

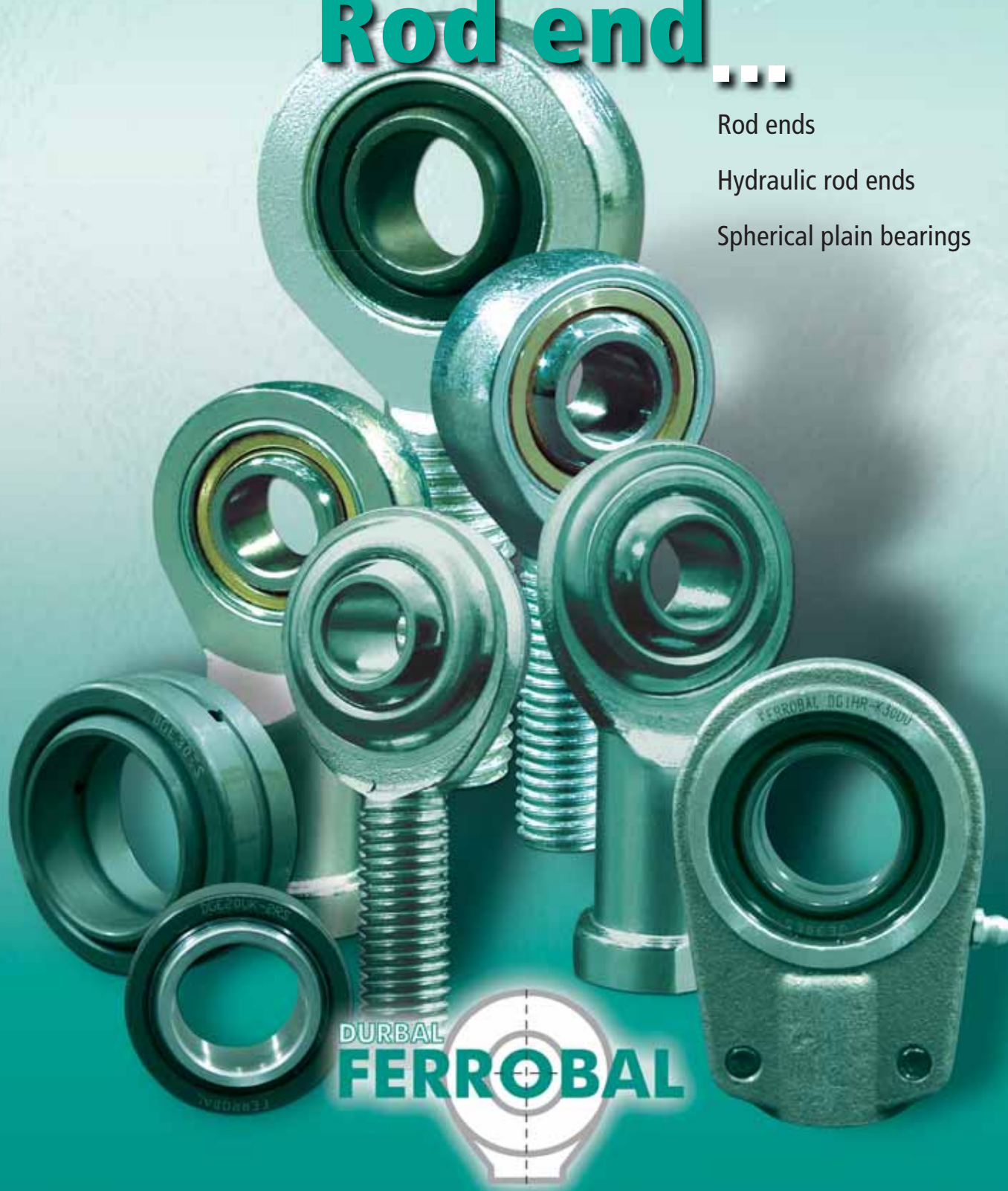
FERROBAL

The Standard Rod end...

■ ■ ■
Rod ends

Hydraulic rod ends

Spherical plain bearings



DURBAL
FERROBAL



FERROBAL is the registered trademark for the standard series of rod ends, bearings and hydraulic rod ends of DURBAL Vertriebsgesellschaft mbH.

FERROBAL® rod ends and bearings are standardized machine components designed for the transmission of static and dynamic loads in combination with swivelling, tilting or rotating movements.

The large assortment shows all common characteristics and encloses the following spherical bearing types:

- steel / steel
- steel / bronze
- steel / bronze-PTFE composite.

FERROBAL® standard products are produced

according to DIN ISO standards and are characterized by high precision and reliability as well as an outstanding price - performance ratio.

FERROBAL standard products and DURBAL heavy-duty rod ends are the assortment of DURBAL Vertriebsgesellschaft mbH.

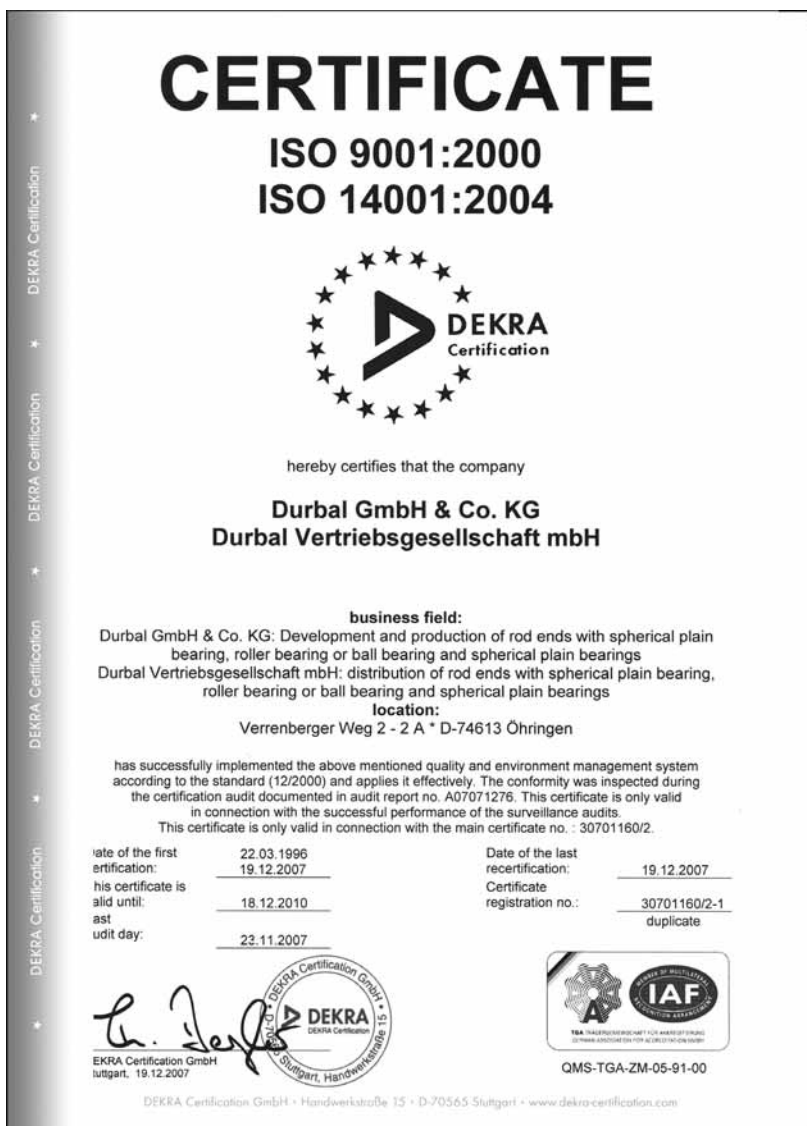
Quality objectives of DURBAL Vertriebsgesellschaft mbH:

- assurance of a constantly high product quality
- continuous monitoring and adjustment of the product characteristics to customers requirements
- utilisation of efficient methods of production to minimize manufacturing costs.
- permanent stock availability of the DURBAL and FERROBAL assortment.
- customer orientated service.

The work flow at sales of the FERROBAL and DURBAL assortment is systematically controlled in accordance with the guidelines of DIN EN ISO 9001: 2000. Thereby DURBAL Group can revert to an experience of over 65 years in production and sales of rod ends and machine components.

In terms of technical and economical progress the catalogue data is subject to changes.

Our experienced staff members will always be available to answer any queries you may have.



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Table of contents rod ends bearings

Type	Sliding combination	Female thread	Male thread	Sealing	Maintenance free	Stainless Steel	Clamping	Size	DIN ISO	Description	Page
Rod ends											
DSI...T/K	steel / bronze-PTFE	X			X			5 - 50	ISO 12240-4 K		12
DSA...T/K	steel / bronze-PTFE		X		X			5 - 50	ISO 12240-4 K		13
DSSI...T/K	steel / bronze-PTFE	X			X	X		5 - 30	ISO 12240-4 K	stainless steel	14
DSSA...T/K	steel / bronze-PTFE		X		X	X		5 - 30	ISO 12240-4 K	stainless steel	15
DSI... PK	steel / bronze-PTFE	X			X			5 - 25	ISO 12240-4 K		16
DSA... PK	steel / bronze-PTFE		X		X			5 - 25	ISO 12240-4 K		17
DGIR...UK	steel / bronze-PTFE	X			X			6 - 30	ISO 12240-4 E		18
DGIR...UK-2RS	steel / bronze-PTFE	X		X	X			17 - 80	ISO 12240-4 E		18
DGAR...UK	steel / bronze-PTFE		X		X			6 - 30	ISO 12240-4 E		19
DGAR...UK-2RS	steel / bronze-PTFE		X	X	X			17 - 80	ISO 12240-4 E		19
DPHS	steel / bronze	X						5 - 30	ISO 12240-4 K		20
DPOS	steel / bronze		X					5 - 30	ISO 12240-4 K		21
DSI...E/ES	steel / steel	X						6 - 80	ISO 12240-4 E		22
DSI...ES-2RS	steel / steel	X		X				15 - 80	ISO 12240-4 E		22
DSA...E/ES	steel / steel		X					6 - 80	ISO 12240-4 E		23
DSA...ES-2RS	steel / steel		X	X				15 - 80	ISO 12240-4 E		23
DSIZP...S	steel / bronze	X						- 1"	(ISO 12240-4 K)	in inches	24
DSAZP...S	steel / bronze		X					- 1"	(ISO 12240-4 K)	in inches	25
DSIZJ...S	steel / steel	X						- 3/4"	(ISO 12240-4 K)	in inches	26
DSAZJ...S	steel / steel		X					- 3/4"	(ISO 12240-4 K)	in inches	27

Mountings 50

Hydraulic rod ends											
DGIHR-K...DO	steel / steel	X					X	20 - 120			28
DGIHR...DO	steel / steel	X						20 - 120		without clamping	29
DGIHN-K...LO	steel / steel	X					X	12 - 125	similar to DIN 24338		30
DGIHO-K...DO	steel / steel	X					X	12 - 100	similar to DIN 24555		31
DGF...DO	steel / steel							20 - 120			32
DGK...DO	steel / steel							10 - 80	ISO 12240-4 E Form S		33

Table of content spherical plain bearings



Type	Sliding combination	Sealing	Maintenance free	Stainless Steel	Size	DIN ISO	Description	Page
Spherical plain bearing								
DG...PW	steel / bronze-PTFE		X		5 - 50	ISO 12240-1 K		34
DS...PW	steel / bronze-PTFE		X		5 - 30	similar to ISO 12240-1 K		35
DGE...UK	steel / bronze-PTFE		X		6 - 30	ISO 12240-1 E		36
DSGE...UK	steel / bronze-PTFE		X	X	6 - 30	ISO 12240-1 E	stainless steel	37
DGE...UK-2RS	steel / bronze-PTFE	X	X		15 - 120	ISO 12240-1 E		38
DGE...FW	steel / steel-PTFE		X		6 - 30	ISO 12240-1 G		39
DSGE...FW	steel / steel-PTFE		X	X	6 - 30	ISO 12240-1 G	stainless steel	40
DGE...FW-2RS	steel / steel-PTFE	X	X		15 - 100	ISO 12240-1 G		41
DG...PB	steel / bronze				5 - 50	ISO 12240-1 K		42
DS...PB	steel / bronze				5 - 30	similar to ISO 12240-1 K		43
DGEBK...S	steel / bronze-Alu				5 - 30	similar to ISO 12240-1 K		44
DGEBJ...S	steel / steel				5 - 30	ISO 12240-1 K		45
DGE...E/ES	steel / steel				6 - 160	ISO 12240-1 E		46
DGE...ES-2RS	steel / steel	X			6 - 160	ISO 12240-1 E		46
DGEZ...E/ES	steel / steel				1/2 " - 4 3/4 "	(ISO 12240-1 E)	in inches	47
DGEZ...ES-2RS	steel / steel	X			1 " - 4 3/4 "	(ISO 12240-1 E)	in inches	47
DGEG...E/ES	steel / steel				6 - 120	ISO 12240-1 G	similar to type DGE...ES	48
DGEG...ES-2RS	steel / steel	X			15 - 120	similar to ISO 12240-1 G	similar to type DGE...ES-2RS	48
DGE...LO	steel / steel				20 - 80	ISO 12240-1 W	with cylindrical extension on both sides	49
DGE...HO-2RS	steel / steel	X			20 - 80	similar to ISO 12240-1 W	with cylindrical extension on both sides	49

Selection criteria of FERROBAL® rod ends and bearings

The specific application conditions and the installation settings of rod ends and bearings are varying in practical use and therefore cannot be generalised in a catalogue.

The specific application conditions are affected by:

Factor and kind of affecting load:

- constant / alternating
- static / dynamic
- axial / radial

Angle of tilt

Swivelling angle

Temperature

Environment conditions

- dust
- dirt
- humidity

(This list may not be complete)

The installation setting is determined by:

The maximal dimension of the machinery element.

The existing adapter sizes for threads or other connections.

The lubrication and maintenance situation.

Lubrication:

- wanted
- not wanted
- central lubrication
- decentralised lubrication

With the details given in the catalogue the user will be able to roughly determine the rod ends and bearings that will be adequate for the concrete application.

Static load C_0

The maximal admissible load of a FERROBAL® rod end or bearing is specified by the static load rating C_0 that is indicated in the catalogue.

The static load rating C_0 of a plain bearing corresponds to the static radial load that does not yet cause a lasting deformation at the weakest housing section of the rod end or bearing during standstill at room temperature.

Temperature - range of application

Non-maintenance-free: -40°C to +300°C
(from +150°C with restriction of the loading capacity)

Maintenance free: -40°C to +130°C

In all cases the user has to coordinate the theoretical selection criteria with the concrete installation situation and check the suitability of the rod end respectively bearing. In this context the user has to define sufficient security factors and maintenance intervals.

Whenever the load is defined at the upper limit of the load rating DURBAL Vertriebsgesellschaft is recommending to use DURBAL® heavy duty rod ends.

Our specialists will be pleased to provide advice.



FERROBAL® rod ends

Symbol

d	= Bore diameter of bearing
Δd_{mp}	= Single plane mean bore diameter deviation
V_{dp}	= Bore diameter variation in a single radial plane
V_{dmp}	= Variation of mean bore diameter
ΔB_s	= Deviation of a single width of the inner ring

Thread:

Metric measurements:

Female thread DIN ISO 965-1 6H

Male thread nach DIN ISO 965-1 6g

Measurements in inches:

Female thread UNF - 3B

Male thread UNF - 3A

Inner ring:

Type:

DSI...E + ES
DSI...ES-2RS
DSA...E + ES
DSA...ES-2RS
DGIR...UK
DGIR...UK-2RS
DGAR...UK
DGAR...UK-2RS
DGK...DO
DGF...DO
DGIHR...DO
DGIHR-K...DO
DGIHN-K...LO

Inner ring

d	over incl.	mm	- 10	10 18	18 30	30 50	50 80	80 120	120 150
Δd_{mp}		μm	0 -8	0 -8	0 -10	0 -12	0 -15	0 -20	0 -25
V_{dp}		μm	8	8	10	12	15	20	25
V_{dmp}		μm	6	6	8	9	11	15	19
ΔB_s		μm	0 -120	0 -120	0 -120	0 -120	0 -120	0 -120	0 -120

Type:

DPHS
DPOS
DSIZP...S
DSAZP...S
DSIZJ...S
DSAZJ...S
DGIHO-K...DO

Innenring

d	über bis	mm	- 6	6 10	10 18	18 30	30 50	50 80	80 120
Δd_{mp}		μm	+12 0	+15 0	+18 0	+21 0	+25 0	+30 0	+35 0
ΔB_s		μm	0 -120	0 -120	0 -120	0 -120	0 -120	0 -120	0 -120

Type:

DSI...T/K
DSA...T/K
DSI...PK
DSA...PK
DSSI...T/K
DSSA...T/K

Innenring

d	über bis	mm	- 6	6 10	10 12	12 18	18 30	30 50
Δd_{mp}		μm	+12 0	+15 0	+18 0	+18 0	+21 0	+25 0
ΔB_s		μm	0 -120	0 -120	0 -120	0 -120	0 -120	0 -120

Tolerances of all other measurements according to DIN ISO 12240-4.

FERROBAL® spherical plain bearings

Symbol

d	= Bore diameter of bearing	D	= Outside diameter of bearing
Δd_{mp}	= Single plane mean bore diameter deviation	ΔD_{mp}	= Single plane mean outside diameter deviation
V_{dp}	= Bore diameter variation in a single radial plane	V_{Dp}	= Variation of outside diameter in a single radial plane
V_{dmp}	= Variation of mean bore diameter	V_{Dmp}	= Variation of mean outside diameter
ΔB_s	= Deviation of a single width of the inner ring	ΔC_s	= Deviation of a single width of the outer ring

Type:

DGE...E + ES
DGE...ES-2RS
DGEZ...ES
DGEZ...ES-2RS
DGEG...E + ES
DGEG...ES-2RS
DGE...UK
DGE...UK-2RS
DGE...FW
DGE...FW-2RS
DGE...HO-2RS
DSGE...UK
DSGE...FW

Inner ring

d	over incl.	mm	-	10	18	30	50	80	120
			10	18	30	50	80	120	150
Δd_{mp}		μm	0	0	0	0	0	0	0
V_{dp}		μm	-8	-8	-10	-12	-15	-20	-25
V_{dmp}		μm	8	8	10	12	15	20	25
ΔB_s		μm	6	6	8	9	11	15	19
		μm	0	0	0	0	0	0	0
		μm	-120	-120	-120	-120	-120	-120	-120

Outer ring

D	over incl.	mm	10	18	30	50	80	120	150	180
			18	30	50	80	120	150	180	250
ΔD_{mp}		μm	0	0	0	0	0	0	0	0
V_{Dp}		μm	-8	-9	-11	-13	-15	-18	-25	-30
V_{Dmp}		μm	10	12	15	17	20	24	33	40
ΔC_s		μm	6	7	8	10	11	14	19	23
		μm	0	0	0	0	0	0	0	0
		μm	-240	-240	-240	-240	-240	-240	-240	-240

Type:

DGE...LO

Inner ring

d	over incl.	mm	10	18	30	50
			18	30	50	80
Δd_{mp}		μm	+18	+21	+25	+30
V_{dp}		μm	0	0	0	0
V_{dmp}		μm	18	21	25	30
ΔB_s		μm	14	16	19	22
		μm	0	0	0	0
		μm	-120	-120	-120	-120

Outer ring: Tolerances of the outer rings similar to type DGE...ES.

