

Overview of Standard-Components





For us high speeds are not a problem, they are a challenge. **Thomson** ballscrews give you the solution and set the standard for speed and precision, which has been the case for over 40 years.

The demands of our customers are high. They expect a solution which has high quality, reliability and cost effectiveness.

Quality control to DIN ISO 9001: in reality this is our day to day business. With modern technology and the willingness of our employees, we fulfil the conditions of Nato Specification AQAP4 and of the German Federal Aviation Board.

Cold formed **Thomson** ballscrews perform in all disciplines. They are outstanding in price, performance, long life, high rigidity and precisions up to $12\mu/300$ mm.

Thomson. For those customers who are looking to move their business into the fast lane.



fast

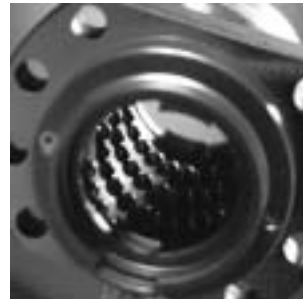


precise



Thomson in transportation

New applications – new precise requirements.
Thomson gives you the speed you require on rail, on road, by water and in the air.



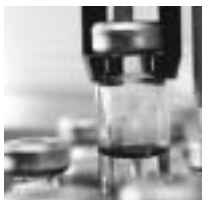
Thomson in manufacturing

40 years experience guarantee high precision in all crucial areas.



Thomson in health and fitness

Where absolute reliability and security are guaranteed.



Thomson in robotic handling

Fast response in pick and place.

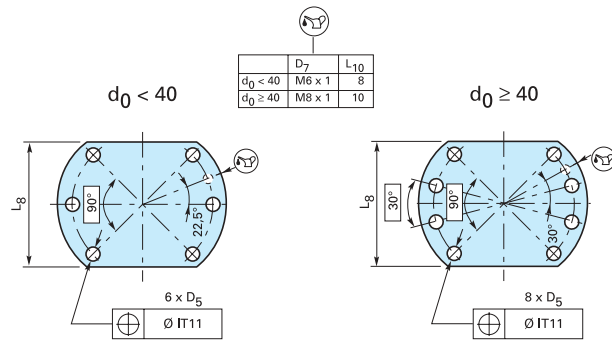
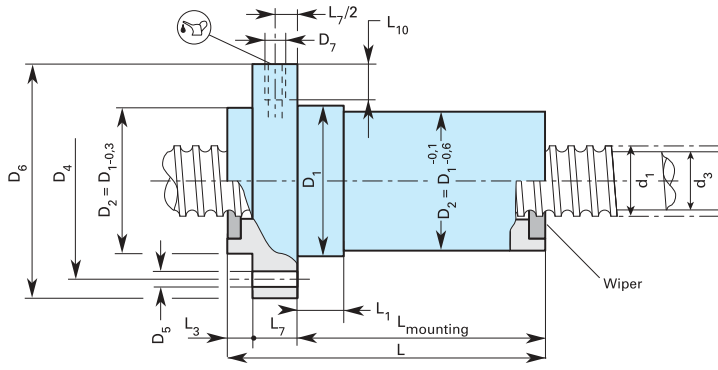


Thomson for plastic and packaging machinery

Pressing, cutting, moulding, pouring:
a clean solution.

good

Standard single ballnut with flange



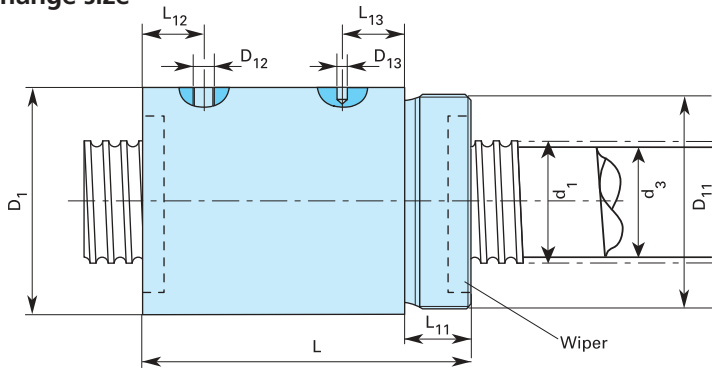
	D7	L10
d ₀ < 40	M6 x 1	8
d ₀ ≥ 40	M8 x 1	10

