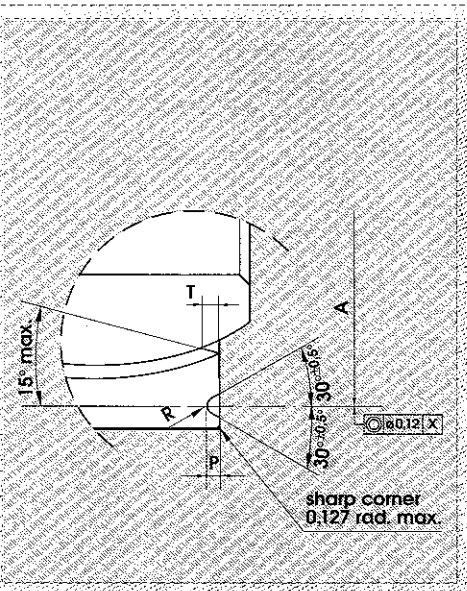
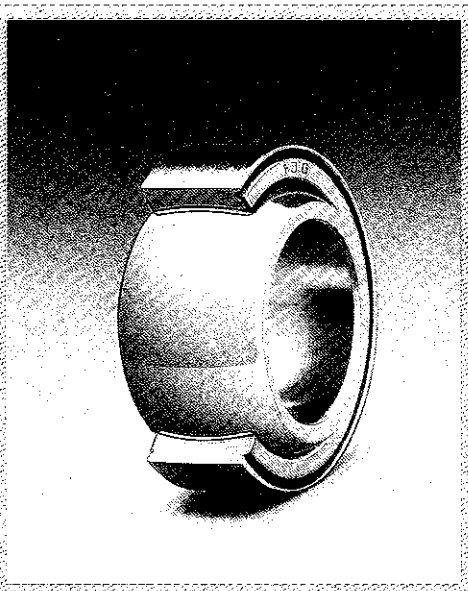




Dimensions in millimetres

T max.	α min.	Out of round µm Δds	Out of round µm ΔDs	Static Limit Load Rating in kN Radial	Static Limit Load Rating in kN Axial	Dynamic Limit Radial Load 25 000 cycles in kN	No Load Rotational Starting Torque in Nm	Mass g	Bearing Number	
0,9	11°			46,4	3,7	25,5		17	FRA 12	FRA 12 R
	9°		+3	79,5	8,0	43,7		32	FRA 15/26	FRA 15/26 R
1,0	9°	+3 -11	-15	79,5	8,0	43,7	0,12 to 0,80	34	FRA 15	FRA 15 R
	10°			102,6	10,6	56,4		49	FRA 17/30	FRA 17/30 R
	10°			102,6	10,6	56,4		51	FRA 17	FRA 17 R
	9°		+8	147,4	17,0	81,0		65	FRA 20	FRA 20 R
1,2	7°	+3 -13	-19	221,7	28,7	110,8	0,25 to 1,00	115	FRA 25	FRA 25 R
	6°			285,6	38,2	142,8	0,40 to 2,00	160	FRA 30	FRA 30 R
	7°			374,5	48,7	187,3		230	FRA 35	FRA 35 R
1,5	7°	+3	+10	462,7	60,7	231,3		315	FRA 40	FRA 40 R
	7°	-15	-23	605,8	81,6	302,9	0,60 to 2,70	460	FRA 45	FRA 45 R
	7°			768,0	105,6	384,0		560	FRA 50	FRA 50 R

Type of mounting: R = with mounting grooves

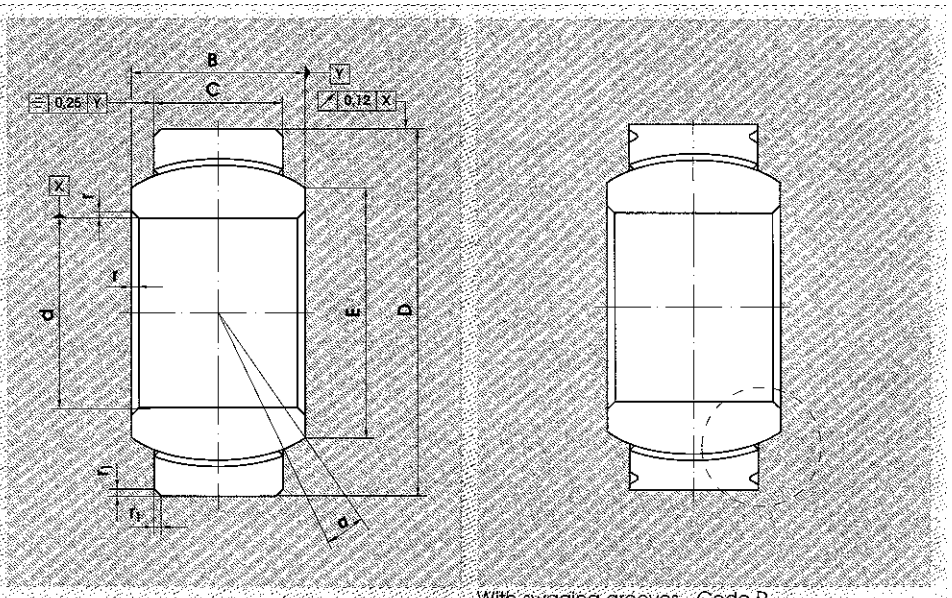
Suffix P only when chromium plated ball is required

SPHERICAL BEARINGS

Corrosion resisting steel
FRASLIP lined, according to EN 3048.

Series: **EN 3048 S**
Material
Outer ring: EN 2539 (1.4548.3)
Inner ring: EN 2030 (1.3544.9)
Liner: PTFE

Series: **EN 3048 R**
Material
Outer ring: EN 2539 (1.4548.3)
Inner ring: EN 2030 (1.3544.9)
Liner: PTFE



With swaging grooves - Code R

Bearing Number	d	Δdmp µm	D	ΔDmp µm	B	ΔBmp µm	C	ΔCmp µm	E min.	r	r1	A	ΔAmp µm	P	R
12	12		22		10		7		14,3			20,2			
15	15	0	26	0	12		9		18,7		0,5	24,2			
15[1]	15	-8	26	-9	12		9		18,7		to	24,0		0,5	0,2
17	17		30		14		10		21,2		0,8	28,2		to	to
17[1]	17		30		14		10		21,2			28,0		0,7	0,3
20	20		35		16		12		24,9			33,2			
20[1]	20		35		16		12		24,9	0,1		33,0			
25	25	0	42	0	20	0	16	±100	30,0	to	0,6	39,4	+100		
25[1]	25	-10	42	-11	20	-60	16		30,0	0,4	to	38,8	0	0,7 to	
30	30		47		22		18		34,3		1,0	44,4		0,9	0,3
30[1]	30		47		22		18		34,3			43,8			to
35	35		55		25		20		40,5			51,8			0,4
40	40	0	62	0	28		22		45,0		0,8	58,8		1,2	
45	45	-12	68	-13	32		25		51,3		to	64,8		to	
50	50		75		35		28		58,2		1,2	71,8		1,4	

[1] Code 1 to be added to the end of the identity block

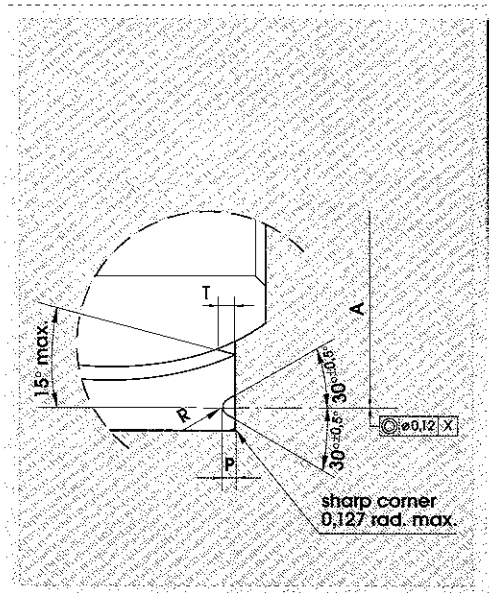
Procurement Specification EN 2755

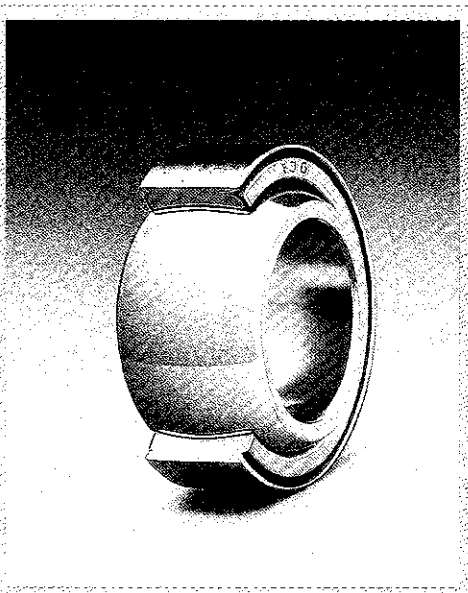
Designation

Each bearing is designated as in the following example:

