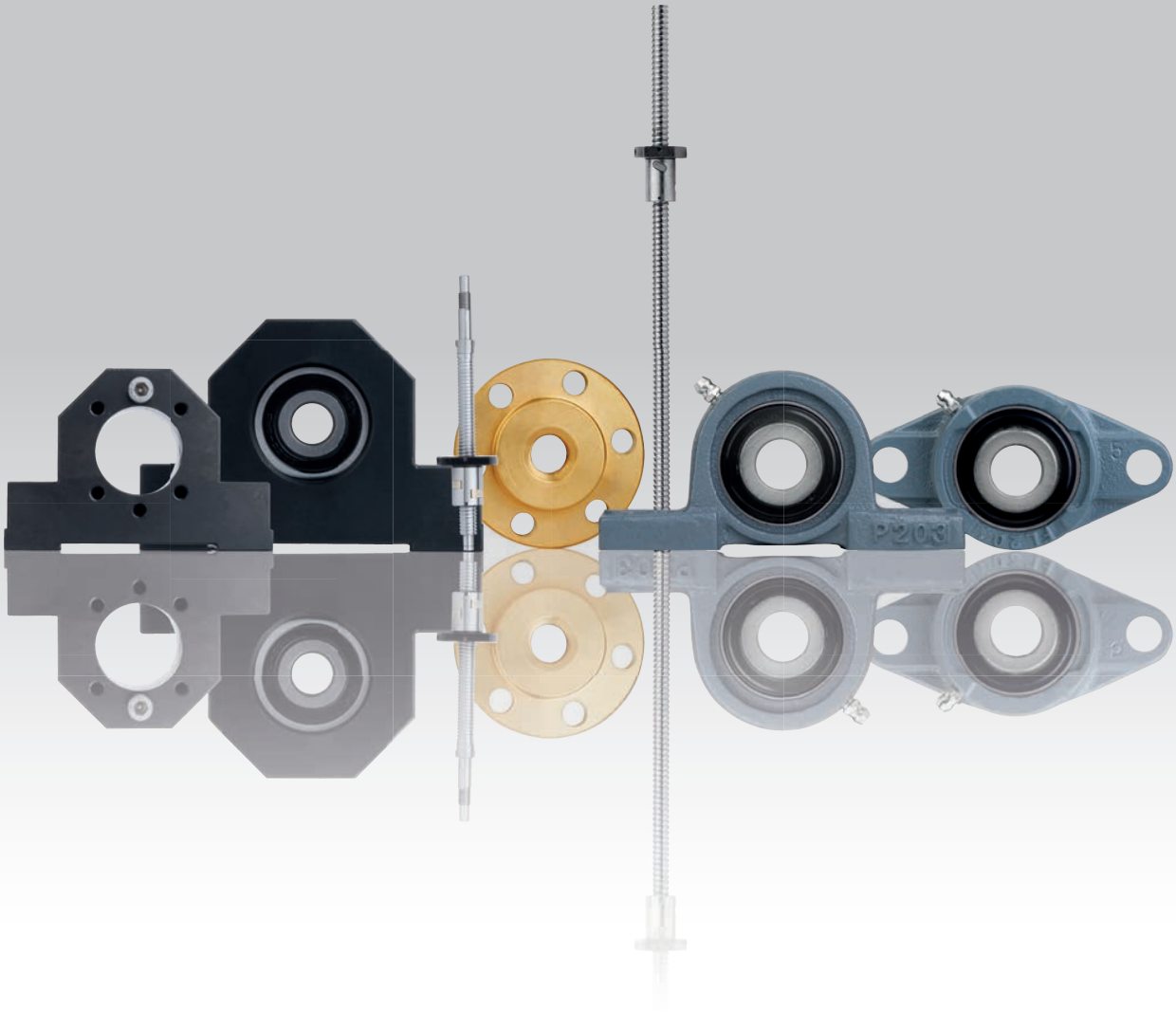
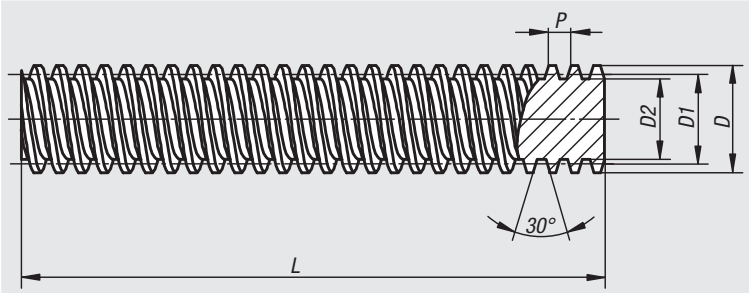
24000

ACME threaded spindles
Ball-type linear drives
Bearing units



ACME threaded spindles, rolled

right-hand thread, single-flight



Material:
Hardened steel 1.0401 (C15).

Version:
Rolled, natural finish

Sample order:
nlm 24000-100311X1000

Note:
The ACME threaded spindle is a movement spindle that has a relatively large friction. It is self locking in the standard thread range. This has the advantage that it generally need not be secured in the rest position

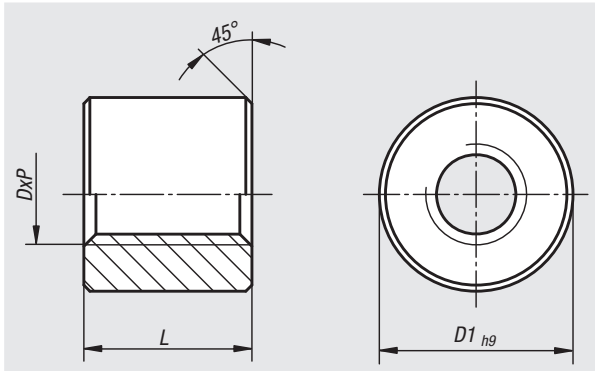
DIN 103. Pitch Tr 10x3 not acc. to DIN 103
Tolerance class 7e
Pitch precision 0.3 / 300 mm

On request:
Lengths up to a max. 3000 mm.

Order No.	DxP	D1 min.	D1 max.	D2	L	Approx. weight kg/m
24000-100311X1000	Tr 10x3	8,191	8,415	5,84	1000	0,430
24000-120311X1000	Tr 12x3	10,191	10,415	7,84	1000	0,660
24000-160411X1000	Tr 16x4	13,64	13,905	10,8	1000	1,180
24000-200411X1000	Tr 20x4	17,64	17,905	14,8	1000	1,960
24000-240511X1000	Tr 24x5	21,094	21,394	17,5	1000	2,800
24000-260511X1000	Tr 26x5	23,094	23,394	19,5	1000	3,340
24000-300611X1000	Tr 30x6	26,547	26,882	21,9	1000	4,440

ACME threaded nuts, round

right-hand thread, single-flight



Material:
Red brass Rg7

Version:
Natural finish

Sample order:
nlm 24003-1003132

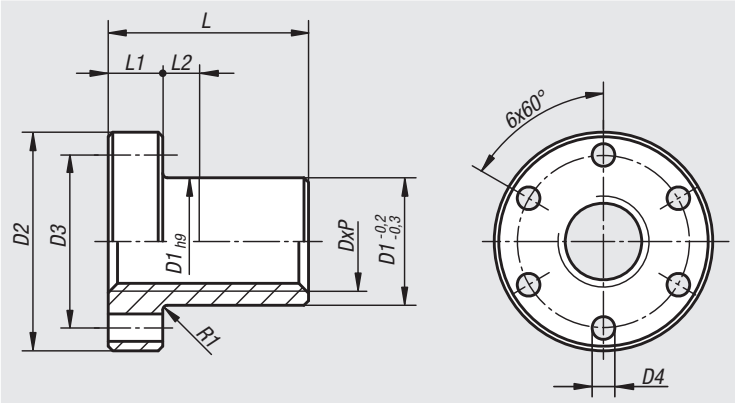
Note:
For motion drives with low and medium speed. In case of lack of lubricant, the ACME threaded nuts made of red brass have good emergency running characteristics on steel spindles.

Tolerance class 7H

Order No.	DxP	D1	L	Approx. weight kg
24003-1003132	Tr 10x3	22	20	0,061
24003-1203132	Tr 12x3	26	24	0,095
24003-1604132	Tr 16x4	36	32	0,270
24003-2004132	Tr 20x4	45	40	0,523
24003-2405132	Tr 24x5	50	48	0,627
24003-2605132	Tr 26x5	60	52	0,700
24003-3006132	Tr 30x6	60	60	1,017

ACME threaded nuts with flange

right-hand thread, single-flight



Material:
Red brass Rg7

Version:
Natural finish

Sample order:
nlm 24005-160411

Note:
For motion drives with low and medium speed. In case of lack of lubricant, the ACME threaded nuts made of red brass have good emergency running characteristics on steel spindles.

Tolerance class 7H

Order No.	DxP	D1	D2	D3	D4	L	L1	L2	Approx. weight kg
24005-100313	Tr 10x3	25	42	34	5	15	10	5	0,100
24005-120313	Tr 12x3	28	48	38	6	18	12	6	0,110
24005-160413	Tr 16x4	28	48	38	6	24	12	12	0,130
24005-200413	Tr 20x4	32	55	45	7	30	12	8	0,200
24005-240513	Tr 24x5	32	55	45	7	36	12	8	0,420
24005-260513	Tr 26x5	38	62	50	7	39	14	8	0,800
24005-300613	Tr 30x6	38	62	50	7	45	14	8	0,950

Technical information for ball-type linear drives

Efficiency and self-limitation:
The mechanical efficiency attained via low rolling friction in the case of a ball screw: up to 95%. Operating time can be up to 100%. Due to low rolling friction, ball screws have no self-limitation. Therefore, a break gear must be provided when selflimitation is required in their application (reduction gear or engine brake). This is particularly necessary in the case of installation positions.

Operating temperature:
Ball screws can be used at normal load within the temperature range of -20 °C up to +80 °C. They can also be used at +110 °C for short periods of time. They always require proper lubrication.

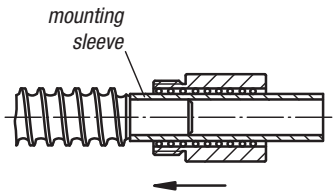
Lubrication:
Proper lubrication is important for ball screws in order to attain the calculated lifespan, to avoid excessive heating and guarantee a smooth, noiseless run. The same lubricants are used for them upon operation as are used for roller bearings.

Ball screws should be stringently protected from impurities.

This should occur by default via the dirt scrapers integrated in the ball screw nuts, which prevents lubricant from escaping from the nut.

Installation information:
When ordering ball screw nuts individually, they come delivered on a mounting sleeve. The sleeve must not be removed prior to installation, or else the balls could fall out of the ball screw nut. Upon installation (Figure 1), hold the sleeve as an extension piece on the end of the spindle and then slide the nut over the sleeve and at the same time casually loosen onto the spindle thread. Next, lubricant should be applied at the lubricant drill hole in the ball screw nut. In order to avoid damaging the ball screws, the machine must be supplied with a limit switch and an end-of-travel damper.

Figure 1



Note:
Ball screws consist of a ball screw spindle, a ball screw nut, in which the balls are integrated, as well as the ball refeed. They serve to convert a rotary motion into a lengthwise motion and the reverse. They excel at so doing owing to high accuracy at a high operating ratio.

Manufacturing technology:
The rolled ball screws are produced by means of a precision rolling process. Spindle and nut have a Gothic section. The load angle is 45°. The nut tracks are ground in as in the case of precision screws. Smooth antifrictional qualities and a long lifespan are thus guaranteed.

Gradient deviations:

Thread length		Accuracy class			
over	under	C 3 (µm)	C 5 (µm)	C 7 (µm)	C 10 (µm)
0	315	8	18	±50 / 300 mm	±210 / 300 mm
315	500	10	20		
500	630	12	23		
630	800	13	25		
800	1000	15	27		
1000	1250	16	30		
1250	1600	18	35		
1600	2000	21	40		
2000	2500	24	46		
2500	3150	29	54		
3150	4000	35	65		
4000	5000	41	77		

Axial play and pretensioning:
Here a differentiation is made between a play-restricted (axial play > 0) and a play-free or pretensioned (axial play < 0) ball screw. In the case of pretensioned nuts, a considerably less elastic deformation occurs than in that of nuts without pretensioning. Pretensioned nuts are, therefore, to be recommended when positioning accuracy under load matters.

