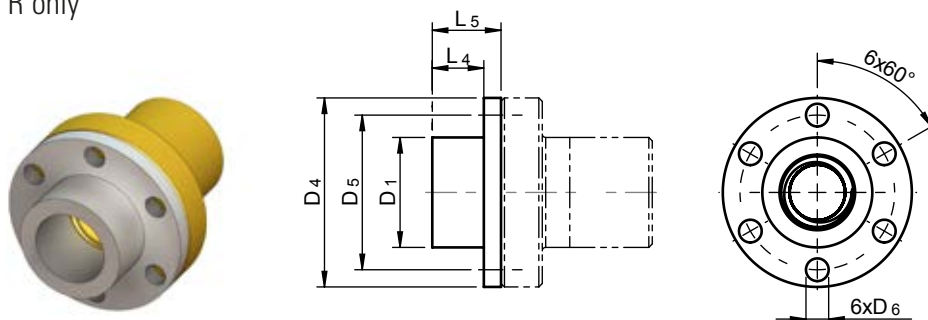




Accessories

Adapter for attaching a second bellow

For version R only



Dimensions							
Size	Type/Size	Dimensions [mm]					
		D ₁	D ₄	D ₅	D ₆	L ₄	L ₅
MULI 0	TGM - EFM Tr14x4	28	48	38	6	15	20
MULI 1	TGM - EFM Tr18x4	28	48	38	6	15	20
MULI 2	TGM - EFM Tr20x4	32	55	45	7	15	20
MULI 3	TGM - EFM Tr30x6	38	62	50	7	20	25
MULI 4	TGM - EFM Tr40x7	63	95	78	9	20	25
MULI 5	TGM - EFM Tr55x9	72	110	90	11	20	25
JUMBO 1	TGM - EFM Tr60x9	85	125	105	11	20	25
JUMBO 2	TGM - EFM Tr70x10	95	180	140	17	20	25
JUMBO 3	TGM - EFM Tr80x10	105	190	150	17	20	25
JUMBO 4	TGM - EFM Tr100x10	130	240	185	25	25	30
JUMBO 5	TGM - EFM Tr120x14	130	300	230	28	30	35

Spiral spring band cover SF

Spiral spring band cover for protection against external influences. Suitable for horizontal or vertical installation.

Material: hardened spring band steel (stainless steel upon request)

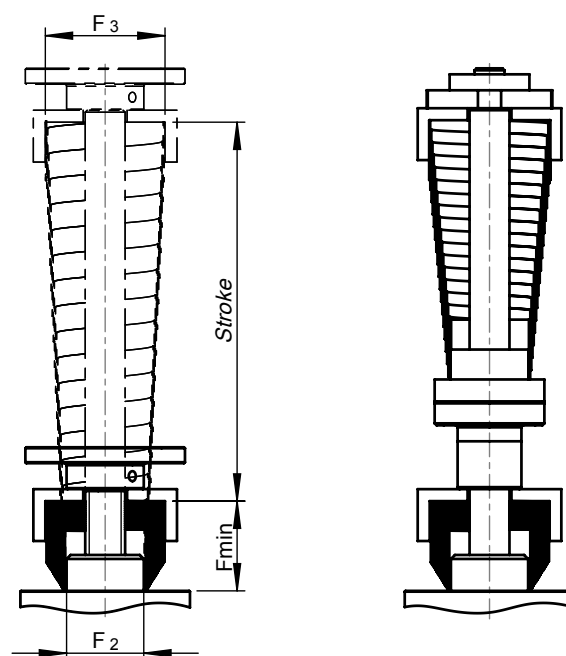
Note: Delivery with 1 pc. centering bushing and/or centering adapter for the flanged nut with version R.

Please always specify the flange direction of the nut.

See next page for dimensions.