Type:

DGEBK...S
DGEBJ...S
DG...PW
DG...PB
DS...PW
DS...PB

Inner ring

d	over incl.	mm	-	6	10	18
			6	10	18	30
Δd_{mp}		μm	+12	+15	+18	+21
V_{dp}		μm	0	0	0	0
ΔB_s		μm	0	0	0	0
		μm	-120	-120	-120	-120

Outer ring

D	over incl.	mm	10	18	30	50
			18	30	50	60
ΔD_{mp}		μm	0	0	0	0
V_{Dp}		μm	-11	-13	-16	-19
ΔC_s		μm	0	0	0	0
		μm	-240	-240	-240	-240

Recommended fit for radial plain bearings

Shaft fit	type of bearing	
	Lubrication required	maintenance free
Loads if all kinds, clearence or transition fit	f8, h6, h7	g6,h6
Loads of all kinds, interferenz fit	m6, n6	k6

Housing fit	type of bearing	
	Lubrication required	maintenance free
Low loads clearence or transition fit	H6, H7	H7
Heavy loads, interferenz fit	J7, M7	K7
Light alloy housings	N7	M7

Recommended roughness of fitting surface

Fitting surface	incl. d/D 80	over d/D 80
shaft surface	Ra < 1,25	Ra < 2,00
bore surface of housing	Ra < 1,60	Ra < 2,50
side of shaft shoulder, washer, housing bore shoulder	Ra < 2,00	Ra < 2,50

Recommended shape and position tolerance of fitting surface

d / D		over incl.	mm	- 6	6 10	10 18	18 30	30 50	50 80	80 120	120 150	150 180	180 250
Cylindricity	shaft $\varnothing < \mu\text{m}$			4	4	5	6	7	8	10	12	12	14
	housing bore $\varnothing < \mu\text{m}$			-	4	5	6	7	8	10	12	12	14
Side beat of round circuitry	shaft shoulder $< \mu\text{m}$			8	9	11	13	16	19	22	25	25	29
	housing bore shoulder $\varnothing < \mu\text{m}$			-	9	11	13	16	19	22	25	25	29

Radial clearance of FERROBAL® spherical plain bearings

Non-maintenance-free spherical plain bearings

Type:

DGE...E + ES
DGE...ES-2RS
DGE...HO-2RS
DGE...LO
DG...PB
DS...PB

d	over incl.	mm	- 12	12 20	20 35	35 60	60 90	90 140
group 2		μm	8 32	10 40	12 50	15 60	18 72	18 85
group N		μm	32 68	40 82	50 100	60 120	72 142	85 165
group 3		μm	68 104	82 124	100 150	120 180	142 212	165 245

Type:

DGEG...ES
DGEG...ES-2RS

d	over incl.	mm	- 10	10 17	17 30	30 50	50 80	80 120
group 2		μm	8 32	10 40	12 50	15 60	18 72	18 85
group N		μm	32 68	40 82	50 100	60 120	72 142	85 165
group 3		μm	68 104	82 124	100 150	120 180	142 212	165 245

Type:

DGEZ...ES
DGEZ...ES-2RS

d	over incl.	mm	- 5/8 "	5/8 " 2 "	2 " 3 "	3 " 6 "
group N		μm	50 150	80 180	100 200	130 230

Type:

DGEBK...S
DGEBJ...S

d	over incl.	mm	- 30
group N		μm	0 35

Maintenance-free spherical plain bearings

Type:

DG...PW
DS...PW
DGE...UK
DGE...FW
DSGE...UK
DSGE...FW

d	over incl.	mm	- 12	12 20	20 30
group N		μm	4 28	5 35	6 44

Type:

DGE...UK-2RS

d	over incl.	mm	2 20	20 35	35 60	60 90	90 140
group N		μm	0 40	0 50	0 60	0 72	0 85

Type:

DGE...FW-2RS

d	over incl.	mm	- 30	30 50	50 80	80 120
group N		μm	0 50	0 60	0 72	0 85

Radial clearance of FERROBAL® rod ends

Non-maintenance-free rod ends

Type:

DSI...E + ES
DSI...ES-2RS
DSA...E + ES
DSA...ES-2RS
DGIHR...DO
DGIHR-K...DO
DGK...DO
DGF...DO
DGIHR-K...LO
DGIHO-K...DO

d	over incl.	mm	- 12	12 20	20 35	35 60	60 80
group N		μm	0 68	0 82	0 10	0 120	0 142

Type:

DPHS
DPOS
DSIZP...S
DSAZP...S

d	over incl.	mm	- 30
group N		μm	0 35

Type:

DSIZJ...
DSAZJ...

d	over incl.	mm	- 8	8 14	14 20	20 35	35 50
group N		μm	10 30	15 60	40 80	50 90	60 110

Maintenance-free rod ends

Type:

DSI...T/K
DSA...T/K
DSI...PK
DSA...PK

d	over incl.	mm	- 12	12 20	20 30
group N		μm	0 32	0 40	0 50

Type:

DGIR...UK
DGIR...UK-2RS
DGAR...UK
DGAR...UK-2RS

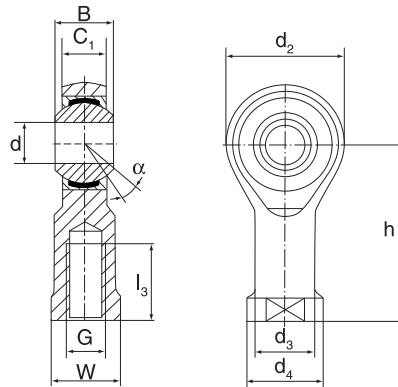
d	over incl.	mm	- 12	12 20	20 35	35 60	60 80
group N		μm	0 32	0 40	0 50	0 60	0 72



**female thread;
maintenance free,
according to
DIN ISO 12240-4,
series K**



Description: DIN ISO rod end K series. Made of spherical plain bearing DG...PW pressed into rod end body. Sliding combination steel / bronze-PTFE composite.



Rod end body:
surface zinc plated

Sliding combination:
steel / bronze-PTFE composite

Inner ring:
bearing steel, hardened, ground and spherical surface chromium plated

Outer ring:
brass body pressed around, outer race lined with bronze-PTFE composite

Lubrication:
maintenance free

order number		measurement [mm]							
right hand thread	left hand thread	d	G	B	C ₁	d ₂	d ₃	d ₄	
DSI 5 T/K	DSIL 5 T/K	5	M 5	8	6,00	18	8,5	11	
DSI 6 T/K	DSIL 6 T/K	6	M 6	9	6,75	20	10,0	13	
DSI 8 T/K	DSIL 8 T/K	8	M 8	12	9,00	24	12,5	16	
DSI 10 T/K	DSIL 10 T/K	10	M 10	14	10,50	28	15,0	19	
DSI 10 T/K M 10 X 1,25	DSIL 10 T/K M 10 X 1,25	10	M 10 x 1,25	14	10,50	28	15,0	19	
DSI 12 T/K	DSIL 12 T/K	12	M 12	16	12,00	32	17,5	22	
DSI 12 T/K M 12 X 1,25	DSIL 12 T/K M 12 X 1,25	12	M 12 x 1,25	16	12,00	32	17,5	22	
DSI 14 T/K	DSIL 14 T/K	14	M 14	19	13,50	36	20,0	25	
DSI 14 T/K M 14 X 1,5	DSIL 14 T/K M 14 X 1,5	14	M 14 x 1,5	19	13,50	36	20,0	25	
DSI 16 T/K	DSIL 16 T/K	16	M 16	21	15,00	42	22,0	27	
DSI 16 T/K M 16 X 1,5	DSIL 16 T/K M 16 X 1,5	16	M 16 x 1,5	21	15,00	42	22,0	27	
DSI 18 T/K	DSIL 18 T/K	18	M 18 x 1,5	23	16,50	44	25,0	31	
DSI 20 T/K	DSIL 20 T/K	20	M 20 x 1,5	25	18,00	50	27,5	34	
DSI 22 T/K	DSIL 22 T/K	22	M 22 x 1,5	28	20,00	54	30,0	38	
DSI 25 T/K	DSIL 25 T/K	25	M 24 x 2	31	22,00	60	33,5	42	
DSI 28 T/K	DSIL 28 T/K	28	M 27 x 2	35	24,00	66	37,0	46	
DSI 30 T/K	DSIL 30 T/K	30	M 30 x 2	37	25,00	70	40,0	50	
DSI 30 T/K M 27 X 2	DSIL 30 T/K M 27 X 2	30	M 27 x 2	37	25,00	70	40,0	50	
DSI 35 T/K	DSIL 35 T/K	35	M 36 x 2	43	28,00	81	46,0	58	
DSI 40 T/K	DSIL 40 T/K	40	M 42 x 2	49	33,00	91	53,0	65	
DSI 50 T/K	DSIL 50 T/K	50	M 48 x 2	60	45,00	117	65,0	75	

type	measurement [mm]			α [°]	load rating	weight
	l ₃ min	W	h		C ₀ [KN]	[kg]
DSI / DSIL 5 T/K	10	9	27	13	6,0	0,016
DSI / DSIL 6 T/K	12	11	30	13	7,7	0,022
DSI / DSIL 8 T/K	16	14	36	14	12,9	0,047
DSI / DSIL 10 T/K	20	17	43	13	18,0	0,077
DSI / DSIL 10 T/K M 10 X 1,25	20	17	43	13	18,0	0,077
DSI / DSIL 12 T/K	22	19	50	13	24,0	0,100
DSI / DSIL 12 T/K M 12 X 1,25	22	19	50	13	24,0	0,100
DSI / DSIL 14 T/K	25	22	57	16	31,0	0,160
DSI / DSIL 14 T/K M 14 X 1,5	25	22	57	16	31,0	0,160
DSI / DSIL 16 T/K	28	22	64	15	39,0	0,220
DSI / DSIL 16 T/K M 16 X 1,5	28	22	64	15	39,0	0,220
DSI / DSIL 18 T/K	32	27	71	15	47,5	0,320
DSI / DSIL 20 T/K	33	30	77	14	57,0	0,420
DSI / DSIL 22 T/K	37	32	84	15	68,0	0,540
DSI / DSIL 25 T/K	42	36	94	15	85,0	0,720
DSI / DSIL 28 T/K	51	41	103	15	107,0	0,820
DSI / DSIL 30 T/K	51	41	110	17	114,0	1,100
DSI / DSIL 30 T/K M 27 X 2	51	41	110	17	114,0	1,100
DSI / DSIL 35 T/K	56	50	125	16		1,600
DSI / DSIL 40 T/K	60	55	142	17		2,400
DSI / DSIL 50 T/K	65	65	160	12		5,000

Rod end body:
surface zinc plated

Sliding combination:
steel / bronze-PTFE composite

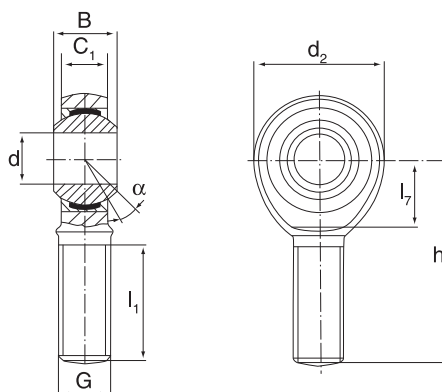
Inner ring:
bearing steel, hardened, ground and
spherical surface chromium plated

Outer ring:
brass body pressed around, outer race
lined with bronze-PTF composite

Lubrication:
maintenance free

Description: DIN ISO rod end K series. Made of
spherical plain bearing DG...PW pressed into rod end
body. Sliding combination steel / bronze-PTFE composite.

male thread;
maintenance free,
according to
DIN ISO 12240-4,
series K



order number		measurement [mm]				
right hand thread	left hand thread	d	G	B	C ₁	d ₂
DSA 5 T/K	DSAL 5 T/K	5	M 5	8	6,00	18
DSA 6 T/K	DSAL 6 T/K	6	M 6	9	6,75	20
DSA 8 T/K	DSAL 8 T/K	8	M 8	12	9,00	24
DSA 10 T/K	DSAL 10 T/K	10	M 10	14	10,50	28
DSA 12 T/K	DSAL 12 T/K	12	M 12	16	12,00	32
DSA 14 T/K	DSAL 14 T/K	14	M 14	19	13,50	36
DSA 16 T/K	DSAL 16 T/K	16	M 16	21	15,00	42
DSA 18 T/K	DSAL 18 T/K	18	M 18 x 1,5	23	16,50	44
DSA 20 T/K	DSAL 20 T/K	20	M 20 x 1,5	25	18,00	50
DSA 22 T/K	DSAL 22 T/K	22	M 22 x 1,5	28	20,00	54
DSA 25 T/K	DSAL 25 T/K	25	M 24 x 2	31	22,00	60
DSA 28 T/K	DSAL 28 T/K	28	M 27 x 2	35	24,00	66
DSA 30 T/K	DSAL 30 T/K	30	M 30 x 2	37	25,00	70
DSA 35 T/K	DSAL 35 T/K	35	M 36 x 2	43	28,00	81
DSA 40 T/K	DSAL 40 T/K	40	M 42 x 2	49	33,00	91
DSA 50 T/K	DSAL 50 T/K	50	M 48 x 2	60	45,00	117

type	measurement [mm]			α [°]	Tragzahlen C ₀ [KN]	weight [kg]
	l ₁ min	l ₇	h			
DSA / DSAL 5 T/K	19		33	13	6,0	0,013
DSA / DSAL 6 T/K	21		36	13	7,7	0,020
DSA / DSAL 8 T/K	25		42	14	12,9	0,038
DSA / DSAL 10 T/K	28		48	13	18,0	0,055
DSA / DSAL 12 T/K	32		54	13	24,0	0,085
DSA / DSAL 14 T/K	36	18	60	16	31,0	0,140
DSA / DSAL 16 T/K	37	21	66	15	39,0	0,210
DSA / DSAL 18 T/K	41	22	72	15	47,5	0,280
DSA / DSAL 20 T/K	45	25	78	14	57,0	0,380
DSA / DSAL 22 T/K	48	27	84	15	68,0	0,480
DSA / DSAL 25 T/K	55	30	94	15	85,0	0,640
DSA / DSAL 28 T/K	62	33	103	15	107,0	0,800
DSA / DSAL 30 T/K	66	35	110	17	114,0	1,100
DSA / DSAL 35 T/K	85	41	140	16		1,640
DSA / DSAL 40 T/K	90	46	150	17		2,300
DSA / DSAL 50 T/K	105	59	185	12		4,800

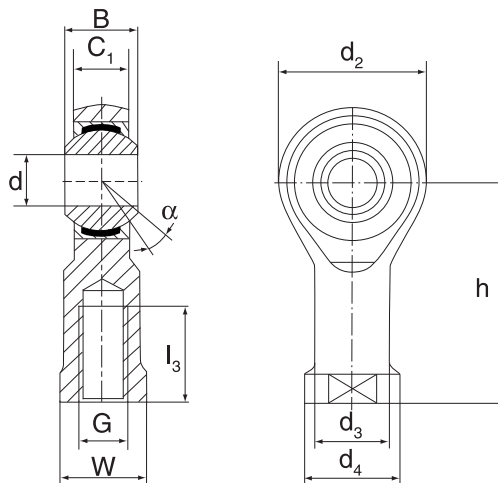
DSSI...T/K stainless steel



female thread;
maintenance free,
according to
DIN ISO 12240-4,
series K,
in stainless steel



Description: DIN ISO rod end K series. Made of spherical plain bearing DG...PW pressed into rod end body. Sliding combination steel / bronze-PTFE composite.



Rod end body:
stainless steel

Sliding combination:
steel / bronze-PTFE composite

Inner ring:
stainless steel, hardened and ground

Outer ring:
stainless steel body pressed around,
outer race lined with bronze-PTFE composite

Lubrication:
maintenance free

order number		measurement [mm]						
right hand thread	left hand thread	d	G	B	C ₁	d ₂	d ₃	d ₄
DSSI 5 T/K	DSSIL 5 T/K	5	M 5	8	6,00	18	8,5	11
DSSI 6 T/K	DSSIL 6 T/K	6	M 6	9	6,75	20	10,0	13
DSSI 8 T/K	DSSIL 8 T/K	8	M 8	12	9,00	24	12,5	16
DSSI 10 T/K	DSSIL 10 T/K	10	M 10	14	10,50	28	15,0	19
DSSI 10 T/K M 10 X 1,25	DSSIL 10 T/K M 10 X 1,25	10	M 10 x 1,25	14	10,50	28	15,0	19
DSSI 12 T/K	DSSIL 12 T/K	12	M 12	16	12,00	32	17,5	22
DSSI 12 T/K M 12 X 1,25	DSSIL 12 T/K M 12 X 1,25	12	M 12 x 1,25	16	12,00	32	17,5	22
DSSI 14 T/K	DSSIL 14 T/K	14	M 14	19	13,50	36	20,0	25
DSSI 14 T/K M 14 X 1,5	DSSIL 14 T/K M 14 X 1,5	14	M 14 x 1,5	19	13,50	36	20,0	25
DSSI 16 T/K	DSSIL 16 T/K	16	M 16	21	15,00	42	22,0	27
DSSI 16 T/K M 16 X 1,5	DSSIL 16 T/K M 16 X 1,5	16	M 16 x 1,5	21	15,00	42	22,0	27
DSSI 18 T/K	DSSIL 18 T/K	18	M 18 x 1,5	23	16,50	44	25,0	31
DSSI 20 T/K	DSSIL 20 T/K	20	M 20 x 1,5	25	18,00	50	27,5	34
DSSI 22 T/K	DSSIL 22 T/K	22	M 22 x 1,5	28	20,00	54	30,0	38
DSSI 25 T/K	DSSIL 25 T/K	25	M 24 x 2	31	22,00	60	33,5	42
DSSI 28 T/K	DSSIL 28 T/K	28	M 27 x 2	35	24,00	66	37,0	46
DSSI 30 T/K	DSSIL 30 T/K	30	M 30 x 2	37	25,00	70	40,0	50
DSSI 30 T/K M 27 X 2	DSSIL 30 T/K M 27 X 2	30	M 27 x 2	37	25,00	70	40,0	50

type	measurement [mm]			α [°]	load rating	weight
	l ₃ min	W	h		C ₀ [KN]	[kg]
DSSI / DSSIL 5 T/K	10	9	27	13	6,0	0,016
DSSI / DSSIL 6 T/K	12	11	30	13	7,7	0,022
DSSI / DSSIL 8 T/K	16	14	36	14	12,9	0,047
DSSI / DSSIL 10 T/K M 10 X 1,25	20	17	43	13	18,0	0,077
DSSI / DSSIL 10 T/K	20	17	43	13	18,0	0,077
DSSI / DSSIL 12 T/K M 12 X 1,25	22	19	50	13	24,0	0,100
DSSI / DSSIL 12 T/K	22	19	50	13	24,0	0,100
DSSI / DSSIL 14 T/K M 14 X 1,5	25	22	57	16	31,0	0,160
DSSI / DSSIL 14 T/K	25	22	57	16	31,0	0,160
DSSI / DSSIL 16 T/K M 16 X 1,5	28	22	64	15	39,0	0,220
DSSI / DSSIL 16 T/K	28	22	64	15	39,0	0,220
DSSI / DSSIL 18 T/K	32	27	71	15	47,5	0,320
DSSI / DSSIL 20 T/K	33	30	77	14	57,0	0,420
DSSI / DSSIL 22 T/K	37	32	84	15	68,0	0,540
DSSI / DSSIL 25 T/K	42	36	94	15	85,0	0,720
DSSI / DSSIL 28 T/K	51	41	103	15	107,0	0,820
DSSI / DSSIL 30 T/K	51	41	110	17	114,0	1,100
DSSI / DSSIL 30 T/K M 27 X 2	51	41	110	17	114,0	1,100

Rod end body:
stainless steel

Sliding combination:
steel / bronze-PTFE composite

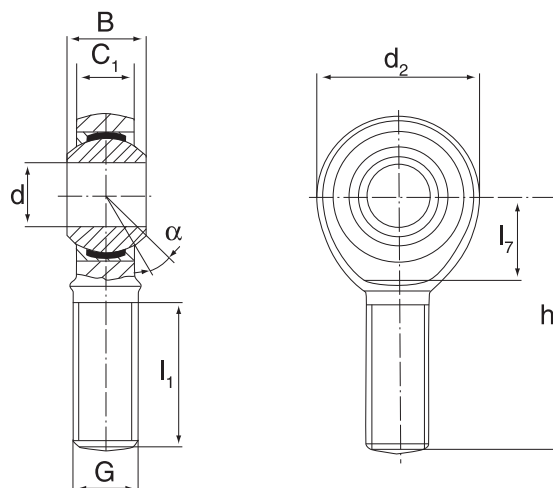
Inner ring:
stainless steel, hardened and ground

Outer ring:
stainless steel body pressed around,
outer race lined with bronze-PTFE composite

Lubrication:
maintenance free

Description: DIN ISO rod end K series. Made of spherical plain bearing DG...PW pressed into rod end body. Sliding combination steel / bronze-PTFE composite.

male thread;
maintenance free,
according to
DIN ISO 12240-4,
series K,
in stainless steel



order number		measurement [mm]					
right hand thread	left hand thread	d	G	B	C ₁	d ₂	
DSSA 5 T/K	DSSAL 5 T/K	5	M 5	8	6,00	18	
DSSA 6 T/K	DSSAL 6 T/K	6	M 6	9	6,75	20	
DSSA 8 T/K	DSSAL 8 T/K	8	M 8	12	9,00	24	
DSSA 10 T/K	DSSAL 10 T/K	10	M 10	14	10,50	28	
DSSA 12 T/K	DSSAL 12 T/K	12	M 12	16	12,00	32	
DSSA 14 T/K	DSSAL 14 T/K	14	M 14	19	13,50	36	
DSSA 16 T/K	DSSAL 16 T/K	16	M 16	21	15,00	42	
DSSA 18 T/K	DSSAL 18 T/K	18	M 18 x 1,5	23	16,50	44	
DSSA 20 T/K	DSSAL 20 T/K	20	M 20 x 1,5	25	18,00	50	
DSSA 22 T/K	DSSAL 22 T/K	22	M 22 x 1,5	28	20,00	54	
DSSA 25 T/K	DSSAL 25 T/K	25	M 24 x 2	31	22,00	60	
DSSA 28 T/K	DSSAL 28 T/K	28	M 27 x 2	35	24,00	66	
DSSA 30 T/K	DSSAL 30 T/K	30	M 30 x 2	37	25,00	70	

type	measurement [mm]			load rating C ₀ [KN]	weight [kg]
	l ₁ min	l ₇ min	h		
DSSA / DSSAL 5 T/K	19		33	6,0	0,013
DSSA / DSSAL 6 T/K	21		36	7,7	0,020
DSSA / DSSAL 8 T/K	25		42	12,9	0,038
DSSA / DSSAL 10 T/K	28		48	18,0	0,055
DSSA / DSSAL 12 T/K	32		54	24,0	0,085
DSSA / DSSAL 14 T/K	36	18	60	31,0	0,140
DSSA / DSSAL 16 T/K	37	21	66	39,0	0,210
DSSA / DSSAL 18 T/K	41	22	72	47,5	0,280
DSSA / DSSAL 20 T/K	45	25	78	57,0	0,380
DSSA / DSSAL 22 T/K	48	27	84	68,0	0,480
DSSA / DSSAL 25 T/K	55	30	94	85,0	0,640
DSSA / DSSAL 28 T/K	62	33	103	107,0	0,800
DSSA / DSSAL 30 T/K	66	35	110	114,0	1,100

**female thread;
maintenance free,
according to
DIN ISO 12240-4,
series K**

Description: DIN ISO rod end K series. Sliding combination steel / bronze-PTFE composite.