Spindle Ø	Axial backlash P0 (mm)	Zero backlash P1 (mm)	Light pre-tensioning P2 single nut loosening torque N
16x5	0,08	0	1 - 3
20x5			1 - 3
25x5			2 - 5
32x5			2 - 5
32x10			3 - 6

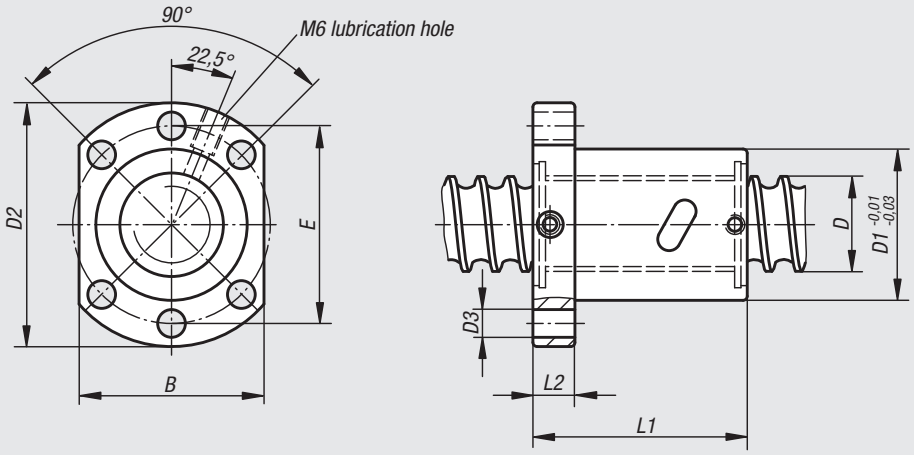
Assessment of the lifespan:
The lifespan can be calculated from the ratio of dynamic load rating and average load.

$$L = \left(\frac{C_{dyn}}{F_m}\right)^3 \cdot 10^6$$

L	=	lifespan in rotations
Cdyn	=	dynamic load rating (N)
Fm	=	average load (N)

Ball-type linear drives, rolled

with flange nut DIN 69051 Part 5



Material:
Spindle, steel 1.1213;
nut, steel 1.3505;
deflector, plastic

Version:
Spindle, rolled, inductively hardened to 62 ±2 HRC and polished;
nut, ground, track inductively hardened to 62 ±2 HRC and polished

Sample order:
nlm 24055-16052X0600
(Please indicate total length L)
For processing the ends, a detailed customer design is required.

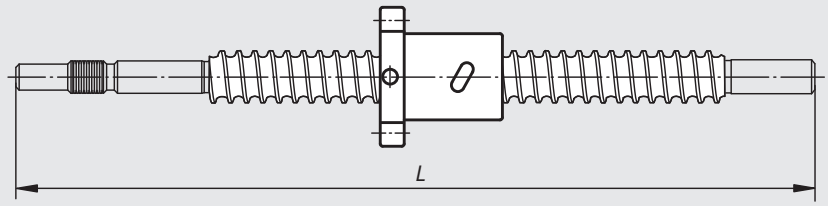
Note:
Ball-type linear drive with gothic pointed arch profile with 5 mm or 10 mm pitch. Single-start, ascending to the right. Ball screw-flange nut according to DIN 69051 Part 5 with flange. Manufactured according to accuracy class C7 (tolerance ±50 µ / 300 mm). Without pre-stressing, with axial play P0 (max. 0.08 mm)

On request:
We manufacture ball screws at your request on the basis of a detailed design.
Max. production lengths 5600 mm.

Other accuracy classes and pre-stressings available (see Technical Information).

Attention:
The flange nut must not be removed without assembly aid of the spindle, otherwise the balls fall out.

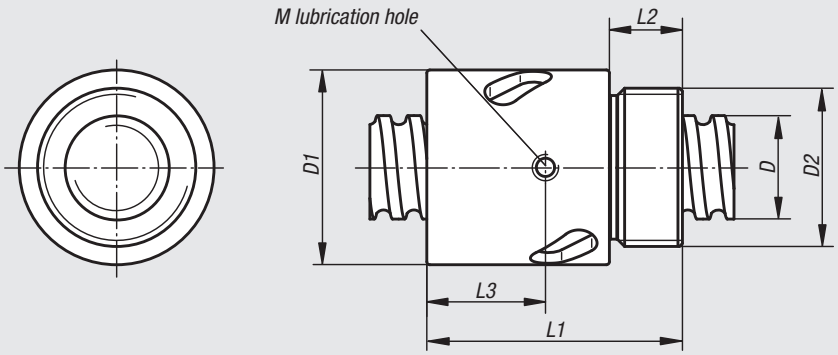
Example of shaft machining:



Order No.	D	D1	Pitch	D2	D3	B	E	L1	L2	Ball-Ø	Number of bearing rotation paths	Dynamic base loads N	Static base loads N	Stiffness K (N/µm)
24055-16052X	16	28	5	48	5,5	40	38	50	10	3,175	4	8880	15250	200
24055-20052X	20	36	5	58	6,6	44	47	51	10	3,175	4	9990	19950	250
24055-25052X	25	40	5	62	6,6	48	51	51	10	3,175	4	11190	25810	350
24055-32052X	32	50	5	80	9	62	65	52	12	3,175	4	12640	34030	400
24055-32102X	32	50	10	80	9	62	65	90	12	6,35	4	30930	61020	400

Ball-type linear drives, rolled

with screw-in cylinder nut



Material:
Spindle, steel 1.1213;
nut, steel 1.3505;
deflector, plastic

Version:
Spindle, rolled, inductively hardened to 62 ±2 HRC and polished;
nut, ground, track inductively hardened to 62 ±2 HRC and polished

Sample order:
nlm 24060-16052X0600
(Please indicate total length L)
For processing the ends, a detailed customer design is required.

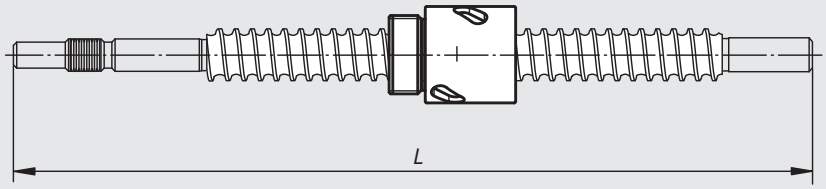
Note:
Ball-type linear drive with gothic pointed arch profile with 5 mm or 10 mm pitch. Single-start, ascending to the right. Ball screw-cylinder nut with screw-in thread according to ISO 3408 (DIN 69051).
Manufactured according to accuracy class C7 (tolerance ±50 µ / 300 mm). Without pre-stressing, with axial play P0 (max. 0.08 mm).

On request:
We manufacture ball screws at your request on the basis of a detailed design.
Max. production lengths 5600 mm.

Other accuracy classes and pre-stressings available (see Technical Information).

Attention:
The screw-in cylinder nut must not be removed without assembly aid of the spindle, otherwise the balls fall out.

Example of shaft machining:



Order No.	D	Pitch	D1	D2	L1	L2	L3	M	Ball-Ø	Number of bearing rotation paths	Dynamic base loads N	Static base loads N	Stiffness K (N/µm)
24060-16052X	16	5	32,5	M26x1,5	42	12	-	-	3,175	4	8880	15250	200
24060-20052X	20	5	38	M35x1,5	45	15	-	-	3,175	4	9990	19950	250
24060-25052X	25	5	43	M40x1,5	69	19	32	M6	3,175	4	11190	25810	350

Housings

for flange nuts

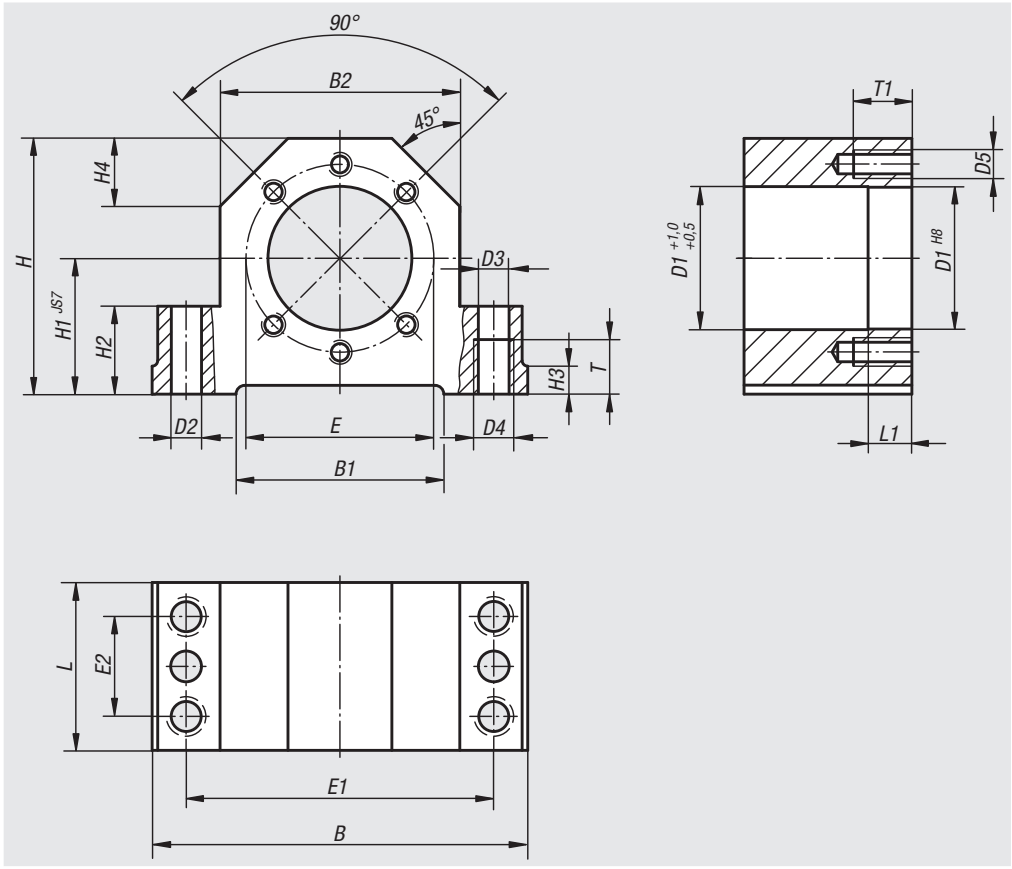
Material:
Steel

Version:
Black oxide finish

Sample order:
nlm 24070-016

Note:
The housings are ideally suited for installation of flange nuts according to DIN 69051 Part 5. The shaft height of the spindle bearings is aligned with the solid bearing units 24072 and loose bearing units 24074. The housings may be screwed on from above and below and pinned with two taper pins or cylindrical pins.

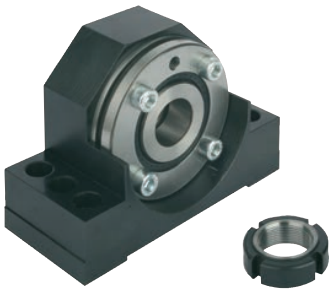
Delivery with 6 pieces, fastening screws of strength class 8.8.

