



FAG



ELGES alloy steel rod ends

Corrosion-resistant

Corrosion-resistant ELGES rod ends

Features

Maintenance-free rod ends made from alloy steel comprise a housing with integral shank and a maintenance-free spherical plain bearing, *Figure 1*. The housing and shank has a thread to DIN 13, the diameter range extends from 5 mm to 30 mm. The bore tolerance of the spherical plain bearings is H7.

The rod ends conform to DIN ISO 12 240-4, dimension series K and have a radial spherical plain bearing GE..-PS and a right or left hand internal or external thread. The sliding contact pair comprises corrosion-resistant steel and corrosion-resistant PTFE-bronze film fixed in the outer ring crowned surface. Due to this sliding contact pair, they are completely maintenance-free.

All rod ends with an internal thread are also available with CETOP mounting dimensions in accordance with ISO 8139 for pneumatic cylinders.



Figure 1
Rod ends,
corrosion-resistant,
dimension series K

Corrosion resistance

The steels used as standard and proven in this situation are corrosion-resistant steels such as X105CrMo17 (material no. 1.4125) for the inner ring and X8CrNiS18-9 (material no. 1.4305) or alternatively X5CrNi18-10 (material no. 1.4301) for the outer ring and housing.

Applications

These materials have corrosion resistance corresponding to market requirements in many media.

The preferred areas of application include machinery for the food and drink industry, butchery machines, the chemical industry and medical equipment. The products have also proven effective in aircraft and ship building as well as for applications in buses and rail vehicles.

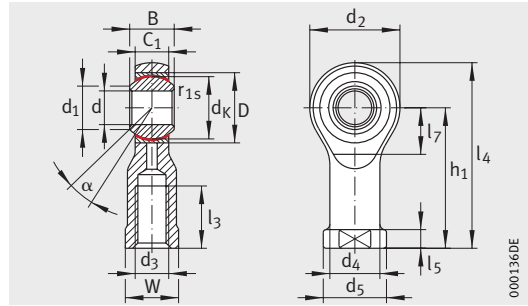
Rod ends with CETOP mounting dimensions are often used in control and automation engineering.

Temperature range

The rod ends can be used without restriction in the temperature range from $-10\text{ }^{\circ}\text{C}$ to $+80\text{ }^{\circ}\text{C}$. At operating temperatures above $+80\text{ }^{\circ}\text{C}$, the load carrying capacity and thus the operating life of the bearings is reduced.

Rod ends

With internal thread, maintenance-free
Dimension series K, type F



GIKSR...-PS, GIKPSR...-PS
Corrosion-resistant steel/PTFE-bronze film

Dimension table · Dimensions in mm

Designation ¹⁾	Mass m ≈ kg	Dimensions									
		d ²⁾	D	B	d _K	d ₁	d ₂	d ₃	d ₄	h ₁	C ₁
GIKSR5-PS	0,017	5 ^{+0,012}	13	8	11,1	7,7	19	M5	9	27	6
GIKPSR5-PS								M4			
GIKSR6-PS	0,025	6 ^{+0,012}	16	9	12,7	8,9	21	M6	10	30	6,75
GIKSR8-PS	0,043	8 ^{+0,015}	19	12	15,8	10,3	25	M8	12,5	36	9
GIKSR10-PS	0,072	10 ^{+0,015}	22	14	19	12,9	29	M10	15	43	10,5
GIKPSR10-PS								M10X1,25			
GIKSR12-PS	0,107	12 ^{+0,018}	26	16	22,2	15,4	33	M12	17,5	50	12
GIKPSR12-PS								M12X1,25			
GIKSR14-PS	0,16	14 ^{+0,018}	28 ³⁾	19	25,4	16,8	37	M14	20	57	13,5
GIKSR16-PS	0,21	16 ^{+0,018}	32	21	28,5	19,3	43	M16	22	64	15
GIKPSR16-PS								M16X1,5			
GIKSR18-PS	0,295	18 ^{+0,018}	35	23	31,7	21,8	47	M18X1,5	25	71	16,5
GIKSR20-PS	0,38	20 ^{+0,021}	40	25	34,9	24,3	51	M20X1,5	27,5	77	18
GIKSR22-PS	0,49	22 ^{+0,021}	42	28	38,1	25,8	55	M22X1,5	30	84	20
GIKSR25-PS	0,65	25 ^{+0,021}	47	31	42,8	29,5	61	M24X2	33,5	94	22
GIKSR30-PS	1,15	30 ^{+0,021}	55	37	50,8	34,8	71	M30X2	40	110	25
GIKPSR30-PS								M27X2			

1) For a left hand thread, the R is replaced by an L, for example GIKSL.

2) Bore tolerance H7 (arithmetic mean value).