N/V-Version

R-Version



Accessories

Dimensions					
Size	SF	F ₂	Dimensions [mm]		External-Ø
			Stroke	F _{min.}	F ₃
MULI 0 MULI 1	SF	30	150	30	39
			200		42
			250		44
			300		46
			350		49
			400		50
			450	53	
			500	40	55
			550		58
			600		60
			650		64
			700		
MULI 2	SF	40	150	30	51
			250		56
			350		60
			400	40	63
			450	30	64
			500	40	65
			550		68
			650		65
			750	50	69
			850		71
			900	60	70
			1100	75	78
			1300		84
			1500		90
			1600	100	81
			1800		82
			2000		86
			2200	120	90
MULI 3	SF	50	150	30	63
			250		68
			350		73
			450	50	70
			550		73
			600		72
			650	50	73
			750	60	80
			900		81
			1100		90
			1200	75	94
			1300		80
			1500		88
			1600	100	89
			1700		91
			1800		94
			1900	120	96
			2100		100
			2300		105
			2500		115
			2800		118
			3000		150
			3250	180	128
			3500	200	134

Dimensions					
Size	SF	F ₂	Dimensions [mm]		External-Ø
			Stroke	F _{min.}	F ₃
MULI 4	SF	65	100	30	76
			150		78
			250		50
			350	84	
			450	88	
			500	60	86
			550	50	92
			650	60	93
			700		94
			750		95
			800		98
			900		103
			1100		107
			1300	75	111
			1500		115
			1700		113
			1800	100	119
			1900	120	109
			2100		113
			2300		118
			2500		128
			2800		134
			3000		150
			3250	180	145
3500	2000	148			
MULI 5	SF	90	150	50	112
			250		116
			350		121
			450		125
			550	75	119
			650		124
			750		128
			900		133
			1100	100	126
			1300		132
			1500		144
			1800		138
			2000	120	148
			2300	150	154
			2600		159
			2800		160
			3000		166
			3250	200	166
			3500		170
			3700		173
4000	182				

Internal-Ø of the centering bushing = F₃ + 4 mm



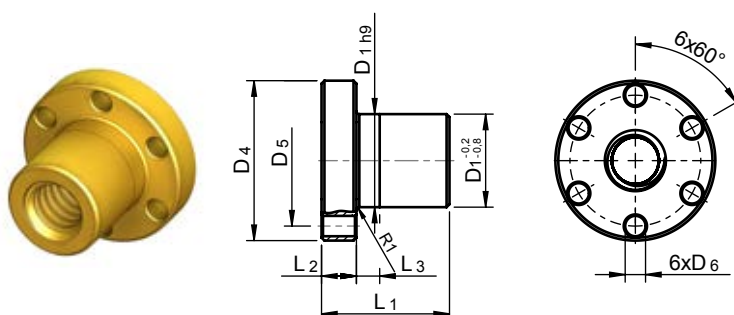
Accessories

Trapezoidal thread nut, complete bronze TGM-EFM

For motion systems in continuous operation with particularly favorable wear characteristics. Suitable as safety nut.

EFM can be fitted with the KON and KAR adapters (see pages 47–48).

Material: 2.1090 (G-CuSn 7Zn Pb (Rg7)).



Dimensions [mm]										
Size	Type/Size	ID number	Bearing length ratio [N/mm ²]	D ₁	D ₄	D ₅	D ₆	L ₁	L ₂	L ₃
MULI 0	TGM - EFM Tr14x4	0110230054	450	28	48	38	6	35	12	8
MULI 1	TGM - EFM Tr18x4	0110064	770	28	48	38	6	44	12	8
MULI 2	TGM - EFM Tr20x4	0110067	870	32	55	45	7	44	12	8
MULI 3	TGM - EFM Tr30x6	0110073	1350	38	62	50	7	46	14	8
MULI 4	TGM - EFM Tr40x7	0110079	2930	63	95	78	9	73	16	10
MULI 5	TGM - EFM Tr55x9	0110085	5350	72	110	90	11	97	18	10
JUMBO 1	TGM - EFM Tr60x9	0110086	6040	85	125	105	11	99	20	10
JUMBO 2	TGM - EFM Tr70x10	0110726	8250	95	180	140	17	100	30	16
JUMBO 3	TGM - EFM Tr80x10	0110716	10890	105	190	150	17	110	30	16
JUMBO 4	TGM - EFM Tr100x10	0110727	13530	130	240	185	25	130	35	16
JUMBO 5	TGM - EFM Tr120x14	0110728	19800	130	300	230	28	160	40	20

