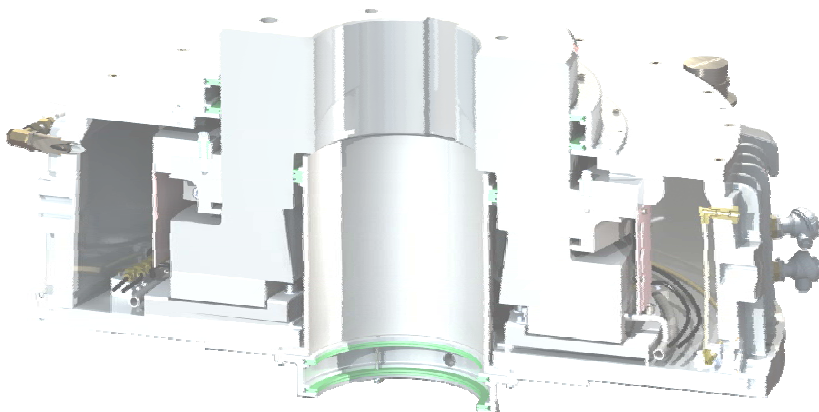


VERTICAL BEARINGS

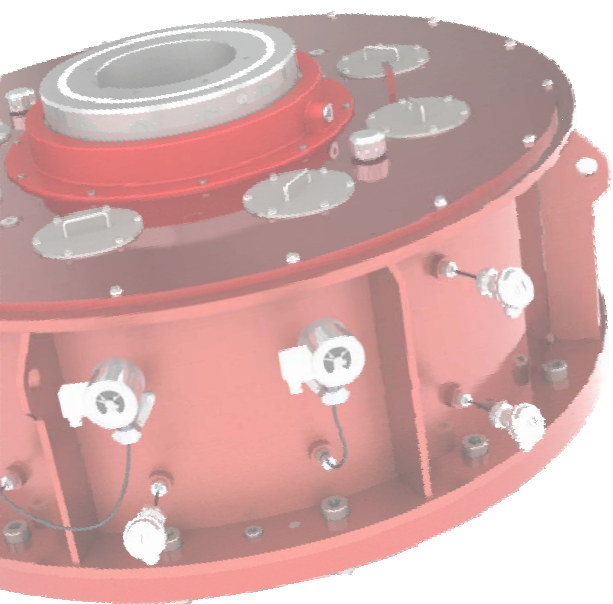
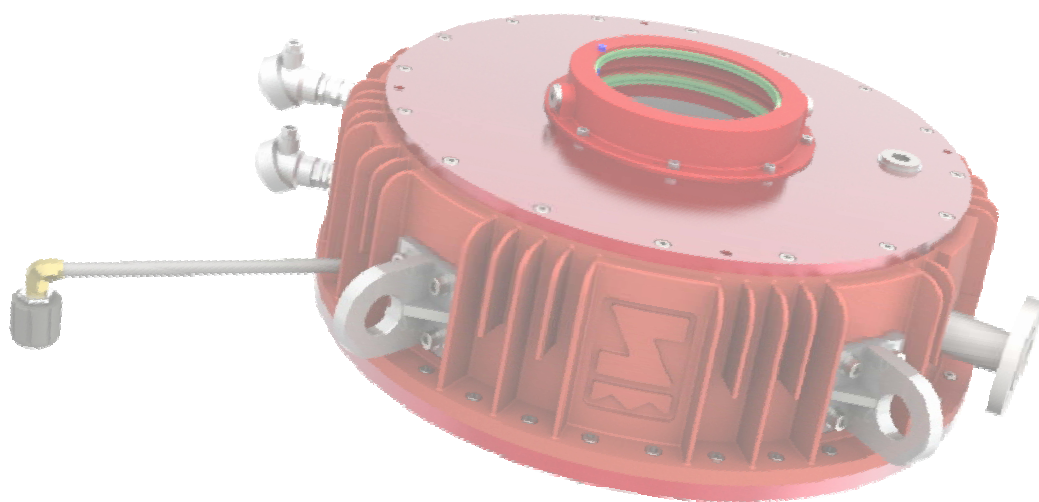
ZOLLERN

PLAIN BEARING TECHNOLOGY



The ZOLLERN Group

ZOLLERN GmbH & CO. KG is a company with world wide operations, employing over 3000 employees in the business fields of transmission technology (automation, gear boxes and winches), plain bearing technology, machine components, foundry technology and steel profiles.