EN 3048 R 12 P A 1

Series designation
R = with mounting grooves
12 = Bore number
1 = Mounting grooves deeper than normal
A = bonded liner technology
P = chromium plated ball / T = only when passivated





Dimensions in millimetres

T max.	α min.	Out of round µm Δds	Out of round µm ΔDs	Static Limit Load Rating in kN Radial	Static Limit Load Rating in kN Axial	Dynamic Limit Radial Load 25 000 cycles in kN	No Load Rotational Starting Torque in Nm	Mass g	Bearing Number
0,9	11°			46,4	3,7	25,5		17	12
	9°			79,5	8,0	43,7		26	15
1,0	9°	+3 -11	+6 -15	79,5	8,0	43,7		26	15
	10°			102,6	10,6	56,4	0,12 to 0,8	40	17
	10°			102,6	10,6	56,4		40	17'
	9°			147,4	17,0	81,0		65	20
	9°			147,4	17,0	81,0		65	20'
1,2	7°	+3 -13	+8 -19	221,7	28,7	110,8	0,25 to 1,00	115	25
	7°			221,7	28,7	110,8		115	25'
	6°			285,6	38,2	142,8		160	30
	6°			285,6	38,2	142,8	0,40 to 2,00	160	30'
	7°			374,5	48,7	187,3		229	35
1,5	7°	+3 -15	+10 -23	462,7	60,7	231,3		315	40
	7°			605,8	81,6	302,9	0,60 to 2,70	460	45
	7°			768,0	105,6	384,0		560	50

Type of mounting: R = with mounting grooves
S = without mounting grooves

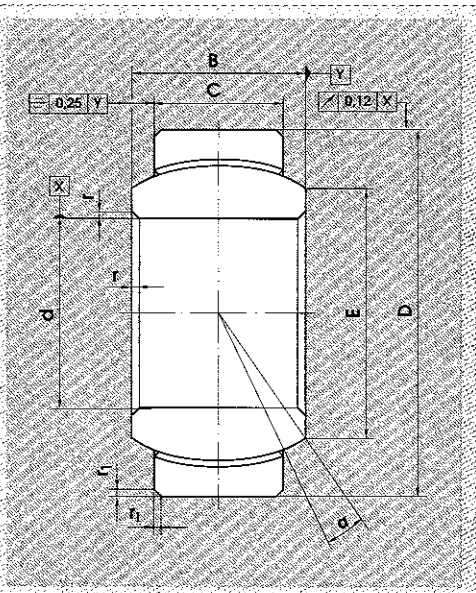
Suffix P only when chromium plated ball is required
Suffix T only when passivated ISO 8075

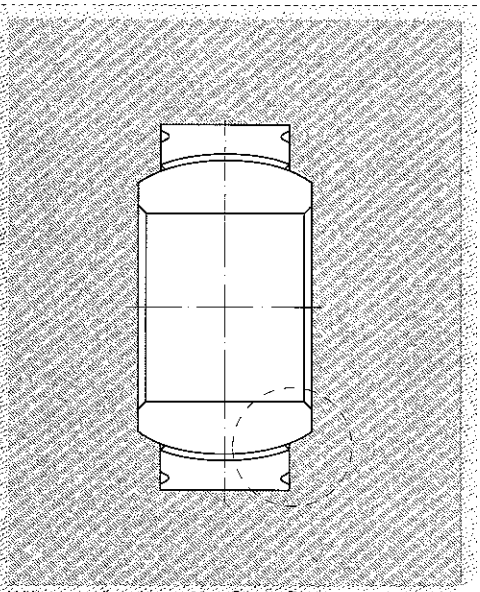
SPHERICAL BEARINGS

Corrosion resisting steel
FRASLIP lined, according to EN 4037.

Series: **EN 4037 S**
Material
Outer ring: EN 2539 (1.4548.3)
Inner ring: EN 2030 (1.3544.9)
Liner: PTFE

Series: **EN 4037 R**
Material
Outer ring: EN 2539 (1.4548.3)
Inner ring: EN 2030 (1.3544.9)
Liner: PTFE





With swaging grooves - Code R

Bearing Number	d	Δdmp µm	D	ΔDmp µm	B	ΔBmp µm	C	ΔCmp µm	E min.	r	r_1	A	ΔAmp µm	P	R
12	12	0	22	0	10		7		14,3		0,5	20,2		0,5	0,2
15	15	-8	26	-9	12		9		18,7		to	24,2		to	to
17	17		30		14		10		21,2		0,8	28,2		0,7	0,3
20	20	0	35	0	16		12		24,9		0,6	33,2			
25	25	-10	42	-11	20	0	16	±100	30,0	0,1	to	39,4	0	0,7 to	
30	30		47		22	-60	18		34,3	to	1,0	44,4	+100	0,9	0,3
35	35		55		25		20		40,5	0,4		51,8			to
40	40	0	62	0	28		22		45,0		0,8	58,8		1,2	0,4
45	45	-12	68	-13	32		25		51,3		to	64,8		to	
50	50		75		35		28		58,2		1,2	71,8		1,4	

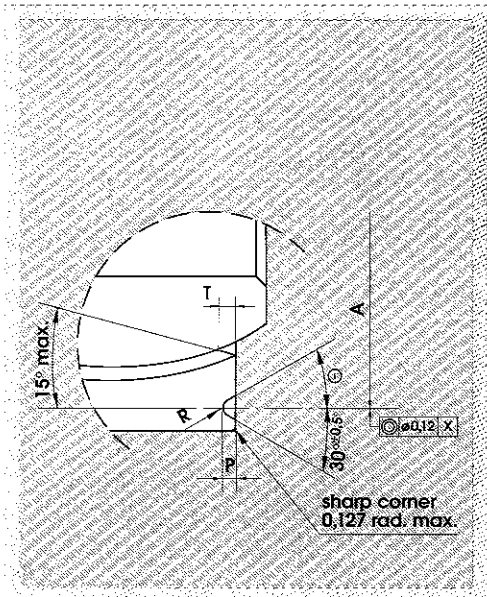
Procurement Specification EN 2755

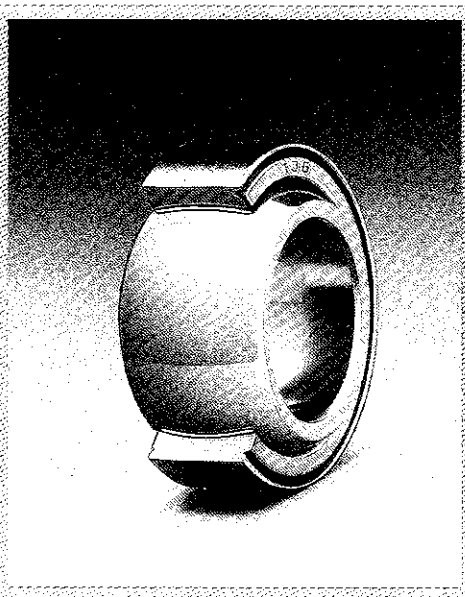
Designation

Each bearing is designated as in the following example:

EN 4037 R 12 T

- EN 4037 — Series designation
- R = with mounting grooves
- 12 = Bore number
- T = Passivated





Dimensions in millimetres

⊖ ±0,5°	T max.	α min.	Out of round µm Δds	Out of round µm ΔDs	Static Limit Load Rating in kN Radial	Static Limit Load Rating in kN Axial	Dynamic Limit Radial Load 25 000 cycles in kN	No Load Rotational Starting Torque in Nm	Mass g	Bearing Number
20°	0,9	11°	+3 -11	+3 -15	46,4	3,7	25,5	0,008 to 0,1	17	12
	1,0	9°			79,5	8,0	43,7		26	15
		10°			102,6	10,6	56,4	0,01 to 0,12	40	17
	1,2	9°	+3 -13	+8 -19	147,4	17,0	81,0		65	20
		7°			221,7	28,7	110,8	0,015 to 0,25	115	25
		6°			285,6	38,2	142,8	0,02 to 0,4	160	30
30°	1,5	7°	+3 -15	+10 -23	374,5	48,7	187,3		229	35
		7°			462,7	60,7	231,3	0,025 to 0,5	315	40
		7°			605,8	81,6	302,9	0,03 to 0,6	460	45
		7°			768,0	105,6	384,0		560	50

