

Rod ends requiring maintenance

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Rod ends requiring maintenance

SKF manufactures rod ends requiring maintenance with a steel/steel or a steel/bronze sliding contact surface combination.

Steel/steel rod ends consist of a rod end housing and a steel/steel radial spherical plain bearing from the standard assortment, where the outer ring is secured in the housing. These rod ends are available with a female thread (→ fig. 1), male thread (→ fig. 2) or a welding shank (→ fig. 3).

Steel/bronze rod ends consist of a rod end housing and a steel/bronze spherical plain bearing. These bearings have an inner ring made of steel and an outer ring made of bronze. The bearing is held in position by staking the housing on both sides of the outer ring. These rod ends are available with a male or female thread.

SKF supplies rod ends with a threaded shank with a right-hand thread as standard. With the exception of rod ends with the designation suffix VZ019, all rod ends are also available with a left-hand thread. They are identified by the designation prefix L.

Dimensions

The dimensions of SKF rod ends requiring maintenance are in accordance with the standards listed in **table 1**.

Male and female threads of SKF rod ends are in accordance with ISO 965-1:1998, except for rod ends with female thread having the designation suffix /VZ019, which is in accordance with ISO 8139:2009.

Tolerances

SKF rod end inner ring dimensional tolerances are in accordance with ISO 12240-4:1998. The tolerances for the steel/steel rod end inner rings are listed in **table 3** and the tolerances for steel/bronze rod end inner rings are listed in **table 2**.

The symbols used in these tables are explained in the following:

d nominal bore diameter

Δ_{dmp} deviation of the mean bore diameter from the nominal

Δ_{Bs} deviation of the single inner ring width from the nominal

Fig. 1

Rod end with a female thread

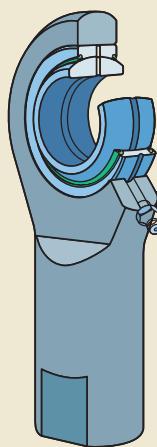


Fig. 2

Rod end with a male thread

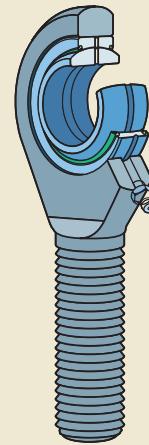
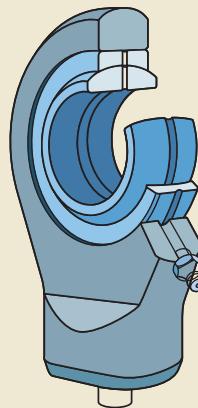
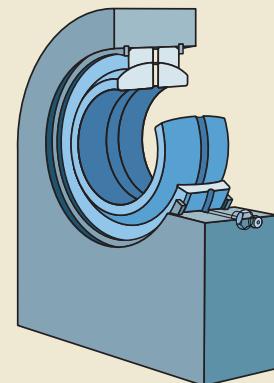


Fig. 3

Rod ends with a welding shank



cylindrical
section



rectangular
section

Radial internal clearance

The clearance values for steel/steel rod ends are in accordance with dimension series E and EH of ISO 12240-4:1998, as far as they have been standardized. The values are listed in **table 4** on **page 170**.

The clearance values for steel/bronze rod ends are in accordance with dimensions series K of ISO 12240-4:1998 and are listed in **table 5** on **page 170**.

Materials

SKF rod end housings for bearings that require maintenance are made of the materials listed in **table 6** on **page 170**.

The materials used for steel/steel radial spherical plain bearings incorporated in SKF rod ends are provided in the section *Materials* on **page 102**.

The bearings incorporated in the steel/bronze rod ends have an outer ring made of bronze and an inner ring made of bearing steel which has been hardened and ground.

Table 1

Standards	
Series	Standards
SA(A)	ISO 12240-4:1998 dimension series E, EH
SI(A)	ISO 12240-4:1998 dimension series E, EH
SC	ISO 12240-4:1998 dimension series E
SCF	-
SIJ	ISO 8133:2006
SIR	-
SIQG	ISO 8132:2006
SAKAC	ISO 12240-4:1998 dimension series K
SIKAC	ISO 12240-4:1998 dimension series K
SIKAC/VZ019	ISO 8139:2009, ISO 12240-4:1998

Table 2

Inner ring dimensional tolerances for steel/bronze rod ends

Bore diameter d over incl.	SIKAC and SAKAC series					
	Δ_{dmp} high	Δ_{dmp} low	Δ_{Bs} high	Δ_{Bs} low	μm	μm
-	6	12	0	0	0	-120
6	10	15	0	0	0	-120
10	18	18	0	0	0	-120
18	30	21	0	0	0	-120

Table 3

Inner ring dimensional tolerances for steel/steel rod ends

Bore diameter d over incl.	SA(A), SI(A), SIJ, SIR, SC and SCF series				SIQG series			
	Δ_{dmp} high	Δ_{dmp} low	Δ_{Bs} high	Δ_{Bs} low	Δ_{dmp} high	Δ_{dmp} low	Δ_{Bs} high	Δ_{Bs} low
-	10	0	-8	0	-120	-	-	-
10	18	0	-8	0	-120	18	0	0
18	30	0	-10	0	-120	21	0	0
30	50	0	-12	0	-120	25	0	0
50	80	0	-15	0	-150	30	0	0
80	120	0	-20	0	-200	35	0	0
120	180	0	-25	0	-250	40	0	0
180	250	0	-30	0	-300	46	0	0

Rod ends requiring maintenance

Permissible operating temperature range

The permissible operating temperature range for SKF rod ends requiring maintenance depends on the rod end housing, the bearing, the bearing seals and the grease used for lubrication. The values for the permissible operating temperature range are listed in **table 7**.