- Model**
- FH** for high lead
 - FK** with axial play
 - FL** preloaded
- Standard: Tolerance class**
- T7** with axial play
 - P5/T5** non axial play
 - P3** preloaded
- Mounting dimensions according to DIN 69051/5 Form B

	Size		Nut						
	d ₀	P _{h0}	Typ	D _w	i	D ₁	D ₄	D ₅	D ₆
						9 ₆			h ₁₃
	16	5	FK	3,500	3,0	28	38	5,5	48
	16	5	FL	3,500	2,0	28	38	5,5	48
	20	5	FK	3,500	3,0	36	47	6,6	58
	20	5	FL	3,500	3,0	36	47	6,6	58
	20	20	FH	3,500	3,6	36	47	6,6	58
	25	5	FK	3,500	3,0	40	51	6,6	62
	25	5	FL	3,500	3,0	40	51	6,6	62
	25	10	FH	3,500	5,6	40	51	6,6	62
	25	25	FH	3,500	3,6	40	51	6,6	62
	32	5	FK	3,500	4,0	50	65	9,0	80
	32	5	FL	3,500	4,0	50	65	9,0	80
	32	10	FK	5,556	3,0	50	65	9,0	80
	32	10	FL	5,556	3,0	50	65	9,0	80
	32	20	FH	5,556	5,6	56	71	9,0	86
	32	32	FH	3,969	3,6	56	71	9,0	86
	40	5	FK	3,500	5,0	63	78	9,0	93
	40	5	FL	3,500	5,0	63	78	9,0	93
	40	10	FK	7,144	4,0	63	78	9,0	93
	40	10	FL	7,144	4,0	63	78	9,0	93
	40	20	FH	5,556	5,6	63	78	9,0	93
	40	40	FH	7,144	3,6	70	85	9,0	100
	50	10	FK	7,144	4,0	75	93	11,0	110
	50	10	FL	7,144	4,0	75	93	11,0	110
	50	20	FH	6,350	5,6	75	93	11,0	110
	63	10	FK	7,144	5,0	90	108	11,0	125
	63	10	FL	7,144	5,0	90	108	11,0	125
	63	20	FH	7,144	5,6	95	115	13,5	135
*	80	10	FK	7,144	6,0	105	125	13,5	145
*	80	20	FK	12,700	4,0	125	145	13,5	165

d₀ = nominal diameter P_{h0} = nominal lead
 C_{am} = modified dynamic load C_{0am} = modified static load

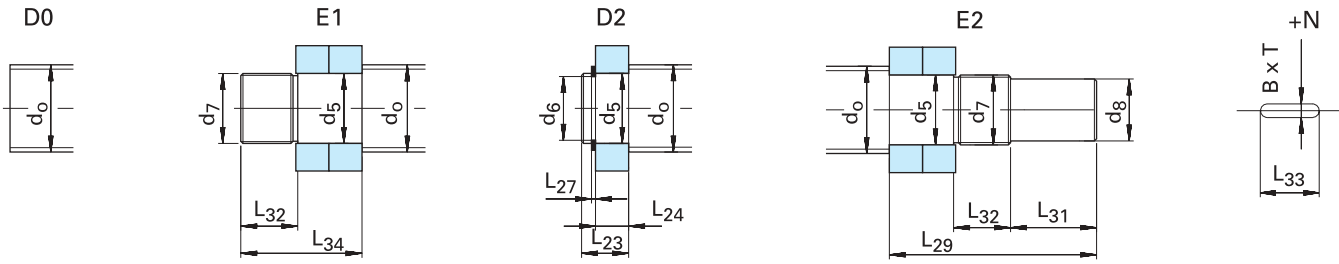
Standard single ballnut, cylindrical with mounting flange size



- Model**
- HS, ZG** with axial play, non axial play
- Standard: Tolerance class**
- T7, P5/T5**

