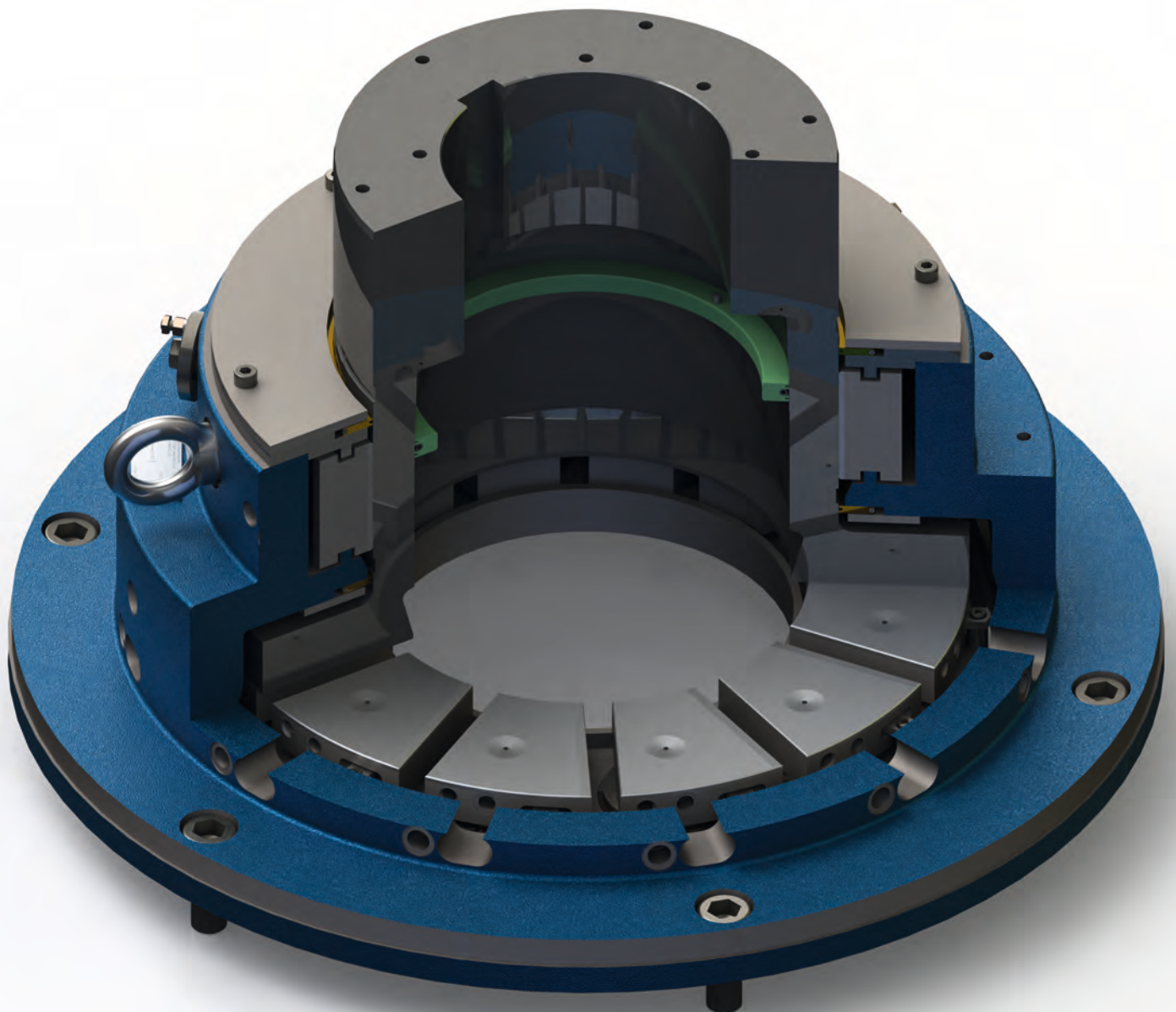


Miba Industrial Bearings Vertical Bearing





Miba Industrial Bearings

The Industrial Bearing Branch of the Miba Bearing Group produces hydrodynamic bearings and labyrinth seals for use in mechanical and plant engineering which are used in a wide range of high-performance applications. Our highly inspired teams work diligently to serve our customers the best bearing solutions for each and every application.

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Service and spare parts

Service

We offer you a range of professional services, from designing to manufacturing; providing you the best possible support. If the indicated ranges or designs do not fit your requirements, we will gladly work out a special design.

