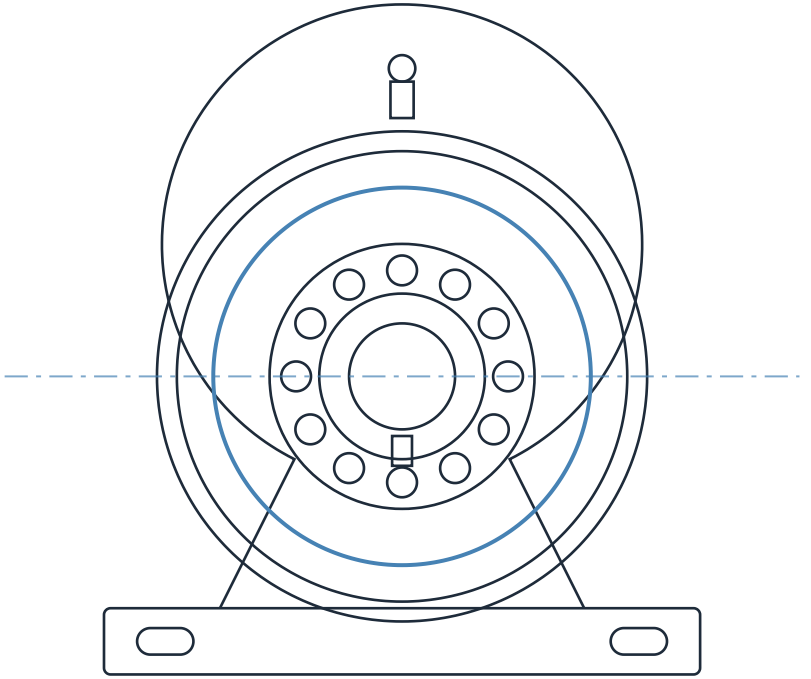
NACHI

Ball & Roller Bearings (B2100E-4) — Bearing Units & Accessories

کاتالوگ یاتاقان و لوازم جانبی NACHI

استعلام قیمت و خرید یاتاقان NACHI ←



BRAND برند	ORIGIN کشور سازنده	PRODUCTS محصولات	PAGES تعداد صفحات	LANGUAGE زبان
NACHI	Japan	Bearing units, sleeves	127	English

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تأمین‌کننده تخصصی بلبرینگ و رولبرینگ
تهران، خیابان امیرکبیر، کوچه ناظم‌الاطبا شمالی، پاساژ تهران، طبقه سوم، پلاک ۱۴۲

021 3399 8121
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Ball Bearing Units

Ball Bearing Units offer a convenient method of applying highly reliable rolling contact bearings to applications without the necessity of manufacturing a bearing housing.

Generally Ball Bearing Units have following features.
- Self-aligning capability
- Sealed
- Easy to mount and dismount
- Interchangeability with foreign made units
- Many types suitable for applications
  Additionally NACHI Ball Bearing Units have the advantages of case of use and high reliability.
- Anti-rotation pin on outer ring
- Eccentric collar type is also available
- Base for mount locating pin
  Since Ball Bearings for units have the same geometry as deep groove ball bearings, load rating, reliability and other functions are equal with that of deep-groove ball bearings.

1. Designations

Number arrangement of Bearing Units and Ball bearings is shown as follows.

(1) Bearing Unit Numbers

C UK P 210 C CT4HR5 +H2310

- **Accessory No.**
  Adapter sleeves
  Frame of take-up type
- **Supplementary symbol**
  Internal clearance
  For high or low temperature
- **Bearing dimension series no.**
- **Housing type symbol**
  Pillow, Flange, Take-up, Cartridge and Hanger
- **Cover symbol**
  C : Pressed steel or cast iron cover with seal
  E : End cover of pressed steel
  CE: End cover of cast iron
- **Bearing type symbol**
  Cylindrical bore (With eccentric collar)
  Tapered bore
- **Covered housing symbol**
  C: For cast iron cover

(2) Ball Bearing Numbers

UG 208 C3HR4 +ER

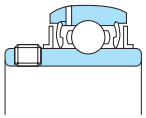
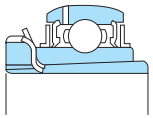
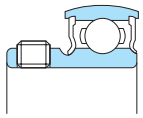
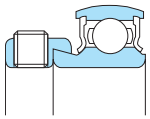
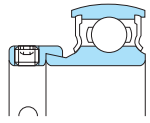
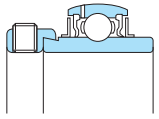
- **Accessory symbol**
  Eccentric collar ER, AR
  Adapter sleeves
- **Supplementary symbol**
  Internal clearance
  For high or low temperature
- **Dimension series**
  First number:
  Diameter series no.
  2nd and 3rd number:
  Bore diameter no.
- **Type symbol**
  Set screw type: UC, B
  Eccentric collar type: KH, U, UG
  Adapter sleeve type: UK

Note: For type B bearings, a last digit of bore diameter number is used as dimension series number.

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Contents of dimension tables (1)

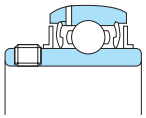
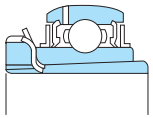
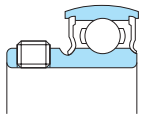
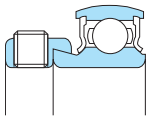
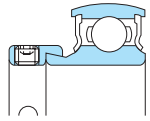
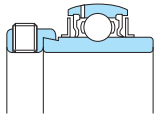
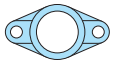
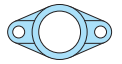
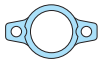
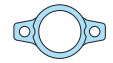
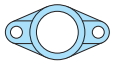
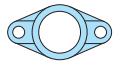
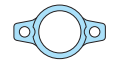
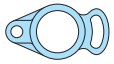
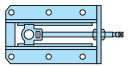
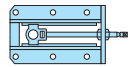
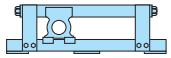
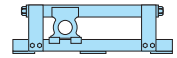
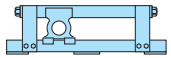
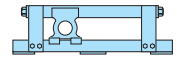
Symbol ○: Pressed steel cover type is available. ●: Cast iron cover type is available.

Housing type \ Ball bearing type		UC (MUC)	UK+H		B	KH AE	U, MU+ER	UG+ER	Ball bearing type \ Housing type
									
		page 527	page 529		page 531	page 531	page 533	page 535	
Cast Iron Series Standard Pillow block Type	P 	UCP ○ ● page 417	UKP ○ ● page 421		BP page 425	–	–	UGP page 427	P 
Cast Iron Series Thick Body Pillow block for Shock Applications	IP 	UCIP ○ ● page 429	UKIP ○ ● page 431		–	–	–	–	IP 
Cast Steel Series Pillow block for Heavy Loads	PK 	UCPK ● page 433	UKPK ● page 425		–	–	–	–	PK 
Cast Iron Series Pillow block with High Center Height	PH 	UCPH page 437	–		–	–	–	–	PH 
Cast Iron Series Pillow block with Small Base	PA 	UCPA page 439	–		–	–	–	–	PA 
Cast Iron Series Pillow block for Free-end	EP 	UCEP page 441	–		–	–	–	–	EP 
Cast Iron Series Light Weight Pillow block for Light Load	LLP 	–	–		BLLP page 443	KHLLP page 443	–	–	LLP 
Stainless Steel Series Standard Pillow block	MP 	MUCP page 445	–		–	–	–	–	MP 
Alloy Series (Silver series) Compact Pillow block for Light Load	P (PZ3) 	–	–		–	–	UP (MUP) page 447	–	P (PZ3) 
Pressed Steel Series Pillow block for Extremely Light Load	PP 	–	–		BPP page 449	KHPP page 449	–	–	PP 
Cast Iron Series Square Flange Type	F 	UCF ○ ● page 451	UKF ○ ● page 455		BF page 459	–	–	UGF page 461	F 
Cast Iron Series Square Flange with Spigot Joint	FS 	UCFS ● page 463	UKFS ● page 465		–	–	–	–	FS 
Cast Iron Series Round Flange Type	FC 	UCFC ○ ● page 467	UKFC ○ ● page 471		BFC page 473	–	–	UGFC page 475	FC 

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Contents of dimension tables (2)

Symbol ○: Pressed steel cover type is available. ●: Cast iron cover type is available.

Housing type \ Ball bearing type		UC (MUC)  page 527	UK+H  page 529		B  page 531	KH AE  page 531	U, MU+ER  page 533	UG+ER  page 535	Ball bearing type \ Housing type	
Cast Iron Series Rhombic Flange Type	FL 	UCFL ○ ● page 477	UKFL ○ ● page 481		BFL page 485	–	–	UGFL page 487	FL 
Cast Iron Series Light Weight Rhombic Flange for Light Load	LFL 	–	–		BLFL page 489	KHLFL page 489	–	–	LFL 
Stainless Steel Series Rhombic Flange for Anti-Corrosion	MFL 	MUCFL page 491	–		–	–	–	–	MFL 
Alloy Series (Silver Series) Compact Rhombic Flange for Light Load	FL (FLZ3) 	–	–		–	–	UFL (MUFL) page 493	–	FL (FLZ3) 
Pressed Steel Series Round Flange for Extremely Light Load	PF 	–	–		BPF page 495	KHPF page 495	–	–	PF 
Pressed Steel Series Rhombic Flange for Extremely Light Load	PFL 	–	–		BPFL page 497	KHPFL page 497	–	–	PFL 
Cast Iron Series Transformed Rhombic Flange, Adjustable Center	FA 	UCFA page 499	–		–	–	–	–	FA 
Cast Iron Series One Side Flange Type	FK 	UCFK page 501	–		–	–	–	–	FK 
Cast Iron Series Standard Take-Up Type	T 	UCT ○ ● page 503	UKT ○ ● page 507		BT page 511	–	–	–	T 
Cast Iron Series Take-Up Type with Frame of Angle Steel	T + WB 	UCT+WB page 513	–		–	–	–	–	T + WB 
Cast Iron Series Take-Up Type with Frame of Light Channel Steel	TL + WL 	UCTL+WL page 515	–		–	–	–	–	TL + WL 
Cast Iron Series Take-Up Type with Frame of Channel Steel	TU + WU 	UCTU+WU page 517	–		–	–	–	–	TU + WU 
Cast Iron Series Cartridge Type	C 	UCC page 521	UKC page 523		–	–	–	–	C 
Cast Iron Series Hanger Type	ECH 	UCECH page 525	–		–	–	–	–	ECH 

2. Tolerance

Tolerances for ball bearings and housings are shown as follows.

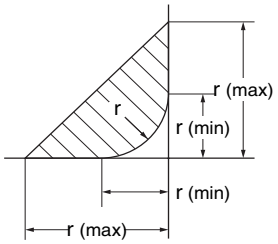
(1) Ball Bearing Tolerances

Tolerances of inner ring	Cylindrical bore: See Table 1 Tapered bore: See Table 5.7.1 (Page 63) 1/12 taper bore
Tolerances of outer ring	Tolerance class 0 of Table 5.1.2 (Page 55) Note: The lower limit of ΔD_{mp} is not applied within a distance of 1/4 of outer ring width from side faces.
Chamfer dimensions	See Table 2

Table 1. Tolerance of Inner Ring (Cylindrical bore) Unit: μm

Bore dia. Nominal d (mm)		Single plane mean bore dia. deviation Δd_{mp}		Bore dia. variation in a single radial plane V_{dp}	Deviation of a single inner ring width ΔB_s		Radial runout of assembled bearing inner ring K_{ia} (referaence)	Deviation of (1) eccentric value of inner ring eccentric face ΔH_s
Over	Incl.	High	Low	Max	High	Low	Max	
6	10	+12	0	8	0	–120	15	±100
10	18	+15	0	10	0	–120	15	±100
18	31.75	+18	0	12	0	–120	18	±100
31.75	50.8	+21	0	14	0	–120	20	±100
50.8	80	+24	0	16	0	–150	25	±100
80	120	+28	0	19	0	–200	30	—
120	180	+33	0	22	0	–250	35	—

Note: (1) This deviation is used on the eccentric locking collar type bearings.



Remark: The exact shape of the chamfer is not specified, but its contour will be in the area shown with oblique lines.

Table 2. Chamfer dimension Limits

Chamfer dimension Nominal r	r		Corner of shaft R
	Max	Min	Max
0.5	0.8	0.3	0.3
1	1.5	0.6	0.6
1.5	2	1	1
2	2.5	1.5	1
2.5	3	2	1.5
3	3.5	2.5	2
3.5	4	2.5	2
4	4.5	3	2.5
5	6	4	3

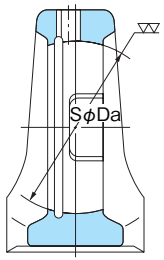
(2) Bearing Unit Housing Tolerances

Spherical bearing seating of cast iron housing	See Table 3
Others	See NACHI Bearing Units Catalog

Table 3. Tolerance of cast iron housing Unit: μm

Spherical bearing seating diameter nominal Da (mm)		Tolerance symbol H7			Tolerance symbol J7			Tolerance symbol K7		
		Deviation of single plane mean dia. of bearing seating ΔD_{am}		Bearing seating dia. variation in a single radial plane VD_{ap}	Deviation of single plane mean dia. of bearing seating ΔD_{am}		Bearing seating dia. variation in a single radial plane VD_{ap}	Deviation of single plane mean dia. of bearing seating ΔD_{am}		Bearing seating dia. variation in a single radial plane VD_{ap}
Over	Incl.	High	Low	Max	High	Low	Max	High	Low	Max
30	50	+25	0	10	+14	–11	10	+ 7	–18	10
50	80	+30	0	12	+18	–12	12	+ 9	–21	12
80	120	+35	0	14	+22	–13	14	+10	–25	14
120	180	+40	0	16	+26	–14	16	+12	–28	16
180	250	+46	0	18	+30	–16	18	+13	–33	18
250	315	+52	0	20	+36	–16	20	+16	–36	20

Notes: 1 Spherical bearing seat dimensions are divided into H7 for clearance fits and J7 and K7 for light interference fits. As NACHI bearings equipped with an anti-rotation pin to prevent outer race rotation, H7 is HACHI standard for the dimension.
2 For rotating outer ring load or fluctuating load applications, J7 or K7 fitting practice should be used.
3 Silver series of special alloy material are supplied with special tolerance.



3. Radial clearance of Ball Bearings

Cylindrical bore	See Table 6.1 (page 64); Radial internal clearance of deep-groove ball bearings (with cilindrical bore)
Tapered bore	CT2: CN for cylindrical bore CTN: C3 for cylindrical bore CT3: C4 for cylindrical bore They are considered the inner ring expansion by fitting with an adapter sleeve.

