Rod-end bearings with maintenance

Standard series SM/SF SMG/SFG

General mechanics

Use

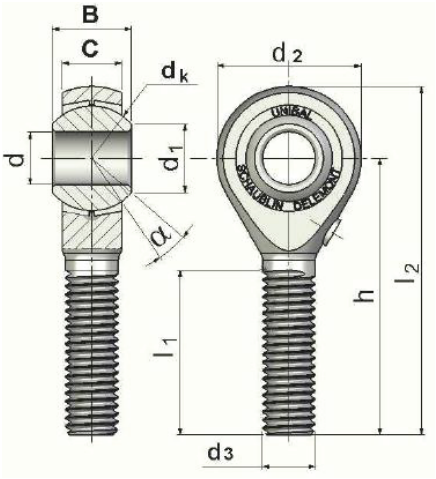
– Usual, standard, general mechanical

Slip contact

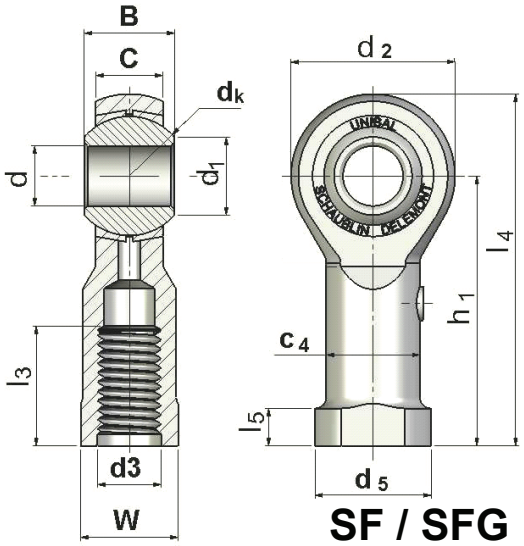
– Brass or bronze spacers / Bearing steel bush

Maintenance

– Needs regular lubrication.
– Integral lubricator on rods from size 8 (letter G)



SM / SMG



SF / SFG

Type		d H7	B 0 - 0,05	C ± 0.2	d_k	d_1	d_2	d_3 (SM) 6 g (SF) 6 H
SM 2	SF 2	2	4.8	3.6	6.00	3.60	9	M2 x0.4
SM 3	SF 3	3	6	4.5	7.93	5.18	12	M3 x0.5
SM 4	SF 4	4	7	5.25	9.52	6.46	14	M4 x0.7
SM 5	SF 5	5	8	6	11.11	7.71	16	M5 x0.8
SM 6	SF 6	6	9	6.75	12.70	8.96	18	M6 x1
SMG 8	SFG 8	8	12	9	15.88	10.40	22	M8 x1.25
SMG 10	SFG 10	10	14	10.5	19.05	12.92	26	M10 x1.5
SMG 12	SFG 12	12	16	12	22.23	15.43	30	M12 x1.75
SMG 14	SFG 14	14	19	13.5	25.40	16.86	34	M14 x2
SMG 16	SFG 16	16	21	15	28.58	19.39	38	M16 x2
SMG 18	SFG 18	18	23	16.5	31.75	21.89	42	M18 x1.5
SMG 20	SFG 20	20	25	18	34.92	24.38	46	M20 x1.5
SMG 22	SFG 22	22	28	20	38.10	25.84	50	M22 x1.5
SMG 25	SFG 25	25	31	22	42.85	29.60	56	M24 x2
SMG 30	SFG 30	30	37	25	50.80	34.80	66	M30 x2

Standard series SM/SF SMG/SFG

General mechanics

Dimensions:
- Available in sizes 2 to 30
- Please ask for bore diameters over 30mm

Materials

Mount:
- Size 2 to 12: steel C35Pb (1.0502), zinc chromated blue
- Size 14 to 30: steel C35 (1.0501), zinc chromated blue