Material Properties

- 0.2 % yield point R_{p0.2}: 120 N/mm²
- Tensile strength R_m (δB): 240 N/mm²
- Elongation at fracture A5 min.: 15 %
- Brinell hardness HB 10/1000: 65
- Density: 8.8 kg/dm³
- Modulus of elasticity: 90000 N/mm²
- pv factor: 300 N/mm² · m/min

pv factor	
Material	pv factor [N/mm ² · m/min]
G-CuSn 7 ZnPb (Rg 7)	300

P _p factor	
Material	P _p factor [N/mm ²]
G-CuSn 7 ZnPb (Rg7)	10 - 20

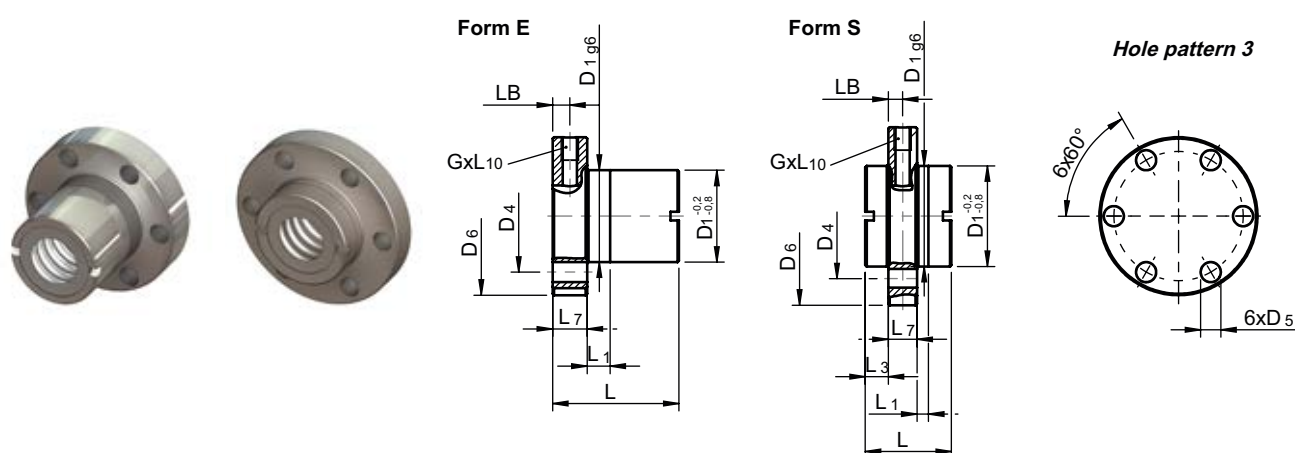
Accessories

Flanged ball nut KGF-N

Flanged ball nut with mounting and lubrication holes and with profiled gaskets (reduces lubricant leakage and prevents ingress of dirt particles) for ball screw KGS.

Material: 1.7131 (ESP 65) or 1.3505 (100Cr6).

Note: For KGS version, please specify installation direction of nut.

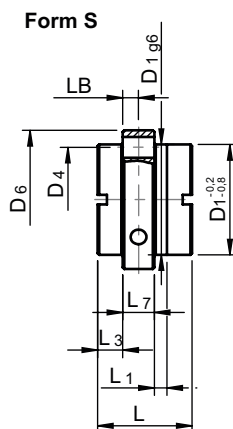
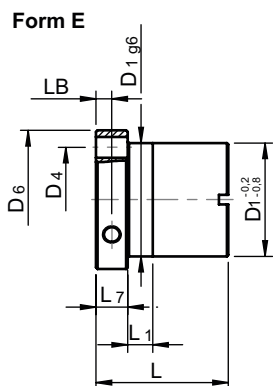