Type of mounting: R = with mounting grooves
S = without mounting grooves

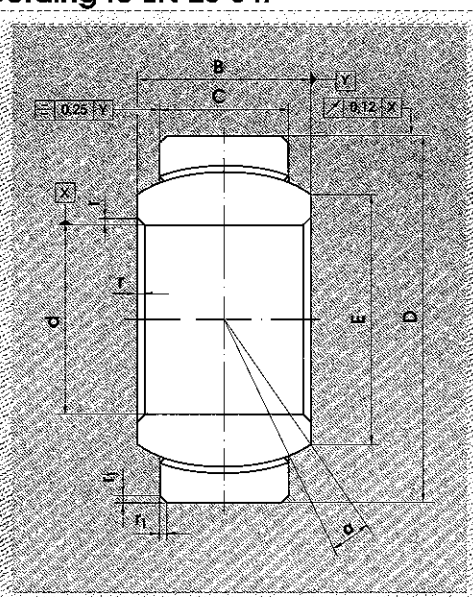
Inner ring: Passivated ISO 8075

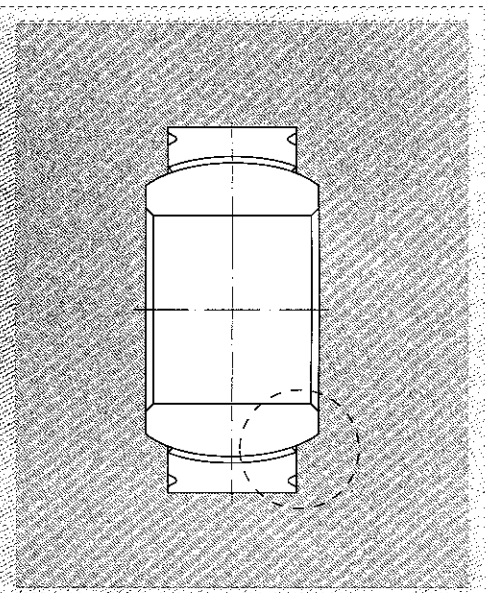
SPHERICAL BEARINGS

Corrosion resisting steel
FRASLIP lined, narrow series, according to EN 25 84.

Series: **EN 2584 S**
Material
Outer ring: EN 2539 (1.4548.3)
Inner ring: EN 2030 (1.3544.9)
Liner: PTFE

Series: **EN 2584 R**
Material
Outer ring: EN 2539 (1.4548.3)
Inner ring: EN 2030 (1.3544.9)
Liner: PTFE





With swaging grooves - Code R

Bearing Number	d	ΔdmP µm	D	ΔDmP µm	B	ΔBmP µm	C	ΔCmP µm	E min.	r	r_1	A	ΔAmP µm	P	R	⊖ ±0,5°
05	5		14		7,0		5,5		8,6		0,3	12,2		0,5	0,2	
06	6		16	0	9,0		6,5		9,0		to	14,2		to	to	20°
08	8	0	18	-8	10,0		7,0		10,2		0,6	16,2		0,7	0,3	
10	10	-8	21		10,5		8,0		11,9			18,4				
12	12		25	0	13,0		10,0		15,0		0,5	22,4		0,7		
15	15		29	-9	15,0		12,0		20,5		to	26,4		to		
17	17		31		16,0	0	13,5		21,7	0,1	0,8	28,4	+100	0,9		
22	22	0	40	0	22,0	-60	18,0	±100	27,1	to		36,8	0		0,3	
25	25	-10	45	-11	25,0		20,0		29,6	0,4	0,6	41,8			to	30°
30	30		51		28,0		24,0		35,5		to	47,8		1,2	0,4	
35	35		57	0	31,0		26,0		41,7		1,0	53,8		to		
40	40	0	64	-13	34,0		29,0		47,0		0,8	60,8		1,4		
45	45	-12	72		37,0		32,0		52,2		to	68,8				
50	50		80	0 - 15	41,0		34,0		59,2		1,2	76,8				

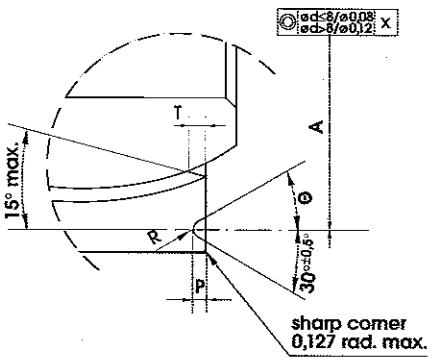
Procurement Specification EN 2755

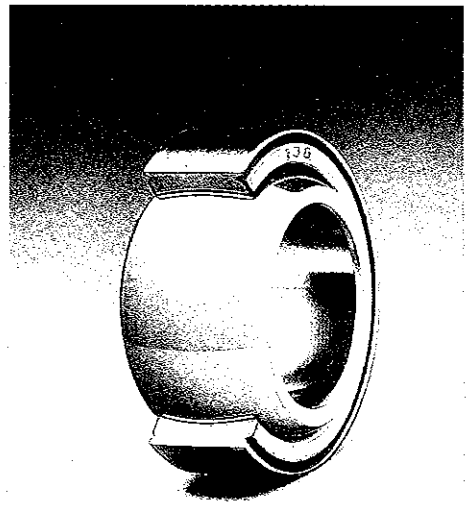
Designation

Each bearing is designated as in the following example:

EN 2584 R 10 P A

Series designation
R = with mounting grooves
10 = Bore number
A = bonded liner technology
P = chromium plated ball/ T = only when passivated





Dimensions in millimetres

T max.	α min.	Out of round µm Δds	Out of round µm ΔDs	Static Limit Load Rating in kN Radial	Static Limit Load Rating in kN Axial	Dynamic Limit radial load 25 000 cycles in kN	No Load Rotational Starting Torque in Nm	Mass g	Bearing Number
0,8	9°	+2 -10	+5 -13	20,5	1,9	12,3	0,08 to 0,50	7	05
	14°			29,2	3,5	17,5		9	06
	15°			37,0	3,9	22,2		12	08
0,9	11°			47,2	6,5	28,3		20	10
	10°	+3 -11	+6 -15	78,1	11,7	43,0	0,12 to 0,80	32	12
1,0	8°			121,9	18,0	67,0		50	15
	7°			148,3	24,3	81,0		59	17
1,2	8°	+3 -13	+8 -19	268,6	45,5	147,7	0,25 to 1,00	126	22
	8°			324,7	55,9	162,4		185	25
	6°			433,4	77,8	216,7	0,40 to 2,00	300	30
1,5	7°	+3 -15	+10 -23	543,4	92,2	271,7		340	35
	6°			680,9	113,4	340,3		460	40
	5°			833,9	135,9	416,9	0,60 to 2,70	630	45
	7°		+13-28	981,4	154,2	490,7		870	50

Type of mounting: R = with mounting grooves
S = without mounting grooves

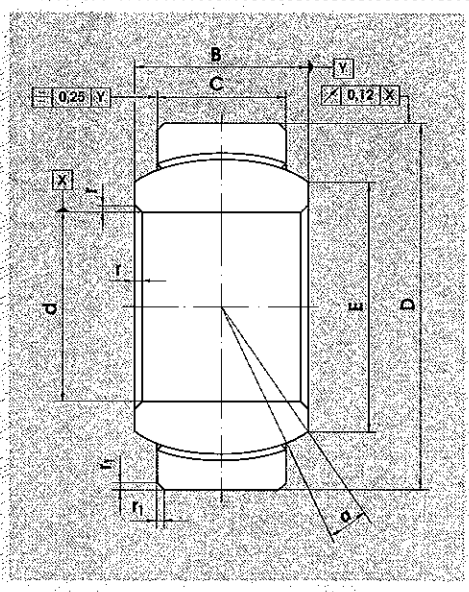
Suffix P only when chromium plated ball is required
Suffix T only when passivated ISO 8075

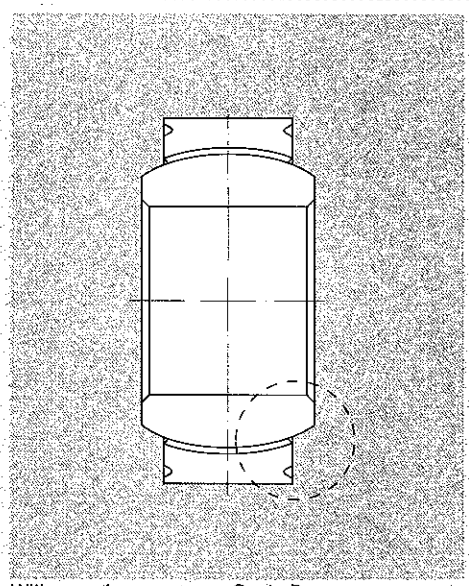
SPHERICAL BEARINGS

Corrosion resisting steel
FRASLIP lined, narrow series, according to EN 4038.