	Size		Nut					
	d ₀	P _{h0}	Typ	D _w	i	D ₁	D ₁₁	D ₁₂
						h ₁₂		
	12	4	ZG	1,984	3,0	26	M 20 x 1,0	3,2
	16	5	HS	2,381	5,0	30	M 26 x 1,5	3 ^{H13}
	16	5	ZG	3,500	4,0	32	M 30 x 1,5	M6 x 1
	20	5	ZG	3,500	4,0	38	M 35 x 1,5	M6 x 1
	25	5	ZG	3,500	5,0	42	M 40 x 1,5	M6 x 1
	25	10	ZG	3,500	6,0	42	M 40 x 1,5	M6 x 1
	32	5	ZG	3,500	5,0	52	M 48 x 1,5	M6 x 1
	32	10	ZG	5,556	4,0	52	M 48 x 1,5	M6 x 1
	40	5	ZG	3,500	5,0	58	M 56 x 1,5	M8 x 1
	40	10	ZG	7,144	5,0	65	M 60 x 2,0	M8 x 1
	50	10	ZG	7,144	6,0	78	M 72 x 2,0	M8 x 1
	63	10	ZG	7,144	6,0	92	M 85 x 2,0	M8 x 1
*	80	10	ZG	7,144	6,0	120	M110 x 2,0	M8 x 1
*	80	20	ZG	12,700	5,0	120	M110 x 2,0	M8 x 1

Standard end journals



Standard end journals													
d_0	d_5 j_6	d_6 h_{12}	d_7	d_8 h_7	L_{23}	L_{24}	L_{27} H_{13}	L_{29}	L_{31}	L_{32}	L_{34}	$B^{P9} \times L_{33} \times T$	
12	8	7,6	M8 x 1,0	6	7,5	6	0,9	47	15	8	33	2 x 10 x 2,2	
16	12	11,5	M12 x 1,0	10	10,5	8	1,1	63	25	10	54	3 x 18 x 1,8	
20	15	14,0	M15 x 1,0	12	13	9	1,1	77	35	12	66	4 x 27 x 2,5	
25	20	19,0	M20 x 1,0	16	16	12	1,3	99	45	14	86	5 x 36 x 3	
32	25	23,9	M25 x 1,5	20	19	15	1,3	120	55	17	104	6 x 45 x 3,5	
40	30	28,6	M30 x 1,5	25	21	16	1,6	133	64	17	117	8 x 50 x 4	
50	40	37,5	M40 x 1,5	36	25	18	1,85	165	78	21	145	10 x 63 x 5	
63	50	47,5	M50 x 1,5	40	27	20	2,0	163	100	25	139	12 x 78 x 5	
80	60	57,5	M60 x 2,0	50	29	22	2,15	192	120	30	163	14 x 100 x 5,5	

Questionnaire for ballscrews

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 Fax: +49 (0) 7022 541-68

Company: _____

Contact:

Technical: _____ Phone: _____ Fax: _____
 Purchasing: _____ Phone: _____ Fax: _____

Application: _____

New application Existing application

Parameters:

Nominal diameter d_0 _____ [mm] Lead P_{h0} _____ [mm]
 Lead direction right left
 Maximum travel deviation within 300 mm _____ [μ m]
 Total length _____ [mm] Quantity _____

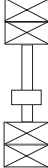
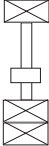

Load ratings:

Load	revolutions	time share
$F_1 =$ _____ [N]	n_1 _____ [min^{-1}]	q_1 _____ [%]
$F_2 =$ _____ [N]	n_2 _____ [min^{-1}]	q_2 _____ [%]
$F_3 =$ _____ [N]	n_3 _____ [min^{-1}]	q_3 _____ [%]