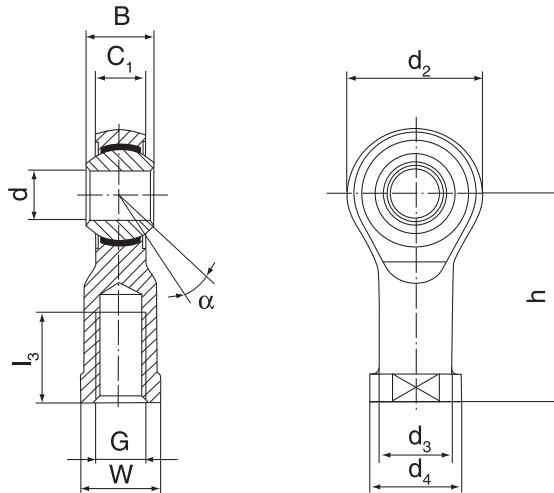
Rod end body:
surface zinc plated

Sliding combination:
steel / bronze-PTFE composite

Inner ring:
bearing steel hardened and ground

Outer ring:
rod end body pressed around, outer race lined with bronze-PTFE composite

Lubrication:
maintenance free



order number		measurement [mm]							
right hand thread	left hand thread	d	G	B	C ₁	d ₂	d ₃	d ₄	
DSI 5 PK	DSIL 5 PK	5	M 5	8	6,00	19	9,0	11	
DSI 6 PK	DSIL 6 PK	6	M 6	9	6,70	21	10,0	13	
DSI 8 PK	DSIL 8 PK	8	M 8	12	9,00	25	12,5	16	
DSI 10 PK	DSIL 10 PK	10	M 10	14	11,00	29	15,0	19	
DSI 10 PK M 10 x 1,25	DSIL 10 PK M 10 x 1,25	10	M 10 x 1,25	14	11,00	29	15,0	19	
DSI 12 PK	DSIL 12 PK	12	M 12	16	12,00	33	17,5	22	
DSI 12 PK M 12 x 1,25	DSIL 12 PK M 12 x 1,25	12	M 12 x 1,25	16	12,00	33	17,5	22	
DSI 14 PK	DSIL 14 PK	14	M 14	19	14,00	37	20,0	25	
DSI 16 PK	DSIL 16 PK	16	M 16	21	15,00	43	22,0	27	
DSI 16 PK M 16 x 1,5	DSIL 16 PK M 16 x 1,5	16	M 16 x 1,5	21	15,00	43	22,0	27	
DSI 18 PK	DSIL 18 PK	18	M 18 x 1,5	23	17,00	47	25,0	31	
DSI 20 PK	DSIL 20 PK	20	M 20 x 1,5	25	18,00	51	27,5	34	
DSI 22 PK	DSIL 22 PK	22	M 22 x 1,5	28	20,00	55	30,0	38	
DSI 25 PK	DSIL 25 PK	25	M 24 x 2	31	22,00	61	33,5	42	

type	measurement [mm]			α [°]	load rating	weight
	l ₃ min	W	h		C ₀ [kN]	[kg]
DSI / DSIL 5 PK	10	9	27	12	6,00	0,018
DSI / DSIL 6 PK	12	11	30	11	7,65	0,026
DSI / DSIL 8 PK	16	14	36	12	12,90	0,047
DSI / DSIL 10 PK	20	17	43	12	18,00	0,077
DSI / DSIL 10 PK M 10 x 1,25	20	17	43	12	18,00	0,077
DSI / DSIL 12 PK	22	19	50	13	24,00	0,100
DSI / DSIL 12 PK M 12 x 1,25	22	19	50	13	24,00	0,100
DSI / DSIL 14 PK	25	22	57	14	31,00	0,160
DSI / DSIL 16 PK	28	22	64	14	39,00	0,220
DSI / DSIL 16 PK M 16 x 1,5	28	22	64	14	39,00	0,220
DSI / DSIL 18 PK	32	27	71	14	47,50	0,320
DSI / DSIL 20 PK	33	30	77	14	57,00	0,420
DSI / DSIL 22 PK	37	32	84	15	68,00	0,540
DSI / DSIL 25 PK	42	36	94	15	85,00	0,720

Rod end body:
surface zinc plated

Description: DIN ISO rod end K series. Sliding combination steel / bronze-PTFE composite.

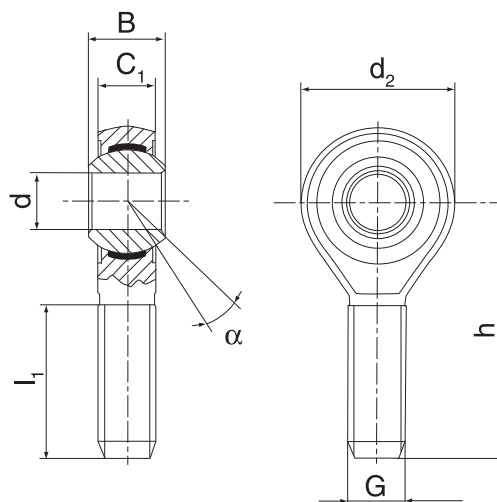
male thread;
maintenance free,
according to
DIN ISO 12240-4,
series K

Sliding combination:
steel / bronze-PTFE composite

Inner ring:
bearing steel hardened and ground

Outer ring:
rod end body pressed around, outer race lined with bronze-PTFE composite

Lubrication:
maintenance free



order number		measurement [mm]				
right hand thread	left hand thread	d	G	B	C ₁	d ₂
DSA 5 BK	DSAL 5 BK	5	M 5	8	6,0	19
DSA 6 BK	DSAL 6 BK	6	M 6	9	6,7	21
DSA 8 BK	DSAL 8 BK	8	M 8	12	9,0	25
DSA 10 BK	DSAL 10 BK	10	M 10	14	11,0	29
DSA 12 BK	DSAL 12 BK	12	M 12	16	12,0	33
DSA 14 BK	DSAL 14 BK	14	M 14	19	14,0	37
DSA 16 BK	DSAL 16 BK	16	M 16	21	15,0	43
DSA 18 BK	DSAL 18 BK	18	M 18 x 1,5	23	17,0	47
DSA 20 BK	DSAL 20 BK	20	M 20 x 1,5	25	18,0	51
DSA 22 BK	DSAL 22 BK	22	M 22 x 1,5	28	20,0	55
DSA 25 BK	DSAL 25 BK	25	M 24 x 2	31	22,0	61

type	measurement [mm]		α [°]	load rating C ₀ [kN]	weight [kg]
	l ₁ min	h			
DSA / DSAL 5 BK	20	33	12	6,00	0,014
DSA / DSAL 6 BK	22	36	11	7,65	0,020
DSA / DSAL 8 BK	25	42	12	12,90	0,038
DSA / DSAL 10 BK	29	48	12	18,00	0,055
DSA / DSAL 12 BK	33	54	13	24,00	0,085
DSA / DSAL 14 BK	36	60	14	31,00	0,140
DSA / DSAL 16 BK	40	66	14	39,00	0,210
DSA / DSAL 18 BK	44	72	14	47,50	0,280
DSA / DSAL 20 BK	47	78	14	57,00	0,380
DSA / DSAL 22 BK	50	84	15	68,00	0,480
DSA / DSAL 25 BK	57	94	15	85,00	0,640

DGIR...UK / DGIR...UK-2RS



**female thread;
maintenance free,
according to
DIN ISO 12240-4;
series E**

Description: DIN ISO rod end E series. Made of spherical plain bearing DGE...UK (UK-2RS) pressed into rod end body. Sliding combination steel / bronze-PTFE composite. Bore diameter $d \geq$ size 35 with additional seal on both sides (e.g. DGIR... UK-2RS) bore diameter $d \geq$ size 17 additional seal on both sides upon request.

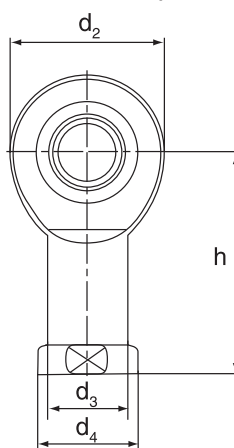
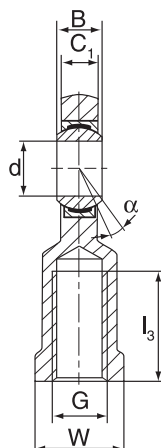
Rod end body:
surface zinc plated

Sliding combination:
steel / bronze-PTFE fabric

Inner ring:
bearing steel, hardened, ground and
spherical surface chromium plated

Outer ring:
steel body pressed around, outer race
lined with bronze-PTFE composite

Lubrication:
no lubrication necessary,
maintenance free



order number		measurement [mm]							
right hand thread	left hand thread	d	G	B	C ₁	d ₂	d ₃	d ₄	
DGIR 6 UK	DGIL 6 UK	6	M 6	6	4,4	21	10,0	13	
DGIR 8 UK	DGIL 8 UK	8	M 8	8	6,0	24	12,5	16	
DGIR 10 UK	DGIL 10 UK	10	M 10	9	7,0	29	15,0	19	
DGIR 12 UK	DGIL 12 UK	12	M 12	10	8,0	34	17,5	22	
DGIR 15 UK	DGIL 15 UK	15	M 14	12	10,0	40	21,0	26	
DGIR 17 UK (-2RS)	DGIL 17 UK (-2RS)	17	M 16	14	11,0	46	24,0	30	
DGIR 20 UK (-2RS)	DGIL 20 UK (-2RS)	20	M 20 x 1,5	16	13,0	53	27,5	35	
DGIR 25 UK (-2RS)	DGIL 25 UK (-2RS)	25	M 24 x 2	20	17,0	64	33,5	42	
DGIR 30 UK (-2RS)	DGIL 30 UK (-2RS)	30	M 30 x 2	22	19,0	73	40,0	50	
DGIR 35 UK-2RS	DGIL 35 UK-2RS	35	M 36 x 3	25	21,0	82	47,0	58	
DGIR 40 UK-2RS	DGIL 40 UK-2RS	40	M 39 x 3	28	23,0	92	52,0	65	
DGIR 45 UK-2RS	DGIL 45 UK-2RS	45	M 42 x 3	32	27,0	102	58,0	70	
DGIR 50 UK-2RS	DGIL 50 UK-2RS	50	M 45 x 3	35	30,0	112	62,0	75	
DGIR 60 UK-2RS	DGIL 60 UK-2RS	60	M 52 x 3	44	38,0	135	70,0	88	
DGIR 70 UK-2RS	DGIL 70 UK-2RS	70	M 56 x 4	49	42,0	160	80,0	98	
DGIR 80 UK-2RS	DGIL 80 UK-2RS	80	M 64 x 4	55	47,0	180	95,0	110	

type	measurement [mm]			α [°]	load rating C ₀ [kN]	weight [kg]
	l ₃ min	h	W			
DGIR / DGIL 6 UK	11	30	11	13	8,2	0,021
DGIR / DGIL 8 UK	15	36	14	15	12,9	0,039
DGIR / DGIL 10 UK	20	43	17	12	17,6	0,061
DGIR / DGIL 12 UK	23	50	19	11	24,5	0,096
DGIR / DGIL 15 UK	30	61	22	8	36,0	0,180
DGIR / DGIL 17 UK	34	67	27	10	45,0	0,220
DGIR / DGIL 20 UK	40	77	32	9	60,0	0,350
DGIR / DGIL 25 UK	48	94	36	7	83,0	0,640
DGIR / DGIL 30 UK	56	110	41	6	110,0	0,930
DGIR / DGIL 35 UK-2RS	60	125	50	6	146,0	1,300
DGIR / DGIL 40 UK-2RS	65	142	55	7	180,0	2,000
DGIR / DGIL 45 UK-2RS	65	145	60	7	240,0	2,500
DGIR / DGIL 50 UK-2RS	68	160	65	6	290,0	3,500
DGIR / DGIL 60 UK-2RS	70	175	75	6	450,0	5,500
DGIR / DGIL 70 UK-2RS	80	200	85	6	610,0	8,600
DGIR / DGIL 80 UK-2RS	85	230	100	6	750,0	12,000

Rod end body:
surface zinc plated

Sliding combination:
steel / bronze-PTFE fabric

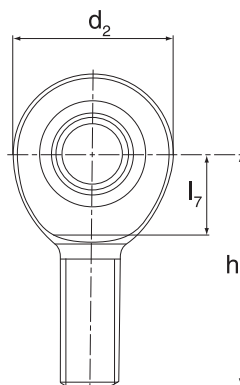
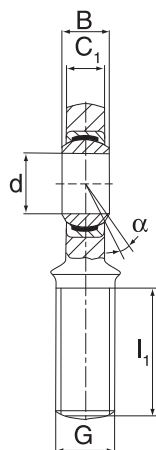
Inner ring:
bearing steel, hardened, ground and
spherical surface chromium plated

Outer ring:
steel body pressed around, outer race
lined with bronze-PTFE composite

Lubrication:
no lubrication necessary,
maintenance free

Description: DIN ISO rod end E series. Made of spherical plain bearing DGE...UK (UK-2RS) pressed into rod end body. Sliding combination steel / bronze-PTFE composite. Bore diameter $d \geq$ size 35 with additional seal on both sides (e.g. DGAR... UK-2RS) bore diameter $d \geq$ size 17 additional seal on both sides upon request.

male thread;
maintenance free,
according to
DIN ISO 12240-4,
series E



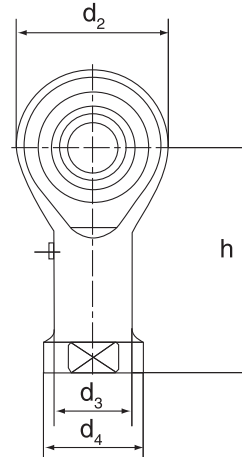
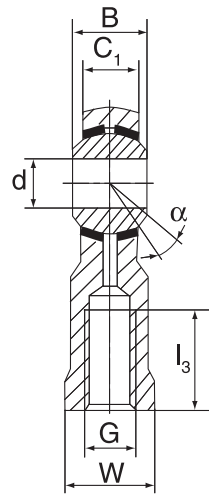
order number		measurement [mm]				
right hand thread	left hand thread	d	G	B	C ₁	d ₂
DGAR 6 UK	DGAL 6 UK	6	M 6	6	4,4	21
DGAR 8 UK	DGAL 8 UK	8	M 8	8	6,0	24
DGAR 10 UK	DGAL 10 UK	10	M 10	9	7,0	29
DGAR 12 UK	DGAL 12 UK	12	M 12	10	8,0	34
DGAR 15 UK	DGAL 15 UK	15	M 14	12	10,0	40
DGAR 17 UK (-2RS)	DGAL 17 UK (-2RS)	17	M 16	14	11,0	46
DGAR 20 UK (-2RS)	DGAL 20 UK (-2RS)	20	M 20 x 1,5	16	13,0	53
DGAR 25 UK (-2RS)	DGAL 25 UK (-2RS)	25	M 24 x 2	20	17,0	64
DGAR 30 UK (-2RS)	DGAL 30 UK (-2RS)	30	M 30 x 2	22	19,0	73
DGAR 35 UK-2RS	DGAL 35 UK-2RS	35	M 36 x 3	25	21,0	82
DGAR 40 UK-2RS	DGAL 40 UK-2RS	40	M 39 x 3	28	23,0	92
DGAR 45 UK-2RS	DGAL 45 UK-2RS	45	M 42 x 3	32	27,0	102
DGAR 50 UK-2RS	DGAL 50 UK-2RS	50	M 45 x 3	35	30,0	112
DGAR 60 UK-2RS	DGAL 60 UK-2RS	60	M 52 x 3	44	38,0	135
DGAR 70 UK-2RS	DGAL 70 UK-2RS	70	M 56 x 4	49	42,0	160
DGAR 80 UK-2RS	DGAL 80 UK-2RS	80	M 64 x 4	55	47,0	180

type	measurement [mm]			α [°]	load rating C ₀ [kN]	weight [kg]
	l ₁ min	l ₇ min	h			
DGAR / DGAL 6 UK	18	12	36	13	8,2	0,017
DGAR / DGAL 8 UK	22	14	42	15	12,9	0,029
DGAR / DGAL 10 UK	26	15	48	12	17,6	0,051
DGAR / DGAL 12 UK	28	18	54	11	24,5	0,086
DGAR / DGAL 15 UK	34	20	63	8	36,0	0,140
DGAR / DGAL 17 UK	36	23	69	10	45,0	0,190
DGAR / DGAL 20 UK	43	27	78	9	60,0	0,310
DGAR / DGAL 25 UK	53	32	94	7	83,0	0,560
DGAR / DGAL 30 UK	65	37	110	6	110,0	0,890
DGAR / DGAL 35 UK-2RS	82	42	140	6	146,0	1,400
DGAR / DGAL 40 UK-2RS	86	48	150	7	180,0	1,800
DGAR / DGAL 45 UK-2RS	94	52	163	7	240,0	2,600
DGAR / DGAL 50 UK-2RS	107	60	185	6	290,0	3,400
DGAR / DGAL 60 UK-2RS	115	75	210	6	450,0	5,900
DGAR / DGAL 70 UK-2RS	125	87	235	6	610,0	8,200
DGAR / DGAL 80 UK-2RS	140	100	270	6	750,0	12,000

female thread;
lubrication
required,
according to
DIN ISO 12240-4,
series K



Description: DIN ISO rod end K series. Sliding combination steel / heavy duty bronze.



Rod end body:
surface chromium plated

Sliding combination:
steel / heavy duty bronze

Inner ring:
bearing steel, hardened, ground and
spherical surface chromium plated

Outer ring:
heavy duty bronze with lubrication

Lubrication:
lubrication required

order number		measurement [mm]							
right hand thread	left hand thread	d	G	B	C ₁	d ₂	d ₃	d ₄	
DPHS 5	DPHSL 5	5	M 5	8	6,00	16	8,5	11	
DPHS 6	DPHSL 6	6	M 6	9	6,75	18	10,0	13	
DPHS 8	DPHSL 8	8	M 8	12	9,00	22	12,5	16	
DPHS 10	DPHSL 10	10	M 10	14	10,50	26	15,0	19	
DPHS 10 M 10 X 1,25	DPHSL 10 M 10 X 1,25	10	M 10 x 1,25	14	10,50	26	15,0	19	
DPHS 12	DPHSL 12	12	M 12	16	12,00	30	17,5	22	
DPHS 12 M 12 X 1,25	DPHSL 12 M 12 X 1,25	12	M 12 x 1,25	16	12,00	30	17,5	22	
DPHS 14	DPHSL 14	14	M 14	19	13,50	34	20,0	25	
DPHS 14 M 14 X 1,5	DPHSL 14 M 14 X 1,5	14	M 14 x 1,5	19	13,50	34	20,0	25	
DPHS 16	DPHSL 16	16	M 16	21	15,00	40	22,0	27	
DPHS 16 M 16 X 1,5	DPHSL 16 M 16 X 1,5	16	M 16 x 1,5	21	15,00	40	22,0	27	
DPHS 18	DPHSL 18	18	M 18 x 1,5	23	16,50	44	25,0	31	
DPHS 20	DPHSL 20	20	M 20 x 1,5	25	18,00	50	27,5	34	
DPHS 22	DPHSL 22	22	M 22 x 1,5	28	20,00	54	30,0	38	
DPHS 25	DPHSL 25	25	M 24 x 2	31	22,00	60	33,5	42	
DPHS 28	DPHSL 28	28	M 27 x 2	35	24,00	66	37,0	46	
DPHS 30	DPHSL 30	30	M 30 x 2	37	25,00	70	40,0	50	
DPHS 30 M 27 X 2	DPHSL 30 M 27 X 2	30	M 27 x 2	37	25,00	70	40,0	50	

type	measurement [mm]			α [°]	load rating	weight
	l ₃ min	W	h		C ₀ [kN]	[kg]
DPHS / DPHSL 5	10	9	27	13	5,7	0,016
DPHS / DPHSL 6	12	11	30	13	7,2	0,022
DPHS / DPHSL 8	16	14	36	14	11,6	0,047
DPHS / DPHSL 10	20	17	43	13	14,5	0,077
DPHS / DPHSL 10 M 10 X 1,25	20	17	43	13	14,5	0,077
DPHS / DPHSL 12	22	19	50	13	17,0	0,100
DPHS / DPHSL 12 M 12 X 1,25	22	19	50	13	17,0	0,100
DPHS / DPHSL 14	25	22	57	16	24,0	0,160
DPHS / DPHSL 14 M 14 X 1,5	25	22	57	16	24,0	0,160
DPHS / DPHSL 16	28	22	64	15	28,5	0,220
DPHS / DPHSL 16 M 16 X 1,5	28	22	64	15	28,5	0,220
DPHS / DPHSL 18	32	27	71	15	42,5	0,320
DPHS / DPHSL 20	33	30	77	14	42,5	0,420
DPHS / DPHSL 22	37	32	84	15	57,0	0,540
DPHS / DPHSL 25	42	36	94	15	68,0	0,730
DPHS / DPHSL 28	48	41	103	15	75,0	0,980
DPHS / DPHSL 30	51	41	110	17	88,0	1,100
DPHS / DPHSL 30 M 27 X 2	51	41	110	17	88,0	1,100

Rod end body:
surface zinc plated

Description: DIN ISO rod end K series. Sliding combination steel / heavy duty bronze.

