



BEARING MAN GROUP



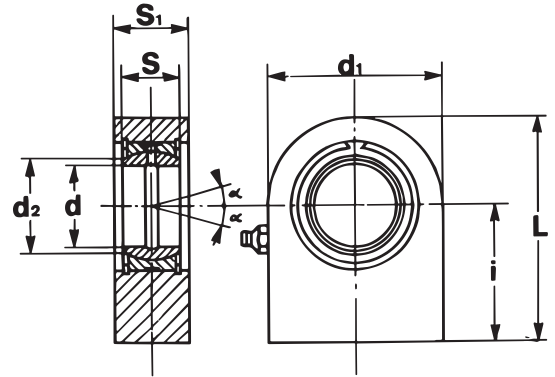
HYDRAULIC ROD ENDS

Technical Guide

Hydraulic rod ends

Sliding contact surfaces: Steel/steel

GF..ES



DESIGNATION	d	S	i	d1	d2	S1	L
GF 20 ES	20	16	38	50	24,2	19	63
GF 25 ES	25	20	45	55	29,3	23	72,5
GF 30 ES	30	22	51	65	34,2	28	83,5
GF 35 ES	35	25	61	83	39,8	30	102,5
GF 40 ES	40	28	69	100	45,0	35	119
GF 45 ES	45	32	77	110	50,8	40	132
GF 50 ES	50	35	88	123	56,0	40	149,5
GF 60 ES	60	44	100	140	66,8	50	170
GF 70 ES	70	49	115	164	77,9	55	197
GF 80 ES	80	55	141	180	89,4	60	231
GF 90 ES	90	60	150	226	98,1	65	263
GF 100 ES	100	70	170	250	109,5	70	295
GF 110 ES	110	70	185	295	121,2	80	332,5
GF 120 ES	120	85	210	360	135,5	90	390

OPTIONS AVAILABLE:

STEEL ON STEEL TYPE		MAINTENANCE FREE TYPE	
WITHOUT SEALS	WITH SEALS	WITHOUT SEALS	WITH SEALS
ES 20 mm to 120 mm incl.	ES-2RS 20 mm to 120 mm incl.	EC 20 mm to 30 mm incl.	EC-2RS 30 mm to 70 mm incl.

Manufactured to DIN 648 Series E Standard.



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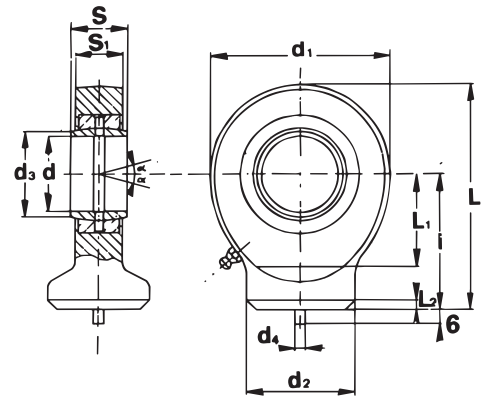
d (H7)	RADIAL INTERNAL CLEARANCE	BASIC LOAD RATING		OSCILLATION ANGLE α	SLIDING CONTACT SURFACES	MASS kg
		STATIC Co	DYNAMIC KN C			
20	0,030 ÷ 0,082	67.00	30.00	9°	Steel/steel	0,358
25	0,037 ÷ 0,100	69.50	48.00	7°	Steel/steel	0,540
30		118.00	62.00	6°	Steel/steel	0,875
35	0,043 ÷ 0,120	196.00	80.00	6°	Steel/steel	1,530
40		300.00	100.00	7°	Steel/steel	2,480
45		380.00	127.00	7°	Steel/steel	3,450
50	0,055 ÷ 0,142	440.00	156.00	6°	Steel/steel	4,450
60		570.00	245.00	6°	Steel/steel	7,130
70		695.00	315.00	6°	Steel/steel	10,515
80	0,065 ÷ 0,165	780.00	400.00	6°	Steel/steel	14,915
90		1340.00	490.00	5°	Steel/steel	23,580
100	0,065 ÷ 0,165	1500.00	610.00	7°	Steel/steel	31,560
110		2160.00	655.00	6°	Steel/steel	48,050
120		3250.00	950.00	6°	Steel/steel	79,515



