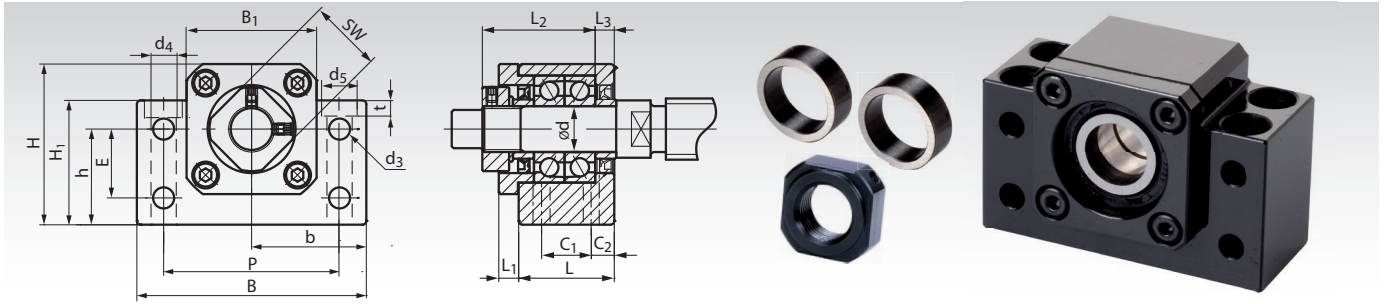


Pillow Block Bearing Units BK, for Fixed Side



Material: Housing from steel, all surfaces machined, burnished.
On request: nickel plated. Rolling bearing from bearing steel.

Ready-to-install housing bearing unit for trapezoidal and ballscrew spindle drives, for the fixed side. With two angular contact ball bearings, lightly preloaded, with seals. With 8 mounting holes.

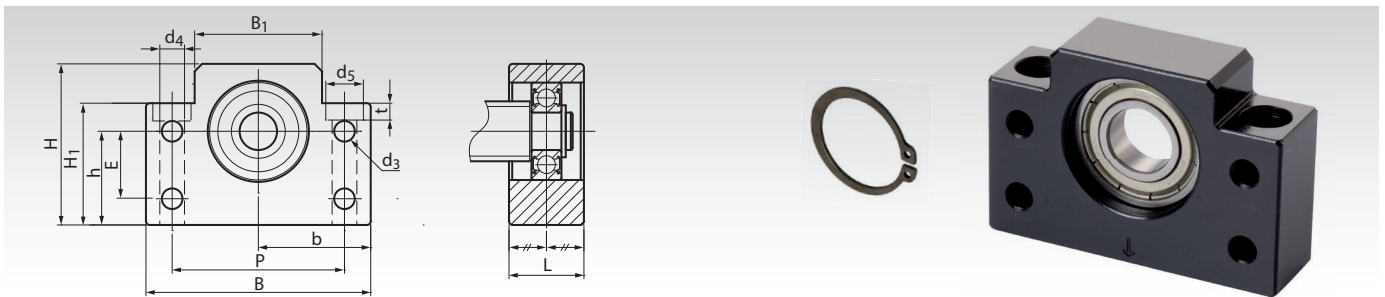
Locknut and distance bushes are included. Due to the standard dimensions, these units can also replace parts of other suppliers.

Spindle reworking on request (see page 325).
Matching counterpart for support side: Pillow Block Bearing BF.

Ordering Details: e.g.: Product No. 642 001 10, Ball Pillow Block Bearing Unit BK 10, Bore 10mm