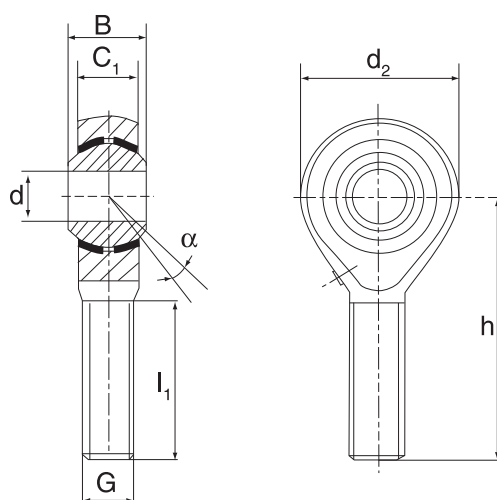
male thread;
maintenance free,
according to
DIN ISO 12240-4,
series K

Sliding combination:
steel / heavy duty bronze

Inner ring:
bearing steel, hardened, ground and
spherical surface chromium plated

Outer ring:
heavy duty bronze with lubrication

Lubrication:
lubrication required



order number		measurement [mm]				
right hand thread	left hand thread	d	G	B	C ₁	d ₂
DPOS 5	DPOSL 5	5	M 5	8	6,00	16
DPOS 6	DPOSL 6	6	M 6	9	6,75	18
DPOS 8	DPOSL 8	8	M 8	12	9,00	22
DPOS 10	DPOSL 10	10	M 10	14	10,50	26
DPOS 12	DPOSL 12	12	M 12	16	12,00	30
DPOS 14	DPOSL 14	14	M 14	19	13,50	34
DPOS 16	DPOSL 16	16	M 16	21	15,00	40
DPOS 18	DPOSL 18	18	M 18 x 1,5	23	16,50	44
DPOS 20	DPOSL 20	20	M 20 x 1,5	25	18,00	50
DPOS 22	DPOSL 22	22	M 22 x 1,5	28	20,00	54
DPOS 25	DPOSL 25	25	M 24 x 2	31	22,00	60
DPOS 28	DPOSL 28	28	M 27 x 2	35	24,00	66
DPOS 30	DPOSL 30	30	M 30 x 2	37	25,00	70

type	measurement [mm]		α [°]	load rating	weight
	l ₁ min	h		C ₀ [KN]	[kg]
DPOS / DPOSL 5	20	33	13	5,7	0,013
DPOS / DPOSL 6	22	36	13	7,2	0,020
DPOS / DPOSL 8	25	42	14	11,6	0,030
DPOS / DPOSL 10	29	48	13	14,5	0,055
DPOS / DPOSL 12	33	54	13	17,0	0,085
DPOS / DPOSL 14	36	60	16	24,0	0,140
DPOS / DPOSL 16	40	66	15	28,5	0,210
DPOS / DPOSL 18	44	72	15	42,5	0,280
DPOS / DPOSL 20	47	78	14	52,5	0,380
DPOS / DPOSL 22	51	84	15	57,0	0,480
DPOS / DPOSL 25	57	94	15	68,0	0,640
DPOS / DPOSL 28	62	103	15	75,5	0,960
DPOS / DPOSL 30	66	110	17	88,0	1,100

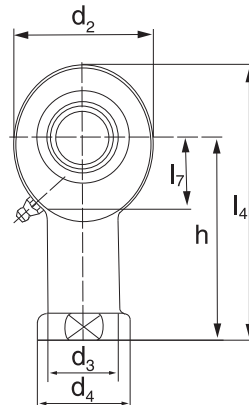
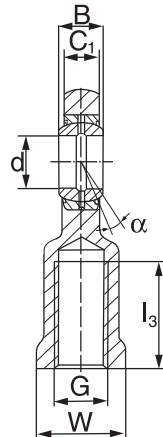
DSI...E / DSI...ES / DSI...ES-2RS



**female thread;
lubrication
required,
according to
DIN ISO 12240-4;
series E**



Description: DIN ISO rod end E series. Made of spherical plain bearing DGE...E (ES) pressed into rod end body. Sliding combination steel / steel. Maintenance necessary. Bore diameter $d \geq 15$ with grease nipple in rod end body and lubrication groove and hole in inner and outer ring. Bore diameter $d \geq 15$ type DSI...ES-2RS with additional seals also available.



Rod end body:
surface zinc plated

Sliding combination:
steel / steel

Inner ring:
bearing steel, hardened, ground and phosphated

Outer ring:
bearing steel, hardened, ground and phosphated

Lubrication:
lubrication required

order number		measurement [mm]						
right hand thread	left hand thread	d	G	B	C ₁	d ₂	d ₃	d ₄
DSI 6 E	DSIL 6 E	6	M 6	6	4,4	21	10,0	13
DSI 8 E	DSIL 8 E	8	M 8	8	6,0	24	12,5	16
DSI 10 E	DSIL 10 E	10	M 10	9	7,0	29	15,0	19
DSI 12 E	DSIL 12 E	12	M 12	10	8,0	34	17,5	22
DSI 15 ES (-2RS)	DSIL 15 ES (-2RS)	15	M 14	12	10,0	40	21,0	26
DSI 17 ES (-2RS)	DSIL 17 ES (-2RS)	17	M 16	14	11,0	46	24,0	30
DSI 20 ES (-2RS)	DSIL 20 ES (-2RS)	20	M 20 x 1,5	16	13,0	53	27,5	35
DSI 25 ES (-2RS)	DSIL 25 ES (-2RS)	25	M 24 x 2	20	17,0	64	33,5	42
DSI 30 ES (-2RS)	DSIL 30 ES (-2RS)	30	M 30 x 2	22	19,0	73	40,0	50
DSI 35 ES (-2RS)	DSIL 35 ES (-2RS)	35	M 36 x 3	25	21,0	82	47,0	58
DSI 40 ES (-2RS)	DSIL 40 ES (-2RS)	40	M 39 x 3	28	23,0	92	52,0	65
DSI 45 ES (-2RS)	DSIL 45 ES (-2RS)	45	M 42 x 3	32	27,0	102	58,0	70
DSI 50 ES (-2RS)	DSIL 50 ES (-2RS)	50	M 45 x 3	35	30,0	112	62,0	75
DSI 60 ES (-2RS)	DSIL 60 ES (-2RS)	60	M 52 x 3	44	38,0	135	70,0	88
DSI 70 ES (-2RS)	DSIL 70 ES (-2RS)	70	M 56 x 3	49	42,0	160	80,0	98
DSI 80 ES (-2RS)	DSIL 80 ES (-2RS)	80	M 64 x 4	55	47,0	180	95,0	110

type	measurement [mm]			α [°]	load rating	weight
	l ₃ min	W	h		C ₀ [KN]	[kg]
DSI / DSIL 6 E	11	11	30	13	8,2	0,021
DSI / DSIL 8 E	15	14	36	15	12,9	0,039
DSI / DSIL 10 E	20	17	43	12	17,6	0,061
DSI / DSIL 12 E	23	19	50	11	24,5	0,096
DSI / DSIL 15 ES (-2RS)	30	22	61	8	36,0	0,18
DSI / DSIL 17 ES (-2RS)	34	27	67	10	45,0	0,22
DSI / DSIL 20 ES (-2RS)	40	32	77	9	60,0	0,35
DSI / DSIL 25 ES (-2RS)	48	36	94	7	83,0	0,64
DSI / DSIL 30 ES (-2RS)	56	41	110	6	110,0	0,93
DSI / DSIL 35 ES (-2RS)	60	50	125	6	146,0	1,3
DSI / DSIL 40 ES (-2RS)	65	55	142	7	180,0	2,0
DSI / DSIL 45 ES (-2RS)	65	60	145	7	240,0	2,5
DSI / DSIL 50 ES (-2RS)	68	65	160	6	290,0	3,5
DSI / DSIL 60 ES (-2RS)	70	75	175	6	450,0	5,5
DSI / DSIL 70 ES (-2RS)	80	85	200	6	610,0	8,6
DSI / DSIL 80 ES (-2RS)	85	100	230	6	750,0	12,0

DSA...ES-2RS / DSA...ES / DSA...E

Rod end body:
surface zinc plated

Sliding combination:
steel / steel

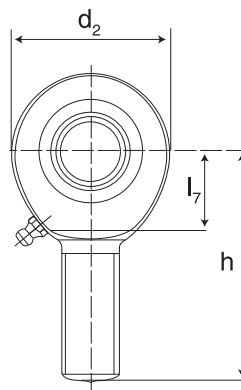
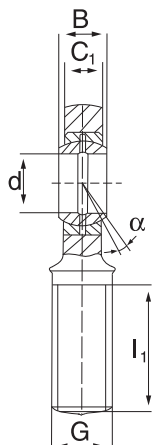
Inner ring:
bearing steel, hardened, ground and phosphated

Outer ring:
bearing steel, hardened, ground and phosphated

Lubrication:
lubrication is necessary

Description: DIN ISO rod end E series. Made of spherical plain bearing DGE...E (ES) pressed into rod end body. Sliding combination steel / steel. Maintenance necessary. Bore diameter $d \geq 15$ with grease nipple in rod end body and lubrication groove and hole in inner and outer ring. Bore diameter $d \geq 15$ type DSA...ES-2RS with additional seals also available.

male thread;
lubrication
is necessary,
according to
DIN ISO 12240-4,
series E



order number		measurement [mm]				
right hand thread	left hand thread	d	G	B	C ₁	d ₂
DSA 6 E	DSAL 6 E	6	M 6	6	4,4	21
DSA 8 E	DSAL 8 E	8	M 8	8	6,0	24
DSA 10 E	DSAL 10 E	10	M 10	9	7,0	29
DSA 12 E	DSAL 12 E	12	M 12	10	8,0	34
DSA 15 ES (-2RS)	DSAL 15 ES (-2RS)	15	M 14	12	10,0	40
DSA 17 ES (-2RS)	DSAL 17 ES (-2RS)	17	M 16	14	11,0	46
DSA 20 ES (-2RS)	DSAL 20 ES (-2RS)	20	M 20 x 1,5	16	13,0	53
DSA 25 ES (-2RS)	DSAL 25 ES (-2RS)	25	M 24 x 2	20	17,0	64
DSA 30 ES (-2RS)	DSAL 30 ES (-2RS)	30	M 30 x 2	22	19,0	73
DSA 35 ES (-2RS)	DSAL 35 ES (-2RS)	35	M 36 x 3	25	21,0	82
DSA 40 ES (-2RS)	DSAL 40 ES (-2RS)	40	M 39 x 3	28	23,0	92
DSA 45 ES (-2RS)	DSAL 45 ES (-2RS)	45	M 42 x 3	32	27,0	102
DSA 50 ES (-2RS)	DSAL 50 ES (-2RS)	50	M 45 x 3	35	30,0	112
DSA 60 ES (-2RS)	DSAL 60 ES (-2RS)	60	M 52 x 3	44	38,0	135
DSA 70 ES (-2RS)	DSAL 70 ES (-2RS)	70	M 56 x 4	49	42,0	160
DSA 80 ES (-2RS)	DSAL 80 ES (-2RS)	80	M 64 x 4	55	47,0	180

type	measurement [mm]			α [°]	load rating	weight
	I ₁ min	I ₇	h		C ₀ [KN]	[kg]
DSA / DSAL 6 E	18	11	36	13	8,2	0,017
DSA / DSAL 8 E	22	14	42	15	12,9	0,029
DSA / DSAL 10 E	26	15	48	12	17,6	0,051
DSA / DSAL 12 E	28	17	54	11	24,5	0,086
DSA / DSAL 15 ES (-2RS)	34	20	63	8	36,0	0,140
DSA / DSAL 17 ES (-2RS)	36	23	69	10	45,0	0,190
DSA / DSAL 20 ES (-2RS)	43	27	78	9	60,0	0,310
DSA / DSAL 25 ES (-2RS)	53	32	94	7	83,0	0,560
DSA / DSAL 30 ES (-2RS)	65	37	110	6	110,0	0,890
DSA / DSAL 35 ES (-2RS)	82	41	140	6	146,0	1,400
DSA / DSAL 40 ES (-2RS)	86	46	150	7	180,0	1,800
DSA / DSAL 45 ES (-2RS)	94	51	163	7	240,0	2,600
DSA / DSAL 50 ES (-2RS)	107	56	185	6	290,0	3,400
DSA / DSAL 60 ES (-2RS)	115	68	210	6	450,0	5,900
DSA / DSAL 70 ES (-2RS)	125	80	235	6	610,0	8,200
DSA / DSAL 80 ES (-2RS)	140	90	270	6	750,0	12,000

DSIZP...S dimensions in inches



female thread;
lubrication
required,
similar to
DIN ISO 12240-4,
series K,
measurement in
inches



Description: DIN ISO rod end K series. Dimensions in inch. Sliding combination steel / heavy duty bronze. With grease nipple.

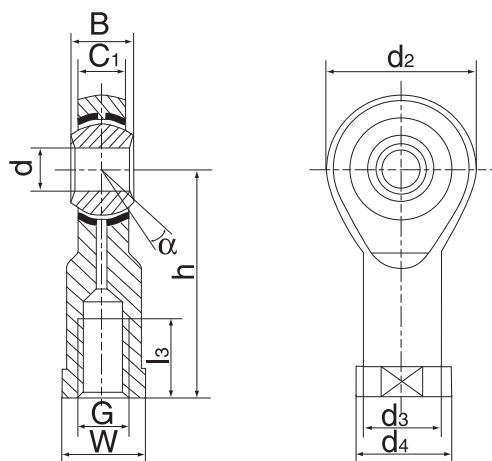
Rod end body:
surface zinc plated

Sliding combination:
steel / heavy duty bronze

Inner ring:
bearing steel, hardened, ground and
spherical surface chromium plated

Outer ring:
heavy duty bronze with lubrication

Lubrication:
lubrication required, with grease nipple



order number		measurement [mm]						
right hand thread	left hand thread	d	G	B	C ₁	d ₂	d ₃	d ₄
DSIZP 4 S	DSIZPL 4 S	4,83	10 - 32	7,92	6,35	15,88	7,54	10,31
DSIZP 6 S	DSIZPL 6 S	6,35	1/4 - 28	9,53	7,14	19,05	9,15	11,91
DSIZP 7 S	DSIZPL 7 S	7,94	5/16 - 24	11,10	8,74	22,23	10,72	12,70
DSIZP 9 S	DSIZPL 9 S	9,53	3/8 - 24	12,70	10,31	25,40	13,89	17,45
DSIZP 11 S	DSIZPL 11 S	11,11	7/16 - 20	14,27	11,10	28,58	15,49	19,05
DSIZP 12 S	DSIZPL 12 S	12,70	1/2 - 20	15,88	12,70	33,32	18,67	22,23
DSIZP 15 S	DSIZPL 15 S	15,88	5/8 - 18	19,05	14,27	38,10	21,84	25,40
DSIZP 19 S	DSIZPL 19 S	19,05	3/4 - 16	22,23	17,45	44,45	25,02	28,58
DSIZP 25 S	DSIZPL 25 S	25,40	5/4 - 12	34,93	25,40	69,85	37,72	44,45

type	inches	measurement [mm]			α [°]	load rating C ₀ [KN]	weight [kg]
		l ₃ min	W	h			
DSIZP / DSIZPL 4 S		14,27	7,92	26,97	10	4,6	0,015
DSIZP / DSIZPL 6 S	1 / 4 "	19,05	9,53	33,32	13	7,7	0,025
DSIZP / DSIZPL 7 S	5 / 16 "	19,05	11,10	34,93	10	8,4	0,036
DSIZP / DSIZPL 9 S	3 / 8 "	23,80	14,27	41,28	9	10,0	0,061
DSIZP / DSIZPL 11 S	7 / 16 "	26,97	15,88	46,02	11	13,0	0,081
DSIZP / DSIZPL 12 S	1 / 2 "	30,15	19,05	53,98	9	19,0	0,133
DSIZP / DSIZPL 15 S	5 / 8 "	38,10	22,23	63,50	11	21,0	0,190
DSIZP / DSIZPL 19 S	3 / 4 "	44,45	25,40	73,03	10	29,0	0,285
DSIZP / DSIZPL 25 S	1 "	53,98	38,10	104,78	14	101,0	1,000

dimensions in inches DSAZP...S

Rod end body:
surface zinc plated

Sliding combination:
steel / heavy duty bronze

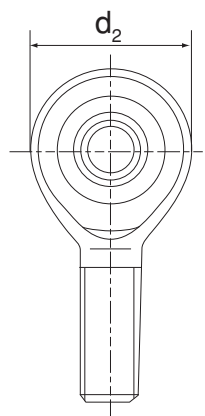
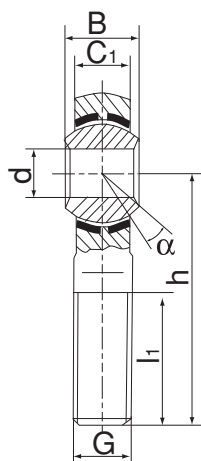
Inner ring:
bearing steel, hardened, ground and
spherical surface chromium plated

Outer ring:
heavy duty bronze with lubrication

Lubrication:
lubrication required, with grease nipple

Description: DIN ISO rod end K series. Dimensions in
inch. Sliding combination steel / heavy duty bronze.
With grease nipple.

male thread;
lubrication
required,
similar to
DIN ISO 12240-4;
series K,
measurement in
inches



order number		measurement [mm]				
right hand thread	left hand thread	d	G	B	C ₁	d ₂
DSAZP 4 S	DSAZPL 4 S	4,83	10 - 32	7,92	6,35	15,88
DSAZP 6 S	DSAZPL 6 S	6,35	1/4 - 28	9,53	7,14	19,05
DSAZP 7 S	DSAZPL 7 S	7,94	5/16 - 24	11,10	8,74	22,23
DSAZP 9 S	DSAZPL 9 S	9,53	3/8 - 24	12,70	10,31	25,40
DSAZP 11 S	DSAZPL 11 S	11,11	7/16 - 20	14,27	11,10	28,58
DSAZP 12 S	DSAZPL 12 S	12,70	1/2 - 20	15,88	12,70	33,32
DSAZP 15 S	DSAZPL 15 S	15,88	5/8 - 18	19,05	14,27	38,10
DSAZP 19 S	DSAZPL 19 S	19,05	3/4 - 16	22,23	17,45	44,45
DSAZP 25 S	DSAZPL 25 S	25,40	5/4 - 12	34,93	25,40	69,85

type	inches	measurement [mm]		α	load rating	weight
		l ₁ min	h	[°]	C ₀ [kN]	[kg]
DSAZP / DSAZPL 4 S		19,05	31,75	10	3,8	0,013
DSAZP / DSAZPL 6 S	1 / 4 "	25,40	39,67	13	6,6	0,022
DSAZP / DSAZPL 7 S	5 / 16 "	31,75	47,63	10	8,4	0,037
DSAZP / DSAZPL 9 S	3 / 8 "	31,75	49,23	9	10,0	0,055
DSAZP / DSAZPL 11 S	7 / 16 "	34,93	53,98	11	13,0	0,078
DSAZP / DSAZPL 12 S	1 / 2 "	38,10	61,93	9	19,0	0,120
DSAZP / DSAZPL 15 S	5 / 8 "	41,28	66,68	11	21,0	0,180
DSAZP / DSAZPL 19 S	3 / 4 "	44,45	73,03	10	29,0	0,290
DSAZP / DSAZPL 25 S	1 "	53,98	104,78	14	101,0	1,100

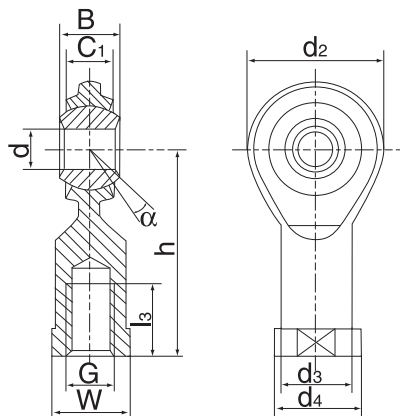
DSIZJ... dimensions in inches



female thread;
lubrication
required,
similar to
DIN ISO 12240-4,
series K,
measurement in
inches



Description: DIN ISO rod end K series. Dimensions in inch. Sliding combination steel / steel.
Size ≥ 9 with grease nipple can be mounted upon request.



Rod end body:
surface zinc plated

Sliding combination:
steel / steel

Inner ring:
bearing steel, hardened, ground and
spherical surface chromium plated

Outer ring:
rod end body pressed around inner ring

Lubrication:
lubrication required

order number		measurement [mm]						
right hand thread	left hand thread	d	B	C ₁	d ₂	G	d ₃	d ₄
DSIZJ 4	DSIZJL 4	4,83	7,92	5,94	15,88	10 - 32	7,54	10,31
DSIZJ 6	DSIZJL 6	6,35	9,53	6,35	19,05	1/4 - 28	9,15	11,91
DSIZJ 7	DSIZJL 7	7,94	11,10	7,92	22,23	5/16 - 24	10,72	12,70
DSIZJ 9	DSIZJL 9	9,53	12,70	9,12	25,40	3/8 - 24	13,89	17,45
DSIZJ 11	DSIZJL 11	11,10	14,27	10,31	28,58	7/16 - 20	15,49	19,05
DSIZJ 12	DSIZJL 12	12,70	15,88	11,50	33,32	1/2 - 20	18,67	22,23
DSIZJ 15	DSIZJL 15	15,88	19,05	12,29	38,10	5/8 - 18	21,84	25,40
DSIZJ 19	DSIZJL 19	19,05	22,23	15,06	44,45	3/4 - 16	25,02	28,58

type	inches	measurement [mm]			α [°]	load rating C ₀ [KN]	weight [kg]
		l ₃ min	W	h			
DSIZJ / DSIZJL 4		12,70	7,92	26,97	10,0	6,8	0,018
DSIZJ / DSIZJL 6	1 / 4 "	15,88	9,53	33,32	13,5	9,6	0,023
DSIZJ / DSIZJL 7	5 / 16 "	15,88	11,10	34,93	11,0	12,0	0,036
DSIZJ / DSIZJL 9	3 / 8 "	19,05	14,27	41,28	11,0	16,0	0,059
DSIZJ / DSIZJL 11	7 / 16 "	22,23	15,88	46,02	10,5	21,0	0,082
DSIZJ / DSIZJL 12	1 / 2 "	25,40	19,05	53,98	10,0	28,0	0,132
DSIZJ / DSIZJL 15	5 / 8 "	31,75	22,23	63,50	13,0	29,0	0,195
DSIZJ / DSIZJL 19	3 / 4 "	34,93	25,40	73,03	12,0	44,0	0,295

dimensions in inches DSAZJ...