Hydraulic rod ends

Sliding contact surfaces: Steel/steel

GK..ES



DESIGNATION	d	S	i	d ₁	d ₂	d ₃	d ₄	S ₁	L	L ₁	L ₂
GK 10 ES	10	9	24	29	15	13,2	3	7	38,5	14	2
GK 12 ES	12	10	27	34	17,5	15,0	3	8	44	16	2
GK 15 ES	15	12	31	40	21	18,4	4	10	51	18	2,5
GK 17 ES	17	14	35	46	24	20,7	4	11	58	20	3
GK 20 ES	20	16	38	53	27,5	24,2	4	13	64,5	23	3
GK 25 ES	25	20	45	64	33,5	29,3	4	17	77	27	4
GK 30 ES	30	22	51	73	40	34,2	4	19	87,5	30	4
GK 35 ES	35	25	61	82	47	39,8	4	21	102	37	4
GK 40 ES	40	28	69	92	52	45,0	4	23	115	44	5
GK 45 ES	45	32	77	102	58	50,8	6	27	128	48	5
GK 50 ES	50	35	88	112	62	56,0	6	30	144	58	6
GK 60 ES	60	44	100	135	70	66,8	6	38	167,5	68	8
GK 70 ES	70	49	115	160	80	77,9	6	42	195	78	10
GK 80 ES	80	55	141	180	95	89,4	6	47	231	91	10

OPTIONS AVAILABLE:

STEEL ON STEEL TYPE		MAINTENANCE FREE TYPE	
WITHOUT SEALS	WITH SEALS	WITHOUT SEALS	WITH SEALS
ES 10 mm to 80 mm incl.	ES-2RS 20 mm to 80 mm incl.	EC 20 mm to 30 mm incl.	EC-2RS 30 mm to 70 mm incl.

Manufactured to DIN 648 Series E Standard.



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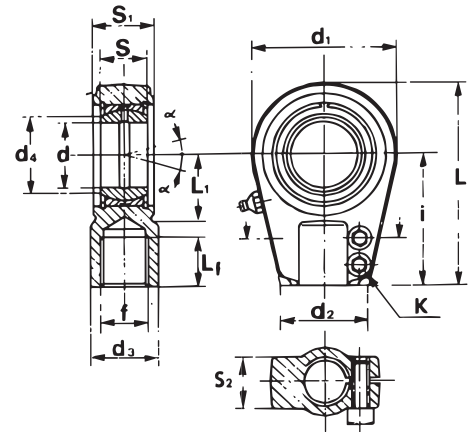
d (H7)	RADIAL INTERNAL CLEARANCE	BASIC LOAD RATING		OSCILLATION ANGLE α	SLIDING CONTACT SURFACES	MASS kg
		STATIC Co	DYNAMIC KN C			
10	0,023 ÷ 0,068	15.60	8.15	12°	Steel/steel	0,046
12	0,030 ÷ 0,082	21.60	10.80	11°	Steel/steel	0,068
15		32.00	17.00	8°	Steel/steel	0,108
17	0,037 ÷ 0,100	40.00	21.20	10°	Steel/steel	0,155
20		54.00	30.00	9°	Steel/steel	0,225
25		72.00	48.00	7°	Steel/steel	0,385
30		95.00	62.00	6°	Steel/steel	0,595
35	0,043 ÷ 0,120	125.00	80.00	6°	Steel/steel	0,975
40		156.00	100.00	7°	Steel/steel	1,305
45		208.00	127.00	7°	Steel/steel	1,858
50	0,055 ÷ 0,142	250.00	156.00	6°	Steel/steel	2,705
60		390.00	245.00	6°	Steel/steel	4,405
70		510.00	315.00	6°	Steel/steel	6,415
80		620.00	400.00	6°	Steel/steel	9,918