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Description

Zollern 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.

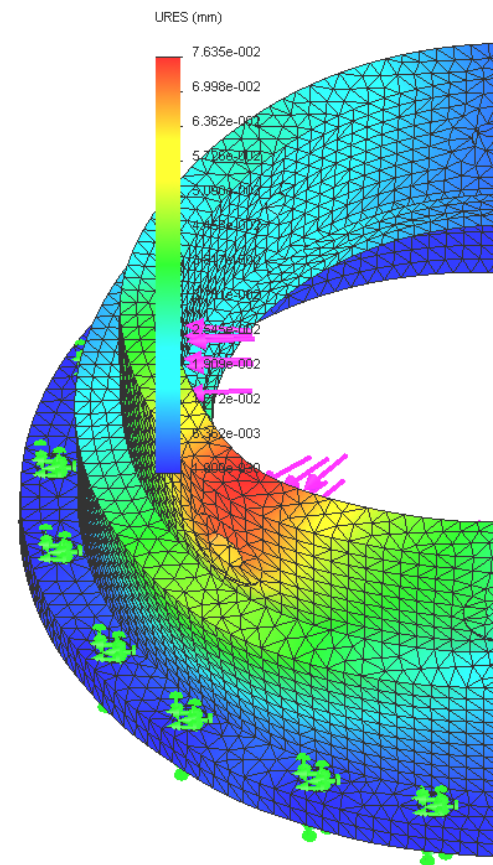
The bearings will use natural cooling, water cooling, fans or forced external oil cooling system, depending on the operating conditions and on the application.

Technical Features

- Finned housing design provides a larger area for heat dissipation.
- Projects generated in a 3D platform.
- Finite element analysis are 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.), to be specified by the customer.



Bearing Coding (VC and VJ Series)



For Slow and Medium Speed

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 directions)
- 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 (fixed geometry)

- C Cylindrical bore
- V Four lobe bore

5 Bearing cover

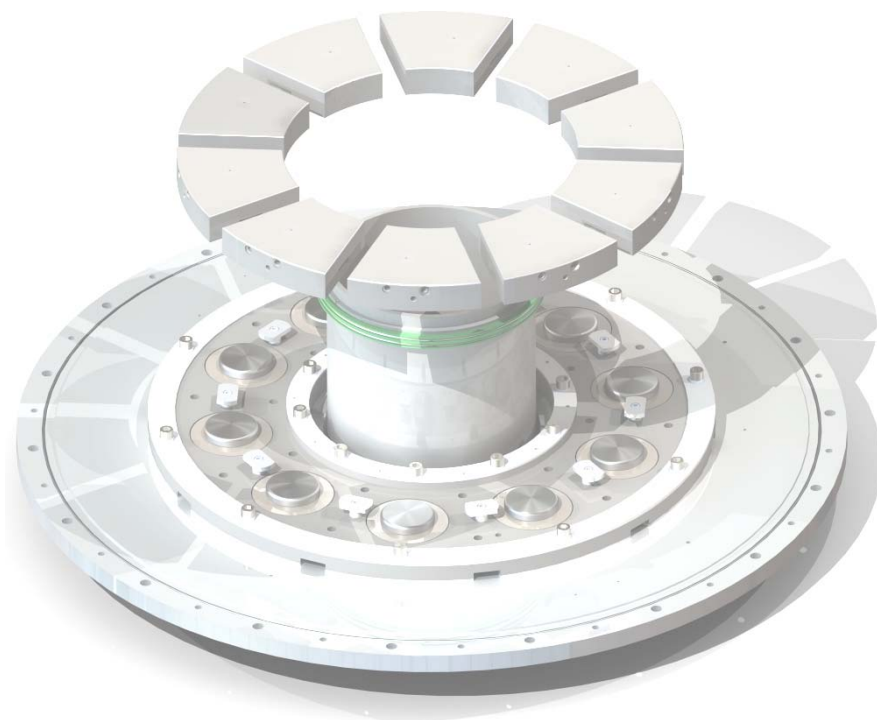
- E Non-split cover
- H Split cover

6 Bearing Size

7 Housing Size

Example for the nomination of a complete bearing

VCTNCH 22-92



Bearing Coding (VH and VM Series)

For High speed

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

1 Type

- VH** Thrust and guide
- VM** Guide

4 Shape of bore

- R** Radial Tilting pads
- S** Special design

2 Design

- T** Thrust and Guide (Thrust load only in one direction)
- B** Thrust and Guide (Thrust load in both directions)
- G** Guide only
- S** Special design