Spare Parts

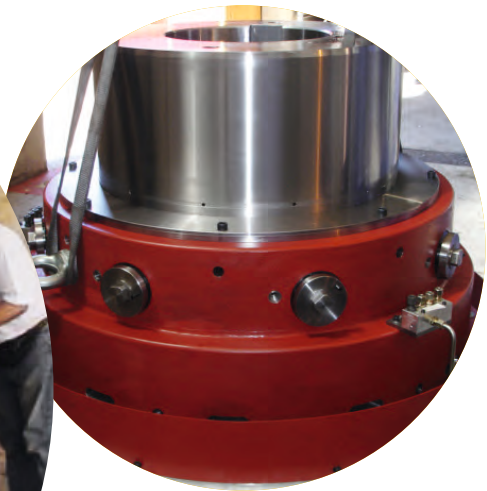
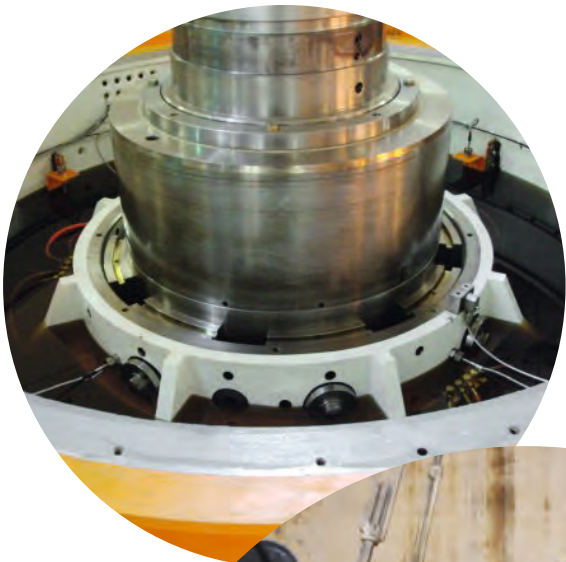
We can provide our customers spare parts and the necessary assistance for assemblies and repairs.

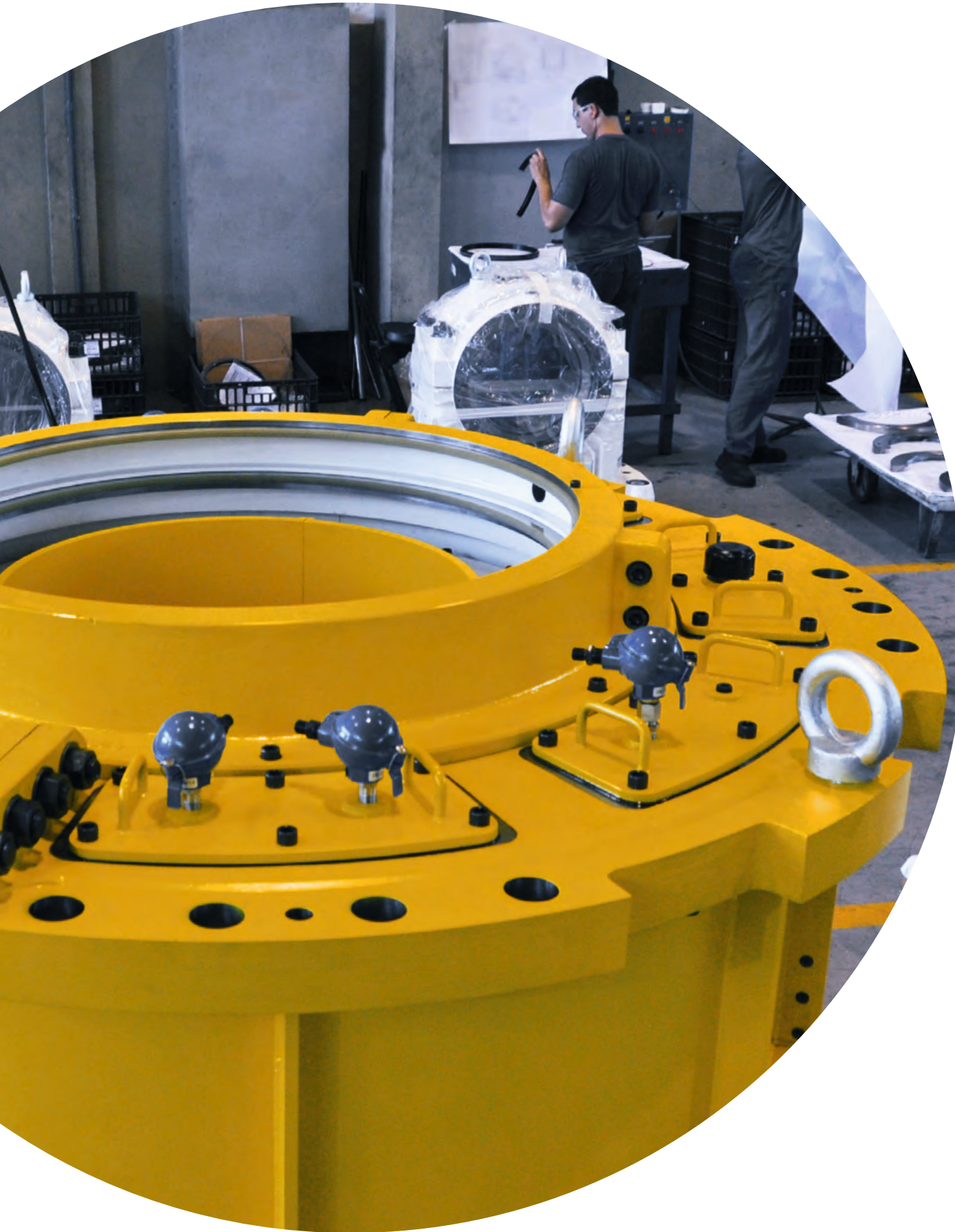
When ordering spare parts, please indicate the following:

- Order number (PV)
- Bearing model
- Spare part name and number

Possible spare parts on vertical bearings

- Floating Seals
- Journal Pads
- Thrust Pads
- Bearing Shell (For VC and VJ)
- RTD's, Thermometers, etc.





Description of the Design

Miba Vertical Bearings are designed to meet a wide range of application requirements.

They are based on the state of art technology as well as structural studies and analyses, which guarantee their design reliability.

The bearing housing are finned and manufactured with nodular cast iron type GGG40, thus being provided with high mechanical resistance, excellent heat dissipation capacity, high structural strength, and low vibration levels. They can with stand very cold ambient temperature.

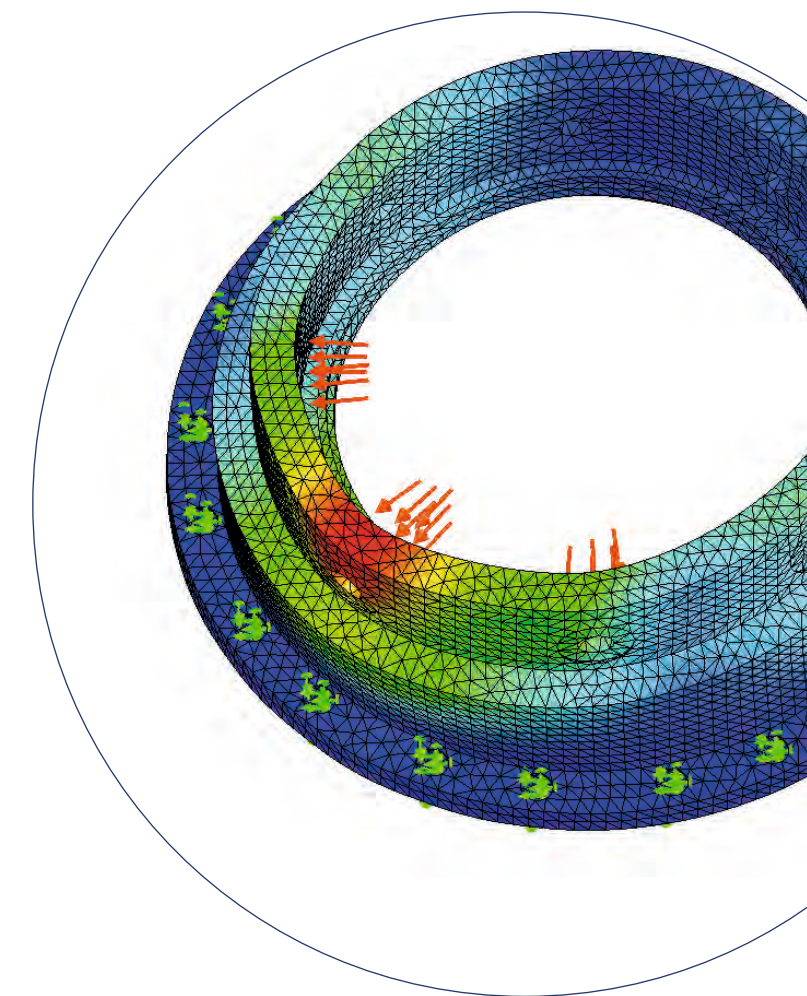
The bearings will use natural cooling, water cooling, fans or a forced external oil cooling system, depending on the operating conditions and on the application.

