

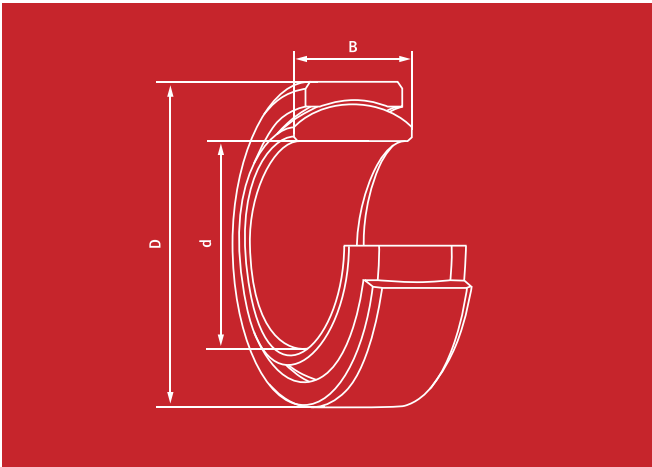
SPHERICAL PLAIN BEARINGS & ROD ENDS



BALL JOINT ENDS - SPHERICAL PLAIN BEARINGS
MAINTENANCE-FREE AND HEAVY-MAINTENANCE

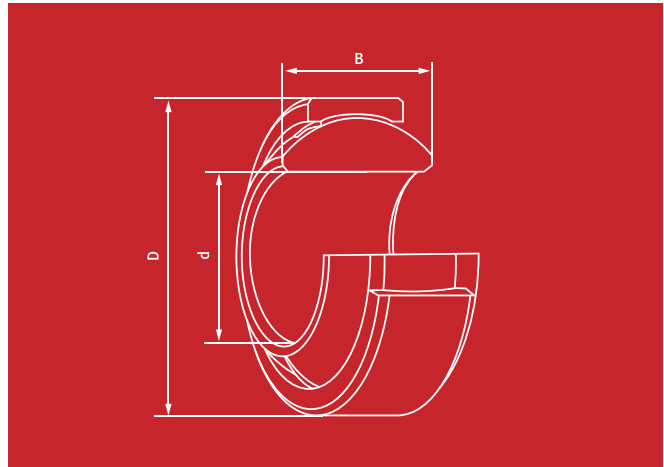
Spherical plain bearings

Maintenance-bound



Spherical plain bearings

Maintenance-bound



Spherical plain bearings, steel / steel

| Art. Nr. | | d | D | B |
|-----------|-------------|-----|-----|-----|
| GE 6 E | (GE 6 DO) | 6 | 14 | 6 |
| GE 8 E | (GE 8 DO) | 8 | 16 | 8 |
| GE 10 E | (GE 10 DO) | 10 | 19 | 9 |
| GE 12 E | (GE 12 DO) | 12 | 22 | 10 |
| GE 15 ES | (GE 15 DO) | 15 | 26 | 12 |
| GE 16 ES | (GE 16 DO) | 16 | 30 | 14 |
| GE 17 ES | (GE 17 DO) | 17 | 30 | 14 |
| GE 20 ES | (GE 20 DO) | 20 | 35 | 16 |
| GE 25 ES | (GE 25 DO) | 25 | 42 | 20 |
| GE 30 ES | (GE 30 DO) | 30 | 47 | 22 |
| GE 35 ES | (GE 35 DO) | 35 | 55 | 25 |
| GE 40 ES | (GE 40 DO) | 40 | 62 | 28 |
| GE 45 ES | (GE 45 DO) | 45 | 68 | 32 |
| GE 50 ES | (GE 50 DO) | 50 | 75 | 35 |
| GE 60 ES | (GE 60 DO) | 60 | 90 | 44 |
| GE 70 ES | (GE 70 DO) | 70 | 105 | 49 |
| GE 80 ES | (GE 80 DO) | 80 | 120 | 55 |
| GE 90 ES | (GE 90 DO) | 90 | 130 | 60 |
| GE 100 ES | (GE 100 DO) | 100 | 150 | 70 |
| GE 110 ES | (GE 110 DO) | 110 | 160 | 70 |
| GE 120 ES | (GE 120 DO) | 120 | 180 | 85 |
| GE 140 ES | (GE 140 DO) | 140 | 210 | 90 |
| GE 160 ES | (GE 160 DO) | 160 | 230 | 105 |
| GE 180 ES | (GE 180 DO) | 180 | 260 | 105 |
| GE 200 ES | (GE 200 DO) | 200 | 290 | 130 |
| GE 220 ES | (GE 220 DO) | 220 | 320 | 135 |
| GE 240 ES | (GE 240 DO) | 240 | 340 | 140 |
| GE 260 ES | (GE 260 DO) | 260 | 370 | 150 |
| GE 280 ES | (GE 280 DO) | 280 | 400 | 155 |
| GE 300 ES | (GE 300 DO) | 300 | 430 | 165 |

Spherical plain bearings, steel / steel, with wider inner ring

| Art. Nr. | | d | D | B |
|------------|-------------|-----|-----|-----|
| GEH 6 ES | (GE 6 FO) | 6 | 16 | 9 |
| GEH 8 ES | (GE 8 FO) | 8 | 19 | 11 |
| GEH 10 ES | (GE 10 FO) | 10 | 22 | 12 |
| GEH 12 ES | (GE 12 FO) | 12 | 26 | 15 |
| GEH 15 ES | (GE 15 FO) | 15 | 30 | 16 |
| GEH 17 ES | (GE 17 FO) | 17 | 35 | 20 |
| GEH 20 ES | (GE 20 FO) | 20 | 42 | 25 |
| GEH 25 ES | (GE 25 FO) | 25 | 47 | 28 |
| GEH 30 ES | (GE 30 FO) | 30 | 55 | 32 |
| GEH 35 ES | (GE 35 FO) | 35 | 62 | 35 |
| GEH 40 ES | (GE 40 FO) | 40 | 68 | 40 |
| GEH 45 ES | (GE 45 FO) | 45 | 75 | 43 |
| GEH 50 ES | (GE 50 FO) | 50 | 90 | 56 |
| GEH 60 ES | (GE 60 FO) | 60 | 105 | 63 |
| GEH 70 ES | (GE 70 FO) | 70 | 120 | 70 |
| GEH 80 ES | (GE 80 FO) | 80 | 130 | 75 |
| GEH 90 ES | (GE 90 FO) | 90 | 150 | 85 |
| GEH 100 ES | (GE 100 FO) | 100 | 160 | 85 |
| GEH 110 ES | (GE 110 FO) | 110 | 180 | 100 |
| GEH 120 ES | (GE 120 FO) | 120 | 210 | 115 |
| GEH 140 ES | (GE 140 FO) | 140 | 230 | 130 |
| GEH 160 ES | (GE 160 FO) | 160 | 260 | 135 |
| GEH 180 ES | (GE 180 FO) | 180 | 290 | 155 |
| GEH 200 ES | (GE 200 FO) | 200 | 320 | 165 |
| GEH 220 ES | (GE 220 FO) | 220 | 340 | 175 |
| GEH 240 ES | (GE 240 FO) | 240 | 370 | 190 |
| GEH 260 ES | (GE 260 FO) | 260 | 400 | 205 |
| GEH 280 ES | (GE 280 FO) | 280 | 430 | 210 |