Bush:
- Bearing steel 100Cr6 (1.3505) hardened, chrome, sizes 4 to 20

Spacers:
- Size 2 to 16: CuZn40MnPb
- Size 18 to 30: GC-CuSn7ZnPb

Notes

Left-hand thread: add the suffix L in the description
- Example: SFL 6

By request:
- Produced with reduced play
- Magnetic fault inspection (suffix M – Example: SMGM12)
- Original lubricant - Molykote BR2 (see page 17)

d mm	d_5	C_4	h	h_1	l_1 ± 0.5	l_2	l_3 ± 0.5	l_4	l_5	W	α°	Basic static loading C_o* (daN)	Weight (g) SMG	SFG
2	4.5	3.8	18	16	9	22.5	6	20.5	2.5	4.5	16	220	2	3
3	6.5	5.0	27	21	15	33	7.5	27	3	5.5	15	420	5	7
4	8.5	6.5	30	24	18	37	10	31	3.5	7	14	530	9	11
5	9.5	7.5	33	27	20	41	12.5	35	4	8	13	650	12	14
6	12	9.5	36	30	22	45	13	39	5	10	13	800	18	22
8	16	12.5	42	36	25	53	16	47	5	13	14	1,180	35	38
10	19	15.0	48	43	29	61	19	56	6.5	16	14	1,550	57	70
12	22	17.5	54	50	33	69	20	65	6.5	18	13	1,970	87	110
14	25	20.0	60	57	36	77	25	74	8	21	16	2,660	120	150
16	27	22.0	66	64	40	85	30	83	8	24	15	3,210	170	200
18	31	25.0	72	71	44	93	33	92	10	27	15	3,830	240	280
20	34	27.5	78	77	47	101	36	100	10	30	15	4,500	320	370
22	37	30.0	84	84	51	109	40	109	12	34	15	5,300	420	480
25	42	33.5	94	94	57	122	42	122	12	36	15	6,450	580	670
30	50	40.0	110	110	66	143	50	143	15	46	17	8,530	980	1 080

* Static loadings are not necessarily comparable from one manufacturer to another. They directly depend on the criteria employed, the type of steel used and the dimensions of the rod-end bearing

Special Thread Series SMG/SFG..20

General mechanics

Use

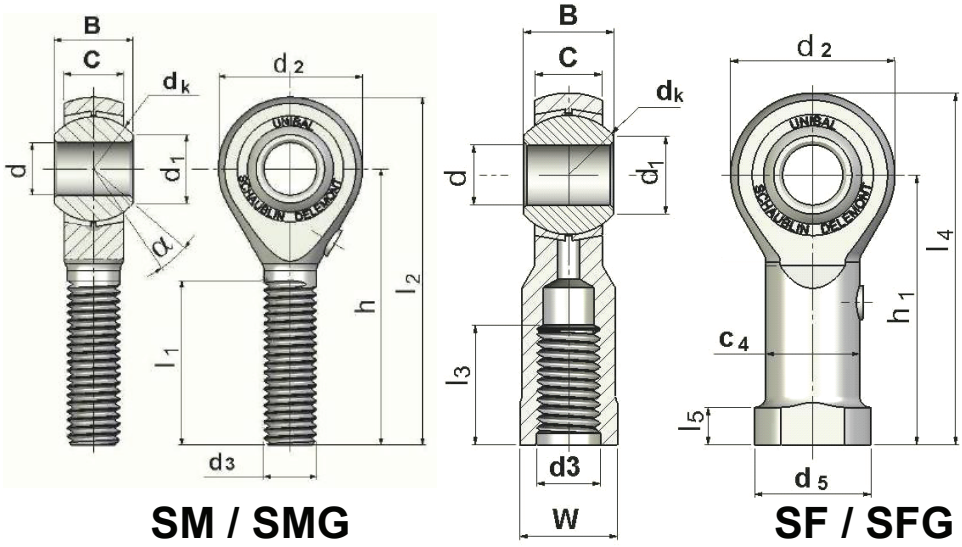
– General mechanics requiring a special MF (metric fine) pitch or an M (metric) pitch

Slip contact

– Brass or bronze spacers / Bearing steel bush

Maintenance

– Requires regular lubrication.