4. Shaft Tolerance

For cylindrical bore bearings	● Normal load: Shaft tolerance h7, h8 or js7 ● Heavy or shock load: Shaft tolerance k6, k7 or m6
For tapered bore bearings with an adaptor sleeve	● Shaft tolerance h9

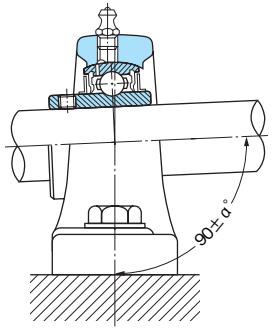
5. Maximum permissible misalignment angle

Normal permissible misalignment angle α is ±1.5°~2.5° because it is restricted by grease supply.

Even if grease is not supplied, it is desirable to use the same limiting value. If larger angles are needed, its angle is permissible to about ±5°.

The maximum misalignment angle of bearing units with a housing cover is ±1.0°~1.8°, beyond this angle the inner diameter of the cover will interfere the shaft.

To prevent the unequal contact between seals and shaft, excessive heat generation and dust intrusion, the misalignment angle should be minimized.



6. Maximum permissible operating temperature

Since Bearing units are sometimes used at higher or lower temperature than normal, NACHI prepares the special specification shown in Table 4.

In case of Bearing units with high temperature specification, the decrease in basic load rating should be considered, and radial clearance should be larger than normal clearance.

NACHI standard radial clearance for high temperature applications is C3 HR4, C4 HR5 and C4 HR23 for cylindrical bore bearings and CT3 HR4, CT4 HR23 for tapered bore bearings.

If there is a large temperature difference between the inner ring and outer ring, radial internal clearance should be determined reasonably.

Notes 1. If operating temperature exceeds 150°C, careful investigation, including radial internal clearance is required. In such case, Please consult NACHI with operating conditions.
2. The grease shown in Table 4 must be supplied for relubrication. If different greases are mixed, lubrication ability can deteriorate. Before supplying different grease, please consult NACHI or the grease manufactures.

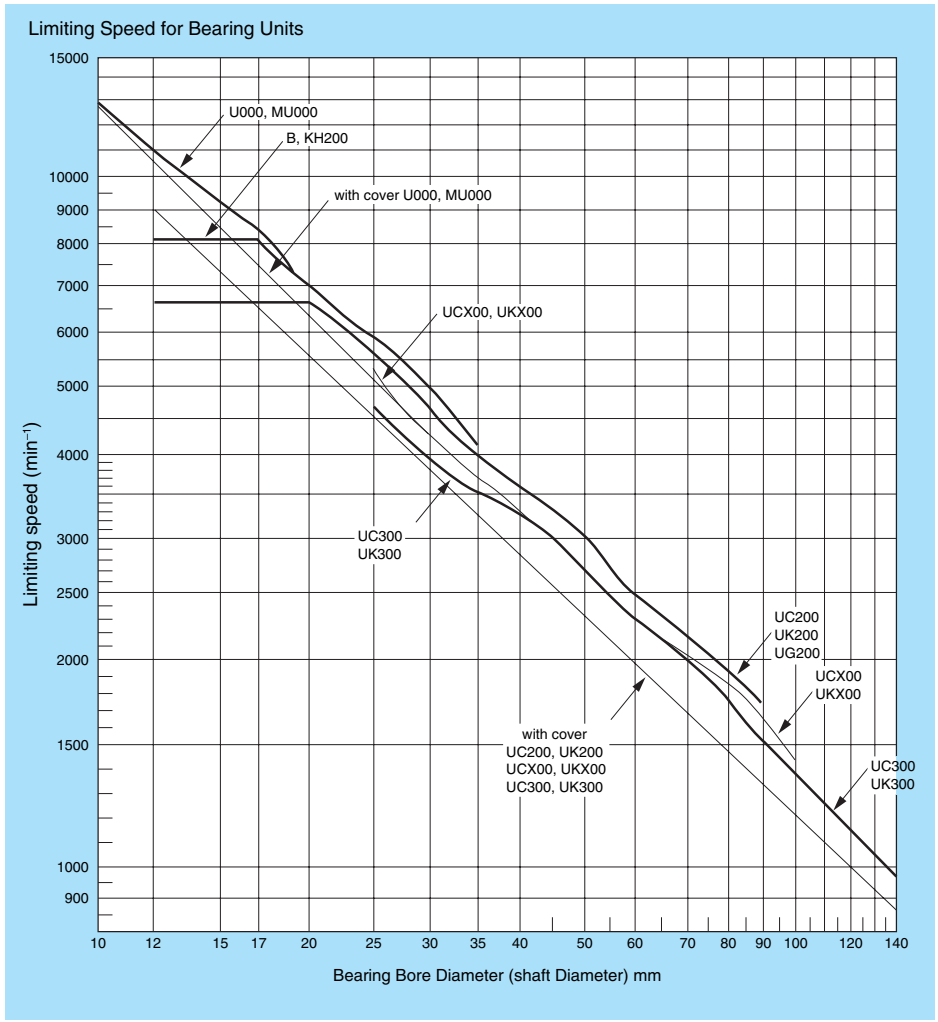
Table 4. Operating Temperature Range

Series	Seal material	Grease	Operating temperature range (°C)	Slinger color
Silver series	Nitrile rubber (NBR)	Alvania Grease 3	– 10~+ 80	–
Standard	Nitrile rubber (NBR)	Alvania Grease 3	– 15~+100	Black
HR4 for high temperature	Nitrile rubber (NBR)	Superlube 3	Normal temperature~+120	Yellow
HR5 for high temperature	Silicone rubber	Superlube 3	Normal temperature~+200	Yellow
HR23 for high temperature	Silicone rubber	Fluorine-contained Grease	Normal temperature~+230	Black
CR2A for low temperature	Silicone rubber	Aero Shell Grease 7	- 40~+Normal temperature	White

7. Speed limit

Limiting speed of bearings is determined by the slip speed limit between the seal and inner ring or shaft.

Limiting speed of bearings is shown in the chart below. But this limiting speed should be decreased, if there are differences between shaft center and bearing center or a mixing resistance of grease for HR23 specification. When Bearing units are necessary to operate in excess of speed limit, please consult NACHI.



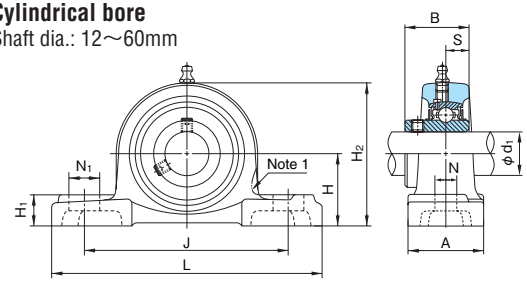
Pillow Block Units

UCP type

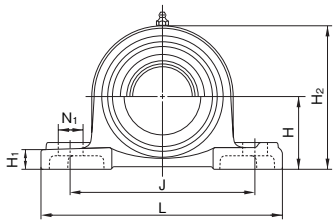
With set screws

Cylindrical bore

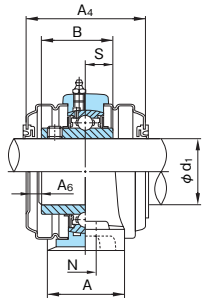
Shaft dia.: 12～60mm

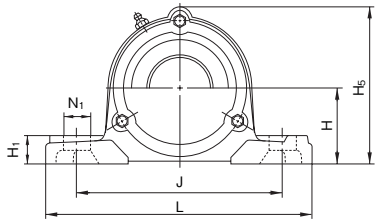


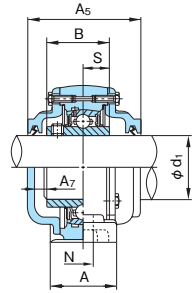
Note: The line shows figure of UCPX00 series



With steel covers







With cast covers

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)															Bolt size	Bearings			Housing No.	Unit No. with steel covers	Unit No. with cast covers	Mass of Unit (kg)		
		H	L	A	J	N	N_1	H_1	H_2	H_5	B	S	A_4	A_5	A_6	A_7		No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Covers with rubber seal (End cover on one side)	Covers with rubber seal (End cover on one side)	standard	with steel cover	with cast covers
12	**UCP201**	30.2	127	38	95	13	19	15	62	66	31	12.7	56	62	8	6	M10	UC201	12800	6600	P203	**UCP201C(E)**	**CUCP201C(CE)**	0.65	0.71	1.1
15	**UCP202**	30.2	127	38	95	13	19	15	62	66	31	12.7	56	62	8	6	M10	UC202	12800	6600	P203	**UCP202C(E)**	**CUCP202C(CE)**	0.63	0.69	1.1
17	**UCP203**	30.2	127	38	95	13	19	15	62	66	31	12.7	56	62	8	6	M10	UC203	12800	6600	P203	**UCP203C(E)**	**CUCP203C(CE)**	0.62	0.68	1.1
20	**UCP204**	33.3	127	38	95	13	19	15	65	69	31	12.7	56	62	8	6	M10	UC204	12800	6600	P204	**UCP204C(E)**	**CUCP204C(CE)**	0.65	0.71	1.1
	UCP205	36.5	140	38	105	13	16	16	70	76	34	14.3	63	70	11	9	M10	UC205	14000	7900	P205	**UCP205C(E)**	**CUCP205C(CE)**	0.79	0.86	1.4
25	**UCPX05**	44.4	159	51	119	17	25	18	85	—	38.1	15.9	65	—	9	—	M14	UCX05	19600	11300	PX05	**UCPX05C(E)**	—	1.5	1.5	—
	UCP305	45	175	45	132	17	20	16	84	89	38	15	—	78	—	10	M14	UC305	21300	10900	P305	—	**CUCP305C(CE)**	1.6	—	2.1
	UCP206	42.9	165	48	121	17	21	18	83	87	38.1	15.9	65	74	9	8	M14	UC206	19600	11300	P206	**UCP206C(E)**	**CUCP206C(CE)**	1.3	1.4	2.0
30	**UCPX06**	47.6	175	57	127	17	25	20	94	—	42.9	17.5	70	—	8	—	M14	UCX06	25900	15400	PX06	**UCPX06C(E)**	—	1.9	1.9	—
	UCP306	50	180	50	140	17	20	19	94	99	43	17	—	84	—	10	M14	UC306	26800	15000	P306	—	**CUCP306C(CE)**	1.9	—	2.6
	UCP207	47.6	167	48	127	17	21	19	94	97	42.9	17.5	70	80	8	8	M14	UC207	25900	15400	P207	**UCP207C(E)**	**CUCP207C(CE)**	1.6	1.7	2.5
35	**UCPX07**	54	203	57	144	17	30	22	105	—	49.2	19	83	—	10	—	M14	UCX07	29300	17900	PX07	**UCPX07C(E)**	—	2.7	2.7	—
	UCP307	56	210	56	160	17	25	21	105	110	48	19	—	90	—	10	M14	UC307	33500	19200	P307	—	**CUCP307C(CE)**	2.7	—	3.4
	UCP208	49.2	184	54	137	17	25	19	100	104	49.2	19	82	90	10	8	M14	UC208	29300	17900	P208	**UCP208C(E)**	**CUCP208C(CE)**	2.0	2.2	3.0
40	**UCPX08**	58.7	222	67	156	20	32	26	113	—	49.2	19	82	—	10	—	M16	UCX08	33000	20500	PX08	**UCPX08C(E)**	—	3.5	3.5	—
	UCP308	60	220	60	170	17	27	23	116	122	52	19	—	100	—	11	M14	UC308	40500	23900	P308	—	**CUCP308C(CE)**	3.3	—	4.4
	UCP209	54	190	54	146	17	22	20	108	114	49.2	19	82	90	10	8	M14	UC209	33000	20500	P209	**UCP209C(E)**	**CUCP209C(CE)**	2.3	2.5	3.4
45	**UCPX09**	58.7	222	67	156	20	33	26	116	—	51.6	19	87	—	9	—	M16	UCX09	35500	23200	PX09	**UCPX09C(E)**	—	3.5	3.6	—
	UCP309	67	245	67	190	20	30	25	128	136	57	22	—	106	—	12	M16	UC309	51500	29500	P309	—	**CUCP309C(CE)**	4.5	—	5.8
	UCP210	57.2	206	60	159	20	25	22	114	120	51.6	19	87	98	9	10	M16	UC210	35500	23200	P210	**UCP210C(E)**	**CUCP210C(CE)**	2.7	3.0	4.1
50	**UCPX10**	63.5	241	73	171	20	36	27	126	—	55.6	22.2	88	—	9	—	M16	UCX10	43000	29400	PX10	**UCPX10C(E)**	—	4.2	4.5	—
	UCP310	75	275	75	212	20	35	28	143	149	61	22	—	114	—	12	M16	UC310	61500	38200	P310	—	**CUCP310C(CE)**	6.2	—	7.6
	UCP211	63.5	219	60	171	20	25	22	126	133	55.6	22.2	88	100	9	10	M16	UC211	43000	29400	P211	**UCP211C(E)**	**CUCP211C(CE)**	3.3	3.7	5.0
55	**UCPX11**	69.8	260	79	184	25	36	30	139	—	65.1	25.4	100	—	9	—	M20	UCX11	52500	36100	PX11	**UCPX11C(E)**	—	5.9	6.2	—
	UCP311	80	310	80	236	20	38	31	154	159	66	25	—	120	—	13	M16	UC311	71500	44800	P311	—	**CUCP311C(CE)**	7.7	—	9.6
	UCP212	69.8	241	70	184	20	25	25	138	145	65.1	25.4	102	114	10	11	M16	UC212	52500	36100	P212	**UCP212C(E)**	**CUCP212C(CE)**	4.7	5.1	6.7
60	**UCPX12**	76.2	286	83	203	25	41	32	151	—	65.1	25.4	104	—	11	—	M20	UCX12	57500	40000	PX12	**UCPX12C(E)**	—	7.2	7.4	—
	UCP312	85	330	85	250	25	38	33	165	169	71	26	—	130	—	14	M20	UC312	81500	52000	P312	—	**CUCP312C(CE)**	9.3	—	11.0

Remarks: 1. Grease nipple: 1/4-28UNF

Remarks: 2. Examples of unit numbers with covers:

With steel cover { Covers with rubber seal on both sides :UCP210C
An end cover and a cover with rubber seal :UCP210E

With cast covers { Covers with rubber seal on both sides :CUCP210C
An end cover and a cover with rubber seal :CUCP210CE