Rod end body:
surface zinc plated

Sliding combination:
steel / steel

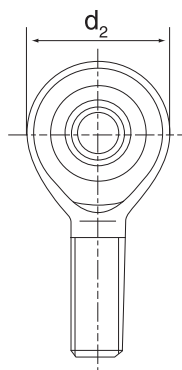
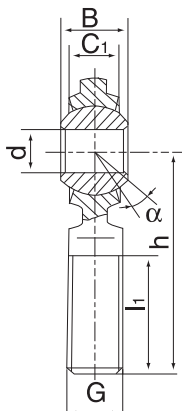
Inner ring:
bearing steel, hardened, ground and
spherical surface chromium plated

Outer ring:
rod end body pressed around inner ring

Lubrication:
lubrication required

Description: DIN ISO rod end K series. Dimensions in inch. Housing made of forged steel, sliding combination steel / steel. Size ≥ 9 with grease nipple can be mounted upon request.

female thread;
lubrication
required,
similar to
DIN ISO 12240-4,
series K,
measurement in
inches



order number		measurement [mm]				
right hand thread	left hand thread	d	G	B	C1	d2
DSAZJ 4	DSAZJL 4	4,83	10 - 32	7,92	5,94	15,88
DSAZJ 6	DSAZJL 6	6,35	1/4 - 28	9,53	6,35	19,05
DSAZJ 7	DSAZJL 7	7,94	5/16 - 24	11,10	7,92	22,23
DSAZJ 9	DSAZJL 9	9,53	3/8 - 24	12,70	9,12	25,40
DSAZJ 11	DSAZJL 11	11,11	7/16 - 20	14,27	10,31	28,58
DSAZJ 12	DSAZJL 12	12,70	1/2 - 20	15,88	11,50	33,32
DSAZJ 15	DSAZJL 15	15,88	5/8 - 18	19,05	12,29	38,10
DSAZJ 19	DSAZJL 19	19,05	3/4 - 16	22,23	15,06	44,45

type	inches	measurement [mm]		α [°]	load rating C ₀ [KN]	weight [kg]
		l ₁ min	h			
DSAZJ / DSAZJL 4		19,05	31,75	10,0	3,8	0,014
DSAZJ / DSAZJL 6	1 / 4 "	25,40	39,67	13,5	6,6	0,018
DSAZJ / DSAZJL 7	5 / 16 "	31,75	47,63	11,0	12,0	0,032
DSAZJ / DSAZJL 9	3 / 8 "	31,75	49,23	11,0	16,0	0,050
DSAZJ / DSAZJL 11	7 / 16 "	34,93	53,98	10,5	21,0	0,068
DSAZJ / DSAZJL 12	1 / 2 "	38,10	61,93	10,0	28,0	0,110
DSAZJ / DSAZJL 15	5 / 8 "	41,28	66,68	13,0	29,0	0,160
DSAZJ / DSAZJL 19	3 / 4 "	44,45	73,03	12,0	44,0	0,260

DGIHR-K...DO



**female thread;
lubrication
required,
hydraulic rod ends**

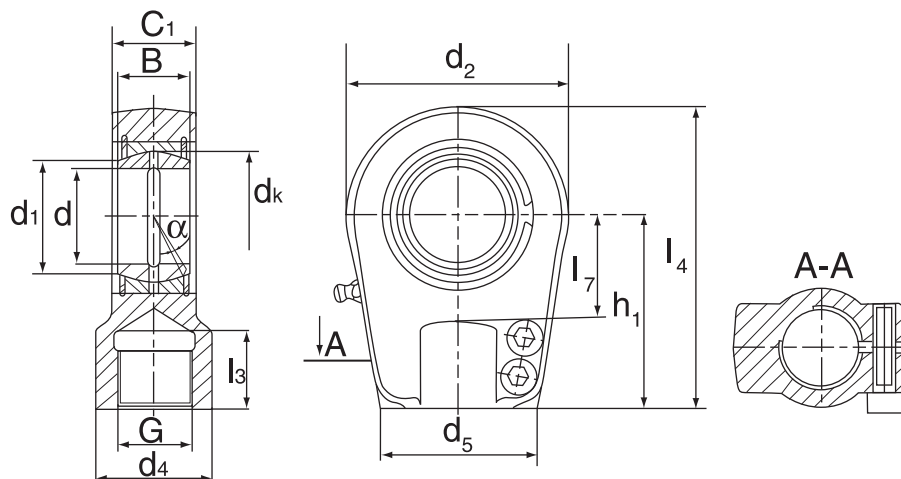
Description: Hydraulic rod end with slot and clamping arrangement. Made of spherical plain bearing DGE...ES pressed into rod end housing. Sliding combination steel / steel, with grease nipple.

Sliding combination:
steel / steel

Inner ring:
bearing steel, hardened, ground and phosphated

Outer ring:
bearing steel, hardened, ground and phosphated

Lubrication:
lubrication required



order number				measurement [mm]							
right hand thread		left hand thread		d	d ₁	G	d ₄	d ₅	B	C ₁	d ₂
DGIHR-K	20 DO	DGIHL-K	20 DO	20	24,1	M 16 x 1,5	25	46	16	19	56
DGIHR-K	25 DO	DGIHL-K	25 DO	25	29,3	M 16 x 1,5	25	46	20	23	56
DGIHR-K	30 DO	DGIHL-K	30 DO	30	34,2	M 22 x 1,5	32	50	22	28	64
DGIHR-K	35 DO	DGIHL-K	35 DO	35	39,7	M 28 x 1,5	40	66	25	30	78
DGIHR-K	40 DO	DGIHL-K	40 DO	40	45,0	M 35 x 1,5	49	76	28	35	94
DGIHR-K	50 DO	DGIHL-K	50 DO	50	55,9	M 45 x 1,5	61	90	35	40	116
DGIHR-K	60 DO	DGIHL-K	60 DO	60	66,8	M 58 x 1,5	75	120	44	50	130
DGIHR-K	70 DO	DGIHL-K	70 DO	70	77,8	M 65 x 1,5	86	130	49	55	154
DGIHR-K	80 DO	DGIHL-K	80 DO	80	80,4	M 80 x 2	105	160	55	60	176
DGIHR-K	90 DO	DGIHL-K	90 DO	90	98,0	M 100 x 2	124	180	60	65	206
DGIHR-K	100 DO	DGIHL-K	100 DO	100	109,5	M 110 x 2	138	200	70	70	230
DGIHR-K	110 DO	DGIHL-K	110 DO	110	121,2	M 120 x 3	152	220	70	80	265
DGIHR-K	120 DO	DGIHL-K	120 DO	120	135,5	M 130 x 3	172	257	85	90	340

type	measurement [mm]					α [°]	load rating C ₀ [kN]	weight [kg]
	l ₃ min	l ₇ min	h ₁	l ₄	d _k			
DGIHR-K / DGIHL-K 20 DO	17	25	50	80,0	29,0	9	72	0,43
DGIHR-K / DGIHL-K 25 DO	17	28	50	80,0	35,5	7	72	0,48
DGIHR-K / DGIHL-K 30 DO	23	30	60	94,0	40,7	6	106	0,74
DGIHR-K / DGIHL-K 35 DO	29	38	70	112,0	47,0	6	153	1,20
DGIHR-K / DGIHL-K 40 DO	36	45	85	135,0	53,0	7	250	2,00
DGIHR-K / DGIHL-K 50 DO	46	55	105	168,0	60,0	6	365	3,80
DGIHR-K / DGIHL-K 60 DO	59	65	130	200,0	66,0	6	400	5,40
DGIHR-K / DGIHL-K 70 DO	66	75	150	237,0	80,0	6	540	8,50
DGIHR-K / DGIHL-K 80 DO	81	80	170	265,0	92,0	6	670	12,00
DGIHR-K / DGIHL-K 90 DO	101	90	210	323,0	105,0	5	980	21,50
DGIHR-K / DGIHL-K 100 DO	111	105	235	360,0	115,0	7	1120	27,50
DGIHR-K / DGIHL-K 110 DO	125	115	265	407,5	130,0	6	1700	40,50
DGIHR-K / DGIHL-K 120 DO	135	140	310	490,0	160,0	6	2900	76,00

Sliding combination:
steel / steel

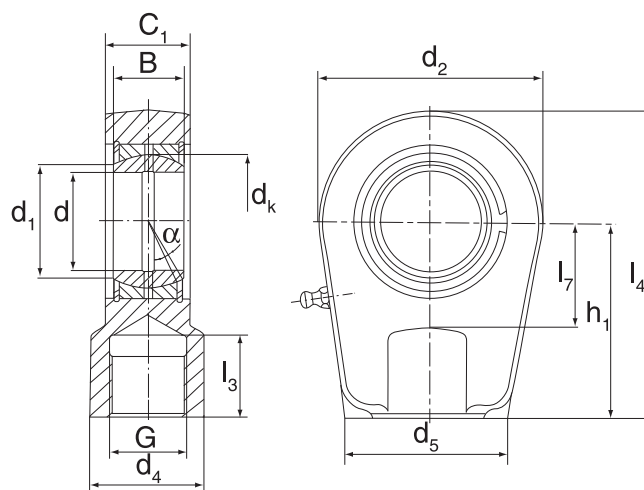
Inner ring:
bearing steel, hardened, ground and
parkerized

Outer ring:
bearing steel, hardened, ground and
parkerized

Lubrication:
lubrication required

Description: Hydraulic rod end. Made of spherical plain
bearing DGE...ES pressed into rod end housing. Sliding
combination steel / steel, with grease nipple.

female thread;
lubrication
required,
hydraulic rod ends



order number				measurement [mm]							
right hand thread		left hand thread		d	d ₁	G	d ₄	d ₅	B	C ₁	d ₂
DGIHR	20 DO	DGIHL	20 DO	20	24,1	M 16 x 1,5	25	46	16	19	56
DGIHR	25 DO	DGIHL	25 DO	25	29,3	M 16 x 1,5	25	46	20	23	56
DGIHR	30 DO	DGIHL	30 DO	30	34,2	M 22 x 1,5	32	50	22	28	64
DGIHR	35 DO	DGIHL	35 DO	35	39,7	M 28 x 1,5	40	66	25	30	78
DGIHR	40 DO	DGIHL	40 DO	40	45,0	M 35 x 1,5	49	76	28	35	94
DGIHR	50 DO	DGIHL	50 DO	50	55,9	M 45 x 1,5	61	90	35	40	116
DGIHR	60 DO	DGIHL	60 DO	60	66,8	M 58 x 1,5	75	120	44	50	130
DGIHR	70 DO	DGIHL	70 DO	70	77,8	M 65 x 1,5	86	130	49	55	154
DGIHR	80 DO	DGIHL	80 DO	80	80,4	M 80 x 2	105	160	55	60	176
DGIHR	90 DO	DGIHL	90 DO	90	98,0	M100 x 2	124	180	60	65	206
DGIHR	100 DO	DGIHL	100 DO	100	109,5	M110 x 2	138	200	70	70	230
DGIHR	110 DO	DGIHL	110 DO	110	121,2	M120 x 3	152	220	70	80	265
DGIHR	120 DO	DGIHL	120 DO	120	135,5	M130 x 3	172	257	85	90	340

type	measurement [mm]					α [°]	load rating C ₀ [KN]	weight [kg]
	l ₃ min	l ₇ min	h ₁	l ₄	d _k			
DGIHR / DGIHL 20 DO	17	25	50	80,0	29,0	9	72	0,43
DGIHR / DGIHL 25 DO	17	28	50	80,0	35,5	7	72	0,48
DGIHR / DGIHL 30 DO	23	30	60	94,0	40,7	6	106	0,74
DGIHR / DGIHL 35 DO	29	38	70	112,0	47,0	6	153	1,20
DGIHR / DGIHL 40 DO	36	45	85	135,0	53,0	7	250	2,00
DGIHR / DGIHL 50 DO	46	55	105	168,0	60,0	6	365	3,80
DGIHR / DGIHL 60 DO	59	65	130	200,0	66,0	6	400	5,40
DGIHR / DGIHL 70 DO	66	75	150	237,0	80,0	6	540	8,50
DGIHR / DGIHL 80 DO	81	80	170	265,0	92,0	6	670	12,00
DGIHR / DGIHL 90 DO	101	90	210	323,0	105,0	5	980	21,50
DGIHR / DGIHL 100 DO	111	105	235	360,0	115,0	7	1120	27,50
DGIHR / DGIHL 110 DO	125	115	265	407,5	130,0	6	1700	40,50
DGIHR / DGIHL 120 DO	135	140	310	490,0	160,0	6	2900	76,00

DGIHN-K...LO



**female thread;
hydraulic rod ends,
according to
DIN 24338**

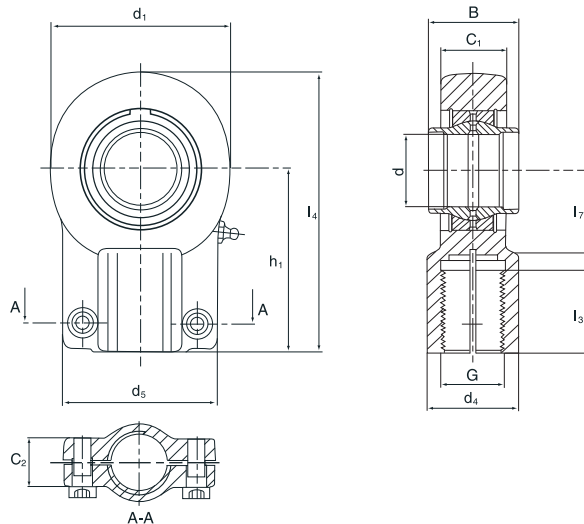
Description: Hydraulic rod end with slot and clamping arrangement. Made of spherical plain bearing DGE.. LO pressed into rod end housing. Sliding combination steel / steel with grease nipple.

Sliding combination:
steel / steel

Inner ring:
bearing steel, hardened, ground and phosphated

Outer ring:
bearing steel, hardened, ground and phosphated

Lubrication:
lubrication required



order number		measurement [mm]								
right hand thread	left hand thread	d	d ₂	G	d ₄	d ₅	B	C ₁	C ₂	
DGIHN-K 12 LO*	DGIHN-KL 12 LO*	12	32	M 12 x 1,25	16,5	32	12	11	11	
DGIHN-K 16 LO	DGIHN-KL 16 LO	16	40	M 14 x 1,5	21,0	40	16	14	14	
DGIHN-K 20 LO	DGIHN-KL 20 LO	20	47	M 16 x 1,5	25,0	47	20	17	17	
DGIHN-K 25 LO	DGIHN-KL 25 LO	25	58	M 20 x 1,5	30,0	54	25	22	19	
DGIHN-K 32 LO	DGIHN-KL 32 LO	32	71	M 27 x 2	38,0	66	32	28	22	
DGIHN-K 40 LO	DGIHN-KL 40 LO	40	90	M 33 x 2	47,0	80	40	33	26	
DGIHN-K 50 LO	DGIHN-KL 50 LO	50	109	M 42 x 2	58,0	96	50	41	32	
DGIHN-K 63 LO	DGIHN-KL 63 LO	63	136	M 48 x 2	70,0	114	63	53	38	
DGIHN-K 70 LO	DGIHN-KL 70 LO	70	155	M 56 x 2	80,0	135	70	57	42	
DGIHN-K 80 LO	DGIHN-KL 80 LO	80	168	M 64 x 3	90,0	148	80	66	48	
DGIHN-K 90 LO	DGIHN-KL 90 LO	90	185	M 72 x 3	100,0	160	90	72	52	
DGIHN-K 100 LO	DGIHN-KL 100 LO	100	210	M 80 x 3	110,0	178	100	84	62	
DGIHN-K 110 LO	DGIHN-KL 110 LO	110	235	M 90 x 3	125,0	190	110	88	62	
DGIHN-K 125 LO	DGIHN-KL 125 LO	125	260	M100 x 3	135,0	200	125	102	72	

type	l ₃ min	measurement [mm]			load rating C ₀ [KN]	weight [kg]
		h ₁	l ₄	l ₇		
DGIHN-K / DGIHN-KL 12 LO*	17	38	54,0	14	24,5	0,10
DGIHN-K / DGIHN-KL 16 LO	19	44	64,0	18	36,5	0,20
DGIHN-K / DGIHN-KL 20 LO	23	52	77,0	22	48,0	0,40
DGIHN-K / DGIHN-KL 25 LO	29	65	96,0	27	78,0	0,66
DGIHN-K / DGIHN-KL 32 LO	37	80	118,5	32	114,0	1,20
DGIHN-K / DGIHN-KL 40 LO	46	97	146,0	41	204,0	2,10
DGIHN-K / DGIHN-KL 50 LO	57	120	179,5	50	310,0	4,40
DGIHN-K / DGIHN-KL 63 LO	64	140	213,0	62	430,0	7,60
DGIHN-K / DGIHN-KL 70 LO	76	160	245,0	70	540,0	9,50
DGIHN-K / DGIHN-KL 80 LO	86	180	270,0	78	695,0	14,50
DGIHN-K / DGIHN-KL 90 LO	91	195	296,0	85	750,0	17,00
DGIHN-K / DGIHN-KL 100 LO	96	210	322,0	98	1060,0	28,00
DGIHN-K / DGIHN-KL 110 LO	106	235	364,0	105	1200,0	32,00
DGIHN-K / DGIHN-KL 125 LO	113	260	405,0	120	1430,0	43,00

Sliding combination:
steel / steel

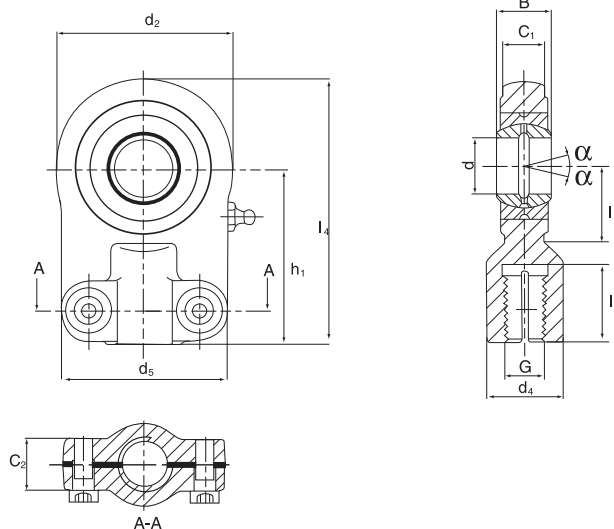
Inner ring:
bearing steel, hardened, ground and phosphated

Outer ring:
bearing steel, hardened, ground and phosphated

Lubrication:
lubrication required

Description: Hydraulic rod end with slot and clamping arrangement. Made of spherical plain bearing DGE.. ES pressed into rod end housing. Sliding combination steel/ steel with grease nipple.

female thread;
hydraulic rod ends,
according to
DIN 24555



order number				measurement [mm]								
right hand thread		left hand thread		d	d ₁	d ₂	G	d ₄	d ₅	B	C ₁	C ₂
DGIHO-K	12 DO*	DGIHO-KL	12 DO*	12	15,0	35	M 10 x 1,25	17	40	10	8	13
DGIHO-K	16 DO*	DGIHO-KL	16 DO*	16	20,7	45	M 12 x 1,25	21	45	14	11	13
DGIHO-K	20 DO*	DGIHO-KL	20 DO*	20	24,1	55	M 14 x 1,5	25	55	16	13	17
DGIHO-K	25 DO	DGIHO-KL	25 DO	25	29,3	65	M 16 x 1,5	30	62	20	17	17
DGIHO-K	30 DO	DGIHO-KL	30 DO	30	34,2	80	M 20 x 1,5	36	77	22	19	19
DGIHO-K	40 DO	DGIHO-KL	40 DO	40	45,0	100	M 27 x 2	45	90	28	23	23
DGIHO-K	50 DO	DGIHO-KL	50 DO	50	56,0	120	M 33 x 2	55	105	35	30	30
DGIHO-K	60 DO	DGIHO-KL	60 DO	60	66,8	160	M 42 x 2	68	134	44	38	38
DGIHO-K	80 DO	DGIHO-KL	80 DO	80	89,4	205	M 48 x 2	90	156	55	47	47
DGIHO-K	100 DO	DGIHO-KL	100 DO	100	109,5	240	M 64 x 3	110	190	70	55	55

type	measurement [mm]				α [°]	load rating	weight
	h1	l3	l4	l7		C0 [KN]	[kg]
DGIHO-K / DGIHO-KL 12 DO*	42	15	59,5	16	11	17,0	0,12
DGIHO-K / DGIHO-KL 16 DO	48	17	70,5	20	10	28,5	0,22
DGIHO-K / DGIHO-KL 20 DO	58	19	85,5	25	9	42,5	0,43
DGIHO-K / DGIHO-KL 25 DO	68	23	100,5	30	7	67,0	0,67
DGIHO-K / DGIHO-KL 30 DO	85	29	125,0	35	6	108,0	1,25
DGIHN-K / DGIHN-KL 40 DO	105	37	155,0	45	7	156,0	2,16
DGIHN-K / DGIHN-KL 50 DO	130	46	190,0	58	6	245,0	3,90
DGIHN-K / DGIHN-KL 60 DO	150	57	230,0	68	6	380,0	7,15
DGIHN-K / DGIHN-KL 80 DO	185	64	287,5	82	6	585,0	15,00
DGIHN-K / DGIHN-KL 100 DO	240	86	360,0	116	6	865,0	27,30

hydraulic rod ends

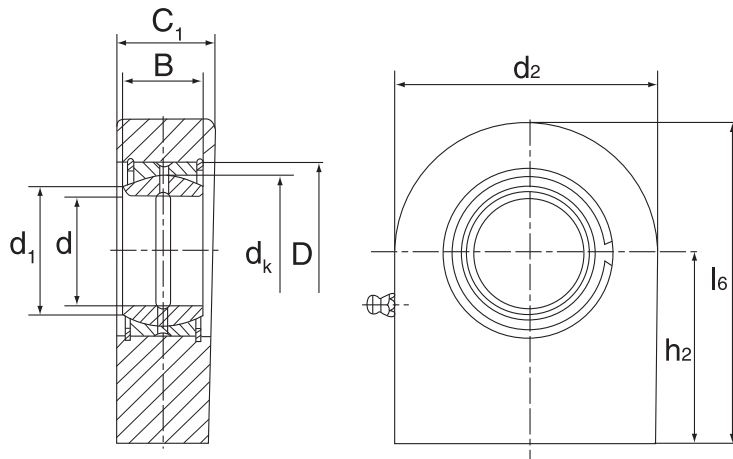
Description: Hydraulic rod end with square welding end. Made of spherical plain bearing DGE.. ES (ES-2RS) pressed into rod end housing. Sliding combination steel / steel. Housing made of weldable steel. Type DGF...DO-2RS with two additional seals available on request with grease nipple.