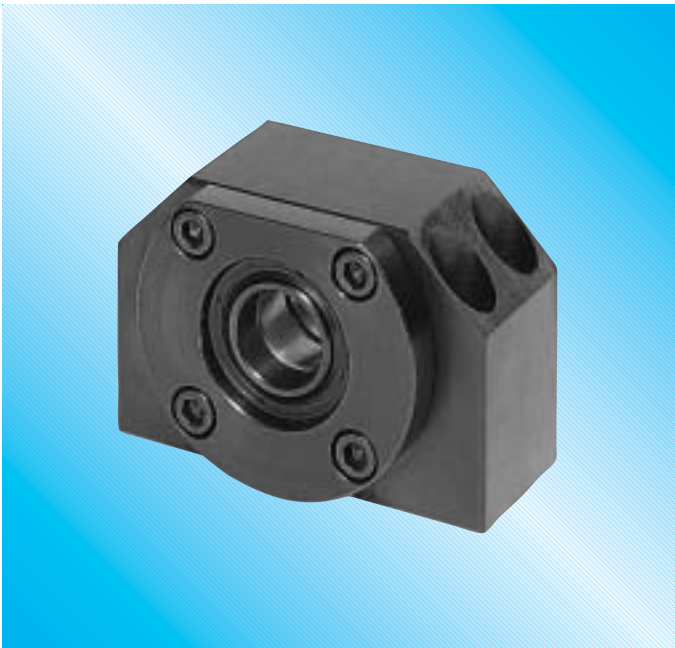
Max. static load _____ [N]

Life required _____ in working hours _____ 10^6 Revolutions

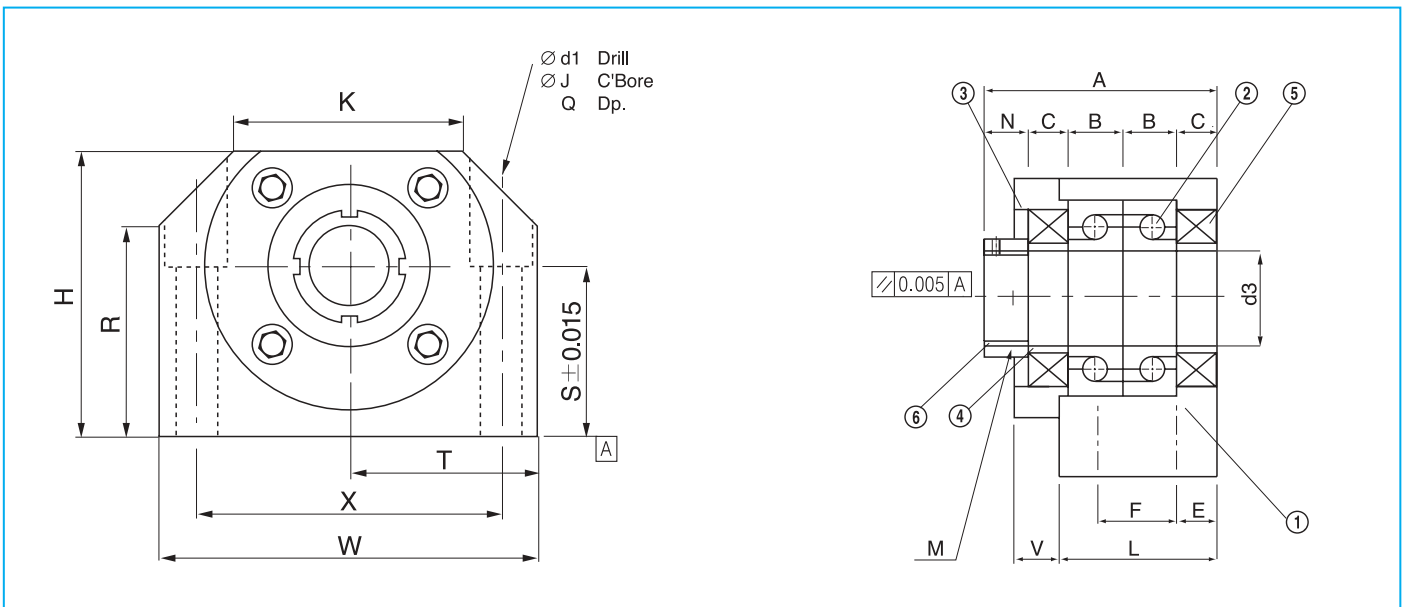
Way of mounting:

Mounting	<input type="checkbox"/> horizontal	<input type="checkbox"/> vertical	<input type="checkbox"/> diagonal
Driven part	<input type="checkbox"/> Screw	<input type="checkbox"/> Nut	
Bearing configuration	rigid	simple	free
			
	rigid	rigid	rigid
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Block type fixed BK