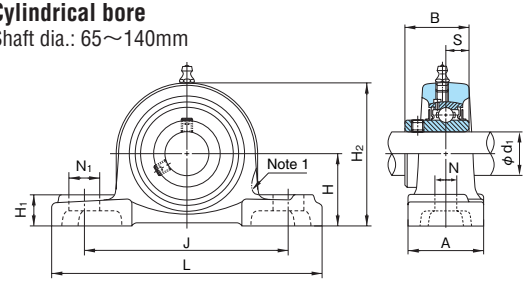
Pillow Block Units

UCP type

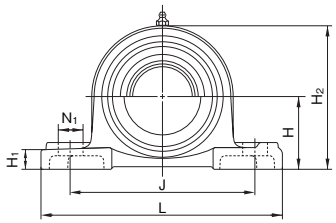
With set screws

Cylindrical bore

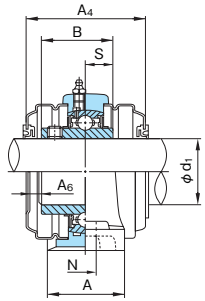
Shaft dia.: 65～140mm

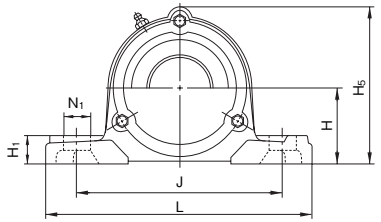


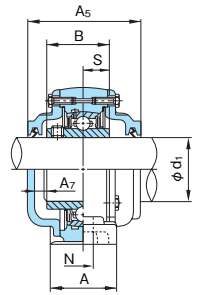
Note: The line shows figure of UCPX00 series



With steel covers







With cast covers

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)															Bolt size	Bearings			Housing No.	Unit No. with steel covers	Unit No. with cast covers	Mass of Unit (kg)		
		H	L	A	J	N	N_1	H_1	H_2	H_5	B	S	A_4	A_5	A_6	A_7		No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Covers with rubber seal (End cover on one side)	Covers with rubber seal (End cover on one side)	standard	With steel cover	With cast covers
65	**UCP213**	76.2	265	70	203	25	29	27	150	156	65.1	25.4	102	118	10	13	M20	UC213	57500	40000	P213	**UCP213C(E)**	**CUCP213C(CE)**	5.6	6.1	7.8
	UCPX13	76.2	286	83	203	25	41	32	154	—	74.6	30.2	—	—	—	—	M20	UCX13	62000	44000	PX13	—	—	7.4	—	—
	UCP313	90	340	90	260	25	38	36	174	188	75	30	—	140	—	17	M20	UC313	92500	59700	P313	—	**CUCP313C(CE)**	9.8	—	14.3
70	**UCP214**	79.4	266	72	210	25	31	27	156	162	74.6	30.2	—	134	—	16	M20	UC214	62000	44000	P214	—	**CUCP214C(CE)**	7.3	—	9.3
	UCPX14	88.9	330	89	229	27	51	35	172	—	77.8	33.3	—	—	—	—	M22	UCX14	66000	48200	PX14	—	—	11.1	—	—
	UCP314	95	360	90	280	27	40	40	186	198	78	33	—	140	—	17	M22	UC314	104000	68000	P314	—	**CUCP314C(CE)**	11.4	—	16.7
75	**UCP215**	82.6	275	74	217	25	31	28	163	167	77.8	33.3	—	136	—	17	M20	UC215	66000	48200	P215	—	**CUCP215C(CE)**	7.9	—	9.6
	UCPX15	88.9	330	89	229	27	51	35	177	—	82.6	33.3	—	—	—	—	M22	UCX15	72500	53000	PX15	—	—	11.4	—	—
	UCP315	100	380	100	290	27	40	40	197	208	82	32	—	150	—	17	M22	UC315	114000	76900	P315	—	**CUCP315C(CE)**	13.6	—	19.6
80	**UCP216**	88.9	292	78	232	25	31	30	175	188	82.6	33.3	—	146	—	15	M20	UC216	72500	53000	P216	—	**CUCP216C(CE)**	10.0	—	12.2
	UCPX16	101.6	381	102	283	27	59	42	197	—	85.7	34.1	—	—	—	—	M22	UCX16	83500	61800	PX16	—	—	17.4	—	—
	UCP316	106	400	110	300	27	40	45	209	219	86	34	—	154	—	17	M22	UC316	123000	86400	P316	—	**CUCP316C(CE)**	16.4	—	23.5
85	**UCP217**	95.2	310	83	247	25	31	32	187	199	85.7	34.1	—	150	—	15	M20	UC217	83500	61800	P217	—	**CUCP217C(CE)**	12.2	—	14.2
	UCPX17	101.6	381	102	283	27	59	42	202	—	96	39.7	—	—	—	—	M22	UCX17	95500	71400	PX17	—	—	17.1	—	—
	UCP317	112	420	110	320	33	45	45	221	234	96	40	—	164	—	18	M27	UC317	132000	96500	P317	—	**CUCP317C(CE)**	18.6	—	27.0
90	**UCP218**	101.6	327	88	262	27	33	34	200	211	96	39.7	—	164	—	17	M22	UC218	95500	71400	P218	—	**CUCP218C(CE)**	14.7	—	18.2
	UCPX18	101.6	381	111	283	27	60	45	206	—	104	42.9	—	—	—	—	M22	UCX18	109000	81600	PX18	—	—	17.0	—	—
	UCP318	118	430	110	330	33	45	50	233	245	96	40	—	168	—	20	M27	UC318	143000	107200	P318	—	**CUCP318C(CE)**	20.9	—	30.4
95	**UCP319**	125	470	120	360	36	50	50	250	257	103	41	—	180	—	20	M30	UC319	153000	118400	P319	—	**CUCP319C(CE)**	26.5	—	36.8
100	**UCPX20**	127	432	121	337	33	64	52	250	—	117.5	49.2	—	—	—	—	M27	UCX20	134000	104700	PX20	—	—	33.0	—	—
	UCP320	140	490	120	380	36	50	55	275	282	108	42	—	190	—	21	M30	UC320	173000	140400	P320	—	**CUCP320C(CE)**	34.3	—	44.9
105	**UCP321**	140	490	120	380	36	50	55	278	287	112	44	—	194	—	21	M30	UC321	183000	153100	P321	—	**CUCP321C(CE)**	36.6	—	45.2
110	**UCP322**	150	520	140	400	40	55	60	295	305	117	46	—	210	—	26	M33	UC322	205000	178800	P322	—	**CUCP322C(CE)**	42.5	—	54.7
120	**UCP324**	160	570	140	450	40	55	70	321	328	126	51	—	220	—	25	M33	UC324	207000	184800	P324	—	**CUCP324C(CE)**	53.5	—	73.8
130	**UCP326**	180	600	140	480	40	55	80	354	358	135	54	—	230	—	24	M33	UC326	229000	214300	P326	—	**CUCP326C(CE)**	72.1	—	92.2
140	**UCP328**	200	620	140	500	40	55	80	388	388	145	59	—	240	—	24	M33	UC328	255000	246000	P328	—	**CUCP328C(CE)**	89.1	—	110

Remarks: 1. Grease nipple: 1/4-28UNF for bore number 13
PF1/8 for bore number 14 and over

Remarks: 2. Examples of unit numbers with covers:

With steel cover { Covers with rubber seal on both sides :UCP213C
An end cover and a cover with rubber seal :UCP213E

With cast covers { Covers with rubber seal on both sides :CUCP213C
An end cover and a cover with rubber seal :CUCP213CE

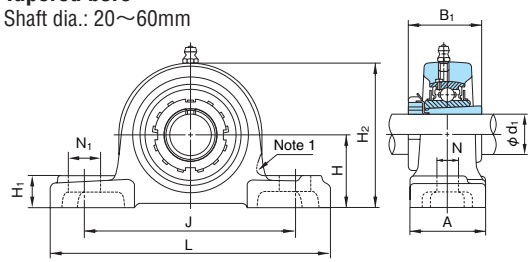
Pillow Block Units

UKP+H type

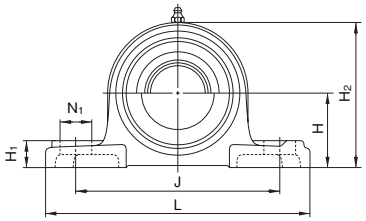
With adapter assembly

Tapered bore

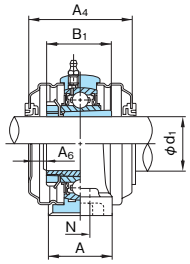
Shaft dia.: 20～60mm

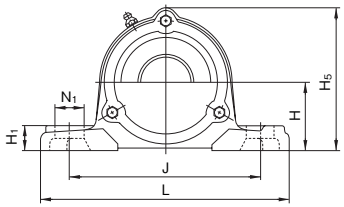


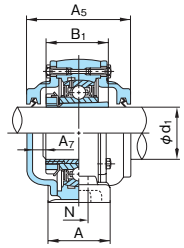
Note: The line shows figure of UCPX00 series



With steel cover







With cast covers

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)														Bolt size	Bearings			Housing No.	Unit No. with steel covers	Unit No. with cast covers	Mass of Unit (kg)		
		H	L	A	J	N	N_1	H_1	H_2	H_5	B_1	A_4	A_5	A_6	A_7		No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Covers with rubber seal (End cover on one side)	Covers with rubber seal (End cover on one side)	standard	with steel cover	with cast covers
20	**UKP205+H2305**	36.5	140	38	105	13	16	16	70	76	35	63	70	11	9	M10	UK205+H2305	14000	7900	P205	**UKP205C(E)+H2305**	**CUKP205C(CE)+H2305**	0.84	0.91	1.4
	UKPX05+H2305	44.4	159	51	119	17	25	18	85	—	35	65	—	10	—	M14	UKX05+H2305	19600	11300	PX05	**UKPX05C(E)+H2305**	—	1.5	1.5	—
	UKP305+H2305	45	175	45	132	17	20	16	84	89	35	—	78	—	12	M14	UK305+H2305	21300	10900	P305	—	**CUKP305C(CE)+H2305**	1.6	—	2.1
25	**UKP206+H2306**	42.9	165	48	121	17	21	18	83	87	38	65	74	10	10	M14	UK206+H2306	19600	11300	P206	**UKP206C(E)+H2306**	**CUKP206C(CE)+H2306**	1.4	1.5	2.1
	UKPX06+H2306	47.6	175	57	127	17	25	20	94	—	38	70	—	12	—	M14	UKX06+H2306	25900	15400	PX06	**UKPX06C(E)+H2306**	—	2.0	2.0	—
	UKP306+H2306	50	180	50	140	17	20	19	94	99	38	—	84	—	13	M14	UK306+H2306	26800	15000	P306	—	**CUKP306C(CE)+H2306**	1.9	—	2.6
30	**UKP207+H2307**	47.6	167	48	127	17	21	19	94	97	43	70	80	11	11	M14	UK207+H2307	25900	15400	P207	**UKP207C(E)+H2307**	**CUKP207C(CE)+H2307**	1.6	1.8	2.6
	UKPX07+H2307	54	203	57	144	17	30	22	105	—	43	83	—	17	—	M14	UKX07+H2307	29300	17900	PX07	**UKPX07C(E)+H2307**	—	2.7	2.7	—
	UKP307+H2307	56	210	56	160	17	25	21	105	110	43	—	90	—	14	M14	UK307+H2307	33500	19200	P307	—	**CUKP307C(CE)+H2307**	2.7	—	3.5
35	**UKP208+H2308**	49.2	184	54	137	17	25	19	100	104	46	82	90	15	14	M14	UK208+H2308	29300	17900	P208	**UKP208C(E)+H2308**	**CUKP208C(CE)+H2308**	2.1	2.3	3.1
	UKPX08+H2308	58.7	222	67	156	20	32	26	113	—	46	82	—	15	—	M16	UKX08+H2308	33000	20500	PX08	**UKPX08C(E)+H2308**	—	3.5	3.5	—
	UKP308+H2308	60	220	60	170	17	27	23	116	122	46	—	100	—	17	M14	UK308+H2308	40500	23900	P308	—	**CUKP308C(CE)+H2308**	3.0	—	4.4
40	**UKP209+H2309**	54	190	54	146	17	22	20	108	114	50	82	90	14	13	M14	UK209+H2309	33000	20500	P209	**UKP209C(E)+H2309**	**CUKP209C(CE)+H2309**	2.4	2.6	3.5
	UKPX09+H2309	58.7	222	67	156	20	33	26	116	—	50	87	—	16	—	M16	UKX09+H2309	35500	23200	PX09	**UKPX09C(E)+H2309**	—	3.5	3.6	—
	UKP309+H2309	67	245	67	190	20	30	25	128	136	50	—	106	—	17	M16	UK309+H2309	51500	29500	P309	—	**CUKP309C(CE)+H2309**	4.6	—	5.9
45	**UKP210+H2310**	57.2	206	60	159	20	25	22	114	120	55	87	98	15	15	M16	UK210+H2310	35500	23200	P210	**UKP210C(E)+H2310**	**CUKP210C(CE)+H2310**	2.8	3.2	4.2
	UKPX10+H2310	63.5	241	73	171	20	36	27	126	—	55	88	—	14	—	M16	UKX10+H2310	43000	29400	PX10	**UKPX10C(E)+H2310**	—	4.3	4.5	—
	UKP310+H2310	75	275	75	212	20	35	28	143	149	55	—	114	—	19	M16	UK310+H2310	61500	38200	P310	—	**CUKP310C(CE)+H2310**	6.2	—	7.8
50	**UKP211+H2311**	63.5	219	60	171	20	25	22	126	133	59	88	100	14	15	M16	UK211+H2311	43000	29400	P211	**UKP211C(E)+H2311**	**CUKP211C(CE)+H2311**	3.4	3.8	5.1
	UKPX11+H2311	69.8	260	79	184	25	36	30	139	—	59	100	—	19	—	M20	UKX11+H2311	52500	36100	PX11	**UKPX11C(E)+H2311**	—	5.8	6.0	—
	UKP311+H2311	80	310	80	236	20	38	31	154	159	59	—	120	—	20	M16	UK311+H2311	71500	44800	P311	—	**CUKP311C(CE)+H2311**	7.6	—	9.6
55	**UKP212+H2312**	69.8	241	70	184	20	25	25	138	145	62	102	114	19	20	M16	UK212+H2312	52500	36100	P212	**UKP212C(E)+H2312**	**CUKP212C(CE)+H2312**	4.8	5.2	6.8
	UKPX12+H2312	76.2	286	83	203	25	41	32	151	—	62	104	—	19	—	M20	UKX12+H2312	57500	40000	PX12	**UKPX12C(E)+H2312**	—	7.1	7.3	—
	UKP312+H2312	85	330	85	250	25	38	33	165	169	62	—	130	—	23	M20	UK312+H2312	81500	52000	P312	—	**CUKP312C(CE)+H2312**	9.3	—	11.7
60	**UKP213+H2313**	76.2	265	70	203	25	29	27	150	156	65	102	118	17	20	M20	UK213+H2313	57500	40000	P213	**UKP213C(E)+H2313**	**CUKP213C(CE)+H2313**	5.7	6.2	7.9
	UKPX13+H2313	76.2	286	83	203	25	41	32	154	—	65	—	—	—	—	M20	UKX13+H2313	62000	44000	PX13	—	—	7.2	—	—
	UKP313+H2313	90	340	90	260	25	38	36	174	188	65	—	140	—	24	M20	UK313+H2313	92500	59700	P313	—	**CUKP313C(CE)+H2313**	9.8	—	14.2