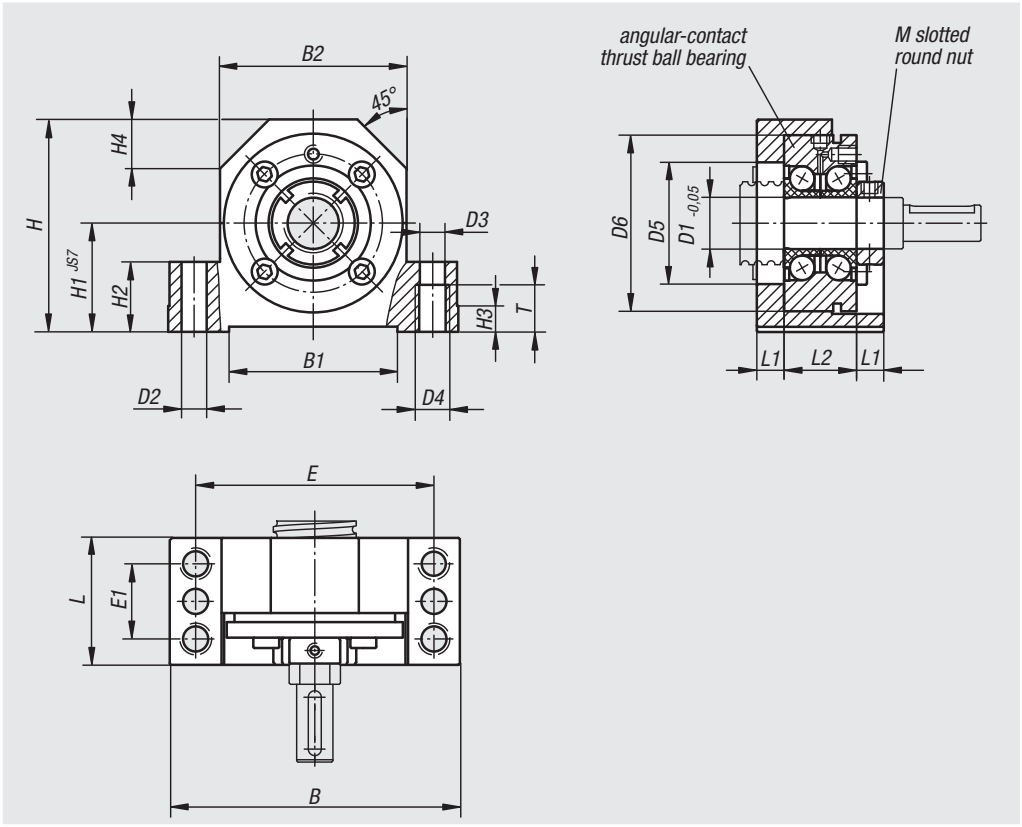


Ball-type linear drive with flange nut installed in a housing

Order No.	Suitable for spindel-Ø	B	B1	B2	D1	D2	D3	D4	D5	E	E1	E2	H	H1	H2	H3	H4	L	L1	T	T1	Approx. weight kg
24070-016	16	86	50	52	28	7,7	8,4	M10	M5	38	68	23	58	32	22	7	15	42	10	15	12	0,800
24070-020	20	94	58	60	36	7,7	8,4	M10	M6	47	77	25	64	34	22	7	17	46	16	15	15	1,000
24070-025	25	108	63	66	40	9,7	10,5	M12	M6	51	88	29	72	39	27	10	19	46	16	18	15	1,400
24070-032	32	112	70	72	50	9,7	10,5	M12	M8	65	92	29	82	42	27	10	19	49	16	18	20	1,500

Solid bearing units





Material:
Housing, steel

Version:
Housing, black oxide finish

Sample order:
nlm 24072-010

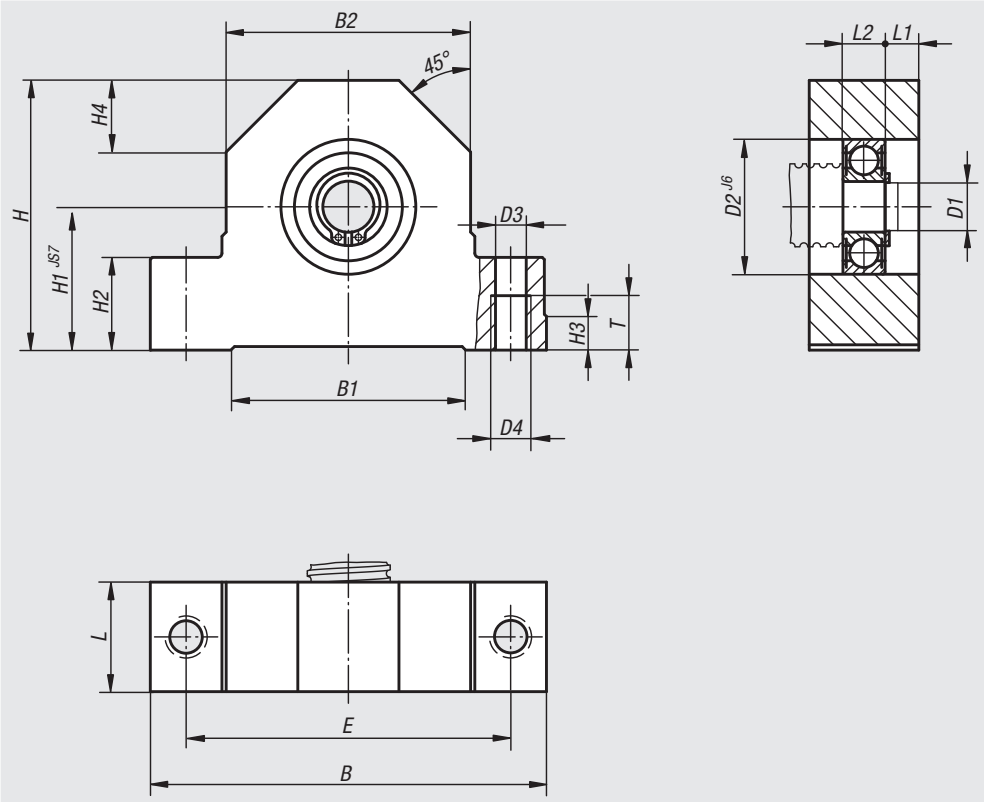
Note:
The shaft height of the spindle bearings is aligned with the loose bearing units 24074 and the housings for flange nuts 24070. The housings may be screwed on from above or below and pinned with two taper pins or cylindrical pins. Double-sided stop angles facilitate the adjustment of the unit.

Fully ready-to-install solid bearing units with two-rowed pre-stressed high-accuracy bearings and a 60° pressure angle. They assimilate both radial and axial forces from both directions and, as a result of pre-stressing, provide highest rigidity, run-out, precise tool positioning and repeatability.

Order No.	Suitable for spindel-Ø	B	B1	B2	D1	D2	D3	D4	D5	D6	E	E1	H	H1	H2	H3	H4	L	L1	L2	M	T
24072-010	16	86	50	52	10	7,7	8,4	M10	32	50	68	23	58	32	22	7	15	37	8,5	20	M10x1	15
24072-012	20	94	58	60	12	7,7	8,4	M10	32	55	77	25	64	34	22	7	17	42	8,5	25	M12x1	15
24072-015	20	108	63	66	15	9,7	10,5	M12	32	60	88	29	72	39	27	10	19	46	10,5	25	M15x1	18
24072-017	25	108	63	66	17	9,7	10,5	M12	36	62	88	29	72	39	27	10	19	46	10,5	25	M17x1	18
24072-020	32	112	70	72	20	9,7	10,5	M12	43	68	92	29	78	42	27	10	20	49	10,5	28	M20x1	18

Order No.	Dynamic base loads N	Static base loads N	Stiffness K (N/µm)	Approx. weight kg
24072-010	13400	18800	325	0,700
24072-012	16900	24700	375	0,970
24072-015	17900	28000	400	1,370
24072-017	18800	31000	450	1,330
24072-020	26000	47000	650	1,590

Loose bearing units



Material:
Housing, steel

Version:
Housing, black oxide finish

Sample order:
nlm 24074-010

Note:
The shaft height of the spindle bearings is aligned with the solid bearing units 24072 and the housings for flange nuts 24070. The housings may be screwed on from above or below. Double-sided stop angles facilitate the adjustment of the unit.

Fully ready-to-install loose bearing units with grooved ball bearing.

Order No.	Suitable for spindel-Ø	B	B1	B2	D1	D2	D3	D4	E	H	H1	H2	H3	H4	L	L1	L2	T	Approx. weight kg
24074-010	16	86	50	52	10	30	8,4	M10	68	58	32	22	7	15	24	7,5	9	15	0,520
24074-012	20	94	58	60	12	32	8,4	M10	77	64	34	22	7	17	26	8	10	15	0,690
24074-015	20	108	63	66	15	35	10,5	M12	88	72	39	27	10	19	28	8	12	18	0,970
24074-017	25	108	63	66	17	35	10,5	M12	88	72	39	27	10	19	28	8	12	18	0,960
24074-020	32	112	70	72	20	47	10,5	M12	92	78	42	27	10	20	34	10	14	18	1,230

Solid bearing units

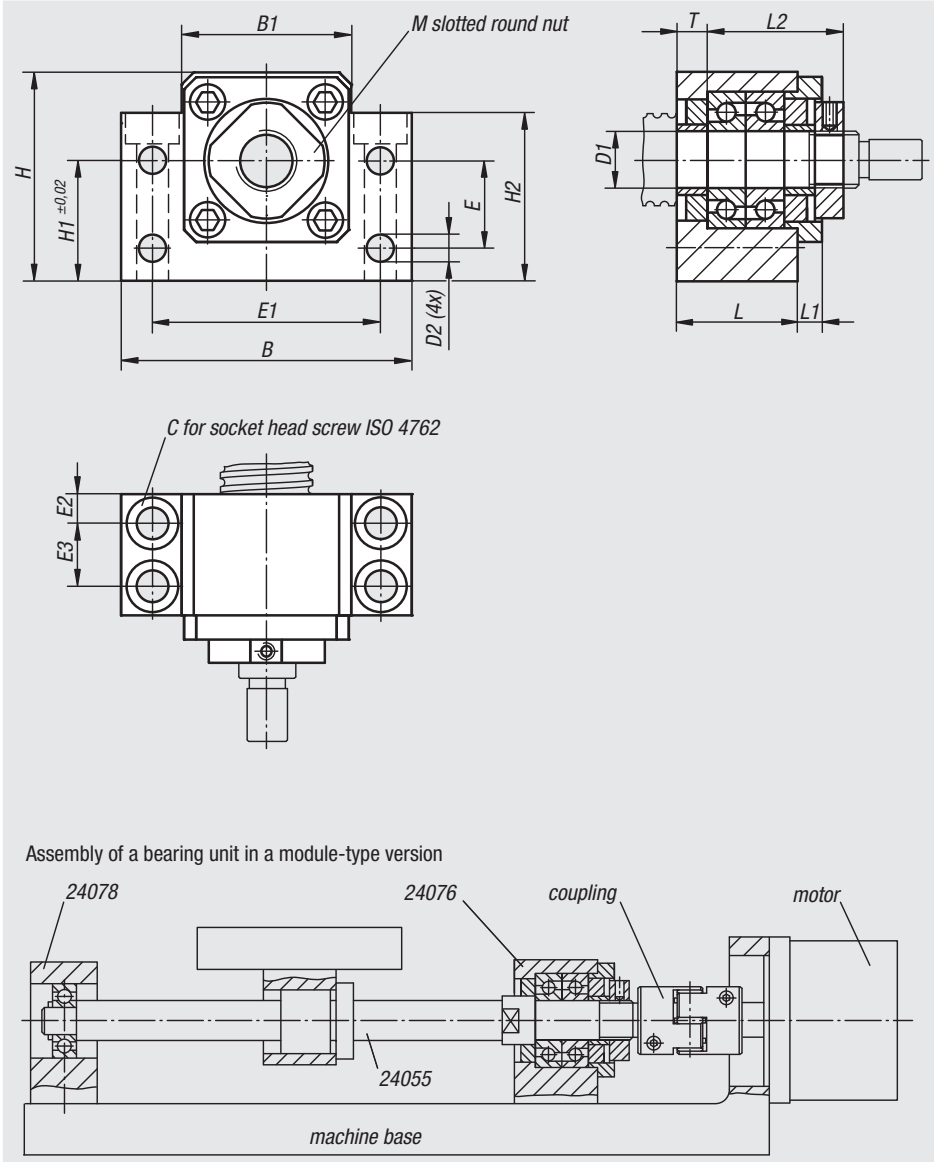
in block version

Material:
Housing, steel

Version:
Housing, black oxide finish

Sample order:
nlm 24076-010

Note:
The shaft height of the spindle bearings is aligned with the loose bearing unit 24078. The solid bearing units are composed of a housing with 2 angular contact thrust ball bearings with seals. Pre-stressed by a prefixed flange. With circlips and a lock nut.