Technical Features

- Finned housing design provides a larger area for heat dissipation.
- Projects generated in a 3D platform.
- Finite element analysis is used to assist the design of parts subjected to stress.
- High electric and mechanical resistance isolating materials.
- Interchangeable assembly positions for sensors, displays and thermometers.
- Specific calculations for each bearing, according to the customer's specification.
- Easy maintenance, assembly and disassembly.
- Anti-corrosive paints.
- Oil drainage system.
- Tailor-made bearing designs according to customer's needs, are also possible.
- It is possible use a hydrostatic pressure system for starting up and shut down.

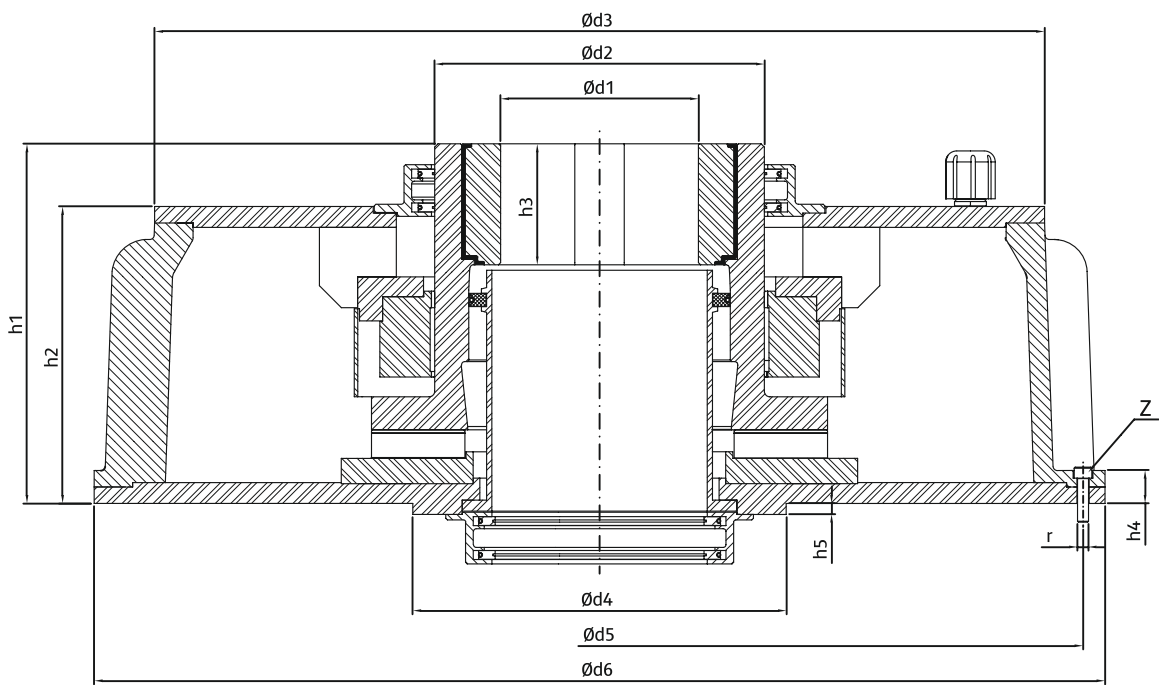
For temperature control purposes, threaded plug holes are included in the standard design, to facilitate the thermal sensors placement in the bearing shell, in the thrust pads and in the oil reservoir.

The type of sensor to be used will depend on the required reading (direct, centralized control system, etc.) and has to be specified by the customer.