5 Oil sump

- E** Without oil sump
- H** With oil sump (Only on request)

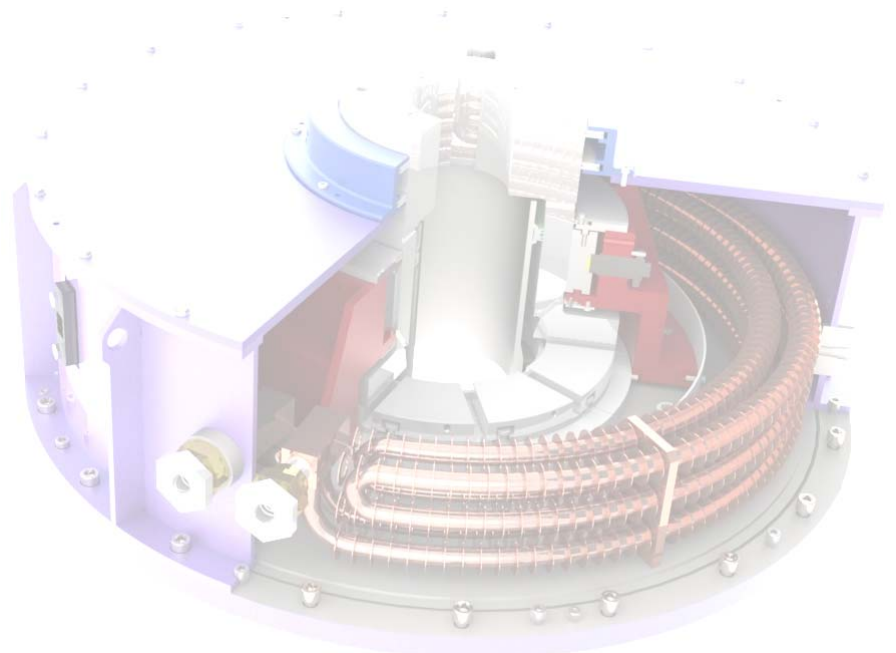
3 Heat dissipation and lubrication

- N** Natural cooling
- Z** Forced lubrication
- W** With water cooler in oil sump
- V** Fan cooling
- S** Special cooling system

6 Bearing Size

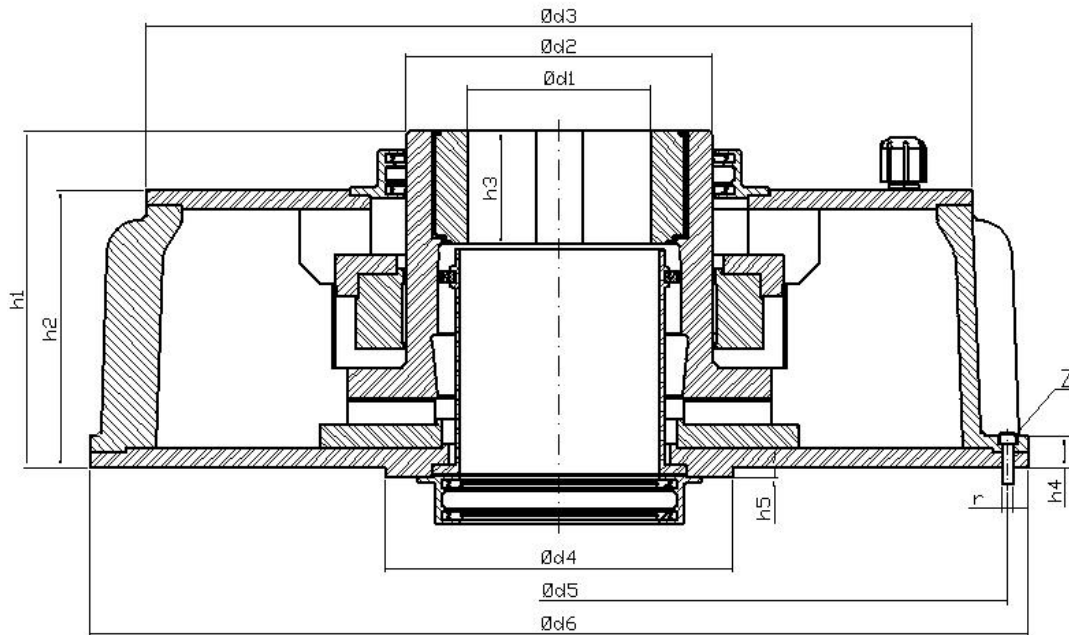
Example for the nomination of a complete bearing

