

# SPECIAL SPHERICAL PLAIN BEARING



STAINLESS STEEL WITH COM-KU®/D  
SLIDING LAYER, MAINTENANCE-FREE

# Special spherical plain bearing

with COM-KU®/D sliding layer, maintenance-free

## INFORMATION:

- Stainless steel outer and inner ring, with COM-KU®/D sliding layer.
- Maintenance-free, no lubrication necessary
- High load capacity - due to thin plastic intermediate layer.
- Compatible with all DIN - spherical plain bearings
- Applicable in water, as COM-KU®/D doesn't swell and the metal parts are produced from rust-free stainless steel.
- Suitable at best for movements which occur only in long intervals.
- The non-ageing sliding layer prevents adhesion of the parts and guarantees therefore a faultless and long-term functionality of the bearing.
- Application at e.g. valve, barrage assets, ball valves, guide vane bearings, dampers, etc.
- Large measurements are produced in parted models, inner diameter > 500 mm possible, see data sheet.
- Many special designs are possible beyond standard measurements.
- Through application of different plastic mixtures it is possible, to produce the special spherical plain bearings to the requested specifications.

All COM-KU®/D type spherical plain bearings are maintenance-free.

Standard production according to DIN (ND series or HD series)

Special measurements and designs are produced at short notice!

The bearings are produced in two standard designs, according to ISO 6124 (ND series) and ISO 6124/3 (HD series).

These spherical plain bearings are featured by sliding layers from special plastic COM-KU®/D.

This is a **maintenance-free, compound plastic material**, which in respect of wear, friction coefficient and capacity load, is among our best sliding materials.

The specific characteristic of this sliding bearing-plastic is based on the fact that even under high loads, largely no plastic deformation appears. Thereby this material finds its specific application at continuously high load.

Spherical plain bearings are produced predominantly in stainless steel in the bearing areas. But the use of different materials is possible.

As the plastic COM-KU®/D absorbs almost no humidity nor shows any swell behaviour, it can be applied without specific constrictions or additional sealing in most of the liquid mediums in connection with stainless steel.

Only at very abrasive mediums is sealing of the bearing suggestive or necessary to prevent early wear.

As COM-KU®/D plastics are produced without phenolic resin, or similar hazardous materials these spherical plain bearings can be used for applications which have specific requirements concerning environmental compatibility.

This sliding material causes no threat to health and environment!

# Tolerances

Inner ring measurements (d) in mm

from mm	to mm	d max $\mu$	d min $\mu$
bis	30	0	-8
30	50	0	-10
50	80	0	-15
80	120	0	-20
120	180	0	-25
180	250	0	-30
250	315	0	-35
315	400	0	-40
400	500	0	-45
500	630	0	-50
630	800	0	-75
800	1000	0	-100

Outer ring measurements (D) in mm

from mm	to mm	d max $\mu$	d min $\mu$
-	30	0	-9
30	50	0	-11
50	80	0	-13
80	120	0	-15
120	150	0	-18
150	180	0	-25
180	250	0	-30
250	315	0	-35
315	400	0	-40
400	500	0	-45
500	630	0	-50
630	800	0	-75
800	1000	0	-100
1000	1250	0	-125
1250	1600	0	-160

Inner ring width (B) in mm

from mm	to mm	d max $\mu$	d min $\mu$
bis	50	0	-120
50	80	0	-150
80	120	0	-200
120	180	0	-250
180	250	0	-300
250	315	0	-350
315	400	0	-400
400	500	0	-450
500	630	0	-500
630	800	0	-750
800	1000	0	-1250

Outer ring width (b) in mm

from mm	to mm	d max $\mu$	d min $\mu$
bis	50	0	-240
50	80	0	-300
80	120	0	-400
120	180	0	-500
180	250	0	-600
250	315	0	-700
315	400	0	-800
400	500	0	-900
500	630	0	-1000
630	800	0	-1100
800	1000	0	-1200
1000	1250	0	-1300
1250	1600	0	-2000

## Please find the tolerances for

Inner ring diameter (d)

Outer ring diameter (D)

Inner ring width (B)

Outer ring width (b)