The load carrying capacity of the rod end is reduced at temperatures above 100 °C. For temperatures below 0 °C, check to be sure that the fracture toughness of the rod end housing is adequate for the intended application.

Table 4

Radial internal clearance for steel/steel rod ends

Bore diameter d	over mm	incl. μm	Radial internal clearance Normal	min	max
-	12	16	68		
12	20	20	82		
20	35	25	100		
35	60	30	120		
60	90	36	142		
90	140	42	165		
140	240	50	192		

Table 5

Radial internal clearance for steel/bronze rod ends

Bore diameter d	over mm	incl. μm	Radial internal clearance Normal	min	max
-	6	5	50		
6	10	7	61		
10	18	8	75		
18	30	10	92		

Table 6

Housing materials for rod ends requiring maintenance

Series	Size	Material	Material No.
SA(A)	6 to 80	Heat treatable steel C45V zinc coated and chromatized	1.0503
SI(A)	6 to 80	Heat treatable steel C45V zinc coated and chromatized	1.0503
SC SCF	20 to 80 20 to 80	Construction steel S 355 J2G3 (St 52-3 N) Construction steel S 355 J2G3 (St 52-3 N)	1.0570 1.0570
SIQG	12 to 63 70 to 200	Heat treatable steel C45 EN-GJS-400-15	1.0503 -
SIJ	12 to 50 60 to 100	Heat treatable steel C45 EN-GJS-400-15	1.0503 -
SIR	25 to 80 90 to 120	Heat treatable steel C45 EN-GJS-400-15	1.0503 -
SAKAC	5 to 12 14 to 30	Free-machining steel 9 SMnPb 28 K zinc coated and chromatized Heat treatable steel C35N zinc coated and chromatized	1.0718 1.0501
SIKAC	5 to 12 14 to 30	Free-machining steel 9 SMnPb 28 K zinc coated and chromatized Heat treatable steel C35N zinc coated and chromatized	1.0718 1.0501

SKF reserves the right to use similar material or material of higher strength.

Fatigue strength

In all applications where a rod end is subjected to alternating loads, loads that vary in magnitude or where failure of a rod end is dangerous, make sure that the selected rod end has sufficient fatigue strength.

Relubrication facilities

SKF rod ends requiring maintenance are provided with a grease fitting or a lubrication hole in the rod end housing. Relubrication via the pin is also possible. Exceptions are steel/steel rod ends in the SA .. E and SI .. E series and a few smaller rod ends as indicated in the product tables. The type and design of relubrication facilities in the rod end housing are listed in **table 8**.

Table 7

Permissible operating temperature range for rod ends requiring maintenance

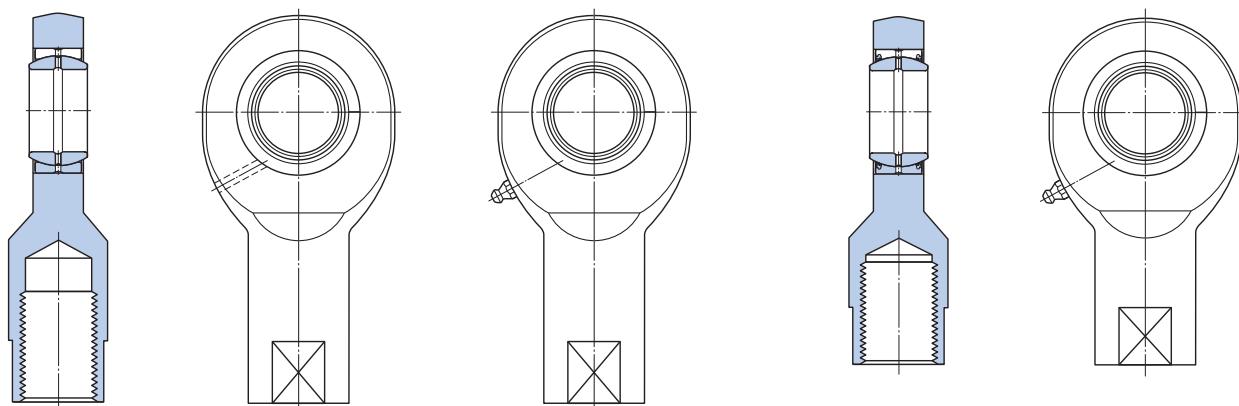
Series	Permissible operating temperature range ¹⁾
	from incl.
-	°C
Steel/steel rod ends	
SA .. E(S)	-50 +200
SA(A) .. ES-2RS	-30 +130
SI .. E(S)	-50 +200
SI(A) .. ES-2RS	-30 +130
SIQG .. ES	-50 +200
SIJ .. ES	-50 +200
SIR .. ES	-50 +200
SC(F) .. ES	-50 +200
Steel/bronze rod ends	
SAKAC .. M	-30 +180
SIKAC .. M (/VZ 019)	-30 +180

¹⁾ Permissible operating temperature range of the grease must be considered.