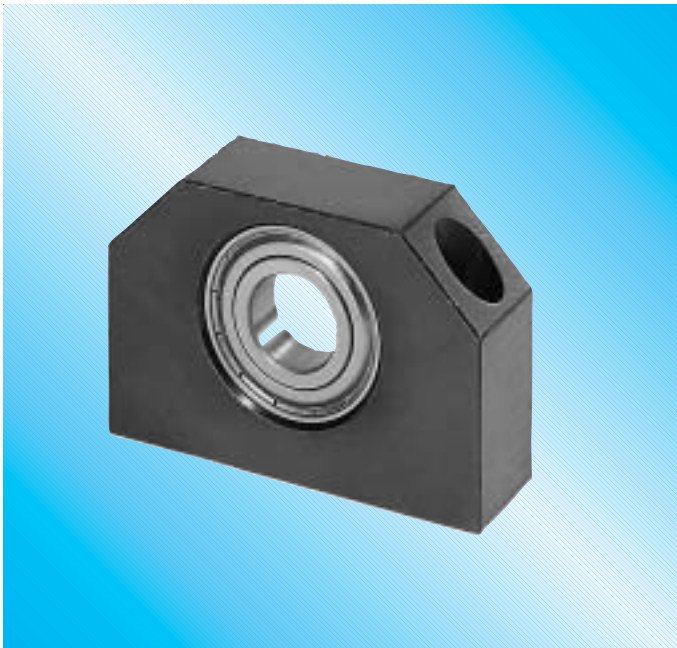


BK Partlist		
No.	Part	Q'ty
1	Housing	1
2	Bearing	2
3	Bracket	1
4	Collar	2
5	Seal	2
6	Set Screw	1