Spherical plain bearings, steel / steel with sealing

| Art. Nr. | | d | D | B |
|---------------|-----------------|-----|-----|-----|
| GE 15 ES 2RS | (GE 15 DO 2RS) | 15 | 26 | 12 |
| GE 17 ES 2RS | (GE 17 DO 2RS) | 17 | 30 | 14 |
| GE 20 ES 2RS | (GE 20 DO 2RS) | 20 | 35 | 16 |
| GE 25 ES 2RS | (GE 25 DO 2RS) | 25 | 42 | 20 |
| GE 30 ES 2RS | (GE 30 DO 2RS) | 30 | 47 | 22 |
| GE 35 ES 2RS | (GE 35 DO 2RS) | 35 | 55 | 25 |
| GE 40 ES 2RS | (GE 40 DO 2RS) | 40 | 62 | 28 |
| GE 45 ES 2RS | (GE 45 DO 2RS) | 45 | 68 | 32 |
| GE 50 ES 2RS | (GE 50 DO 2RS) | 50 | 75 | 35 |
| GE 60 ES 2RS | (GE 60 DO 2RS) | 60 | 90 | 44 |
| GE 70 ES 2RS | (GE 70 DO 2RS) | 70 | 105 | 49 |
| GE 80 ES 2RS | (GE 80 DO 2RS) | 80 | 120 | 55 |
| GE 90 ES 2RS | (GE 90 DO 2RS) | 90 | 130 | 60 |
| GE 100 ES 2RS | (GE 100 DO 2RS) | 100 | 150 | 70 |
| GE 110 ES 2RS | (GE 110 DO 2RS) | 110 | 160 | 70 |
| GE 120 ES 2RS | (GE 120 DO 2RS) | 120 | 180 | 85 |
| GE 140 ES 2RS | (GE 140 DO 2RS) | 140 | 210 | 90 |
| GE 160 ES 2RS | (GE 160 DO 2RS) | 160 | 230 | 105 |
| GE 180 ES 2RS | (GE 180 DO 2RS) | 180 | 260 | 105 |
| GE 200 ES 2RS | (GE 200 DO 2RS) | 200 | 290 | 130 |
| GE 220 ES 2RS | (GE 220 DO 2RS) | 220 | 320 | 135 |
| GE 240 ES 2RS | (GE 240 DO 2RS) | 240 | 340 | 140 |
| GE 260 ES 2RS | (GE 260 DO 2RS) | 260 | 370 | 150 |
| GE 280 ES 2RS | (GE 280 DO 2RS) | 280 | 400 | 155 |
| GE 300 ES 2RS | (GE 300 DO 2RS) | 300 | 430 | 165 |

Spherical plain bearings, steel / steel, with wider inner ring and sealing

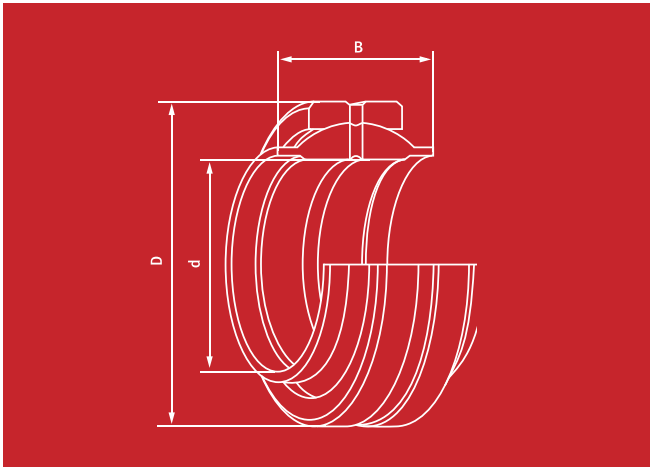
| Art. Nr. | | d | D | B |
|----------------|-----------------|-----|-----|-----|
| GEH 15 ES 2RS | (GE 15 FO 2RS) | 15 | 30 | 16 |
| GEH 17 ES 2RS | (GE 17 FO 2RS) | 17 | 35 | 20 |
| GEH 20 ES 2RS | (GE 20 FO 2RS) | 20 | 42 | 25 |
| GEH 25 ES 2RS | (GE 25 FO 2RS) | 25 | 47 | 28 |
| GEH 30 ES 2RS | (GE 30 FO 2RS) | 30 | 55 | 32 |
| GEH 35 ES 2RS | (GE 35 FO 2RS) | 35 | 62 | 35 |
| GEH 40 ES 2RS | (GE 40 FO 2RS) | 40 | 68 | 40 |
| GEH 45 ES 2RS | (GE 45 FO 2RS) | 45 | 75 | 43 |
| GEH 50 ES 2RS | (GE 50 FO 2RS) | 50 | 90 | 56 |
| GEH 60 ES 2RS | (GE 60 FO 2RS) | 60 | 105 | 63 |
| GEH 70 ES 2RS | (GE 70 FO 2RS) | 70 | 120 | 70 |
| GEH 80 ES 2RS | (GE 80 FO 2RS) | 80 | 130 | 75 |
| GEH 90 ES 2RS | (GE 90 FO 2RS) | 90 | 150 | 85 |
| GEH 100 ES 2RS | (GE 100 FO 2RS) | 100 | 160 | 85 |
| GEH 110 ES 2RS | (GE 110 FO 2RS) | 110 | 180 | 100 |
| GEH 120 ES 2RS | (GE 120 FO 2RS) | 120 | 210 | 115 |
| GEH 140 ES 2RS | (GE 140 FO 2RS) | 140 | 230 | 130 |
| GEH 160 ES 2RS | (GE 160 FO 2RS) | 160 | 260 | 135 |
| GEH 180 ES 2RS | (GE 180 FO 2RS) | 180 | 290 | 155 |
| GEH 200 ES 2RS | (GE 200 FO 2RS) | 200 | 320 | 165 |
| GEH 220 ES 2RS | (GE 220 FO 2RS) | 220 | 340 | 175 |
| GEH 240 ES 2RS | (GE 240 FO 2RS) | 240 | 370 | 190 |
| GEH 260 ES 2RS | (GE 260 FO 2RS) | 260 | 400 | 205 |
| GEH 280 ES 2RS | (GE 280 FO 2RS) | 280 | 430 | 210 |

Permissible working temperature: -60°C - +130°C (Applications up to +200°C without sealings and from 150°C with possible losses of length of life). Further restrictions through lubricant should be kept in mind.

Permissible working temperature: -60°C - +130°C (Applications up to +200°C without sealings and from 150°C with possible losses of length of life). Further restrictions through lubricant should be kept in mind.