VH T Z R E - 18

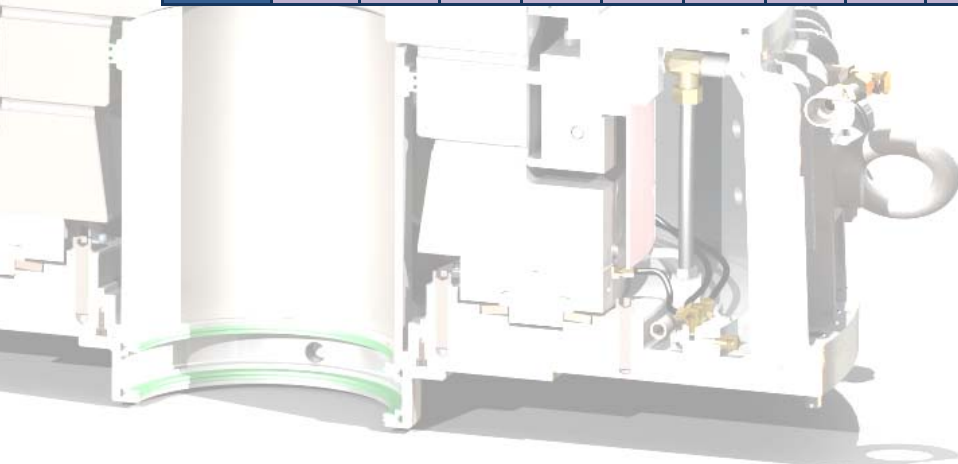


Dimensions

VC series

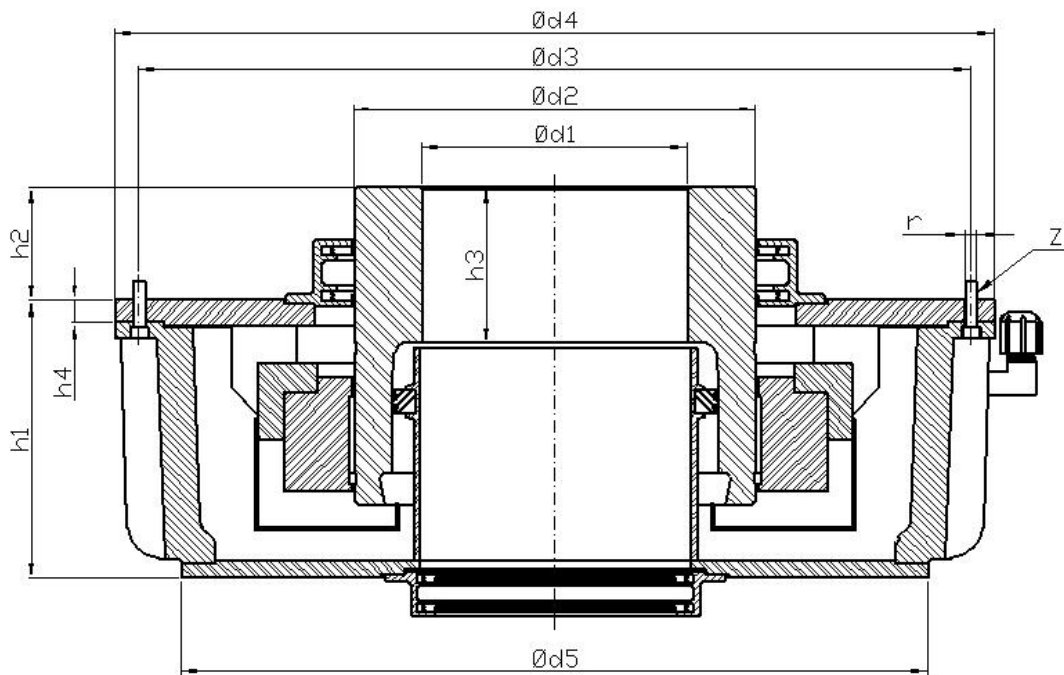


Size	d1 max	d2	d3	d4	d5	d6	h1	h2	h3	h4	h5	r	z	weight (kg)
14-67	140	225	580	280	640	670	270	210	85	30	10	M8	18	270
16-67	160	250	580	340	640	670	300	210	100	30	10	M8	18	310
16-81	160	250	720	340	780	810	325	245	100	30	10	M10	18	380
18-81	180	300	720	350	780	810	345	245	110	30	10	M10	18	460
18-92	180	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	1000	420	1080	1120	400	330	140	40	10	M12	20	800
25-112	250	425	1000	460	1080	1120	435	330	150	40	10	M12	20	900
28-112	280	475	1000	500	1080	1120	480	330	170	40	10	M12	20	1090
28-125	280	475	1085	520	1200	1250	480	345	170	45	10	M12	18	1200
