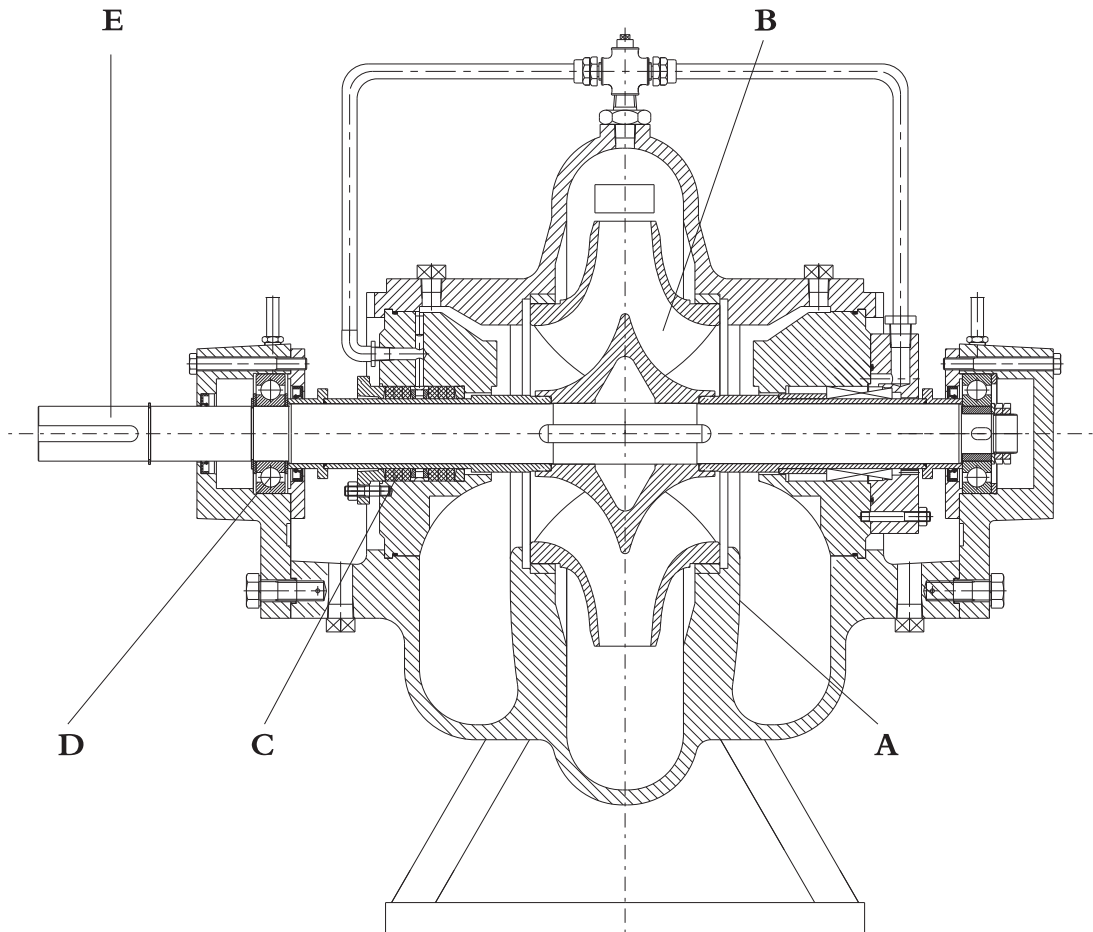


Configuration Features



A. Casing

- a. In-line axially split design which permits removal of the complete rotor without moving the pipe and motor
- b. Short distance between bearings
- c. Leak-tight due to compact joint flange with long, prestressed bolts
- d. Counter-rotation possible with similar parts
- e. Double volute casing reduces radial forces on the impeller and consequently the bearing loads
- f. Easy mounting self-aligning upper casing
- g. Flange drilled to ISO, DIN, BS or ANSI
- h. Smooth surface inside and epoxy coating as required
- i. Replaceable wear rings protect the casing at the impeller running clearances
- j. Excellent efficiencies and outstanding NPSH improved by CFD
- k. Heavy duty casing design for high working pressure

B. Impeller

- a. Computer-optimized double entry impellers
- b. Minimal axial thrust due to double-entry impeller
- c. Impeller is statically and dynamically balanced according to ISO1940
- d. Optional impeller wear rings
- e. New vane passage with excellent hydraulic characteristics high-performance improved by CFD

C. Seal

- a. Asbestos-free, potable water quality soft-packed stuffing boxes
- b. Unbalanced mechanical seal, according to DIN24960 Balance mechanical seal for operating pressure >16 bar on required
- c. Cartridge-type mechanical seal on required

D. Bearing

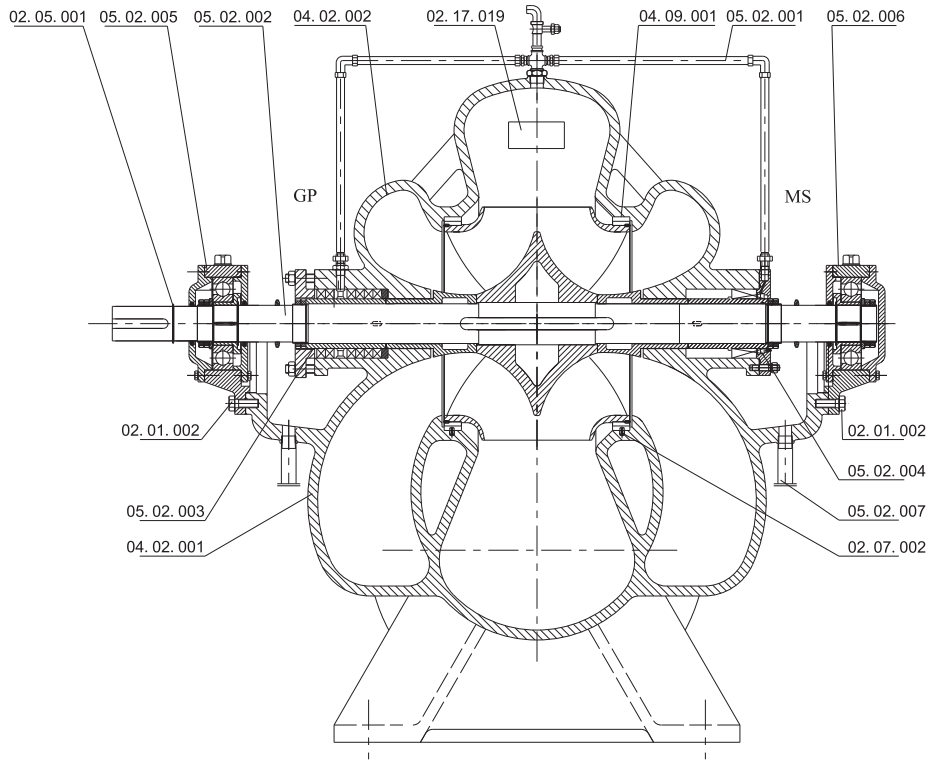
- a. SKF covered, sealed for life grease lubricated antifriction bearings for long service life
- b. Open gland, enough space for service activities
- c. Optional: oil lubrication with constant level oiler