Spherical plain bearings

Maintenance-bound



Spherical plain bearings, steel / steel, with wider inner ring

| Art. Nr. | | d | D | B |
|------------|-------------|-----|-----|-----|
| GEG 12 ES | (GE 12 LO) | 12 | 22 | 12 |
| GEG 16 ES | (GE 16 LO) | 16 | 28 | 16 |
| GEG 20 ES | (GE 20 LO) | 20 | 35 | 20 |
| GEG 25 ES | (GE 25 LO) | 25 | 42 | 25 |
| GEG 30 ES | (GE 30 LO) | 30 | 47 | 30 |
| GEG 32 ES | (GE 32 LO) | 32 | 52 | 32 |
| GEG 35 ES | (GE 35 LO) | 35 | 55 | 35 |
| GEG 40 ES | (GE 40 LO) | 40 | 62 | 40 |
| GEG 45 ES | (GE 45 LO) | 45 | 68 | 45 |
| GEG 50 ES | (GE 50 LO) | 50 | 75 | 50 |
| GEG 60 ES | (GE 60 LO) | 60 | 90 | 60 |
| GEG 63 ES | (GE 63 LO) | 63 | 95 | 63 |
| GEG 70 ES | (GE 70 LO) | 70 | 105 | 70 |
| GEG 80 ES | (GE 80 LO) | 80 | 120 | 80 |
| GEG 90 ES | (GE 90 LO) | 90 | 130 | 90 |
| GEG 100 ES | (GE 100 LO) | 100 | 150 | 100 |
| GEG 110 ES | (GE 110 LO) | 110 | 160 | 110 |
| GEG 125 ES | (GE 125 LO) | 125 | 180 | 125 |
| GEG 160 ES | (GE 160 LO) | 160 | 230 | 160 |
| GEG 200 ES | (GE 200 LO) | 200 | 290 | 200 |

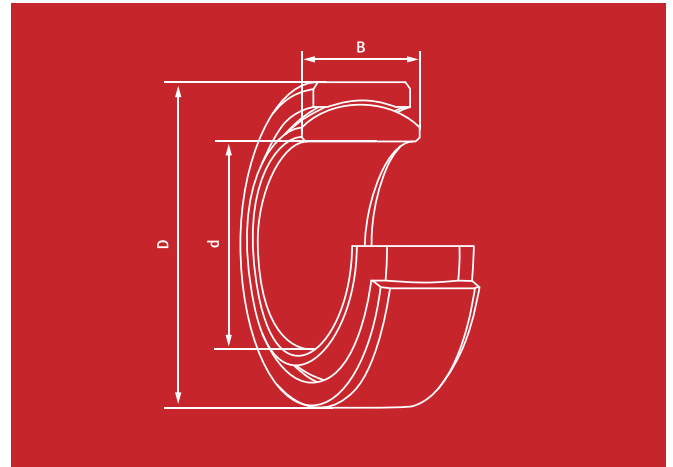
Spherical plain bearings, steel / steel, with wider inner ring and sealing

| Art. Nr. | | d | D | B |
|---------------|----------------|----|-----|----|
| GEM 20 ES 2RS | (GE 20 HO 2RS) | 20 | 35 | 24 |
| GEM 25 ES 2RS | (GE 25 HO 2RS) | 25 | 42 | 29 |
| GEM 30 ES 2RS | (GE 30 HO 2RS) | 30 | 47 | 30 |
| GEM 35 ES 2RS | (GE 35 HO 2RS) | 35 | 55 | 35 |
| GEM 40 ES 2RS | (GE 40 HO 2RS) | 40 | 62 | 38 |
| GEM 45 ES 2RS | (GE 45 HO 2RS) | 45 | 68 | 40 |
| GEM 50 ES 2RS | (GE 50 HO 2RS) | 50 | 75 | 43 |
| GEM 60 ES 2RS | (GE 60 HO 2RS) | 60 | 90 | 54 |
| GEM 70 ES 2RS | (GE 70 HO 2RS) | 70 | 105 | 65 |
| GEM 80 ES 2RS | (GE 80 HO 2RS) | 80 | 120 | 74 |

Permissible working temperature: -60°C - +130°C (Applications up to +200°C without sealings and from 150°C with possible losses of length of life). Further restrictions through lubricant should be kept in mind.

Spherical plain bearings

Maintenance-free



Spherical plain bearings, rigid chrome / PTFE

| Art. Nr. | | d | D | B |
|----------|------------|----|----|----|
| GE 6 C | (GE 6 UK) | 6 | 14 | 6 |
| GE 8 C | (GE 8 UK) | 8 | 16 | 8 |
| GE 10 C | (GE 10 UK) | 10 | 19 | 9 |
| GE 12 C | (GE 12 UK) | 12 | 22 | 10 |
| GE 15 C | (GE 15 UK) | 15 | 26 | 12 |
| GE 17 C | (GE 17 UK) | 17 | 30 | 14 |
| GE 20 C | (GE 20 UK) | 20 | 35 | 16 |
| GE 25 C | (GE 25 UK) | 25 | 42 | 20 |
| GE 30 C | (GE 30 UK) | 30 | 47 | 22 |

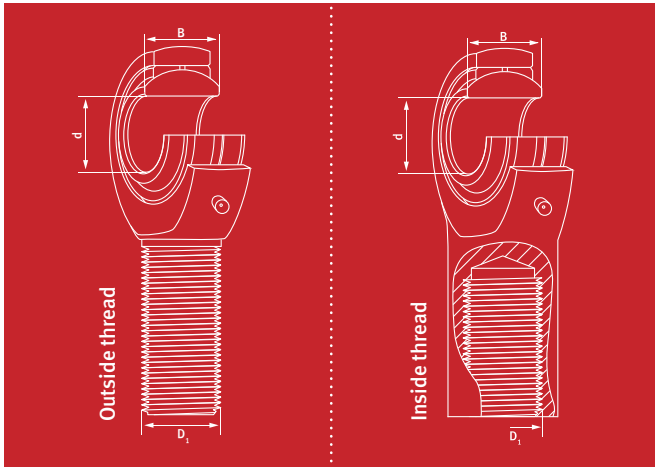
Spherical plain bearings, rigid chrome / PTFE, with sealing

| Art. Nr. | | d | D | B |
|---------------|-----------------|-----|-----|----|
| GE 20 TE 2RS | (GE 20 UK 2RS) | 20 | 35 | 16 |
| GE 25 TE 2RS | (GE 25 UK 2RS) | 25 | 42 | 20 |
| GE 30 TE 2RS | (GE 30 UK 2RS) | 30 | 47 | 22 |
| GE 35 TE 2RS | (GE 35 UK 2RS) | 35 | 55 | 25 |
| GE 40 TE 2RS | (GE 40 UK 2RS) | 40 | 62 | 28 |
| GE 45 TE 2RS | (GE 45 UK 2RS) | 45 | 68 | 32 |
| GE 50 TE 2RS | (GE 50 UK 2RS) | 50 | 75 | 35 |
| GE 60 TE 2RS | (GE 60 UK 2RS) | 60 | 90 | 44 |
| GE 70 TE 2RS | (GE 70 UK 2RS) | 70 | 105 | 49 |
| GE 80 TE 2RS | (GE 80 UK 2RS) | 80 | 120 | 55 |
| GE 90 TE 2RS | (GE 90 UK 2RS) | 90 | 130 | 60 |
| GE 100 TE 2RS | (GE 100 UK 2RS) | 100 | 150 | 70 |
| GE 110 TE 2RS | (GE 110 UK 2RS) | 110 | 160 | 70 |
| GE 120 TE 2RS | (GE 120 UK 2RS) | 120 | 180 | 85 |

Permissible working temperature: -50°C - +95°C (Applications up to +200°C with possible losses of length of life).