Table 8

Relubrication facilities for rod ends requiring maintenance

Series	Size	Relubrication facilities Design
Steel/steel rod ends		
SA .. ES	15 to 20	Lubrication hole diameter 2,5 mm
SI .. ES	15 to 20	
SI .. ES	15 to 20	
SIJ .. ES	16 to 20	
SC .. ES	20	
SA(A) .. ES(-2RS)	25 to 80	Grease fitting in accordance with DIN 71412: 1987
SI(A) .. ES(-2RS)	25 to 80	
SIJ .. ES	25 to 100	
SIR .. ES	25 to 120	
SIQG .. ES(A)	12 to 200	
SC .. ES	25 to 80	
SCF .. ES	20 to 80	
Steel/bronze rod ends		
SAKAC .. M	6 to 30	Grease fitting in accordance with DIN 3405: 1986
SIKAC .. M(/VZ 019)	6 to 30	



SI(L) .. ES

$d \leq 20 \text{ mm}$

$d \geq 25 \text{ mm}$

SI(L)A .. ES-2RS

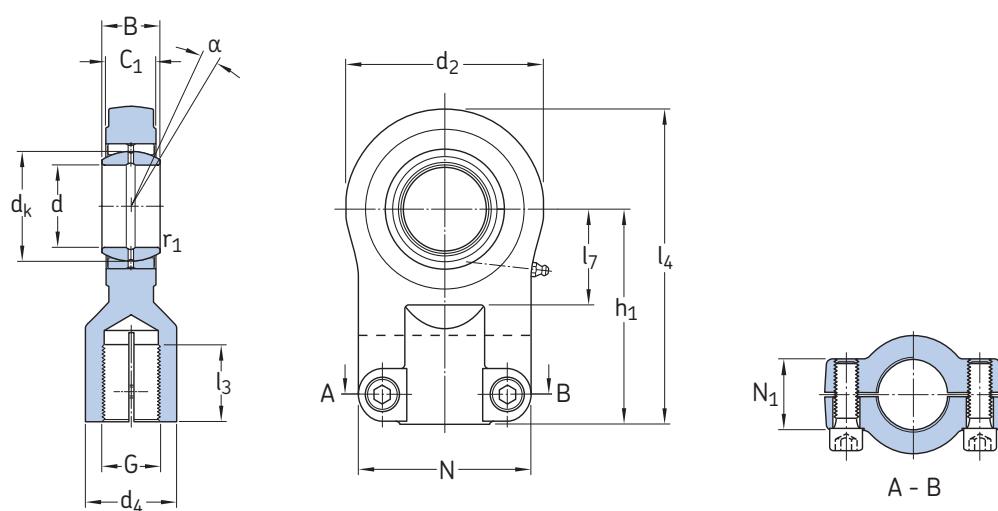
SI(L) .. ES-2RS

Dimensions

d	d _k	d ₄ ≈	l ₃ min	l ₄ max	l ₅ ≈	l ₇ min	r ₁ min	w h14
<hr/>								
mm								
6	10	11	11	43	8	10	0,3	9
8	13	13	15	50	9	11	0,3	11
10	16	16	15	60	11	13	0,3	14
12	18	19	18	69	12	17	0,3	17
15	22	22	21	83	14	19	0,3	19
17	25	25	24	92	15	22	0,3	22
20	29	28	30	106	16	24	0,3	24
25	35,5	35	36	128	18	30	0,6	30
30	40,7	42	45	149	19	34	0,6	36
35	47	49	60	174	25	40	0,6	41
40	53	58	65	191	25	46	0,6	50
	53	58	65	194	25	46	0,6	50
45	60	65	65	199	30	50	0,6	55
	60	65	65	219	30	50	0,6	55
50	66	70	68	219	30	58	0,6	60
	66	70	68	254	30	58	0,6	60
60	80	82	70	246	35	73	1	70
	80	82	70	296	35	73	1	70
70	92	92	80	284	40	85	1	80
	92	92	80	349	40	85	1	80
80	105	105	85	324	45	98	1	90
	105	105	85	389	45	98	1	90