E. Shaft

- a. Heavy duty shaft completely sealed and dry for zero corrosion
- b. Short and rigid with negligible vibrations
- c. Replaceable shaft protecting sleeves
- d. No threads exposed to pumped medium, long operating life and no corrosion
- e. Adjustment-free assembly
- f. Quick and easy assembly/dismantling of the rotor components due to elastically prestressed mountings
- g. Maximum interchangeability shafts design entire series for 2900rpm and 1450rpm model just six shafts and six bearings assemblies

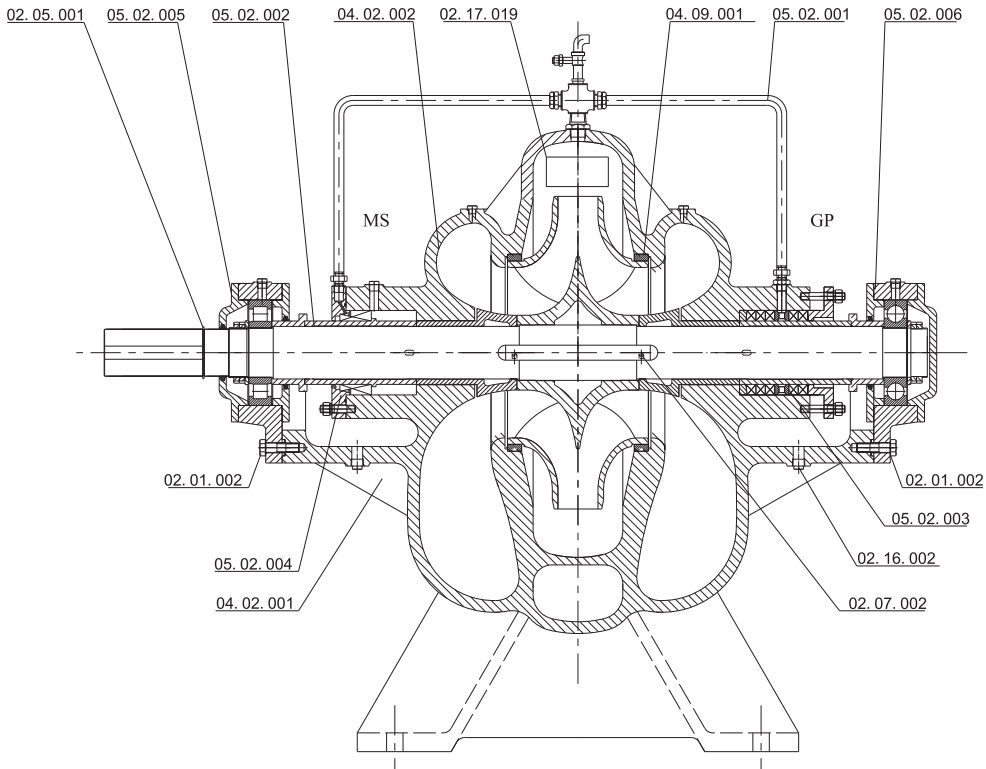
Sectional View ----NSC

Horizontal Installation



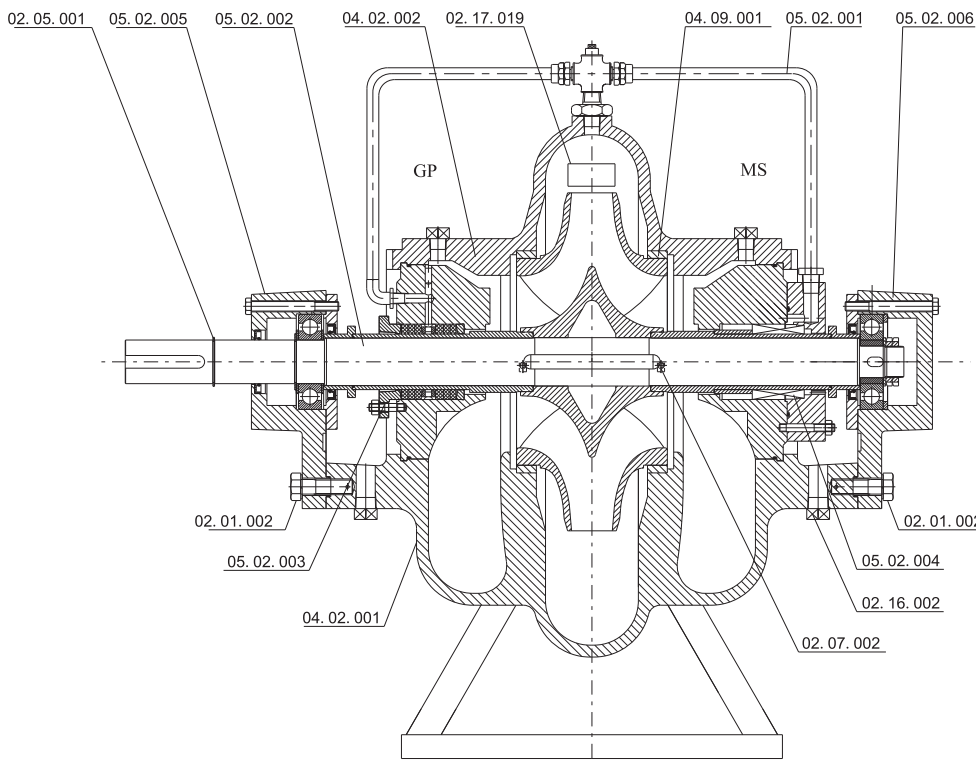
▲ Type A

Part No.	Part Name
02.05.001	Shaft Circlip
05.02.005	Bearing assembly (DE)
05.02.002	Rotor assembly
04.02.002	Upper casing
02.17.019	Nameplate
04.09.001	Casing wear ring
05.02.001	Flushing water piping
05.02.006	Bearing assembly (NDE)
02.01.002	Bolt
05.02.003	Packing seal assembly
04.02.001	Lower casing
05.02.004	Mechanical seal assembly
05.02.007	Drainage pipe
02.07.002	Wear ring dowel pin



▲ Type B

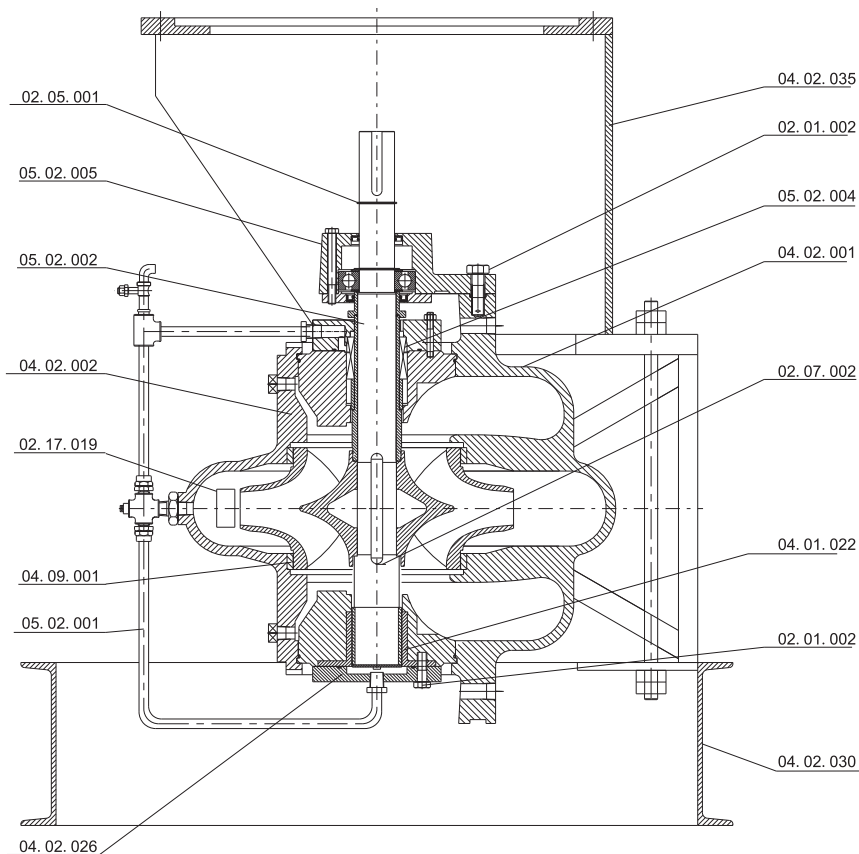
Part No.	Part Name
02.05.001	Shaft Circlip
05.02.005	Bearing assembly (DE)