Remarks: 1. Grease nipple: 1/4-28UNF

Remarks: 2. Examples of unit numbers with covers:

With steel cover { Covers with rubber seal on both sides :UKP210C+H2310
An end cover and a cover with rubber seal :UKP210E+H2310

With cast covers { Covers with rubber seal on both sides :CUKP210C+H2310
An end cover and a cover with rubber seal :CUKP210CE+H2310

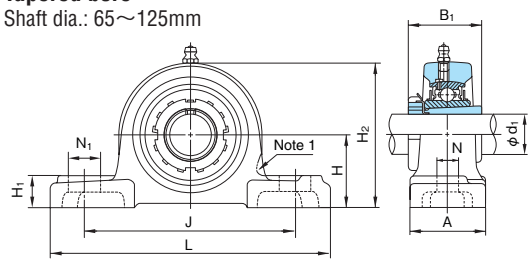
Pillow Block Units

UKP+H type

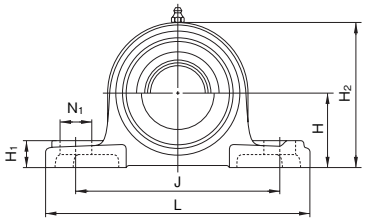
With adapter assembly

Tapered bore

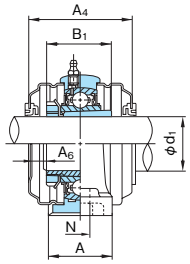
Shaft dia.: 65～125mm

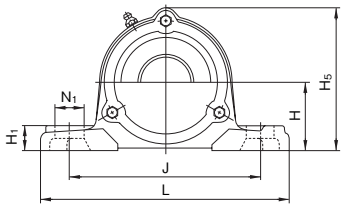


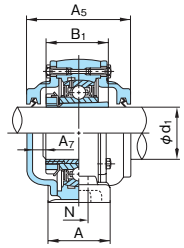
Note: The line shows figure of UCPX00 series



With steel cover







With cast covers

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)														Bolt size	Bearings			Housing No.	Unit No. with steel covers	Unit No. with cast covers	Mass of Unit (kg)		
		H	L	A	J	N	N_1	H_1	H_2	H_5	B_1	A_4	A_5	A_6	A_7		No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Covers with rubber seal (End cover on one side)	Covers with rubber seal (End cover on one side)	standard	with steel cover	with cast covers
65	**UKP215+H2315**	82.6	275	74	217	25	31	28	163	167	73	—	136	—	26	M20	UK215+H2315	66000	48200	P215	—	**CUKP215C(CE)+H2315**	8.3	—	10.0
	UKPX15+H2315	88.9	330	89	229	27	51	35	177	—	73	—	—	—	—	M22	UKX15+H2315	72500	53000	PX15	—	—	11.5	—	—
	UKP315+H2315	100	380	100	290	27	40	40	197	208	73	—	150	—	25	M22	UK315+H2315	114000	76900	P315	—	**CUKP315C(CE)+H2315**	13.7	—	19.9
70	**UKP216+H2316**	88.9	292	78	232	25	31	30	175	188	78	—	146	—	26	M20	UK216+H2316	72500	53000	P216	—	**CUKP216C(CE)+H2316**	10.4	—	12.7
	UKPX16+H2316	101.6	381	102	283	27	59	42	197	—	78	—	—	—	—	M22	UKX16+H2316	83500	61800	PX16	—	—	17.4	—	—
	UKP316+H2316	106	400	110	300	27	40	45	209	219	78	—	154	—	23	M22	UK316+H2316	123000	86400	P316	—	**CUKP316C(CE)+H2316**	16.6	—	23.9
75	**UKP217+H2317**	95.2	310	83	247	25	31	32	187	199	82	—	150	—	26	M20	UK217+H2317	83500	61800	P217	—	**CUKP217C(CE)+H2317**	12.8	—	14.8
	UKPX17+H2317	101.6	381	102	283	27	59	42	202	—	82	—	—	—	—	M22	UKX17+H2317	95500	71400	PX17	—	—	17.0	—	—
	UKP317+H2317	112	420	110	320	33	45	45	221	234	82	—	164	—	26	M27	UK317+H2317	132000	96500	P317	—	**CUKP317C(CE)+H2317**	18.6	—	27.1
80	**UKP218+H2318**	101.6	327	88	262	27	33	34	200	211	86	—	164	—	31	M22	UK218+H2318	95500	71400	P218	—	**CUKP218C(CE)+H2318**	15.1	—	18.6
	UKPX18+H2318	101.6	381	111	283	27	60	45	206	—	86	—	—	—	—	M22	UKX18+H2318	109000	81600	PX18	—	—	16.7	—	—
	UKP318+H2318	118	430	110	330	33	45	50	233	245	86	—	168	—	26	M27	UK318+H2318	143000	107200	P318	—	**CUKP318C(CE)+H2318**	21.1	—	30.9
85	**UKP319+H2319**	125	470	120	360	36	50	50	250	257	90	—	180	—	30	M30	UK319+H2319	153000	118400	P319	—	**CUKP319C(CE)+H2319**	26.5	—	37.1
90	**UKPX20+H2320**	127	432	121	337	33	64	52	250	—	97	—	—	—	—	M27	UKX20+H2320	134000	104700	PX20	—	—	32.1	—	—
	UKP320+H2320	140	490	120	380	36	50	55	275	282	97	—	190	—	31	M30	UK320+H2320	173000	140400	P320	—	**CUKP320C(CE)+H2320**	34.3	—	45.2
100	**UKP322+H2322**	150	520	140	400	40	55	60	295	305	105	—	210	—	36	M33	UK322+H2322	205000	178800	P322	—	**CUKP322C(CE)+H2322**	42.6	—	55.1
110	**UKP324+H2324**	160	570	140	450	40	55	70	321	328	112	—	220	—	35	M33	UK324+H2324	207000	184800	P324	—	**CUKP324C(CE)+H2324**	53.0	—	73.8
115	**UKP326+H2326**	180	600	140	480	40	55	80	354	358	121	—	230	—	36	M33	UK326+H2326	229000	214300	P326	—	**CUKP326C(CE)+H2326**	72.4	—	93.3
125	**UKP328+H2328**	200	620	140	500	40	55	80	388	388	131	—	240	—	37	M33	UK328+H2328	255000	246000	P328	—	**CUKP328C(CE)+H2328**	89.4	—	111

Remarks: 1. Grease nipple: PF1/8

Remarks: 2. Examples of unit numbers with covers:

With cast covers { Covers with rubber seal on both sides :CUKP215C+H2315
An end cover and a cover with rubber seal :CUKP215CE+H2315

NACHI

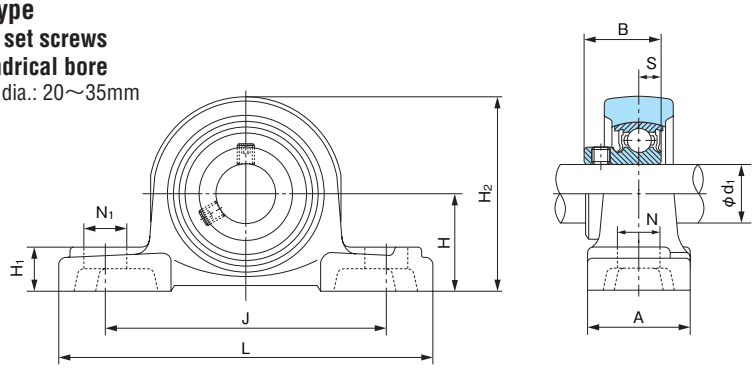
Pillow Block Units

BP type

With set screws

Cylindrical bore

Shaft dia.: 20～35mm



1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)										Bolt size		Bearings			Housing No.	Mass of Unit (kg)
		H	L	A	J	N	N_1	H_1	H_2	B	S			No.	Basic load rating (N)			
															Cr	Cor		
20	**BP204**	33.3	127	38	95	13	19	15	65	24.7	7	M10		B4	12800	6600	P204 G00	0.61
25	**BP205**	36.5	140	38	105	13	16	16	70	27	7.5	M10		B5	14000	7900	P205 G00	0.76
30	**BP206**	42.9	165	48	121	17	21	18	83	30.3	8	M14		B6	19600	11300	P206 G00	1.2
35	**BP207**	47.6	167	48	127	17	21	19	94	32.9	8.5	M14		B7	25900	15400	P207 G00	1.6

NACHI

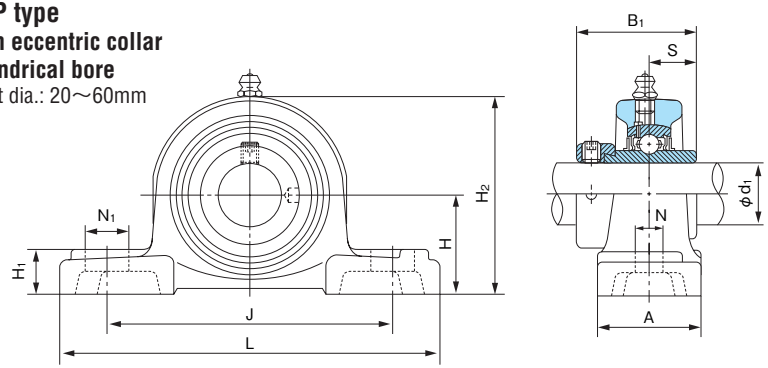
Pillow Block Units

UGP type

With eccentric collar

Cylindrical bore

Shaft dia.: 20～60mm



1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)										Bolt size		Bearings			Housing No.	Mass of Unit (kg)
		H	L	A	J	N	N_1	H_1	H_2	B_1	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor		
20	UGP204	33.3	127	38	95	13	19	15	65	43.7	17.1	M10		UG204+ER	12800	6600	P204	0.70
25	UGP205	36.5	140	38	105	13	16	16	70	44.4	17.5	M10		UG205+ER	14000	7900	P205	0.83
30	UGP206	42.9	165	48	121	17	21	18	83	48.4	18.3	M14		UG206+ER	19600	11300	P206	1.3
35	UGP207	47.6	167	48	127	17	21	19	94	51.1	18.8	M14		UG207+ER	25900	15400	P207	1.7
40	UGP208	49.2	184	54	137	17	25	19	100	56.3	21.4	M14		UG208+ER	29300	17900	P208	2.1
45	UGP209	54	190	54	146	17	22	20	108	56.3	21.4	M14		UG209+ER	33000	20500	P209	2.3
50	UGP210	57.2	206	60	159	20	25	22	114	62.7	24.6	M16		UG210+ER	35500	23200	P210	2.7
55	UGP211	63.5	219	60	171	20	25	22	126	71.4	27.8	M16		UG211+ER	43000	29400	P211	3.5
60	UGP212	69.8	241	70	184	20	25	25	138	77.8	31	M16		UG212+ER	52500	36100	P212	5.0

