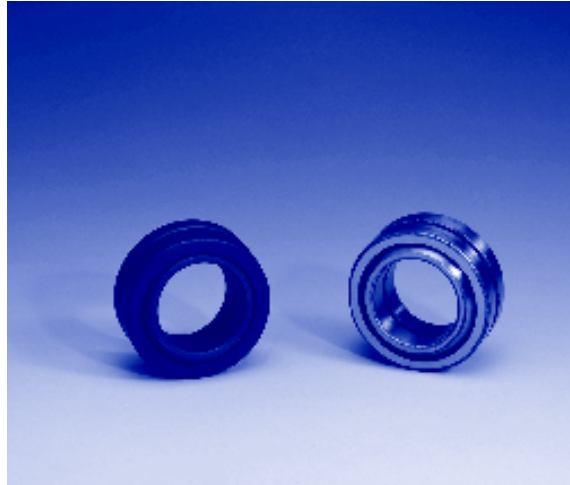


Spherical Plain Bearings



Spherical plain bearings are radial sliding bearings consisting of one inner and one outer ring which have spherical functional surfaces. Bearings are determined for arrangements where great radial forces at slow tilting or oscillating are acting and for arrangements where space adjustability of both components is secured. Besides radial load, bearings can also accommodate an axial load of certain magnitude in both directions.

Spherical plain bearings are produced of bearing steel. Rings are hardened, ground or phosphatized. Spherical plain bearings require minimum service. At first mounting the bearings are filled with grease and are relubricated in certain time periods according to operating conditions. For spherical plain bearings lubrication mainly greases with EP or MoS₂ additives are suitable.

Boundary Dimensions

Boundary dimensions of spherical plain bearings - Type GE comply with the international standard ISO 6124/1 and bearings - type GEW with enlarged inner ring the international standard ISO 6124/2.

Designation

Spherical plain bearings designation in standard design is shown in the dimension table and consists of type designation (GE or GEW) and size (digit indicates bore diameter in mm), e.g. GE30. Deviations from standard design (radial clearance, sealing, dimension change) are indicated by additional symbols according to ISO 02 4608 (except for symbol E), placed after the basic designation. Symbol E - phosphatized bearing surface, e.g. GE30E.

Tolerance

Spherical plain bearings are produced in normal tolerance class which is not indicated. Deviation values correspond to the international standard ISO 6125.

Radial Clearance

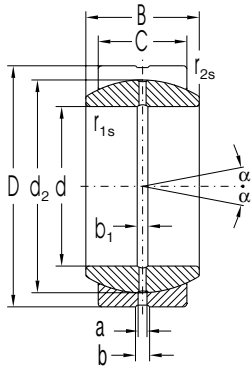
Spherical plain bearings are commonly produced with normal radial clearance which is not indicated. Radial clearance values are shown in the following table.

Bore Diameter		Radial Clearance					
over	to	C2		normal		C3	
		min	max	min	max	min	max
mm		µm					
12	20	10	40	40	82	82	124
20	35	12	50	50	100	100	150
35	60	15	60	60	120	120	180