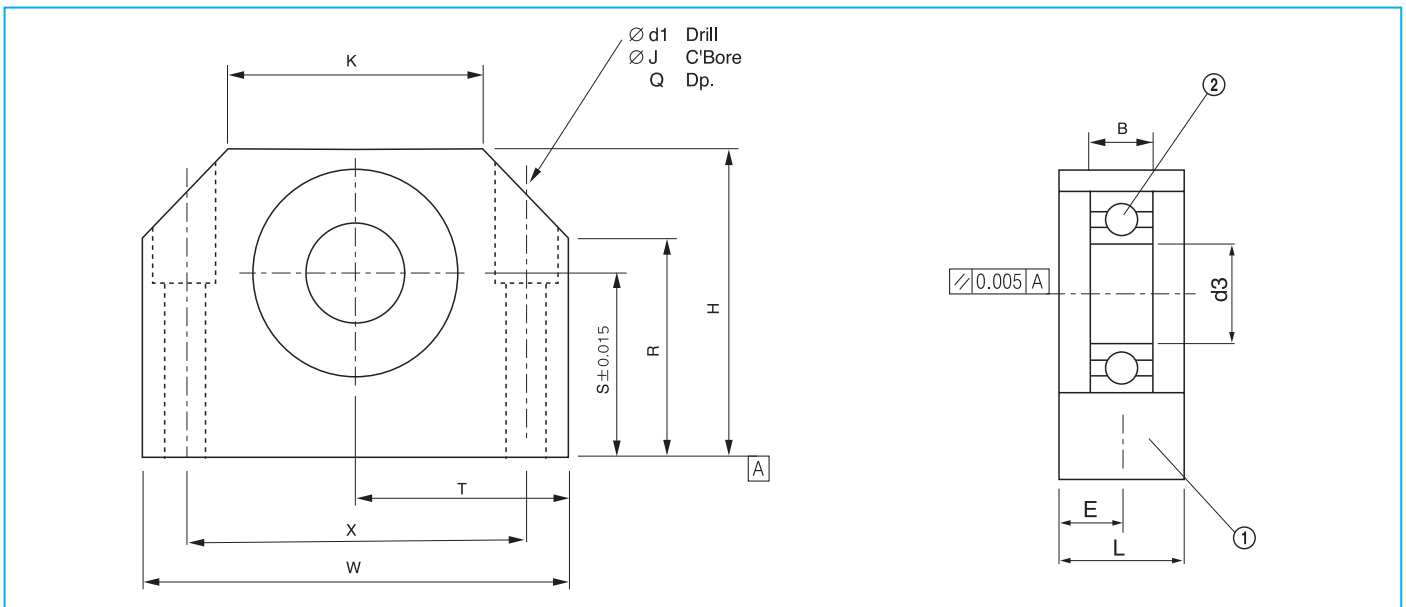


Reference	Mounting Dim.								d1	j	Q	M	L	E	F	V	A	B	C	N	d3	Bearing	Load[N]	Load[N]	
	W	H	S	R	T	X	K	axial															permissible	weight [KG]	
BK 8	52	32	17	18,5	26	38	25	6,6	11	6,5	M 8x1,0	23	11,5		5	33	7	6	6	8	EN8	1640	1480		
BK 10	60	39	22	26	30	46	34	6,6	11	6,5	M10x1,0	25	6	13	6	38	8	7	8	10	7000A	6700	2780		
BK 12	60	43	25	30	30	46	34	6,6	11	6,5	M12x1,0	25	6	13	6	38	8	7	8	12	7001A	7250	3100	0,465	
BK 15	70	48	28	33	35	54	40	6,6	11	6,5	M15x1,0	27	6	15	7	40	9	7	8	15	7002A	7750	4070	0,660	
BK 17	86	64	39	46	43	68	50	9	14	8,5	M17x1,0	35	8	19	9	52	12	9	10	17	7203A	14000	5950		
BK 20	88	60	34	42	44	70	52	9	14	8,5	M20x1,0	35	8	19	9	52	12	9	10	20	7004A	12950	9700	1,280	
BK 25	106	80	48	59	53	85	64	11	17,5	11	M25x1,5	42	10	22	11	62	15	10	12	25	7205B	20600	11700	2,480	
BK 30	128	89	51	63	64	102	76	14	20	13	M30x1,5	45	11	23	12	66	16	11	12	30	7206B	28600	16600	3,425	
BK 40	160	110	60	80	80	130	100	18	26	17,5	M40x1,5	61	14	33	15	82	18	16	14	40	7208B	45000	27700	6,910	

Block type simple BF



BF Partlist		
No.	Part	Q'ty
1	Housing	1
2	Bearing	1
3	Snapping	1



Reference	w	H	S	R	T	X	K	Mounting Dim.			L	E	d3	Bearing	Load[N]		weight [KG]
								d1	J	Q					radial		
BF 8	52	32	17	18,5	26	38	25	6,6	11	6,5	20	10	8	606	2310		
BF 10	60	39	22	26	30	46	34	6,6	11	6,5	20	10	8	608	3350		
BF 12	60	43	25	35	30	46	35	6,6	11	6,5	20	10	10	6001	4650	0,315	
BF 15	70	48	28	38	35	54	40	6,6	11	6,5	20	10	15	6002	5700	0,395	
BF 17	86	64	39	46	43	68	50	9	14	8,5	23	11,5	17	6203	9750		
BF 20	88	60	34	50	44	70	52	9	14	8,5	26	13	20	6004	9550	0,765	
BF 25	106	80	48	70	53	85	64	11	17,5	11	30	15	25	6205	14300	1,445	
BF 30	128	89	51	78	64	102	76	14	20	13	32	16	30	6206	19800	1,985	
BF 40	160	110	60	90	80	130	100	18	26	17,5	37	18,5	40	6208	29700	3,365	