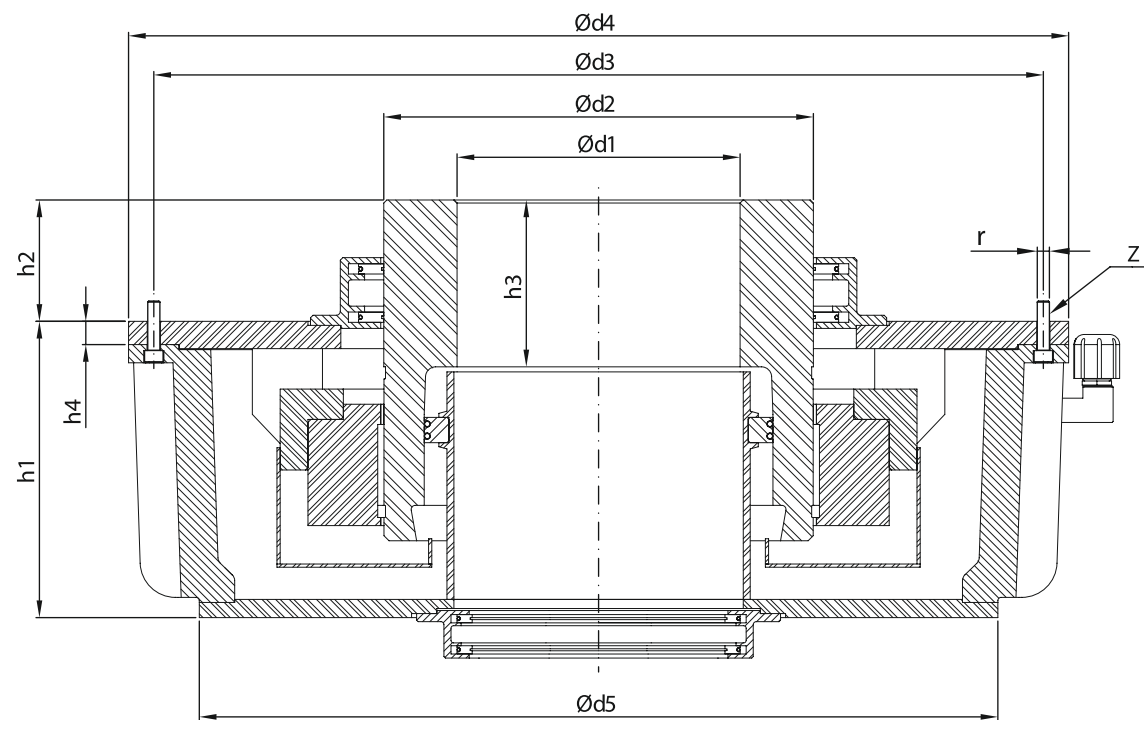
Dimensions VC series

1 // Technical data														
Size	d1 max.	d2	d3	d4	d5	d6	h1	h2	h3	h4	h5	r	z	weight (kg)
14-67	140	225	580	280	640	670	270	210	85	30	10	M8	18	270
16-67	160	250	580	340	640	670	300	210	100	30	10	M8	18	310
16-81	160	250	720	340	780	810	325	245	100	30	10	M10	18	380
18-81	180	300	720	340	780	810	330	250	110	30	10	M10	18	460
18-92	180	300	810	350	880	920	345	270	110	30	10	M10	20	560
20-81	200	315	720	380	780	810	355	255	120	30	10	M10	18	470
20-92	200	315	810	380	880	920	365	280	125	40	10	M10	20	600
22-92	220	375	810	420	880	920	400	290	140	40	10	M10	20	690
22-112	220	375	1.000	420	1.080	1.120	400	330	140	40	10	M10	20	800
25-112	250	425	1.000	460	1.080	1.120	435	330	150	40	10	M12	20	900
28-112	280	475	1.000	500	1.080	1.120	480	330	170	40	10	M12	20	1.090
28-125	280	475	1.085	520	1.200	1.250	480	340	170	45	10	M12	18	1.200
31-125	300	530	1.085	580	1.200	1.250	495	350	190	50	10	M12	18	1.300
40-132	400	600	1.200	660	1.270	1.320	625	390	220	50	10	M16	24	1.900
48-183	450	900	1.630	950	1.760	1.830	800	570	295	78	10	M24	36	6.000