Product No.	Type	d mm	L mm	L ₁ mm	L ₂ mm	L ₃ mm	B mm	H mm	b $\pm 0,02$ mm	h $\pm 0,02$ mm	B ₁ mm	H ₁ mm	E mm	P mm	C ₁ mm	C ₂ mm	d ₃ mm	d ₄ mm	d ₅ mm	t mm	SW mm	Weight kg
642 001 10	BK 10	10	25	5	29,5	5	60	39	30	22	34	32,5	15	46	13	6	5,5	6,3	10,5	6,5	16	0,39
642 001 12	BK 12	12	25	5	29,5	5	60	42	30	25	34	32,5	18	46	13	6	5,5	6,3	10,5	1,5	19	0,41
642 001 15	BK 15	15	27	6	32	6	70	47	35	28	38	38	18	54	15	6	5,5	6,3	10,5	6,5	22	0,57
642 001 17	BK 17	17	35	9	44	7	86	63	43	39	48	55	28	68	19	8	6,6	8,7	14,0	8,6	24	1,27
642 001 20	BK 20	20	35	8	43	8	88	59	44	34	50	50	22	70	19	8	6,6	8,7	14,0	8,5	30	1,19
642 001 25	BK 25	25	42	12	54	9	106	79	53	48	62	70	33	85	22	10	9	10,7	17,5	10,8	35	2,30
642 001 30	BK 30	30	45	14	61	9	128	88	64	51	74	78	33	102	23	11	11	13,7	20	13	40	3,32
642 001 35	BK 35	35	50	14	67	12	140	95	70	52	86	79	35	114	26	12	11	13,7	20	13	50	4,33
642 001 40	BK 40	40	61	18	76	15	160	109	80	60	98	90	37	130	33	14	14	17,7	26	17,5	50	6,50

Pillow Block Bearing Units BF, for Support Side



Material: Housing from steel, all surfaces machined, burnished.
On request: nickel plated. Rolling bearing from bearing steel.

Ready-to-install housing bearing unit for trapezoidal and ballscrew spindle drives, for the support side. With one movable single row deep groove ball bearing with shields (2Z). With 6 mounting holes.

Retaining ring for fixing on the spindle end is included. Due to the standard dimensions, these units can also replace parts of other suppliers.

Spindle reworking on request (see page 325).
Matching counterpart for fixed side: Pillow Block Bearing BK.

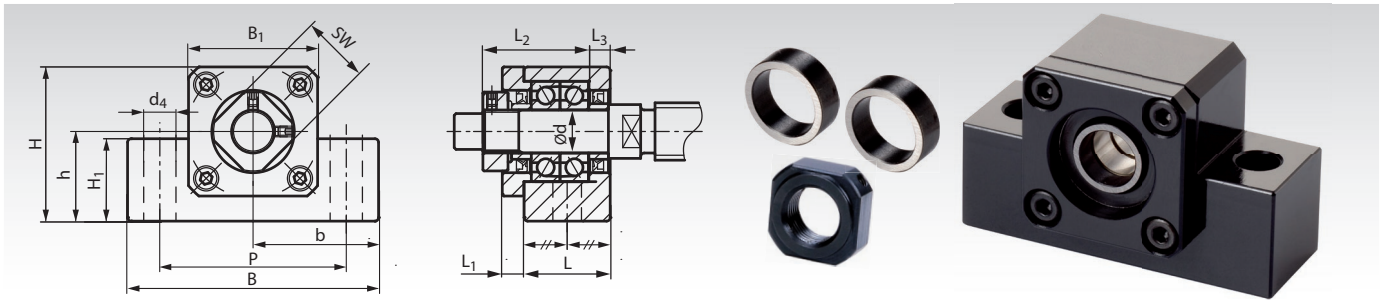
Ordering Details: e.g.: Product No. 642 002 10, Ball Pillow Block Bearing Unit BF 10, Bore 8mm