Series: **EN 4038 S**
Material
Outer ring: EN 2539 (1.4548.3)
Inner ring: EN 2030 (1.3544.9)
Liner: PTFE

Series: **EN 4038 R**
Material
Outer ring: EN 2539 (1.4548.3)
Inner ring: EN 2030 (1.3544.9)
Liner: PTFE





With swaging grooves - Code R

Bearing Number	d	Δdmp µm	D	ΔDmp µm	B	ΔBmp µm	C	ΔCmp µm	E min.	r	r_1	A	ΔAmp µm	P	R	Θ ±0,5°
05	5		14		7,0		5,5		8,6		0,3	12,2		0,5	0,2	
06	6		16	0	9,0		6,5		9,0		to	14,2		to	to	20°
08	8	0	18	-8	10,0		7,0		10,2		0,6	16,2		0,7	0,3	
10	10	-8	21		10,5		8,0		11,9			18,4				
12	12		25	0	13,0		10,0		15,0		0,5	22,4		0,7		
15	15		29	-9	15,0		12,0		20,5		to	26,4		to		
17	17		31		16,0	0	13,5		21,7	0,1	0,8	28,4		0,9		
22	22		40	0	22,0	-60	18,0	±100	27,1	to		36,8	+100		0,3	
25	25	0	45	-11	25,0		20,0		29,6	0,4	0,6	41,8	0		to	30°
30	30	-10	51		28,0		24,0		35,5		to	47,8		1,2	0,4	
35	35		57	0	31,0		26,0		41,7		1,0	53,8		to		
40	40	0	64	-13	34,0		29,0		47,0		0,8	60,8		1,4		
45	45	-12	72		37,0		32,0		52,2		to	68,8				
50	50		80	0 - 15	41,0		34,0		59,2		1,2	76,8				

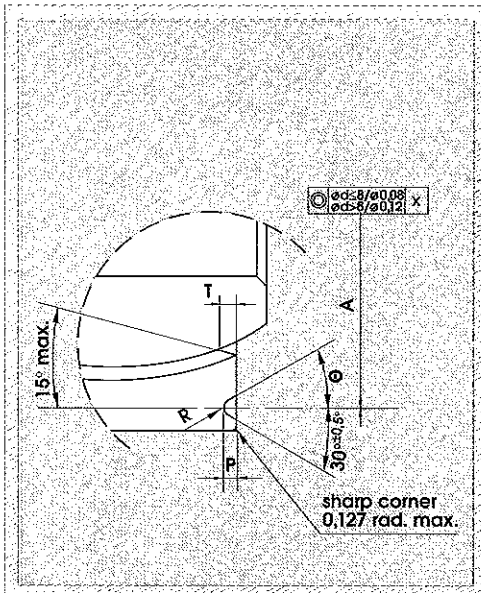
Procurement Specification EN 2755

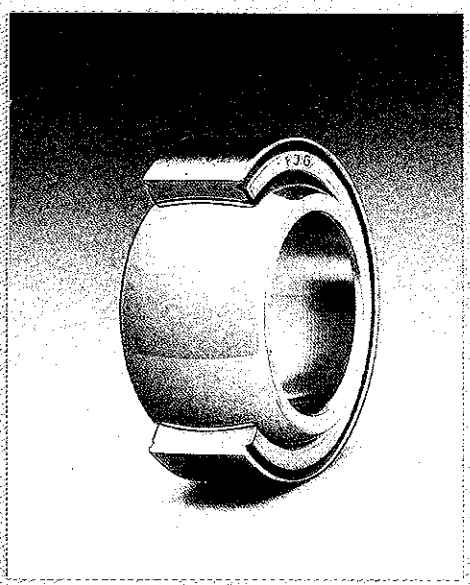
Designation

Each bearing is designated as in the following example:

EN 4038 R 10 P

Series designation
R = with mounting grooves
10 = Bore number
P = chromium plated ball/ T = only when passivated





Dimensions in millimetres

T max.	α min.	Out of round µm Δds	Out of round µm ΔDs	Static Limit Load Rating in kN Radial	Static Limit Load Rating in kN Axial	Dynamic Limit radial load 25 000 cycles in kN	No Load Rotational Starting Torque in Nm	Mass g	Bearing Number
	9°			20,5	1,9	12,3		7	05
0,8	14°	+2	+5 -13	29,2	3,5	17,5	0,005 to 0,06	9	06
	15°	-10		37,0	3,9	22,2		12	08
0,9	11°			47,2	6,5	28,3		20	10
	10°		+6	78,1	11,7	43,0		32	12
1,0	8°	+3 -11	-15	121,9	18,0	67,0	0,008 to 0,10	50	15
	7°			148,3	24,3	81,0		59	17
	8°		+8	268,6	45,5	147,7		126	22
1,2	8°	+3 -13	-19	324,7	55,9	162,4	0,15 to 0,25	185	25
	6°			433,4	77,8	216,7		300	30
	7°		+10	543,4	92,2	271,7	0,02 to 0,40	340	35
1,5	6°	+3	-23	680,9	113,4	340,3		460	40
	5°	-15		833,9	135,9	416,9	0,03 to 0,6	630	45
	7°		+13-28	981,4	154,2	490,7		870	50

Type of mounting: R = with mounting grooves
S = without mounting grooves

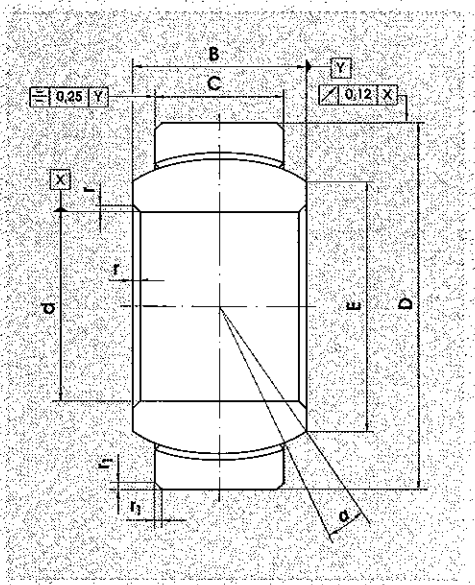
Suffix P only when chromium plated ball is required
Suffix T only when passivated ISO 8075

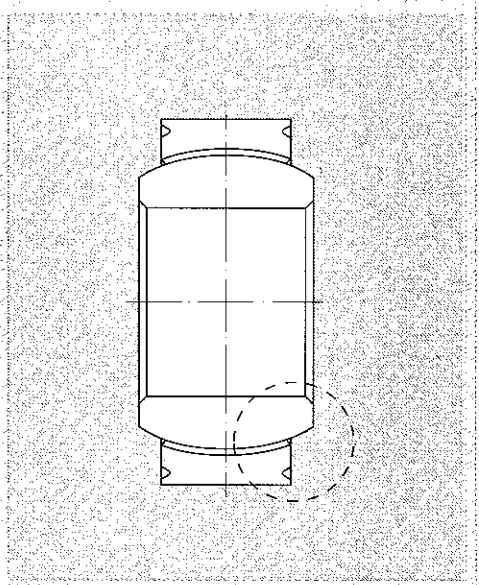
SPHERICAL BEARINGS

Corrosion resisting steel
FRASLIP lined, wide series, according to EN 2585.