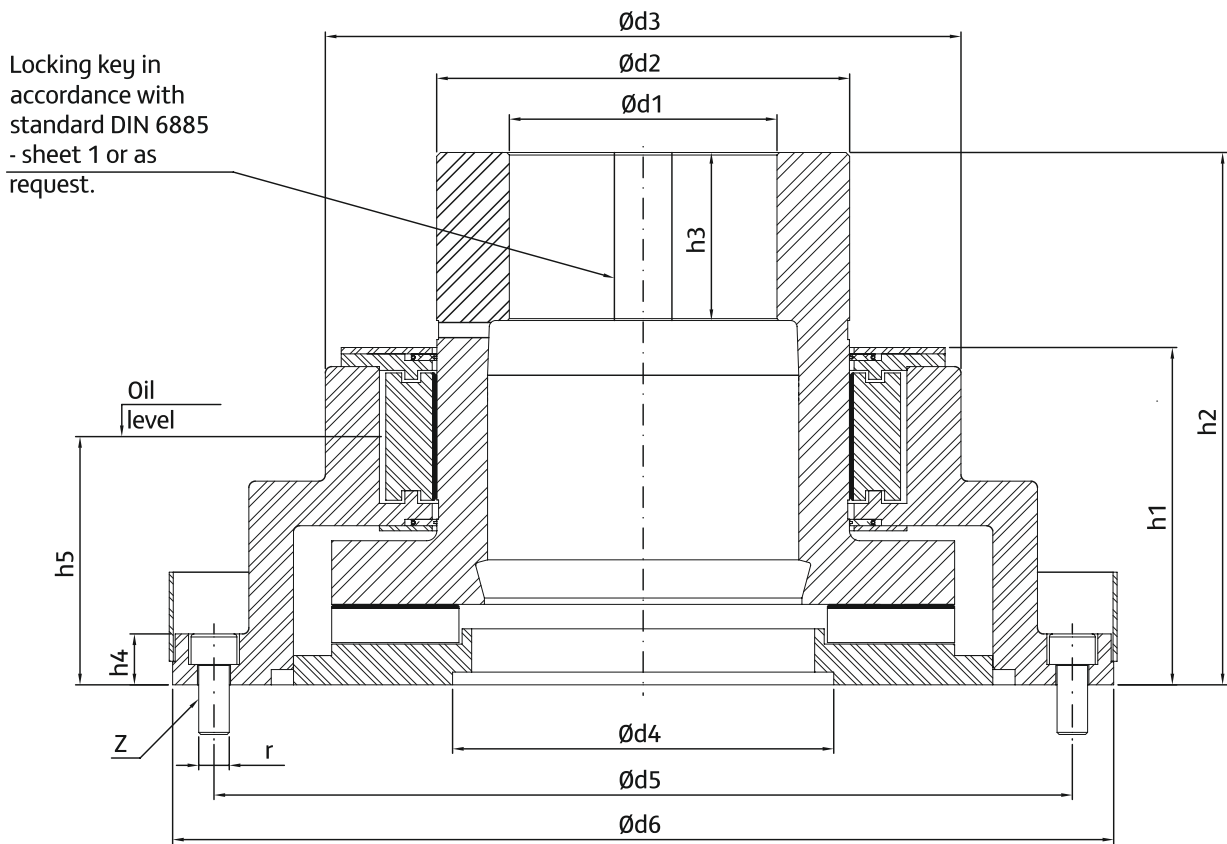
Dimensions VJ series

1 // Technical data													
Size	d1 max.	d2	d3	d4	d5	h1	h2	h3	h4	r	z	weight (kg)	
14-54	160	225	510	550	460	180	60	90	15	M8	12	145	
16-58	180	250	640	680	580	210	60	110	16	M8	18	215	
18-58	200	280	640	680	580	210	80	120	16	M8	18	245	
20-80	225	315	760	800	690	250	90	135	20	M10	18	320	
22-80	250	375	760	800	690	250	120	155	20	M10	18	380	
25-93	315	425	880	930	790	290	120	165	23	M12	20	550	
28-105	335	475	1000	1050	910	330	130	175	23	M12	20	750	
31-105	375	530	1000	1050	910	330	200	225	23	M12	24	900	
31-115	375	530	1115	1155	1020	340	200	225	25	M12	24	930	
40-115	425	600	1115	1155	1020	340	230	250	25	M12	24	1050	
44-156	600	800	1500	1560	1365	435	140	250	28	M20	24	2060	