Order No.	Size	B	B1	C	D1	D2	E	E1	E2	E3	H	H1	H2	L	L1	L2	M	T
24076-010	10	60	34	M6	10	5,5	15	46	6	13	39	22	32,5	25	5	29	M10x1	5
24076-012	12	60	35	M6	12	5,5	18	46	6	13	43	25	35	25	5	29	M12x1	5
24076-015	15	70	40	M6	15	5,5	18	54	6	15	48	28	38	27	9	32	M15x1	6
24076-017	17	86	50	M8	17	6,6	28	68	8	19	64	39	55	35	8	44	M17x1	7
24076-020	20	88	52	M8	20	6,6	22	70	8	19	60	34	50	35	8	43	M20x1	8

Order No.	Dynamic base loads N	Static base loads N	Stiffness K (N/µm)	Approx. weight kg
24076-010	6500	2800	95	0,360
24076-012	7000	3100	102	0,390
24076-015	7500	3500	114	0,560
24076-017	13000	5900	120	1,020
24076-020	16100	8400	145	1,050

Loose bearing units

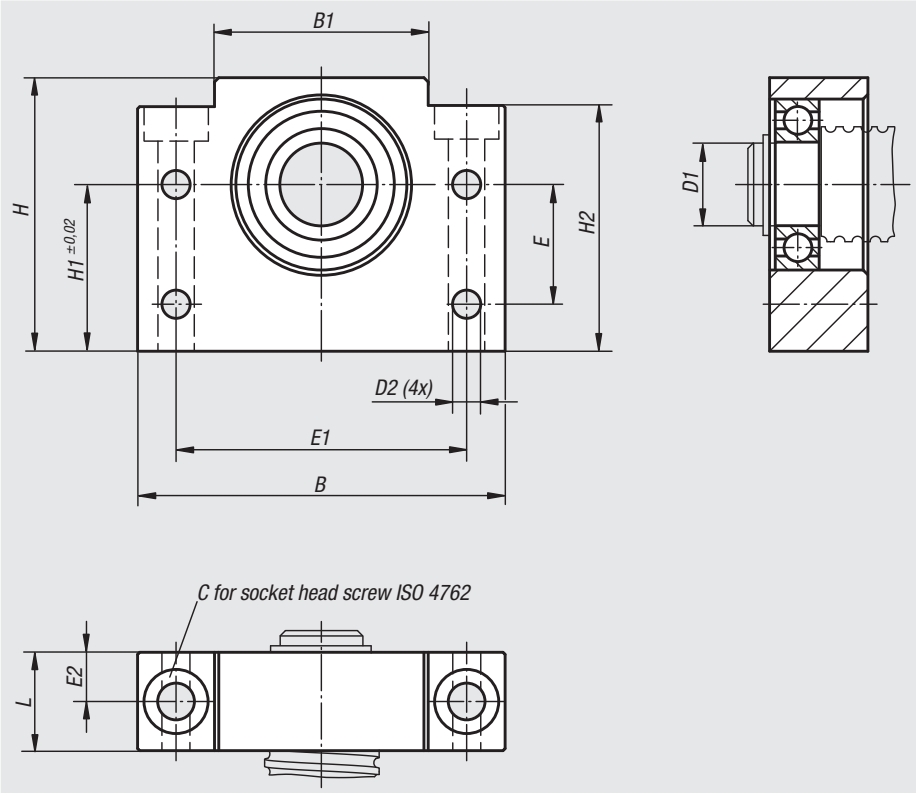
in block version

Material:
Housing, steel

Version:
Housing, black oxide finish

Sample order:
nlm 24078-010

Note:
The shaft height of the spindle bearings is aligned with the solid bearing unit 24076. The loose bearing units consist of a housing with grooved ball bearing which adapts axially to the length dimensions of the spindle.



Order No.	Size	B	B1	C	D1	D2	E	E1	E2	H	H1	H2	L	Approx. weight kg
24078-010	10	60	34	M6	8	5,5	15	46	10	39	22	32,5	20	0,250
24078-012	12	60	34	M6	10	5,5	18	46	10	43	25	35	20	0,270
24078-015	15	70	40	M6	15	5,5	18	54	10	48	28	38	20	0,350
24078-017	17	86	50	M8	17	6,6	28	68	11,5	64	39	55	23	0,680
24078-020	20	88	52	M8	20	6,6	22	70	13	60	34	50	26	0,700

Order No.	Dynamic base loads N	Static base loads N
24078-010	3250	1400
24078-012	4550	1960
24078-015	5600	2840
24078-017	9500	4750
24078-020	9300	5000

Solid bearing units

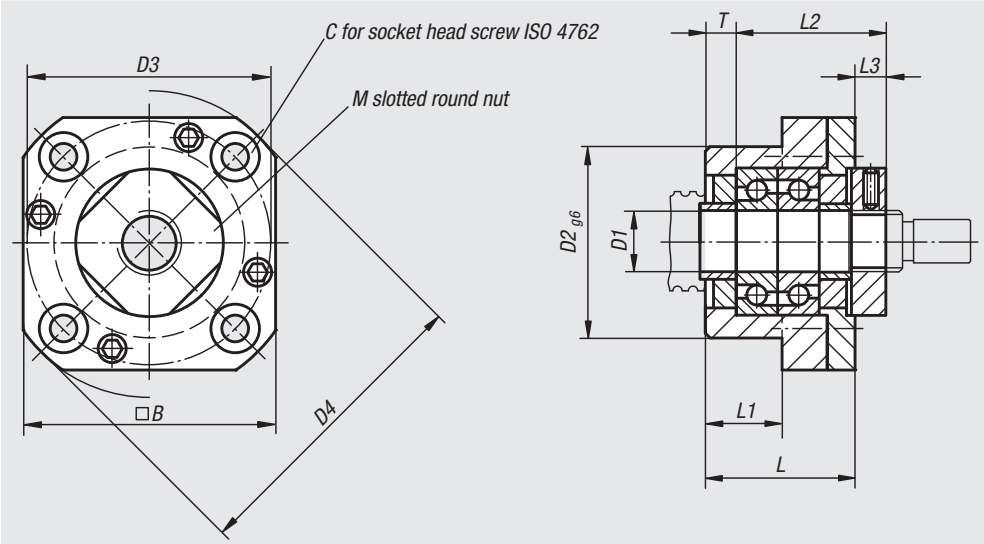
in flange version

Material:
Housing, steel

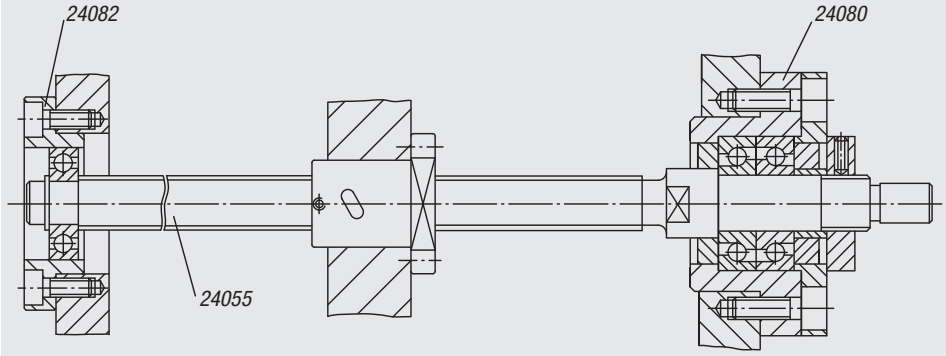
Version:
Housing, black oxide finish

Sample order:
nlm 24080-010

Note:
The solid bearing unit is aligned with the loose bearing unit 24082. The solid bearing units are composed of a housing with 2 angular contact thrust ball bearings and seals. Pre-stressed with a prefixed flange. With circlips and a lock nut.



Bearing units attached externally



Order No.	Size	B	C	D1	D2	D3	D4	L	L1	L2	L3	M	T
24080-010	10	42	M4	10	34	42	52	27	17	29,5	7,5	M10x1	5
24080-012	12	44	M4	12	36	44	54	27	17	29,5	7,5	M12x1	5
24080-015	15	52	M5	15	40	50	63	32	17	36	8	M15x1	6
24080-020	20	68	M6	20	57	70	85	52	30	50	10	M20x1	10

Order No.	Dynamic base loads N	Static base loads N	Stiffness K (N/µm)	Approx. weight kg
24080-010	6500	2800	95	0,210
24080-012	7000	3100	102	0,230
24080-015	7500	3500	114	0,360
24080-020	17500	8400	145	1,000

Loose bearing units

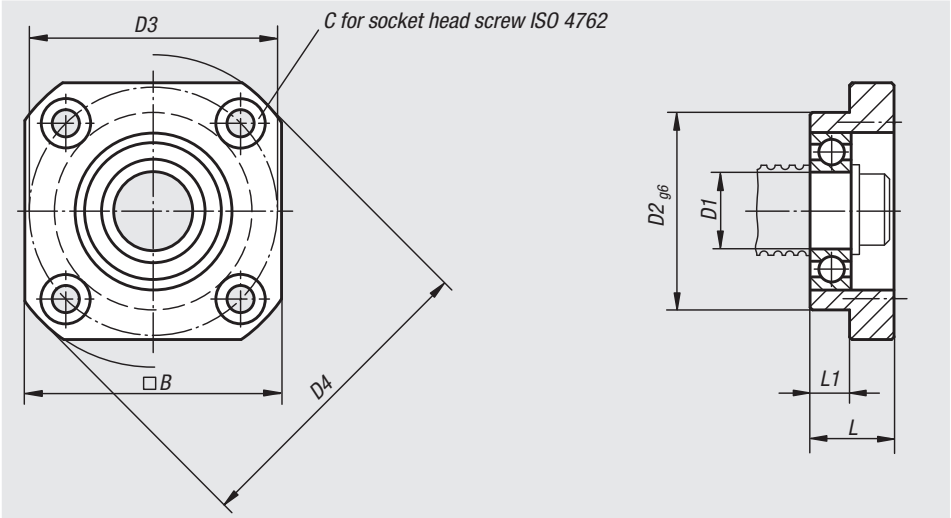
in flange version

Material:
Housing, steel

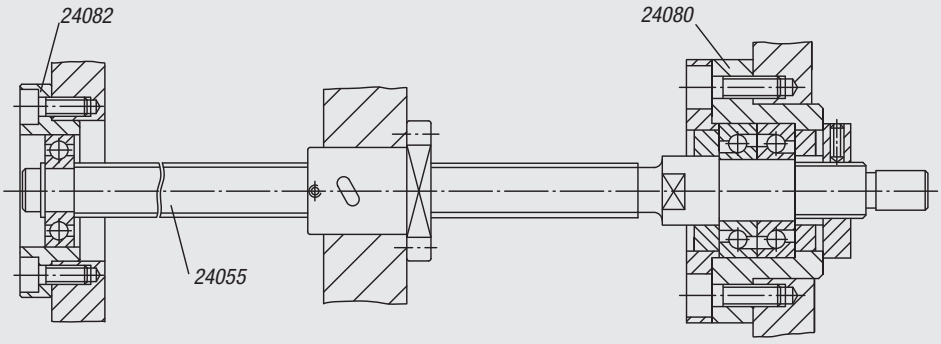
Version:
Housing, black oxide finish

Sample order:
nlm 24082-010

Note:
The loose bearing unit is aligned with the solid bearing unit 24080. The loose bearing units consist of a housing with grooved ball bearing which adapts axially to the length dimensions of the spindle.



Floating bearing attached externally, fixed bearing attached internally



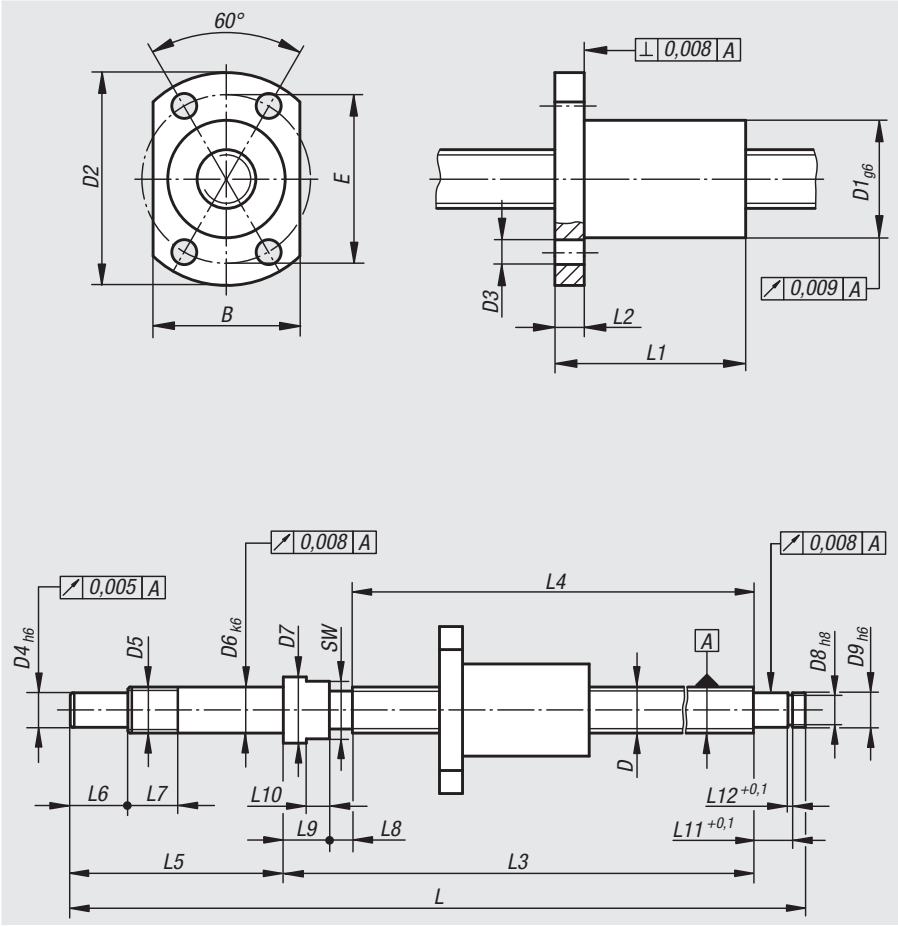
Order No.	Size	B	C	D1	D2	D3	D4	L	L1	Approx. weight kg
24082-010	10	35	M3	8	28	35	43	12	5	0,060
24082-012	12	42	M4	10	34	42	52	15	8	0,120
24082-015	15	52	M5	15	40	50	63	17	8	0,150
24082-020	20	68	M6	20	57	70	85	20	9	0,380

Order No.	Dynamic base loads N	Static base loads N
24082-010	3250	1400
24082-012	4550	1960
24082-015	5600	2840
24082-020	9300	5000

Notes

Miniature ball-type linear drives, ground

with flange nut



Material:
Spindle, steel 1.1213;
nut, steel 1.3505

Version:
Spindle and nut ground, inductively hardened to 62 ±2 HRC and polished

Sample order:
nlm 24100-0810050

Note:
Miniature ball screw drives with finish-machined shaft ends and flange nut. Delivered greased. Re-lubrication is recommended.