Sliding combination:
steel / steel

Inner ring:
bearing steel, hardened, ground and phosphated

Outer ring:
bearing steel, hardened, ground and phosphated

Lubrication:
lubrication required



order number type	measurement [mm]				
	d	d ₁	d ₂	B	C ₁
DGF 20 DO	20	24,1	50	16	19
DGF 25 DO	25	29,3	55	20	23
DGF 30 DO	30	34,2	65	22	28
DGF 35 DO	35	39,7	83	25	30
DGF 40 DO	40	45,0	100	28	35
DGF 45 DO	45	50,7	110	32	40
DGF 50 DO	50	55,9	123	35	40
DGF 60 DO	60	66,8	140	44	50
DGF 70 DO	70	77,8	164	49	55
DGF 80 DO	80	89,4	180	55	60
DGF 90 DO	90	98,1	226	60	65
DGF 100 DO	100	109,5	250	70	70
DGF 110 DO	110	121,2	295	70	80
DGF 120 DO	120	135,5	360	85	90

type	measurement [mm]				load rating C ₀ [KN]	weight [kg]
	h ₂	l ₆	D	dk		
DGF 20 DO	38	63,0	35	29,0	67,0	0,35
DGF 25 DO	45	72,5	42	35,5	69,5	0,53
DGF 30 DO	51	83,5	47	40,7	118,0	0,87
DGF 35 DO	61	102,5	55	47,0	196,0	1,50
DGF 40 DO	69	119,0	62	53,0	300,0	2,40
DGF 45 DO	77	132,0	68	60,0	380,0	3,40
DGF 50 DO	88	149,5	75	66,0	440,0	4,40
DGF 60 DO	100	170,0	90	80,0	570,0	7,10
DGF 70 DO	115	197,0	105	92,0	695,0	10,50
DGF 80 DO	141	231,0	120	105,0	780,0	15,00
DGF 90 DO	150	263,0	130	115,0	1340,0	23,50
DGF 100 DO	170	295,0	150	130,0	1500,0	31,50
DGF 110 DO	185	332,5	160	140,0	2160,0	48,50
DGF 120 DO	210	390,0	180	160,0	3250,0	79,00

Sliding combination:
steel / steel

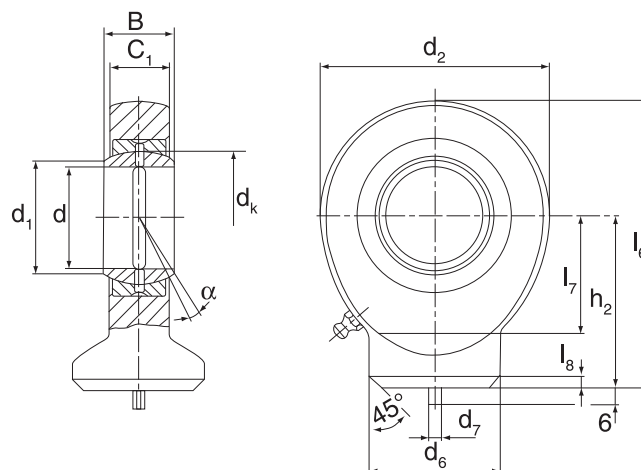
Inner ring:
bearing steel, hardened, ground and phosphated

Outer ring:
bearing steel, hardened, ground and phosphated

Lubrication:
lubrication required

Description: DIN ISO Hydraulic rod end with welding slope and dowel pin at the end of rod. Made of spherical plain bearing DGE.. ES (ES-2RS) pressed into rod end housing. Sliding combination steel / steel.
Type DGK...DO-2RS with two additional seals available on request with grease nipple.

hydraulic rod ends, according to DIN ISO 12240-4, series E



order number type	measurement [mm]						
	d	d ₁	d ₂	d ₇	d ₆	B	C ₁
DGK 10 DO*	10	13,2	29	3	15,0	9	7
DGK 12 DO*	12	14,9	34	3	17,5	10	8
DGK 15 DO**	15	18,4	40	4	21,0	12	10
DGK 17 DO**	17	20,7	46	4	24,0	14	11
DGK 20 DO**	20	24,1	53	4	27,5	16	13
DGK 25 DO	25	29,3	64	4	33,5	20	17
DGK 30 DO	30	34,2	73	4	40,0	22	19
DGK 35 DO	35	39,7	82	4	47,0	25	21
DGK 40 DO	40	45,0	92	4	52,0	28	23
DGK 45 DO	45	50,7	102	6	58,0	32	27
DGK 50 DO	50	55,9	112	6	62,0	35	30
DGK 60 DO	60	66,8	135	6	70,0	44	38
DGK 70 DO	70	77,8	160	6	80,0	49	42
DGK 80 DO	80	89,4	180	6	95,0	55	47

type	measurement [mm]						load rating C ₀ [kN]	weight [kg]
	h ₂	l ₆	l ₇	l ₈	D	dk		
DGK 10 DO*	24	38,5	15,0	1,5	19	16,0	15,6	0,041
DGK 12 DO*	27	44,0	18,0	1,5	22	18,0	21,6	0,066
DGK 15 DO**	31	51,0	20,0	2,0	26	22,0	32,0	0,120
DGK 17 DO**	35	58,0	23,0	2,0	30	25,0	40,0	0,190
DGK 20 DO**	38	64,5	27,5	2,0	35	29,0	54,0	0,230
DGK 25 DO	45	77,0	33,0	3,0	42	35,5	72,0	0,430
DGK 30 DO	51	87,5	37,5	3,0	47	40,7	95,0	0,640
DGK 35 DO	61	102,0	43,0	3,0	55	47,0	125,0	0,960
DGK 40 DO	69	115,0	48,0	4,0	62	53,0	156,0	1,300
DGK 45 DO	77	128,0	52,0	4,0	68	60,0	208,0	1,800
DGK 50 DO	88	144,0	59,0	4,0	75	66,0	250,0	2,500
DGK 60 DO	100	167,5	72,5	4,0	90	80,0	390,0	3,900
DGK 70 DO	115	195,0	86,0	5,0	105	92,0	510,0	6,600
DGK 80 DO	141	231,0	98,0	5,0	120	105,0	620,0	8,700

spherical plain bearing;
maintenance free,
according to
DIN ISO 12240-1,
series K

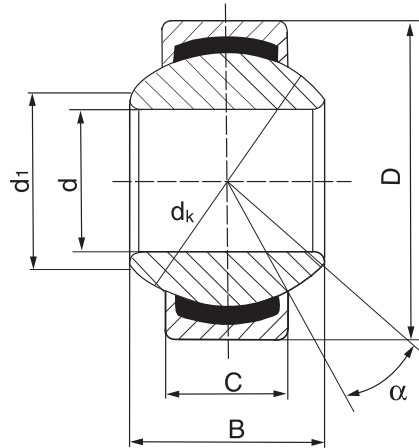
Description: spherical plain bearing with sliding combination steel / bronze-PTFE composite.

Sliding combination:
steel / bronze-PTFE composite

Inner ring:
bearing steel, hardened and ground

Outer ring:
brass body pressed around inner ring,
outer race lined with bronze-PTFE
composite

Lubrication:
maintenance free



order number type	measurement [mm]			
	d	B	C	d ₁
DG 5 PW	5	8	6,00	7,7
DG 6 PW	6	9	6,75	8,9
DG 8 PW	8	12	9,00	10,3
DG 10 PW	10	14	10,50	12,9
DG 12 PW	12	16	12,00	15,4
DG 14 PW	14	19	13,50	16,8
DG 16 PW	16	21	15,00	19,3
DG 18 PW	18	23	16,50	21,8
DG 20 PW	20	25	18,00	24,3
DG 22 PW	22	28	20,00	25,8
DG 25 PW	25	31	22,00	29,5
DG 30 PW	30	37	25,00	34,8
DG 35 PW	35	43	28,00*	37,7*
DG 40 PW	40	49	33,00*	45,2
DG 50 PW	50	60	45,00	56,6

type	measurement [mm]		load rating	weight
	D	dk	C ₀ [KN]	[kg]
DG 5 PW	13	11,1	17	0,007
DG 6 PW	16	12,7	22	0,010
DG 8 PW	19	15,8	36	0,016
DG 10 PW	22	19,0	50	0,031
DG 12 PW	26	22,2	67	0,065
DG 14 PW	28	25,4	86	0,090
DG 16 PW	32	28,5	107	0,100
DG 18 PW	35	31,7	131	0,125
DG 20 PW	40	34,9	157	0,180
DG 22 PW	42	38,1	191	0,210
DG 25 PW	47	42,8	236	0,295
DG 30 PW	55	50,8	318	0,425
DG 35 PW	62*	57,1	400	0,500
DG 40 PW	75*	66,6	550	0,900
DG 50 PW	90	82,5	928	1,640

Sliding combination:
steel / bronze-PTFE composite

Inner ring:
bearing steel, hardened and ground

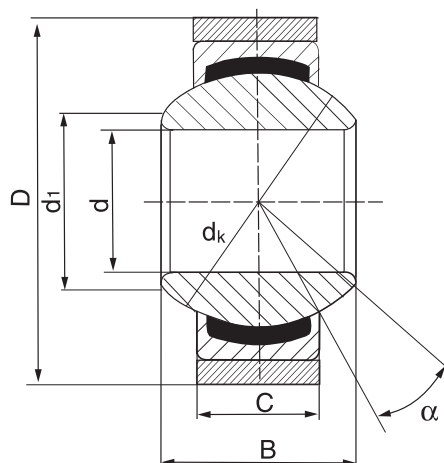
Outer ring:
bronze body pressed around inner ring,
outer race lined with bronze-PTFE
composite

Outer part:
steel bush, outer diameter ground, with
integrated bearing DG...PW

Lubrication:
maintenance free

Description: spherical plain bearing with sliding combination steel / bronze. Bearing type DG...PB pressed into steel bush.

spherical plain bearing;
maintenance free,
similar to
DIN ISO 12240-1,
series K



order number type	measurement [mm]			
	d	B	C	d ₁
DS 5 PW	5	8	6,00	7,7
DS 6 PW	6	9	6,75	8,9
DS 8 PW	8	12	9,00	10,3
DS 10 PW	10	14	10,50	12,9
DS 12 PW	12	16	12,00	15,4
DS 14 PW	14	19	13,50	16,8
DS 16 PW	16	21	15,00	19,3
DS 18 PW	18	23	16,50	21,8
DS 20 PW	20	25	18,00	24,3
DS 22 PW	22	28	20,00	25,8
DS 25 PW	25	31	22,00	29,5
DS 30 PW	30	37	25,00	34,8

type	measurement [mm]		α [°]	load rating C ₀ [KN]	weight [kg]
	D	d _k			
DS 5 PW	16*	11,1	13	17	0,009
DS 6 PW	18*	12,7	13	22	0,013
DS 8 PW	22*	15,8	13	36	0,024
DS 10 PW	26*	19,0	13	50	0,040
DS 12 PW	30*	22,2	13	67	0,080
DS 14 PW	34*	25,4	15	86	0,110
DS 16 PW	38*	28,5	15	107	0,130
DS 18 PW	42*	31,7	15	131	0,170
DS 20 PW	46*	34,9	15	157	0,230
DS 22 PW	50*	38,1	15	191	0,280
DS 25 PW	56*	42,8	15	236	0,390
DS 30 PW	66*	50,8	15	318	0,610

spherical plain bearing;
maintenance free,
according to
DIN ISO 12240-1,
series E

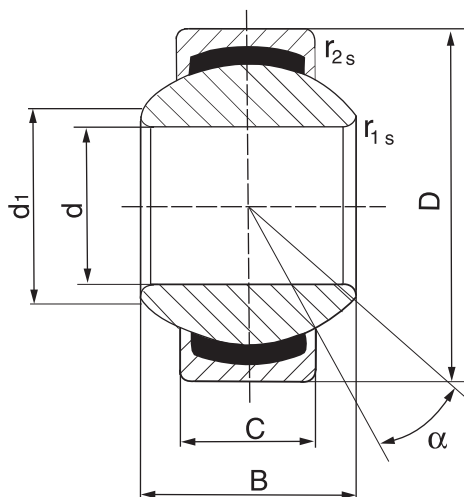
Description: spherical plain bearing with sliding combination steel / bronze-PTFE composite.

Sliding combination:
steel / bronze-PTFE composite

Inner ring:
bearing steel, hardened, ground and spherical surface chromium plated

Outer ring:
pressed around inner ring, outer race lined with bronze-PTFE composite

Lubrication:
maintenance free



order number type	measurement [mm]			
	d	B	C	d ₁ min
DGE 6 UK	6	6	4	8
DGE 8 UK	8	8	5	10
DGE 10 UK	10	9	6	13
DGE 12 UK	12	10	7	15
DGE 15 UK	15	12	9	18
DGE 17 UK	17	14	10	20
DGE 20 UK	20	16	12	24
DGE 25 UK	25	20	16	29
DGE 30 UK	30	22	18	34

type	measurement [mm]			α [°]	load rating C ₀ [kN]	weight [kg]
	r _{1s} min	r _{2s} min	D			
DGE 6 UK	0,3	0,3	14	13	9,1	0,004
DGE 8 UK	0,3	0,3	16	15	14,0	0,008
DGE 10 UK	0,3	0,3	19	12	21,0	0,011
DGE 12 UK	0,3	0,3	22	10	28,0	0,015
DGE 15 UK	0,3	0,3	26	8	45,0	0,027
DGE 17 UK	0,3	0,3	30	10	56,0	0,041
DGE 20 UK	0,3	0,3	35	9	78,0	0,066
DGE 25 UK	0,6	0,6	42	7	127,0	0,119
DGE 30 UK	0,6	0,6	47	6	166,0	0,163

Sliding combination:
stainless steel / bronze-PTFE composite

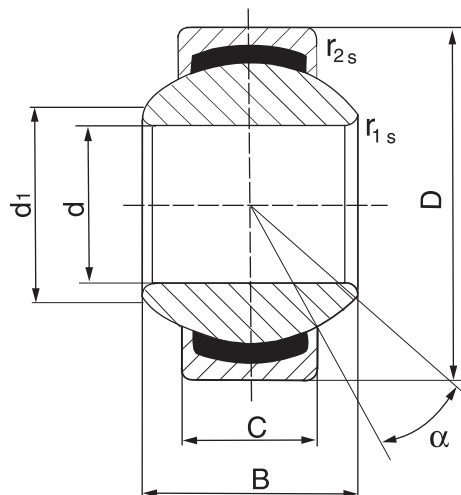
Inner ring:
stainless steel, hardened and ground

Outer ring:
stainless steel body pressed around inner ring, outer race lined with bronze-PTFE composite

Lubrication:
maintenance free

Description: spherical plain bearing with sliding combination stainless steel / bronze-PTFE composite.
Stainless steel.

spherical plain bearing;
maintenance free,
according to
DIN ISO 12240-1,
series E,
in stainless steel



order number type	measurement [mm]			
	d	B	C	d ₁ min
DSGE 6 UK	6	6	4	8
DSGE 8 UK	8	8	5	10
DSGE 10 UK	10	9	6	13
DSGE 12 UK	12	10	7	15
DSGE 15 UK	15	12	9	18
DSGE 17 UK	17	14	10	20
DSGE 20 UK	20	16	12	24
DSGE 25 UK	25	20	16	29
DSGE 30 UK	30	22	18	34

type	measurement [mm]			α [°]	load rating C_0 [kN]	weight [kg]
	r _{1s} min	r _{2s} min	D			
DSGE 6 UK	0,3	0,3	14	13	9,1	0,004
DSGE 8 UK	0,3	0,3	16	15	14,0	0,008
DSGE 10 UK	0,3	0,3	19	12	21,0	0,011
DSGE 12 UK	0,3	0,3	22	10	28,0	0,015
DSGE 15 UK	0,3	0,3	26	8	45,0	0,027
DSGE 17 UK	0,3	0,3	30	10	56,0	0,041
DSGE 20 UK	0,3	0,3	35	9	78,0	0,066
DSGE 25 UK	0,6	0,6	42	7	127,0	0,119
DSGE 30 UK	0,6	0,6	47	6	166,0	0,163

spherical plain bearing;
maintenance free,
according to
DIN ISO 12240-1,
series E

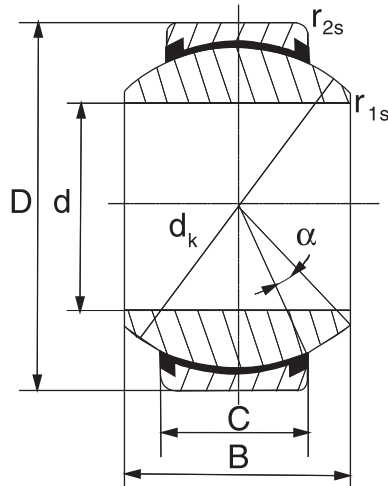
Description: spherical plain bearing with sliding combination steel / bronze-PTFE composite. Outer ring with two seals.

Sliding combination:
steel / bronze - PTFE composite

Inner ring:
bearing steel, hardened, ground and spherical surface chromium plated

Outer ring:
bearing steel, hardened, ground, single split in axial direction, outer race lined with bronze-PTFE composite, lip seals on both sides

Lubrication:
maintenance free



order number type	measurement [mm]			
	d	B	C	d ₁ min
DGE 15 UK-2RS	15	12	9	18
DGE 17 UK-2RS	17	14	10	20
DGE 20 UK-2RS	20	16	12	24
DGE 25 UK-2RS	25	20	16	29
DGE 30 UK-2RS	30	22	18	34
DGE 35 UK-2RS	35	25	20	39
DGE 40 UK-2RS	40	28	22	45
DGE 45 UK-2RS	45	32	25	50
DGE 50 UK-2RS	50	35	28	55
DGE 60 UK-2RS	60	44	36	66
DGE 70 UK-2RS	70	49	40	77
DGE 80 UK-2RS	80	55	45	88
DGE 90 UK-2RS	90	60	50	98
DGE 100 UK-2RS	100	70	55	109
DGE 110 UK-2RS	110	70	55	120
DGE 120 UK-2RS	120	85	70	130

type	measurement [mm]			α [°]	load rating C ₀ [kN]	weight [kg]
	r _{1s} min	r _{2s} min	D			
DGE 15 UK-2RS	0,3	0,3	26	10	60	0,041
DGE 17 UK-2RS	0,3	0,3	30	10	60	0,041
DGE 20 UK-2RS	0,3	0,3	35	9	83	0,066
DGE 25 UK-2RS	0,6	0,6	42	7	137	0,119
DGE 30 UK-2RS	0,6	0,6	47	6	176	0,153
DGE 35 UK-2RS	0,6	1,0	55	6	224	0,233
DGE 40 UK-2RS	0,6	1,0	62	7	280	0,306
DGE 45 UK-2RS	0,6	1,0	68	7	360	0,427
DGE 50 UK-2RS	0,6	1,0	75	6	440	0,546
DGE 60 UK-2RS	1,0	1,0	90	6	695	1,040
DGE 70 UK-2RS	1,0	1,0	105	6	880	1,550
DGE 80 UK-2RS	1,0	1,0	120	6	1140	2,310
DGE 90 UK-2RS	1,0	1,0	130	5	1370	2,750
DGE 100 UK-2RS	1,0	1,0	150	7	1730	4,450
DGE 110 UK-2RS	1,0	1,0	160	6	1860	4,820
DGE 120 UK-2RS	1,0	1,0	180	6	2700	8,050

Sliding combination:
steel / bronze-PTFE composite

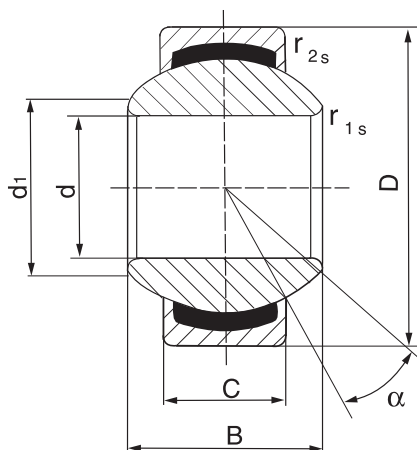
Description: spherical plain bearing with sliding combination steel / bronze-PTFE composite.

spherical plain bearing;
maintenance free,
according to
DIN ISO 12240-1,
series G

Inner ring:
bearing steel, hardened, ground and spherical surface chromium plated

Outer ring:
bearing steel pressed around inner ring, outer race lined with bronze-PTFE composite

Lubrication:
maintenance free



order number type	measurement [mm]			
	d	B	C	d ₁ min
DGE 6 FW	6	9	5	9
DGE 8 FW	8	11	6	11
DGE 10 FW	10	12	7	13
DGE 12 FW	12	15	9	16
DGE 15 FW	15	16	10	19
DGE 17 FW	17	20	12	21
DGE 20 FW	20	25	16	24
DGE 25 FW	25	28	18	29
DGE 30 FW	30	32	20	34

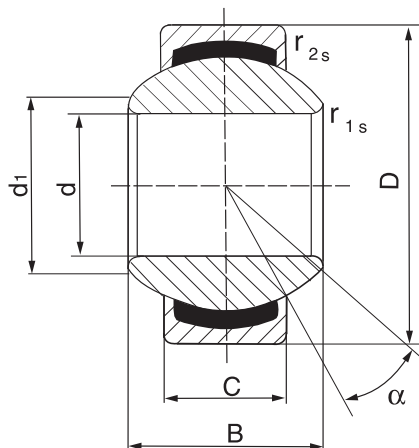
type	measurement [mm]			α [°]	load rating C ₀ [kN]	weight [kg]
	r _{1s} min	r _{2s} min	D			
DGE 6 FW	0,3	0,3	16	21	14,0	0,008
DGE 8 FW	0,3	0,3	19	21	21,0	0,014
DGE 10 FW	0,3	0,3	22	18	28,0	0,021
DGE 12 FW	0,3	0,3	26	18	45,0	0,033
DGE 15 FW	0,3	0,3	30	16	56,0	0,049
DGE 17 FW	0,3	0,3	35	19	78,0	0,083
DGE 20 FW	0,3	0,3	42	17	127,0	0,153
DGE 25 FW	0,6	0,6	47	17	166,0	0,203
DGE 30 FW	0,6	0,6	55	17	212,0	0,304

DSGE...FW stainless steel



spherical plain bearing;
maintenance free,
according to
DIN ISO 12240-1,
series G,
in stainless steel

Description: spherical plain bearing with sliding combination stainless steel / bronze-PTFE composite.
Stainless steel.