6.1

Rod ends with a female thread, for hydraulic cylinders, steel/steel
d 12 – 70 mm



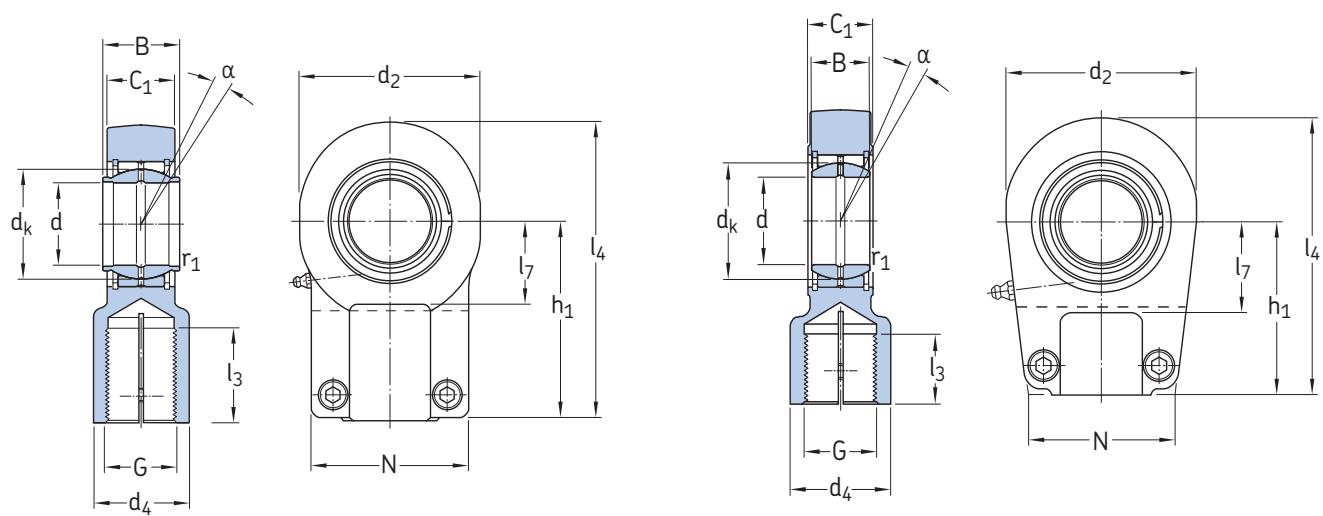
SI(L)J .. ES

Principal dimensions							Angle of tilt	Basic load ratings		Mass	Designations	
d	d ₂ max	G 6H	B	C ₁ max	h ₁	α	C	C ₀		Rod end with right-hand thread	left-hand thread ¹⁾	
mm							degrees	kN	kg		–	
12	36 33	M 10×1,25 M 12×1,25	10 12	8 11	42 38	3 4	10,8 10,8	21,2 22	0,14 0,11	SIJ 12 E ²⁾ SIQG 12 ESA ³⁾	SILJ 12 E ²⁾ SILQG 12 ESA ³⁾	
16	45 41	M 12×1,25 M 14×1,5	14 16	11 14	48 44	3 4	21,2 17,6	23,5 32,5	0,25 0,21	SIJ 16 ES SIQG 16 ES	SILJ 16 ES SILQG 16 ES	
20	55 48	M 14×1,5 M 16×1,5	16 20	13 17,5	58 52	3 4	30 30	51 43	0,40 0,40	SIJ 20 ES SIQG 20 ES	SILJ 20 ES SILQG 20 ES	
25	65 57 59	M 16×1,5 M 16×1,5 M 20×1,5	20 20 25	17 23,5 22	68 50 65	3 7 4	48 48 48	73,5 52 69,5	0,68 0,49 0,66	SIJ 25 ES SIR 25 ES SIQG 25 ES	SILJ 25 ES SILR 25 ES SILQG 25 ES	
30	80 65	M 20×1,5 M 22×1,5	22 22	19 28,5	85 60	3 6	62 62	112 78	1,35 0,77	SIJ 30 ES SIR 30 ES	SILJ 30 ES SILR 30 ES	
32	71	M 27×2	32	28	80	4	65,5	100	1,20	SIQG 32 ES	SILQG 32 ES	
35	79	M 28×1,5	25	30,5	70	6	80	118	1,20	SIR 35 ES	SILR 35 ES	
40	98 95 90	M 27×2 M 35×1,5 M 33×2	28 28 40	23 35,5 34	105 85 97	3 7 4	100 100 100	146 200 176	2,40 2,10 2,00	SIJ 40 ES SIR 40 ES SIQG 40 ES	SILJ 40 ES SILR 40 ES SILQG 40 ES	
50	122 118 110	M 33×2 M 45×1,5 M 42×2	35 35 50	30 40,5 42	130 105 120	3 6 4	156 156 156	216 280 270	3,80 3,60 3,50	SIJ 50 ES SIR 50 ES SIQG 50 ES	SILJ 50 ES SILR 50 ES SILQG 50 ES	
60	160 132	M 42×2 M 58×1,5	44 44	38 50,5	150 130	3 6	245 245	405 325	8,50 6,00	SIJ 60 ES SIR 60 ES	SILJ 60 ES SILR 60 ES	
63	134	M 48×2	63	53,5	140	4	255	375	6,80	SIQG 63 ES	SILQG 63 ES	
70	156	M 65×1,5	49	55,5	150	6	315	450	9,40	SIR 70 ES	SILR 70 ES	

¹⁾ Check availability of rod ends with left-hand thread.

²⁾ No relubrication facilities.

³⁾ Can only be relubricated via the outer ring.



SI(L)QG .. ES

SI(L)R .. ES

Dimensions

Cylinder bolt
with internal hexagon
(ISO 4762:1998)