Remark: Grease nipple: 1/4-28UNF

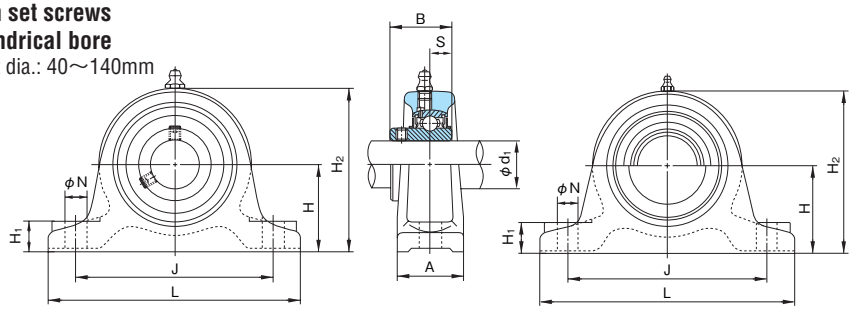
Pillow Block Units

UCIP type

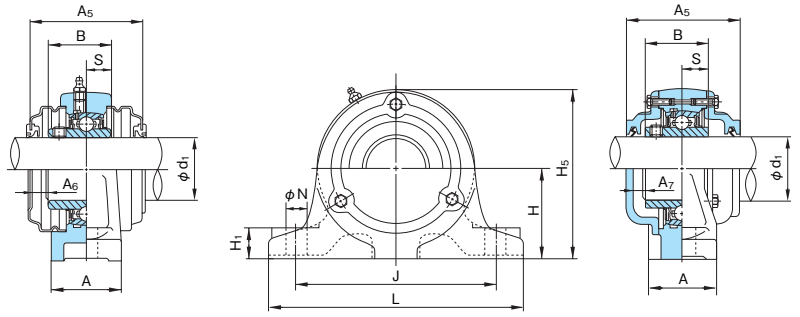
With set screws

Cylindrical bore

Shaft dia.: 40～140mm



With steel cover



With cast covers

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)														Bolt size	Bearings			Housing No.	Unit No. with steel covers	Unit No. with cast covers	Mass of Unit (kg)		
		H	L	A	J	N	H_1	H_2	H_5	B	S	A_4	A_5	A_6	A_7		No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Covers with rubber seal (End cover on one side)	Covers with rubber seal (End cover on one side)	standard	with steel cover	With cast covers
40	**UCIP208**	60	200	60	150	19	25	115	115	49.2	19	86	90	12	8	M16	UC208	29300	17900	IP208	**UCIP208C(E)**	**CUCIP208C(CE)**	3.6	3.8	4.0
45	**UCIP209**	70	210	60	160	19	25	128	130	49.2	19	92	90	15	8	M16	UC209	33000	20500	IP209	**UCIP209C(E)**	**CUCIP209C(CE)**	3.8	4.1	4.5
50	**UCIP210**	70	220	60	170	19	28	132	133	51.6	19	92	98	12	10	M16	UC210	35500	23200	IP210	**UCIP210C(E)**	**CUCIP210C(CE)**	4.4	4.7	5.0
55	**UCIP211**	80	230	60	180	19	28	148	150	55.6	22.2	97	100	14	10	M16	UC211	43000	29400	IP211	**UCIP211C(E)**	**CUCIP211C(CE)**	5.5	5.8	6.2
60	**UCIP212**	80	260	70	200	22	30	155	155	65.1	25.4	113	114	15	11	M20	UC212	52500	36100	IP212	**UCIP212C(E)**	**CUCIP212C(CE)**	5.9	6.3	8.0
65	**UCIP213**	90	280	70	220	22	30	172	172	65.1	25.4	111	118	14	13	M20	UC213	57500	40000	IP213	**UCIP213C(E)**	**CUCIP213C(CE)**	7.5	8.0	10.1
	UCIP313	110	310	70	250	22	30	208	208	75	30	—	140	—	17	M20	UC313	92500	59700	IP313	—	**CUCIP313C(CE)**	12.4	—	16.5
70	**UCIP314**	110	330	75	270	25	35	215	215	78	33	—	140	—	17	M22	UC314	104000	68000	IP314	—	**CUCIP314C(CE)**	14.9	—	19.2
75	**UCIP315**	120	340	75	280	25	35	230	230	82	32	—	150	—	17	M22	UC315	114000	76900	IP315	—	**CUCIP315C(CE)**	16.2	—	21.8
80	**UCIP316**	120	350	85	290	25	40	235	235	86	34	—	154	—	17	M22	UC316	123000	86400	IP316	—	**CUCIP316C(CE)**	20.8	—	24.8
85	**UCIP317**	130	370	85	310	25	40	255	255	96	40	—	164	—	18	M22	UC317	132000	96500	IP317	—	**CUCIP317C(CE)**	23.1	—	29.4
90	**UCIP318**	130	400	85	330	29	45	260	260	96	40	—	168	—	20	M24	UC318	143000	107200	IP318	—	**CUCIP318C(CE)**	25.7	—	33.2
95	**UCIP319**	150	410	85	340	29	45	285	285	103	41	—	180	—	20	M24	UC319	153000	118400	IP319	—	**CUCIP319C(CE)**	29.7	—	38.5
100	**UCIP320**	150	430	85	360	29	45	295	295	108	42	—	190	—	21	M24	UC320	173000	140400	IP320	—	**CUCIP320C(CE)**	33.4	—	44.2
110	**UCIP322**	170	490	100	410	32	50	335	335	117	46	—	210	—	26	M27	UC322	205000	178800	IP322	—	**CUCIP322C(CE)**	50.4	—	61.2
120	**UCIP324**	170	510	100	430	32	50	345	345	126	51	—	220	—	25	M27	UC324	207000	184800	IP324	—	**CUCIP324C(CE)**	56.8	—	72.3
130	**UCIP326**	200	550	110	470	32	50	390	390	135	54	—	230	—	24	M27	UC326	229000	214300	IP326	—	**CUCIP326C(CE)**	73.2	—	94.3
140	**UCIP328**	200	590	110	500	35	55	400	400	145	59	—	240	—	24	M30	UC328	255000	246000	IP328	—	**CUCIP328C(CE)**	83.5		105

Remarks: 1. Grease nipple : 1/4-28UNF for bore number 13 and under
PF1/8 for bore number 14 and over

Remarks: 2. Examples of unit numbers with covers:

With steel cover { Covers with rubber seal on both sides :UCIP210C
An end cover and a cover with rubber seal :UCIP210E

With cast covers { Covers with rubber seal on both sides :CUCIP210C
An end cover and a cover with rubber seal :CUCIP210CE

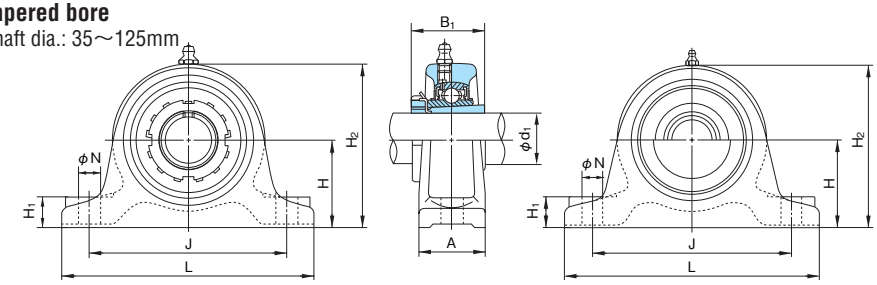
Pillow Block Units

UKIP+H type

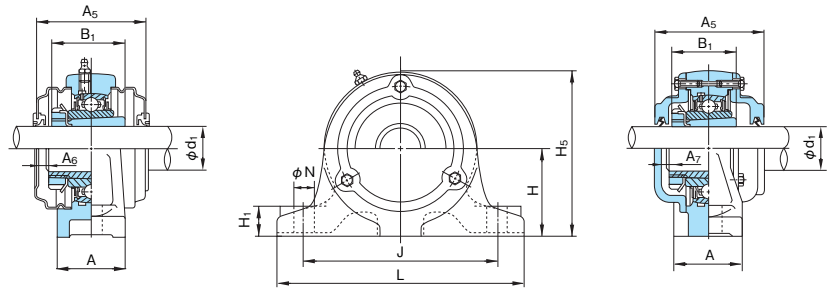
With adapter assembly

Tapered bore

Shaft dia.: 35～125mm



With steel covers



With cast covers

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)													Bolt size	Bearings			Housing No.	Unit No. with steel covers	Unit No. with cast covers	Mass of Unit (kg)		
		H	L	A	J	N	H_1	H_2	H_5	B_1	A_4	A_5	A_6	A_7		No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Covers with rubber seal (End cover on one side)	Covers with rubber seal (End cover on one side)	standard	With steel cover	With cast cover
35	**UKIP208+H2308**	60	200	60	150	19	25	115	115	46	86	90	17	14	M16	UK208+H2308	29300	17900	IP208	**UKIP208C(E)+H2308**	**CUKIP208C(CE)+H2308**	3.7	3.9	4.1
40	**UKIP209+H2309**	70	210	60	160	19	25	128	130	50	92	90	19	13	M16	UK209+H2309	33000	20500	IP209	**UKIP209C(E)+H2309**	**CUKIP209C(CE)+H2309**	3.9	4.2	4.7
45	**UKIP210+H2310**	70	220	60	170	19	28	132	133	55	92	98	17	15	M16	UK210+H2310	35500	23200	IP210	**UKIP210C(E)+H2310**	**CUKIP210C(CE)+H2310**	4.6	4.9	5.2
50	**UKIP211+H2311**	80	230	60	180	19	28	148	150	59	97	100	19	15	M16	UK211+H2311	43000	29400	IP211	**UKIP211C(E)+H2311**	**CUKIP211C(CE)+H2311**	5.6	6.0	6.4
55	**UKIP212+H2312**	80	260	70	200	22	30	155	155	62	113	114	24	20	M20	UK212+H2312	52500	36100	IP212	**UKIP212C(E)+H2312**	**CUKIP212C(CE)+H2312**	5.9	6.4	8.2
60	**UKIP213+H2313**	90	280	70	220	22	30	172	172	65	111	118	21	20	M20	UK213+H2313	57500	40000	IP213	**UKIP213C(E)+H2313**	**CUKIP213C(CE)+H2313**	7.7	8.2	10.4
	UKIP313+H2313	110	310	70	250	22	30	208	208	65	—	140	—	24	M20	UK313+H2313	92500	59700	IP313	—	**CUKIP313C(CE)+H2313**	12.4	—	16.5
65	**UKIP315+H2315**	120	340	75	280	25	35	230	230	73	—	150	—	25	M22	UK315+H2315	114000	76900	IP315	—	**CUKIP315C(CE)+H2315**	16.3	—	22.2
70	**UKIP316+H2316**	120	350	85	290	25	40	235	235	78	—	154	—	23	M22	UK316+H2316	123000	86400	IP316	—	**CUKIP316C(CE)+H2316**	21.0	—	25.2
75	**UKIP317+H2317**	130	370	85	310	25	40	255	255	82	—	164	—	26	M22	UK317+H2317	132000	96500	IP317	—	**CUKIP317C(CE)+H2317**	23.1	—	29.6
80	**UKIP318+H2318**	130	400	85	330	29	45	260	260	86	—	168	—	26	M24	UK318+H2318	143000	107200	IP318	—	**CUKIP318C(CE)+H2318**	25.9	—	34.2
85	**UKIP319+H2319**	150	410	85	340	29	45	285	285	90	—	180	—	30	M24	UK319+H2319	153000	118400	IP319	—	**CUKIP319C(CE)+H2319**	29.7	—	38.7
90	**UKIP320+H2320**	150	430	85	360	29	45	295	295	97	—	190	—	31	M24	UK320+H2320	173000	140400	IP320	—	**CUKIP320C(CE)+H2320**	33.4	—	44.8
100	**UKIP322+H2322**	170	490	100	410	32	50	335	335	105	—	210	—	36	M27	UK322+H2322	205000	178800	IP322	—	**CUKIP322C(CE)+H2322**	50.5	—	61.9
110	**UKIP324+H2324**	170	510	100	430	32	50	345	345	112	—	220	—	35	M27	UK324+H2324	207000	184800	IP324	—	**CUKIP324C(CE)+H2324**	56.3	—	72.5
115	**UKIP326+H2326**	200	550	110	470	32	50	390	390	121	—	230	—	36	M27	UK326+H2326	229000	214300	IP326	—	**CUKIP326C(CE)+H2326**	73.5	—	95.8
125	**UKIP328+H2328**	200	590	110	500	35	55	400	400	131	—	240	—	37	M30	UK328+H2328	255000	246000	IP328	—	**CUKIP328C(CE)+H2328**	83.8	—	106

Remarks: 1. Grease nipple : 1/4-28UNF for bore number 13 and under
PF1/8 for bore number 14 and over

Remarks: 2. Examples of unit numbers with covers:

With steel cover
- Covers with rubber seal on both sides :UKIP210C+H2310
- An end cover and a cover with rubber seal :CUKP210CE+H2310

With cast cover
- Covers with rubber seal on both sides :CUKP210C+H2310
- An end cover and a cover with rubber seal :CUKIP210CE+H2310