SM / SMG **SF / SFG**

Type		d H7	B 0 -0,05	C ±0.2	d_k	d_1	d_2	d_3 (SM) 6 g (SF) 6 H
SMG 8 .20	SFG* 8 .20	8	12	9	15.88	10.40	22	M8 x1
SMG 10 .20	SFG 10 .20	10	14	10.5	19.05	12.92	26	M10 x1
SMG 10 .22	SFG* 10 .22	10	14	10.5	19.05	12.92	26	M10 x1.25
SMG 12 .20	SFG 12 .20	12	16	12	22.23	15.43	30	M12 x1.5
SMG 12 .22	SFG* 12 .22	12	16	12	22.23	15.43	30	M12 X1.25
SMG 14 .20	SFG 14 .20	14	19	13.5	25.40	16.86	34	M14 x1.5
SMG 16 .20	SFG* 16 .20	16	21	15	28.58	19.39	38	M16 x1.5
SMG 18 .20	SFG 18 .20	18	23	16.5	31.75	21.89	42	M18 x2.5
SMG 20 .20	SFG 20 .20	20	25	18	34.92	24.38	46	M20 x2.5
SMG 22 .20	SFG 22 .20	22	28	20	38.10	25.84	50	M22 x2.5
SMG 25 .20	SFG 25 .20	25	31	22	42.85	29.60	56	M24 x3
SMG 30 .20	SFG 30 .20	30	37	25	50.80	34.80	66	M30 x3.5

* CETOP thread (fine thread for hydraulic cylinder)

Special Thread Series SMG/SFG..20

General mechanics

Dimensions:
- Available in sizes 8 to 30
- Please ask us for bore diameters over 30mm

Materials

Mount:
- Size 8 to 12: steel C35Pb (1.0502), zinc chromated blue
- Size 14 to 30: steel C35 (1.0501), zinc chromated blue

Bush:
- Bearing steel 100Cr6 (1.3505) hardened, chrome, sizes 8 to 20

Spacers:
- Size 8 to 16: CuZn40MnPb
- Size 18 to 30: GC-CuSn7ZnPb

Notes

Left-hand thread: add the suffix L in the description
- Example: SFLG8.20

By request:
- Produced with reduced play
- Magnetic fault inspection (suffix M – Example: SMGM12.20)
- Original lubricant - Molykote BR2 (see page 17)

d mm	d_5	C_4	h	h_1	l_1 ± 0.5	l_2	l_3 ± 0.5	l_4	l_5	W	α°	Basic static loading C_o* (daN)	Weight (g) SMG	Weight (g) SFG
8	16	12.5	42	36	25	53	16	47	5	13	14	1,180	35	38
10	19	15.0	48	43	29	61	19	56	6.5	16	14	1,550	57	70
10	19	15.0	48	43	29	61	19	56	6.5	16	14	1550	57	70
12	22	17.5	54	50	33	69	20	65	6.5	18	13	1,970	87	110
12	22	17.5	54	50	33	69	20	65	6.5	18	13	1970	87	110
14	25	20.0	60	57	36	77	25	74	8	21	16	2,660	120	150
16	27	22.0	66	64	40	85	30	83	8	24	15	3,210	170	200
18	31	25.0	72	71	44	93	33	92	10	27	15	3,830	240	280
20	34	27.5	78	77	47	101	36	100	10	30	15	4,500	320	370
22	37	30.0	84	84	51	109	40	109	12	34	15	5,300	420	480
25	42	33.5	94	94	57	122	42	122	12	36	15	6,450	580	670
30	50	40.0	110	110	66	143	50	143	15	46	17	8,530	980	1 080

* Static loadings are not necessarily comparable from one manufacturer to another. They directly depend on criteria employed, the type of steel used and the dimensions of the rod-end bearing