Dimensions																			
Size	Type/Size	ID number	Form	Hole pattern	Dimensions [mm]											Axial backlash max. [mm]	No. of circuits	Load rating [kN]	
					D ₁	D ₄	D ₅	D ₆	L ₁	L	L ₃	L ₇	L ₁₀	LB	G			C _{am}	C _{Dam}
MULI 0	KGF-N-1205-RH-K-00	-	E	3	24	34	4,5	40	6	42	-	10	8	6	M6x1	0,08	3	3,9	6,3
MULI 1	KGF-N-1605-RH-E-EE	0215200047	E	3	28	38	5,5	48	8	44	-	12	8	6	M6x1	0,08	3	9,3	13,1
MULI 2	KGF-N-2005-RH-E-EE	0215200049	E	3	32	45	7	55	8	44	-	12	8	6	M6x1	0,08	3	10,5	16,6
	KGF-N-2020-RH-D-EE	0215200181	S	3	35	50	7	62	4	30	8	10	8	5	M6x1	0,15	4	11,6	18,4
MULI 3	KGF-N-2050-RH-D-EE	0215200211	S	3	35	50	7	62	10	56	9	10	8	5	M6x1	0,15	5	13,0	24,6
	KGF-N-2505-RH-E-EE	0215200050	E	3	38	50	7	62	8	46	-	14	8	7	M6x1	0,08	3	12,3	22,5
	KGF-N-3205-RH-E-EE	0215200053	E	3	45	58	7	70	10	59	-	16	8	8	M6x1	0,08	5	21,5	49,3
	KGF-N-3210-RH-E-EE	0215200075	E	3	53	68	7	80	10	73	-	16	8	8	M8x1	0,08	3	33,4	54,5
MULI 4	KGF-N-3240-RH-D-EE	0215200210	S	3	53	68	7	80	14	45	7,5	16	10	8	M6x1	0,15	4	14,9	32,4
	KGF-N-4005-RH-E-EE	0215200055	E	3	53	68	7	80	10	59	-	16	8	8	M6x1	0,08	5	23,8	63,1
MULI 5	KGF-N-4010-RH-E-EE	0215200353	E	3	63	78	9	95	10	73	-	16	8	8	M8x1	0,08	3	38,0	69,1
	KGF-N-5010-RH-E-EE	0215200041	E	3	72	90	11	110	10	97	-	18	8	9	M8x1	0,08	5	68,7	155,8
JUMBO 3	KGF-N-6310-RH-E-EE	0215200058	E	3	85	105	11	125	10	99	-	20	8	10	M8x1	0,08	5	76,0	197,0
	KGF-N-8010-RH-E-EE	0215200028	E	3	105	125	14	145	10	101	-	22	8	11	M8x1	0,08	5	86,2	262,4

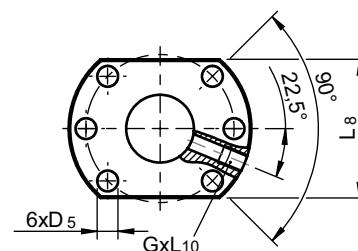


Accessories

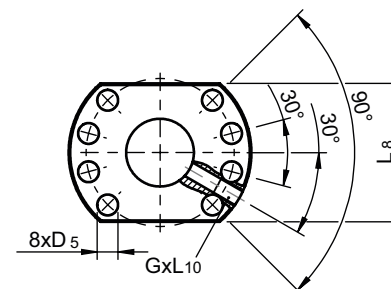
Flanged ball nut KGF-D



Hole pattern 1 according to DIN 69051



Hole pattern 2 according to DIN 69051



Dimensions														Axial backlash max. [mm]	No. of circuits	Load Rating [kN]				
Size	Type/Size	ID number	Form	Hole pattern	Dimensions [mm]											C _{am}	C _{0am}			
					D ₁	D ₄	D ₅	D ₆	L ₁	L	L ₃	L ₇	L ₈	L ₁₀	LB	G				
MULI 1	KGF-D-1605-RH-E-EE	0215200048	E	1	28	38	5,5	48	10	42	-	10	40	10	5	M6x1	0,08	3	9,3	13,1
	KGF-D-1610-RH-K-EE	0215200168	E	1	28	38	5,5	48	10	55	-	10	40	10	5	M6x1	0,08	6	15,4	26,5
MULI 2	KGF-D-2005-RH-K-EE	0215200185	E	1	36	47	6,6	58	10	42	-	10	44	10	5	M6x1	0,08	3	10,5	16,6
MULI 3	KGF-D-2505-RH-E-EE	0215200051	E	1	40	51	6,6	62	10	42	-	10	48	10	5	M6x1	0,08	3	12,3	22,5
	KGF-D-2510-RH-K-EE	0215200175	E	1	40	51	6,6	62	16	55	-	10	48	10	5	M6x1	0,08	3	13,2	25,3
	KGF-D-2520-RH-D-EE	0215200200	S	1	40	51	6,6	62	4	35	10,5	10	48	8	5	M6x1	0,15	4	13	23,3
	KGF-D-2525-RH-D-EE ¹⁾	0215200201	S	1	40	51	6,6	62	9	35	8	10	- ¹⁾	8	5	M6x1	0,08	5	16,7	32,3
	KGF-D-2550-RH-D-EE	0215200195	S	1	40	51	6,6	62	10	58	10	10	48	8	5	M6x1	0,15	5	15,4	31,7
	KGF-D-3205-RH-E-EE	0215200054	E	1	50	65	9	80	10	55	-	12	62	10	6	M6x1	0,08	5	21,5	49,3
	KGF-D-3210-RH-E-EE	0215200087	E	1	53 ²⁾	65	9	80	16	69	-	12	62	10	6	M8x1	0,08	3	33,4	54,5
MULI 4	KGF-D-3220-RH-K-EE	0215200191	E	1	53 ²⁾	65	9	80	16	80	-	12	62	10	6	M6x1	0,08	4	29,7	59,8
	KGF-D-4005-RH-E-EE	0215200056	E	2	63	78	9	93	10	57	-	14	70	10	7	M6x1	0,08	5	23,8	63,1
	KGF-D-4010-RH-E-EE	0215200356	E	2	63	78	9	93	16	71	-	14	70	10	7	M8x1	0,08	3	38	69,1
	KGF-D-4020-RH-K-EE	0215200206	E	2	63	78	9	93	16	80	-	14	70	10	7	M8x1	0,08	4	33,3	76,1
MULI 5	KGF-D-4040-RH-D-EE ¹⁾	0215200199	S	2	63	78	9	93	16	85	7,5	14	- ¹⁾	10	7	M8x1	0,15	8	35	101,9
	KGF-D-5010-RH-E-EE	0215200074	E	2	75	93	11	110	16	95	-	16	85	10	8	M8x1	0,08	5	68,7	155,8
	KGF-D-5020-RH-K-EE	0215200212	E	2	85 ²⁾	103 ²⁾	11	125	22	95	-	18	95	10	9	M8x1	0,08	4	60	136,3