Series: **EN 2585 S**
Material
Outer ring: EN 2539 (1.4548.3)
Inner ring: EN 2030 (1.3544.9)
Liner: PTFE

Series: **EN 2585 R**
Material
Outer ring: EN 2539 (1.4548.3)
Inner ring: EN 2030 (1.3544.9)
Liner: PTFE





With swaging grooves - Code R

Bearing Number	d		D		B		C		E	r	r_1	A		P	R	Θ
		Δdmp µm		ΔDmp µm		ΔBmp µm		ΔCmp µm	min.				ΔAmp µm			±0,5°
05	5		16		11,0		8,5		7,7			14,2		0,5	0,2	
06	6		16	0	11,0		8,5		7,7			14,2		to	to	20°
08	8		18	-8	11,0		8,0		10,3			16,2		0,7	0,3	
10	10	0	21		12,5		10,0		12,2		0,5	18,4				
12	12	-8	26	0	16,0		13,0		15,5		to	23,4		0,7		
15	15		29	-9	17,0		13,5		18,9		0,8	26,4		to		
17	17		30		18,0		14,5		20,1	0,1		27,4		0,9		
20	20	0	35	0-11	20,0	0	16,0	±100	23,5	to		31,8	+100		0,3	
25	25	-10	54		32,0	-60	26,0		35,3	0,4	0,6to1,0	50,8	0		to	30°
30	30		60		34,0		28,0		40,9			56,8		1,2	0,4	
35	35		65	0	36,0		29,0		45,5			61,8		to		
40	40		68	-13	38,0		31,0		47,0		0,8	64,8		1,4		
45	45	0	76		41,0		33,0		54,1		to	72,8				
50	50	-12	82	0 - 15	44,0		35,0		60,3		1,2	78,8				
55	55		96		52,0		40,0		63,4			92,8		1,3to1,5		

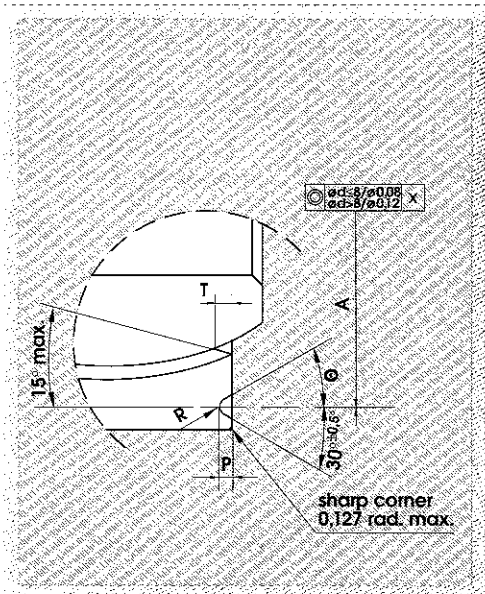
Procurement Specification EN 2755

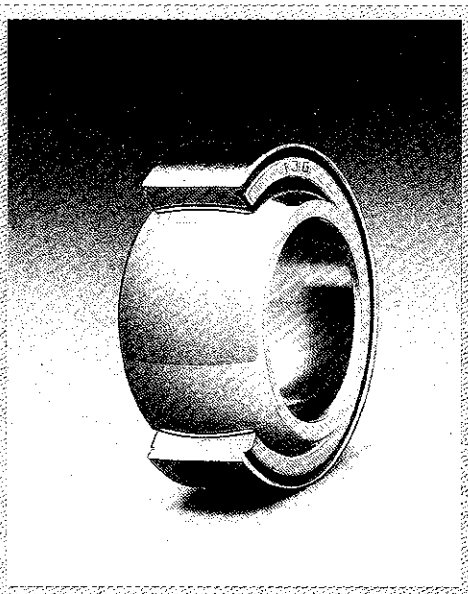
Designation

Each bearing is designated as in the following example:

EN 2585 R 10 P A

Series designation
R = with mounting grooves
10 = Bore number
A = bonded liner technology
P = chromium plated ball/ T = only when passivated





Dimensions in millimetres

T max.	α min.	Out of round µm Δds	ΔDs	Static Limit Load Rating in kN Radial	Axial	Dynamic Limit Radial Load 25 000 cycles in kN	No Load Rotational Starting Torque in Nm	Mass g	Bearing Number
	15°			42,6	7,2	25,6	0,08 to 0,50	16	05
0,8	15°	+2	+5 -13	42,6	7,2	25,6		16	06
	14°	-10		45,7	6,4	27,4		17	08
0,9	10°			68,7	11,7	41,2		27	10
	10°		+6	116,4	21,5	64,0	0,12 to 0,80	49	12
1,0	9°	+3 -11	-15	139,0	24,1	76,5		62	15
	9°			159,1	29,0	87,5		69	17
	8°		+8-19	207,5	36,0	113,9		104	20
1,2	9°	+3 -13		496,6	93,2	248,3	0,25 to 1,00	445	25
	8°		+10 -23	587,5	109,6	293,7	0,40 to 2,00	480	30
	8°			666,0	117,6	333,0		565	35
	8°			745,6	136,6	372,8		600	40
1,5	8°	+3 -15		895,9	155,6	447,9	0,60 to 2,70	800	45
	8°		+13 -28	1024,7	176,2	512,3		970	50
	10°			1298,7	221,2	649,3		1580	55

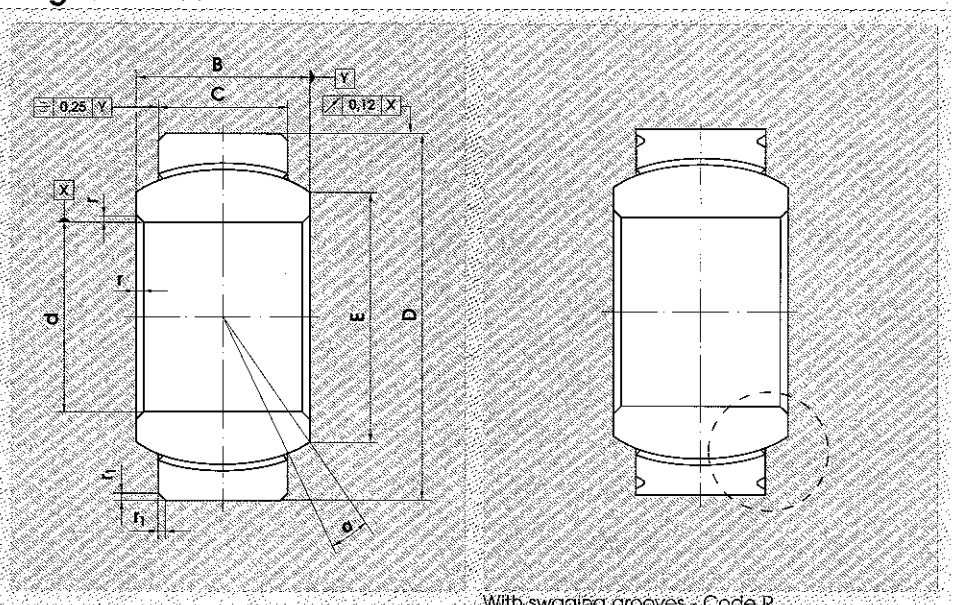
Type of mounting: R = with mounting grooves
S = without mounting grooves
Suffix P only when chromium plated ball is required
Suffix T only when passivated ISO 8075

SPHERICAL BEARINGS

Corrosion resisting steel
FRASLIP lined, wide series, according to EN 4039.

Series: **EN 4039 S**
Material
Outer ring: EN 2539 (1.4548.3)
Inner ring: EN 2030 (1.3544.9)
Liner: PTFE

Series: **EN 4039 R**
Material
Outer ring: EN 2539 (1.4548.3)
Inner ring: EN 2030 (1.3544.9)
Liner: PTFE



With swaging grooves - Code R

Bearing Number	d	Δdmp µm	D	ΔDmp µm	B	ΔBmp µm	C	ΔCmp µm	E min.	r	r1	A	ΔAmp µm	P	R	⊖ ±0,5°
06	6		16	0	11,0		8,5		7,7			14,2		0,5	0,2	
08	8		18	-8	11,0		8,0		10,3			16,2		to 0,7	to 0,3	20°
10	10	0	21		12,5		10,0		12,2		0,5	18,4				
12	12	-8	26	0	16,0		13,0		15,5		to	23,4		0,7		
15	15		29	-9	17,0		13,5		18,9		0,8	26,4		to		
17	17		30		18,0	0	14,5		20,1	0,1		27,4		0,9		
20	20	0	35	0-11	20,0	-60	16,0	±100	23,5	to		31,8	+100		0,3	
25	25	-10	54		32,0		26,0		35,3	0,4	0,6to1,0	50,8	0		to	30°
30	30		60	0	34,0		28,0		40,9			56,8		1,2	0,4	
35	35		65	-13	36,0		29,0		45,5		0,8	61,8		to		
40	40	0	68		38,0		31,0		47,0		to	64,8		1,4		
45	45	-12	76		41,0		33,0		54,1		1,2	72,8				
50	50		82	0 - 15	44,0		35,0		60,3			78,8				