Produced according to precision class C5. Without initial tension, with axial play (max. 0.008 mm).

Precision spindles for use in optics, the food industry, automation, medical technology, the defence industry, aviation and precision industrial technology.

Attention:
The flange nut must not be removed from the spindle, otherwise the balls fall out.

Miniature ball-type linear drives, ground

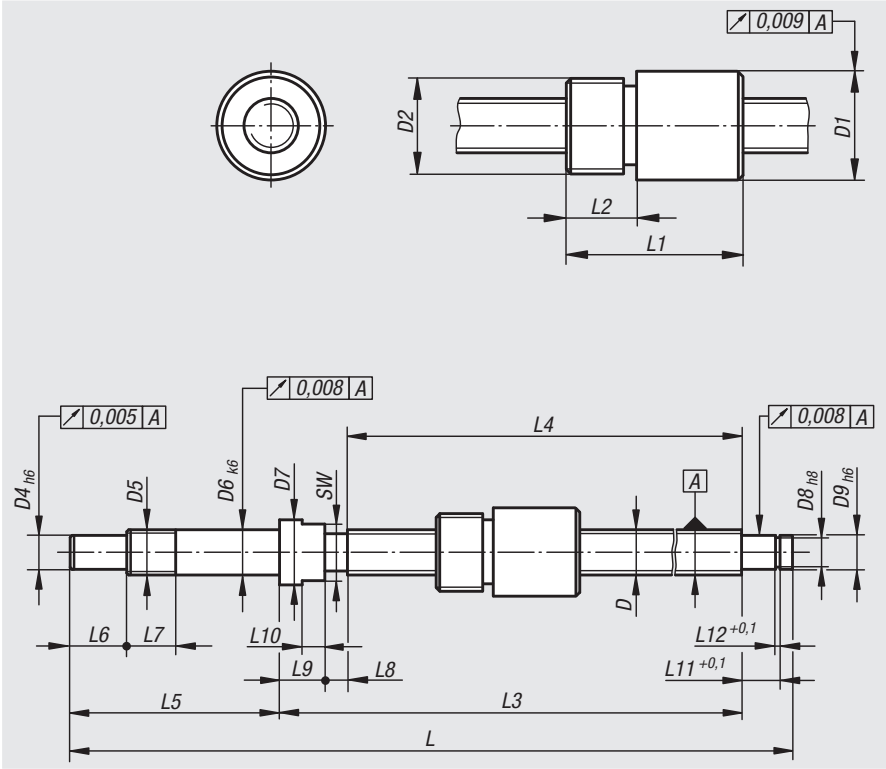
with flange nut

Order No.	D	Pitch	Stroke	B	D1	D2	D3	D4	D5	D6	D7	D8	D9	E	L	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12
24100-0810050	8	1	50	18	14	27	3,4	6	M8x1	8	11,5	5,7	6	21	148	16	4	102	90	37	10	9	4	8	4	6,8	0,8
24100-0810100	8	1	100	18	14	27	3,4	6	M8x1	8	11,5	5,7	6	21	198	16	4	152	140	37	10	9	4	8	4	6,8	0,8
24100-0810150	8	1	150	18	14	27	3,4	6	M8x1	8	11,5	5,7	6	21	248	16	4	202	190	37	10	9	4	8	4	6,8	0,8
24100-0820050	8	2	50	20	16	29	3,4	6	M8x1	8	11,5	5,7	6	23	148	26	4	102	90	37	10	9	4	8	4	6,8	0,8
24100-0820100	8	2	100	20	16	29	3,4	6	M8x1	8	11,5	5,7	6	23	198	26	4	152	140	37	10	9	4	8	4	6,8	0,8
24100-0820150	8	2	150	20	16	29	3,4	6	M8x1	8	11,5	5,7	6	23	248	26	4	202	190	37	10	9	4	8	4	6,8	0,8
24100-1020050	10	2	50	22	18	35	4,5	6	M8x1	8	11,5	5,7	6	27	158	28	5	112	100	37	10	9	4	8	4	6,8	0,8
24100-1020100	10	2	100	22	18	35	4,5	6	M8x1	8	11,5	5,7	6	27	208	28	5	162	150	37	10	9	4	8	4	6,8	0,8
24100-1020150	10	2	150	22	18	35	4,5	6	M8x1	8	11,5	5,7	6	27	258	28	5	212	200	37	10	9	4	8	4	6,8	0,8
24100-1020200	10	2	200	22	18	35	4,5	6	M8x1	8	11,5	5,7	6	27	308	28	5	262	250	37	10	9	4	8	4	6,8	0,8
24100-1220050	12	2	50	24	20	37	4,5	8	M10x1	10	14	7,6	8	29	180	28	5	125	110	45	15	10	5	10	5	7,9	0,9
24100-1220100	12	2	100	24	20	37	4,5	8	M10x1	10	14	7,6	8	29	230	28	5	175	160	45	15	10	5	10	5	7,9	0,9
24100-1220150	12	2	150	24	20	37	4,5	8	M10x1	10	14	7,6	8	29	280	28	5	225	210	45	15	10	5	10	5	7,9	0,9
24100-1220200	12	2	200	24	20	37	4,5	8	M10x1	10	14	7,6	8	29	330	28	5	275	260	45	15	10	5	10	5	7,9	0,9
24100-1220250	12	2	250	24	20	37	4,5	8	M10x1	10	14	7,6	8	29	380	28	5	325	310	45	15	10	5	10	5	7,9	0,9

Order No.	SW	Number of bearing rotation paths	Pitch angle	Ball-Ø	Dynamic base loads N	Static base loads N	Revolutions per minute max.
24100-0810050	10	1 x 3	2° 13‘	0,8	700	1300	3200
24100-0810100	10	1 x 3	2° 13‘	0,8	700	1300	3200
24100-0810150	10	1 x 3	2° 13‘	0,8	700	1300	3200
24100-0820050	10	1 x 3	4° 23‘	1,6	1350	2250	4200
24100-0820100	10	1 x 3	4° 23‘	1,6	1350	2250	4200
24100-0820150	10	1 x 3	4° 23‘	1,6	1350	2250	4200
24100-1020050	10	1 x 3	2° 32‘	1,6	1500	2900	4000
24100-1020100	10	1 x 3	2° 32‘	1,6	1500	2900	4000
24100-1020150	10	1 x 3	2° 32‘	1,6	1500	2900	4000
24100-1020200	10	1 x 3	2° 32‘	1,6	1500	2900	4000
24100-1220050	12	1 x 3	2° 58‘	1,6	1700	3700	3400
24100-1220100	12	1 x 3	2° 58‘	1,6	1700	3700	3400
24100-1220150	12	1 x 3	2° 58‘	1,6	1700	3700	3400
24100-1220200	12	1 x 3	2° 58‘	1,6	1700	3700	3400
24100-1220250	12	1 x 3	2° 58‘	1,6	1700	3700	3400

Miniature ball-type linear drives, ground

with screw-in cylinder nut



Material:
Spindle, steel 1.1213.
Nut, steel 1.3505.

Version:
Spindle and nut ground, inductively hardened to 62 ± 2 HRC and polished

Sample order:
nlm 24105-0810050

Note:
Miniature ball screw drives with finish-machined shaft ends and screw-on barrel nut. Delivered greased. Re-lubrication is recommended.

Produced according to precision class C5. Without initial tension, with axial play (max. 0.008 mm).

Precision spindles for use in optics, the food industry, automation, medical technology, the defence industry, aviation and precision industrial technology.

Attention:
The screw-in cylinder nut must not be removed from the spindle, otherwise the balls fall out.

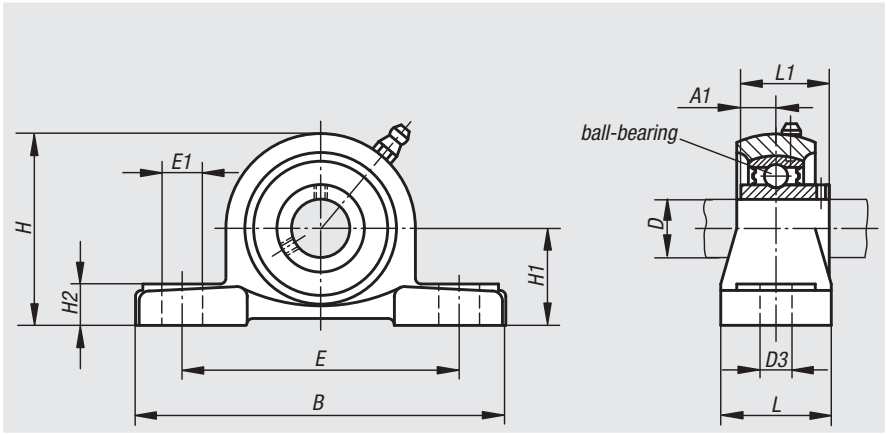
Miniature ball-type linear drives, ground

with screw-in cylinder nut

Order No.	D	Pitch	Stroke	D1	D2	D4	D5	D6	D7	D8	D9	L	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12
24105-0810050	8	1	50	16	M14x1	6	M8x1	8	11,5	5,7	6	148	22	8	102	90	37	10	9	4	8	4	6,8	0,8
24105-0810100	8	1	100	16	M14x1	6	M8x1	8	11,5	5,7	6	198	22	8	152	140	37	10	9	4	8	4	6,8	0,8
24105-0810150	8	1	150	16	M14x1	6	M8x1	8	11,5	5,7	6	248	22	8	202	190	37	10	9	4	8	4	6,8	0,8
24105-0820050	8	2	50	16	M14x1	6	M8x1	8	11,5	5,7	6	148	27	8	102	90	37	10	9	4	8	4	6,8	0,8
24105-0820100	8	2	100	16	M14x1	6	M8x1	8	11,5	5,7	6	198	27	8	152	140	37	10	9	4	8	4	6,8	0,8
24105-0820150	8	2	150	16	M14x1	6	M8x1	8	11,5	5,7	6	248	27	8	202	190	37	10	9	4	8	4	6,8	0,8
24105-1020050	10	2	50	18	M16x1	6	M8x1	8	11,5	5,7	6	158	28,5	7	112	100	37	10	9	4	8	4	6,8	0,8
24105-1020100	10	2	100	18	M16x1	6	M8x1	8	11,5	5,7	6	208	28,5	7	162	150	37	10	9	4	8	4	6,8	0,8
24105-1020150	10	2	150	18	M16x1	6	M8x1	8	11,5	5,7	6	258	28,5	7	212	200	37	10	9	4	8	4	6,8	0,8
24105-1020200	10	2	200	18	M16x1	6	M8x1	8	11,5	5,7	6	308	28,5	7	262	250	37	10	9	4	8	4	6,8	0,8
24105-1220050	12	2	50	20,5	M18x1	8	M10x1	10	14	7,6	8	180	29	10	125	110	45	15	10	5	10	5	7,9	0,9
24105-1220100	12	2	100	20,5	M18x1	8	M10x1	10	14	7,6	8	230	29	10	175	160	45	15	10	5	10	5	7,9	0,9
24105-1220150	12	2	150	20,5	M18x1	8	M10x1	10	14	7,6	8	280	29	10	225	210	45	15	10	5	10	5	7,9	0,9
24105-1220200	12	2	200	20,5	M18x1	8	M10x1	10	14	7,6	8	330	29	10	275	260	45	15	10	5	10	5	7,9	0,9
24105-1220250	12	2	250	20,5	M18x1	8	M10x1	10	14	7,6	8	380	29	10	325	310	45	15	10	5	10	5	7,9	0,9