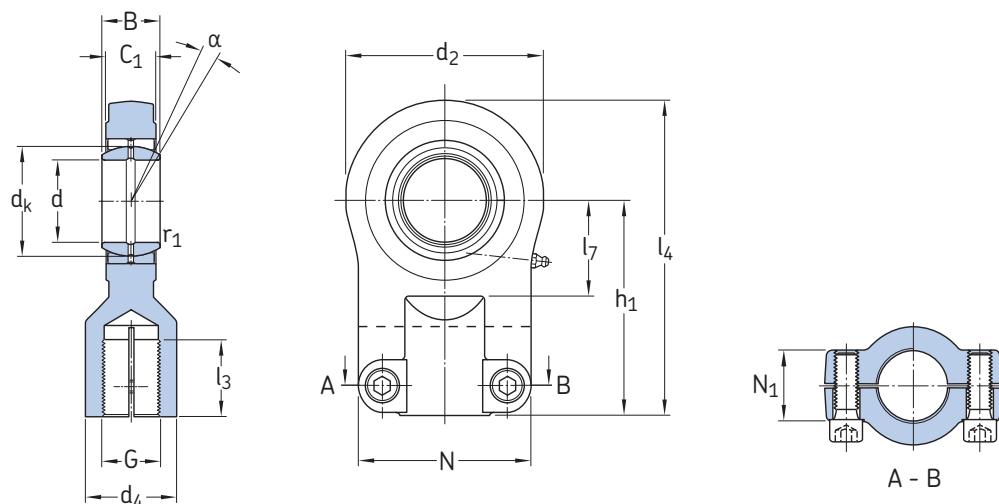
Size Tightening
mm torque

d	d _k	d ₄ max	l ₃ min	l ₄ max	l ₇ min	N max	N ₁ max	r ₁ min	-	Nm
mm										
12	18 18	17 17	15 17	62 55	16 13	40 33	13 11	0,3 0,3	M 6 M 5	10 5,5
16	25 23	21 22	17 19	70,5 64,5	20 17	45 41	13 14	0,3 0,3	M 6 M 6	10 9,5
20	29 29	25 26,5	19 23	85,5 77	25 21	55 48	17 18	0,3 0,3	M 8 M 8	25 23
25	35,5 35,5 35,5	30 26 31	23 17 29	100,5 79,5 97	30 27 26	62 42 55	17 23,5 18	0,6 0,6 0,6	M 8 M 8 M 8	25 23 23
30	40,7 40,7	36 33	29 23	125 93,5	35 29	80 47	19 28,5	0,6 0,6	M 10 M 8	45 23
32	43	38	37	116,5	31	67	23	0,6	M 10	46
35	47	41,5	29	110,5	37	59	30,5	0,6	M 10	46
40	53 53 53	45 50,5 47	37 36 46	155 133,5 143	45 44 40	90 67 81	23 35,5 28	0,6 0,6 0,6	M 10 M 10 M 10	45 46 46
50	66 66 66	55 62,5 58	46 46 57	192,5 164,5 175,5	58 54 49	105 89 97,5	30 40,5 33	0,6 0,6 0,6	M 12 M 12 ¹⁾ M 12	80 79 ¹⁾ 79
60	80 80	68 76,5	57 59	230 202,5	68 64	134 91	38 50,5	1 1	M 16 M 16 ¹⁾	160 46 ¹⁾
63	83	70	64	213,5	61	116	40	1	M 16 ¹⁾	195 ¹⁾
70	92	87,5	66	234,5	74	101	55,5	1	M 16 ¹⁾	79 ¹⁾

6.2

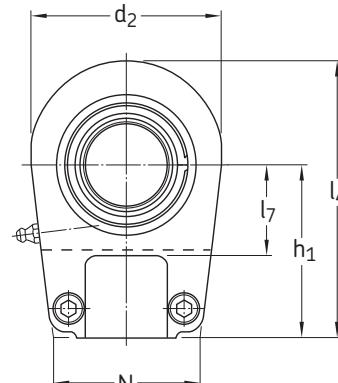
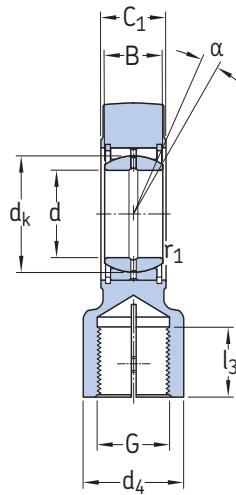
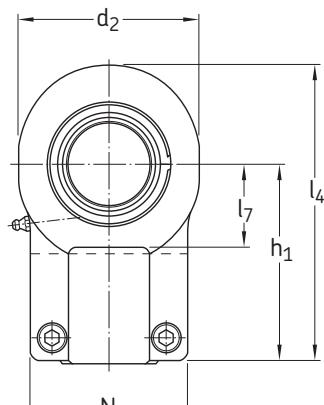
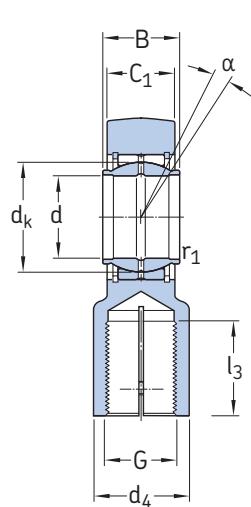
¹⁾ Bolts, position of bolts, and tightening torque may vary.

Rod ends with a female thread, for hydraulic cylinders, steel/steel
d 80 – 200 mm



SI(L)J .. ES

Principal dimensions	d	d ₂ max	G 6H	B	C ₁ max	h ₁	Angle of tilt α	Basic load ratings		Mass	Designations Rod end with right-hand thread	left-hand thread
								dynamic	static			
mm												
80	205	M 48x2	55	47	185	3	400	610	14,5	SIJ 80 ES	SILJ 80 ES	
	178	M 80x2	55	60,5	170	6	400	560	13,0	SIR 80 ES	SILR 80 ES	
	170	M 64x3	80	68	180	4	400	600	14,5	SIQG 80 ES	SILQG 80 ES	
100	240	M 64x3	70	57	240	3	610	780	29,5	SIJ 100 ES	SILJ 100 ES	
	232	M 110x2	70	70,5	235	7	610	950	30,0	SIR 100 ES	SILR 100 ES	
	212	M 80x3	100	85,5	210	4	610	930	28,0	SIQG 100 ES	SILQG 100 ES	
120	343	M 130x3	85	90,5	310	6	950	2 450	84,0	SIR 120 ES	SILR 120 ES	
125	268	M 100x3	125	105	260	4	950	1 430	43,0	SIQG 125 ES	SILQG 125 ES	
160	328	M 125x4	160	133	310	4	1 370	2 200	80,0	SIQG 160 ES	SILQG 160 ES	
200	420	M 160x4	200	165	390	4	2 120	3 400	165	SIQG 200 ES	SILQG 200 ES	



SI(L)QG .. ES

SI(L)R .. ES

Dimensions

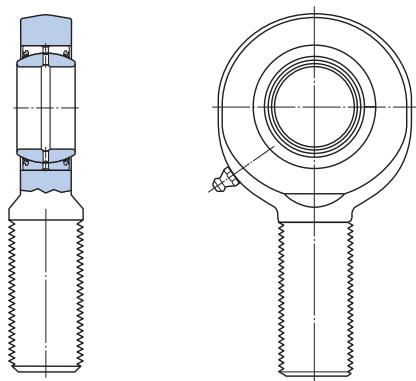
Cylinder bolt
with internal hexagon
(ISO 4762:1998)