05.02.002	Rotor assembly
04.02.002	Upper casing
02.17.019	Nameplate
04.09.001	Casing wear ring
05.02.001	Flushing water piping
05.02.006	Bearing assembly (NDE)
02.01.002	Bolt
05.02.004	Mechanical seal assembly
04.02.001	Lower casing
05.02.003	Packing seal assembly
02.16.002	Plug
02.07.002	Wear ring dowel pin



Part No.	Part Name
02.05.001	Shaft Circlip
05.02.005	Bearing assembly (DE)
05.02.002	Rotor assembly
04.02.002	Upper casing
02.17.019	Nameplate
04.09.001	Casing wear ring
05.02.001	Flushing water piping
05.02.006	Bearing assembly (NDE)
02.01.002	Bolt
05.02.003	Packing seal assembly
04.02.001	Lower casing
05.02.004	Mechanical seal assembly
02.16.002	Plug
02.07.002	Wear ring dowel pin

▲ Type C

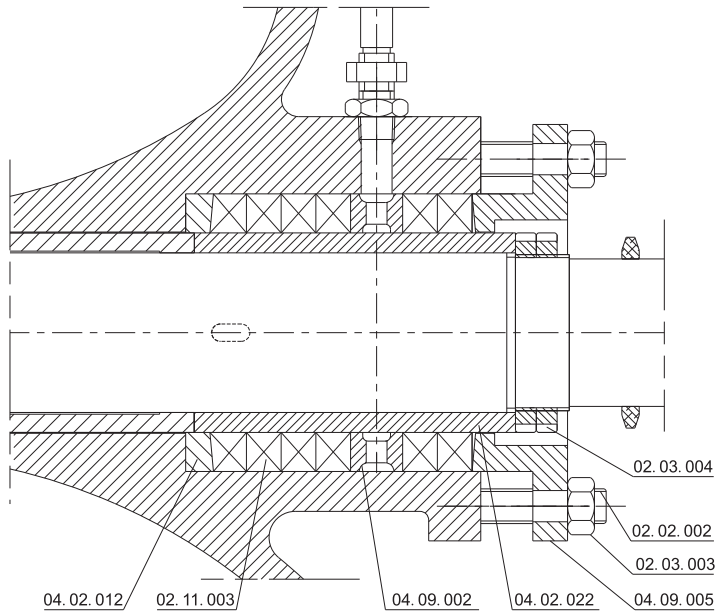
Vertical Installation



Part No.	Part Name
02.05.001	Shaft Circlip
05.02.005	Bearing assembly (DE)
05.02.002	Rotor assembly
04.02.002	Upper casing
02.17.019	Nameplate
04.09.001	Casing wear ring
05.02.001	Flushing water piping
04.02.026	Cap
04.02.035	Motor riser
02.01.002	Bolt
05.02.004	Mechanical seal assembly
04.02.001	Lower casing
02.07.002	Wear ring dowel pin
04.01.022	Bearing bush
04.02.030	Foot