Order No.	SW	Number of bearing rotation paths	Pitch angle	Ball-Ø	Dynamic base loads N	Static base loads N	Revolutions per minute max.
24105-0810050	10	1 x 3	2° 13‘	0,8	700	1300	3200
24105-0810100	10	1 x 3	2° 13‘	0,8	700	1300	3200
24105-0810150	10	1 x 3	2° 13‘	0,8	700	1300	3200
24105-0820050	10	1 x 3	4° 23‘	1,6	1350	2250	4200
24105-0820100	10	1 x 3	4° 23‘	1,6	1350	2250	4200
24105-0820150	10	1 x 3	4° 23‘	1,6	1350	2250	4200
24105-1020050	10	1 x 3	2° 32‘	1,6	1500	2900	4000
24105-1020100	10	1 x 3	2° 32‘	1,6	1500	2900	4000
24105-1020150	10	1 x 3	2° 32‘	1,6	1500	2900	4000
24105-1020200	10	1 x 3	2° 32‘	1,6	1500	2900	4000
24105-1220050	12	1 x 3	2° 58‘	1,6	1700	3700	3400
24105-1220100	12	1 x 3	2° 58‘	1,6	1700	3700	3400
24105-1220150	12	1 x 3	2° 58‘	1,6	1700	3700	3400
24105-1220200	12	1 x 3	2° 58‘	1,6	1700	3700	3400
24105-1220250	12	1 x 3	2° 58‘	1,6	1700	3700	3400

Pillow block bearing pedestal type UCP



Material:
Housing, grey cast iron.
Bearing, ball-bearing steel 100Cr6.
Seal, rubber NBR.

Version:
Housing, painted.

Sample order:
nlm 24200-12201

Note:
Pillow block bearings consist of a sealed single-row ball bearing with a spherical outer ring which is mounted in a housing. Because of the spherical outer surface of the bearing, shaft misalignment can be compensated for. The bearings are manufactured with a plus tolerance. This results in transition or press fits when using shafts with h-tolerances. The shaft is secured by grub screws on the inner ring.

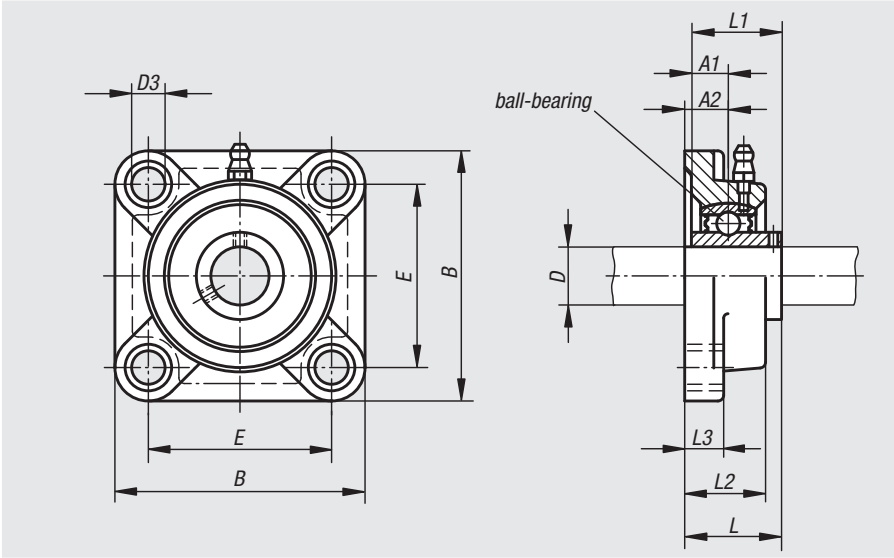
In normal applications, pillow block bearings are maintenance-free due to the lifetime lubrication. In difficult environmental conditions re-lubrication can be carried out over the grease nipple.

All housing dimensions are nominal dimensions for which the usual casting tolerances must be taken into consideration.

Temperature range:
-15 °C to +100 °C.

Order No.	Bearing	Housing	D	A1	B	D3	E	E1	H	H1	H2	L	L1	α	Fastening screw	Approx. weight kg
24200-12201	UC 201	P 201	12	12,7	127	13	95	19	65	30,2	14	38	31	10°	M10	0,69
24200-15202	UC 202	P 202	15	12,7	127	13	95	19	65	30,2	14	38	31	10°	M10	0,69
24200-17203	UC 203	P 203	17	12,7	127	13	95	19	65	30,2	14	38	31	10°	M10	0,68
24200-20204	UC 204	P 204	20	12,7	127	13	95	19	65	33,3	14	38	31	10°	M10	0,66
24200-25205	UC 205	P 205	25	14,3	140	13	105	19	71	36,5	15	38	34	10°	M10	0,81
24200-30206	UC 206	P 206	30	15,9	165	17	121	20	84	42,9	17	44	38,1	10°	M14	1,24
24200-35207	UC 207	P 207	35	17,5	167	17	127	20	93	47,6	18	48	42,9	10°	M14	1,58
24200-40208	UC 208	P 208	40	19	184	17	137	20	100	49,2	18	54	49,2	10°	M14	1,89
24200-45209	UC 209	P 209	45	19	190	17	146	20	106	54	20	54	49,2	10°	M14	2,14
24200-50210	UC 210	P 210	50	19	206	20	159	23	113	57,2	21	60	51,6	10°	M16	2,66
24200-55211	UC 211	P 211	55	22,2	219	20	171	23	125	63,5	23	60	55,6	10°	M16	3,31
24200-60212	UC 212	P 212	60	25,4	241	20	184	23	138	69,8	25	70	65,1	10°	M16	4,9

Pillow block bearing flange type UCF



Material:
Housing, grey cast iron.
Bearing, ball-bearing steel 100Cr6.
Seal, rubber NBR.

Version:
Housing, painted.

Sample order:
nlm 24210-12201

Note:
Pillow block bearings consist of a sealed single-row ball bearing with a spherical outer ring which is mounted in a housing. Because of the spherical outer surface of the bearing, shaft misalignment can be compensated for. The bearings are manufactured with a plus tolerance. This results in transition or press fits when using shafts with h-tolerances. The shaft is secured by grub screws on the inner ring.

In normal applications, pillow block bearings are maintenance-free due to the lifetime lubrication. In difficult environmental conditions re-lubrication can be carried out over the grease nipple.

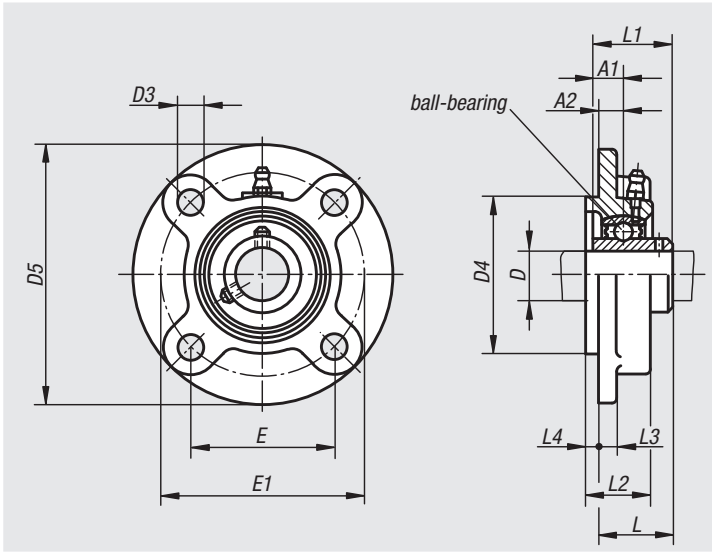
All housing dimensions are nominal dimensions for which the usual casting tolerances must be taken into consideration.

Temperature range:
-15 °C to +100 °C.

Order No.	Bearing	Housing	D	A1	A2	B	D3	E	L	L1	L2	L3	α	Fastening screw	Approx. weight kg
24210-12201	UC 201	F 201	12	12,7	15	86	12	64	33,3	31	25,5	12	10°	M10	0,6
24210-15202	UC 202	F 202	15	12,7	15	86	12	64	33,3	31	25,5	12	10°	M10	0,59
24210-17203	UC 203	F 203	17	12,7	15	86	12	64	33,3	31	25,5	12	10°	M10	0,58
24210-20204	UC 204	F 204	20	12,7	15	86	12	64	33,3	31	25,5	12	10°	M10	0,56
24210-25205	UC 205	F 205	25	14,3	16	95	12	70	35,8	34	27	14	10°	M10	0,8
24210-30206	UC 206	F 206	30	15,9	18	108	12	83	40,2	38,1	31	14	10°	M10	1,12
24210-35207	UC 207	F 207	35	17,5	19	117	14	92	44,4	42,9	34	16	10°	M12	1,46
24210-40208	UC 208	F 208	40	19	21	130	16	102	51,2	49,2	36	16	10°	M14	1,84
24210-45209	UC 209	F 209	45	19	22	137	16	105	52,2	49,2	38	18	10°	M14	2,15
24210-50210	UC 210	F 210	50	19	22	143	16	111	54,6	51,6	40	18	10°	M14	2,42
24210-55211	UC 211	F 211	55	22,2	25	162	19	130	58,4	55,6	43	20	10°	M16	3,31
24210-60212	UC 212	F 212	60	25,4	29	175	19	143	68,7	65,1	48	20	10°	M16	4,28

Pillow block bearing flange type UCFC

with centring hub



Material:
Housing, grey cast iron.
Bearing, ball-bearing steel 100Cr6.
Seal, rubber NBR.

Version:
Housing, painted.

Sample order:
nlm 24212-20204

Note:
Pillow block bearings consist of a sealed single-row ball bearing with a spherical outer ring which is mounted in a housing. Because of the spherical outer surface of the bearing, shaft misalignment can be compensated for. The bearings are manufactured with a plus tolerance. This results in transition or press fits when using shafts with h-tolerances. The shaft is secured by grub screws on the inner ring.

In normal applications, pillow block bearings are maintenance-free due to the lifetime lubrication. In difficult environmental conditions re-lubrication can be carried out over the grease nipple.

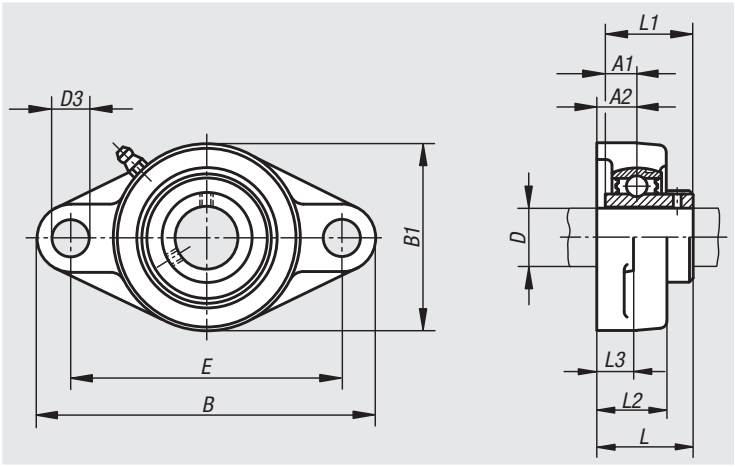
All housing dimensions are nominal dimensions for which the usual casting tolerances must be taken into consideration.

Temperature range:
-15 °C to +100 °C.

