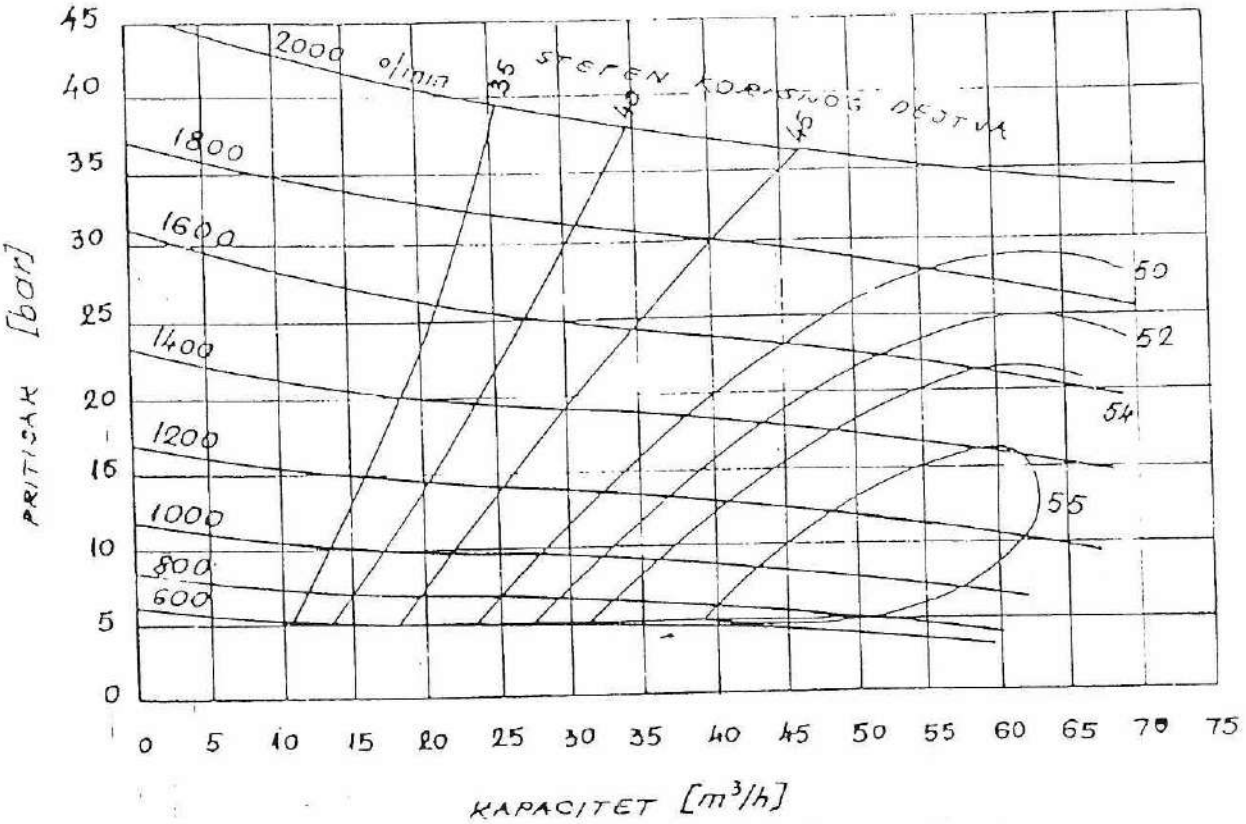
Red. broj	Naziv dela	Poziclja
1.	Priključak	802.10.001
2.	Kućište gumene obloge	„ 004
3.	Čaura II	„ 005
4.	Kućište gumene obloge	„ 006
5.	Cev	„ 007
6.	Čaura I	„ 008
7.	Navrtka	„ 009
8.	Zaptivna čaura	„ 010
9.	Dvodelna čaura	„ 012
10.	Poklopac	„ 013
11.	Dvostruka čaura	„ 014
12.	Kućište	„ 015
13.	Postolje	„ 016
14.	Vratilo	„ 017
15.	Zavrtanj za štelovanje	„ 018
16.	Stezni poklopac	„ 020
17.	Zavrtanj	„ 022
18.	Poklopac	„ 023
19.	Čaura	„ 024
20.	Klin	„ 025
21.	Konus remenice	„ 027
22.	Klinasta remenica	„ 026
23.	Priključak II	„ 028
24.	Radno kolo otvoreno za 75/75	„ 100
25.	Gumena obloga leva za 75/75	„ 200
26.	Gumena obloga desna za 75/75	„ 300
27.	Zaštita kaiša	„ 500
28.	Nosač elektro motora	„ 600
29.	Radno kolo zatvoreno za 100/75	802.20.100
30.	Gumena obloga leva za 100/75	„ 200
31.	Gumena obloga desna za 100/75	„ 300
32.	Kuglični ležaj	3307
33.	Klinasti kaiš	13 x 1150
34.	Uljni prsten — semering	65 x 45 x 10
35.	Azbestna grafitna pletenica (10 x 10)	802.10.011
36.	Radno kolo poluotvoreno za 100/75	802.20.100-1 sa 4 lopatice
37.	Radno kolo poluotvoreno za 100/75	802.20.100-2 sa 3 lopatice

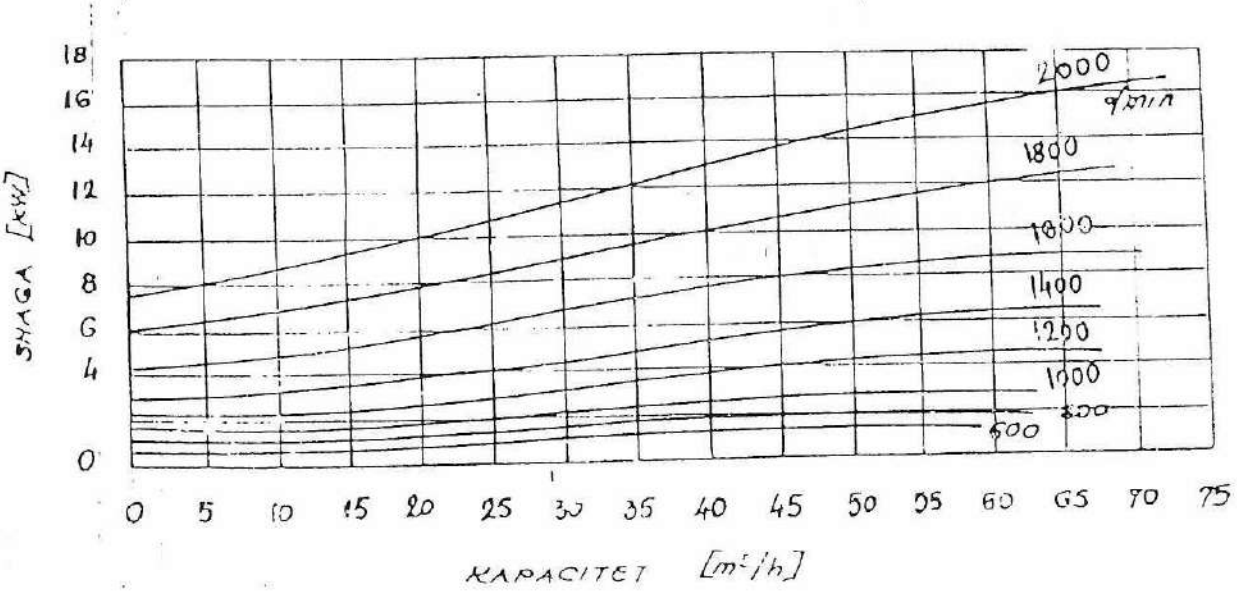
Napomena:

Pri narudžbi klinastih remenica poslati najveći prečnik remenice, broj i poprečni presek klinastog remena.