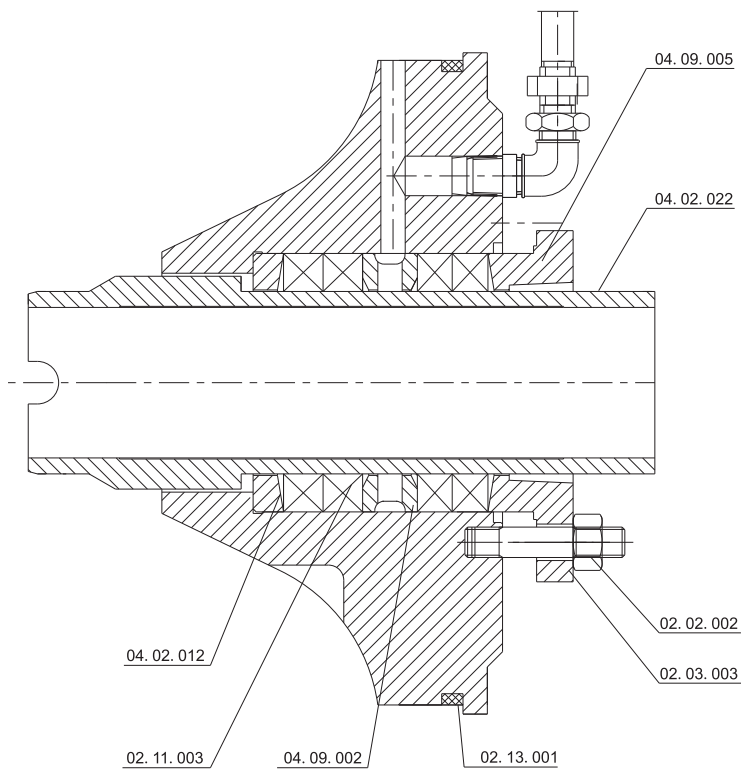
Sectional View----Shaft Seal

1.Soft Packed Stuffing Box



Part No.	Part Name
04.02.012	Set neck ring
02.11.003	Gland packing
04.09.002	Lantern ring
04.02.022	Shaft protecting sleeve
04.09.005	Gland
02.03.003	Nut
02.02.002	Bolt
02.03.004	Round nut

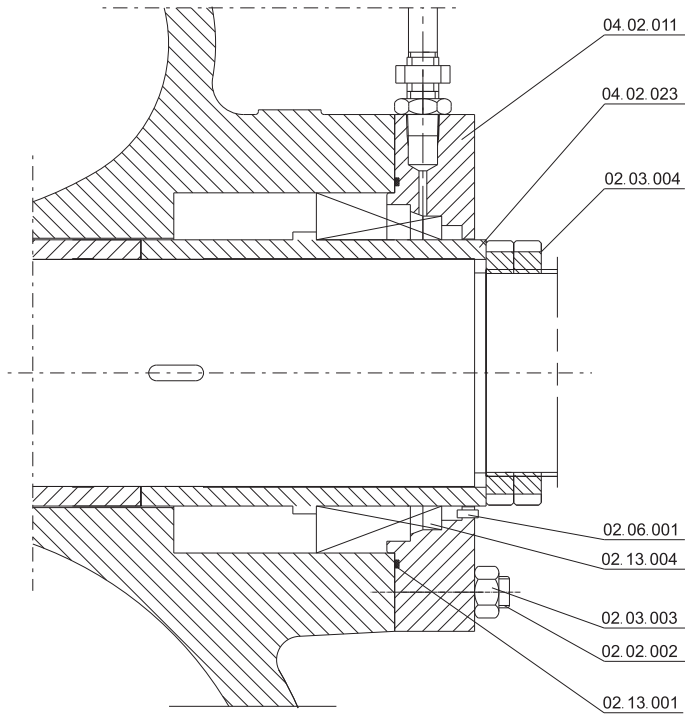
▲ Type A---Apply to horizontal installation type A and B



Part No.	Part Name
04.09.005	Gland
04.02.022	Shaft protecting sleeve
04.02.012	Set neck ring
02.11.003	Gland packing
04.09.002	Lantern ring
02.13.001	O-Ring
02.02.002	Bolt
02.03.003	Nut

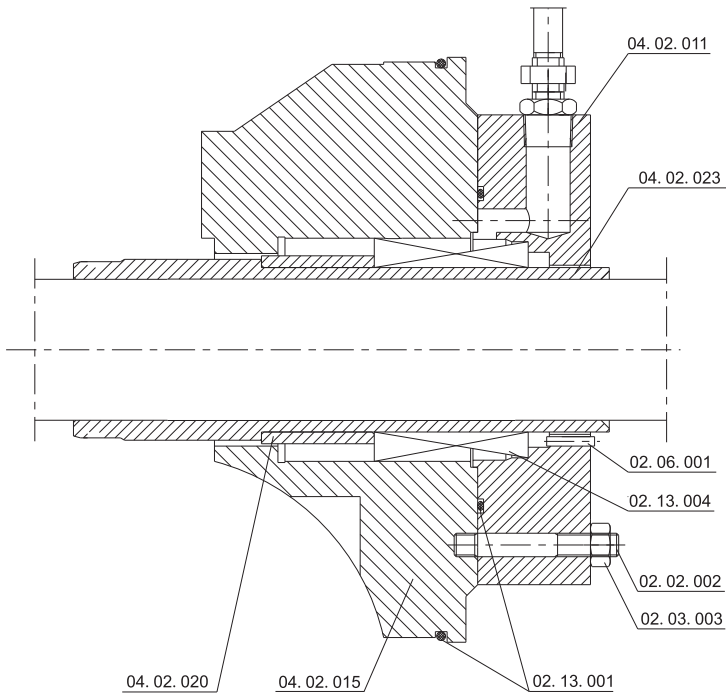
▲ Type B---Apply to horizontal installation type C