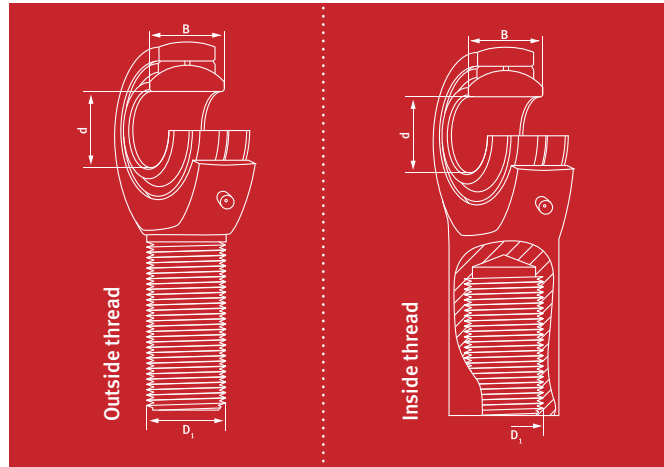
Rod ends

Maintenance-bound



Rod ends

Maintenance-bound



Rod end, steel / bronze with outside thread

| Art. Nr. | | d | B | D ₁ |
|------------|---------------|----|----|----------------|
| SAKAC 5 M | (GAKFR 5 PB) | 5 | 8 | M5 |
| SAKAC 6 M | (GAKFR 6 PB) | 6 | 9 | M6 |
| SAKAC 8 M | (GAKFR 8 PB) | 8 | 12 | M8 |
| SAKAC 10 M | (GAKFR 10 PB) | 10 | 14 | M10 |
| SAKAC 12 M | (GAKFR 12 PB) | 12 | 16 | M12 |
| SAKAC 14 M | (GAKFR 14 PB) | 14 | 19 | M14 |
| SAKAC 16 M | (GAKFR 16 PB) | 16 | 21 | M16 |
| SAKAC 17 M | (GAKFR 17 PB) | 17 | 22 | M17 |
| SAKAC 18 M | (GAKFR 18 PB) | 18 | 23 | M18 x 1,5 |
| SAKAC 20 M | (GAKFR 20 PB) | 20 | 25 | M20 x 1,5 |
| SAKAC 22 M | (GAKFR 22 PB) | 22 | 28 | M22 x 1,5 |
| SAKAC 25 M | (GAKFR 25 PB) | 25 | 31 | M24 x 2 |
| SAKAC 28 M | (GAKFR 28 PB) | 28 | 35 | M27 x 2 |
| SAKAC 30 M | (GAKFR 30 PB) | 30 | 37 | M30 x 2 |

Rod end, steel / steel with outside thread

| Art. Nr. | | d | B | D ₁ |
|-----------|-------------|----|----|----------------|
| SA 6 E | (GAR 6 DO) | 6 | 6 | M6 |
| SA 8 E | (GAR 8 DO) | 8 | 8 | M8 |
| SA 10 E | (GAR 10 DO) | 10 | 9 | M10 |
| SA 12 E | (GAR 12 DO) | 12 | 10 | M12 |
| SA 15 ES | (GAR 15 DO) | 15 | 12 | M14 |
| SA 17 ES | (GAR 17 DO) | 17 | 14 | M16 |
| SA 20 ES | (GAR 20 DO) | 20 | 16 | M20 x 1,5 |
| SA 25 ES | (GAR 25 DO) | 25 | 20 | M24 x 2 |
| SA 30 ES | (GAR 30 DO) | 30 | 22 | M30 x 2 |
| SAA 35 ES | (GAR 35 DO) | 35 | 25 | M36 x 3 |
| SAA 40 ES | (GAR 40 DO) | 40 | 28 | M39 x 3 |
| SAA 45 ES | (GAR 45 DO) | 45 | 32 | M42 x 3 |
| SAA 50 ES | (GAR 50 DO) | 50 | 35 | M45 x 3 |
| SAA 60 ES | (GAR 60 DO) | 60 | 44 | M52 x 3 |
| SAA 70 ES | (GAR 70 DO) | 70 | 49 | M56 x 4 |
| SAA 80 ES | (GAR 80 DO) | 80 | 55 | M64 x 4 |

Rod end, steel / bronze with inside thread

| Art. Nr. | | d | B | D ₁ |
|------------|---------------|----|----|----------------|
| SIKAC 5 M | (GIKFR 5 PB) | 5 | 8 | M5 |
| SIKAC 6 M | (GIKFR 6 PB) | 6 | 9 | M6 |
| SIKAC 8 M | (GIKFR 8 PB) | 8 | 12 | M8 |
| SIKAC 10 M | (GIKFR 10 PB) | 10 | 14 | M10 |
| SIKAC 12 M | (GIKFR 12 PB) | 12 | 16 | M12 |
| SIKAC 14 M | (GIKFR 14 PB) | 14 | 19 | M14 |
| SIKAC 16 M | (GIKFR 16 PB) | 16 | 21 | M16 |
| SIKAC 17 M | (GIKFR 17 PB) | 17 | 22 | M16 |
| SIKAC 18 M | (GIKFR 18 PB) | 18 | 23 | M18 x 1,5 |
| SIKAC 20 M | (GIKFR 20 PB) | 20 | 25 | M20 x 1,5 |
| SIKAC 22 M | (GIKFR 22 PB) | 22 | 28 | M22 x 1,5 |
| SIKAC 25 M | (GIKFR 25 PB) | 25 | 31 | M24 x 2 |
| SIKAC 28 M | (GIKFR 28 PB) | 28 | 35 | M27 x 2 |
| SIKAC 30 M | (GIKFR 30 PB) | 30 | 37 | M30 x 2 |