Product No.	Type	d mm	L mm	B mm	H mm	b $\pm 0,02$ mm	h $\pm 0,02$ mm	B ₁ mm	H ₁ mm	E mm	P mm	d ₃ mm	d ₄ mm	d ₅ mm	t mm	Weight kg
642 002 10	BF 10	8	20	60	39	30	22	34	32,5	15	46	5,5	6,3	10,8	5,0	0,29
642 002 12	BF 12	10	20	60	43	30	25	34	32,5	18	46	5,5	6,3	10,8	1,5	0,30
642 002 15	BF 15	15	20	70	48	35	28	40	38	18	54	5,5	6,3	11	6,5	0,38
642 002 17	BF 17	17	23	86	64	43	39	50	55	28	68	6,6	8,7	14	8,6	0,74
642 002 20	BF 20	20	26	88	60	44	34	52	50	22	70	6,6	8,7	14	8,6	0,76
642 002 25	BF 25	25	30	106	80	53	48	64	70	33	85	9	10,7	17,5	11	1,42
642 002 30	BF 30	30	32	128	89	64	51	76	78	33	102	11	13,7	20	13	1,97
642 002 35	BF 35	35	32	140	96	70	52	88	79	35	114	11	13,7	20	13	2,22
642 002 40	BF 40	40	37	160	110	80	60	100	90	37	130	14	17,7	26	17,5	3,27



Nickel plated on request.

Pillow Block Bearing Units EK, for Fixed Side



Material: Housing from steel, all surfaces machined, burnished. On request: nickel plated. Rolling bearing from bearing steel.

Ready-to-install housing bearing unit for trapezoidal and ballscrew spindle drives, for the fixed side. With two angular contact ball bearings, lightly preloaded, with seals. With 2 mounting holes.

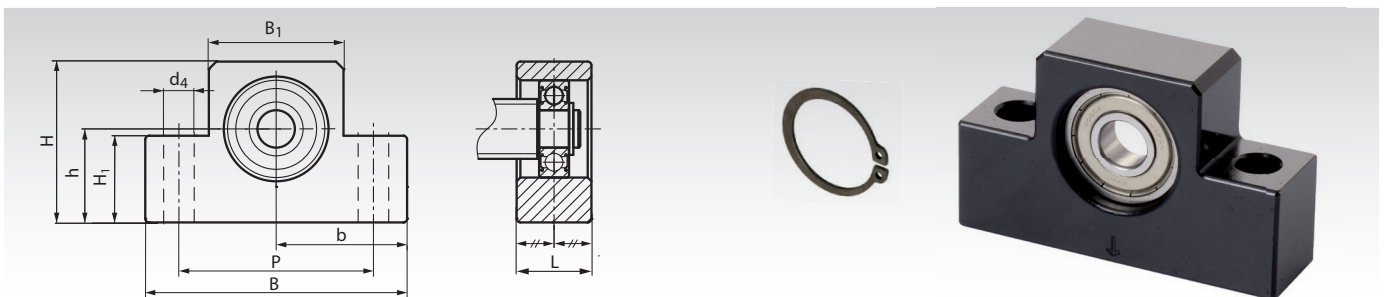
Locknut and distance bushes are included. Due to the standard dimensions, these units can also replace parts of other suppliers.

Spindle reworking on request (see page 325).
Matching counterpart for support side: Pillow Block Bearing EF.

Ordering Details: e.g.: Product No. 642 003 06, Ball Pillow Block Bearing Unit EK 6, Bore 6mm

Product No.	Type	d mm	L mm	L ₁ mm	L ₂ mm	L ₃ mm	B mm	H mm	b±0,02 mm	h±0,02 mm	B ₁ mm	H ₁ mm	P mm	d ₄ mm	SW mm	Weight kg
642 003 06	EK 06	6	20	5,5	22	3,5	42	25	21	13	20	12	30	5,2	12	0,14
642 003 08	EK 08	8	23	7	26	4	52	32	26	17	27	16	38	6,3	14	0,24
642 003 10	EK 10	10	24	6	29,5	6	70	43	35	25	36	24	52	9	16	0,46
642 003 12	EK 12	12	24	6	29,5	6	70	43	35	25	36	24	52	9	19	0,44
642 003 15	EK 15	15	25	6	32	5	80	50	40	30	40	25	60	11	22	0,55
642 003 20	EK 20	20	42	10	50	10	95	58	47,5	30	56	25	75	11	30	1,35

Pillow Block Bearing Units EF, for Support Side



Material: Housing from steel, all surfaces machined, burnished. On request: nickel plated. Rolling bearing from bearing steel.