2.Mechanical Seal



▲ Type A---Apply to horizontal installation type A and B

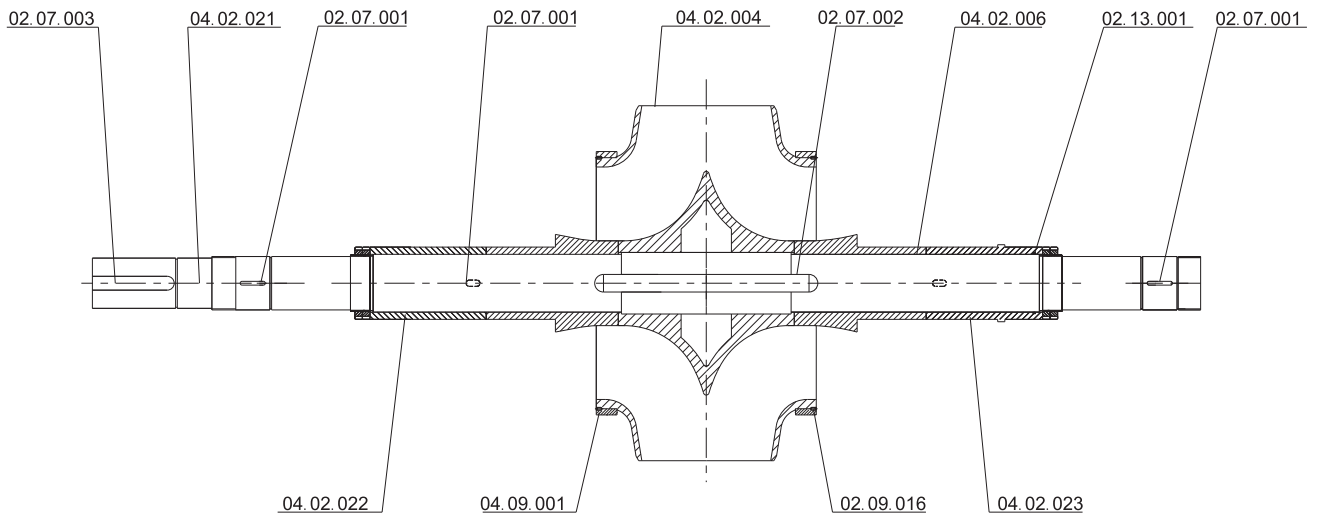
Part No.	Part Name
04.02.011	Seal cover
04.02.023	Shaft protecting sleeve
02.03.004	Round nut
02.06.001	Round pin
02.13.004	Shaft seal unit
02.03.003	Nut
02.02.002	Bolt
02.13.001	O-Ring



▲ Type B---Apply to horizontal installation type C

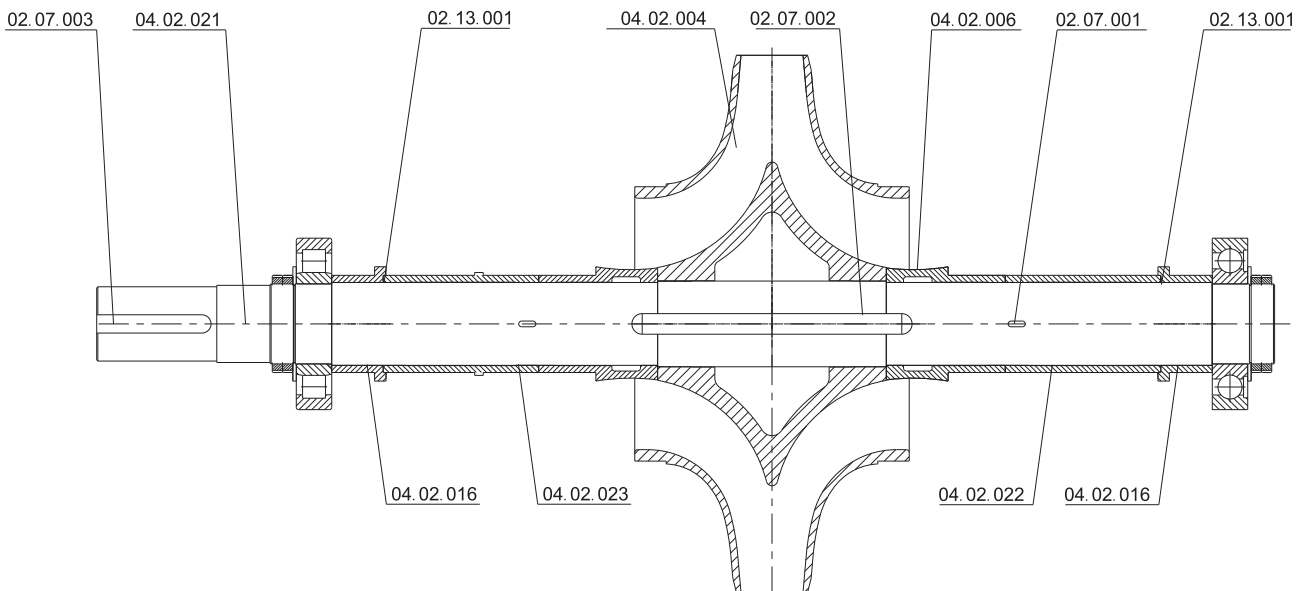
Part No.	Part Name
04.02.011	Seal cover
04.02.023	Shaft protecting sleeve
02.06.001	Round pin
02.13.004	Shaft seal unit
02.02.002	Bolt
02.03.003	Nut
02.13.001	O-Ring
04.02.015	Shaft seal housing
04.02.020	Spacer sleeve