not on Stock

Flange type fixed AFK



fig. 1-1



fig. 1-2

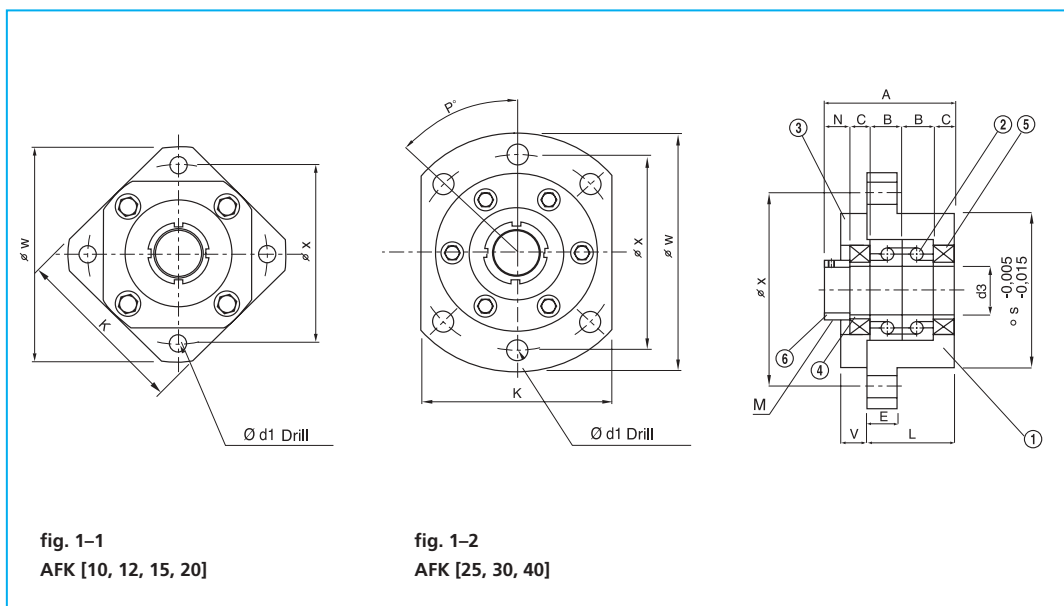


fig. 1-1
AFK [10, 12, 15, 20]

fig. 1-2
AFK [25, 30, 40]

AFK Partlist		
No.	Part	Q'ty
1	Housing	1
2	Bearing	2
3	Bracket	1
4	Collar	2
5	Seal	2
6	Set Screw	1

Reference	w	L	s	Mounting Dim.								M	A	B	C	N	d3	Bearing	Load [N]		
				K	E	V	x	n	d1	P°	axial								permissible	weight [kg]	
AFK 8	43	21	28	35	7	5	35	4	3,4	90	M 8 x 1,0	30	7	5	6	8	608	1640	3350		
AFK 10	52	25	34	42	7	6	42	4	4,5	90	M10 x 1,0	38	8	7	8	10	7000 A	6700	2780		
AFK 12	54	25	36	44	8	6	44	4	4,5	90	M12 x 1,0	38	8	7	8	12	7001 A	7250	3100	0,285	
AFK 15	63	27	40	52	10	7	50	4	5,5	90	M15 x 1,0	40	9	7	8	15	7002 A	7750	4070	0,400	
AFK 20	85	37	57	68	15	7	70	4	6,6	90	M20 x 1,0	52	14	7	10	20	7204 B	18300	9700	0,940	
AFK 25	122	42	80	92	15	11	100	6	11	45	M25 x 1,5	62	15	10	12	25	7205 B	20600	11700	2,200	
AFK 30	138	45	90	106	16	12	116	6	11	45	M30 x 1,5	66	16	11	12	30	7206 B	28600	16600	3,020	
AFK 40	176	61	120	128	19	15	150	6	14	45	M40 x 1,5	82	18	16	14	40	7208 B	45000	27700	6,720	