RMP 100/75
Poluotvoreno radno kolo

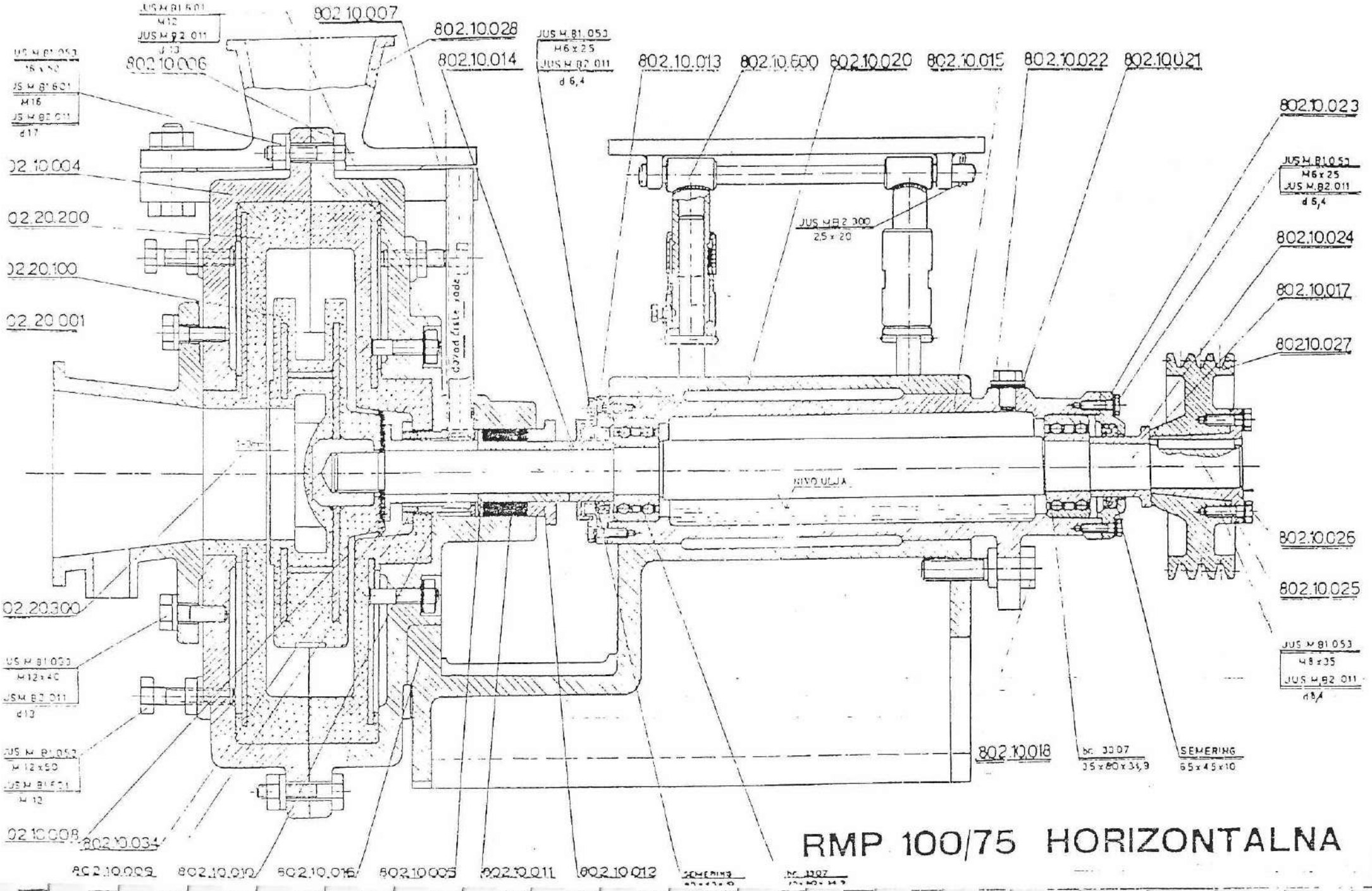
KRIVE KARAKTERISTIKA





SNAGE VREDE ZA ČISTU VODU

ZA DRUGE VREDNOSTI SPEC. TEŽINE SNAGA SE DOBIJA MNOŽENJEM SA δ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802.10.013
802.10.600
802.10.020
802.10.015
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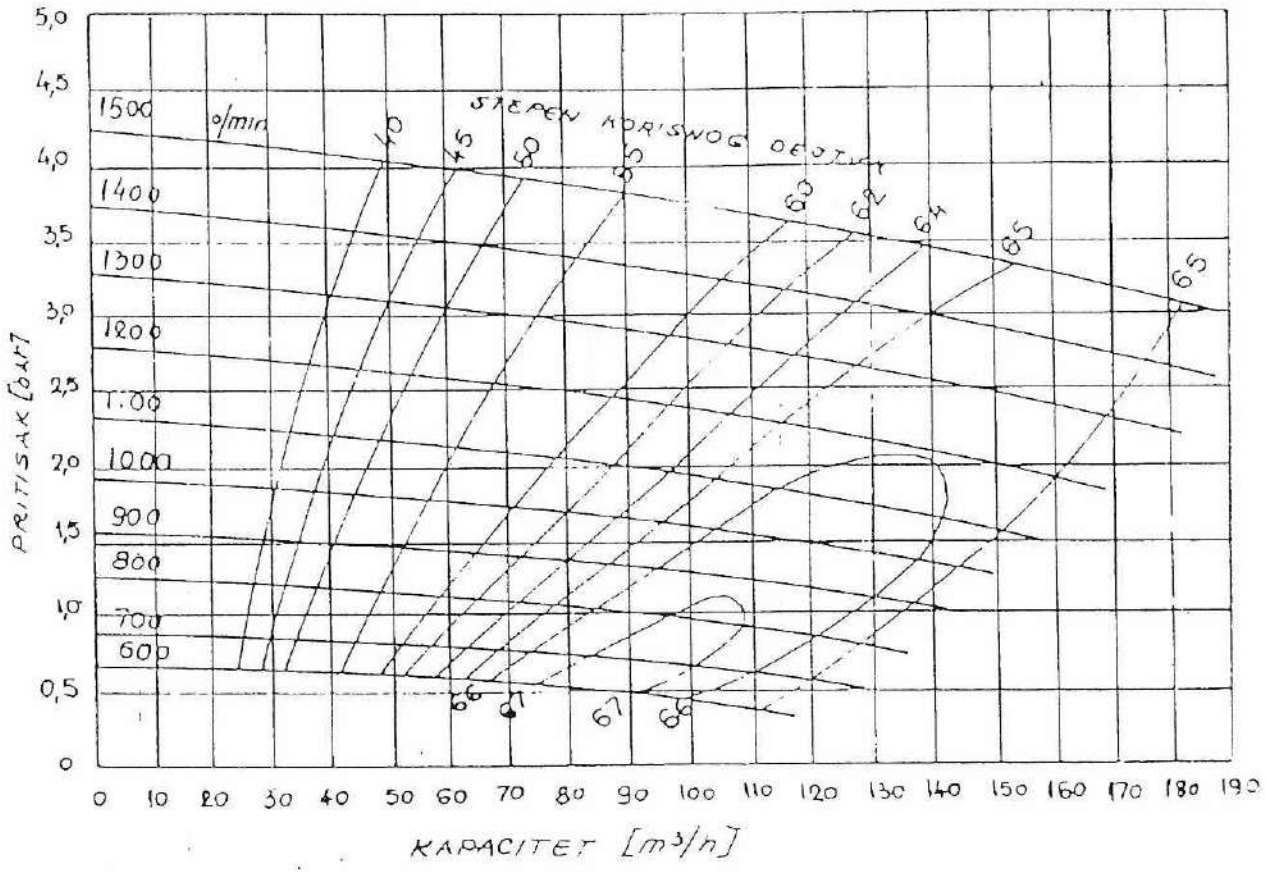
802.10.021
802.10.023
802.10.024
802.10.017
802.10.027
802.10.026
802.10.025
802.10.018
802.10.004
802.20.200
802.20.100
802.20.001
802.20.300
802.10.008
802.10.034
802.10.009
802.10.010
802.10.016
802.10.005
802.10.011
802.10.012
JUS M.B2.300
2,5 x 20
NIVO ULJA
SEMERING
65x45x10
RMP 100/75 HORIZONTALNA

RMP 125/100
Zatvoreno radno kolo

KRIVE KARAKTERISTIKA



SNAGE VREDE ZA ČISTU VODU

ZA DRUGE VREDNOSTI SPEC TEŽINE SNAGA SE DOBIJA MNOŽENJEM SA ρ

SPECIFICATIONS OF SPARE PARTS FOR THE RMP 125/125 AND 125/100 HORIZONTAL PUMP

No.	Part	Item
1.	Flange	803.10.001
2.	Rubber liner housing, right	,, 002
3.	Flange	,, 003
4.	Rubber liner housing, left	,, 004
5.	Sleeve	,, 005
6.	Divided sleeve	,, 007
7.	Sleeve I	,, 008
8.	Double sleeve	,, 009
9.	Sleeve II	,, 010
10.	Cover	,, 011
11.	Nut	,, 012
12.	Screw	,, 013
13.	Cover	,, 015
14.	Shaft	,, 016
15.	Cover	,, 017
16.	Nut	,, 018
17.	Sleeve	,, 019
18.	Peg	,, 021
19.	Wedge friction wheel conic sleeve	,, 021
20.	Wedge friction wheel	,, 022
21.	Pump base	,, 023
22.	Screw	,, 024
23.	Housing	,, 025
24.	Tube	,, 026
25.	Cover	,, 027
26.	Membrane	,, 032
27.	Runner	,, 100
28.	Rubber liner, left	,, 200
29.	Ruber liner, right	,, 300
30.	Electromotor bearing plate, assembly	,, 400
31.	Guide	,, 401
32.	Bolt	,, 402
33.	Washer	803.10.403
34.	Washer	,, 403
35.	Nut	,, 404
36.	Shaft	,, 405
37.	Sleeve, asembly	,, 410
38.	Sleeve	803.20.010
39.	Runner	,, 100
40.	Rubber liner, left	,, 200
41.	Rubber liner, right	,, 300
42.	Belt shield	,, 400
43.	Bearing cylinder	broj 22309
44.	V-belt	17x1610
45.	Graphite asbestos braid	10 x 10
46.	Oil ring — semering	10,00
47.	Runner	803.20.100-1
48.	Runner	803.20.100-2