Order No.	Bearing	Housing	D	A1	A2	D3	D4	D5	E	E1	L	L1	L2	L3	L4	α	Fastening screw	Approx. weight kg
24212-20204	UC 204	FC 204	20	12,7	10	12	62	100	55,1	78	28,3	31	20,5	7	5	10°	M10	0,69
24212-25205	UC 205	FC 205	25	14,3	10	12	70	115	63,6	90	29,8	34	21	7	6	10°	M10	1
24212-30206	UC 206	FC 206	30	15,9	10	12	80	125	70,7	100	32,2	38,1	23	8	8	10°	M10	1,3
24212-35207	UC 207	FC 207	35	17,5	11	14	90	135	77,8	110	36,4	42,9	26	9	8	10°	M12	1,81
24212-40208	UC 208	FC 208	40	19	11	14	100	145	84,8	120	41,2	49,2	26	9	10	10°	M12	2,14
24212-45209	UC 209	FC 209	45	19	10	16	105	160	93,3	132	40,2	49,2	26	14	12	10°	M14	2,68
24212-50210	UC 210	FC 210	50	19	10	16	110	165	97,6	138	42,6	51,6	28	14	12	10°	M14	2,9
24212-55211	UC 211	FC 211	55	22,2	13	19	125	185	106,1	150	46,4	55,6	31	15	12	10°	M16	4,01
24212-60212	UC 212	FC 212	60	25,4	17	19	135	195	113,1	160	56,7	65,1	36	15	12	10°	M16	4,94

Pillow block bearing flange type UCFL

2-hole



Material:
Housing, grey cast iron.
Bearing, ball-bearing steel 100Cr6.
Seal, rubber NBR.

Version:
Housing, painted.

Sample order:
nlm 24215-12201

Note:
Pillow block bearings consist of a sealed single-row ball bearing with a spherical outer ring which is mounted in a housing. Because of the spherical outer surface of the bearing, shaft misalignment can be compensated for. The bearings are manufactured with a plus tolerance. This results in transition or press fits when using shafts with h-tolerances. The shaft is secured by grub screws on the inner ring.

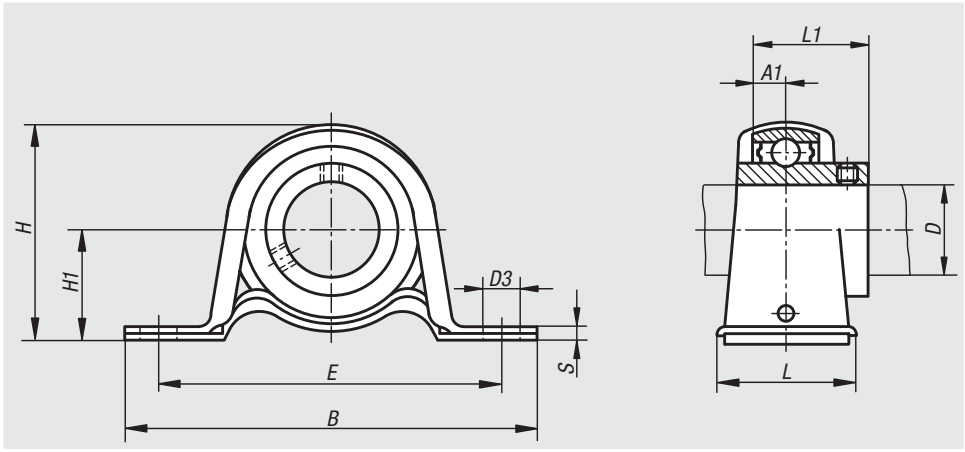
In normal applications, pillow block bearings are maintenance-free due to the lifetime lubrication. In difficult environmental conditions re-lubrication can be carried out over the grease nipple.

All housing dimensions are nominal dimensions for which the usual casting tolerances must be taken into consideration.

Temperature range:
-15 °C to +100 °C.

Order No.	Bearing	Housing	D	A1	A2	B	B1	D3	E	L	L1	L2	L3	α	Fastening screw	Approx. weight kg
24215-12201	UC 201	FL 201	12	12,7	15	113	60	12	90	33,3	31	25,5	11	10°	M10	0,45
24215-15202	UC 202	FL 202	15	12,7	15	113	60	12	90	33,3	31	25,5	11	10°	M10	0,44
24215-17203	UC 203	FL 203	17	12,7	15	113	60	12	90	33,3	31	25,5	11	10°	M10	0,43
24215-20204	UC 204	FL 204	20	12,7	15	113	60	12	90	33,3	31	25,5	11	10°	M10	0,41
24215-25205	UC 205	FL 205	25	14,3	16	130	68	16	99	35,8	34	27	13	10°	M14	0,58
24215-30206	UC 206	FL 206	30	15,9	18	148	80	16	117	40,2	38,1	31	13	10°	M14	0,86
24215-35207	UC 207	FL 207	35	17,5	19	161	90	16	130	44,4	42,9	34	14	10°	M14	1,08
24215-40208	UC 208	FL 208	40	19	21	175	100	16	144	51,2	49,2	36	14	10°	M14	1,44
24215-45209	UC 209	FL 209	45	19	22	188	108	19	148	52,2	49,2	38	15	10°	M16	1,74
24215-50210	UC 210	FL 210	50	19	22	197	115	19	157	54,6	51,6	40	15	10°	M16	2,1
24215-55211	UC 211	FL 211	55	22,2	25	224	130	19	184	58,4	55,6	43	18	10°	M16	2,91
24215-60212	UC 212	FL 212	60	25,4	29	250	140	23	202	68,7	65,1	48	18	10°	M20	3,74

Pillow block bearing pedestal type BPP



Material:
Housing, steel
Bearing, ball-bearing steel 100Cr6.
Seal, rubber NBR.

Version:
Housing, galvanized.

Sample order:
nlm 24225-12201

Note:
Pillow block bearings consist of a sealed single-row ball bearing with a spherical outer ring which is mounted in a sheet steel housing. Because of the spherical outer surface of the bearing, shaft misalignment can be compensated for. The bearings are manufactured with a plus tolerance. This results in transition or press fits when using shafts with h-tolerances. The shaft is secured by grub screws on the inner ring.

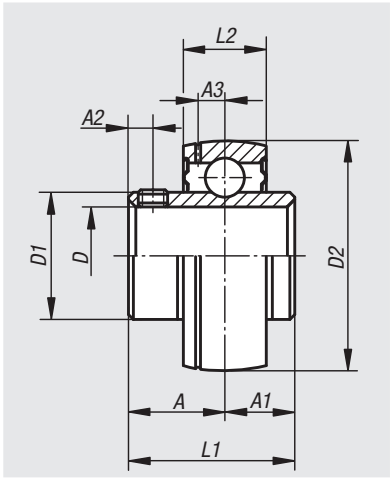
In normal applications, pillow block bearings are maintenance-free due to the lifetime lubrication.

Do not exceed the housing load. It is less than the load rating of the bearings.

Temperature range:
-15 °C to +100 °C.

Order No.	Bearing	Housing	D	A1	B	D3	E	H	H1	L	L1	S	α	Fastening screw	max. static load kN	Approx. weight kg
24225-12201	B 201	PP 201	12	6	86	9,5	68	43,8	22,2	25	22	3,2	10°	M8	2,16	0,16
24225-15202	B 202	PP 202	15	6	86	9,5	68	43,8	22,2	25	22	3,2	10°	M8	2,16	0,16
24225-17203	B 203	PP 203	17	6	86	9,5	68	43,8	22,2	25	22	3,2	10°	M8	2,16	0,16
24225-20204	B 204	PP 204	20	7	98	9,5	76	50,5	25,4	32	25	3,2	10°	M8	2,62	0,23
24225-25205	B 205	PP 205	25	7,5	108	11,5	86	56,5	28,6	32	27	4	10°	M10	3,72	0,28
24225-30206	B 206	PP 206	30	8	117	11,5	95	66,3	33,3	38	30	4	10°	M10	4,41	0,47
24225-35207	B 207	PP 207	35	8,5	129	11,5	106	78	39,7	42	32	4,6	10°	M10	4,9	0,57

Insert bearing UC



Material:
Ball-bearing steel 100Cr6.
Seal, rubber NBR.

Version:
Sealed on both sides with a spherical outer ring.
Can be re-lubricated.

Sample order:
nlm 24230-20204

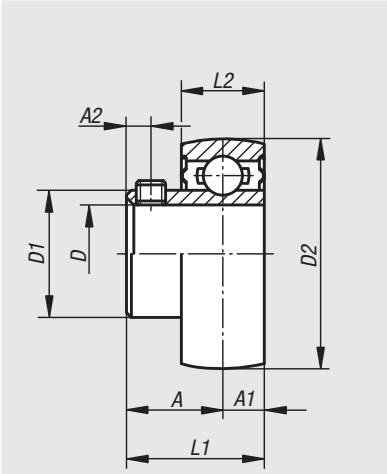
Note:
The internal construction of the insert bearings corresponds to that of standard Series 6200 and 6300 radial ball bearing. However, they have wider inner rings for easier fastening on shafts. The inner rings are manufactured with a plus tolerance. This results in transition or press fits when using shafts with h-tolerances. The shaft is secured by 2 grub screws positioned 120° apart on the inner ring.

The insert bearings are ready to install and are permanently lubricated with a suitable ball bearing grease. In normal applications, re-lubrication is not necessary.

Temperature range:
-15 °C to +100 °C.

Order No.	Bearing	D	A	A1	A2	A3	D1	D2	L1	L2	Grub screw	Dynamic base loads kN	Static base loads kN	Approx. weight kg
24230-20204	UC 204	20	18,3	12,7	4,8	3,7	29	47	31	17	M6x0,75	9,88	6,2	0,16
24230-25205	UC 205	25	19,7	14,3	5	3,9	34	52	34	17	M6x0,75	10,78	6,98	0,2
24230-30206	UC 206	30	22,2	15,9	5	5	40,5	62	38,1	19	M6x0,75	14,97	10,04	0,32
24230-35207	UC 207	35	25,4	17,5	7	5,7	48	72	42,9	20	M8x1	19,75	13,67	0,48
24230-40208	UC 208	40	30,2	19	8	6,2	53	80	49,2	21	M8x1	22,71	15,94	0,64
24230-45209	UC 209	45	30,2	19	8	6,4	57,3	85	49,2	22	M8x1	24,36	17,71	0,68
24230-50210	UC 210	50	32,6	19	10	6,5	63	90	51,6	24	M10x1,25	26,98	19,84	0,8
24230-55211	UC 211	55	33,4	22,2	10	7	70	100	55,6	25	M10x1,25	33,37	25,11	1,11
24230-60212	UC 212	60	39,7	25,4	10	7,6	77	110	65,1	27	M10x1,25	36,74	27,97	1,54

Insert bearing B



Material:
Ball-bearing steel 100Cr6.
Seal, rubber NBR.

Version:
Sealed on both sides with a spherical outer ring.

Sample order:
nlm 24235-12201

Note:
The internal construction of the insert bearings corresponds to that of standard Series 6200 and 6300 radial ball bearing. However, they have wider inner rings for easier fastening on shafts. The inner rings are manufactured with a plus tolerance. This results in transition or press fits when using shafts with h-tolerances. The shaft is secured by 2 grub screws positioned 120° apart on the inner ring.

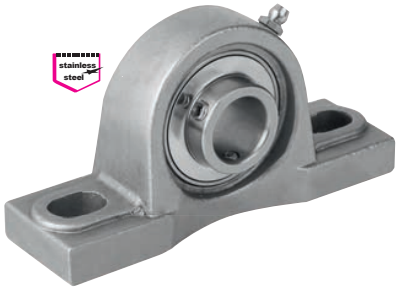
The insert bearings are ready to install and are permanently lubricated with a suitable ball bearing grease.

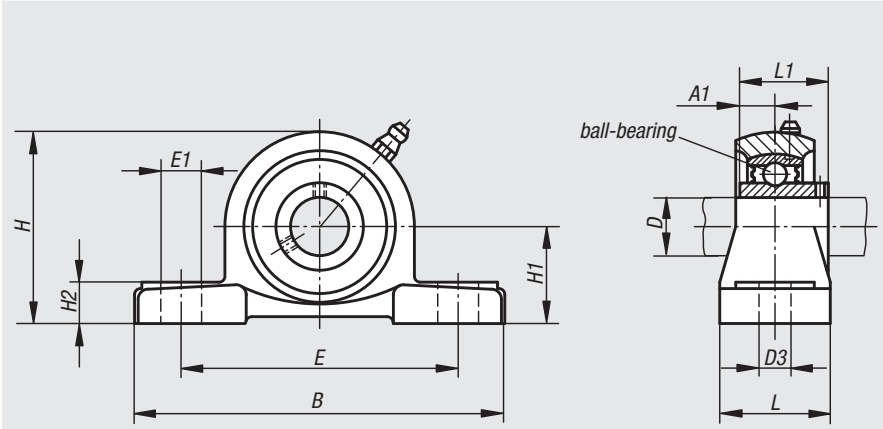
Temperature range:
-15 °C to +100 °C.