¹⁾ Round flange

²⁾ Dimension does not comply with DIN 69051

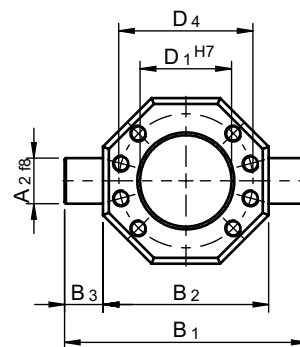
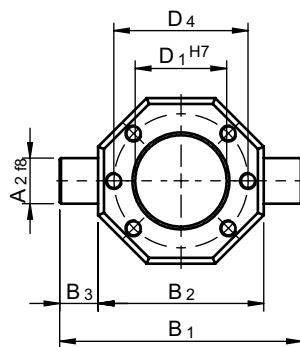
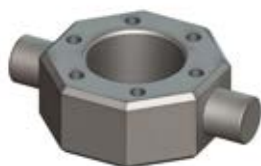
Accessories

Universal joint adapter KAR

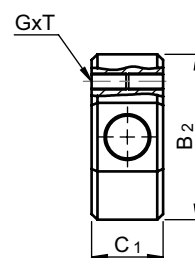
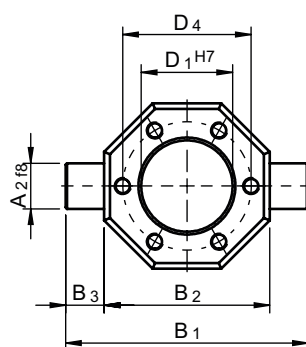
Universal joint adapter for trunnion mounting of flanged ball nut KGF and trapezoidal nut EFM.

Material: 1.0065 (St37) or 1.0507 (St52)