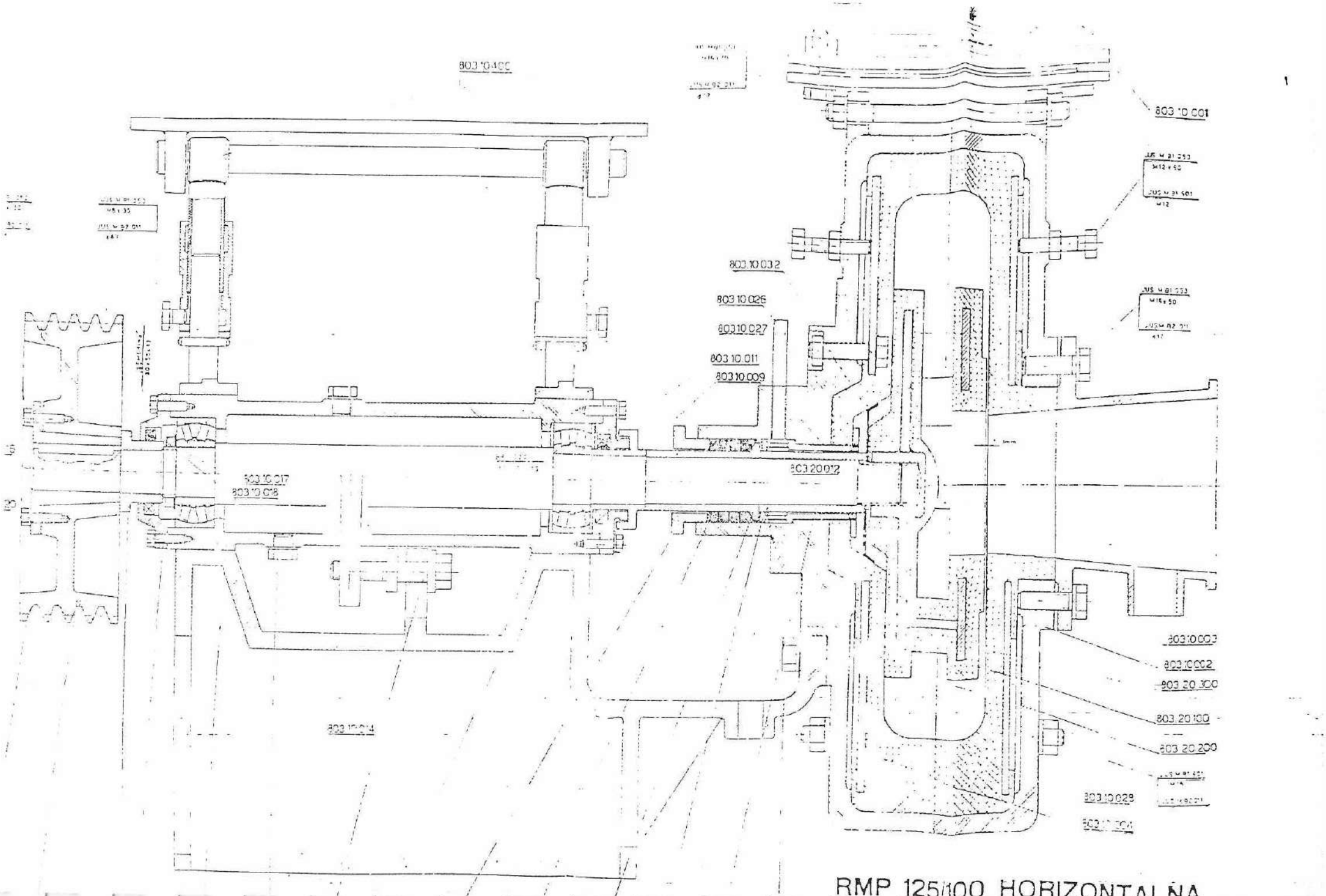
Radne karakteristike pumpe RMP 125/100 sa zatvorenim radnim kolom

Podaci za snagu dati su za čistu vodu $\gamma = 1\ kg/dm^3$ za druge vrednosti specifične težine snaga se uvećava množenjem sa γ

Kapacitet Q = lit/min.	Ukupan napor pumpe H u [m]																									
	6		8		10		12		14		16		18		20		22		24		26		28		30	
	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N
660	600	1,7	675	2,4	743	3,0	810	3,3	870	4,0	928	4,7	985	5,4	1032	6,1	1080	6,8	1130	7,7	1173	8,5	1216	9,4	1258	10,2
760	605	1,9	678	2,6	749	3,2	815	3,6	875	4,3	933	5,0	990	5,8	1037	6,5	1085	7,3	1134	8,1	1178	9,0	1220	9,8	1261	10,8
850	610	2,0	683	2,8	753	3,4	820	3,8	880	4,6	938	5,4	994	6,2	1042	7,0	1029	7,7	1137	8,5	1182	9,6	1223	10,5	1263	11,3
950	620	2,2	690	2,9	759	3,5	825	4,0	885	4,9	942	5,8	997	6,6	1046	7,4	1095	8,2	1140	9,1	1185	10,1	1227	11,0	1268	12,0
1050	625	2,4	695	3,1	763	3,7	830	4,4	890	5,3	946	6,1	1000	6,8	1050	7,9	1098	8,8	1145	9,7	1190	10,7	1232	11,7	1270	12,5
1150	635	2,6	705	3,2	772	3,9	835	4,6	895	5,5	952	6,4	1005	7,3	1055	8,3	1104	9,2	1150	10,2	1194	11,3	1235	12,1	1275	13,3
1350	655	2,9	722	3,7	787	4,5	850	5,4	910	6,5	966	7,4	1020	8,3	1067	9,3	1113	10,3	1160	11,4	1204	12,4	1243	13,4	1280	14,5
1500	675	3,6	742	4,3	807	5,2	870	6,1	926	7,2	982	8,3	1035	9,4	1078	10,4	1125	11,4	1170	12,5	1213	13,7	1255	14,9	1295	16,0
1700	695	4,3	762	5,1	827	5,9	890	6,9	945	8,1	998	9,2	1045	10,1	1095	11,4	1143	12,6	1190	13,8	1230	15,0	1270	16,2	1310	17,4
1900	712	5,5	779	6,2	842	7,1	904	8,0	962	9,2	1013	10,5	1060	11,2	1106	12,5	1153	13,8	1200	15,2	1241	16,5	1280	17,8	1320	19,7