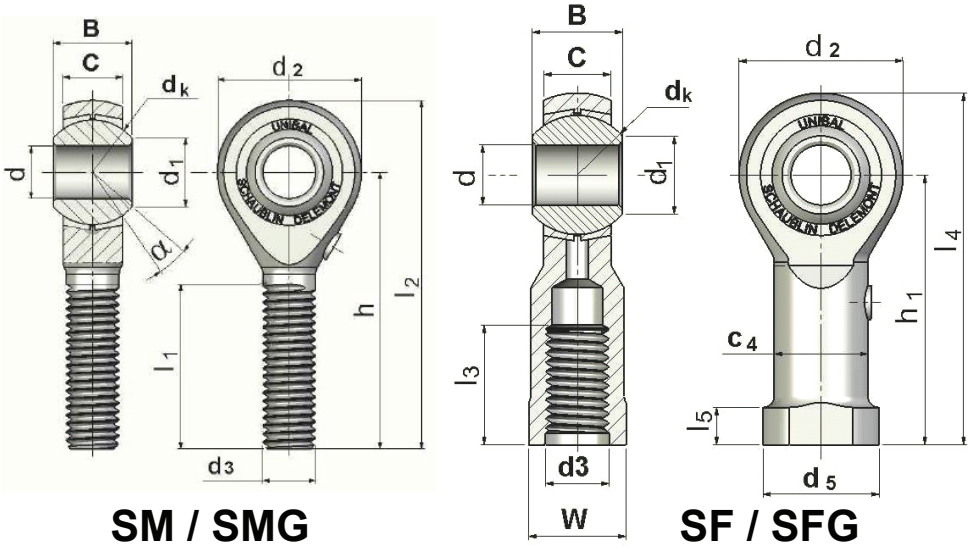
High Tensile Series SM/SF..40 SMG/SFG..40

Use
- Application in all fields where static loadings are high, at reduced velocities

Slip contact
- Bronze spacers / Bearing steel bush

Maintenance
- Requires regular lubrication.
- Integral lubricator on rods from size 8 (letter G)

Dimensions:
- Available in sizes 5 to 30
- Please ask us for bore diameters over 30mm



SM / SMG **SF / SFG**

Type		d H7	B 0 - 0,05	C ± 0.2	d_k	d_1	d_2	d_3 (SM) 6 g (SF) 6 H
SM 5.40	**SF 5.40**	5	8	6	11.11	7.71	16	M5 x0.8
SM 6.40	**SF 6.40**	6	9	6.75	12.70	8.96	18	M6 x1
SMG 8.40	**SFG 8.40**	8	12	9	15.88	10.40	22	M8 x1.25
SMG 10.40	**SFG 10.40**	10	14	10.5	19.05	12.92	26	M10 x1.5
SMG 12.40	**SFG 12.40**	12	16	12	22.23	15.43	30	M12 x1.75
SMG 14.40	**SFG 14.40**	14	19	13.5	25.40	16.86	34	M14 x2
SMG 16.40	**SFG 16.40**	16	21	15	28.58	19.39	38	M16 x2
SMG 18.40	**SFG 18.40**	18	23	16.5	31.75	21.89	42	M18 x1.5
SMG 20.40	**SFG 20.40**	20	25	18	34.92	24.38	46	M20 x1.5
SMG 22.40	**SFG 22.40**	22	28	20	38.10	25.84	50	M22 x1.5
SMG 25.40	**SFG 25.40**	25	31	22	42.85	29.60	56	M24 x2
SMG 30.40	**SFG 30.40**	30	37	25	50.80	34.80	66	M30 x2

High Tensile Series SM/SF..40 SMG/SFG..40

Materials

Mount:
- Steel C45 (1.0503) treated, zinc chromated yellow

Bush:
- Bearing steel 100Cr6 (1.3505) hardened, chrome (size 5 to 20)