Hole pattern 1 according to DIN 6905 Hole pattern 2 according to DIN 69051



Hole pattern 3



Dimensions

Size	ID number	for KGF	for EFM	hole pattern	Dimensions (mm)							
					A ₂	B ₁	B ₂	B ₃	C ₁	D ₁	D ₄	GxT
KAR MULI 0	-		Tr14x4	3	12	70	50	10	20	28	38	M5x10
KAR MULI 0	-	KGF 1205		3	12	70	50	10	20	24	34	M4x8
KAR MULI 1	89022013	KGF-N 1605	Tr18x4	3	12	70	50	10	20	28	38	M5x10
KAR MULI 1	89022001	KGF-D 1610		1	12	70	50	10	20	28	38	M5x10
KAR MULI 2	89022014	KGF-N 2005	Tr20x4	3	16	85	58	13,5	25	32	45	M6x12
KAR MULI 2	89022015	KGF-N 2020 / 2050		3	18	95	65	15	25	35	50	M6x12
KAR MULI 3	89022016	KGF-N 2505	Tr30x6	3	18	95	65	15	25	38	50	M6x12
KAR MULI 3	89022003	KGF-D 2510 / 2520 / 2525 / 2550		1	18	95	65	15	25	40	51	M6x12
KAR MULI 3	89022017	KGF-N 3205		3	20	110	75	17,5	30	45	58	M6x12
KAR MULI 3	89022008	KGF-D 3220		1	25	125	85	20	30	53	65	M8x12
KAR MULI 3	89022018	KGF-N 3210 / 3240		3	25	125	85	20	30	53	68	M6x12
KAR MULI 4	89022018	KGF-N 4005		3	25	125	85	20	30	53	68	M6x12
KAR MULI 4	89022019	KGF-N 4010	Tr40x7	3	30	140	100	20	40	63	78	M8x14
KAR MULI 4	89022010	KGF-D 4020 / 4040		2	30	140	100	20	40	63	78	M8x14
KAR MULI 5	89022020	KGF-N 5010	Tr55x9	3	40	165	115	25	50	72	90	M10x16
KAR MULI 5	89022069	KGF-D 5020		2	40	180	130	25	50	85	103	M10x16
KAR JUMBO 1	89022021	KGF-N 6310	Tr60x9	3	40	180	130	25	50	85	105	M10x16
KAR JUMBO 2			Tr70x10	3	40	235	185	25	50	95	140	M16x20
KAR JUMBO 3	89022022	KGF-N 8010		3	50	200	150	25	60	105	125	M12x18



Accessories

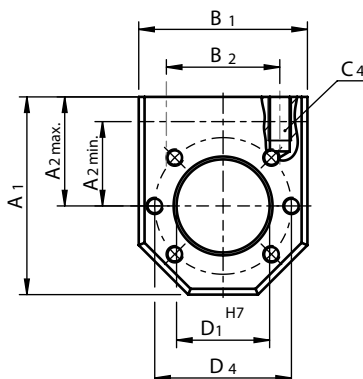
Mounting adapter bracket KON

Adapter bracket for the radial mounting of flanged ball nut KGF and trapezoidal nut EFM.

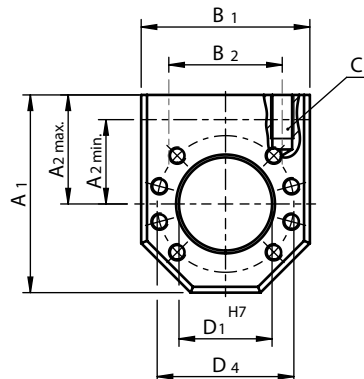
Material: 1.0065 (St37) or 1.0507 (St52)



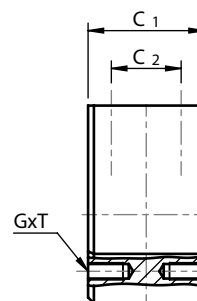
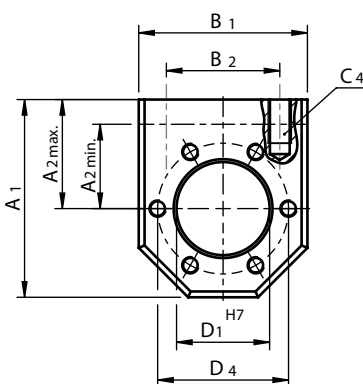
Hole pattern 1 according to DIN 69051