n [min.$^{-1}$]-broj obrtaja pumpe

N [KS] — pogonska snaga

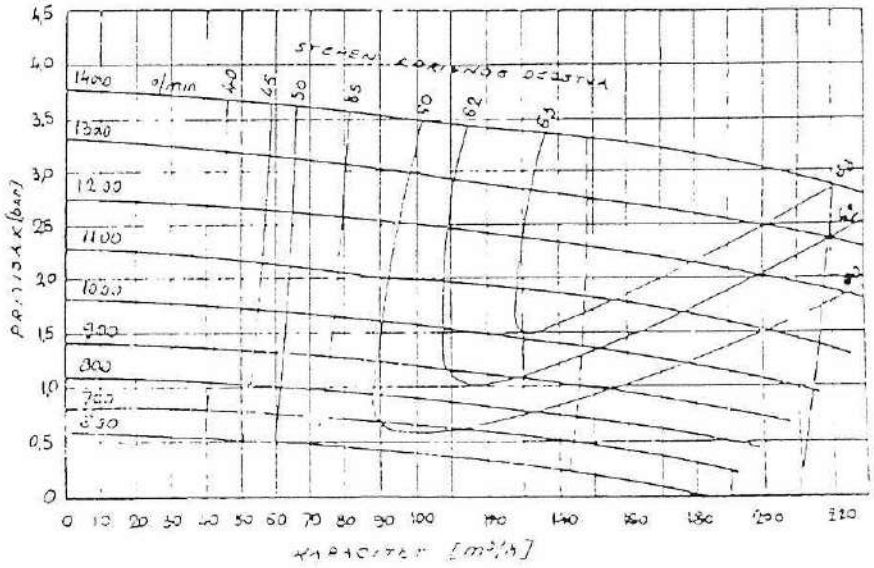


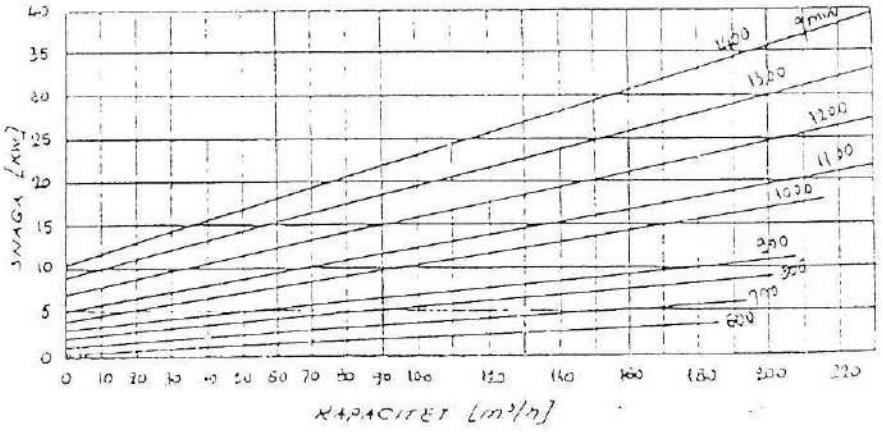
RMP 125/100 HORIZONTALNA

RMP 125/125

Otvoreno radno kolo

KRIVE KARAKTERISTIKA





Radne karakteristike pumpe RMP 125/125 sa otvorenim radnim kolom

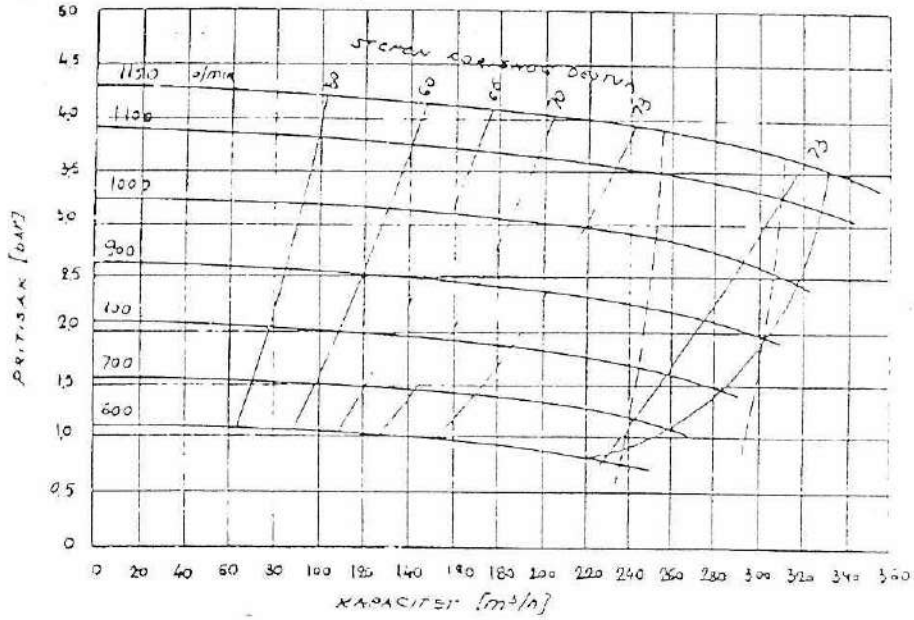
Podaci za snagu dati su za čistu vodu $\gamma = 1$ kg/dm³, za druge vrednosti specifične težine snaga se dobija množenjem sa γ

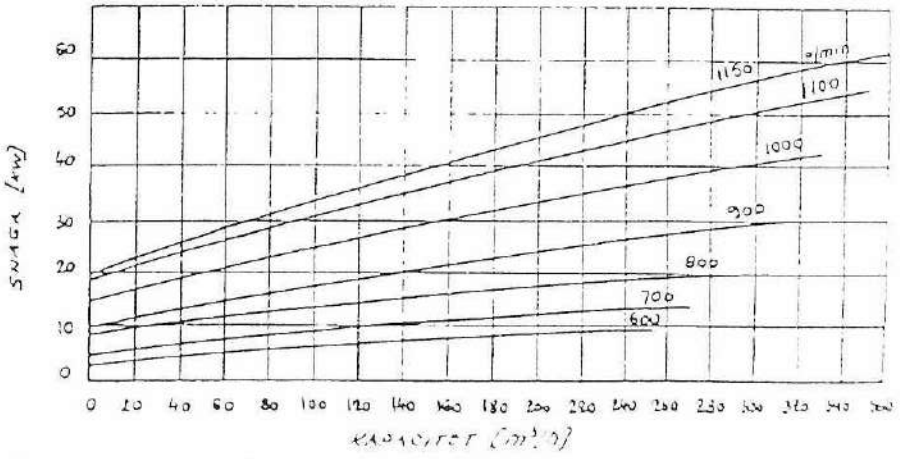
Kapacitet Q – l/min	Ukupan napor pumpe H u [m]																					
	6		8		10		12		14		16		18		20		22		24		25	
	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N
700	570	1,6	635	2,4	700	3,0	765	3,5	825	4,4	880	5,1	925	5,8	970	6,8	1010	7,8	1055	8,8	1080	9,2
800	575	1,8	640	2,6	705	3,0	770	3,8	830	4,8	885	5,5	930	6,4	975	7,4	1015	8,0	1060	9,3	1085	9,8
1000	580	2,0	650	3,0	715	3,8	785	4,5	930	5,5	905	6,5	940	7,4	985	8,4	1025	9,4	1070	10,4	1095	10,9
1200	585	2,3	660	3,3	730	4,0	800	5,2	855	6,3	910	7,4	950	8,4	995	9,5	1040	10,5	1080	11,6	1105	12,2
1400	590	2,6	670	3,7	745	4,8	810	5,8	865	7,0	920	8,3	960	9,4	1005	10,6	1045	11,8	1090	13,0	1110	13,5
1600	600	2,9	690	4,0	760	5,4	820	6,4	875	7,8	930	9,2	970	10,4	1015	11,7	1055	13,0	1100	14,3	1120	15,0
1800	610	3,4	710	4,6	780	6,0	830	7,2	890	8,6	935	10,1	980	11,4	1020	12,8	1065	14,2	1110	15,6	1130	16,4
2000	630	4,1	725	5,4	795	6,8	845	8,0	900	9,5	945	11,0	990	12,4	1030	13,9	1075	15,4	1120	17,0	1140	17,8
2200	655	4,8	735	6,3	805	7,6	860	8,9	910	10,4	955	11,9	995	13,4	1040	15,0	1085	16,6	1130	18,3	1150	19,2
2400	680	5,6	750	7,1	820	8,5	880	9,8	925	11,3	970	12,8	1010	14,4	1055	16,2	1110	17,9	1140	20,1	1160	21,2
2500	685	6,0	760	7,5	825	9,0	885	10,2	930	11,8	975	13,0	1015	15,0	1060	16,7	1135	18,6	1145	21,1	1165	22,3

n [min⁻¹] – broj obrtaja pumpe
N [KS] — pogonska snaga

RMP 200/150
Zatvoreno radno kolo

KRIVE KARAKTERISTIKA





RADNE KARAKTERISTIKE PUMPE RMP 200 150 SA ZATVORENIM RADNIM KOLOM

Podaci za snagu dati su za čistu vodu $\gamma = 1$ (kgr.dm^3) za druge vrednosti specifične težine snaga se uvecava množenjem sa γ

Kapacitet Q - lit/min	UKUPAN NAPOR PUMPE H u (m)																							
	6		8		10		12		14		16		18		20		22		24		26		28		30	
	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N
1500	450	3,4	510	4,40	562	5,8	604	7,4	655	8,6	703	9,8	750	11,7	786	13,3	817	14,9	840	16,3	874	17,8	912	19,7	957	21,9
1700	454	3,6	514	4,60	568	6,2	614	7,9	662	8,9	710	10,2	755	12,0	791	13,8	823	15,4	849	16,9	882	18,4	920	20,2	960	22,5
1900	460	3,8	520	4,80	575	6,6	624	8,2	668	9,3	713	10,7	760	12,5	797	14,3	829	15,9	859	17,4	893	18,8	928	20,6	965	23,0
2300	470	4,3	533	5,80	588	7,3	634	9,2	678	10,4	721	11,7	765	13,5	801	13,5	838	16,8	869	18,0	903	19,8	937	21,6	970	23,7
2510	486	4,5	545	7,00	598	8,5	644	10,7	688	11,6	730	13,1	770	15,1	807	16,4	843	18,1	879	20,0	912	21,9	944	24,0	978	26,1
3000	500	5,7	557	7,40	608	9,4	654	11,6	698	13,2	740	14,9	780	16,6	817	18,4	853	20,2	889	22,3	920	24,2	950	26,3	990	28,6
3400	515	7,0	567	8,60	619	10,7	668	12,7	713	14,7	755	16,5	790	18,7	827	20,4	863	22,5	900	24,9	930	25,7	958	28,9	985	31,1
3800	526	8,7	576	10,5	632	12,4	685	14,7	728	16,5	768	18,3	805	20,6	837	22,5	873	24,6	910	27,1	940	29,2	969	31,7	995	34,3
4000	536	11,4	587	13,1	642	15,0	699	17,2	743	19,2	783	21,0	820	23,3	850	24,8	885	27,4	915	30,1	965	32,2	984	34,7	1010	37,5

n — broj obrtaja pumpe [min^{-1}]