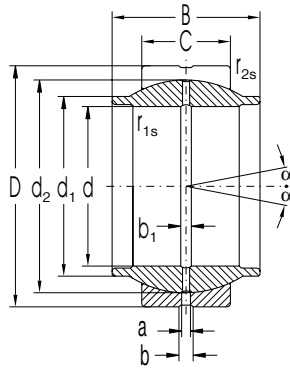


Spherical Plain Bearings

d = 14 to 60 mm

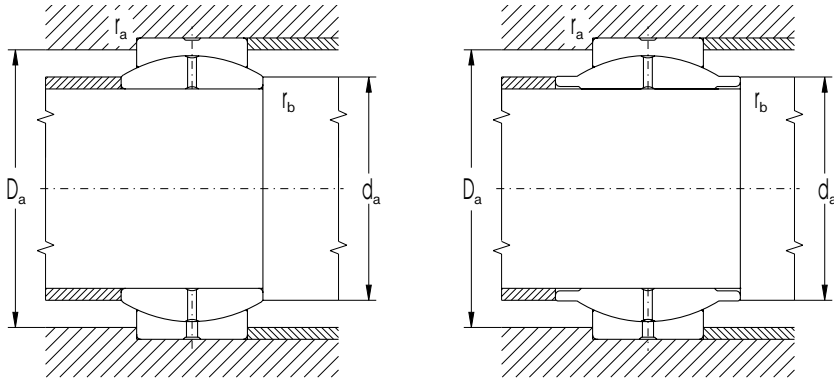


GE



GEW

Dimensions										Radial Clearance		Basic Load Rating		Bearing Designation	Weight
d	D	B	C	d ₁	d ₂	r _{1s} min	r _{2s} min	α	min	max	C _r	C _{or}			
mm										μm	kN				kg
14	26	12	9	-	22.0	0.6	0.6	8	30	60	17	85	GE15EX2	0.025	
	28	12	9	-	22.0	0.6	0.6	8	40	82	17	85	GE15EX1	0.031	
20	35	16	12	-	29.0	0.6	0.6	9	40	82	30	146	GE20E	0.061	
	35	20	12	25.0	29.0	0.6	0.6	4	40	82	30	146	GEW20E	0.070	
25	42	20	16	-	35.5	0.6	0.6	7	50	100	48	240	GE25E	0.110	
	42	25	16	30.5	35.5	0.6	0.6	4	50	100	48	240	GEW25E	0.120	
30	47	22	18	-	40.7	0.6	0.6	6	50	100	62	310	GE30E	0.140	
	47	22	18	-	40.7	0.6	0.6	4	50	100	62	310	GE30E-2RS	0.140	
32	52	32	18	37.0	44.0	0.6	1.0	4	50	100	67	335	GEW32E	0.200	
35	55	25	20	-	47.0	0.6	1.0	6	50	100	80	400	GE35E	0.220	
	55	25	20	-	47.0	0.6	1.0	4	50	100	80	400	GE35E-2RS	0.220	
40	62	28	22	-	53.0	0.6	1.0	7	60	120	100	500	GE40E	0.300	
	62	40	22	46.0	53.0	0.6	1.0	4	60	120	100	500	GEW40E	0.340	
45	68	32	25	-	60.0	0.6	1.0	7	60	120	127	640	GE45E	0.400	
50	75	35	28	-	66.0	0.6	1.0	6	60	120	156	780	GE50E	0.540	
	75	50	28	57.0	66.0	0.6	1.0	4	60	120	156	780	GEW50E	0.560	
55	85	40	32	-	74.0	0.6	1.0	7	60	120	190	950	GE55E	0.700	
60	90	44	36	-	80.0	1.0	1.0	6	60	120	245	1220	GE60E	1.000	



Abutment and Fillet Dimensions

d	d _a min	d _a max	D _a max	D _a min	r _a max	r _b max
mm						
14	18.0	18.0	23	21	0.6	0.5
15	18.0	18.0	23	21	0.6	0.5
20	23.0	24.0	31	28	0.3	0.5
25	24.0	26.0	31	28	0.6	0.6
	28.0	29.0	38	33	0.6	0.5
30	29.5	31.5	38	33	0.6	0.6
	33.0	34.0	43	38	0.6	0.5
32	33.0	34.0	43	38	0.6	0.5
35	36.0	38.0	47	41	0.8	0.6
35	39.0	40.0	50	44	0.8	0.6
	39.0	40.0	50	44	0.8	0.6
40	44.0	45.0	57	50	0.8	0.6
	44.0	45.0	57	50	0.8	0.6
45	49.0	50.0	63	56	0.8	0.6
50	49.0	50.0	63	56	0.8	0.6
	54.0	56.0	70	61	0.8	0.6
55	56.0	58.0	70	61	0.8	0.6
	60.0	62.0	80	70	1.0	0.8
60	65.0	66.0	84	73	1.0	0.8