Spacers:
- GC-CuSn7ZnPb

Notes

Left-hand thread: add the suffix L in the description
- Example: SMLG 12.40

By request:
- Produced with reduced play
- Magnetic fault inspection (suffix M – Example: SMGM12.40)
- Hard chrome plated bush
- Original lubricant - Molykote BR2 (see page 17)
- CETOP or special thread

d mm	d_5	C_4	h	h_1	l_1 ± 0.5	l_2	l_3 ± 0.5	l_4	l_5	W	α°	Basic static loading C_o (daN)	Weight (g) SMG	SFG
5	9.5	7.5	33	27	20	41	12.5	35	4	8	13	990	12	14
6	12	9.5	36	30	22	45	13	39	5	10	13	1,190	18	22
8	16	12.5	42	36	25	53	16	47	5	13	14	1,760	35	38
10	19	15.0	48	43	29	61	19	56	6.5	16	14	2,300	57	70
12	22	17.5	54	50	33	69	20	65	6.5	18	13	2,920	87	110
14	25	20.0	60	57	36	77	25	74	8	21	16	3,610	120	150
16	27	22.0	66	64	40	85	30	83	8	24	15	4,370	170	200
18	31	25.0	72	71	44	93	33	92	10	27	15	5,210	240	280
20	34	27.5	78	77	47	101	36	100	10	30	15	6,120	320	370
22	37	30.0	84	84	51	109	40	109	12	34	15	7,210	420	480
25	42	33.5	94	94	57	122	42	122	12	36	15	8,780	580	670
30	50	40.0	110	110	66	143	50	143	15	46	17	11,610	980	1 080

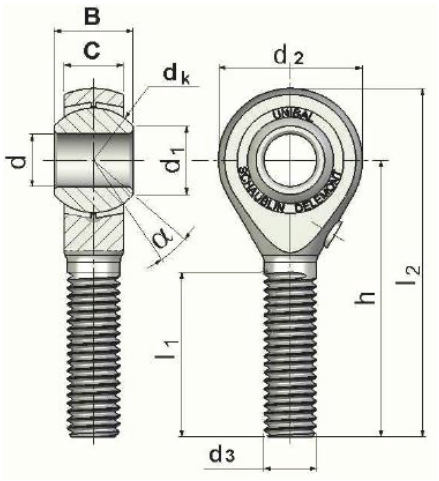
Stainless Steel Series SM/SF..45 SMG/SFG..45

Use
- Difficult environments, washroom fittings, laboratories, etc…
- Exposure to weather, oxidising and corrosive environments (water, humidity, etc.)

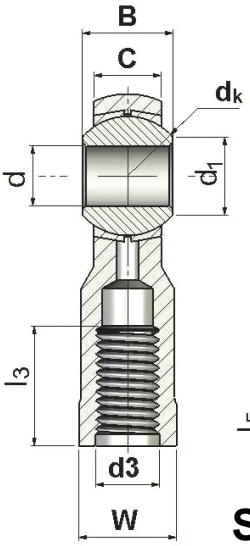
Slip contact
- Bronze spacers / Stainless steel bush

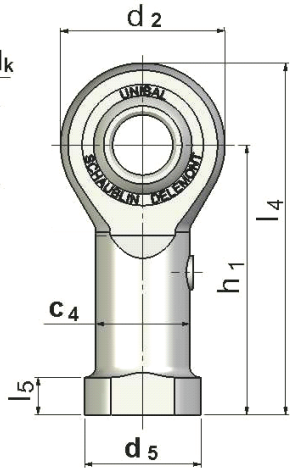
Maintenance
- Requires regular lubrication.
- Integral lubricator on rods from size 8 (letter G)

Dimensions:
- Available in sizes 3 to 30
- Please ask us for bore diameters over 30mm