N — pogonska snaga (KS)

SPECIFICATIONS OF SPARE PARTS FOR THE RMP 200 150 HORIZONTAL PUMPS

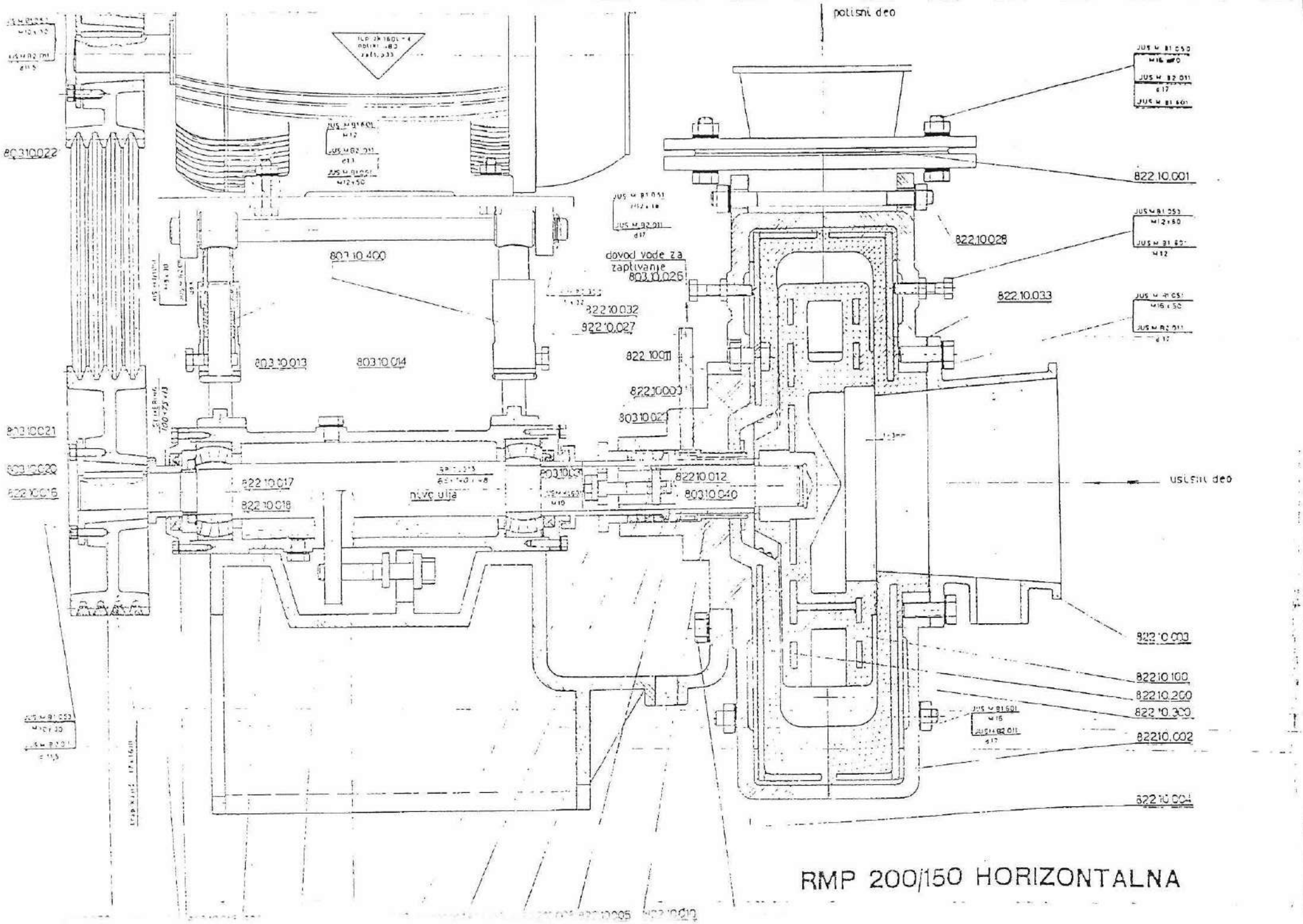
No.	Part	Item
1.	Flange	822.10.001
2.	Rubber liner housing, right	„ 002
3.	Flange	„ 003
4.	Rubber liner housing, left	„ 004
5.	Sleeve	„ 005
6.	Divided sleeve	„ 007
7.	Sleeve I	„ 008
8.	Double sleeve	„ 009
9.	Sleeve II	„ 010
10.	Cover	„ 011
11.	Nut	„ 012
12.	Screw	„ 013
13.	Cover	„ 015
14.	Shaft	„ 016
15.	Fuse	„ 017
16.	Nut	„ 018
17.	Sleeve	„ 019
18.	Peg	803.10.020
19.	Sleeve	„ 021
20.	Wedge friction wheel	„ 022
21.	Pump base	„ 023
22.	Screw	„ 024
23.	Housing	822.10.025
24.	Tube	803.10.026
25.	Cover	822.10.027
26.	Screw	„ 028
27.	Membrane	„ 032
28.	Base	803.10.033
29.	Runner	822.10.100
30.	Rubber liner, left	„ 200
31.	Ruber liner, right	„ 300
32.	Electromotor bearing plate, assembly	803.10.400
33.	Guide	„ 401
34.	Bolt	„ 402
35.	Washer	„ 403
36.	Nut	„ 404
37.	Shaft	„ 405
38.	Sleeve, assembly	„ 410
39.	Coupling	„ 500
40.	Shield	803.20.400
41.	Packing	822.10.033
42.	Bearing cylinder	broj 22310
43.	V-belt	17 x 1610
44.	Oil ring --- semering	86 x 60 x 13
45.	Graphite asbestos braid	10 x 10
46.	Runner	822.10.100-1
47.	Runner	822.10.100-2