Hole pattern 2 according to DIN 69051



Hole pattern 3



Dimensions															
Size	ID number	for KGF	for EFM	hole pattern	Dimensions [mm]										
					A ₁	A _{2 max} ¹⁾	A _{2 min}	B ₁	B ₂	C ₁	C ₂	C ₄ ¹⁾	D ₁	D ₄	GxT
KON MULI 0	-		Tr14x4	3	60	35	25	50	34	40	24	M8x15	28	38	M5x10
KON MULI 0	-	KGF 1205		3	60	35	25	50	34	40	24	M8x15	24	34	M4x8
KON MULI 1	89022032	KGF-N 1605	Tr18x4	3	60	35	25	50	34	40	24	M8x15	28	38	M5x10
KON MULI 1	89022023	KGF-D 1610		1	60	35	25	50	34	40	24	M8x15	28	38	M5x10
KON MULI 2	89022033	KGF-N 2005	Tr20x4	3	68	37,5	29	58	39	40	24	M8x15	32	45	M6x12
KON MULI 2	89022035	KGF-N 2020 / 2050		3	75	42,5	32,5	65	49	40	24	M10x15	35	50	M6x12
KON MULI 3	89022034	KGF-N 2505	Tr30x6	3	75	42,5	32,5	65	49	40	24	M10x15	38	50	M6x12
KON MULI 3	89022025	KGF-D 2510 / 2520 / 2525 / 2550		1	75	42,5	32,5	65	49	40	24	M10x15	40	51	M6x12
KON MULI 3	89022036	KGF-N 3205		3	82	45	37	75	54	50	30	M10x12	45	58	M6x12
KON MULI 3	89022028	KGF-D 3220		1	92	50	40	85	60	50	30	M12x15	53	65	M8x12
KON MULI 3	89022037	KGF-N 3210 / 3240		3	92	50	42	85	60	50	30	M10x15	53	68	M6x12
KON MULI 4	89022037	KGF-N 4005		3	92	50	42	85	60	50	30	M12x15	53	68	M6x12
KON MULI 4	89022038	KGF-N 4010	Tr40x7	3	120	70	50	100	76	65	41	M14x25	63	78	M8x14
KON MULI 5	89022039	KGF-N 5010	Tr55x9	3	135	77,5	57,5	115	91	88	64	M16x25	72	90	M10x16
KON MULI 5	89022072	KGF-D 5020		2	152	87,5	65	130	101	88	64	M16x30	85	103	M10x16
KON JUMBO 1	89022040	KGF-N 6310	Tr60x9	3	152	87,5	65	130	101	88	64	M16x30	85	105	M10x16
KON JUMBO 3	89022041	KGF-N 8010		3	172	97,5	-	150	121	88	64	M16x30	105	125	M12x18

¹⁾ Standard = A_{2 max} (delivery status)

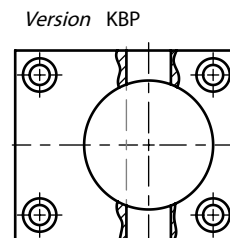
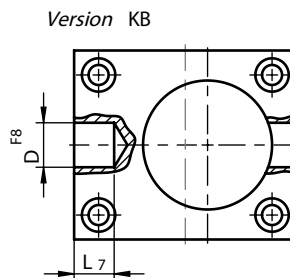
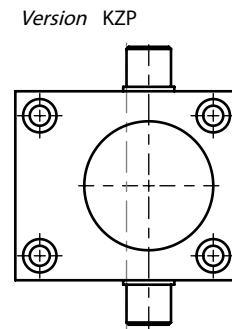
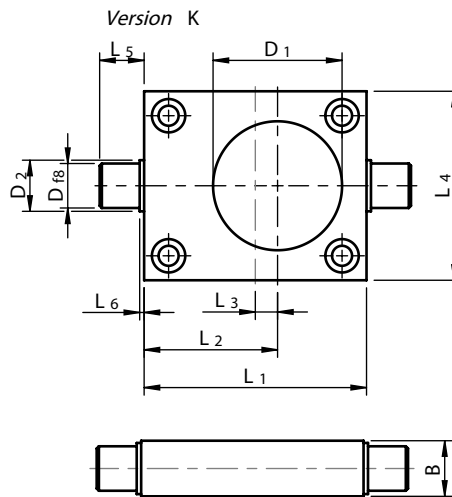


Accessories

Universal joint adapter K, KZP, KB, KBP

Supplied loose with mounting bolts for the screw jack. Burnished.

Standard mounting side: side E. Please specify if mounting side F is required (see page 34-37).



Dimensions [mm]												
Size	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	L ₇	D _{f8}	D ^{f8}	D ₁	D ₂	B
K MULI 0	60	38	8	50	10	2	10	10	8	37	13	15
K MULI 1	80	49	9	72	15	2	13	15	15	44	18	20
K MULI 2	100	60	10	85	20	2	18	20	20	58	23	25
K MULI 3	130	76	11	105	20	2	18	25	22	72	28	30
K MULI 4	180	102	12	145	30	2	28	35	30	86	38	40
K MULI 5	200	117	17	165	35	2	33	45	40	115	48	50
K JUMBO 1	210	120	15	195	40	2	–	50	–	130	56	60
K JUMBO 2	240	140	20	220	45	2	–	70	–	170	76	80
K JUMBO 3	240	140	20	220	45	2	–	70	–	170	76	80
K JUMBO 4	290	165	20	250	60	2	–	80	–	160	88	90
K JUMBO 5	360	210	30	300	80	2	–	90	–	175	96	100

Accessories

Safety nut SFM with wear indicator

Version R

The safety nut is positioned below the travelling nut without axial load and is therefore not subjected to wear. The functioning of the safety nut is guaranteed only when installation and applied forces are as shown in the illustration (see right). As the travelling nut wears, the distance "X" (=1/4 of the lead of the thread of a single-thread screw) between the two nuts is decreasing, which provides a visual check of wear without the need for dismantling.