SM / SMG





SF / SFG

Type		d H7	B 0 - 0,05	C ± 0.2	d_k	d_1	d_2	d_3 (SM) 6 g (SF) 6 H
SM 3 .45	SF 3 .45	3	6	4.5	7.93	5.18	12	M3 x0.5
SM 4 .45	SF 4 .45	4	7	5.25	9.52	6.46	14	M4 x0.7
SM 5 .45	SF 5 .45	5	8	6	11.11	7.71	16	M5 x0.8
SM 6 .45	SF 6 .45	6	9	6.75	12.70	8.96	18	M6 x1
SMG 8 .45	SFG 8 .45	8	12	9	15.88	10.40	22	M8 x1.25
SMG 10 .45	SFG 10 .45	10	14	10.5	19.05	12.92	26	M10 x1.5
SMG 12 .45	SFG 12 .45	12	16	12	22.23	15.43	30	M12 x1.75
SMG 14 .45	SFG 14 .45	14	19	13.5	25.40	16.86	34	M14 x2
SMG 16 .45	SFG 16 .45	16	21	15	28.58	19.39	38	M16 x2
SMG 18 .45	SFG 18 .45	18	23	16.5	31.75	21.89	42	M18 x1.5
SMG 20 .45	SFG 20 .45	20	25	18	34.92	24.38	46	M20 x1.5
SMG 22 .45	SFG 22 .45	22	28	20	38.10	25.84	50	M22 x1.5
SMG 25 .45	SFG 25 .45	25	31	22	42.85	29.60	56	M24 x2
SMG 30 .45	SFG 30 .45	30	37	25	50.80	34.80	66	M30 x2

Stainless Steel Series SM/SF..45
SMG/SFG..45

Materials

Mount:
- Stainless steel X10CrNiS18-9 (1.4305) or X5CrNi18-10 (1.4301)

Bush:
- Stainless steel X46Cr13 (1.4034), hardened

Spacers:
- GC-CuSn7ZnPb

Notes

Left-hand thread: add the suffix L in the description
- Example: SMLG 12.45

By request:
- Produced with reduced play
- Stainless steel hard chrome plated bush
- Original lubricant - Molykote BR2 (see page 17)
- Made entirely from stainless steel
- Other steels

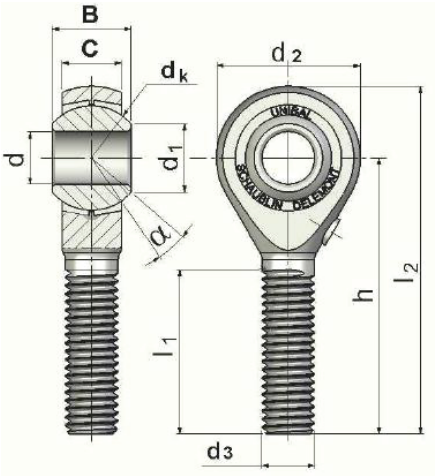
d mm	d_5	C_4	h	h_1	l_1 ± 0.5	l_2	l_3 ± 0.5	l_4	l_5	W	α°	Basic static loading C_o (daN)	Weight (g) SMG	SFG
3	6.5	5.0	27	21	15	33	7.5	27	3	5.5	15	290	5	7
4	8.5	6.5	30	24	18	37	10	31	3.5	7	14	360	9	11
5	9.5	7.5	33	27	20	41	12.5	35	4	8	13	440	12	14
6	12	9.5	36	30	22	45	13	39	5	10	13	540	18	22
8	16	12.5	42	36	25	53	16	47	5	13	14	820	35	38
10	19	15.0	48	43	29	61	19	56	6.5	16	14	1,070	57	70
12	22	17.5	54	50	33	69	20	65	6.5	18	13	1,360	87	110
14	25	20.0	60	57	36	77	25	74	8	21	16	1,680	120	150
16	27	22.0	66	64	40	85	30	83	8	24	15	2,030	170	200
18	31	25.0	72	71	44	93	33	92	10	27	15	2,420	240	280
20	34	27.5	78	77	47	101	36	100	10	30	15	2,850	320	370
22	37	30.0	84	84	51	109	40	109	12	34	15	3,350	420	480
25	42	33.5	94	94	57	122	42	122	12	36	15	4,080	580	670
30	50	40.0	110	110	66	143	50	143	15	46	17	5,400	980	1080