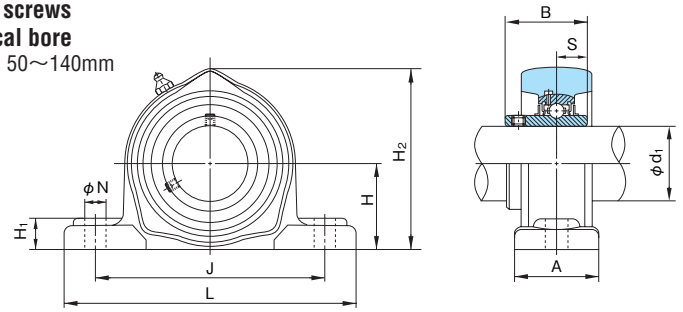
■ Cast Steel Pillow Block Units

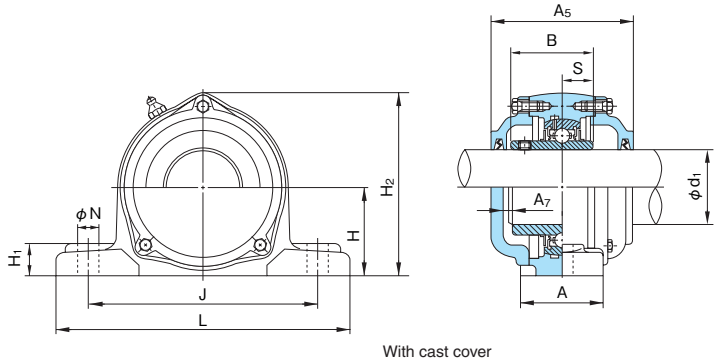
UCPK type

With set screws

Cylindrical bore

Shaft dia.: 50～140mm





With cast cover

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)											Bolt size		Bearings			Housing No.	Unit No. with cast covers	Mass of Unit (kg)	
		H	L	A	J	N	H_1	H_2	B	S	A_5	A_7			No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Covers with rubber seal (End cover on one side)	standard	with cast cover
50	***UCPK210***	*57.2*	*200*	*55*	*159*	*19*	*22*	*120*	*51.6*	*19*	*98*	*10*	*M16*		*UC210*	*35500*	*23200*	*PK210*	***CUCPK210C(CE)***	*3.5*	*4.4*
55	***UCPK211***	*63.5*	*216*	*55*	*171*	*19*	*22*	*133*	*55.6*	*22.2*	*100*	*10*	*M16*		*UC211*	*43000*	*29400*	*PK211*	***CUCPK211C(CE)***	*4.5*	*5.7*
60	***UCPK212***	*69.8*	*233*	*65*	*184*	*19*	*25*	*145*	*65.1*	*25.4*	*114*	*11*	*M16*		*UC212*	*52500*	*36100*	*PK212*	***CUCPK212C(CE)***	*5.7*	*6.8*
65	***UCPK213***	*76.2*	*258*	*70*	*203*	*24*	*27*	*156*	*65.1*	*25.4*	*118*	*13*	*M20*		*UC213*	*57500*	*40000*	*PK213*	***CUCPK213C(CE)***	*6.7*	*8.2*
	UCPK313	*90*	*326*	*85*	*260*	*24*	*36*	*188*	*75*	*30*	*140*	*17*	*M20*		*UC313*	*92500*	*59700*	*PK313*	***CUCPK313C(CE)***	*12.2*	*14.6*
70	***UCPK214***	*79.4*	*266*	*72*	*210*	*24*	*27*	*162*	*74.6*	*30.2*	*134*	*16*	*M20*		*UC214*	*62000*	*44000*	*PK214*	***CUCPK214C(CE)***	*7.6*	*9.4*
	UCPK314	*95*	*350*	*85*	*280*	*26*	*40*	*198*	*78*	*33*	*140*	*17*	*M22*		*UC314*	*104000*	*68000*	*PK314*	***CUCPK314C(CE)***	*14.8*	*17.5*
75	***UCPK215***	*82.6*	*272*	*74*	*217*	*24*	*28*	*167*	*77.8*	*33.3*	*136*	*17*	*M20*		*UC215*	*66000*	*48200*	*PK215*	***CUCPK215C(CE)***	*8.1*	*10.3*
	UCPK315	*100*	*366*	*90*	*290*	*26*	*40*	*208*	*82*	*32*	*150*	*17*	*M22*		*UC315*	*114000*	*76900*	*PK315*	***CUCPK315C(CE)***	*17.0*	*20.0*
80	***UCPK216***	*88.9*	*288*	*75*	*232*	*24*	*30*	*188*	*82.6*	*33.3*	*146*	*15*	*M20*		*UC216*	*72500*	*53000*	*PK216*	***CUCPK216C(CE)***	*10.4*	*13.3*
	UCPK316	*106*	*386*	*100*	*300*	*26*	*45*	*219*	*86*	*34*	*154*	*17*	*M22*		*UC316*	*123000*	*86400*	*PK316*	***CUCPK316C(CE)***	*19.7*	*23.4*
85	***UCPK217***	*95.2*	*303*	*80*	*247*	*24*	*32*	*199*	*85.7*	*34.1*	*150*	*15*	*M20*		*UC217*	*83500*	*61800*	*PK217*	***CUCPK217C(CE)***	*12.2*	*15.4*
	UCPK317	*112*	*407*	*105*	*320*	*32*	*45*	*234*	*96*	*40*	*164*	*18*	*M27*		*UC317*	*132000*	*96500*	*PK317*	***CUCPK317C(CE)***	*22.9*	*27.3*
90	***UCPK218***	*101.6*	*322*	*85*	*262*	*26*	*34*	*211*	*96*	*39.7*	*164*	*17*	*M22*		*UC218*	*95500*	*71400*	*PK218*	***CUCPK218C(CE)***	*15.2*	*18.9*
	UCPK318	*118*	*417*	*105*	*330*	*32*	*50*	*245*	*96*	*40*	*168*	*20*	*M27*		*UC318*	*143000*	*107200*	*PK318*	***CUCPK318C(CE)***	*25.9*	*30.8*
95	***UCPK319***	*125*	*455*	*115*	*360*	*35*	*50*	*257*	*103*	*41*	*180*	*20*	*M30*		*UC319*	*153000*	*118400*	*PK319*	***CUCPK319C(CE)***	*33.1*	*38.4*
100	***UCPK320***	*140*	*475*	*115*	*380*	*35*	*55*	*282*	*108*	*42*	*190*	*21*	*M30*		*UC320*	*173000*	*140400*	*PK320*	***CUCPK320C(CE)***	*40.2*	*46.4*
105	***UCPK321***	*140*	*475*	*115*	*380*	*35*	*55*	*287*	*112*	*44*	*194*	*21*	*M30*		*UC321*	*183000*	*153100*	*PK321*	***CUCPK321C(CE)***	*40.4*	*47.4*
110	***UCPK322***	*150*	*505*	*130*	*400*	*38*	*60*	*305*	*117*	*46*	*210*	*26*	*M33*		*UC322*	*205000*	*178800*	*PK322*	***CUCPK322C(CE)***	*47.8*	*55.9*
120	***UCPK324***	*160*	*555*	*130*	*450*	*38*	*70*	*328*	*126*	*51*	*220*	*25*	*M33*		*UC324*	*207000*	*184800*	*PK324*	***CUCPK324C(CE)***	*63.8*	*75.2*
130	***UCPK326***	*180*	*585*	*130*	*480*	*38*	*80*	*358*	*135*	*54*	*230*	*24*	*M33*		*UC326*	*229000*	*214300*	*PK326*	***CUCPK326C(CE)***	*81.6*	*94.4*
140	***UCPK328***	*200*	*605*	*130*	*500*	*38*	*80*	*388*	*145*	*59*	*240*	*24*	*M33*		*UC328*	*255000*	*246000*	*PK328*	***CUCPK328C(CE)***	*95.9*	*110*

Remarks: 1. Please contact NACHI for units number appeared in italic.
2. Grease nipple : 1/4-28UNF for bore number 13 and under
PF1/8 for bore number 14 and over

Remarks: 3. Examples of unit numbers with covers:
With cast cover { Covers with rubber seal on both sides :CUCPK210C
An end cover and a cover with rubber seal :CUCPK210CE

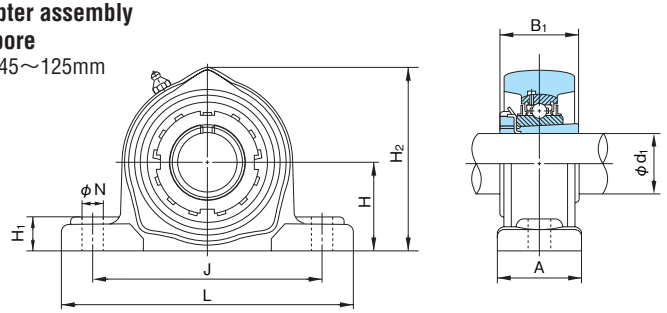
Cast Steel Pillow Block Units

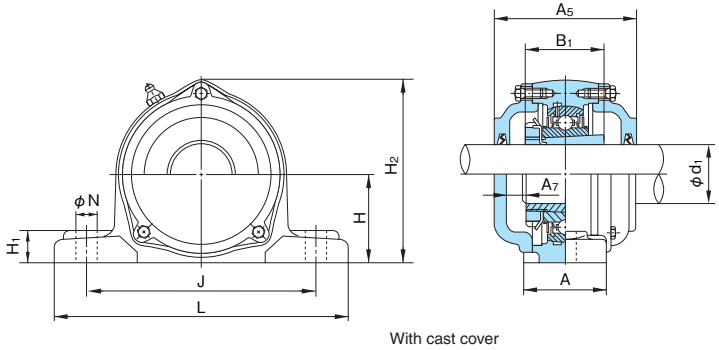
UKPK+H type

With adapter assembly

Tapered bore

Shaft dia.: 45～125mm





With cast cover

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)										Bolt size		Bearings			Housing No.	Unit No. with cast covers	Mass of Unit (kg)	
		H	L	A	J	N	H_1	H_2	B_1	A_5	A_7			No.	Basic load rating (N)					
															Cr	Cor		Both covers with rubber seal (one side end cover)	standard	with cast cover
45	UKPK210+H2310	57.2	200	55	159	19	22	120	55	98	15	M16		UK210+H2310	35500	23200	PK210	CUKPK210C(CE)+H2310	3.6	4.6
50	UKPK211+H2311	63.5	216	55	171	19	22	133	59	100	15	M16		UK211+H2311	43000	29400	PK211	CUKPK211C(CE)+H2311	4.7	5.9
55	UKPK212+H2312	69.8	233	65	184	19	25	145	62	114	20	M16		UK212+H2312	52500	36100	PK212	CUKPK212C(CE)+H2312	5.7	6.9
60	UKPK213+H2313	76.2	258	70	203	24	27	156	65	118	20	M20		UK213+H2313	57500	40000	PK213	CUKPK213C(CE)+H2313	6.8	8.4
	UKPK313+H2313	90	326	85	260	24	36	188	65	140	24	M20		UK313+H2313	92500	59700	PK313	CUKPK313C(CE)+H2313	12.1	14.6
65	UKPK215+H2315	82.6	272	74	217	24	28	167	73	136	26	M20		UK215+H2315	66000	48200	PK215	CUKPK215C(CE)+H2315	8.5	10.7
	UKPK315+H2315	100	366	90	290	26	40	208	73	150	25	M22		UK315+H2315	114000	76900	PK315	CUKPK315C(CE)+H2315	17.2	20.4
70	UKPK216+H2316	88.9	288	75	232	24	30	188	78	146	26	M20		UK216+H2316	72500	53000	PK216	CUKPK216C(CE)+H2316	10.9	13.8
	UKPK316+H2316	106	386	100	300	26	45	219	78	154	23	M22		UK316+H2316	123000	86400	PK316	CUKPK316C(CE)+H2316	20.0	23.7
75	UKPK217+H2317	95.2	303	80	247	24	32	199	82	150	26	M20		UK217+H2317	83500	61800	PK217	CUKPK217C(CE)+H2317	12.8	16.1
	UKPK317+H2317	112	407	105	320	32	45	234	82	164	26	M27		UK317+H2317	132000	96500	PK317	CUKPK317C(CE)+H2317	22.9	27.4
80	UKPK218+H2318	101.6	322	85	262	26	34	211	86	164	31	M22		UK218+H2318	95500	71400	PK218	CUKPK218C(CE)+H2318	15.5	19.4
	UKPK318+H2318	118	417	105	330	32	50	245	86	168	26	M27		UK318+H2318	143000	107200	PK318	CUKPK318C(CE)+H2318	26.1	31.2
85	UKPK319+H2319	125	455	115	360	35	50	257	90	180	30	M30		UK319+H2319	153000	118400	PK319	CUKPK319C(CE)+H2319	33.1	38.7
90	UKPK320+H2320	140	475	115	380	35	55	282	97	190	31	M30		UK320+H2320	173000	140400	PK320	CUKPK320C(CE)+H2320	40.2	46.7
100	UKPK322+H2322	150	505	130	400	38	60	305	105	210	36	M33		UK322+H2322	205000	178800	PK322	CUKPK322C(CE)+H2322	47.9	56.5
110	UKPK324+H2324	160	555	130	450	38	70	328	112	220	35	M33		UK324+H2324	207000	184800	PK324	CUKPK324C(CE)+H2324	63.3	75.1
115	UKPK326+H2326	180	585	130	480	38	80	358	121	230	36	M33		UK326+H2326	229000	214300	PK326	CUKPK326C(CE)+H2326	81.9	95.3
125	UKPK328+H2328	200	605	130	500	38	80	388	131	240	37	M33		UK328+H2328	255000	246000	PK328	CUKPK328C(CE)+H2328	96.2	111

Remarks: 1. Please contact NACHI for units number appeared in italic.
2. Grease nipple : 1/4-28UNF for bore number 13 and under
PF1/8 for bore number 14 and over

Remarks: 3. Examples of unit numbers with covers:
with cast cover { Covers with rubber seal on both sides :CUKPK210C+H2310
An end cover and a cover with rubber seal:CUKP210CE+H2310

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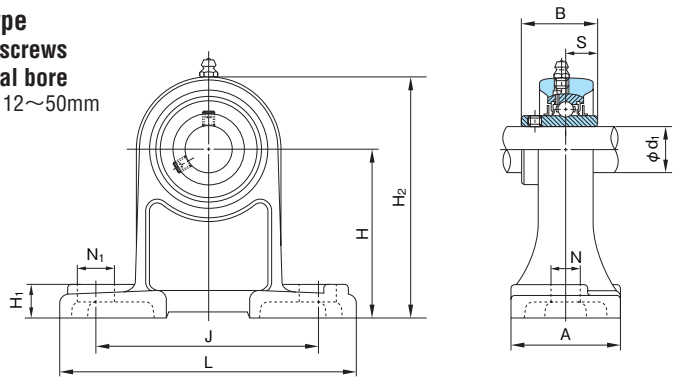
Pillow Block Units

UCPH type

With set screws

Cylindrical bore

Shaft dia.: 12～50mm



1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)										Bolt size		Bearings			Housing No.	Mass of Unit (kg)
		H	L	A	J	N	N_1	H_1	H_2	B	S			No.	Basic load rating (N)			
															Cr	Cor		
12	UCPH201	70	127	40	95	13	19	15	101	31	12.7	M10		UC201	12800	6600	PH204	1.0
15	UCPH202	70	127	40	95	13	19	15	101	31	12.7	M10		UC202	12800	6600	PH204	0.99
17	UCPH203	70	127	40	95	13	19	15	101	31	12.7	M10		UC203	12800	6600	PH204	0.98
20	UCPH204	70	127	40	95	13	19	15	101	31	12.7	M10		UC204	12800	6600	PH204	0.96
25	UCPH205	80	140	50	105	13	19	16	114	34	14.3	M10		UC205	14000	7900	PH205	1.2
30	UCPH206	90	165	50	121	17	21	18	130	38.1	15.9	M14		UC206	19600	11300	PH206	1.9
35	UCPH207	95	167	60	127	17	21	19	140	42.9	17.5	M14		UC207	25900	15400	PH207	2.4
40	UCPH208	100	184	70	137	17	25	19	149	49.2	19	M14		UC208	29300	17900	PH208	2.8
45	UCPH209	105	190	70	146	17	25	20	157	49.2	19	M14		UC209	33000	20500	PH209	3.2
50	UCPH210	110	206	70	159	20	25	22	165	51.6	19	M16		UC210	35500	23200	PH210	3.6

Remark: Grease nipple :1/4-28UNF

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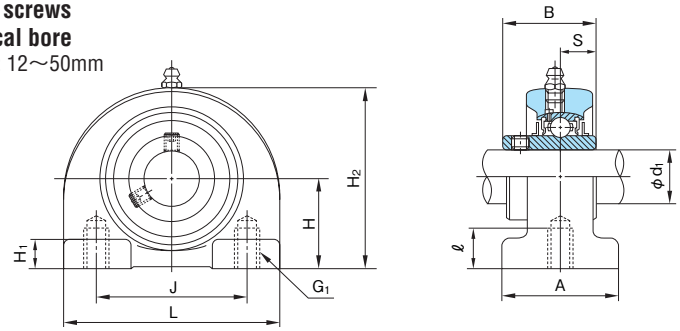
Pillow Block Units

UCPA type

With set screws

Cylindrical bore

Shaft dia.: 12～50mm



1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)											Bearings			Housing No.	Mass of Unit (kg)
		H	L	A	J	G_1	ℓ	H_1	H_2	B	S		No.	Basic load rating (N)			
														Cr	Cor		
12	UCPA201	30.2	76	38	52	M10×1.5	12	8	62	31	12.7		UC201	12800	6600	PA204	0.59
15	UCPA202	30.2	76	38	52	M10×1.5	12	8	62	31	12.7		UC202	12800	6600	PA204	0.57
17	UCPA203	30.2	76	38	52	M10×1.5	12	8	62	31	12.7		UC203	12800	6600	PA204	0.56
20	UCPA204	30.2	76	38	52	M10×1.5	12	8	62	31	12.7		UC204	12800	6600	PA204	0.54
25	UCPA205	36.5	84	38	56	M10×1.5	15	10	72	34	14.3		UC205	14000	7900	PA205	0.73
30	UCPA206	42.9	94	48	66	M14×2	18	10	84	38.1	15.9		UC206	19600	11300	PA206	1.11
35	UCPA207	47.6	110	48	80	M14×2	20	12	95	42.9	17.5		UC207	25900	15400	PA207	1.63
40	UCPA208	49.2	116	54	84	M14×2	20	12	100	49.2	19		UC208	29300	17900	PA208	1.85
45	UCPA209	54.2	120	54	90	M14×2	25	12	108	49.2	19		UC209	33000	20500	PA209	2.11
50	UCPA210	57.2	130	60	94	M16×2	25	14	116	51.6	19		UC210	35500	23200	PA210	2.52