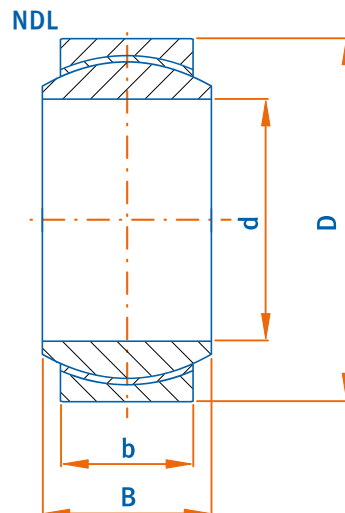
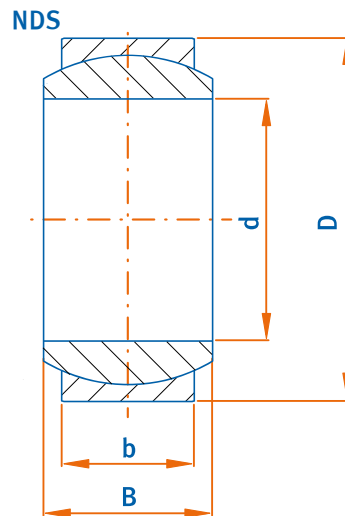
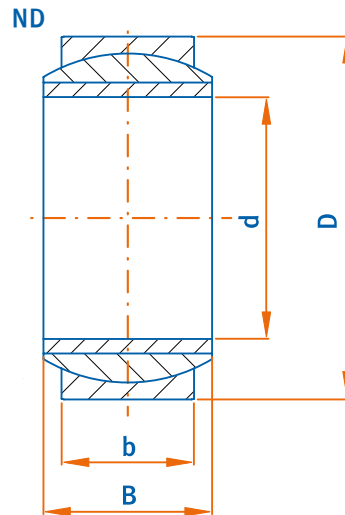
in the chart above

# Measurements and load ratings of ND series

	Typ	D	b	B	C <sub>0</sub>	C
	mm	mm	mm	mm	KN	KN
For ND and NDS	30	47	18	22	202	115
	35	55	20	25	265	151
	40	62	22	28	329	187
	45	68	25	32	411	234
	50	75	28	35	510	290
	60	90	36	44	784	446
	70	105	40	49	1027	585
	80	120	45	55	1316	749
	90	130	50	60	1625	925
	100	150	55	70	2002	1140
	110	160	55	70	2181	1241
	120	180	70	85	3003	1709
	140	210	70	90	3549	2020
	160	230	80	105	4524	2575
180	260	80	105	5096	2901	
200	290	100	130	7150	4070	
For NDL	220	320	100	135	8568	4877
	240	340	100	140	9240	5260
	260	370	110	150	11205	6379
	280	400	120	155	12958	7376
	300	430	120	155	13923	7925
	320	440	135	160	16179	9209
	340	460	135	160	17084	9725
	360	480	135	160	17987	10239
	380	520	160	190	22479	12796
	400	540	160	190	23554	13408
	420	560	160	190	24626	14018
	440	600	185	218	30062	17112
	460	620	185	218	31305	17820
	480	650	195	230	34582	19685
	500	670	195	230	35889	20429
	530	710	205	243	39946	22738
	560	750	215	258	44219	25171
	600	800	230	272	50340	28655
	630	850	260	300	59934	34116
	670	900	260	308	63859	36350
710	950	275	325	71450	40671	
750	1000	280	335	76604	43605	
800	1060	300	335	86755	49384	
850	1120	310	365	96001	54647	
900	1180	320	375	104798	59654	
950	1250	340	400	117789	67049	
1000	1320	370	438	134992	76842	

C = dynamic load rating  
 C<sub>0</sub> = static load rating

The measurements and load ratings of the ND series of our COM-KU®/D special spherical plain bearings can be seen in this chart.



# Measurements and load ratings of HD series

Typ	D	b	B	C <sub>0</sub>	C
mm	mm	mm	mm	KN	KN
100	150	67	71	2751	1566
110	160	74	78	3249	1849
120	180	80	85	3831	2181
140	210	95	100	5247	2987
160	230	109	115	6831	3888
180	260	122	128	8565	4875
200	290	134	140	10430	5937
220	320	148	155	12724	7243
240	340	162	170	14961	8516
260	370	175	185	17541	9985
280	400	190	200	20505	11672
300	430	200	212	23221	13218
320	460	218	230	27076	15412
340	480	230	243	29915	17029
360	520	243	258	33866	19277
380	540	258	272	37757	21492
400	580	265	280	41028	23354
420	600	280	300	45306	25790
440	630	300	315	50910	28980
460	650	308	325	53980	30727
480	680	320	340	59091	33636
500	710	335	355	64436	36679
530	750	355	375	71837	40892
560	800	380	400	81315	46287
600	850	400	425	91862	52291
630	900	425	450	103749	59057
670	950	450	475	116358	66234
710	1000	475	500	129354	73633
750	1060	500	530	145156	82627
800	1120	530	565	163509	93074
850	1220	565	600	190273	108309
900	1250	600	635	206347	117459
950	1360	635	670	234105	133260
1000	1450	670	710	263591	150044

C = dynamic load rating

C<sub>0</sub> = static load rating

The measurements and load ratings of the HD series of our COM-KU®/D special spherical plain bearings can be seen in this chart.