Rod end, steel / steel with inside thread

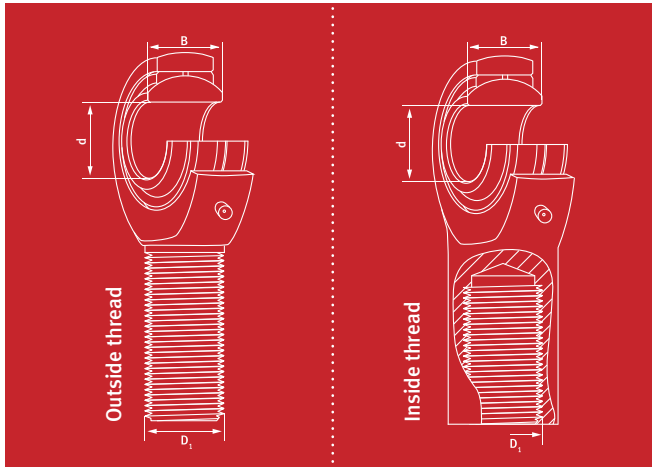
| Art. Nr. | | d | B | D ₁ |
|-----------|-------------|----|----|----------------|
| SI 6 E | (GIR 6 DO) | 6 | 6 | M6 |
| SI 8 E | (GIR 8 DO) | 8 | 8 | M8 |
| SI 10 E | (GIR 10 DO) | 10 | 9 | M10 |
| SI 12 E | (GIR 12 DO) | 12 | 10 | M12 |
| SI 15 ES | (GIR 15 DO) | 15 | 12 | M14 |
| SI 17 ES | (GIR 17 DO) | 17 | 14 | M16 |
| SI 20 ES | (GIR 20 DO) | 20 | 16 | M20 x 1,5 |
| SI 25 ES | (GIR 25 DO) | 25 | 20 | M24 x 2 |
| SIA 30 ES | (GIR 30 DO) | 30 | 22 | M30 x 2 |
| SIA 35 ES | (GIR 35 DO) | 35 | 25 | M36 x 3 |
| SIA 40 ES | (GIR 40 DO) | 40 | 28 | M39 x 3 |
| SIA 45 ES | (GIR 45 DO) | 45 | 32 | M42 x 3 |
| SIA 50 ES | (GIR 50 DO) | 50 | 35 | M45 x 3 |
| SIA 60 ES | (GIR 60 DO) | 60 | 44 | M52 x 3 |
| SIA 70 ES | (GIR 70 DO) | 70 | 49 | M56 x 4 |
| SIA 80 ES | (GIR 80 DO) | 80 | 55 | M64 x 4 |

Permissible working temperature: -60°C - +150°C
(Applications up to +250°C with possible losses of length of life).
Further restrictions through lubricant should be kept in mind.

Permissible working temperature: -60°C - +150°C
(Applications up to +250°C with possible losses of length of life).
Further restrictions through lubricant should be kept in mind.

Rod ends

Maintenance-bound



Rod end, steel / steel with outside thread and sealing

| Art. Nr. | | d | B | D ₁ |
|---------------|-----------------|----|----|----------------|
| SA 15 ES 2RS | (GAR 15 DO 2RS) | 15 | 12 | M14 |
| SA 17 ES 2RS | (GAR 17 DO 2RS) | 17 | 14 | M16 |
| SA 20 ES 2RS | (GAR 20 DO 2RS) | 20 | 16 | M20 x 1,5 |
| SA 25 ES 2RS | (GAR 25 DO 2RS) | 25 | 20 | M24 x 2 |
| SA 30 ES 2RS | (GAR 30 DO 2RS) | 30 | 22 | M30 x 2 |
| SAA 35 ES 2RS | (GAR 35 DO 2RS) | 35 | 25 | M36 x 3 |
| SAA 40 ES 2RS | (GAR 40 DO 2RS) | 40 | 28 | M39 x 3 |
| SAA 45 ES 2RS | (GAR 45 DO 2RS) | 45 | 32 | M42 x 3 |
| SAA 50 ES 2RS | (GAR 50 DO 2RS) | 50 | 35 | M45 x 3 |
| SAA 60 ES 2RS | (GAR 60 DO 2RS) | 60 | 44 | M52 x 3 |
| SAA 70 ES 2RS | (GAR 70 DO 2RS) | 70 | 49 | M56 x 4 |
| SAA 80 ES 2RS | (GAR 80 DO 2RS) | 80 | 55 | M64 x 4 |

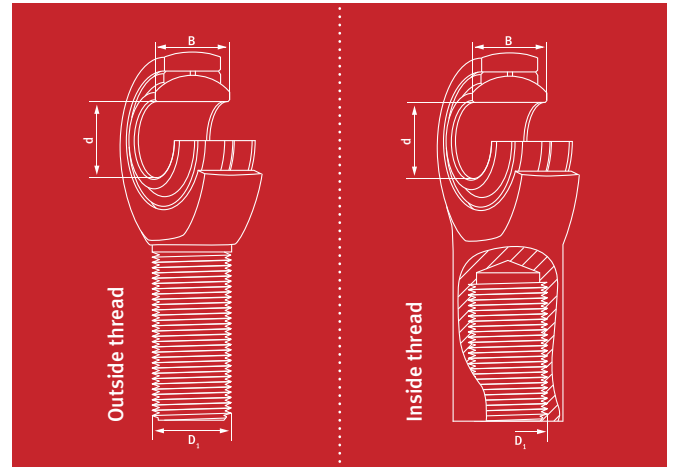
Rod end, steel / steel with inside thread and sealing

| Art. Nr. | | d | B | D ₁ |
|---------------|-----------------|----|----|----------------|
| SI 15 ES 2RS | (GIR 15 DO 2RS) | 15 | 12 | M14 |
| SI 17 ES 2RS | (GIR 17 DO 2RS) | 17 | 14 | M16 |
| SI 20 ES 2RS | (GIR 20 DO 2RS) | 20 | 16 | M20 x 1,5 |
| SI 25 ES 2RS | (GIR 25 DO 2RS) | 25 | 20 | M24 x 2 |
| SI 30 ES 2RS | (GIR 30 DO 2RS) | 30 | 22 | M30 x 2 |
| SIA 35 ES 2RS | (GIR 35 DO 2RS) | 35 | 25 | M36 x 3 |
| SIA 40 ES 2RS | (GIR 40 DO 2RS) | 40 | 28 | M39 x 3 |
| SIA 45 ES 2RS | (GIR 45 DO 2RS) | 45 | 32 | M42 x 3 |
| SIA 50 ES 2RS | (GIR 50 DO 2RS) | 50 | 35 | M45 x 3 |
| SIA 60 ES 2RS | (GIR 60 DO 2RS) | 60 | 44 | M52 x 3 |
| SIA 70 ES 2RS | (GIR 70 DO 2RS) | 70 | 49 | M56 x 4 |
| SIA 80 ES 2RS | (GIR 80 DO 2RS) | 80 | 55 | M64 x 4 |

Permissible working temperature: -60°C - +130°C (Applications up to +200°C without sealings and from 150°C with possible losses of length of life). Further restrictions through lubricant should be kept in mind.