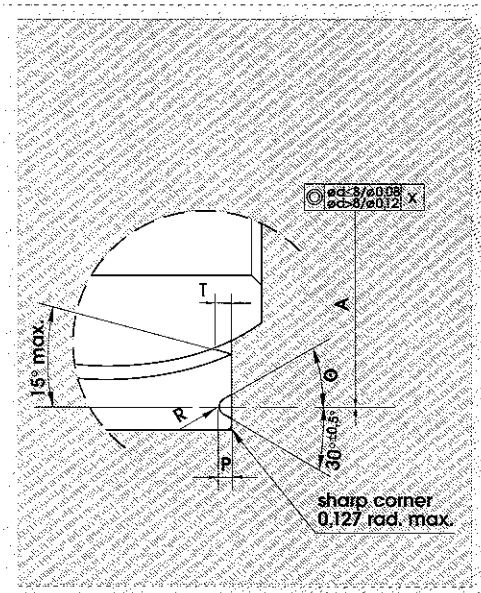
Procurement Specification EN 2755

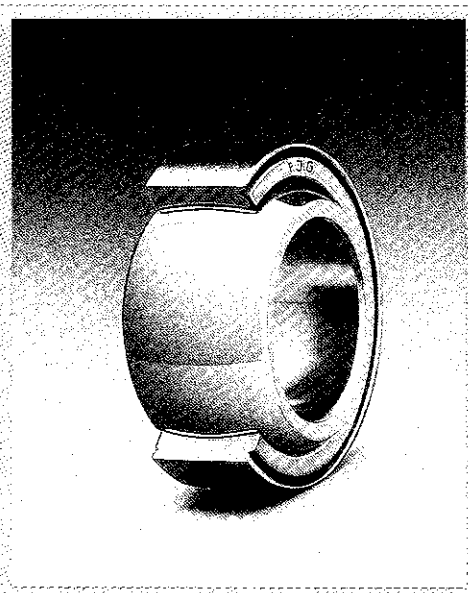
Designation

Each bearing is designated as in the following example:

EN 4039 R 10 P

Series designation
R = with mounting grooves
10 = Bore number
P = chromium plated ball/ T = only when passivated





Dimensions in millimetres

T max.	α min.	Out of round µm Δds	Out of round µm ΔDs	Static Limit Load Rating in kN Radial	Static Limit Load Rating in kN Axial	Dynamic Limit Radial Load 25 000 cycles in kN	No Load Rotational Starting Torque in Nm	Mass g	Bearing Number
0,8	15°	+2 -10	+5 -13	42,6	7,2	25,6	0,005 to 0,06	16	06
	14°			45,7	6,4	27,4	0,006 to 0,08	17	08
0,9	10°			68,7	11,7	41,2	0,008 to 0,1	27	10
	10°	+3 -11	+6 -15	116,4	21,5	64,0		49	12
1,0	9°			139,0	24,1	76,5		62	15
	9°			159,1	29,0	87,5	0,01 to 0,12	69	17
1,2	8°	+3 -13	+8-19	207,5	36,0	113,9		104	20
	9°			496,6	93,2	248,3	0,015 to 0,25	445	25
	8°		+10 -23	587,5	109,6	293,7	0,02 to 0,4	480	30
	8°			666,0	117,6	333,0		565	35
1,5	8°	+3 -15		745,6	136,6	372,8	0,025 to 0,5	600	40
	8°			895,9	155,6	447,9	0,03 to 0,6	800	45
	8°		+13-28	1024,7	176,2	512,3		970	50

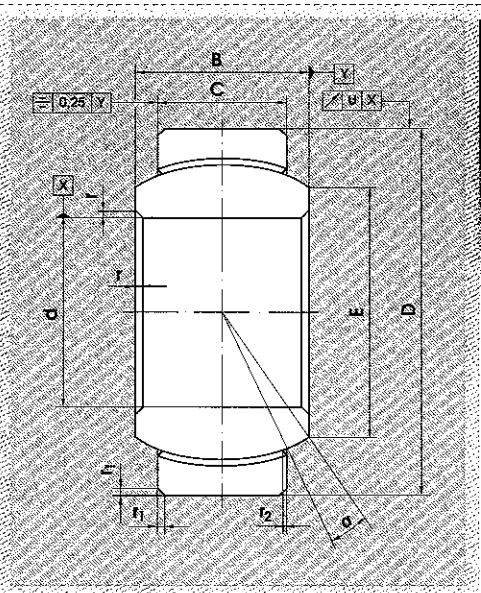
Type of mounting: R = with mounting grooves
S = without mounting grooves

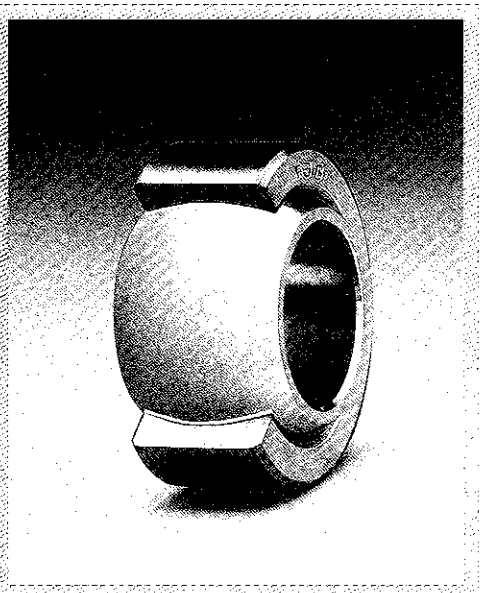
Suffix P only when chromium plated ball is required
Suffix T only when passivated ISO 8075

SPHERICAL BEARINGS

FRASLIP lined, according to MS 14 104/ISO 10 792-2.

Series: **FMGS...4**
Material
Outer ring: EN 2539 (1.4548.3)
Inner ring: EN 2030 (1.3544.9 or 1.4534.5)
Liner: FRASLIP





Bearing Number	d		D		B		C		E	r	r_1 x 45°	r_2	U	α	Static Limit Load Rating in kN	
		Δdmp µm		ΔDmp µm		ΔBmp µm		ΔCmp µm	min.			max.			Radial	Axial
FMGS 3.4	4,826		14,287		7,137		5,537		7,442		0,25			10°	17,68	0,67
FMGS 4.4	6,350		16,667		8,712		6,350		9,246		to	0,76	0,762	10°	26,87	1,91
FMGS 5.4	7,937		19,050		9,525		7,137		10,643		0,51			10°	38,92	3,11
FMGS 6.4	9,525		20,637		10,312		7,925		12,065					9°	46,88	4,89
FMGS 7.4	11,112		23,017		11,100		8,712		13,462		0,51	0,89		8°	58,71	6,23
FMGS 8.4	12,700		25,400		12,700		9,906		15,240		to			8°	79,62	9,34
FMGS 9.4	14,287		27,780		14,275		11,100		17,018	0,13	0,76			8°	103,19	16,37
FMGS 10.4	15,875	0 -13	30,162	0 -13	15,875	0 -51	12,700	±127	18,771	to		1,02		8°	135,66	20,99
FMGS 12.4	19,050		36,512		19,050		15,062		23,368	0,38				8°	206,39	30,02
FMGS 14.4	22,225		39,687		22,225		17,856		24,892				0,127	8°	276,67	41,59
FMGS 16.4	25,400		44,450		25,400		20,243		28,397		0,76			9°	365,63	54,09
FMGS 20.4	31,750		50,800		27,762		23,920		36,420		to	1,14		5,5°	405,00	78,00
FMGS 24.4	38,100		61,912		33,325		28,700		46,420		1,02			5°	619,40	117,10
FMGS 28.4	44,450		71,437		38,887		33,450		50,710					5,5°	816,60	164,00
FMGS 32.4	50,800		80,962		44,450		38,230		61,980					5°	1123,10	218,20

Procurement Specification MIL-B-81 820

Designation

Each bearing is designated as in the following example:

Bearing Number **FMGS 5·4 C P X**

- absence of letter indicates standard breakaway torque
  letter X indicates low breakaway torque
- absence of letter indicates no plating
  letter P indicates cadmium plating
- absence of letter indicates 1.3544.9 ball material
  letter C indicates 1.4534.5 ball material

Oscillating Radial Load Rating in kN	No Load Rotational Starting Torque in Nm		Suffix X µm		Mass g	Bearing Number
		Suffix X	max.Radial play	max. Axial play		
6,67	0,03 to 0,56	0,06 max.			9	FMGS 3.4
14,77					9	FMGS 4.4
24,29					14	FMGS 5.4
29,36					18	FMGS 6.4
35,81	0,03 to 0,90	0,11 max.	18	71	23	FMGS 7.4
46,26					32	FMGS 8.4
57,82					41	FMGS 9.4
73,17					54	FMGS 10.4
104,97					95	FMGS 12.4
134,55	0,03 to 1,36	0,23 max.	25	102	122	FMGS 14.4
169,02					177	FMGS 16.4
200,30	0,04 to 2,00				240	FMGS 20.4
322,10		-	-	-	435	FMGS 24.4
418,20	0,06 to 2,70				668	FMGS 28.4
575,20					952	FMGS 32.4