Sliding combination:
stainless steel / bronze-PTFE composite

Inner ring:
stainless steel, hardened, ground and polished

Outer ring:
stainless steel body pressed around inner ring, outer race lined with bronze-PTFE composite

Lubrication:
maintenance free

Attention:
Articles have minimum quantity

order number type	measurement [mm]			
	d	B	C	d ₁ min
DSGE 6 FW	6	9	5	9
DSGE 8 FW	8	11	6	11
DSGE 10 FW	10	12	7	13
DSGE 12 FW	12	15	9	16
DSGE 15 FW	15	16	10	19
DSGE 17 FW	17	20	12	21
DSGE 20 FW	20	25	16	24
DSGE 25 FW	25	28	18	29
DSGE 30 FW	30	32	20	34

type	measurement [mm]			α [°]	load rating C ₀ [kN]	weight [kg]
	r _{1s} min	r _{2s} min	D			
DSGE 6 FW	0,3	0,3	16	21	14,0	0,008
DSGE 8 FW	0,3	0,3	19	21	21,0	0,014
DSGE 10 FW	0,3	0,3	22	18	28,0	0,021
DSGE 12 FW	0,3	0,3	26	18	45,0	0,033
DSGE 15 FW	0,3	0,3	30	16	56,0	0,049
DSGE 17 FW	0,3	0,3	35	19	78,0	0,083
DSGE 20 FW	0,3	0,3	42	17	127,0	0,153
DSGE 25 FW	0,6	0,6	47	17	166,0	0,203
DSGE 30 FW	0,6	0,6	55	17	212,0	0,304

Sliding combination:
steel / bronze-PTFE composite

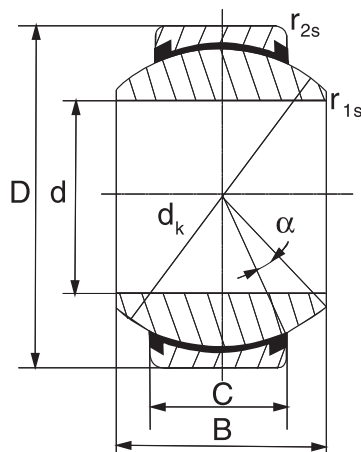
Inner ring:
bearing steel, hardened, ground and
spherical surface chromium plated

Outer ring:
bearing steel, hardened, ground, single
split in axial direction, outer race lined
with bronze-PTFE composite, lip seals on
both sides

Lubrication:
maintenance free

Description: spherical plain bearing with sliding
combination steel / bronze-PTFE composite. Outer ring
with two seals.

**spherical plain
bearing;
maintenance free,
according to
DIN ISO 12240-1,
series G**



order number type	measurement [mm]		
	d	B	C
DGE 15 FW-2RS	15	16	10
DGE 17 FW-2RS	17	20	12
DGE 20 FW-2RS	20	25	16
DGE 25 FW-2RS	25	28	18
DGE 30 FW-2RS	30	32	20
DGE 35 FW-2RS	35	35	23
DGE 40 FW-2RS	40	40	25
DGE 45 FW-2RS	45	43	28
DGE 50 FW-2RS	50	56	36
DGE 60 FW-2RS	60	63	40
DGE 70 FW-2RS	70	70	45
DGE 80 FW-2RS	80	75	50
DGE 90 FW-2RS	90	85	55
DGE 100 FW-2RS	100	85	55

type	measurement [mm]					load rating C_0 [kN]	weight [kg]
	r_{1s} min	r_{2s} min	D	d_k	α [°]		
DGE 15 FW-2RS	0,3	0,3	30	25,0	16	56	0,046
DGE 17 FW-2RS	0,3	0,3	35	29,0	19	78	0,078
DGE 20 FW-2RS	0,6	0,6	42	35,5	17	127	0,150
DGE 25 FW-2RS	0,6	0,6	47	40,7	17	166	0,190
DGE 30 FW-2RS	0,6	1,0	55	47,0	17	224	0,290
DGE 35 FW-2RS	0,6	1,0	62	53,0	16	280	0,390
DGE 40 FW-2RS	0,6	1,0	68	60,0	17	360	0,520
DGE 45 FW-2RS	0,6	1,0	75	66,0	15	440	0,680
DGE 50 FW-2RS	0,6	1,0	90	80,0	17	695	1,400
DGE 60 FW-2RS	1,0	1,0	105	92,0	17	880	2,000
DGE 70 FW-2RS	1,0	1,0	120	105,0	16	1140	2,900
DGE 80 FW-2RS	1,0	1,0	130	115,0	14	1370	3,500
DGE 90 FW-2RS	1,0	1,0	150	130,0	15	1730	5,400
DGE 100 FW-2RS	1,0	1,0	160	140,0	14	1860	5,900

spherical plain bearing;
according to
DIN ISO 12240-1,
series K

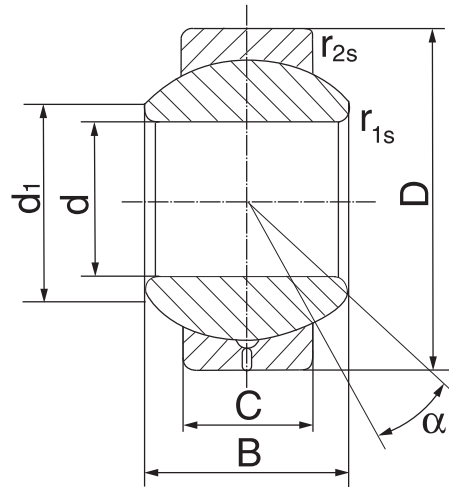
Description: spherical plain bearing with sliding combination steel / bronze. Lubrication groove and hole in outer ring. Outer ring pressed around inner ring.

Sliding combination:
steel / bronze

Inner ring:
bearing steel, hardened and ground

Outer ring:
bronze body pressed around inner ring

Lubrication:
lubrication required



order number type	measurement [mm]			
	d	B	C	d ₁
DG 5 PB	5	8	6,00	7,7
DG 6 PB	6	9	6,75	8,9
DG 8 PB	8	12	9,00	10,3
DG 10 PB	10	14	10,50	12,9
DG 12 PB	12	16	12,00	15,4
DG 14 PB	14	19	13,50	16,8
DG 16 PB	16	21	15,00	19,3
DG 18 PB	18	23	16,50	21,8
DG 20 PB	20	25	18,00	24,3
DG 22 PB	22	28	20,00	25,8
DG 25 PB	25	31	22,00	29,5
DG 30 PB	30	37	25,00	34,8
DG 35 PB	35	43	28,00*	37,7*
DG 40 PB	40	49	33,00*	45,2
DG 50 PB	50	60	45,00	56,6

type	measurement [mm]		α [°]	load rating	weight
	D	d _k		C ₀ [kN]	[kg]
DG 5 PB	13	11,1	13	15	0,007
DG 6 PB	16	12,7	13	19	0,010
DG 8 PB	19	15,8	13	31	0,016
DG 10 PB	22	19,0	13	43	0,031
DG 12 PB	26	22,2	13	58	0,065
DG 14 PB	28	25,4	15	74	0,090
DG 16 PB	32	28,5	15	92	0,100
DG 18 PB	35	31,7	15	112	0,125
DG 20 PB	40	34,9	15	135	0,180
DG 22 PB	42	38,1	15	164	0,210
DG 25 PB	47	42,8	15	203	0,295
DG 30 PB	55	50,8	15	273	0,425
DG 35 PB	62*	57,1	16	344	0,500
DG 40 PB	75*	66,6	17	473	0,900
DG 50 PB	90	82,5	12	798	1,640

Sliding combination:
steel / bronze

Inner ring:
bearing steel, hardened and ground

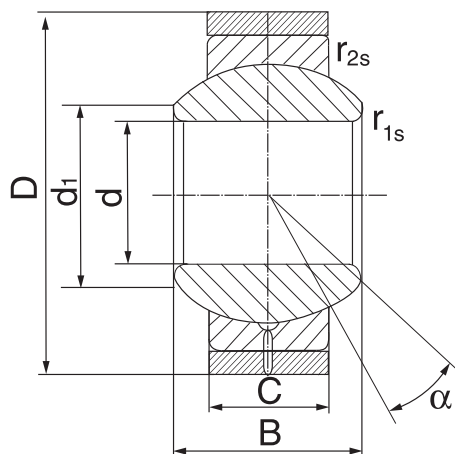
Outer ring:
bronze body pressed around inner ring

Outer part:
steel bush, outer diameter ground, with
intergrated bearing DG...PB

Lubrication:
lubrication required

Description: spherical plain bearing with sliding
combination steel / bronze. Bearing type DG...PB pressed
into steel bush. Lubrication groove and hole in outer
ring. Outer ring pressed around inner ring.

**spherical plain
bearing;
similar to
DIN ISO 12240-1,
series K**



order number type	measurement [mm]			
	d	B	C	d ₁
DS 5 PB	5	8	6,00	7,7
DS 6 PB	6	9	6,75	8,9
DS 8 PB	8	12	9,00	10,3
DS 10 PB	10	14	10,50	12,9
DS 12 PB	12	16	12,00	15,4
DS 14 PB	14	19	13,50	16,8
DS 16 PB	16	21	15,00	19,3
DS 18 PB	18	23	16,50	21,8
DS 20 PB	20	25	18,00	24,3
DS 22 PB	22	28	20,00	25,8
DS 25 PB	25	31	22,00	29,5
DS 30 PB	30	37	25,00	29,5

type	measurement [mm]		α [°]	load rating C ₀ [KN]	weight [kg]
	D	d _k			
DS 5 PB	16*	11,1	13	15	0,009
DS 6 PB	18*	12,7	13	19	0,013
DS 8 PB	22*	15,8	13	31	0,024
DS 10 PB	26*	19,0	13	43	0,040
DS 12 PB	30*	22,2	13	58	0,080
DS 14 PB	34*	25,4	15	74	0,110
DS 16 PB	38*	28,5	15	92	0,130
DS 18 PB	42*	31,7	15	112	0,170
DS 20 PB	46*	34,9	15	135	0,230
DS 22 PB	50*	38,1	15	164	0,280
DS 25 PB	56*	42,8	15	203	0,390
DS 30 PB	66*	50,8	15	273	0,610

spherical plain bearing;
similar to
DIN ISO 12240-1,
series K

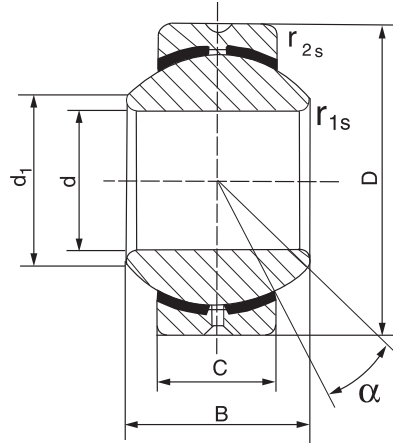
Description: spherical plain bearing with sliding combination steel / bronze-aluminum. Similar to K series, but with larger outer diameter. Lubrication groove and hole in outer ring.

Sliding combination:
steel / bronze - aluminium

Inner ring:
bearing steel, hardened, ground and spherical surface chromium plated

Outer ring:
steel body with aluminium-bronze liner, pressed around inner ring

Lubrication:
lubrication required



order number type	measurement [mm]			
	d	B	C	d ₁ min
DGEBK 5 S	5	8	6,00	7,7
DGEBK 6 S	6	9	6,75	9,0
DGEBK 8 S	8	12	9,00	10,4
DGEBK 10 S	10	14	10,50	12,9
DGEBK 12 S	12	16	12,00	15,4
DGEBK 14 S	14	19	13,50	16,9
DGEBK 16 S	16	21	15,00	19,4
DGEBK 18 S	18	23	16,50	21,9
DGEBK 20 S	20	25	18,00	24,4
DGEBK 22 S	22	28	20,00	25,8
DGEBK 25 S	25	31	22,00	29,6
DGEBK 30 S	30	37	25,00	34,8

type	measurement [mm]			α [°]	load rating C ₀ [kN]	weight [kg]
	r _{1s} min	r _{2s} min	D			
DGEBK 5 S	0,3	0,3	16	13	7,8	0,009
DGEBK 6 S	0,3	0,3	18	13	9,8	0,013
DGEBK 8 S	0,3	0,3	22	14	16,0	0,024
DGEBK 10 S	0,3	0,6	26	14	23,0	0,039
DGEBK 12 S	0,3	0,6	30	13	31,0	0,058
DGEBK 14 S	0,3	0,6	34	16	40,0	0,084
DGEBK 16 S	0,3	0,6	38	15	50,0	0,111
DGEBK 18 S	0,3	0,6	42	15	61,0	0,160
DGEBK 20 S	0,3	0,6	46	15	73,0	0,210
DGEBK 22 S	0,3	0,6	50	15	88,0	0,260
DGEBK 25 S	0,6	0,6	56	15	110,0	0,390
DGEBK 30 S	0,6	0,6	66	17	148,0	0,610

Sliding combination:
steel / steel

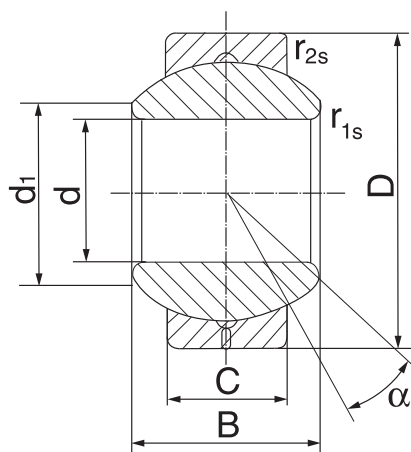
Inner ring:
bearing steel, hardened, ground and polished

Outer ring:
steel body with aluminium-bronze liner, pressed around inner ring

Lubrication:
lubrication required

Description: spherical plain bearing with sliding combination steel / steel. Lubrication groove and hole in outer ring

spherical plain bearing;
according to
DIN ISO 12240-1,
series K



order number type	measurement [mm]			
	d	B	C	d ₁ min
DGEBJ 5 S	5	8	6,00	7,7
DGEBJ 6 S	6	9	6,75	9,0
DGEBJ 8 S	8	12	9,00	10,4
DGEBJ 10 S	10	14	10,50	12,9
DGEBJ 12 S	12	16	12,00	15,4
DGEBJ 14 S	14	19	13,50	16,9
DGEBJ 16 S	16	21	15,00	19,4
DGEBJ 18 S	18	23	16,50	21,9
DGEBJ 20 S	20	25	18,00	24,4
DGEBJ 22 S	22	28	20,00	25,8
DGEBJ 25 S	25	31	22,00	29,6
DGEBJ 30 S	30	37	25,00	34,8

type	measurement [mm]			load rating C ₀ [kN]	weight [kg]
	r _{1s} min	r _{2s} min	D		
DGEBJ 5 S	0,3	0,3	13	9,0	0,007
DGEBJ 6 S	0,3	0,3	16	12,0	0,010
DGEBJ 8 S	0,3	0,3	19	20,0	0,016
DGEBJ 10 S	0,3	0,6	22	28,0	0,031
DGEBJ 12 S	0,3	0,6	26	37,0	0,055
DGEBJ 14 S	0,3	0,6	28	49,0	0,078
DGEBJ 16 S	0,3	0,6	32	61,0	0,095
DGEBJ 18 S	0,3	0,6	35	74,0	0,140
DGEBJ 20 S	0,3	0,6	40	89,0	0,180
DGEBJ 22 S	0,3	0,6	42	108,0	0,210
DGEBJ 25 S	0,6	0,6	47	130,0	0,350
DGEBJ 30 S	0,6	0,6	55	178,0	0,560

DGE...E / DGE...ES / DGE...ES-2RS



spherical plain bearing;
according to
DIN ISO 12240-1,
series E

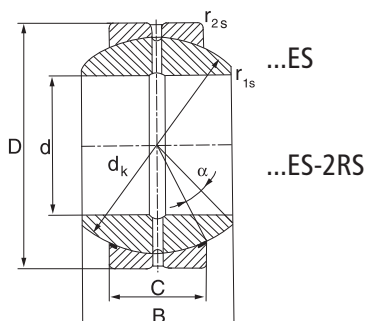
Description: spherical plain bearing with sliding combination steel / steel. ES type (size ≥ 15) with lubrication grooves and holes in inner and outer ring. Outer ring of type DGE...ES-2RS with two seals.

Sliding combination:
steel / steel

Inner ring:
bearing steel, hardened, ground and phosphated

Outer ring:
bearing steel, hardened, ground and phosphated, single split in axial direction

Lubrication:
lubrication required



order number		measurement [mm]			
right hand thread	left hand thread	d	B	C	D
DGE 6 E		6	6	4	14
DGE 8 E		8	8	5	16
DGE 10 E		10	9	6	19
DGE 12 E		12	10	7	22
DGE 15 ES	DGE 15 ES-2RS	15	12	9	26
DGE 16 ES	DGE 16 ES-2RS	16	14	10	30
DGE 17 ES	DGE 17 ES-2RS	17	14	10	30
DGE 20 ES	DGE 20 ES-2RS	20	16	12	35
DGE 25 ES	DGE 25 ES-2RS	25	20	16	42
DGE 30 ES	DGE 30 ES-2RS	30	22	18	47
DGE 35 ES	DGE 35 ES-2RS	35	25	20	55
DGE 40 ES	DGE 40 ES-2RS	40	28	22	62
DGE 45 ES	DGE 45 ES-2RS	45	32	25	68
DGE 50 ES	DGE 50 ES-2RS	50	35	28	75
DGE 60 ES	DGE 60 ES-2RS	60	44	36	90
DGE 70 ES	DGE 70 ES-2RS	70	49	40	105
DGE 80 ES	DGE 80 ES-2RS	80	55	45	120
DGE 90 ES	DGE 90 ES-2RS	90	60	50	130
DGE 100 ES	DGE 100 ES-2RS	100	70	55	150
DGE 110 ES	DGE 110 ES-2RS	110	70	55	160
DGE 120 ES	DGE 120 ES-2RS	120	85	70	180
DGE 140 ES	DGE 140 ES-2RS	140	90	70	210
DGE 160 ES	DGE 160 ES-2RS	160	105	80	230

type	measurement [mm]			α [°]	load rating	weight
	r _{1s} min	r _{2s} min	d _k		C ₀ [kN]	[kg]
DGE 6 E	0,3	0,3	10,0	13	17,0	0,004
DGE 8 E	0,3	0,3	13,0	15	27,5	0,007
DGE 10 E	0,3	0,3	16,0	12	40,5	0,011
DGE 12 E	0,3	0,3	18,0	11	54,0	0,016
DGE 15 ES	0,3	0,3	22,0	8	85,0	0,025
DGE 16 ES	0,3	0,3	25,0	10	106,0	0,041
DGE 17 ES	0,3	0,3	25,0	10	106,0	0,041
DGE ES / DGE 20 ES-2RS	0,6	0,3	29,0	9	146,0	0,061
DGE ES / DGE 25 ES-2RS	0,6	0,6	35,5	7	240,0	0,110
DGE ES / DGE 30 ES-2RS	0,6	0,6	40,7	6	310,0	0,140
DGE ES / DGE 35 ES-2RS	0,6	1,0	47,0	6	400,0	0,220
DGE ES / DGE 40 ES-2RS	0,6	1,0	53,0	7	500,0	0,300
DGE ES / DGE 45 ES-2RS	0,6	1,0	60,0	7	640,0	0,400
DGE ES / DGE 50 ES-2RS	1,0	1,0	66,0	6	780,0	0,540
DGE ES / DGE 60 ES-2RS	1,0	1,0	80,0	6	1220,0	1,000
DGE ES / DGE 70 ES-2RS	1,0	1,0	92,0	6	1560,0	1,500
DGE ES / DGE 80 ES-2RS	1,0	1,0	105,0	6	2000,0	2,200
DGE ES / DGE 90 ES-2RS	1,0	1,0	115,0	5	2450,0	2,700
DGE ES / DGE 100 ES-2RS	1,0	1,0	130,0	7	3050,0	4,300
DGE ES / DGE 110 ES-2RS	1,0	1,0	140,0	6	3250,0	4,700
DGE ES / DGE 120 ES-2RS	1,0	1,0	160,0	6	4750,0	8,000
DGE ES / DGE 140 ES-2RS	1,0	1,0	180,0	7	5400,0	11,000
DGE ES / DGE 160 ES-2RS	1,0	1,0	200,0	8	6800,0	14,000

dimensions in inches DGEZ...ES/ES-2RS

Sliding combination:
steel / steel

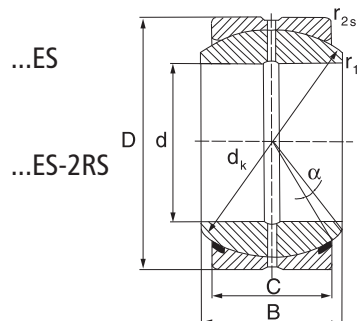
Inner ring:
bearing steel, hardened, ground and phosphated