Size Tightening
mm torque

d	d_k	d_4 max	l_3 min	l_4 max	l_7 min	N max	N_1 max	r_1 min	-	Nm
mm										
80	105	90	64	287,5	92	156	47	1	M 20	310
	105	103,5	81	267,5	79	126	60,5	1	M 20 ¹⁾	195 ¹⁾
	105	91	86	272,5	77	150	50	1	M 20 ¹⁾	390 ¹⁾
100	130	110	86	360	116	190	57	1	M 24	530
	130	140	111	362,5	103	167	70,5	1	M 24 ¹⁾	390 ¹⁾
	130	110	96	324	97	180	65	1	M 24 ¹⁾	670 ¹⁾
120	160	175	135	493	138	257	86	1	M 24 ¹⁾	670 ¹⁾
125	160	135	113	407	118	202	75	1	M 24 ¹⁾	670 ¹⁾
160	200	165	126	490	148	252	85	1	M 24 ¹⁾	670 ¹⁾
200	250	215	161	623	193	323	106	1,1	M 30 ¹⁾	1 350 ¹⁾

6.2

¹⁾ Bolts, position of bolts, and tightening torque may vary.



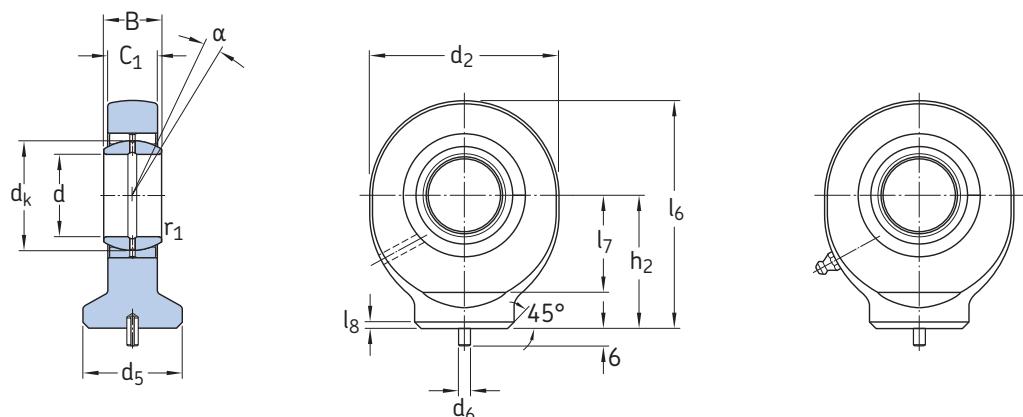
SA(L)A.. ES-2RS

Dimensions

d	d _k	l ₁ min	l ₂ max	l ₇ min	r ₁ min
<hr/>					
mm					
6	10	16	49	10	0,3
8	13	21	56	11	0,3
10	16	26	65	13	0,3
12	18	28	73	17	0,3
15	22	34	85	19	0,3
17	25	36	94	22	0,3
20	29	43	107	24	0,3
25	35,5	53	128	30	0,6
30	40,7	65	149	34	0,6
35	47	82	174	40	0,6
40	53	86	199	46	0,6
	53	90	194	46	0,6
45	60	92	217	50	0,6
	60	95	219	50	0,6
50	66	104	244	58	0,6
	66	110	254	58	0,6
60	80	115	281	73	1
	80	120	296	73	1
70	92	125	319	85	1
	92	132	349	85	1
80	105	140	364	98	1
	105	147	389	98	1

6.3

Rod ends with a cylindrical section welding shank, steel/steel
d 20 – 80 mm



SC .. ES

d = 20 mm

d ≥ 25 mm

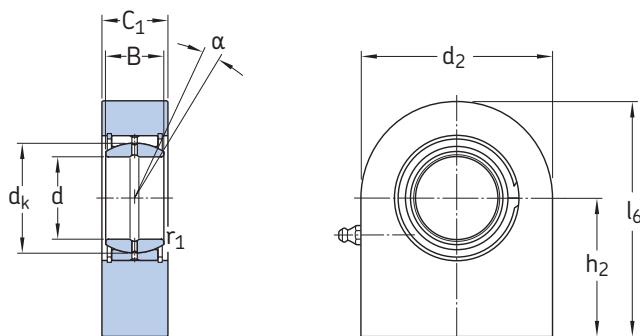
Principal dimensions					Angle of tilt	Basic load ratings dynamic static		Mass	Designation
d	d ₂ max	B	C ₁ max	h ₂	α	C	C ₀		
mm					degrees	kN		kg	-
20	54	16	13,5	38	9	30	46,5	0,20	SC 20 ES
25	65	20	18	45	7	48	73,5	0,45	SC 25 ES
30	75	22	20	51	6	62	96,5	0,65	SC 30 ES
35	84	25	22	61	6	80	112	1,00	SC 35 ES
40	94	28	24	69	7	100	134	1,30	SC 40 ES
45	104	32	28	77	7	127	180	1,90	SC 45 ES
50	114	35	31	88	6	156	220	2,50	SC 50 ES
60	137	44	39	100	6	245	335	4,60	SC 60 ES
70	162	49	43	115	6	315	455	6,80	SC 70 ES
80	182	55	48	141	6	400	550	9,70	SC 80 ES