Surface finish

Outer ring: Plating, when specified, shall be cadmium plating per QQ-P-416, Type II, Class 2
Plate on the outside diameter surface and on the chamfer

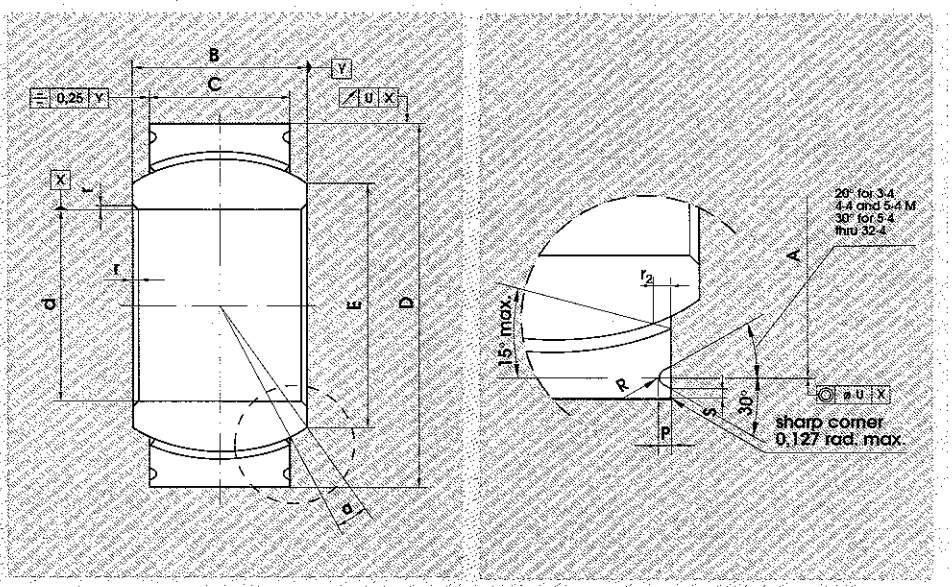
Ball: Passivate per QQ-P-35

SPHERICAL BEARINGS

FRASLIP lined, according to MS 14 101/ISO 10 792-2.

Series: **FMGN...-4**

Material
Outer ring: EN 2539 (1.4548.3)
Inner ring: EN 2030 (1.3544.9 or 1.4534.5)
Liner: FRASLIP



Bearing Number	d	Δdmp µm	D	ΔDmp µm	B	ΔBmp µm	C	ΔCmp µm	E min.	r	r2 max.	A	ΔAmp µm	P	ΔPmp µm	R	ΔRmp µm
FMGN 3.4	4,826		14,287		7,137		5,537		7,442			12,700		0,635			
FMGN 4.4	6,350		16,667		8,712		6,350		9,246		0,762	15,080				0,127	+127 0
FMGN 5.4M	7,937		19,050		9,525		7,137		10,643			16,764					
FMGN 5.4	7,937		19,050		9,525		7,137		10,643			16,510		0,889			
FMGN 6.4	9,525		20,637		10,312		7,925		12,065			18,085					
FMGN 7.4	11,112		23,017		11,100		8,712		13,462		0,89	20,472					
FMGN 8.4	12,700		25,400		12,700		9,906		15,240			22,250					
FMGN 9.4	14,287	0	27,780	0	14,275	0	11,100	±127	17,018	0,13	1,02	24,638	0		0		+178
FMGN 10.4	15,875	-13	30,162	-13	15,875	-51	12,700		18,771	to 0,38		27,000	-203		-254	0,254	0
FMGN 12.4	19,050		36,512		19,050		15,062		23,368			33,350					
FMGN 14.4	22,225		39,687		22,225		17,856		24,892			36,525		1,397			
FMGN 16.4	25,400		44,450		25,400		20,243		28,397			41,300					
FMGN 20.4	31,750		50,800		27,762		23,920		36,420		1,14	47,650					
FMGN 24.4	38,100		61,912		33,325		28,700		46,420			58,750					
FMGN 28.4	44,450		71,437		38,887		33,450		50,710			68,270					
FMGN 32.4	50,800		80,962		44,450		38,230		61,980			77,830					

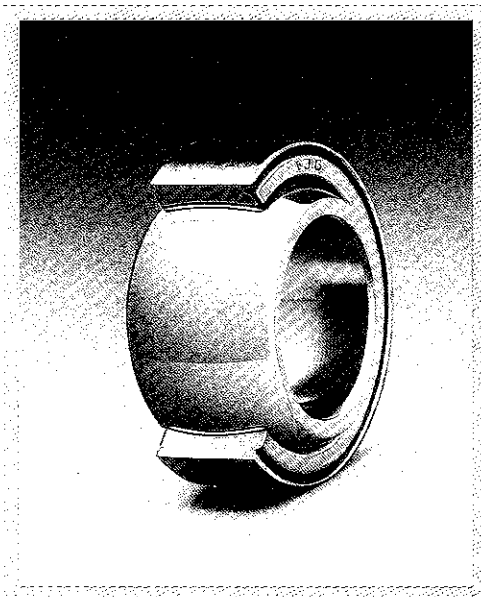
Suffix M: smaller mounting grooves
Procurement Specification MIL-B-81 820

Designation

Each bearing is designated as in the following example:

Bearing Number — **FMGN 5-4 C P X**

- absence of letter indicates standard breakaway torque; letter X indicates low breakaway torque
- absence of letter indicates no plating; letter P indicates cadmium plating
- absence of letter indicates 1.3544.9 ball material; letter C indicates 1.4534.5 ball material



Dimensions in millimetres

U	S min.	α	Static Limit Load Rating in kN Radial	Axial	Oscillating Radial Load Rating in kN	No Load Rotational Starting Torque in Nm	Suffix X	Suffix X µm max.radial play	max. axial play	Mass g	Bearing Number
0,076	0,254	10°	17,68	0,67	6,67	0,03 to 0,56	0,06 max.	18	71	9	FMGN 3.4
			26,87	1,91	14,77					9	FMGN 4.4
	0,457		38,92	3,11	24,29					14	FMGN 54M
			38,92	3,11	24,99					14	FMGN 5.4
		9°	46,88	4,89	29,36					18	FMGN 6.4
			58,71	6,23	35,81	0,03 to 0,90	0,11 max.			23	FMGN 7.4
			79,62	9,34	46,26					32	FMGN 8.4
	0,508	8°	103,19	16,37	57,82					41	FMGN 9.4
			135,66	20,99	73,17					54	FMGN 10.4
0,127			206,39	30,02	104,97					95	FMGN 12.4
			276,67	41,59	134,55					122	FMGN 14.4
		9°	365,63	54,09	169,02	0,03 to 1,36	0,23 max.	25	102	177	FMGN 16.4
		5,5°	405,00	78,00	200,30					240	FMGN 20.4
		5°	619,40	117,10	322,10	0,04 to 2,0	-	-	-	435	FMGN 24.4
		5,5°	816,60	164,00	418,20					668	FMGN 28.4
		5°	1123,10	218,20	575,20	0,06 to 2,70				952	FMGN 32.4

Surface finish

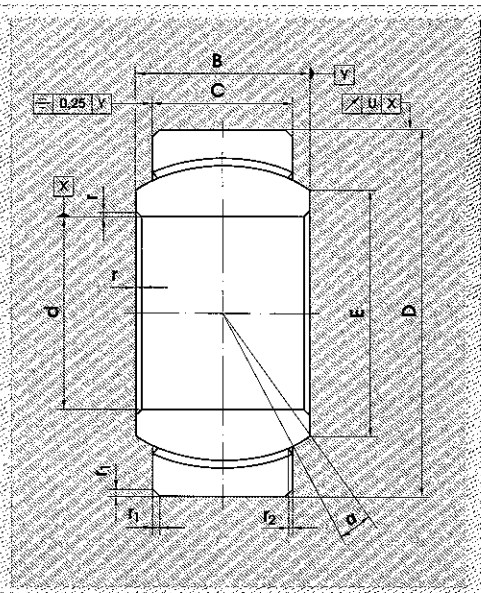
Outer ring: Plating, when specified, shall be cadmium plating per QQ-P-416, Type II, Class 2
Plate on the outside diameter surface and on the flat between the outsid diameter on the groove