Sectional View----Rotor



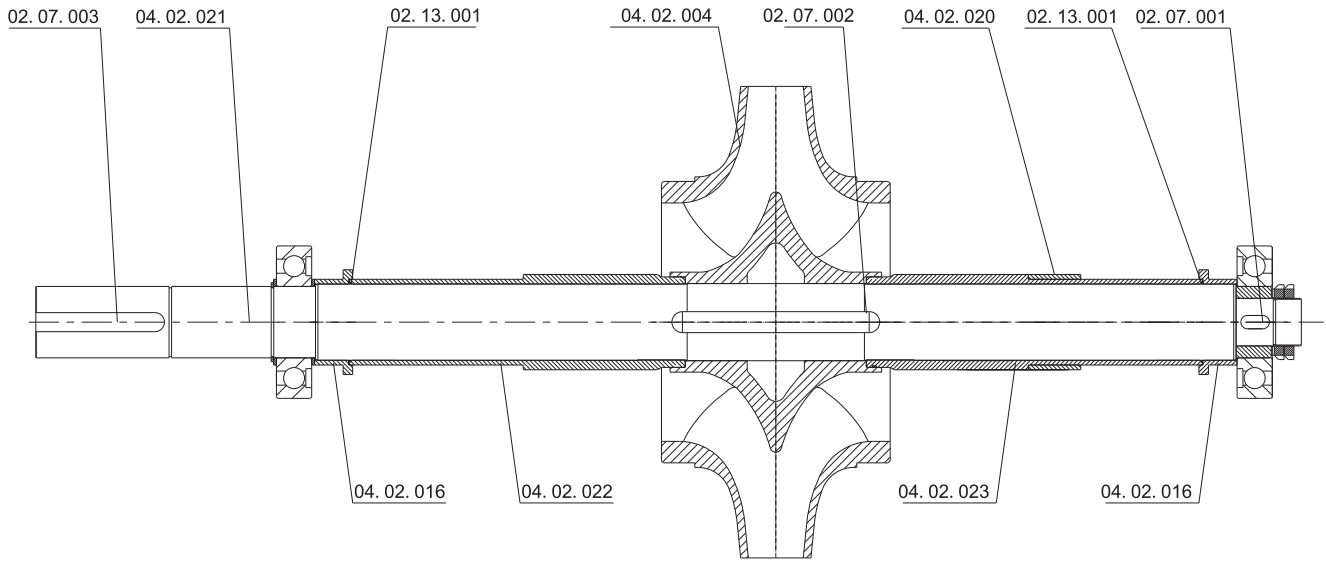
▲ Type A---Apply to horizontal installation type A

Part No.	Part Name	Part No.	Part Name	Part No.	Part Name
02.07.003	Key C	04.02.021	Shaft	02.07.001	Key A
04.02.004	Impeller	02.07.002	Key B	04.02.006	Shaft protecting sleeve
02.13.001	O-Ring	04.02.022	Shaft protecting sleeve(GP)	04.09.001	Impeller wear ring
02.09.016	Impeller locating screw	04.02.023	Shaft protecting sleeve(MS)		



▲ Type B---Apply to horizontal installation type B

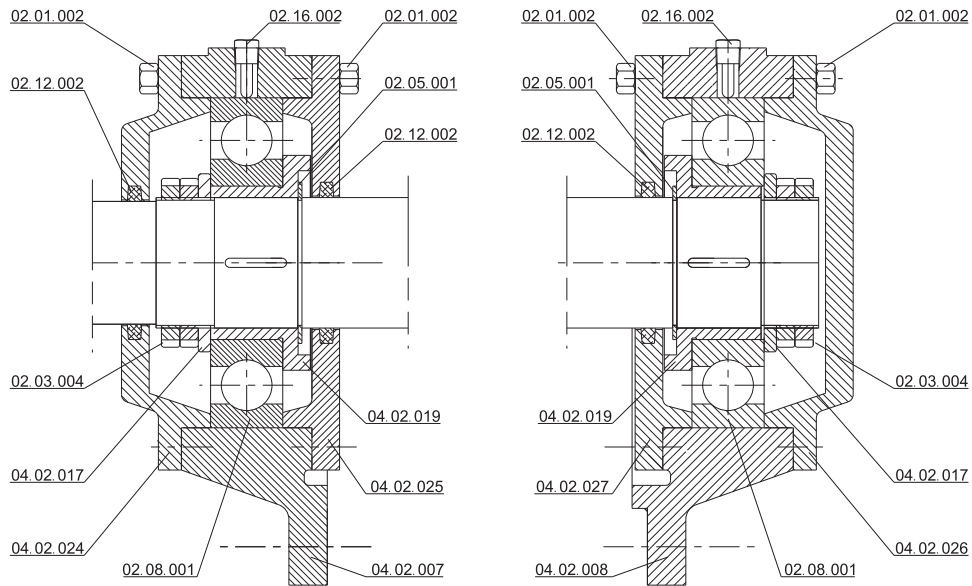
Part No.	Part Name	Part No.	Part Name	Part No.	Part Name
02.07.003	Key C	04.02.021	Shaft	02.13.001	O-Ring
04.02.004	Impeller	02.07.002	Key B	04.02.006	Shaft protecting sleeve
02.07.001	Key A	04.02.016	Water baffle sleeve	04.02.023	Shaft protecting sleeve(MS)
04.02.022	Shaft protecting sleeve(GP)				