Dimensions

d	d _k	d ₅ max	d ₆	l ₆ max	l ₇ min	r ₁ min	l ₈
<hr/>							
mm							
20	29	29	4	66	24	0,3	2
25	35,5	35	4	78	30	0,6	3
30	40,7	42	4	89	34	0,6	3
35	47	49	4	104	40	0,6	3
40	53	54	4	118	46	0,6	4
45	60	60	6	132	50	0,6	4
50	66	64	6	150	58	0,6	4
60	80	72	6	173	73	1	4
70	92	82	6	199	85	1	5
80	105	97	6	237	98	1	5

6.4

Rod ends with a rectangular section welding shank, steel/steel
d 20 – 120 mm



SCF .. ES

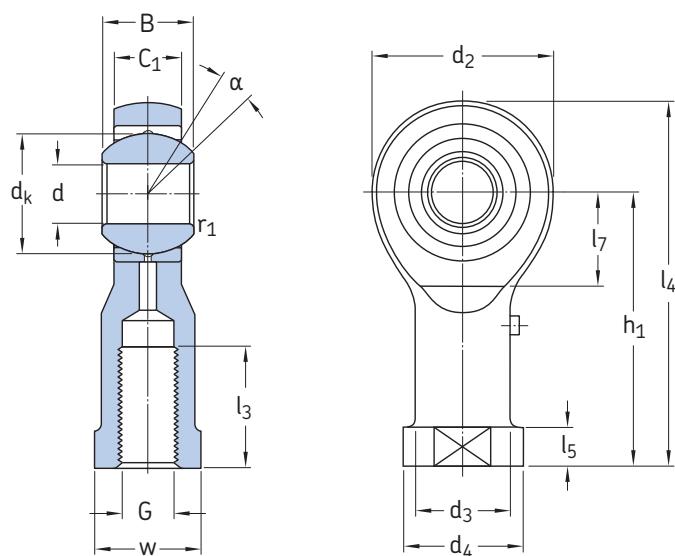
Principal dimensions					Angle of tilt	Basic load ratings		Mass	Designation
d	d ₂ max	B	C ₁ max	h ₂ js13	α	C	C ₀	kg	–
mm									
20	51,5	16	20	38	9	30	63	0,35	SCF 20 ES
25	56,5	20	24	45	7	48	65,5	0,53	SCF 25 ES
30	66,5	22	29	51	6	62	110	0,87	SCF 30 ES
35	85	25	31	61	6	80	183	1,55	SCF 35 ES
40	102	28	36,5	69	7	100	285	2,45	SCF 40 ES
45	112	32	41,5	77	7	127	360	3,40	SCF 45 ES
50	125,5	35	41,5	88	6	156	415	4,45	SCF 50 ES
60	142,5	44	51,5	100	6	245	530	7,00	SCF 60 ES
70	166,5	49	57	115	6	315	680	10,0	SCF 70 ES
80	182,5	55	62	141	6	400	750	15,0	SCF 80 ES
90	228,5	60	67	150	5	490	1 290	23,5	SCF 90 ES
100	252,5	70	72	170	7	610	1 430	31,5	SCF 100 ES
110	298	70	83	185	6	655	2 200	48,0	SCF 110 ES
120	363	85	92,5	210	6	950	3 250	79,5	SCF 120 ES

Dimensions

d	d _k	l ₆ max	r ₁ min
<hr/>			
mm			
20	29	64	0,3
25	35,5	73,5	0,6
30	40,7	85	0,6
35	47	103,5	0,6
40	53	120	0,6
45	60	133	0,6
50	66	151	0,6
60	80	171,5	1
70	92	198,5	1
80	105	232,5	1
90	115	264,5	1
100	130	296,5	1
110	140	334	1
120	160	391,5	1

6.5

Rod ends with a female thread, steel/bronze
d 5 – 30 mm



SI(L)KAC .. M(/VZ019)
d ≥ 6 mm

Principal dimensions							Angle of tilt	Basic load ratings			Mass	Designations	
d	d ₂ max	G 6H	B	C ₁ max	h ₁	α	C	C ₀		Rod end with right-hand thread	left-hand thread		
mm							degrees	kN		kg	–		
5	19 19	M 5 M 4	8 8	7,5 7,5	27 27	13 13	3,25 3,25	5,4 5,4	0,017 0,017	SIKAC 5 M ¹⁾ SIKAC 5 M/VZ019 ¹⁾	SILKAC 5 M ¹⁾ –		
6	21	M 6	9	7,5	30	13	4,3	5,4	0,025	SIKAC 6 M	SILKAC 6 M		
8	25	M 8	12	9,5	36	14	7,2	9,15	0,043	SIKAC 8 M	SILKAC 8 M		
10	29 29	M 10 M 10x1,25	14 14	11,5 11,5	43 43	13 13	10 10	12,2 12,2	0,072 0,072	SIKAC 10 M SIKAC 10 M/VZ019	SILKAC 10 M –		
12	33 33	M 12 M 12x1,25	16 16	12,5 12,5	50 50	13 13	13,4 13,4	14 14	0,11 0,11	SIKAC 12 M SIKAC 12 M/VZ019	SILKAC 12 M –		
14	37	M 14	19	14,5	57	16	17	20,4	0,16	SIKAC 14 M	SILKAC 14 M		
16	43 43	M 16 M 16x1,5	21 21	15,5 15,5	64 64	15 15	21,6 21,6	29 29	0,22 0,22	SIKAC 16 M SIKAC 16 M/VZ019	SILKAC 16 M –		
18	47	M 18x1,5	23	17,5	71	15	26	35,5	0,30	SIKAC 18 M	SILKAC 18 M		
20	51	M 20x1,5	25	18,5	77	14	31,5	35,5	0,40	SIKAC 20 M	SILKAC 20 M		
22	55	M 22x1,5	28	21	84	15	38	45	0,50	SIKAC 22 M	SILKAC 22 M		
25	61	M 24x2	31	23	94	15	47,5	53	0,65	SIKAC 25 M	SILKAC 25 M		
30	71 71	M 30x2 M 27x2	37 37	27 27	110 110	17 17	64 64	69,5 69,5	1,15 1,15	SIKAC 30 M SIKAC 30 M/VZ019	SILKAC 30 M –		