Hydraulic rod ends

Sliding contact surfaces: Steel/steel

GIHR..ES



DESIGNATION	d	i	S	L ₁	d ₁	d ₂	d ₃	d ₄	S ₁	S ₂	L	L ₁	f
GIHR-K 20 ES	20	50	16	17	56	36	25	24,2	19	17	80	25	M 16x1,5
GIHR-K 25 ES	25	50	20	17	56	36	25	29,3	23	21	80	28	M 16x1,5
GIHR-K 30 ES	30	60	22	23	64	40	32	34,2	28	26	94	30	M 22x1,5
GIHR-K 35 ES	35	70	25	29	78	50	40	39,8	30	28	112	38	M 28x1,5
GIHR-K 40 ES	40	85	28	36	94	60	49	45,0	35	33	135	45	M 35x1,5
GIHR-K 50 ES	50	105	35	46	116	72	61	56,0	40	37	168	55	M 45x1,5
GIHR-K 60 ES	60	130	44	59	130	90	75	66,8	50	46	200	65	M 58x1,5
GIHR-K 70 ES	70	150	49	66	154	100	86	77,9	55	51	232	75	M 65x1,5
GIHR-K 80 ES	80	170	55	81	176	125	102	89,4	60	55	265	80	M 80x2
GIHR-K 90 ES	90	210	60	101	206	146	124	98,1	65	60	323	90	M100x2
GIHR-K 100 ES	100	235	70	111	230	166	138	109,5	70	65	360	105	M110x2
GIHR-K 110 ES	110	265	70	125	265	190	152	121,2	80	75	407,5	115	M120x3
GIHR-K 120 ES	120	310	85	135	340	257	172	135,6	90	85	490	140	M130x3

OPTIONS AVAILABLE:

STEEL ON STEEL TYPE		MAINTENANCE FREE TYPE	
WITHOUT SEALS	WITH SEALS	WITHOUT SEALS	WITH SEALS
ES 20 mm to 120 mm incl.	ES-2RS 20 mm to 120 mm incl.	EC 20 mm to 30 mm incl.	EC-2RS 30 mm to 70 mm incl.

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d (H7)	RADIAL INTERNAL CLEARANCE	BASIC LOAD RATING		OSCILLATION ANGLE α	SLIDING CONTACT SURFACES	MASS kg	SCREWS TO DIN 912-8,8
		STATIC Co	DYNAMIC KN C				
20	0,030 ÷ 0,082	72.00	30.00	9°	Steel/steel	0,380	M 6x16
25	0,037 ÷ 0,100	72.00	48.00	7°	Steel/steel	0,435	M 6x20
30		106.00	62.00	6°	Steel/steel	0,705	M 6x25
35	0,043 ÷ 0,120	153.00	80.00	6°	Steel/steel	1,115	M 8x25
40		250.00	100.00	7°	Steel/steel	1,330	M 8x30
50		365.00	156.00	6°	Steel/steel	3,285	M10x35
60	0,055 ÷ 0,142	400.00	245.00	6°	Steel/steel	5,475	M10x45
70		540.00	315.00	6°	Steel/steel	8,575	M12x50
80		670.00	400.00	6°	Steel/steel	12,185	M16x50
90		980.00	490.00	5°	Steel/steel	21,418	M16x60
100	0,065 ÷ 0,165	1120.00	610.00	7°	Steel/steel	27,465	M20x60
110		1700.00	655.00	6°	Steel/steel	40,730	M20x70
120		2900.00	950.00	6°	Steel/steel	76,375	M24x80





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JOB APPROVAL FORM

Branch:
Bearing Ops

Corel Job ID:
BMG-BE21012009

Branch No.
010

Date:
21/01/2009

Branch Manager:
Rouff Essop

Signed:



BEARING MAN GROUP

Please sign, and
fax proof sheet to
086 6703 337
to confirm design
and details
are correct