▲ Type C---Apply to horizontal installation type C

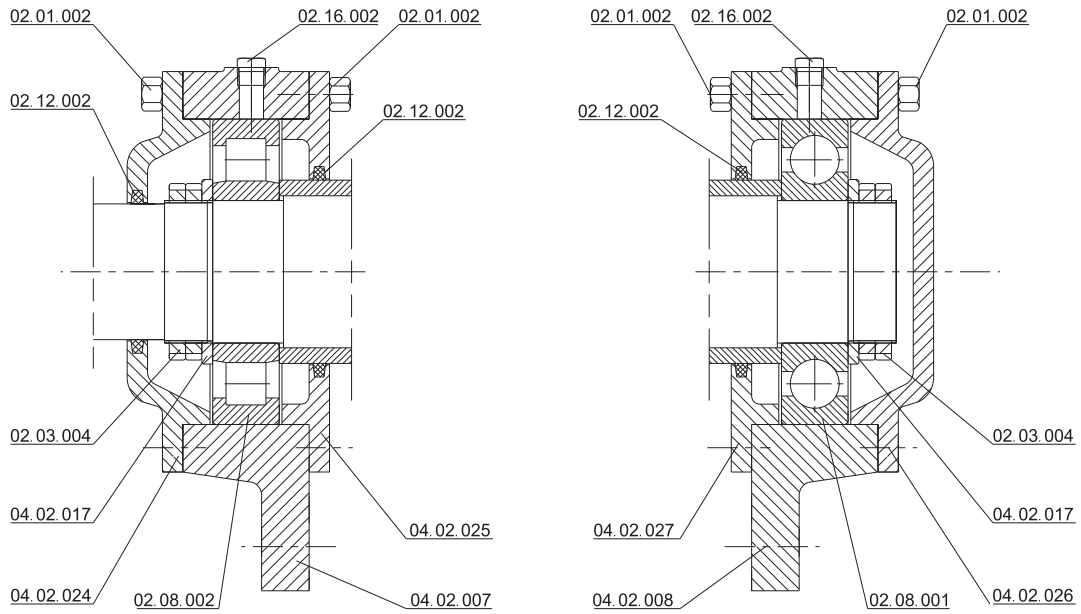
Part No.	Part Name	Part No.	Part Name	Part No.	Part Name
02.07.003	Key C	04.02.021	Shaft	02.13.001	O-Ring
04.02.004	Impeller	02.07.002	Key B	04.02.020	Spacer sleeve(MS)
02.07.001	Key A	04.02.016	Water baffle sleeve	04.02.022	Shaft protecting sleeve(GP)
04.02.023	Shaft protecting sleeve(MS)				

Sectional View----Bearing



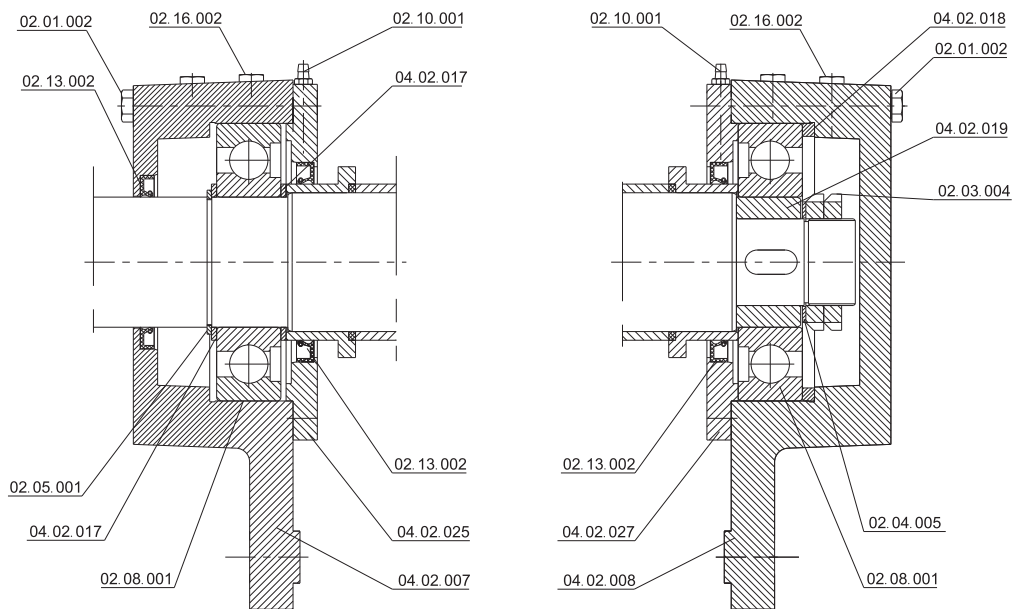
▲ Type A---Apply to horizontal installation type A

Part No.	Part Name	Part No.	Part Name	Part No.	Part Name	Part No.	Part Name
02.01.002	Hex bolts	02.12.002	Felt ring	02.03.004	Round nut	04.02.017	Bearing circlip
04.02.024	Bearing outer cover(DE)	02.08.001	Deep groove ball bearing	02.16.002	Plug	02.05.001	Shaft Circlip
04.02.019	Bearing sleeve	04.02.025	Bearing inner cover (DE)	04.02.007	Bearing housing (DE)	04.02.027	Bearing inner cover (NDE)
04.02.008	Bearing housing (NDE)	04.02.026	Bearing outer cover (NDE)				



▲ Type B---Apply to horizontal installation type B

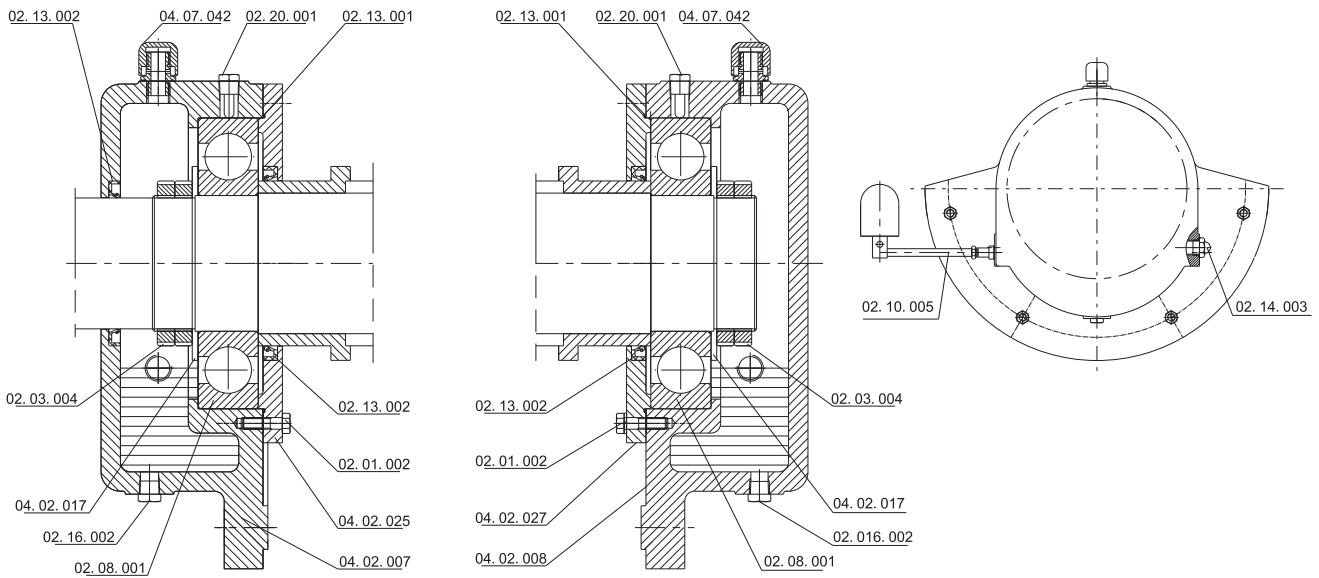
Part No.	Part Name	Part No.	Part Name	Part No.	Part Name	Part No.	Part Name
02.01.002	Hex bolts	02.12.002	Felt ring	02.03.004	Round nut	04.02.017	Bearing circlip
04.02.024	Bearing outer cover (DE)	02.08.002	Roller bearing	02.16.002	Plug	04.02.025	Bearing inner cover (DE)
04.02.007	Bearing housing (DE)	04.02.027	Bearing inner cover (NDE)	04.02.008	Bearing housing (NDE)	02.08.001	Deep groove ball bearing
04.02.026	Bearing outer cover (NDE)						