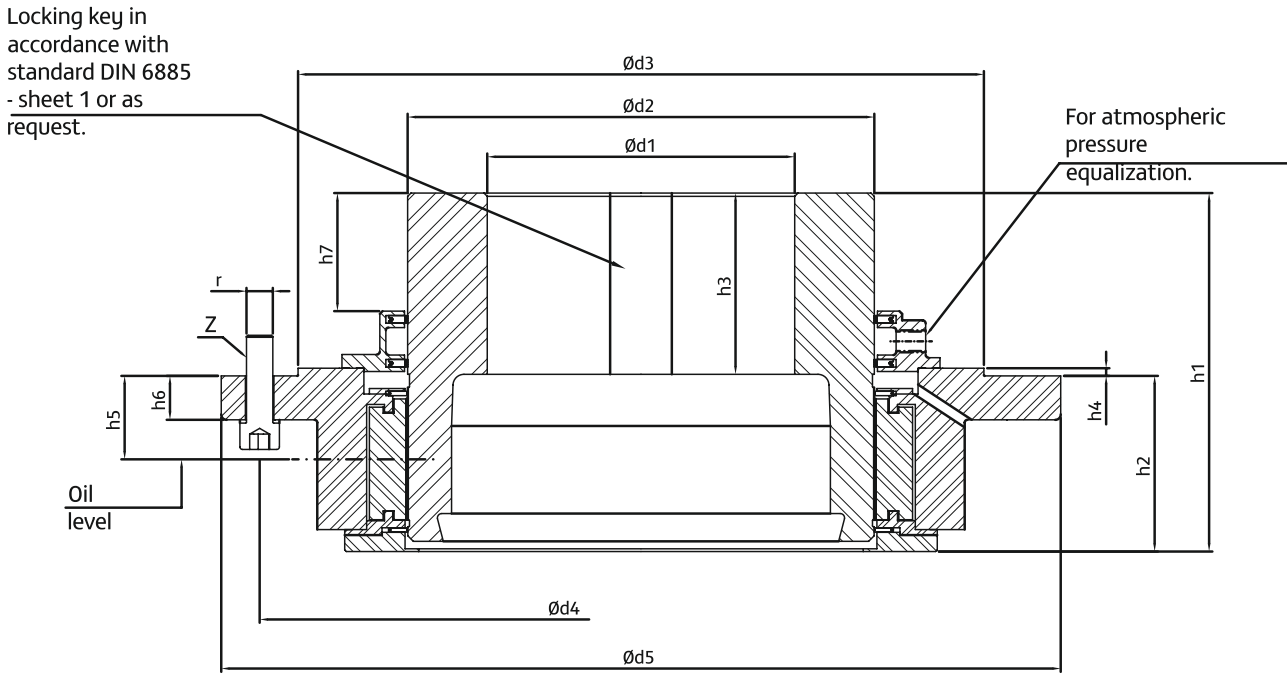
Dimensions VH series

1 // Technical data														
Size	d1 max.	d2	d3	d4	d5	d6	h1	h2	h3	h4	h5	r	z	weight (kg)
5	110	200	320	175	425	465	180	340	85	30	162	M16	5	150
6	125	225	350	190	450	495	180	340	85	30	162	M16	5	200
7	160	250	400	190	520	575	218	355	105	35	165	M20	5	250
8	180	280	430	215	600	640	225	350	105	35	165	M20	5	285
9	200	315	490	290	660	710	260	385	135	40	195	M20	5	400
10	225	335	510	310	690	750	265	415	135	40	195	M24	5	500
11	250	375	575	350	780	850	320	510	170	50	235	M24	6	650
12	280	425	630	400	840	910	320	510	170	50	235	M24	6	750
13	315	475	700	400	900	1.000	370	615	220	60	275	M30	6	1.200
14	355	530	755	460	960	1.060	370	615	220	60	275	M30	6	1.340
15	400	600	860	530	1.100	1.200	450	750	270	70	335	M30	6	2.150
16	450	670	930	620	1.210	1.300	455	750	270	70	335	M36	6	2.550
17	500	750	1.045	645	1.320	1.430	530	920	350	90	390	M36	8	3.700
18	560	900	1.200	685	1.520	1.640	575	965	355	90	425	M36	8	4.800
19	600	950	1.350	700	1.760	1.900	667	1.067	375	110	495	M42	8	8.000
20	625	1.070	1.470	720	1.855	2.000	737	1.175	400	120	550	M48	8	10.300



Dimensions VM series

1 // Technical data															
Size	d1 max.	d2	d3	d4	d5	h1	h2	h3	h4	h5	h6	h7	r	z	weight (kg)
5	125	200	375	420	465	190	113	90	8	67	30	28	M16	5	80
6	140	225	405	450	495	195	117	90	8	67	30	28	M16	6	95
7	160	250	465	520	575	248	140	110	8	72	35	53	M20	6	145
8	180	280	510	565	620	248	140	110	8	72	35	53	M20	6	170
9	200	315	555	620	685	296	170	135	10	94	40	55	M24	6	250
10	225	335	580	645	690	296	170	135	10	94	40	55	M24	6	265
11	250	375	660	740	820	368	197	180	10	104	50	93	M30	6	440
12	280	425	720	800	880	368	197	180	10	104	50	93	M30	6	500
13	315	475	800	900	1000	453	232	220	12	114	60	113	M36	6	800
14	355	530	860	960	1060	453	232	220	12	114	60	113	M36	8	890
15	400	600	960	1080	1200	555	293	265	12	142	70	151	M42	8	1.390
16	450	670	1040	1160	1280	555	293	265	12	142	70	151	M42	8	1.650
17	500	750	1150	1290	1430	710	320	390	14	152	80	270	M48	8	2.450
18	560	850	1250	1390	1530	710	320	390	14	152	80	270	M48	8	2.790
19	620	985	1450	1580	1750	770	420	350	15	215	90	130	M56	8	5.000
20	720	1070	1500	1630	1800	770	420	350	15	215	90	130	M56	8	5.500