SPECIFIKACIJA
REZERVNIH DELOVA ZA PUMPU RMP 250/200 HORIZONTALNA

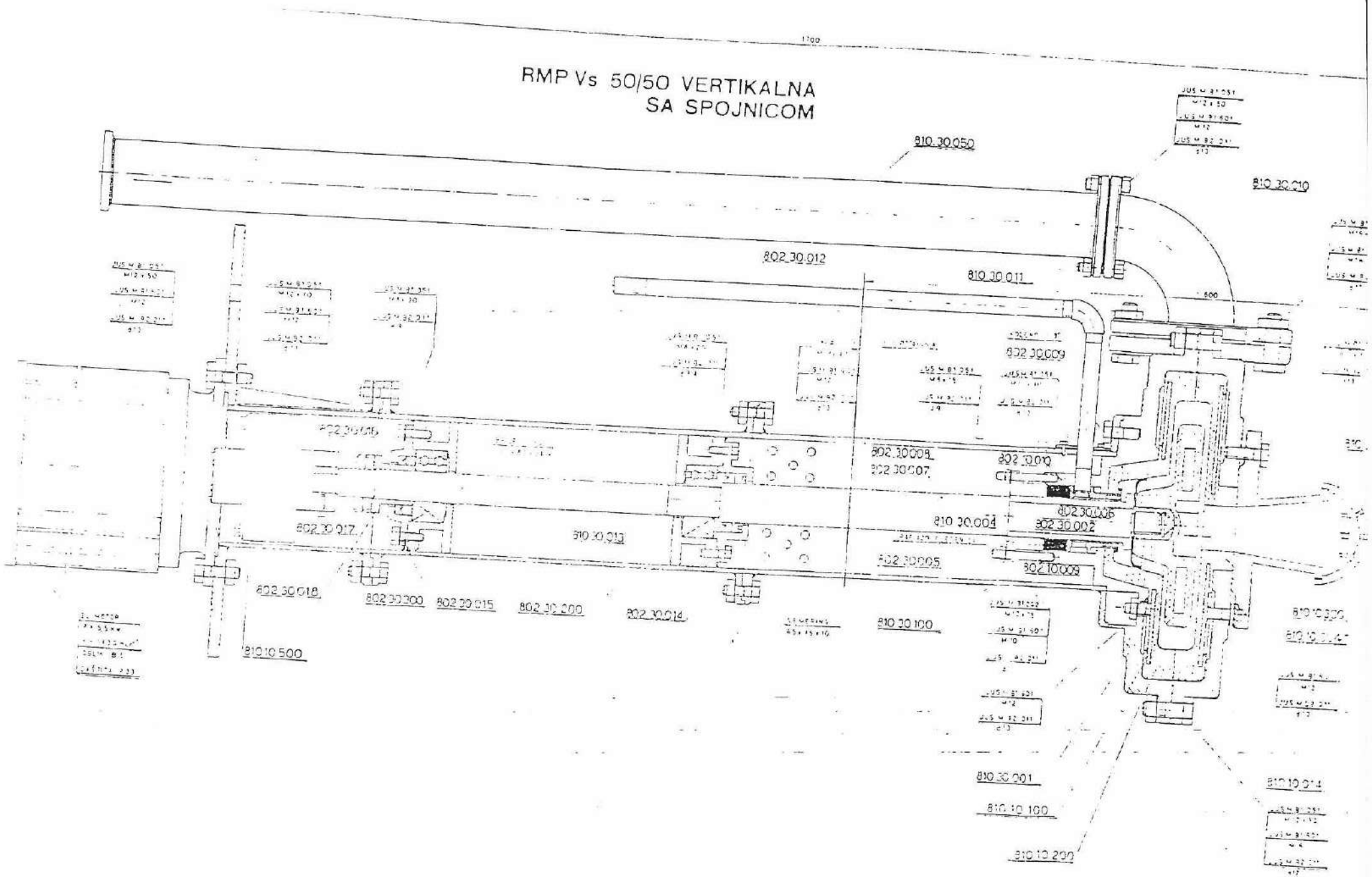
Red. broj	Naziv dela	Pozicija
1.	Usisni priključak I	808.20.001
2.	Usisni priključak	808.20.002
3.	Kućište gumene obloge-desne	808.20.003
4.	Kućište gumene obloge-leve	808.20.004
5.	Navrtka zaptivne čaure	808.20.005
6.	Zaptivna čaura	808.20.006
7.	Čaura I	808.20.007
8.	Čaura	808.20.008
9.	Dvodelna čaura	808.20.009
10.	Lavirintska čaura	808.20.011
11.	Stezni poklopac	808.20.012
12.	Poklopac I	808.20.013
13.	Kućište	808.20.014
14.	Osigurač	808.20.015
15.	Navrtka za osiguranje	808.20.016
16.	Poklopac II	808.20.017
17.	Distantna čaura	808.20.018
18.	Konus remnice	808.20.019
19.	Klin	808.20.021
20.	Remnica	808.20.022
21.	Zavrtanj-čep	808.20.023
22.	Podmetač	808.20.024
23.	Vratilo	808.20.025
24.	Zavrtanj za štelovanje	808.20.026
25.	Postolje pumpe	808.20.027
26.	Cev za dovod vode	808.20.028
27.	Izlazni priključak	808.20.029
28.	Zakivak	808.20.031
29.	Grafitna azbestna pletenica	808.20.032
30.	Prsten	808.20.033
31.	Goli zavrtanj	808.20.035
32.	Konus remenice el. motora	858.20.036
33.	Klinasta remenica	808.20.037
34.	Poklopac — kućište ležišta	808.20.038
35.	Zavrtanj za pritezanje	808.20.040
36.	Uljomer	808.20.060
37.	Radno kolo	808.20.100
38.	Gumena obloga — leva	808.20.200
39.	Gumena obloga — desna	808.20.300
40.	Nosač el. motora	808.20.400
41.	Zaštita	808.20.600
42.	Ležaj JUS.M C3.735	85KB23
43.	Ležaj JUS.M C3.655	85SD23
44.	Klinasti kaiš JUS.G E2.05 322 x 14 x 2500 x 2800	32 x 1800
45.	Uljni prsten — semering	110x90x12

Napomena:

Pozicije 1 i 2: jedna se obavezno ugrađuje.
Kaiševi ugraduju se samo uz isporuku elektromotora.
Pozicije 36 i 37 ugraduje se samo uz isporuku elektromotora.


potisni deo
usisni deo
803.10.022
822.10.001
822.10.028
822.10.033
803.10.400
dovod vode za zaptivanje
803.10.026
822.10.032
822.10.027
803.10.013
803.10.014
822.10011
822.10003
803.10.021
803.10.020
822.10.016
822.10.017
822.10.018
nivo ulja
803.10.030
822.10.012
803.10.040
822.10.003
822.10.100
822.10.200
822.10.300
822.10.002
822.10.004
RMP 200/150 HORIZONTALNA

RMP Vs 50/50 VERTIKALNA SA SPOJNICOM



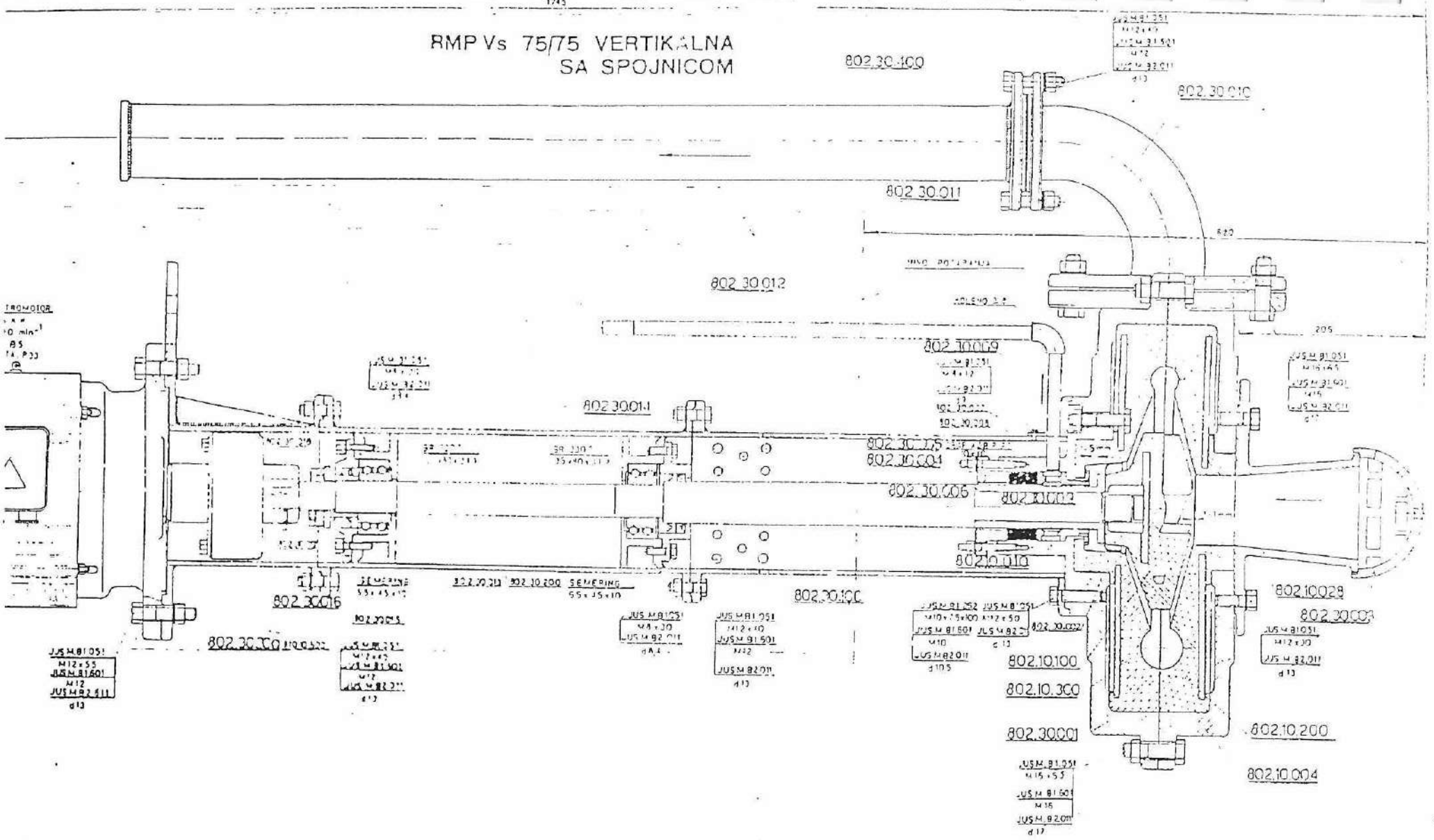
SPECIFICATIONS OF SPARE PARTS FOR THE RMP Vs 50/50 VERTICAL PUMP