▲ Type C---Apply to horizontal installation type C

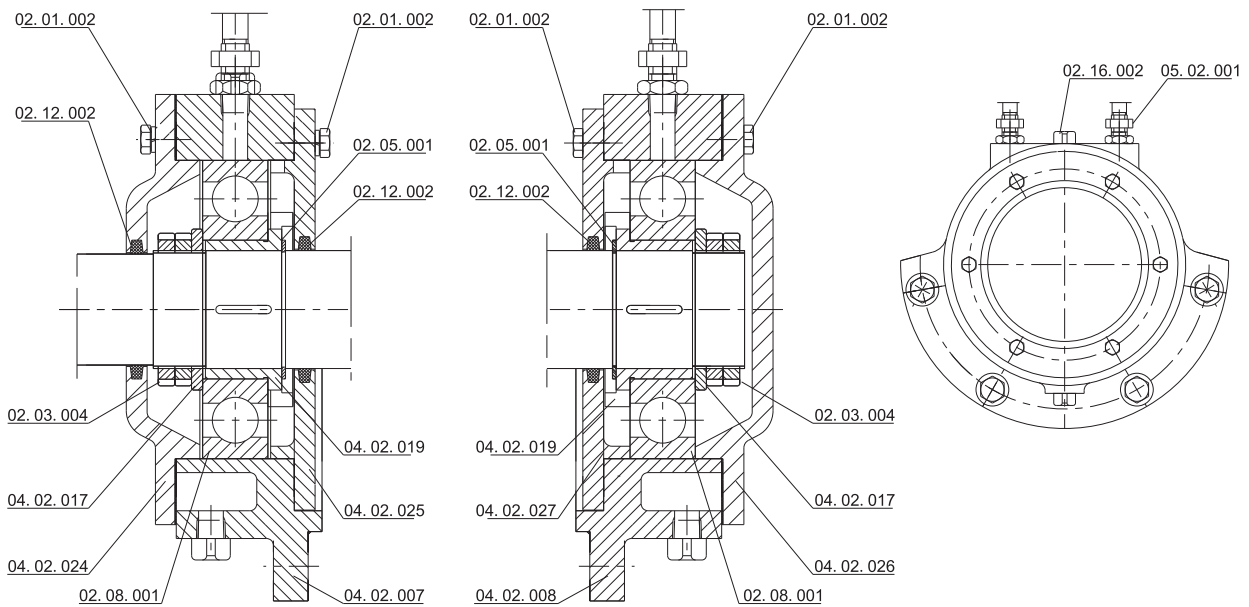
Part No.	Part Name	Part No.	Part Name	Part No.	Part Name	Part No.	Part Name
02.01.002	Hex bolts	02.13.002	Lip-type seal ring	02.05.001	Shaft Circlip	04.02.017	Bearing circlip
02.08.001	Deep groove ball bearing	02.16.002	Plug	02.10.001	Straight-through type oil cup	04.02.025	Bearing inner cover (DE)
04.02.007	Bearing housing (DE)	04.02.027	Bearing inner cover (NDE)	04.02.008	Bearing housing (NDE)	04.02.018	Bearing locating ring
04.02.019	Bearing sleeve	02.03.004	Round nut	02.04.005	Spring		

Bearing with oil lubrication



Part No.	Part Name	Part No.	Part Name	Part No.	Part Name	Part No.	Part Name
02.13.002	Lip-type seal ring	02.03.004	Round nut	04.02.017	Bearing circlip	02.16.002	Plug
02.08.001	Deep groove ball bearing	04.07.042	Breather cap	02.20.001	Temperature measuring device	02.13.001	O-Ring
02.01.002	Hex bolts	04.02.025	Bearing inner cover (DE)	04.02.007	Bearing housing (DE)	04.02.027	Bearing inner cover (NDE)
04.02.008	Bearing housing (NDE)	02.14.003	Oil sight gauge	02.10.005	Constant lever oiler		

Bearing with water cooling(Pumping higher temp. liquid)



Part No.	Part Name	Part No.	Part Name	Part No.	Part Name	Part No.	Part Name
02.01.002	Hex bolts	02.12.002	Felt ring	02.03.004	Round nut	04.02.017	Bearing circlip
04.02.024	Bearing outer cover(DE)	02.08.001	Deep groove ball bearing	02.05.001	Shaft Circlip	04.02.019	Bearing sleeve
04.02.025	Bearing inner cover (DE)	04.02.007	Bearing housing (DE)	04.02.027	Bearing inner cover (NDE)	04.02.008	Bearing housing (NDE)
04.02.026	Bearing outer cover (NDE)	02.16.002	Plug	05.02.001	Cooling Piping		