Ready-to-install housing bearing unit for trapezoidal and ballscrew spindle drives, for the support side. With one movable single row deep groove ball bearing with shields (2Z). With 2 mounting holes.

Retaining ring for fixing on the spindle end is included. Due to the standard dimensions, these units can also replace parts of other suppliers.

Spindle reworking on request (see page 325).
Matching counterpart for fixed side: Pillow Block Bearing EK.

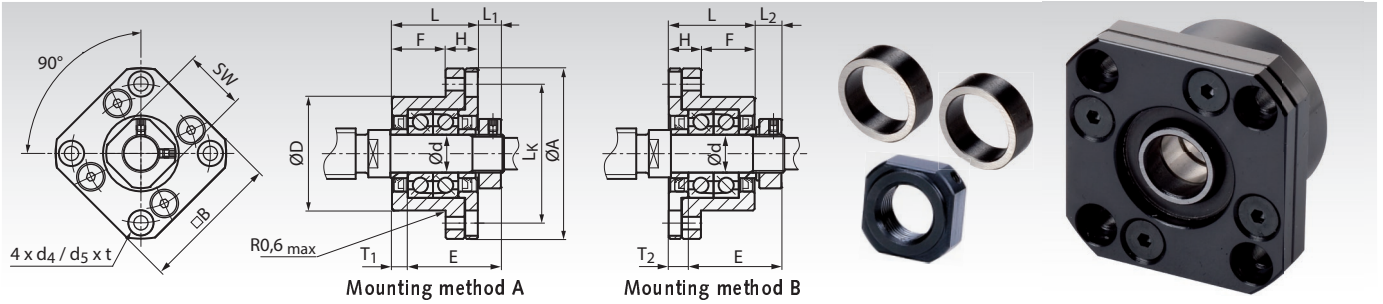
Ordering Details: e.g.: Product No. 642 004 06, Ball Pillow Block Bearing Unit EF 6, Bore 6mm

Product No.	Type	d mm	L mm	B mm	H mm	b±0,02 mm	h±0,02 mm	B ₁ mm	H ₁ mm	P mm	d ₄ mm	Weight kg
642 004 06	EF 06	6	12	42	25	21	13	20	12	30	5,2	0,07
642 004 08	EF 08	6	14	52	32	26	17	27	16	38	6,3	0,13
642 004 10	EF 10	8	20	70	43	35	25	36	24	52	9	0,33
642 004 12	EF 12	10	20	70	43	35	25	36	24	52	9	0,32
642 004 15	EF 15	15	20	80	49	40	30	41	25	60	9	0,38
642 004 20	EF 20	20	26	95	58	47,5	30	56	25	75	11	0,63



Nickel plated on request.

Flange Bearing Units FK, for Fixed Side



Material: Housing from steel, all surfaces machined, burnished. On request: nickel plated. Rolling bearing from bearing steel.

Ready-to-install housing bearing unit for trapezoidal and ballscrew spindle drives, for the fixed side. With two angular contact ball bearings, lightly preloaded, with seals. With 4 mounting holes.

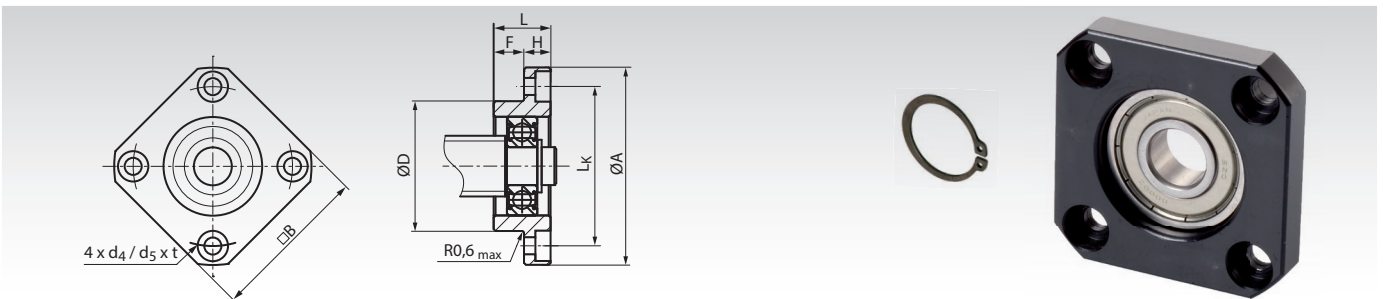
Locknut and distance bushes are included. Due to the standard dimensions, these units can also replace parts of other suppliers.