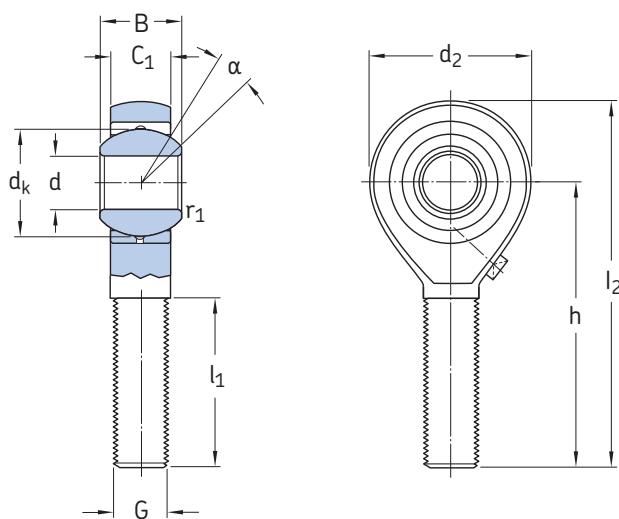
¹⁾No relubrication facilities.

Dimensions

d	d _k	d ₃ ≈	d ₄ max	l ₃ min	l ₄ max	l ₅ ≈	l ₇ min	r ₁ min	w h14
<hr/>									
mm									
5	11,1 11,1	9 9	12 12	8 10	38 38	4 4	9 9	0,3 0,3	9 9
6	12,7	10	14	9	42	5	10	0,3	11
8	15,8	12,5	17	12	50	5	12	0,3	14
10	19 19	15 15	20 20	15 20	59 59	6,5 6,5	14 14	0,3 0,3	17 17
12	22,2 22,2	17,5 17,5	23 23	18 22	68 68	6,5 6,5	16 16	0,3 0,3	19 19
14	25,4	20	27	21	77	8	18	0,3	22
16	28,5 28,5	22 22	29 29	24 28	87 87	8 8	21 21	0,3 0,3	22 22
18	31,7	25	32	27	96	10	23	0,3	27
20	34,9	27,5	37	30	105	10	25	0,3	30
22	38,1	30	40	33	114	12	27	0,3	32
25	42,8	33,5	44	36	127	12	30	0,3	36
30	50,8 50,8	40 40	52 52	45 51	148 148	15 15	35 35	0,3 0,3	41 41

6.6

Rod ends with a male thread, steel/bronze
d 5 – 30 mm



SA(L)KAC .. M
d ≥ 6 mm

Principal dimensions						Angle of tilt	Basic load ratings		Mass	Designations	
d	d ₂ max	G 6g	B	C ₁ max	h	α	dynamic	static		Rod end with right-hand thread	left-hand thread
mm						degrees	kN		kg		–
5	19	M 5	8	6	33	13	3,25	4,8	0,013	SAKAC 5 M ¹⁾	SALKAC 5 M ¹⁾
6	21	M 6	9	6,75	36	13	4,3	4,8	0,020	SAKAC 6 M	SALKAC 6 M
8	25	M 8	12	9	42	14	7,2	8	0,032	SAKAC 8 M	SALKAC 8 M
10	29	M 10	14	10,5	48	13	10	10,8	0,054	SAKAC 10 M	SALKAC 10 M
12	33	M 12	16	12	54	13	12,2	12,2	0,085	SAKAC 12 M	SALKAC 12 M
14	37	M 14	19	13,5	60	16	17	17,3	0,13	SAKAC 14 M	SALKAC 14 M
16	43	M 16	21	15	66	16	21,6	23,2	0,19	SAKAC 16 M	SALKAC 16 M
18	47	M 18x1,5	23	16,5	72	16	26	29	0,26	SAKAC 18 M	SALKAC 18 M
20	51	M 20x1,5	25	18	78	16	29	29	0,34	SAKAC 20 M	SALKAC 20 M
22	55	M 22x1,5	28	20	84	16	38	39	0,44	SAKAC 22 M	SALKAC 22 M
25	61	M 24x2	31	22	94	15	46,5	46,5	0,60	SAKAC 25 M	SALKAC 25 M
30	71	M 30x2	37	25	110	17	61	61	1,05	SAKAC 30 M	SALKAC 30 M

¹⁾ No relubrication facilities.

Dimensions

d	d _k	l ₁ min	l ₂ max	r ₁ min
<hr/>				
mm				
5	11,1	19	44	0,3
6	12,7	21	48	0,3
8	15,8	25	56	0,3
10	19	28	64	0,3
12	22,2	32	72	0,3
14	25,4	36	80	0,3
16	28,5	37	89	0,3
18	31,7	41	97	0,3
20	34,9	45	106	0,3
22	38,1	48	114	0,3
25	42,8	55	127	0,3
30	50,8	66	148	0,3

6.7