Remark: Grease nipple: 1/4-28UNF

NACHI

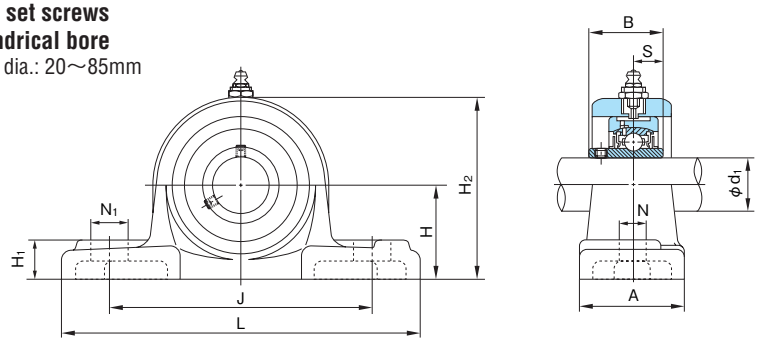
Pillow Block Units

UCEP type

With set screws

Cylindrical bore

Shaft dia.: 20～85mm



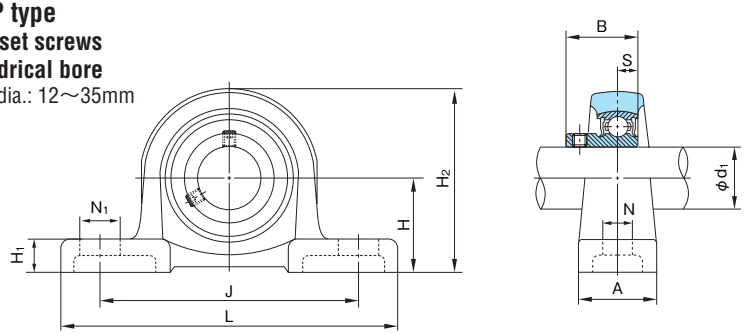
1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)										Axial displacement (mm)	Bolt size		Bearings			Housing No.		Mass of Unit (kg)
		H	L	A	J	N	N_1	H_1	H_2	B	S				No.	Basic load rating (N) Cr	Basic load rating (N) Cor	Pillow type Housing	Cartridge type Housing	
20	UCEP204	36.5	140	38	105	13	16	16	73	31	12.7	10	M10		UC204	12800	6600	EP204	EC204	1.1
25	UCEP205	44.4	159	51	119	17	20	18	85	34	14.3	10	M14		UC205	14000	7900	EP205	EC205	1.5
30	UCEP206	47.6	175	57	127	17	20	20	94	38.1	15.9	10	M14		UC206	19600	11300	EP206	EC206	2.0
35	UCEP207	54	203	57	144	17	20	22	108	42.9	17.5	10	M14		UC207	25900	15400	EP207	EC207	2.7
40	UCEP208	58.7	222	67	156	20	24	26	116	49.2	19	10	M16		UC208	29300	17900	EP209	EC208	3.5
45	UCEP209	58.7	222	67	156	20	24	26	116	49.2	19	10	M16		UC209	33000	20500	EP209	EC209	3.4
50	UCEP210	63.5	241	73	171	20	26	27	126	51.6	19	10	M16		UC210	35500	23200	EP210	EC210	4.1
55	UCEP211	69.8	260	79	184	25	28	30	139	55.6	22.2	10	M20		UC211	43000	29400	EP211	EC211	5.6
60	UCEP212	76.2	286	83	203	25	30	32	151	65.1	25.4	10	M20		UC212	52500	36100	EP212	EC212	7.1
65	UCEP213	76.2	286	83	203	25	30	32	154	65.1	25.4	10	M20		UC213	57500	40000	EP213	EC213	7.0
70	UCEP214	88.9	330	89	229	27	31	35	177	74.6	30.2	10	M22		UC214	62000	44000	EP215	EC214	10.8
75	UCEP215	88.9	330	89	229	27	31	35	177	77.8	33.3	10	M22		UC215	66000	48200	EP215	EC215	10.9
80	UCEP216	101.6	381	102	283	27	40	42	205	82.6	33.3	15	M22		UC216	72500	53000	EP217	EC216	17.1
85	UCEP217	101.6	381	102	283	27	40	42	205	85.7	34.1	15	M22		UC217	83500	61800	EP217	EC217	16.4

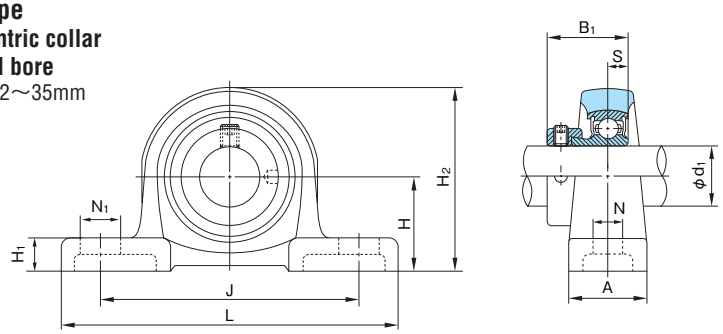
Remarks: 1. This unit allows the movement in axial direction to be used on free side and the mounting dimensions are equal to UCPX00 type.
2. Grease nipple: 1/4-28UNF for bore number 13 and under
PF1/8 for bore number 14 and over

Pillow Block Units

BLLP type
With set screws
Cylindrical bore
Shaft dia.: 12～35mm



KHLLP type
With eccentric collar
Cylindrical bore
Shaft dia.: 12～35mm



BLLP type

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)										Bolt size		Bearings			Housing No.	Mass of Unit (kg)
		H	L	A	J	N	N_1	H_1	H_2	B	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor		
12	BLLP1J	30.2	114	25	87	12	16	12	57	22	6	M10		B1	9550	4800	LLP3J	0.39
15	BLLP2J	30.2	114	25	87	12	16	12	57	22	6	M10		B2	9550	4800	LLP3J	0.38
17	BLLP3J	30.2	114	25	87	12	16	12	57	22	6	M10		B3	9550	4800	LLP3J	0.36
20	BLLP4J	33.3	125	27	97	12	16	13	64	24.7	7	M10		B4	12800	6600	LLP4J	0.48
25	BLLP5J	36.5	130	29	100	12	16	13	70	27	7.5	M10		B5	14000	7900	LLP5J	0.59
30	BLLP6J	42.9	156	33	120	14	21	15	83	30.3	8	M12		B6	19600	11300	LLP6J	0.70
35	BLLP7J	47.6	165	35	127	14	21	16	93	32.9	8.5	M12		B7	25900	15400	LLP7J	0.98

Remark: Spherical bearing seating diameter of housing is applied tolerance class J7.

KHLLP type

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)										Bolt size		Bearings			Housing No.	Mass of Unit (kg)
		H	L	A	J	N	N_1	H_1	H_2	B_1	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor		
12	KHLLP201AJ	30.2	114	25	87	12	16	12	57	28.6	6.5	M10		KH201AE	9550	4800	LLP3J	0.41
15	KHLLP202AJ	30.2	114	25	87	12	16	12	57	28.6	6.5	M10		KH202AE	9550	4800	LLP3J	0.40
17	KHLLP203AJ	30.2	114	25	87	12	16	12	57	28.6	6.5	M10		KH203AE	9550	4800	LLP3J	0.39
20	KHLLP204AJ	33.3	125	27	97	12	16	13	64	31	7.5	M10		KH204AE	12800	6600	LLP4J	0.52
25	KHLLP205AJ	36.5	130	29	100	12	16	13	70	31	7.5	M10		KH205AE	14000	7900	LLP5J	0.63
30	KHLLP206AJ	42.9	156	33	120	14	21	15	83	35.7	9	M12		KH206AE	19600	11300	LLP6J	0.76
35	KHLLP207AJ	47.6	165	35	127	14	21	16	93	38.9	9.5	M12		KH207AE	25900	15400	LLP7J	1.09

Remark: Spherical bearing seating diameter of housing is applied tolerance class J7.

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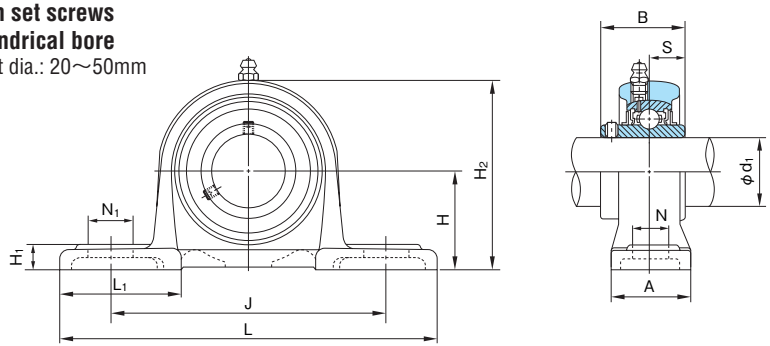
Pillow Block Units

MUCP type (Stainless Steel)

With set screws

Cylindrical bore

Shaft dia.: 20～50mm



1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)											Bolt size		Bearings			Housing No.	Mass of Unit (kg)
		H	L	A	J	N	N_1	H_1	H_2	L_1	B	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor		
20	MUCP204	33.3	127	30	95	13	19	9	64	42	31	12.7	M10		MUC204	10900	5300	MP204	0.50
25	MUCP205	36.5	140	30	105	13	19	10	70	42	34	14.3	M10		MUC205	11900	6300	MP205	0.65
30	MUCP206	42.9	165	36	121	17	21	11	82	53	38.1	15.9	M14		MUC206	16700	9050	MP206	0.95
35	MUCP207	47.6	167	38	127	17	21	12	92	54	42.9	17.5	M14		MUC207	22000	12300	MP207	1.25
40	MUCP208	49.2	184	40	137	17	22	12	98	52	49.2	19	M14		MUC208	24900	14300	MP208	1.50
45	MUCP209	54	190	40	146	17	22	13	105	60	49.2	19	M14		MUC209	28100	16400	MP209	1.75
50	MUCP210	57.2	206	45	159	20	25	14	112	65	51.6	19	M16		MUC210	30200	18600	MP210	2.05

Remark: Grease nipple: 1/4-28UNF

■ Silver series

Pillow Block Units

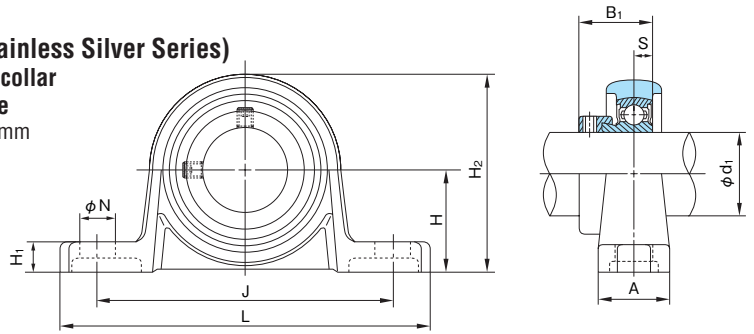
UP type

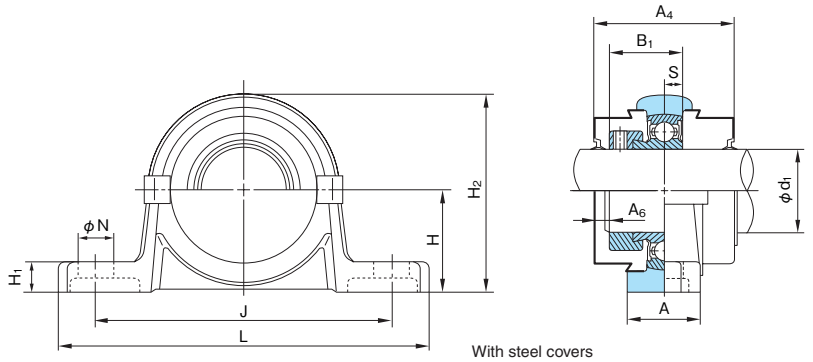
MUP type (Stainless Silver Series)

With eccentric collar

Cylindrical bore

Shaft dia.: 8～30mm





With steel covers

UP type

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)											Bolt size	Bearings			Housing No.	Unit No. with covers	Cover No. (Reference)		Mass of Unit (kg)	
		H	L	A	J	N	H_1	H_2	B_1	S	A_4	A_6		No.	Basic load rating (N)			Covers with rubber seal (End cover on one side)	Cover with rubber seal	Side end cover	standard	with steel cover
															Cr	Cor						
10	**UP000**	18	67	16	53	7	6	35	17.5	4	33	2	M 6	U000+ER	4600	2000	P000	**UP000C(E)**	000CP10	000CPE	77	85
12	**UP001**	19	71	16	56	7	6	38	17.5	4	33	2	M 6	U001+ER	5100	2400	P001	**UP001C(E)**	001CP12	001CPE	91	100
15	**UP002**	22	80	16	63	7	7	43	18.5	4.5	34	2	M 6	U002+ER	5600	2800	P002	**UP002C(E)**	002CP15	002CPE	125	135
17	**UP003**	24	85	18	67	7	7	47	20.5	5	38	2	M 6	U003+ER	6000	3300	P003	**UP003C(E)**	003CP17	003CPE	156	170
20	**UP004**	28	100	20	80	10	9	55	24.5	6	46	3	M 8	U004+ER	9350	5100	P04-5	**UP004C(E)**	04-5CP20	04-5CPE	230	250
25	**UP005**	32	112	20	90	10	10	62	25.5	6	47	3	M 8	U005+ER	10100	5800	P05-6	**UP005C(E)**	05-6CP25	05-6CPE	294	315
30	**UP006**	36	132	26	106	13	11	70	26.5	6.5	50	4	M10	U006+ER	13200	8300	P06-7	**UP006C(E)**	06-7CP30	06-7CPE	454	480
8	***UP 08***	*15*	*55*	*13*	*42*	*4.8*	*5*	*29*	*15*	*3.5*	—	—	*M 4*	*U08+ER*(1)	*3300*	*1260*	*P08*	—	—	—	*47*	—

Note: (1) Set screw type U08X is also available and the width of inner ring is 12mm.
Remarks: 1. Please contact NACHI for unit numbers appearing in italic.