Spindle reworking on request (see page 325).
Matching counterpart for support side: Flange Bearing FF.

Ordering Details: e.g.: Product No. 642 005 06, Flange Bearing Unit FK 6, Bore 6mm

Product No.	Type	d mm	L mm	H mm	F mm	E mm	D ^{g6} mm	A mm	L _k mm	B mm	L ₁ mm	T ₁ mm	L ₂	T ₂	d ₄ mm	d ₅ mm	t mm	SW mm	Weight kg
642 005 06	FK 06	6	20	7	13	22	22	36	28	28	5,5	3,5	6,5	4,5	3,4	6	3,3	12	0,08
642 005 08	FK 08	8	23	9	14	26	28	43	35	35	7,0	4	8	5	3,4	6	3,3	14	0,15
642 005 10	FK 10	10	27	10	17	29,5	34	52	42	42	7,3	5	8,5	6	4,5	8	4	16	0,21
642 005 12	FK 12	12	27	10	17	29,5	36	54	44	44	7,3	5	8,5	6	4,5	8	4	19	0,22
642 005 15	FK 15	15	32	15	17	36	40	63	50	52	9,8	6	12	8	5,5	9,5	6	22	0,39
642 005 17	FK 17	17	45	22	23	47	50	77	62	61	11,0	9	14	12	6,6	11	10	24	0,85
642 005 20	FK 20	20	52	22	30	50	57	85	70	68	7,8	10	12	14	6,5	11	10	30	1,09
642 005 25	FK 25	25	57	27	30	60	63	98	80	79	12,8	10	20	17	9	15	13	35	1,49
642 005 30	FK 30	30	62	30	32	61	75	117	95	93	10,8	12	17	18	11	17,5	15	40	2,32

Flange Bearing Units FF, for Support Side



Material: Housing from steel, all surfaces machined, burnished. On request: nickel plated. Rolling bearing from bearing steel.

Ready-to-install housing bearing unit for trapezoidal and ballscrew spindle drives, for the support side. With one movable single row deep groove ball bearing with shields (2Z). With 4 mounting holes.

Retaining ring for fixing on the spindle end is included. Due to the standard dimensions, these units can also replace parts of other suppliers.

Spindle reworking on request (see page 325).
Matching counterpart for fixed side: Flange Bearing FK.

Ordering Details: e.g.: Product No. 642 006 06, Flange Bearing Unit FF 6, Bore 6mm

Product No.	Type	d mm	L mm	H mm	F mm	D ^{g6} mm	A mm	L _k mm	B mm	d ₄ mm	d ₅ mm	t mm	Weight kg
642 006 06	FF 06	6	10	6	4	22	36	28	28	3,4	6,0	3,3	0,04
642 006 10	FF 10	8	12	7	5	28	43	35	35	3,4	6,0	3,3	0,07
642 006 12	FF 12	10	15	7	8	34	52	42	42	4,2	8	4,4	0,11
642 006 15	FF 15	15	17	9	8	40	63	50	52	5,2	9,5	5,4	0,20
642 006 17	FF 17	17	20	11	9	50	77	62	61	6,6	11	8,6	0,35
642 006 20	FF 20	20	20	11	9	57	85	70	68	6,3	11	6,5	0,27
642 006 25	FF 25	25	24	14	10	63	98	80	79	8,7	14	8,6	0,67
642 006 30	FF 30	30	27	18	9	75	117	95	93	10,7	17,5	10,8	1,07

Nickel plated on request.