Outer ring:
bearing steel, hardened, ground and phosphated, single split in axial direction

Lubrication:
lubrication required

Description: spherical plain bearing with sliding combination steel / steel. Dimensions in inches. Lubrication grooves and holes in inner and outer ring. Outer ring of type DGEZ..ES-2RS with two seals.

spherical plain bearing;
similar to
DIN ISO 12240-1
series E,
measurement in inches



order number type		measurement [mm]			
		d	B	C	D
DGEZ 12 ES		12,700	11,100	9,525	22,225
DGEZ 15 ES		15,875	13,894	11,913	26,988
DGEZ 19 ES		19,050	16,662	14,275	31,750
DGEZ 22 ES		22,225	19,431	16,662	36,513
DGEZ 25 ES	DGEZ 25 ES-2RS	25,400	22,225	19,050	41,275
DGEZ 31 ES	DGEZ 31 ES-2RS	31,750	27,762	23,800	50,800
DGEZ 34 ES	DGEZ 34 ES-2RS	34,925	30,150	26,187	55,563
DGEZ 38 ES	DGEZ 38 ES-2RS	38,100	33,325	28,575	61,913
DGEZ 44 ES	DGEZ 44 ES-2RS	44,450	38,887	33,325	71,438
DGEZ 50 ES	DGEZ 50 ES-2RS	50,800	44,450	38,100	80,963
DGEZ 57 ES	DGEZ 57 ES-2RS	57,150	50,013	42,850	90,488
DGEZ 63 ES	DGEZ 63 ES-2RS	63,500	55,550	47,625	100,013
DGEZ 69 ES	DGEZ 69 ES-2RS	69,850	61,112	52,375	111,125
DGEZ 76 ES	DGEZ 76 ES-2RS	76,200	66,675	57,150	120,650
DGEZ 82 ES	DGEZ 82 ES-2RS	82,550	72,238	61,900	130,175
DGEZ 88 ES	DGEZ 88 ES-2RS	88,900	77,775	66,675	139,700
DGEZ 95 ES	DGEZ 95 ES-2RS	95,250	83,337	71,425	149,225
DGEZ 101 ES	DGEZ 101 ES-2RS	101,600	88,900	76,200	158,750
DGEZ 114 ES	DGEZ 114 ES-2RS	114,300	100,013	85,725	177,800
DGEZ 120 ES	DGEZ 120 ES-2RS	120,650	105,562	90,475	187,325

type	inches	measurement [mm]			α [°]	load rating C_0 [KN]	weight [kg]
		r_{1s} min	r_{2s} min	d_k			
DGEZ 12 ES	1 / 2"	0,3	0,6	19,0	6	41	0,022
DGEZ 15 ES	5 / 8"	0,3	0,6	22,0	6	65	0,036
DGEZ 19 ES	3 / 4"	0,3	0,6	27,5	6	95	0,053
DGEZ 22 ES	7 / 8"	0,3	0,6	32,0	6	127	0,085
DGEZ ES / DGEZ 25 ES-2RS	1"	0,3	0,6	35,5	6	166	0,121
DGEZ ES / DGEZ 31 ES-2RS	1 1/4"	0,6	0,6	45,5	6	260	0,232
DGEZ ES / DGEZ 34 ES-2RS	1 3/8"	0,6	1,0	49,0	6	310	0,351
DGEZ ES / DGEZ 38 ES-2RS	1 1/2"	0,6	1,0	53,0	6	375	0,422
DGEZ ES / DGEZ 44 ES-2RS	1 3/4"	0,6	1,0	63,9	6	510	0,641
DGEZ ES / DGEZ 50 ES-2RS	2"	0,6	1,0	73,0	6	670	0,932
DGEZ ES / DGEZ 57 ES-2RS	2 1/4"	0,6	1,0	82,0	6	850	1,330
DGEZ ES / DGEZ 63 ES-2RS	2 1/2"	0,6	1,0	92,0	6	1060	1,850
DGEZ ES / DGEZ 69 ES-2RS	2 3/4"	1,0	1,0	100,0	6	1250	2,420
DGEZ ES / DGEZ 76 ES-2RS	3"	1,0	1,0	109,5	6	1500	3,100
DGEZ ES / DGEZ 82 ES-2RS	3 1/4"	1,0	1,0	120,0	6	1760	3,820
DGEZ ES / DGEZ 88 ES-2RS	3 1/2"	1,0	1,0	130,0	6	2040	4,790
DGEZ ES / DGEZ 95 ES-2RS	3 3/4"	1,0	1,0	100,0	6	2360	5,800
DGEZ ES / DGEZ 101 ES-2RS	4"	1,0	1,0	109,5	6	2650	7,000
DGEZ ES / DGEZ 114 ES-2RS	4 1/2"	1,0	1,0	120,0	6	3400	9,800
DGEZ ES / DGEZ 120 ES-2RS	4 3/4"	1,0	1,0	130,0	6	3750	11,500

DGEG...E / DGE...ES / DGE...ES-2RS



spherical plain bearing;
according to
DIN ISO 12240-1,
series G

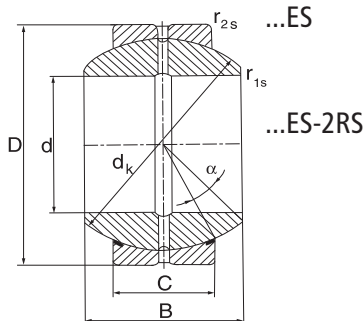
Description: spherical plain bearing with sliding combination steel / steel. ES type (size M 15) with lubrication groove and hole in inner and outer ring. Outer ring of type DGEG...ES-2RS with two seals.

Sliding combination:
steel / steel

Inner ring:
bearing steel, hardened, ground and phosphated

Outer ring:
bearing steel, hardened, ground and phosphated, single split in axial direction

Lubrication:
lubrication required



order number		measurement [mm]			
type		d	B	C	D
DGEG	6 E	6	9	5	16
DGEG	8 E	8	11	6	19
DGEG	10 E	10	12	7	22
DGEG	12 E	12	15	9	26
DGEG	15 ES	15	16	10	30
DGEG	17 ES	17	20	12	35
DGEG	20 ES	20	25	16	42
DGEG	25 ES	25	28	18	47
DGEG	30 ES	30	32	20	55
DGEG	35 ES	35	35	23	62
DGEG	40 ES	40	40	25	68
DGEG	45 ES	45	43	28	75
DGEG	50 ES	50	56	36	90
DGEG	60 ES	60	63	40	105
DGEG	70 ES	70	70	45	120
DGEG	80 ES	80	75	50	130
DGEG	90 ES	90	85	55	150
DGEG	100 ES	100	85	55	160
DGEG	110 ES	110	100	70	180
DGEG	120 ES	120	115	70	210

type	measurement [mm]			α [°]	load rating	weight
	r _{1s} min	r _{2s} min	d _k		C ₀ [kN]	[kg]
DGEG 6 E	0,3	0,3	13,0	21	27,5	0,008
DGEG 8 E	0,3	0,3	16,0	21	40,5	0,014
DGEG 10 E	0,3	0,3	18,0	18	54,0	0,020
DGEG 12 E	0,3	0,3	22,0	18	85,0	0,034
DGEG 15 E	0,3	0,3	25,0	16	106,0	0,046
DGEG 17 E	0,3	0,3	29,0	19	146,0	0,078
DGEG ES / DGEG 20 ES-2RS	0,6	0,6	35,5	17	240,0	0,15
DGEG ES / DGEG 25 ES-2RS	0,6	0,6	40,7	17	310,0	0,19
DGEG ES / DGEG 30 ES-2RS	0,6	1,0	47,0	17	400,0	0,29
DGEG ES / DGEG 35 ES-2RS	0,6	1,0	53,0	16	500,0	0,39
DGEG ES / DGEG 40 ES-2RS	0,6	1,0	60,0	17	640,0	0,52
DGEG ES / DGEG 45 ES-2RS	0,6	1,0	66,0	15	780,0	0,68
DGEG ES / DGEG 50 ES-2RS	0,6	1,0	80,0	17	1220,0	1,40
DGEG ES / DGEG 60 ES-2RS	1,0	1,0	92,0	17	1560,0	2,00
DGEG ES / DGEG 70 ES-2RS	1,0	1,0	105,0	16	2000,0	2,90
DGEG ES / DGEG 80 ES-2RS	1,0	1,0	115,0	14	2450,0	3,50
DGEG ES / DGEG 90 ES-2RS	1,0	1,0	130,0	15	3050,0	5,40
DGEG ES / DGEG 100 ES-2RS	1,0	1,0	140,0	14	3250,0	5,90
DGEG ES / DGEG 110 ES-2RS	1,0	1,0	160,0	11	4750,0	11,00
DGEG ES / DGEG 120 ES-2RS	1,0	1,0	180,0	16	5400,0	15,00

Sliding combination:
steel / steel

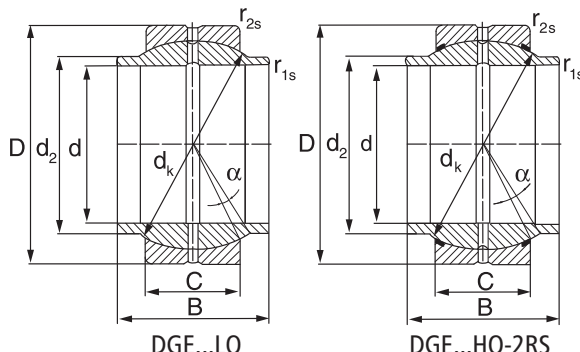
Inner ring:
bearing steel, hardened, ground and phosphated, with cylindric extension on both sides

Outer ring:
bearing steel, hardened, ground and phosphated, single split in axial direction

Lubrication:
lubrication required

Description: spherical plain bearing with sliding combination steel / steel. Inner ring with cylindrical extension at both sides. Lubrication groove and hole in inner and outer ring. Outer ring of type DGE...HO-2RS with two seals.

spherical plain bearing;
similar to
DIN ISO 12240-1,
series W

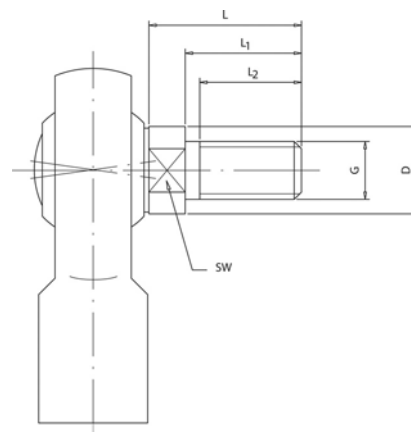


order number	measurement [mm]				
	d	B	C	d ₂ min	D
DGE 12 LO	12	12	7	15,5	22
DGE 16 LO	16	16	9	20,0	28
DGE 20 LO	20	20	12	25,0	35
DGE 25 LO	25	25	16	30,0	42
DGE 30 LO	30	30	18	34,0	47
DGE 32 LO	32	32	18	38,0	52
DGE 35 LO	35	35	20	40,0	55
DGE 40 LO	40	40	22	46,0	62
DGE 50 LO	50	50	28	57,0	75
DGE 60 LO	60	60	36	68,0	90
DGE 63 LO	63	63	36	71,5	95
DGE 70 LO	70	70	40	79,0	105
DGE 80 LO	80	80	45	91,0	120
DGE 20 HO-2RS	20	24	12	24,0	35
DGE 25 HO-2RS	25	29	16	29,0	42
DGE 30 HO-2RS	30	30	18	34,2	47
DGE 35 HO-2RS	35	35	20	40,0	55
DGE 40 HO-2RS	40	38	22	45,0	62
DGE 45 HO-2RS	45	40	25	51,5	68
DGE 50 HO-2RS	50	43	28	56,5	75
DGE 60 HO-2RS	60	54	36	67,7	90
DGE 70 HO-2RS	70	65	40	78,0	105
DGE 80 HO-2RS	80	74	45	90,0	120

type	measurement [mm]				load rating	weight
	r _{1s} min	r _{2s} min	dk	α [°]	C ₀ [kN]	[kg]
DGE 20 LO	0,3	0,3	18,0	4	53	0,022
DGE 25 LO	0,3	0,3	23,0	4	85	0,035
DGE 20 LO	0,3	0,3	29,0	4	146	0,070
DGE 25 LO	0,6	0,6	35,5	4	240	0,120
DGE 30 LO	0,6	0,6	40,0	4	310	0,168
DGE 32 LO	0,6	1,0	44,0	4	335	0,200
DGE 35 LO	0,6	1,0	48,0	4	399	0,253
DGE 40 LO	0,6	1,0	53,0	4	500	0,340
DGE 50 LO	0,6	1,0	66,0	4	780	0,560
DGE 60 LO	1,0	1,0	80,0	4	1220	1,150
DGE 63 LO	1,0	1,0	83,0	4	1270	1,200
DGE 70 LO	1,0	1,0	92,0	4	1560	1,700
DGE 80 LO	1,0	1,0	105,0	4	2000	2,400
DGE 20 HO-2RS	0,2	0,3	29,0	3	146	0,057
DGE 25 HO-2RS	0,2	0,6	35,5	3	240	0,100
DGE 30 HO-2RS	0,2	0,6	40,7	3	310	0,140
DGE 35 HO-2RS	0,3	1,0	47,0	3	400	0,240
DGE 40 HO-2RS	0,3	1,0	53,0	3	500	0,290
DGE 45 HO-2RS	0,3	1,0	60,0	3	640	0,430
DGE 50 HO-2RS	0,3	1,0	66,0	3	780	0,540
DGE 60 HO-2RS	0,3	1,0	80,0	3	1220	1,100
DGE 70 HO-2RS	0,3	1,0	92,0	3	1560	1,600
DGE 80 HO-2RS	0,3	1,0	105,0	3	2000	2,400

Threaded Bolt

In addition to all type of FERROBAL® rod ends series K DURBAL Vertriebsgesellschaft mbH supplies a threaded bolt. The bolt will be supplied already fixed to the required rod end.



order number		measurements [mm]					weight
type	size	L	L ₁	L ₂	G	D	
BOK	06	18,5	13	10	M 6	9,0	10
BOK	08	23,5	17	13	M 8	10,5	12
BOK	10	28,0	21	17	M 10	13,0	25
BOK	12	32,5	25	20	M 12	15,0	40
BOK	14	37,5	29	22	M 14	17,0	65
BOK	16	42,5	33	24	M 16	19,0	90
BOK	20	57,0	45	35	M 20 x 1,5	24,0	200

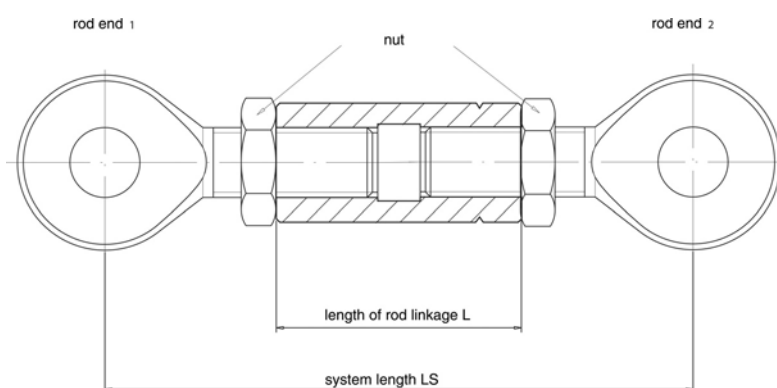
When ordering this constellation please use the catalogue designation of the required rod end along with the type of the fitting threaded bolt.

Example: you need a DURBAL® integral spherical plain bearing DSI 10 T/K incl. threaded bolt:
text of order: **DSI 10 T/K + BOK 10**

Rod Linkage

To simplify installation you can use already mounted rod linkages.

Please define the desired system as described in the table below:



FERROBAL® rod end 1	length of rod linkage L	system length LS	FERROBAL® rod end 2

Upon your request you will receive the rod linkage with male thread respectively pipe construction to reduce weight.

1. General

- 1.1. Only our conditions for delivery and payment are valid unless otherwise specified in our order confirmation. Deviating conditions for purchasing the customer may have will not become term of the contract with the acceptance of the order.
- 1.2. If a specific term of these conditions is or becomes invalid, all remaining conditions shall remain valid.
- 1.3. Modifications of the contract or side agreements will be applicable only if confirmed in writing.

2. Conclusion of the Contract

- 2.1. All our offers are without obligation.
- 2.2. Contracts are accepted with the dispatch of our order confirmation and apply accordingly.

3. Delivery

- 3.1. Delivering times are not binding for us.
- 3.2. For agreed delivery times the period for delivery begins on the day on which we receive the written consent between the customer and the supplier and the customer has provided the supplier with all documents and items needed for the execution of the contract.
- 3.3. The compliance with the agreed delivery time takes place under reserve of correct and timely self supply of the supplier.
- 3.4. The delivery date is considered met if the delivery item is brought or fetched for shipping within the agreed period. If the handover is delayed due to reasons the customer is responsible for, the delivery date is considered met with the notification of the readiness for dispatch.
- 3.5. If the shipping or turnover of the delivery item is delayed due to reasons the customer is responsible for, he has to compensate the supplier for any costs incurred due to the delay. The supplier is entitled to bill these costs after the expiration of ten days counting from the day of notification of the readiness for dispatch or turnover.
- 3.6. If the delivery date cannot be met due to reasons the supplier is not responsible for or due to unexpected events, the period will be reasonably extended.
- 3.7. If the supplier cannot meet the delivery date (delay in delivery), the customer is entitled to rescission and/or amends only after a reasonable period of grace has been set.

4. Shipping

- 4.1. The shipment is made on account and at the risk of the customer. The packaging will be charged at cost price.
- 4.2. With the shipment of the delivery items the risk passes to the customer, even if the delivery is done partially and/or the supplier exceptionally pays for shipping and handling.
- 4.3. If the shipping is delayed due to reasons the customer is responsible for, the risk passes to the customer on the day of readiness for dispatch.
- 4.4. Delivered items have to be accepted by the customer, even if they show minor defects.
- 4.5. Partial deliveries are licit.

5. Claim of Remedy

- 5.1. Claims of remedy are excluded if the condition of the goods changes after the passing of the risk and/or the customer has to scrutinize and accept the goods prior to shipping.
- 5.2. Claims of remedy against the supplier are not applicable if a pre-supplier of the supplier has taken over the guarantee towards the customer.
- 5.3. Notification of defects shall be asserted in writing immediately after delivery, within ten days at the latest. At the same time the supplier is entitled to an opportunity to scrutinize the delivered goods or to have them scrutinized respectively.
- 5.4. If the claim is legitimate, the supplier reserves the right to repair or replace the goods free of defects at his own choice. Replaced parts become the property of the supplier.

- 5.5. The customer must give the opportunity and allow for the required time for the rectifications and replacements the supplier deems necessary; otherwise the supplier is not liable for any subsequent consequences.
- 5.6. The customer is only entitled to rescission if the supplier - with respect to the legal exceptional cases - fails to repair or replace the goods within a reasonable period of time. In case of a minor defect the customer is only entitled to an abatement of the contract price. In all other respects the right to abatement of the contract price remains excluded.
- 5.7. Any claim of the customer - on whatever legal foundation - expires after 12 month, if legally allowed.

6. Pricing and Payment

- 6.1. Prices are ex works except packaging and except currently applicable VAT, unless otherwise agreed.
- 6.2. If the delivery shall take place more than four month after the conclusion of the contract, the supplier reserves the right to an appropriate price adjustment in the event that the relevant conditions for the calculation of the price have risen considerably since the conclusion of the contract, particularly material costs, wages and public charges.
- 6.3. Payments are due without deductions within 30 days after invoicing. If the payment has been made within 10 days and the net price amounts to more than 50,- Euro, we grant a 2% discount.
- 6.4. The customer shall assert a set-off or retention only to the extend that the claim is uncontested or recognized by declaratory judgment.

7. Reservation of Title

- 7.1. The delivered good remains our property until the customer has fully paid all bills receivable from our business connection with the customer. The customer has the right to resell the reservation goods within proper business connections, but he has no authorization to pledge or bail them.
- 7.2. The customer already cedes all bills receivable from the reselling of the reservation goods to us; our consent to this assignment in advance is herewith deemed to be granted. As long as the customer fulfils his obligations as our customer and is not in a state of liquidation, he is authorized to collect these bills receivable. At our request the customer has to provide us with all information required for the collection and to inform the party liable about the assignment of claim.
- 7.3. The customer has to undertake any possible processing or combination of the reservation good with other goods without the development of any obligations for us. We are entitled to become co-owner of the new thing in proportion of the value of the reservation goods to the other processed goods. If the customer is the sole owner of the new thing, he already transfers a co-ownership to us and keeps it with commercial care and free of charge.
- 7.4. If the customer resells the reservation goods together with other goods - no matter if with or without any processing or interconnection-, the assignment in advance agreed above is only valid amounting to the value of the reservation goods.
- 7.5. If the value of the existing securities exceeds the value of these bills receivable by 20% or more, we commit ourselves to release these excess securities upon request of the customer.
- 7.6. The customer has the obligation to notify us about any compulsory enforcement of any third party into the reservation goods or into the allowances ceded in advance and to provide us with all documents required for intervention.

8. Other

- 8.1. Place of fulfilment for delivery and payments is Öhringen, Germany.
- 8.2. Only the law of the Federal Republic of Germany applies to the mutual contractual and legal relationship.
- 8.3. Place of jurisdiction is Öhringen.