Rod ends

Maintenance-free



Rod end, steel / PTFE with outside thread

| Art. Nr. | | d | B | D ₁ |
|-----------|---------------|----|----|----------------|
| SAKB 5 F | (GAKFR 5 PW) | 5 | 8 | M5 |
| SAKB 6 F | (GAKFR 6 PW) | 6 | 9 | M6 |
| SAKB 8 F | (GAKFR 8 PW) | 8 | 12 | M8 |
| SAKB 10 F | (GAKFR 10 PW) | 10 | 14 | M10 |
| SAKB 12 F | (GAKFR 12 PW) | 12 | 16 | M12 |
| SAKB 14 F | (GAKFR 14 PW) | 14 | 19 | M14 |
| SAKB 16 F | (GAKFR 16 PW) | 16 | 21 | M16 |
| SAKB 18 F | (GAKFR 18 PW) | 18 | 23 | M18 x 1,5 |
| SAKB 20 F | (GAKFR 20 PW) | 20 | 25 | M20 x 1,5 |
| SAKB 22 F | (GAKFR 22 PW) | 22 | 28 | M22 x 1,5 |
| SAKB 25 F | (GAKFR 25 PW) | 25 | 31 | M24 x 2 |
| SAKB 28 F | (GAKFR 28 PW) | 28 | 35 | M27 x 2 |
| SAKB 30 F | (GAKFR 30 PW) | 30 | 37 | M30 x 2 |

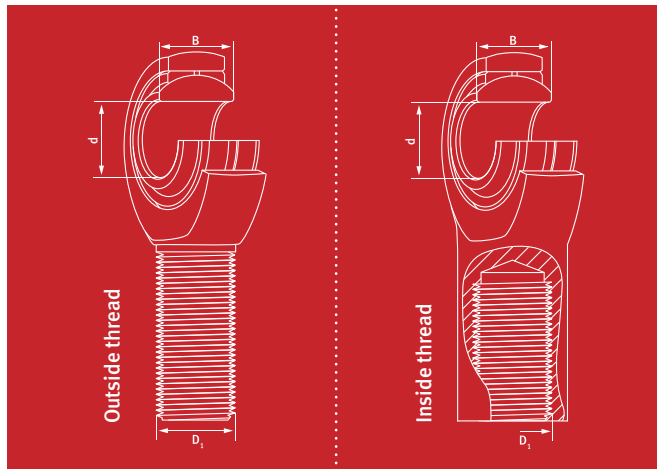
Rod end, steel / PTFE with inside thread

| Art. Nr. | | d | B | D ₁ |
|-----------|---------------|----|----|----------------|
| SIKB 5 F | (GIKFR 5 PW) | 5 | 8 | M5 |
| SIKB 6 F | (GIKFR 6 PW) | 6 | 9 | M6 |
| SIKB 8 F | (GIKFR 8 PW) | 8 | 12 | M8 |
| SIKB 10 F | (GIKFR 10 PW) | 10 | 14 | M10 |
| SIKB 12 F | (GIKFR 12 PW) | 12 | 16 | M12 |
| SIKB 14 F | (GIKFR 14 PW) | 14 | 19 | M14 |
| SIKB 16 F | (GIKFR 16 PW) | 16 | 21 | M16 |
| SIKB 18 F | (GIKFR 18 PW) | 18 | 23 | M18 x 1,5 |
| SIKB 20 F | (GIKFR 20 PW) | 20 | 25 | M20 x 1,5 |
| SIKB 22 F | (GIKFR 22 PW) | 22 | 28 | M22 x 1,5 |
| SIKB 25 F | (GIKFR 25 PW) | 25 | 31 | M24 x 2 |
| SIKB 28 F | (GIKFR 28 PW) | 28 | 35 | M27 x 2 |
| SIKB 30 F | (GIKFR 30 PW) | 30 | 37 | M30 x 2 |

Permissible working temperature: -60°C - +100°C (Applications up to +200°C with possible losses of length of life).

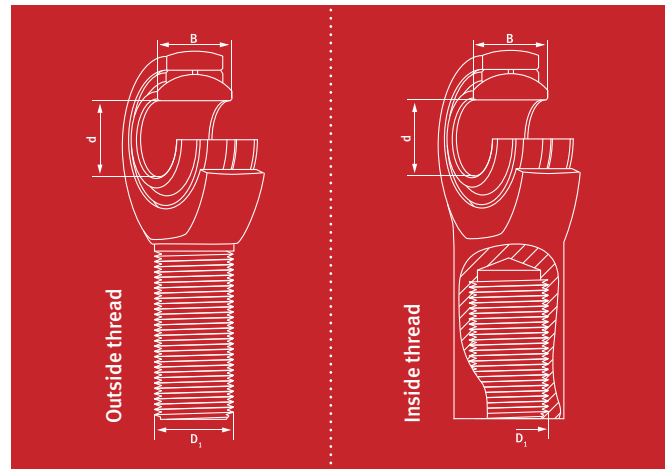
Rod ends

Maintenance-free



Rod ends

Maintenance-free



Rod end, rigid chrome / PTFE with outside thread

| Art. Nr. | | d | B | D ₁ |
|----------|-------------|----|----|----------------|
| SA 6 C | (GAR 6 UK) | 6 | 6 | M6 |
| SA 8 C | (GAR 8 UK) | 8 | 8 | M8 |
| SA 10 C | (GAR 10 UK) | 10 | 9 | M10 |
| SA 12 C | (GAR 12 UK) | 12 | 10 | M12 |
| SA 15 C | (GAR 15 UK) | 15 | 12 | M14 |
| SA 17 C | (GAR 17 UK) | 17 | 14 | M16 |
| SA 20 C | (GAR 20 UK) | 20 | 16 | M20 x 1,5 |
| SA 25 C | (GAR 25 UK) | 25 | 20 | M24 x 2 |
| SA 30 C | (GAR 30 UK) | 30 | 22 | M30 x 2 |

Rod end, rigid chrome / PTFE with outside thread and sealing

| Art. Nr. | | d | B | D ₁ |
|---------------|-----------------|----|----|----------------|
| SAA 35 TE 2RS | (GAR 35 UK 2RS) | 35 | 25 | M36 x 3 |
| SAA 40 TE 2RS | (GAR 40 UK 2RS) | 40 | 28 | M39 x 3 |
| SAA 45 TE 2RS | (GAR 45 UK 2RS) | 45 | 32 | M42 x 3 |
| SAA 50 TE 2RS | (GAR 50 UK 2RS) | 50 | 35 | M45 x 3 |
| SAA 60 TE 2RS | (GAR 60 UK 2RS) | 60 | 44 | M52 x 3 |
| SAA 70 TE 2RS | (GAR 70 UK 2RS) | 70 | 49 | M56 x 4 |
| SAA 80 TE 2RS | (GAR 80 UK 2RS) | 80 | 55 | M64 x 4 |

Rod end, rigid chrome / PTFE with inside thread

| Art. Nr. | | d | B | D ₁ |
|----------|-------------|----|----|----------------|
| SI 6 C | (GIR 6 UK) | 6 | 6 | M6 |
| SI 8 C | (GIR 8 UK) | 8 | 8 | M8 |
| SI 10 C | (GIR 10 UK) | 10 | 9 | M10 |
| SI 12 C | (GIR 12 UK) | 12 | 10 | M12 |
| SI 15 C | (GIR 15 UK) | 15 | 12 | M14 |
| SI 17 C | (GIR 17 UK) | 17 | 14 | M16 |
| SI 20 C | (GIR 20 UK) | 20 | 16 | M20 x 1,5 |
| SI 25 C | (GIR 25 UK) | 25 | 20 | M24 x 2 |
| SI 30 C | (GIR 30 UK) | 30 | 22 | M30 x 3 |