not on Stock

Flange type simple FF

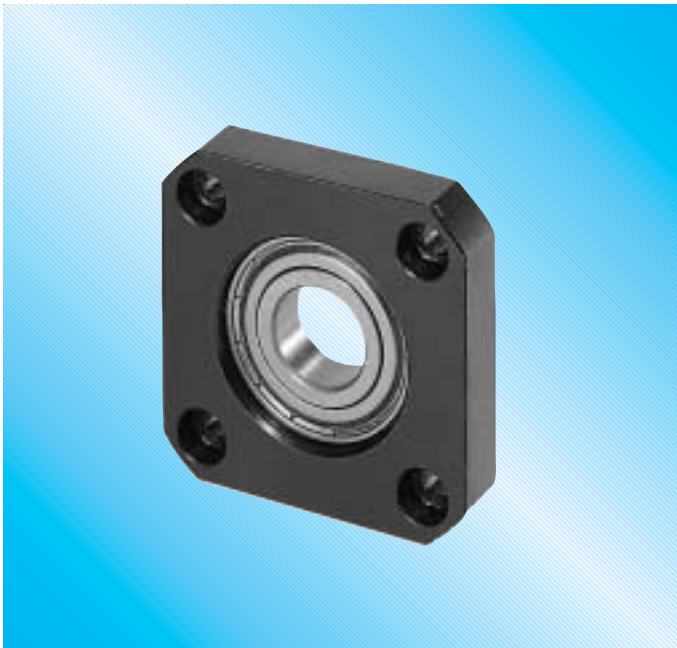


fig. 2-1



fig. 2-2

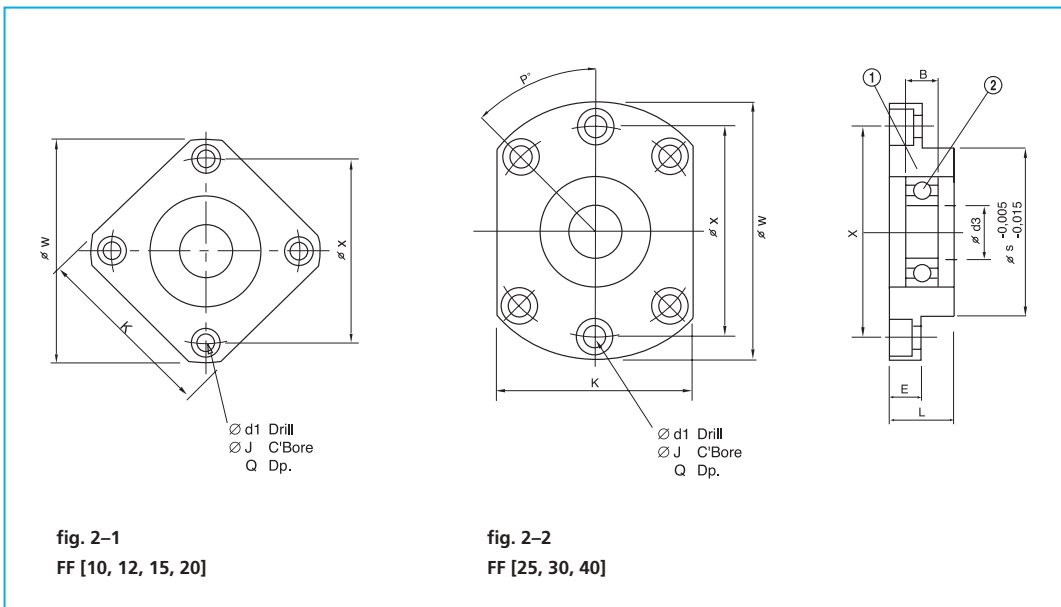


fig. 2-1
FF [10, 12, 15, 20]

fig. 2-2
FF [25, 30, 40]

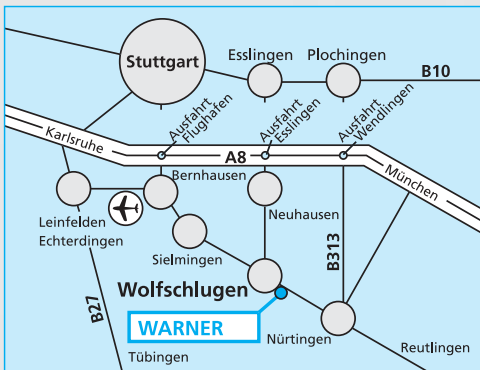
FF Partlist		
No.	Part	Q'ty
1	Housing	1
2	Bearing	2
3	Snapping	1

Reference	w	L	s	K	E	x	n	Mounting Dim.					d3	B	Bearing	Load [N]	
								d1	j	Q	P°	radial				weight [kg]	
FF 8	43	11	28	35	6	35	4	3,4	6,5	4	90	6	6	606	2310		
FF 10	52	12	34	42	7	42	4	4,5	8	5	90	8	7	608	3350		
FF 12	54	15	36	44	8	44	4	4,5	8	5	90	10	8	6001	4650	0,160	
FF 15	63	17	40	52	9	50	4	5,5	9,5	6	90	15	9	6002	5700	0,210	
FF 20	85	20	57	68	14	70	4	6,6	11	10	90	20	14	6204	13000	0,475	
FF 25	122	30	80	92	15	100	6	11	17,5	11	45	25	15	6205	14300	1,300	
FF 30	138	32	90	106	15	116	6	11	17,5	11	45	30	16	6206	19800	1,830	
FF 40	176	36	120	128	18	150	6	14	20	13	45	40	18	6208	29700	3,345	

not on Stock

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