31-125	300	530	1085	580	1200	1250	495	350	190	50	10	M12	18	1300
40-132	400	600	1200	660	1270	1320	625	390	220	50	10	M16	24	1900
48-183	450	865	1630	950	1755	1830	785	570	295	78	15	M24	36	6000



Dimensions

VJ Series

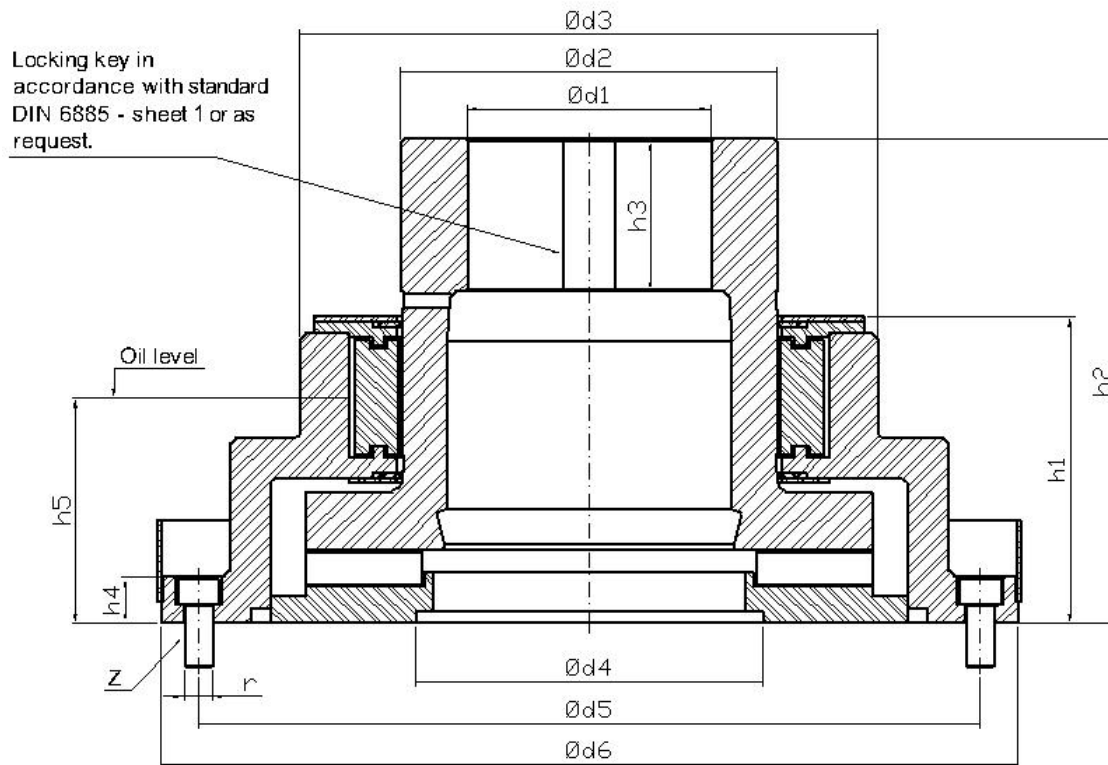


Size	d1 max	d2	d3	d4	d5	h1	h2	h3	h4	r	z	weight (kg)
14-54	160	225	510	550	460	180	60	90	15	M8	12	145
16-58	180	250	640	680	580	210	60	110	16	M8	18	215
18-58	200	280	640	680	580	210	80	120	16	M8	18	245
20-80	225	315	760	800	690	250	90	135	20	M10	18	320
22-80	250	375	760	800	690	250	120	155	20	M10	18	380
25-93	315	425	880	930	790	290	120	165	23	M12	20	550
28-105	335	475	1000	1050	910	328	130	175	23	M12	20	750
31-105	375	530	1000	1050	910	328	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