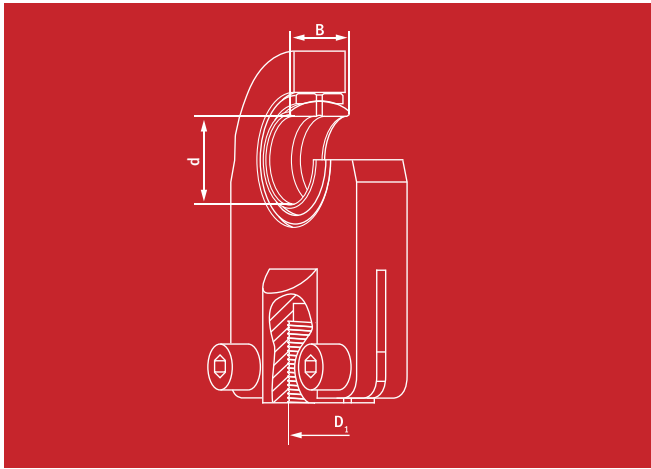
Rod end, rigid chrome / PTFE with inside thread and sealing

| Art. Nr. | | d | B | D ₁ |
|---------------|-----------------|----|----|----------------|
| SIA 35 TE 2RS | (GIR 35 UK 2RS) | 35 | 25 | M36 x 3 |
| SIA 40 TE 2RS | (GIR 40 UK 2RS) | 40 | 28 | M39 x 3 |
| SIA 45 TE 2RS | (GIR 45 UK 2RS) | 45 | 32 | M42 x 3 |
| SIA 50 TE 2RS | (GIR 50 UK 2RS) | 50 | 35 | M45 x 3 |
| SIA 60 TE 2RS | (GIR 60 UK 2RS) | 60 | 44 | M52 x 3 |
| SIA 70 TE 2RS | (GIR 70 UK 2RS) | 70 | 49 | M56 x 4 |
| SIA 80 TE 2RS | (GIR 80 UK 2RS) | 80 | 55 | M64 x 4 |

Permissible working temperature: -60°C - +100°C
(Applications up to +200°C with possible losses of length of life).

Permissible working temperature: -60°C - +100°C
(Applications up to +200°C with possible losses of length of life).

Ball joint ends



Ball joint end, steel / steel with inside thread
2 sided-clampable

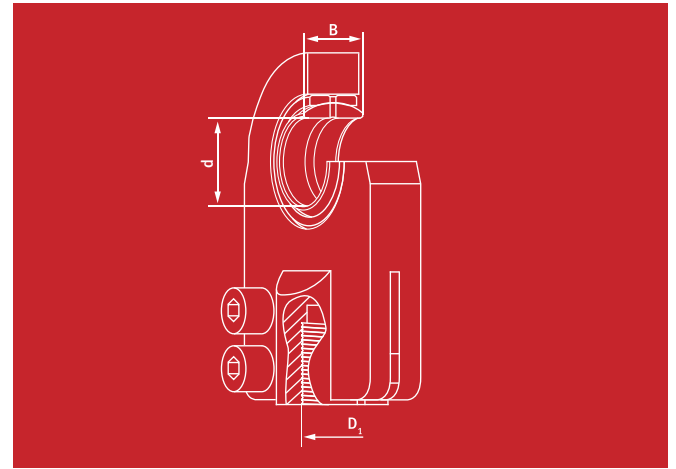
| Art. Nr. | | d | B | D ₁ |
|------------|-----------------|-----|----|----------------|
| SIR 20 ES | (GIHR-K 20 DO) | 20 | 16 | M16 x 1,5 |
| SIR 25 ES | (GIHR-K 25 DO) | 25 | 20 | M16 x 1,5 |
| SIR 30 ES | (GIHR-K 30 DO) | 30 | 22 | M22 x 1,5 |
| SIR 35 ES | (GIHR-K 35 DO) | 35 | 25 | M28 x 1,5 |
| SIR 40 ES | (GIHR-K 40 DO) | 40 | 28 | M35 x 1,5 |
| SIR 50 ES | (GIHR-K 50 DO) | 50 | 35 | M45 x 1,5 |
| SIR 60 ES | (GIHR-K 60 DO) | 60 | 44 | M58 x 1,5 |
| SIR 70 ES | (GIHR-K 70 DO) | 70 | 49 | M65 x 1,5 |
| SIR 80 ES | (GIHR-K 80 DO) | 80 | 55 | M80 x 2 |
| SIR 90 ES | (GIHR-K 90 DO) | 90 | 60 | M100 x 2 |
| SIR 100 ES | (GIHR-K 100 DO) | 100 | 70 | M110 x 2 |
| SIR 110 ES | (GIHR-K 110 DO) | 110 | 70 | M120 x 2 |
| SIR 120 ES | (GIHR-K 120 DO) | 120 | 85 | M130 x 2 |

Ball joint end, steel / steel with inside thread non-clampable

| Art. Nr. | | d | B | D ₁ |
|-------------|---------------|-----|----|----------------|
| SIRD 20 ES | (GIHR 20 DO) | 20 | 16 | M16 x 1,5 |
| SIRD 25 ES | (GIHR 25 DO) | 25 | 20 | M16 x 1,5 |
| SIRD 30 ES | (GIHR 30 DO) | 30 | 22 | M22 x 1,5 |
| SIRD 35 ES | (GIHR 35 DO) | 35 | 25 | M28 x 1,5 |
| SIRD 40 ES | (GIHR 40 DO) | 40 | 28 | M35 x 1,5 |
| SIRD 50 ES | (GIHR 50 DO) | 50 | 35 | M45 x 1,5 |
| SIRD 60 ES | (GIHR 60 DO) | 60 | 44 | M58 x 1,5 |
| SIRD 70 ES | (GIHR 70 DO) | 70 | 49 | M65 x 1,5 |
| SIRD 80 ES | (GIHR 80 DO) | 80 | 55 | M80 x 2 |
| SIRD 90 ES | (GIHR 90 DO) | 90 | 60 | M100 x 2 |
| SIRD 100 ES | (GIHR 100 DO) | 100 | 70 | M110 x 2 |
| SIRD 110 ES | (GIHR 110 DO) | 110 | 70 | M120 x 3 |
| SIRD 120 ES | (GIHR 120 DO) | 120 | 85 | M130 x 3 |

Permissible working temperature: -60°C - +150°C
(Applications up to +250°C with possible losses of length of life).
Further restrictions through lubricant should be kept in mind.