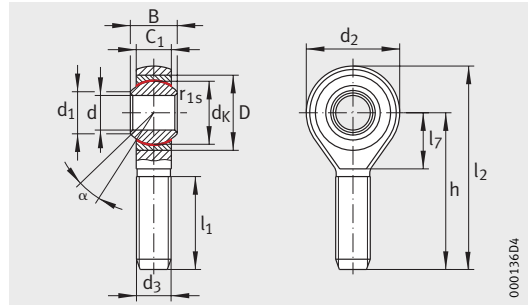
3) Variation from DIN ISO 12 240-4, dimension series K, type F.

4) Basic static load rating of rod end.

							Chamfer dimension	Basic load ratings		Radial internal clearance
α	l_3	l_4	l_5	l_7	d_5	W		r_{1s}	dyn. C_r	
°	min.		≈	min.			min.	N	N	
13	8	36,5	4	9	11	9	0,3	6 000	3 800	0,003 – 0,035
13	9	40,5	5	10	13	11	0,3	7 650	3 400	0,003 – 0,035
13	12	48,5	5	12	16	14	0,3	12 900	5 700	0,005 – 0,040
13	15	57,5	6,5	14	19	17	0,3	18 000	8 000	0,005 – 0,040
13	18	66,5	6,5	16	22	19	0,3	24 000	9 100	0,005 – 0,045
15	21	75,5	8	18	25	22	0,3	31 000	13 700	0,005 – 0,045
15	24	85,5	8	21	27	22	0,3	39 000	19 000	0,005 – 0,045
15	27	94,5	10	23	31	27	0,3	47 500	23 000	0,005 – 0,045
15	30	102,5	10	25	34	30	0,3	57 000	22 800	0,010 – 0,055
15	33	111,5	12	27	37	32	0,3	68 000	30 400	0,010 – 0,055
15	36	124,5	12	30	42	36	0,3	85 000	36 200	0,010 – 0,055
15	45	145,5	15	35	50	41	0,3	114 000	47 500	0,010 – 0,055

Rod ends

With external thread, maintenance-free
Dimension series K, type F



GAKSR...PS
Corrosion-resistant steel/PTFE-bronze film

000136D4

Dimension table · Dimensions in mm

Designation ¹⁾	Mass m ≈kg	Dimensions								
		d ²⁾	D	B	d _K	d ₁	d ₂	d ₃	h	
GAKSR5-PS	0,01	5 ^{+0,012}	13	8	11,1	7,7	19	M5	33	
GAKSR6-PS	0,02	6 ^{+0,012}	16	9	12,7	8,9	21	M6	36	
GAKSR8-PS	0,03	8 ^{+0,015}	19	12	15,8	10,3	25	M8	42	
GAKSR10-PS	0,05	10 ^{+0,015}	22	14	19	12,9	29	M10	48	
GAKSR12-PS	0,09	12 ^{+0,018}	26	16	22,2	15,4	33	M12	54	
GAKSR14-PS	0,13	14 ^{+0,018}	28 ³⁾	19	25,4	16,8	37	M14	60	
GAKSR16-PS	0,19	16 ^{+0,018}	32	21	28,5	19,3	43	M16	66	
GAKSR18-PS	0,26	18 ^{+0,018}	35	23	31,7	21,8	47	M18X1,5	72	
GAKSR20-PS	0,34	20 ^{+0,021}	40	25	34,9	24,3	51	M20X1,5	78	
GAKSR22-PS	0,44	22 ^{+0,021}	42	28	38,1	25,8	55	M22X1,5	84	
GAKSR25-PS	0,59	25 ^{+0,021}	47	31	42,8	29,5	61	M24X2	94	
GAKSR30-PS	1,06	30 ^{+0,021}	55	37	50,8	34,8	71	M30X2	110	

1) For a left hand thread, the R is replaced by an L, for example GAKSL.

2) Bore tolerance H7 (arithmetic mean value).

3) Variation from DIN ISO 12 240-4, dimension series K, type F.

4) Basic static load rating of rod end.

					Chamfer dimension r_{1s} min.	Basic load ratings		Radial internal clearance
C_1	α °	l_1	l_2	l_7		dyn. C_r N	stat. $C_{0r}^{4)}$ N	
6	13	19	42,5	9	0,3	6 000	1 800	0,003 – 0,035
6,75	13	21	46,5	10	0,3	7 650	2 500	0,003 – 0,035
9	13	25	54,5	12	0,3	12 900	4 600	0,005 – 0,040
10,5	13	28	62,5	14	0,3	18 000	7 300	0,005 – 0,040
12	13	32	70,5	16	0,3	24 000	9 100	0,005 – 0,045
13,5	15	36	78,5	18	0,3	31 000	13 700	0,005 – 0,045
15	15	37	87,5	21	0,3	39 000	19 000	0,005 – 0,045
16,5	15	41	95,5	23	0,3	47 500	23 000	0,005 – 0,045
18	15	45	104	25	0,3	57 000	22 800	0,010 – 0,055
20	15	48	112	27	0,3	68 000	30 400	0,010 – 0,055
22	15	55	125	30	0,3	85 000	36 200	0,010 – 0,055
25	15	66	146	35	0,3	114 000	47 500	0,010 – 0,055

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