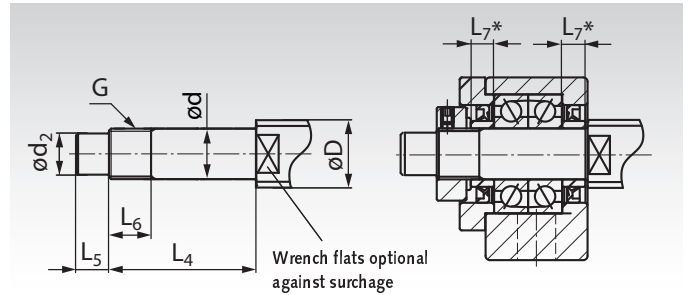
Shaft Reworking and Bearing Load Data for Spindle Bearing Units BK, EK and FK (Fixed Side)

Shaft Reworking:

At **MÄDLER**[®], trapezoidal and ballscrew spindles can get reworked, fitting to the bearing units. The spindle reworking in the drawing is just a recommendation. Due to the customer's request, the length L_5 could be shorter or longer and the shaft end could get a keyway DIN 6885.

Bearing Load Data:

The loading rates and speed limits shown in the table are the limits just for the bearings. The limits of the spindles are much lower, depending on the diameter, length and material.



Recommended Shaft Reworking for Fixed Side Units

Bearing-Unit Type	Spindle- ϕD		d_{g6} mm	d_2^{h7} mm	$L_4 \pm 0,2$ mm	$L_5 \pm 0,2$ mm	G mm	$L_6 \pm 0,2$ mm	$L_7^{1)}$ mm	Bearing Load Data			
	KGT mm	TR mm								Bearing Type	Load rating axial dyn.C kN	stat. C_0 kN	Speed limit min^{-1}
EK 06 / FK 06	8	10*	6	4	28	8	M6x0,75	8	5	706 A P5	2,03	0,80	46.400
EK 08 / FK 08	10/12	12*/14	8	6	32	9	M8x1	10	5,5	708 A P5	3,35	1,45	35.200
BK 10	12/14/15	16	10	8	36	15	M10x1	16	5,5	7000 A P5	5,0	2,34	29.440
EK 10 / FK 10	12/14/15	16	10	8	36	15	M10x1	11	5,5	7000 A P5	5,0	2,34	29.440
BK 12	14/15/16	18	12	10	36	15	M12x1	14	5,5	7001 A P5	5,4	2,71	25.760
EK 12 / FK 12	14/15/16	18	12	10	36	15	M12x1	11	5,5	7001 A P5	5,4	2,71	25.760
BK 15	18/20	20*/24	15	12	40	20	M15x1	12	6	7002 A P5	3,2	2,36	22.080
EK 15	18/20	20*/24	15	12	40	20	M15x1	13	6	7002 A P5	3,2	2,36	22.080
FK 15	18/20	20*/24	15	12	47	20	M15x1	13	10	7002 A P5	3,2	2,36	22.080
BK 17 / FK 17	20/25	24/28	17	15	53	23	M17x1	17	7	7203 A P5	10,1	5,45	18.400
BK 20	25/28/30	30/36	20	17	53	25	M20x1	15	8	7004 A P5	10,3	6,10	16.560
EK 20 / FK 20	25/28/30	30/36	20	17	62	25	M20x1	17	11	7204 A P5	13,6	7,55	15.640
BK 25	30/32/36	36	25	20	65	30	M25x1,5	18	9	7205 A P5	15,4	9,45	13.800
FK 25	30/32/36	36	25	20	76	30	M25x1,5	20	15	7205 A P5	15,4	9,45	13.800
BK 30 / FK 30	36/40	36*/40	30	25	72	38	M30x1,5	25	9	7206 A P5	21,3	13,6	11.040
BK 35	45	36*/40	35	30	81	45	M35x1,5	28	12	7207 A P5	28,2	18,5	9.660
BK 40	50	50	40	35	93	50	M40x1,5	35	15	7208 A P5	33,5	23,3	8.832

¹⁾ The matching distance bushes are included in the scope of delivery of bearing units BK, EK and FK.