Bearing coding VC and VJ series for low and medium speed

Nomination

1

2

3

4

5

6

7

The nomination of the different bearings is acc. to the following table.

1 // Type	
VC	Thrust and guide
VJ	Guide

2 // Design	
T	Thrust and Guide (Thrust load only in one direction)
B	Thrust and Guide (Thrust load in both direction)
G	Guide only
S	Special design

3 // Heat dissipation and lubrication	
N	Natural cooling
Z	Forced lubrication
W	With water cooler in oil sump
V	Fan cooling
S	Special cooling system

4 // Shape of bore	
C	Cylindrical bore
V	Four lobe bore

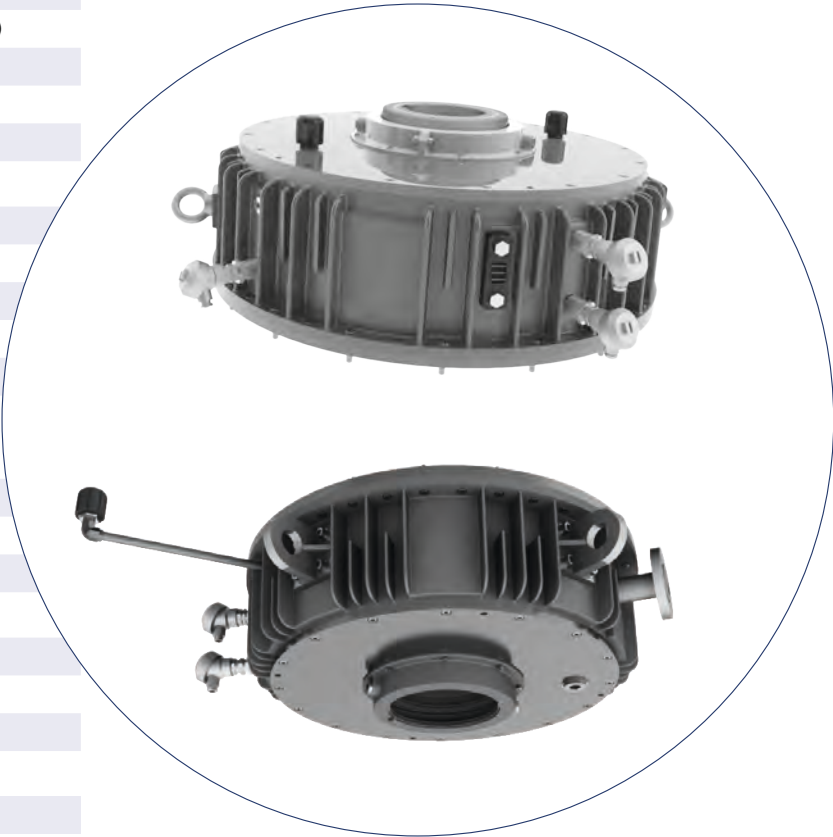
5 // Bearing cover	
E	Non-split cover
H	Split cover

6 // Bearing size	
-------------------	--

7 // Housing size	
-------------------	--

Example for the nomination of a bearing:

VCTW C H 22 - 92



Bearing coding VH and VM series for high speed

Nomination

1

2

3

4

5

6

The nomination of the different bearings is acc. to the following table.

1 // Type	
VH	Thrust and guide
VM	Guide

2 // Design	
T	Thrust and Guide (Thrust load only in one direction)
B	Thrust and Guide (Thrust load in both direction)
G	Guide only
S	Special design

3 // Heat dissipation and lubrication	
N	Natural cooling
Z	Forced lubrication
W	With water cooler in oil sump
V	Fan cooling
S	Special cooling system

4 // Shape of bore	
R	Radial Tilting pads
S	Special design

5 // Oil sump	
E	Without oil sump
H	With oil sump (Only on request)

6 // Bearing size	
-------------------	--

Example for the nomination of a bearing:

VHT Z R E - 18



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