Ball joint ends



Ball joint end, steel / steel with inside thread
with wide ring, 1-sided clampable

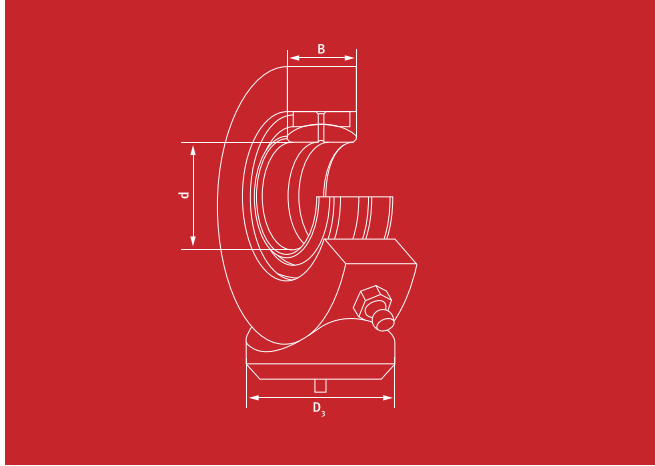
| Art. Nr. | | d | B | D ₁ |
|-------------|-----------------|-----|-----|----------------|
| SIQG 12 ES | (GIHN-K 12 LO) | 12 | 12 | M12 x 1,25 |
| SIQG 16 ES | (GIHN-K 16 LO) | 16 | 16 | M14 x 1,5 |
| SIQG 20 ES | (GIHN-K 20 LO) | 20 | 20 | M16 x 1,5 |
| SIQG 25 ES | (GIHN-K 25 LO) | 25 | 25 | M20 x 1,5 |
| SIQG 32 ES | (GIHN-K 32 LO) | 32 | 32 | M27 x 2 |
| SIQG 40 ES | (GIHN-K 40 LO) | 40 | 40 | M33 x 2 |
| SIQG 50 ES | (GIHN-K 50 LO) | 50 | 50 | M42 x 2 |
| SIQG 63 ES | (GIHN-K 63 LO) | 63 | 63 | M48 x 2 |
| SIQG 70 ES | (GIHN-K 70 LO) | 70 | 70 | M56 x 2 |
| SIQG 80 ES | (GIHN-K 80 LO) | 80 | 80 | M64 x 2 |
| SIQG 90 ES | (GIHN-K 90 LO) | 90 | 90 | M72 x 3 |
| SIQG 100 ES | (GIHN-K 100 LO) | 100 | 100 | M80 x 3 |
| SIQG 110 ES | (GIHN-K 110 LO) | 110 | 110 | M90 x 3 |
| SIQG 125 ES | (GIHN-K 125 LO) | 125 | 125 | M100 x 3 |

Ball joint end, steel / steel with inside thread
with wider housing, 2-sided clampable

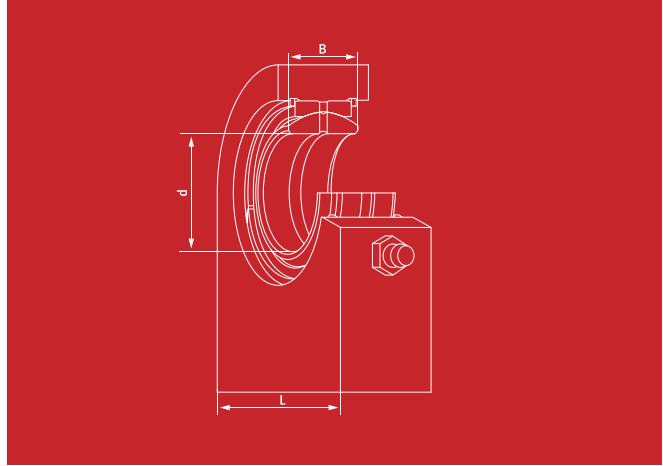
| Art. Nr. | | d | B | D ₁ |
|------------|-----------------|-----|----|----------------|
| SIJ 12 ES | (GIHO-K 12 DO) | 12 | 10 | M10 x 1,25 |
| SIJ 16 ES | (GIHO-K 16 DO) | 16 | 14 | M12 x 1,25 |
| SIJ 20 ES | (GIHO-K 20 DO) | 20 | 16 | M14 x 1,5 |
| SIJ 25 ES | (GIHO-K 25 DO) | 25 | 20 | M16 x 1,5 |
| SIJ 30 ES | (GIHO-K 30 DO) | 30 | 22 | M20 x 1,5 |
| SIJ 40 ES | (GIHO-K 40 DO) | 40 | 28 | M27 x 2 |
| SIJ 50 ES | (GIHO-K 50 DO) | 50 | 35 | M33 x 2 |
| SIJ 60 ES | (GIHO-K 60 DO) | 60 | 44 | M42 x 2 |
| SIJ 80 ES | (GIHO-K 80 DO) | 80 | 55 | M48 x 2 |
| SIJ 100 ES | (GIHO-K 100 DO) | 100 | 70 | M64 x 3 |

Permissible working temperature: -60°C - +150°C
(Applications up to +250°C with possible losses of length of life).
Further restrictions through lubricant should be kept in mind.

Ball joint ends



Ball joint ends



Ball joint end, steel / steel with round weld-on bolt

| Art. Nr. | | d | B | D ₃ |
|----------|------------|----|----|----------------|
| SC 10 ES | (GK 10 DO) | 10 | 9 | 15,0 |
| SC 12 ES | (GK 12 DO) | 12 | 10 | 17,5 |
| SC 15 ES | (GK 15 DO) | 15 | 12 | 21,0 |
| SC 17 ES | (GK 17 DO) | 17 | 14 | 24,0 |
| SC 20 ES | (GK 20 DO) | 20 | 16 | 27,5 |
| SC 25 ES | (GK 25 DO) | 25 | 20 | 33,5 |
| SC 30 ES | (GK 30 DO) | 30 | 22 | 40,0 |
| SC 35 ES | (GK 35 DO) | 35 | 25 | 47,0 |
| SC 40 ES | (GK 40 DO) | 40 | 28 | 52,0 |
| SC 45 ES | (GK 45 DO) | 45 | 32 | 58,0 |
| SC 50 ES | (GK 50 DO) | 50 | 35 | 62,0 |
| SC 60 ES | (GK 60 DO) | 60 | 44 | 70,0 |
| SC 70 ES | (GK 70 DO) | 70 | 49 | 80,0 |
| SC 80 ES | (GK 80 DO) | 80 | 55 | 95,0 |

Ball joint end, steel / steel with angular weld-on bolt

| Art. Nr. | | d | B | L |
|------------|-------------|-----|----|-----|
| SCF 20 ES | (GF 20 DO) | 20 | 16 | 50 |
| SCF 25 ES | (GF 25 DO) | 25 | 20 | 55 |
| SCF 30 ES | (GF 30 DO) | 30 | 22 | 65 |
| SCF 35 ES | (GF 35 DO) | 35 | 25 | 83 |
| SCF 40 ES | (GF 40 DO) | 40 | 28 | 100 |
| SCF 45 ES | (GF 45 DO) | 45 | 32 | 110 |
| SCF 50 ES | (GF 50 DO) | 50 | 35 | 123 |
| SCF 60 ES | (GF 60 DO) | 60 | 44 | 140 |
| SCF 70 ES | (GF 70 DO) | 70 | 49 | 164 |
| SCF 80 ES | (GF 80 DO) | 80 | 55 | 180 |
| SCF 90 ES | (GF 90 DO) | 90 | 60 | 226 |
| SCF 100 ES | (GF 100 DO) | 100 | 70 | 250 |
| SCF 110 ES | (GF 110 DO) | 110 | 70 | 295 |
| SCF 120 ES | (GF 120 DO) | 120 | 85 | 360 |

Permissible working temperature: -60°C - +150°C
 (Applications up to +250°C with possible losses of length of life).
 Further restrictions through lubricant should be kept in mind.