* A rest of the thread grooves may remain visible.

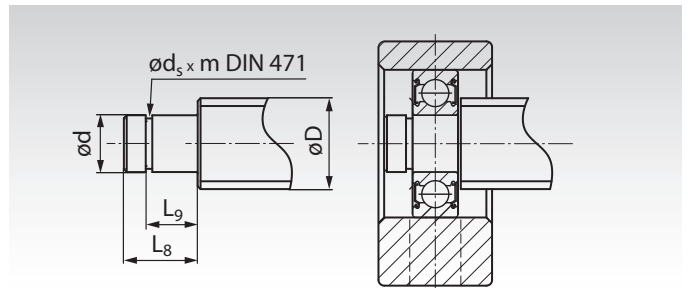
Shaft Reworking and Bearing Load Data for Spindle Bearing Units BF, EF and FF (Support Side)

Shaft Reworking:

At **MÄDLER**[®], trapezoidal and ballscrew spindles can get reworked, fitting to the bearing units. The spindle reworking in the drawing is just a recommendation. Due to the customer's request, the length L_8 could be shorter or longer and the shaft end could get a keyway DIN 6885.

Bearing Load Data:

The loading rates and speed limits shown in the table are the limits just for the bearings. The limits of the spindles are much lower, depending on the diameter, length and material.



Recommended Shaft Reworking for Support Side Units

Bearing-Unit Type	Spindle- ϕD		d_{g6} mm	$d_s^{-0,15}$ mm	$L_8 \pm 0,2$ mm	$L_9 \pm 0,2$ mm	mH13 mm	DIN 471 ¹⁾ mm	Bearing Load Data			
	KGT mm	TR mm							Bearing Type	Load rating axial dyn.C kN	stat. C_0 kN	Speed limit min^{-1}
EF 06 / FF 06	8	10*	6	5,7	9	6,8	0,8	6	606-2Z	2,3	0,8	37.000
EF 08	10/12	10*/12	6	5,7	9	6,8	0,8	6	606-2Z	2,3	0,8	37.000
BF 10 / EF 10 / FF 10	12/14/15	12*/14	8	7,6	10	7,9	0,9	8	608-2Z	3,3	1,4	34.000
BF 12 / EF 12 / FF 12	14/15/16	16/18	10	9,6	11	9,15	1,15	10	6000-2Z	4,6	2,0	31.000
BF 15 / EF 15 / FF 15	18/20	20*/24	15	14,3	13	10,15	1,15	15	6002-2Z	5,6	2,8	23.000
BF 17 / FF 17	20/25	24/28	17	16,2	16	13,15	1,15	17	6203-2Z	9,6	4,8	17.000
BF 20	25/28/30	30/36	20	19,0	16	13,15	1,15	20	6004-2Z	9,4	5,0	15.000
BF 20 / FF 20	25/28/30	30/36	20	19,0	19	15,35	1,35	20	6204-2Z	12,8	6,7	14.000
BF 25 / FF 25	30/32/36	36	25	23,9	20	16,35	1,35	25	6205-2Z	14,0	7,9	12.000
BF 30 / FF 30	36/40	36*/40	30	28,6	21	17,75	1,75	30	6206-2Z	19,5	11,3	9.500
BF 35	40/45	36/40	35	33	22	18,75	1,75	35	6207-2Z	16,0	10,4	9.000
BF 40	50	50	40	38	23	19,95	1,95	40	6208-2Z	29,5	18,0	8.000

¹⁾ The retaining ring DIN 471 is included in the scope of delivery of bearing units BF, EF and FF.

* A rest of the thread grooves may remain visible.