Order No.	Bearing	D	A	A1	A2	D1	D2	L1	L2	Grub screw	Dynamic base loads kN	Static base loads kN	Approx. weight kg
24235-12201	B 201	12	16	6	4,5	24,7	40	22	12	M5x0,8	7,36	4,48	0,1
24235-15202	B 202	15	16	6	4,5	24,7	40	22	12	M5x0,8	7,36	4,48	0,1
24235-17203	B 203	17	16	6	4,5	24,7	40	22	12	M5x0,8	7,36	4,48	0,09
24235-20204	B 204	20	18	7	4,5	29	47	25	14	M5x0,8	9,88	6,2	0,13
24235-25205	B 205	25	19,5	7,5	5,5	34	52	27	15	M6x0,75	10,78	6,98	0,16
24235-30206	B 206	30	22	8	6	40,5	62	30	16	M6x0,75	14,97	10,04	0,25
24235-35207	B 207	35	23,5	8,5	6,5	48	72	32	17	M8x1	19,75	13,67	0,38

Pillow block bearing pedestal type MUCP

stainless steel





Material:
Housing, stainless steel 1.4301.
Bearing, stainless steel 1.4125.
Seal, rubber NBR.

Version:
Natural finish.

Sample order:
nlm 24240-20204

Note:
Pillow block bearings consist of a sealed single-row ball bearing with a spherical outer ring which is mounted in a housing. Because of the spherical outer surface of the bearing, shaft misalignment can be compensated for. The bearings are manufactured with a plus tolerance. This results in transition or press fits when using shafts with h-tolerances. The shaft is secured by grub screws on the inner ring.

In normal applications, pillow block bearings are maintenance-free due to the lifetime lubrication. In difficult environmental conditions re-lubrication can be carried out over the grease nipple.

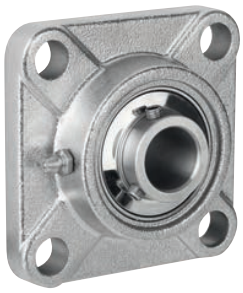
All housing dimensions are nominal dimensions for which the usual casting tolerances must be taken into consideration.

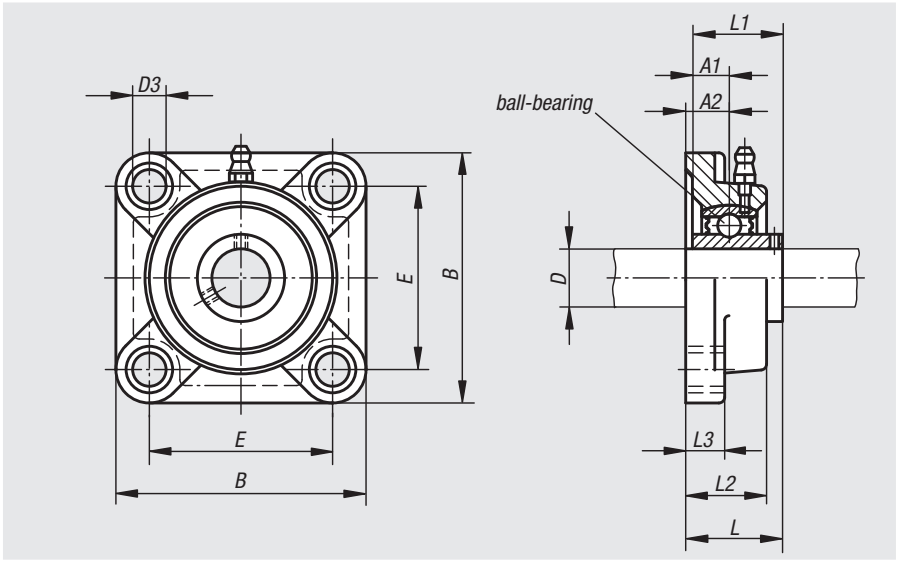
Temperature range:
-15 °C to +100 °C.

Order No.	Bearing	Housing	D	A1	B	D3	E	E1	H	H1	H2	L	L1	α	Fastening screw	Approx. weight kg
24240-20204	MUC 204	P 204	20	12,7	127	13	95	19	64	33,3	15	38	31	10°	M10	0,79
24240-25205	MUC 205	P 205	25	14,3	140	13	105	19	70	36,5	16,5	38	34	10°	M10	0,98
24240-30206	MUC 206	P 206	30	15,9	165	17	121	21	82	42,9	18	48	38,1	10°	M12	1,53
24240-35207	MUC 207	P 207	35	17,5	167	17	127	21	92	47,6	19	53	42,9	10°	M12	1,92
24240-40208	MUC 208	P 208	40	19	184	17	137	22	99	49,2	19	53	49,2	10°	M12	2,33
24240-45209	MUC 209	P 209	45	19	190	17	146	22	108	54	20	53	49,2	10°	M12	2,67
24240-50210	MUC 210	P 210	50	19	206	20	159	25	112	57,2	22	60	51,6	10°	M16	3,31

Pillow block bearing flange type MUCF

stainless steel





Material:
Housing, stainless steel 1.4301.
Bearing, stainless steel 1.4125.
Seal, rubber NBR.

Version:
Natural finish.

Sample order:
nlm 24242-20204

Note:
Pillow block bearings consist of a sealed single-row ball bearing with a spherical outer ring which is mounted in a housing. Because of the spherical outer surface of the bearing, shaft misalignment can be compensated for. The bearings are manufactured with a plus tolerance. This results in transition or press fits when using shafts with h-tolerances. The shaft is secured by grub screws on the inner ring.

In normal applications, pillow block bearings are maintenance-free due to the lifetime lubrication. In difficult environmental conditions re-lubrication can be carried out over the grease nipple.

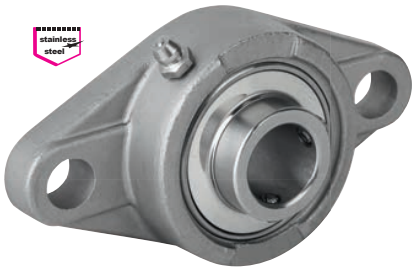
All housing dimensions are nominal dimensions for which the usual casting tolerances must be taken into consideration.

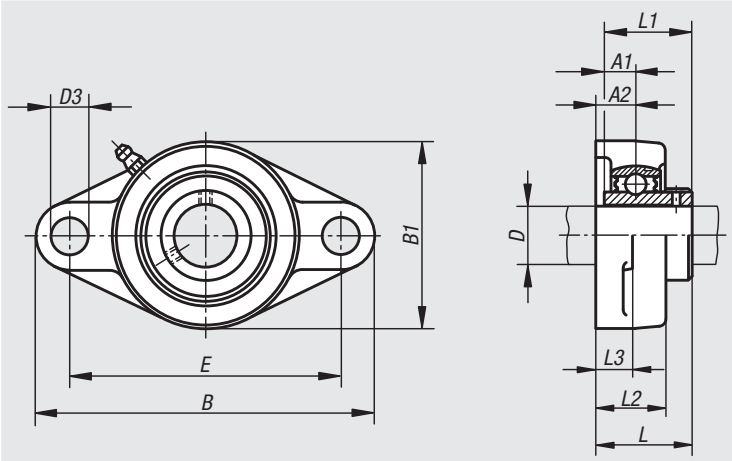
Temperature range:
-15 °C to +100 °C.

Order No.	Bearing	Housing	D	A1	A2	B	D3	E	L	L1	L2	L3	Fastening screw	Approx. weight kg
24242-20204	MUC 204	F 204	20	12,7	15	86	12	64	33,3	31	25,5	12	M10	0,71
24242-25205	MUC 205	F 205	25	14,3	16	95	12	70	35,8	34	27	14,3	M10	0,92
24242-30206	MUC 206	F 206	30	15,9	18	108	12	83	40,2	38,1	31	14	M10	1,36
24242-35207	MUC 207	F 207	35	17,5	19	117	14	92	44,4	42,9	34	15,9	M14	1,77
24242-40208	MUC 208	F 208	40	19	21	130	16	102	51,2	49,2	36	15,9	M14	2,46
24242-45209	MUC 209	F 209	45	19	22	137	16	105	52,2	49,2	38	16,7	M14	2,77
24242-50210	MUC 210	F 210	50	19	22	143	16	111	54,6	51,6	40	15,9	M16	3,18

Pillow block bearing flange type MUCF

2-hole stainless steel





Material:
Housing, stainless steel 1.4301.
Bearing, stainless steel 1.4125.
Seal, rubber NBR.

Version:
Natural finish.

Sample order:
nlm 24244-20204

Note:
Pillow block bearings consist of a sealed single-row ball bearing with a spherical outer ring which is mounted in a housing. Because of the spherical outer surface of the bearing, shaft misalignment can be compensated for. The bearings are manufactured with a plus tolerance. This results in transition or press fits when using shafts with h-tolerances. The shaft is secured by grub screws on the inner ring.

In normal applications, pillow block bearings are maintenance-free due to the lifetime lubrication. In difficult environmental conditions re-lubrication can be carried out over the grease nipple.

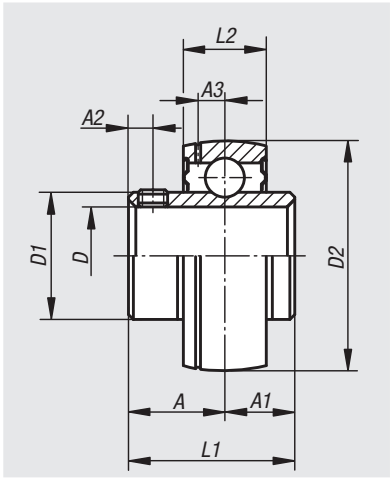
All housing dimensions are nominal dimensions for which the usual casting tolerances must be taken into consideration.

Temperature range:
-15 °C to +100 °C.

Order No.	Bearing	Housing	D	A1	A2	B	B1	D3	E	L	L1	L2	L3	α	Fastening screw	Approx. weight kg
24244-20204	MUC 204	FL 204	20	12,7	15	113	60	10,5	90	33,3	31	27	11,5	10°	M8	0,51
24244-25205	MUC 205	FL 205	25	14,3	16	130	68	12,5	99	35,7	34	28	13	10°	M10	0,67
24244-30206	MUC 206	FL 206	30	15,9	18	148	79	12,5	117	40,2	38,1	31	13	10°	M10	0,97
24244-35207	MUC 207	FL 207	35	17,5	19	161	90	14	130	44,4	42,9	34	14,3	10°	M12	1,32
24244-40208	MUC 208	FL 208	40	19	21	171	100	14	144	51,2	49,2	36	14,3	10°	M12	1,81
24244-45209	MUC 209	FL 209	45	19	22	179	108	16	148	52,2	49,2	38	15	10°	M14	2,27
24244-50210	MUC 210	FL 210	50	19	22	195	115	16	157	54,6	51,6	40	15	10°	M14	2,58

Insert bearing MUC

stainless steel



Material:
Stainless steel 1.4125.
Seal, rubber NBR.

Version:
Sealed on both sides with a spherical outer ring.
Can be re-lubricated.

Sample order:
nlm 24248-20204

Note:
The internal construction of the insert bearings corresponds to that of standard Series 6200 and 6300 radial ball bearing. However, they have wider inner rings for easier fastening on shafts. The inner rings are manufactured with a plus tolerance. This results in transition or press fits when using shafts with h-tolerances. The shaft is secured by 2 grub screws positioned 120° apart on the inner ring.

The insert bearings are ready to install and are permanently lubricated with a suitable ball bearing grease. In normal applications, re-lubrication is not necessary.

Temperature range:
-15 °C to +100 °C.

Order No.	Bearing	D	A	A1	A2	A3	D1	D2	L1	L2	Grub screw	Dynamic base loads kN	Static base loads kN	Approx. weight kg
24248-20204	MUC 204	20	18,3	12,7	5	4,3	29	47	31	17	M6x0,75	9,88	6,2	0,16
24248-25205	MUC 205	25	19,7	14,3	5,4	4	34	52	34	17	M6x0,75	7,36	6,98	0,18
24248-30206	MUC 206	30	22,2	15,9	5,5	5,3	40,5	62	38,1	19	M6x0,75	14,97	10,04	0,33
24248-35207	MUC 207	35	25,4	17,5	6,9	5,8	48	72	42,9	20	M8x1	19,75	13,67	0,49
24248-40208	MUC 208	40	30,2	19	8	6,2	53	80	49,2	21	M8x1	22,71	15,94	0,65
24248-45209	MUC 209	45	30,2	19	8	6,5	57,3	85	49,2	22	M8x1	24,36	17,71	0,71
24248-50210	MUC 210	50	32,6	19	10	7	63	90	51,6	24	M10x1,25	26,98	19,84	0,8