No.	Part	Item
1.	Flange	810.10.004/1
2.	Rubber liner housing, left	810.10.014
3.	Runner	810.10.100
4.	Rubber liner housing, right	810.10.200
5.	Rubber liner, left	810.10.300
6.	Coupling	810.10.500
7.	Rubber plugs	810.10.502
8.	Nut	802.10.009
9.	Sealing sleeve	802.10.010
10.	Cover	802.30.014
11.	Cover	802.30.015
12.	Packing	802.30.008
13.	Supply pipe II	802.30.009
14.	Packing	810.30.011
15.	Supply pipe I	802.30.012
16.	Pump body I	810.30.100
17.	Pump body II	802.30.200
18.	Pump body III	802.30.300
19.	Rubber liner housing, right	810.30.001
20.	Suction basket	810.30.003
21.	Sleeve	810.30.005
22.	Elbow	810.30.010
23.	Shaft	810.30.013
24.	Discharge pipe	810.30.050
25.	Semering	65x45x10
26.	Ball bearing	br. 3307
27.	Graphite asbestos braid	10x10x20
28.	Coupling head	810.10.503
29.	Coupling body	810.10.505
30.	Runner	810.10.100-1
31.	Runner	810.10.100-2

SPECIFICATIONS OF SPARE PARTS FOR THE RMP
Vr. 75/75 VERTICAL PUMP

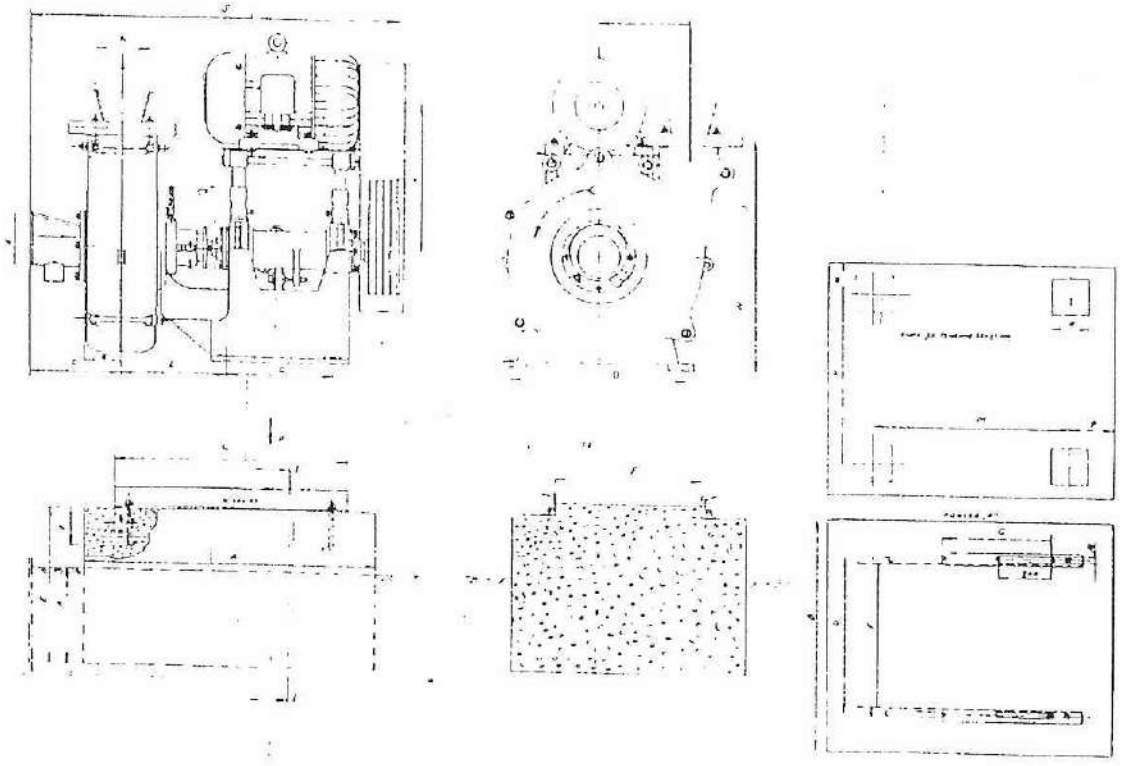
No.	Part	Item
1.	Rubber liner housing	
2.	Nut	802.10.004
3.	Sealing sleeve	802.10.009
4.	Flange II	802.10.010
5.	Runner	802.10.028
6.	Rubber liner, left	802.10.100
7.	Rubber liner, right	802.10.200
8.	Rubber liner housing	802.10.300
9.	Suction basket	802.30.001
10.	Sleeve	802.30.003
11.	Packing	802.30.005
12.	Supply pipe II	802.30.006
13.	Elbow	802.30.009
14.	Packing	802.30.010
15.	Supply pipe I	802.30.011
16.	Cover	802.30.012
17.	Cover	802.30.014
18.	Nut	802.30.015
19.	Sleeve	802.30.017
20.	Pump body I	802.30.018
21.	Pump body II	802.30.100
22.	Discharge pipe, assembly	802.30.200
23.	Wedge friction wheel conic sleeve	802.30.050
24.	Wedge friction wheel	802.10.026
25.	Plate	802.10.027
26.	Electromotor bearing plate	802.40.004
27.	Shield	802.40.005
28.	Shaft	802.40.007
29.	Semering	802.40.001
30.	Ball bearing	65x45x10
31	Graphite asbestos braid	3307
32.	Runner	10x10x210
33.	Runner	802.20.100-1
		802.20.100-2