The travelling nut must be replaced when the distance "X" is decreased to 0 mm resp. the travelling nut is touching the safety nut, otherwise, safety cannot be guaranteed and people and property can be endangered.

Dimension X must be checked regularly.

The safety nut supports the load if the thread form of the travelling nut fails as a result of excessive wear (dirt, lubrication starvation, overheating, etc.). The safety nut can only be ordered together with the flanged nut.

Version N and V

The design is similar to that for version R.

With increasing wear of the thread in the worm-wheel the distance "X" (=1/4 of the lead of the thread of a single-thread screw) is decreasing between top edge of the safety nut and top edge of the bearing cover.

The worm-wheel nut must be replaced together with the safety nut when the distance "X" is decreased to 0 mm resp. the top edge of the safety nut is flush with the top edge of the bearing cover, otherwise, safety cannot be guaranteed and people and property can be endangered.

A visual check for wear is also possible in this case.

Inductive sensors upon request (subject to change of design).

Please specify the load direction when ordering.

Accessories

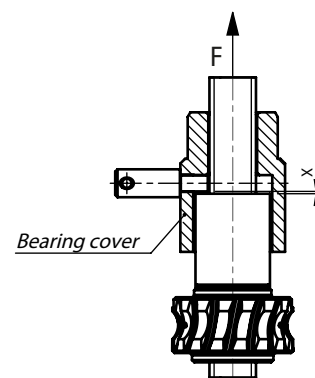
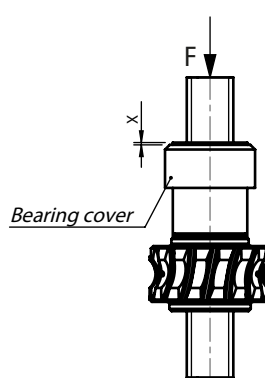
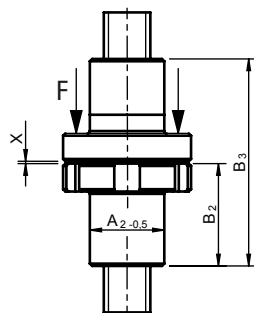
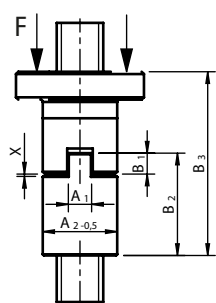
For R-version



For N and V-version



Load direction



Dimensions

Size	Version	Dimensions [mm]					
		A ₁	A ₂	B ₁	B ₂	B ₃	X
SFM MULI 1	R Standard	10	28	10	44	79	1
	R Flange to flange	-		-		90	
SFM MULI 2	R Standard	10	32	10	44	79	1
	R Flange to flange	-		-		90	
SFM MULI 3	R Standard	12	38	10	46	83,5	1,5
	R Flange to flange	-		-		93,5	
SFM MULI 4	R Standard	16	63	15	73	132,75	1,75
	R Flange to flange	-		-		147,75	
SFM MULI 5	R Standard	20	72	16	97	180,25	2,25
	R Flange to flange	-		-		196,25	
SFM JUMBO 1	R Standard	20	85	16	99	184,25	2,25
	R Flange to flange	-		-		200,25	
SFM JUMBO 2	R Standard	25	95	20	100	182,5	2,5
	R Flange to flange	-		-		202,5	
SFM JUMBO 3	R Standard	25	105	20	110	202,5	2,5
	R Flange to flange	-		-		222,5	
SFM JUMBO 4	R Standard	30	130	25	130	237,5	2,5
	RR Flange to flange	-		-		262,5	
SFM JUMBO 5	R Standard	40	160	25	160	298,5	3,5
	R Flange to flange	-		-		323,5	

¹⁾ For KGS upon request.

²⁾ Dimensions of flanged nuts see page 45.

³⁾ Version N/V SFM in the bearing cover (according to schemes). Dimension X remains the same.