Dimensions

VH Series

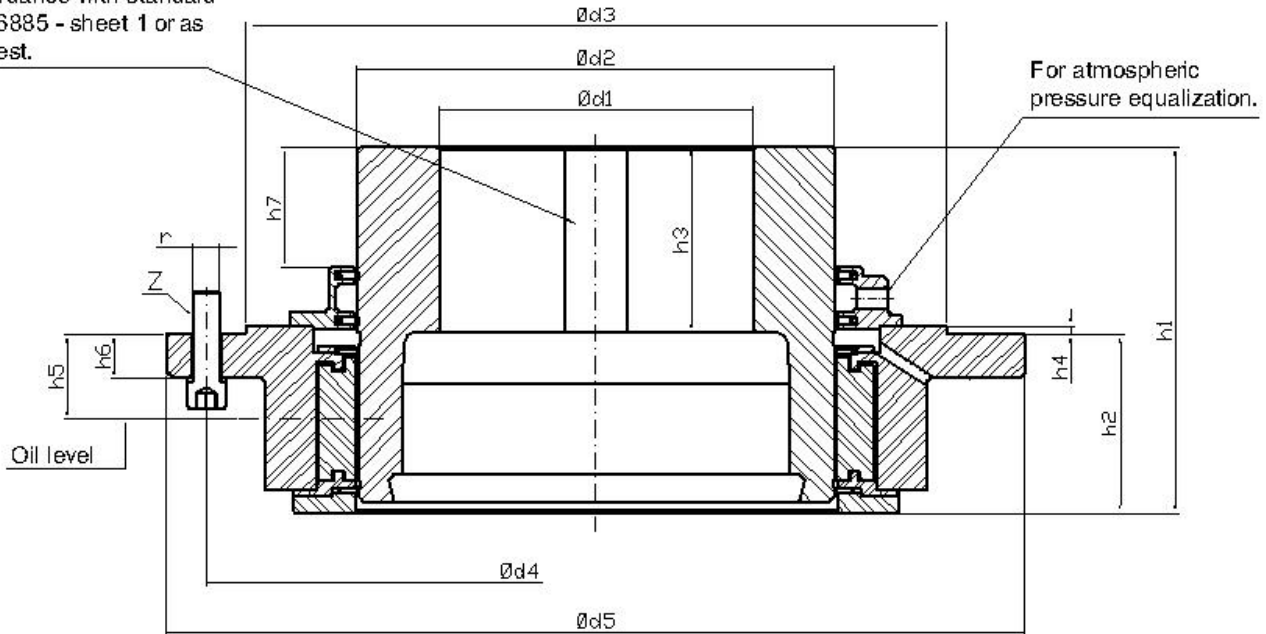


Size	d1 max	d2	d3	d4	d5	d6	h1	h2	h3	h4	h5	r	z	weight (kg)
7	160	250	400	190	520	575	218	355	105	35	165	M20	5	250
8	180	280	430	215	600	640	225	350	105	35	165	M20	5	285
9	200	315	490	290	660	710	260	420	135	40	195	M20	5	400
10	225	335	510	310	685	750	265	415	135	40	195	M24	5	500
11	250	375	575	350	780	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	1000	370	615	220	60	275	M30	6	1200
14	355	530	755	460	960	1060	370	615	220	60	275	M30	6	1340
15	400	600	860	530	1100	1200	450	750	270	70	335	M36	6	2150
16	450	670	930	620	1210	1300	455	750	270	70	335	M36	6	2550
17	500	750	1045	645	1320	1430	530	920	350	80	390	M36	8	3700
18	560	900	1200	685	1520	1640	575	965	355	80	425	M36	8	4800
19	600	950	1350	700	1760	1900	667	1067	375	110	495	M42	8	8000
20	625	1070	1470	720	1855	2000	737	1175	400	120	550	M48	8	10300

Dimensions

VM Series

Locking key in accordance with standard DIN 6885 - sheet 1 or as request.



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	710	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	225	12	114	60	113	M36	8	800
14	355	530	860	960	1060	453	232	225	12	114	60	113	M36	8	890
15	400	600	960	1080	1200	555	293	270	12	142	70	151	M42	8	1390
16	450	670	1040	1160	1280	555	293	270	12	142	70	151	M42	8	1650
17	500	750	1150	1290	1430	710	320	390	14	152	80	272	M48	8	2450
18	560	850	1250	1390	1530	710	320	390	14	152	80	272	M48	8	2790