RMP Vs 75/75 VERTIKALNA SA SPOJNICOM

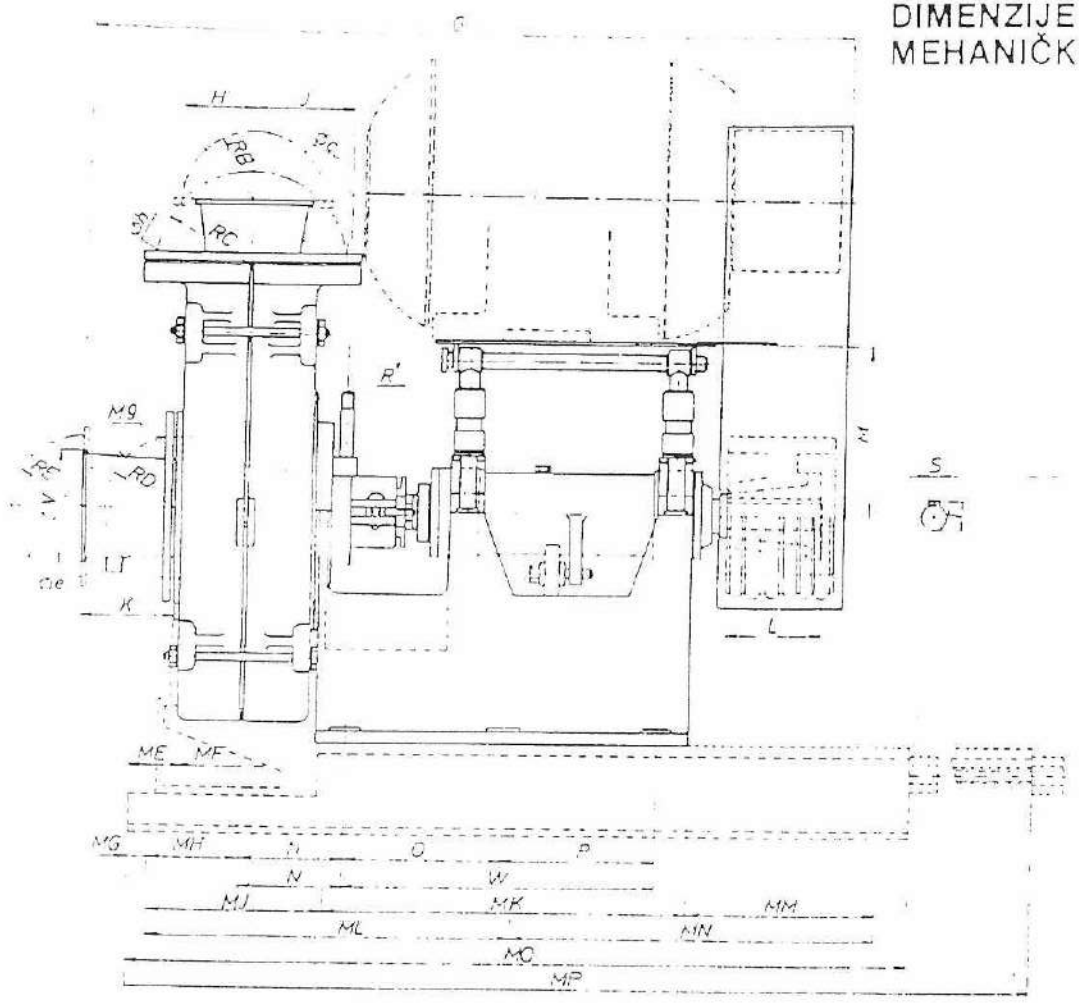


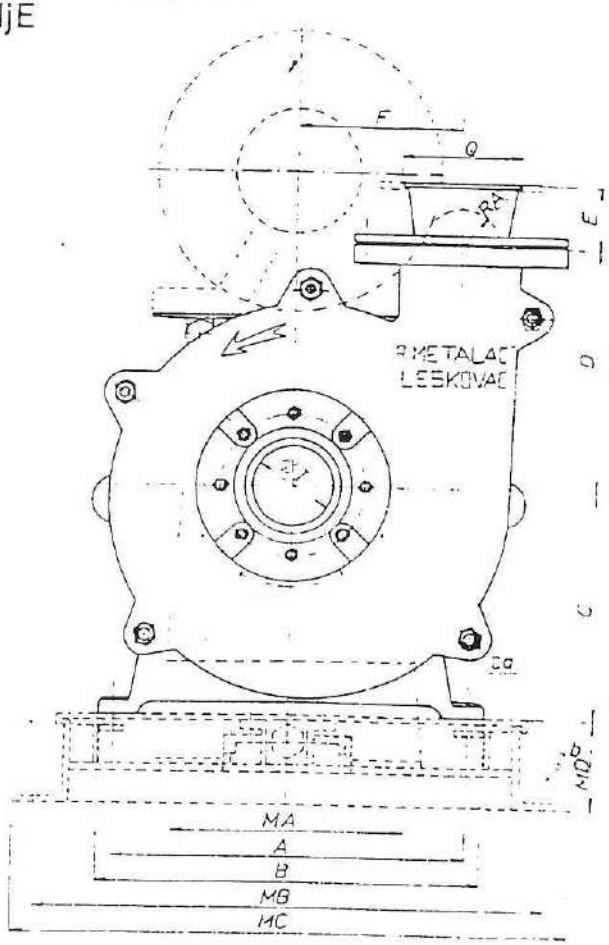
DIMENZIJE ZA UGRADNJU PUMPI

PUMPE	Dimenzije temelja u (mm)																						
	A	B	C	D	E	F	G	H	K	I	J	L	M	N	S	Z	b	d	e	a	Ø	$Ø_1$	☐
PUMP 50/50	800	600	600	390	400	310	360	300	150	150	132	97	500	245	835	200	50	105	55	110	75	50	100
PUMP 75/75	900	600	700	390	400	310	360	300	150	163	222	157	600	245	950	183	50	105	78	105	100	75	100
PUMP 100/75	900	600	700	390	400	310	360	300	150	163	222	157	600	245	950	183	50	105	78	105	100	75	100
PUMP 125/100	900	740	700	540	500	460	340	300	200	230	380	302	600	355	1065	243	50	100	108	100	150	150	120
PUMP 125/125	900	740	700	540	500	460	340	300	200	230	380	302	600	355	1065	243	50	100	108	100	150	150	120
PUMP 200/150	900	740	700	540	500	460	340	300	200	230	400	325	600	355	1110	263	50	100	128	100	216	166	180
PUMP 250/200	1400	850	900	720	650	600	305	500	300	380	517	417	1000	550	1870	355	80	200	155	100	300	225	200



DIMENZIJE UGRADNJE SA POSTOLJEM ZA MEHANIČKO POVLAČENJE





TIP PUMPE / PODACI	A	B	C	D	E	F	G	H	J	K	L	M min/max	N	O	P	R"	S	T	ØI	ØQ	W	GV	RA	RB	RC	RD	RE	a	b	c	e	Mg	h	MA	MB	MC	MD	ME	MF	MG	MH	MJ	MK	ML	MM	MN	MO	MP	MS - ODVOD
RMP 50/25			145	170	100	107						180-260			3/8																																		
RMP 50/50	390	435	242	190	100	150	835	56	110	142	60	180-260	98		3/8	8	30	75	1025	365	305	25		80	95,5		18		12	20																		
RMP 75/75	390	435	242	232	100	1635	950	82	118	135	65	180-260	122		1/2	8	36	100	1305	365	156	37		105	107		18		12	20																		VS 4" VS 3"
RMP 100/75	390	435	242	232	100	1635	950	82	118	135	65	180-260	122		1/2	8	36	102	1305	365	156	40		105	107		18		12	20																		VS 4" VS 4"
RMP 125/100	550	600	260	380	100	263	1065	108	149	150	100	260-350	159		1/2	10	41	135	1625	487	1625	50		145	111		2225		16	20	360	800	870	140	80	120	50	101		570		570	1240	1700	VS 6" VS 6"
RMP 125/125	550	600	260	380	100	263	1065	108	149	150	100	260-350	159		1/2	10	41	135	1625	487	1625	62		145	111		2225		16	20	360	800	870	140	80	120	50	101		570		570	1240	1700	VS 6" VS 6"
RMP 150/150	550	600	260	397	100							260-350			1"	2	16		487								2225		16	20	360	800	870	140	80	120	50			570		570	1240	1700	VS 6" VS 6"
RMP 200/150	550	600	260	397	100	228	1110	114	162	150	100	260-350	167		1"	2	16	59	2110	1625	487	232	75		160	145		2226		16	20	360	800	870	140	80	120	50	103		570		570	1240	1700	
RMP 250/200	720	800	550	457	100	360	1870	158	205	200	225	450	700	417	305	305	1"	2	20	74	120	259	160		100		216	200	975	280	1			16	20	550	960	1060	150	110	100	50		500	660		500		1760	2200	VS 8" VS 6"

TRANSLATION OF THE TITLES OF THE TABLES AND DRAWINGS

Fig. 1. Instalation of the pump

1. Reservoir
2. Suction pipeline
3. Pump
4. Pressure gauge on the discharge pipeline
5. Slide valve on the discharge pipeline
6. Discharge pipeline
7. Pressure gauge on the sealing line
8. Pipeline for sealing water
9. »U« profile beams

Fig. 2. Properly done sealing

Tabela 1.

OPERATING CHARACTERISTICS OF THE OPEN RUNNER PUMP RMP 50/50

Power data are given clear water γ = 1 kg/dm³. For other values of specific gravity power is obtained multiplying by.

Total delivery head of the pump H in (m)

n [O min] - rotation speed of the pump

N [KS] = driving power

Tabela 2.

OPERATING CHARACTERISTICS OF THE OPEN RUNNER PUMP RMP 75/75

Power data are given clear water γ = 1 kg/dm³. For other values of specific gravity, power is obtained multiplying by.

Total delivery head of the pump H in (m)

n [O/min] - rotation speed of the pump

N [KS] - driving power

Tabela 3.

OPERATING CHARACTERISTICS FOR THE RMP 100 x 75 PUMP

Power data are given clear water γ = 1 kg/dm³. For other values of specific gravity, power is obtained multiplying by.

Total delivery head of the pump H in (m)

n [O/min] = rotation speed of the pump

N [KS] = driving power

Tabela 4.

OPERATING CHARACTERISTICS FOR THE CLOSED RUNNER PUMP RMP 125/100

Power data are given clear water γ = 1 kg/dm³. For other values of specific gravity, power is obtained multiplying by.

Total delivery head of the pump H in (m)

n [O/min] = rotation speed of the pump

N [KS] = driving power

Tabela 5.

OPERATING CHARACTERISTICS FOR THE OPEN RUNNER PUMP RMP 125/125

Power data are given for clear water γ = 1 kg/dm³. For other values of specific gravity, power is obtained multiplying by.

Total delivery head of the pump H in (m)

n [O min] rotation speed of the pump

N [KS] = driving power

Tabela 6.

OPERATING CHARACTERISTICS FOR THE CLOSED RUNNER PUMP RMP 200/150

Power data are given clear water γ = 1 kg dm^3. For other values of specific gravity, power is obtained multiplying by.

Total delivery head of the pump H in (m)

n [O/min] = rotation speed of the pump

N [KS] = driving power

Tabela 7.

OPERATING CHARACTERISTICS FOR THE OPEN RUNNER PUMP RMP 50/50

Power data are given for clear water γ = 1 kg/dm^3. For other values of specific gravity, power is obtained multiplying by.

Total delivery head of the pump H in (m)

n [O/min] = rotation speed of the pump

N [KS] = driving power

Tabela 8.

OPERATING CHARACTERISTICS FOR THE OPEN RUNNER PUMP RMP 75/75

Power data are given clear water $\gamma = 1$ kg dm^3. For other values of specific gravity, power is obtained multiplying by.

Total delivery head of the pump H in (m)

n [O/min] = rotation speed of the pump

N [KS] = driving power

Tabela 9.

Pump type

Fundation dimensions in (mm)

GUARANTEE

A guarantee is given by the manufacturer, that is, the manufacturer performs replacement of damaged parts which are not normally subject to wear during operation, within guarantee period, but only if damages resulted besides proper handling and maintenance given in this Instruction.