Competition Series SMM..50/51 SMGM..50/51/52

Use
- Application in all fields where static loadings are high, at low velocities

Slip contact
- Stainless steel spacers / Chrome steel bush

Maintenance
- Requires regular lubrication.
- Integral lubricator on rods from size 8 (letter G)



SMM / SMGM

Type	d H7	B 0 - 0,05	C ± 0.2	d_k	d_1	d_2	d_3 6 g	h	l_1	l_2	α°	Basic static loading C_o (daN)	Weight (g)
SMM 5 .50	5	8	6	11.11	7.71	16	M5 x0.8	33	20	41	13	1,290	12
SMM 6 .50	6	9	6.75	12.70	8.96	18	M6 x1	36	22	45	13	1,550	18
SMGM 8 .50	8	12	9	15.88	10.40	22	M8 x1.25	42	25	53	14	2,290	35
SMGM 10 .50	10	14	10.5	19.05	12.92	26	M10 x1.5	48	29	61	14	2,990	57
SMGM 12 .50	12	16	12	22.23	15.43	30	M12 x1.75	54	33	69	13	3,800	87
SMGM 14 .50	14	19	13.5	25.40	16.86	34	M14 x2	60	36	77	16	4,690	120
SMGM 16 .50	16	21	15	28.58	19.39	38	M16 x2	66	40	85	15	5,680	170
SMGM 18 .50	18	23	16.5	31.75	21.89	42	M18 x1.5	72	44	93	15	6,770	240

Competition Series SMM..50/51 SMGM..50/51/52

Special features:
- Magnetic fault inspection as standard
- Without play
- High torque

Materials

Mount:
- High tensile steel 34CrNiMo6 (1.6582), blackened, oiled

Bush:
- Bearing steel 100Cr6 (1.3505), hardened, chrome

Spacers:
- Stainless steel X10CrNiS18-9 (1.4305)

Notes

Left-hand thread: add the suffix L in the description
- Example: SMLGM 12.50

By request:
- Original lubricant - Molykote BR2 (see page 17)
- Reduced torque

Series .51

- MF thread

Type	d H7	B 0 -0,05	C ± 0.2	d_k	d_1	d_2	d_3 6 g	h	l_1	l_2	α°	Basic static loading C_o (daN)	Weight (g)
SMM 5 .51	5	8	6	11.11	7.71	16	M5 x0.5	33	20	41	13	1,290	12
SMM 6 .51	6	9	6.75	12.70	8.96	18	M6 x0.75	36	22	45	13	1,550	18
SMGM 8 .51	8	12	9	15.88	10.40	22	M8 x1	42	25	53	14	2,290	35
SMGM 10 .51	10	14	10.5	19.05	12.92	26	M10 x1	48	29	61	14	2,990	57
SMGM 12 .51	12	16	12	22.23	15.43	30	M12 x1.5	54	33	69	13	3,800	87
SMGM 14 .51	14	19	13.5	25.40	16.86	34	M14 x1.5	60	36	77	16	4,690	120
SMGM 16 .51	16	21	15	28.58	19.39	38	M16 x1.5	66	40	85	15	5,680	170

Series .52

- MF thread and bush bore 2mm smaller than the thread

Type	d H7	B 0 -0,05	C ± 0.2	d_k	d_1	d_2	d_3 6 g	h	l_1	l_2	α°	Basic static loading C_o (daN)	Weight (g)
SMGM 10 .52	8	14	10.5	19.05	12.92	26	M10 x1	48	29	61	31.5	2,990	57
SMGM 12 .52	10	16	12	22.23	15.43	30	M12 x1.5	54	33	69	30.5	3,800	87
SMGM 14 .52	12	19	13.5	25.40	16.86	34	M14 x1.5	60	36	77	29.5	4,690	120
SMGM 16 .52	14	21	15	28.58	19.39	38	M16 x1.5	66	40	85	29	5,680	170
SMGM 18 .52	16	23	16.5	31.75	21.89	42	M18 x1.5	72	44	93	28	6,770	240