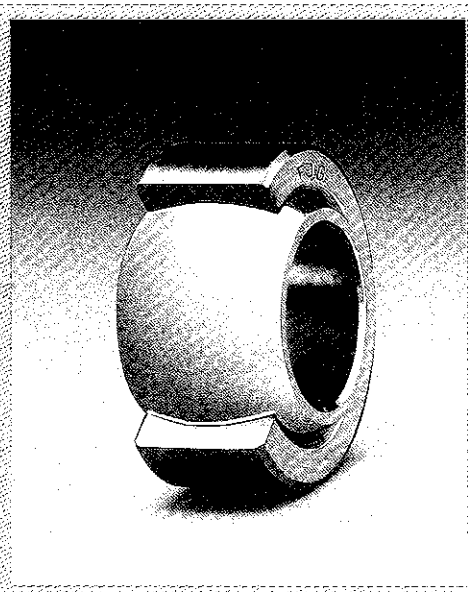
Ball: Passivate per QQ-P-35

SPHERICAL BEARINGS

FRASLIP lined, according to MS 14 102/ISO 10 792-2

Series: **FMGB... 4**
Material
Outer ring: EN 2539 (1.4548.3)
Inner ring: EN 2030 (1.3544.9 or 1.4534.5)
Liner: FRASLIP





Bearing Number	d	D		B		C		E	r	r_1 x 45°	r_2	U	α	Static Limit Load Rating in kN	
		Δdmp µm	ΔDmp µm	ΔBmp µm	ΔCmp µm	min.			max.				Radial	Axial
FMGB 3.4	4,826					7,620		0,38				15°	11,12	7,87
FMGB 4.4	6,350					7,620		to	0,76	0,762		15°	24,46	7,87
FMGB 5.4	7,937					9,144		0,63				14°	41,81	7,30
FMGB 6.4	9,525					11,836						8°	60,94	11,70
FMGB 7.4	11,112					13,640		0,51	0,89			10°	92,07	16,24
FMGB 8.4	12,700					15,418		to				9°	95,19	22,11
FMGB 9.4	14,287	0	0	0		18,313	0,13	0,76				10°	118,32	23,89
FMGB 10.4	15,875	-13	-13	-51	±127	18,974	to		1,02			12°	128,99	27,27
FMGB 12.4	19,050					21,463	0,38					13°	164,58	34,38
FMGB 14.4	22,225					25,273					0,127	6°	290,01	48,04
FMGB 16.4	25,400					32,233		0,76				12°	462,59	85,85
FMGB 20.4	31,750					37,150		to	1,14			12,5°	568,40	115,90
FMGB 24.4	38,100					45,500		1,02				13°	706,00	137,70
FMGB 28.4	44,450					49,900						12,5°	859,40	161,70
FMGB 32.4	50,800					56,100						12,5°	996,10	180,00

Procurement Specification MIL-B-81 820

Designation

Each bearing is designated as in the following example:

Bearing Number — **FMGB 5.4 C P X**

- absence of letter indicates standard breakaway torque; letter X indicates low breakaway torque
- absence of letter indicates no plating; letter P indicates cadmium plating
- absence of letter indicates 1.3544.9 ball material; letter C indicates 1.4534.5 ball material

Dimensions in millimetres

Oscillating Radial Load Rating in kN	No Load Rotational Starting Torque in Nm	Suffix X	Suffix X µm max.Radial play	Suffix X µm max. Axial play	Mass g	Bearing Number
21,80	0,03 to 0,56	0,06 max.			14	FMGB 3.4
21,80					14	FMGB 4.4
26,91					16	FMGB 5.4
36,96					27	FMGB 6.4
52,26	0,03 to 0,90	0,11 max.	18	53	36	FMGB 7.4
66,50					45	FMGB 8.4
80,51					61	FMGB 9.4
90,07					73	FMGB 10.4
116,54					109	FMGB 12.4
149,45	0,03 to 1,36	0,23 max.	25	76	159	FMGB 14.4
250,20					440	FMGB 16.4
295,50	0,04 to 2,00				500	FMGB 20.4
367,10		-	-	-	700	FMGB 24.4
445,50	0,06 to 2,70				900	FMGB 28.4
518,00					1050	FMGB 32.4

Surface finish

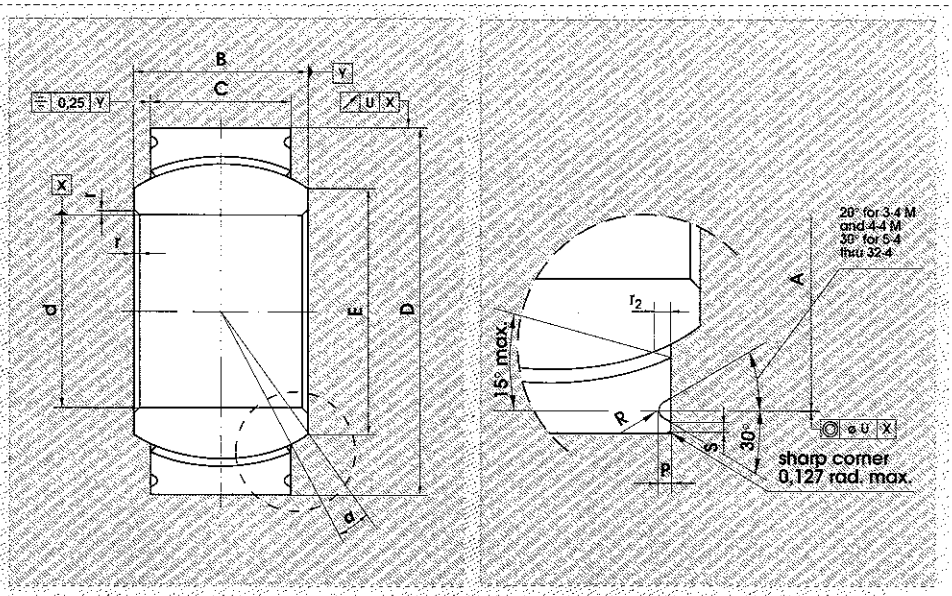
Outer ring: Plating, when specified, shall be cadmium plating per QQ-P-416, Type II, Class 2
Plate on the outside diameter surface and on the chamfer

Ball: Passivate per QQ-P-35

SPHERICAL BEARINGS

FRASLIP lined, according to MS 14 103/ISO 10 792-2

Series: **FMGB...·4M**
Material
Outer ring: EN 2539 (1.4548.3)
Inner ring: EN 2030 (1.3544.9 or 1.4534.5)
Liner: FRASLIP



Bearing Number	d		D		B		C		E	r	r_2	A		P		R	
		Δdmp µm		ΔDmp µm		ΔBmp µm		ΔCmp µm	min.		max.		ΔAmp µm		ΔPmp µm		ΔRmp µm
FMGB 3.4 M	4,826		15,875		11,100		8,306		7,620			14,300					
FMGB 4.4 M	6,350		15,875		11,100		8,306		7,620		0,76	14,300		0,635		0,127	
FMGB 5.4 M	7,937		17,462		11,100		8,052		9,144			15,875					
FMGB 6.4 M	9,525		20,637		12,700		10,312		11,836			18,085					
FMGB 7.4 M	11,112		23,812		14,275		11,227		13,640			21,260					
FMGB7A.4M	11,112		23,017		14,275		11,227		13,640		0,89	20,472		0,889			
FMGB 8.4 M	12,700		25,400		15,875		12,827		15,418			22,860					
FMGB 9.4 M	14,287	0	28,575	0	17,450	0	13,614	±127	18,313	0,13	1,02	26,035	0		0	0,254	+178
FMGB 10.4 M	15,875	-13	30,162	-13	19,050	-51	14,402		18,974	to 0,38		27,610	-203		-254		0
FMGB 12.4 M	19,050		34,925		22,225		16,002		21,463			31,775					
FMGB 14.4 M	22,225		41,275		22,225		19,177		25,273			38,125					
FMGB 16.4 M	25,400		53,975		34,925		25,527		32,233			50,825					
FMGB 20.4 M	31,750		60,325		38,100		28,700		37,150		1,14	57,170		1,397			
FMGB 24.4 M	38,100		68,262		42,850		31,060		45,500			66,100					
FMGB 28.4 M	44,450		76,200		46,020		33,450		49,900			73,050					
FMGB 32.4 M	50,800		82,550		49,190		35,050		56,100			79,350					

Procurement Specification MIL-B-81 820

Designation

Each bearing is designated as in the following example:

FMGB 5·4 M P C X

Bearing Number

with mounting grooves

absence of letter indicates standard breakaway torque
letter X indicates low breakaway torque

absence of letter indicates 1.3544.9 ball material
letter C indicates 1.4534.5 ball material

absence of letter indicates no plating
letter P indicates cadmium plating