Remarks: 2. Examples of unit numbers with covers: Covers with rubber seal on both sides :UP005C
An end cover and a cover with rubber seal :UP005E

MUP type (Stainless Silver Series)

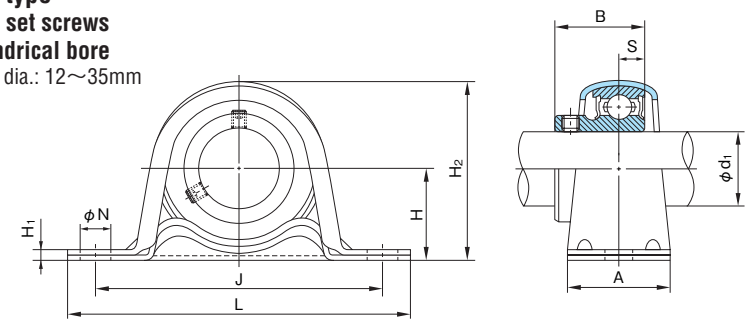
1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)											Bolt size	Bearings			Housing No.	Unit No. with covers	Cover No. (Reference)		Mass of Unit (kg)	
		H	L	A	J	N	H_1	H_2	B_1	S	A_4	A_6		No.	Basic load rating (N)			Covers with rubber seal (End cover on one side)	Cover with rubber seal	Side end cover	standard	with steel cover
															Cr	Cor						
10	**MUP000**	18	67	16	53	7	6	35	17.5	4	33	2	M 6	MU000+ER	3900	1550	P000Z3	**MUP000C(E)**	000CP10	000CPE	77	85
12	**MUP001**	19	71	16	56	7	6	38	17.5	4	33	2	M 6	MU001+ER	4300	1900	P001Z3	**MUP001C(E)**	001CP12	001CPE	91	100
15	**MUP002**	22	80	16	63	7	7	43	18.5	4.5	34	2	M 6	MU002+ER	4750	2250	P002Z3	**MUP002C(E)**	002CP15	002CPE	125	135
17	**MUP003**	24	85	18	67	7	7	47	20.5	5	38	2	M 6	MU003+ER	5100	2650	P003Z3	**MUP003C(E)**	003CP17	003CPE	156	170
20	**MUP004**	28	100	20	80	10	9	55	24.5	6	46	3	M 8	MU004+ER	7900	4000	P04-5Z3	**MUP004C(E)**	04-5CP20	04-5CPE	230	250
25	**MUP005**	32	112	20	90	10	10	62	25.5	6	47	3	M 8	MU005+ER	8600	4650	P05-6Z3	**MUP005C(E)**	05-6CP25	05-6CPE	294	315
30	**MUP006**	36	132	26	106	13	11	70	26.5	6.5	50	4	M10	MU006+ER	11300	6600	P06-7Z3	**MUP006C(E)**	06-7CP30	06-7CPE	454	480

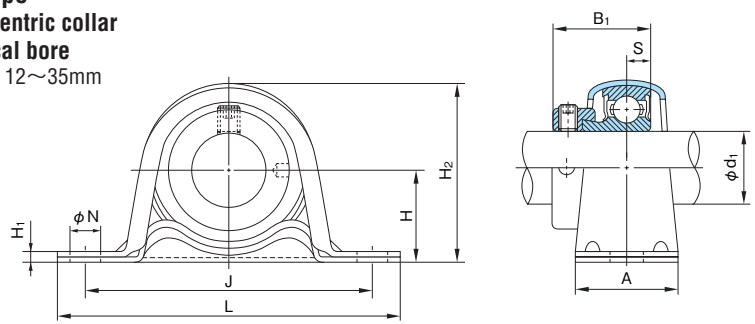
Remark : Examples of unit numbers with covers: Covers with rubber seal on both sides :MUP005C
An end cover and a cover with rubber seal :MUP005E

■ Pressed Steel Pillow Block Units

BPP type
With set screws
Cylindrical bore
Shaft dia.: 12～35mm



KHPP type
With eccentric collar
Cylindrical bore
Shaft dia.: 12～35mm



BPP type

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)									Bolt size		Bearings			Housing No.	Mass of Unit (kg)	Limiting load (N)	
		H	L	A	J	N	H_1	H_2	B	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor			Radial	Axial
12	BPP1	22.2	86	25	68	9.5	3.2	44	22	6	M 8		B1	9550	4800	PP3	0.16	2150	830
15	BPP2	22.2	86	25	68	9.5	3.2	44	22	6	M 8		B2	9550	4800	PP3	0.15	2150	830
17	BPP3	22.2	86	25	68	9.5	3.2	44	22	6	M 8		B3	9550	4800	PP3	0.13	2150	830
20	BPP4	25.4	98	32	76	9.5	3.2	50	24.7	7	M 8		B4	12800	6600	PP4	0.21	2650	1030
25	BPP5	28.6	108	32	86	11.5	4	56	27	7.5	M10		B5	14000	7900	PP5	0.29	3700	1470
30	BPP6	33.3	117	38	95	11.5	4	66	30.3	8	M10		B6	19600	11300	PP6	0.42	4400	1670
35	BPP7	39.7	129	42	106	11.5	4.6	78	32.9	8.5	M10		B7	25900	15400	PP7	0.61	4900	1860

KHPP type

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)									Bolt size		Bearings			Housing No.	Mass of Unit (kg)	Limiting load (N)	
		H	L	A	J	N	H_1	H_2	B_1	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor			Radial	Axial
12	KHPP201A	22.2	86	25	68	9.5	3.2	44	28.6	6.5	M 8		KH201AE	9550	4800	PP3	0.18	2150	830
15	KHPP202A	22.2	86	25	68	9.5	3.2	44	28.6	6.5	M 8		KH202AE	9550	4800	PP3	0.17	2150	830
17	KHPP203A	22.2	86	25	68	9.5	3.2	44	28.6	6.5	M 8		KH203AE	9550	4800	PP3	0.16	2150	830
20	KHPP204A	25.4	98	32	76	9.5	3.2	50	31	7.5	M 8		KH204AE	12800	6600	PP4	0.25	2650	1030
25	KHPP205A	28.6	108	32	86	11.5	4	56	31	7.5	M10		KH205AE	14000	7900	PP5	0.33	3700	1470
30	KHPP206A	33.3	117	38	95	11.5	4	66	35.7	9	M10		KH206AE	19600	11300	PP6	0.48	4400	1670
35	KHPP207A	39.7	129	42	106	11.5	4.6	78	38.9	9.5	M10		KH207AE	25900	15400	PP7	0.72	4900	1860

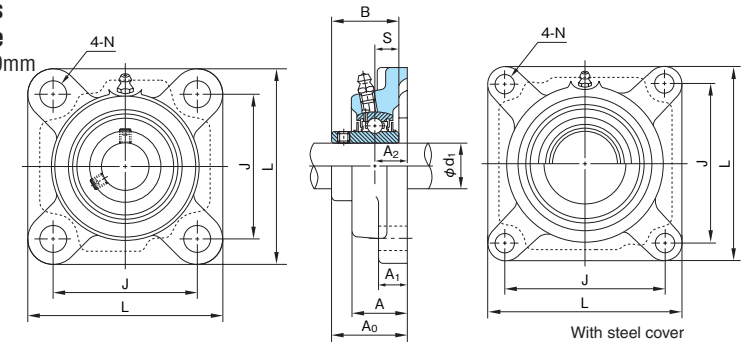
■ Square Flange Units

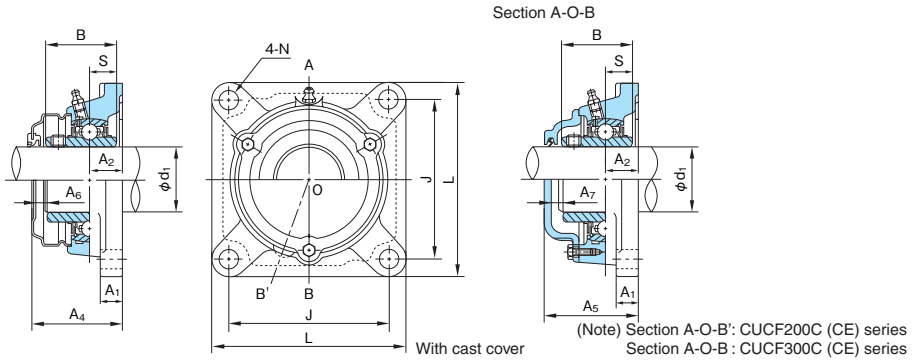
UCF type

With set screws

Cylindrical bore

Shaft dia.: 12～60mm





(Note) Section A-O-B': CUCF200C (CE) series
Section A-O-B : CUCF300C (CE) series

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)													Bolt size	Bearings			Housing No.	Unit No. with steel cover	Unit No. with cast cover	Mass of Unit (kg)		
		L	A	J	N	A_1	A_2	A_0	B	S	A_4	A_5	A_6	A_7		No.	Basic load rating (N) Cr	Cor		Cover with rubber seal (End cover)	Cover with rubber seal (End cover)	standard	with steel cover	with cast cover
12	UCF201	86	25.5	64	12	12	15	33.3	31	12.7	43	46	8	6	M10	UC201	12800	6600	F204	UCF201C(E)	CUCF201C(CE)	0.64	0.67	1.0
15	UCF202	86	25.5	64	12	12	15	33.3	31	12.7	43	46	8	6	M10	UC202	12800	6600	F204	UCF202C(E)	CUCF202C(CE)	0.62	0.65	1.0
17	UCF203	86	25.5	64	12	12	15	33.3	31	12.7	43	46	8	6	M10	UC203	12800	6600	F204	UCF203C(E)	CUCF203C(CE)	0.61	0.64	1.0
20	UCF204	86	25.5	64	12	12	15	33.3	31	12.7	43	46	8	6	M10	UC204	12800	6600	F204	UCF204C(E)	CUCF204C(CE)	0.59	0.62	1.0
25	UCF205	95	27	70	12	14	16	35.7	34	14.3	48	51	11	9	M10	UC205	14000	7900	F205	UCF205C(E)	CUCF205C(CE)	0.82	0.86	1.2
	UCFX05	108	30	83	12	13	18	40.2	38.1	15.9	51	—	9	—	M10	UCX05	19600	11300	FX05	UCFX05C(E)	—	1.1	1.2	—
	UCF305	110	29	80	16	13	16	39	38	15	—	55	—	10	M14	UC305	21300	10900	F305	—	CUCF305C(CE)	1.2	—	1.6
30	UCF206	108	31	83	12	14	18	40.2	38.1	15.9	51	55	9	8	M10	UC206	19600	11300	F206	UCF206C(E)	CUCF206C(CE)	1.1	1.2	1.6
	UCFX06	117	34	92	16	14	19	44.4	42.9	17.5	54	—	8	—	M14	UCX06	25900	15400	FX06	UCFX06C(E)	—	1.3	1.3	—
	UCF306	125	32	95	16	15	18	44	43	17	—	60	—	10	M14	UC306	26800	15000	F306	—	CUCF306C(CE)	1.7	—	2.1
35	UCF207	117	34	92	14	16	19	44.4	42.9	17.5	54	59	8	8	M12	UC207	25900	15400	F207	UCF207C(E)	CUCF207C(CE)	1.5	1.6	2.1
	UCFX07	130	38	102	16	14	21	51.2	49.2	19	63	—	10	—	M14	UCX07	29300	17900	FX07	UCFX07C(E)	—	1.8	1.8	—
	UCF307	135	36	100	19	16	20	49	48	19	—	65	—	10	M16	UC307	33500	19200	F307	—	CUCF307C(CE)	2.1	—	2.6
40	UCF208	130	36	102	16	16	21	51.2	49.2	19	62	66	10	8	M14	UC208	29300	17900	F208	UCF208C(E)	CUCF208C(CE)	2.0	2.1	2.7
	UCFX08	137	40	105	19	14	22	52.2	49.2	19	63	—	10	—	M16	UCX08	33000	20500	FX08	UCFX08C(E)	—	1.8	1.8	—
	UCF308	150	40	112	19	17	23	56	52	19	—	73	—	11	M16	UC308	40500	23900	F308	—	CUCF308C(CE)	2.9	—	3.4
45	UCF209	137	38	105	16	18	22	52.2	49.2	19	63	67	10	8	M14	UC209	33000	20500	F209	UCF209C(E)	CUCF209C(CE)	2.4	2.5	3.1
	UCFX09	143	40	111	19	14	23	55.6	51.6	19	67	—	9	—	M16	UCX09	35500	23200	FX09	UCFX09C(E)	—	2.4	2.5	—
	UCF309	160	44	125	19	18	25	60	57	22	—	78	—	12	M16	UC309	51500	29500	F309	—	CUCF309C(CE)	3.6	—	4.3
50	UCF210	143	40	111	16	18	22	54.6	51.6	19	66	71	9	10	M14	UC210	35500	23200	F210	UCF210C(E)	CUCF210C(CE)	2.5	2.6	3.6
	UCFX10	162	44	130	19	20	26	59.4	55.6	22.2	70	—	9	—	M16	UCX10	43000	29400	FX10	UCFX10C(E)	—	3.6	3.7	—
	UCF310	175	48	132	23	19	28	67	61	22	—	85	—	12	M20	UC310	61500	38200	F310	—	CUCF310C(CE)	4.7	—	5.5
55	UCF211	162	43	130	19	20	25	58.4	55.6	22.2	69	75	9	10	M16	UC211	43000	29400	F211	UCF211C(E)	CUCF211C(CE)	3.4	3.6	4.6
	UCFX11	175	49	143	19	20	29	68.7	65.1	25.4	79	—	9	—	M16	UCX11	52500	36100	FX11	UCFX11C(E)	—	4.5	4.6	—
	UCF311	185	52	140	23	20	30	71	66	25	—	90	—	13	M20	UC311	71500	44800	F311	—	CUCF311C(CE)	5.7	—	6.7
60	UCF212	175	48	143	19	20	29	68.7	65.1	25.4	80	86	10	11	M16	UC212	52500	36100	F212	UCF212C(E)	CUCF212C(CE)	4.6	4.8	5.9
	UCFX12	187	59	149	19	21	34	73.7	65.1	25.4	86	—	11	—	M16	UCX12	57500	40000	FX12	UCFX12C(E)	—	5.3	5.5	—
	UCF312	195	56	150	23	22	33	78	71	26	—	98	—	14	M20	UC312	81500	52000	F312	—	CUCF312C(CE)	6.8	—	7.7

Remarks: 1. Grease nipple :1/4-28UNF

Remarks: 2. Examples of unit numbers with cover:

With steel cover { Cover with rubber seal :UCF210C
End cover :UCF210E

With cast cover { Cover with rubber seal :CUCF210C
End cover :CUCF210CE

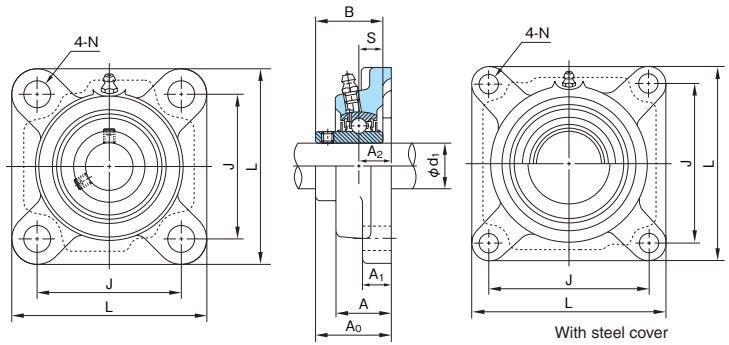
■ Square Flange Units

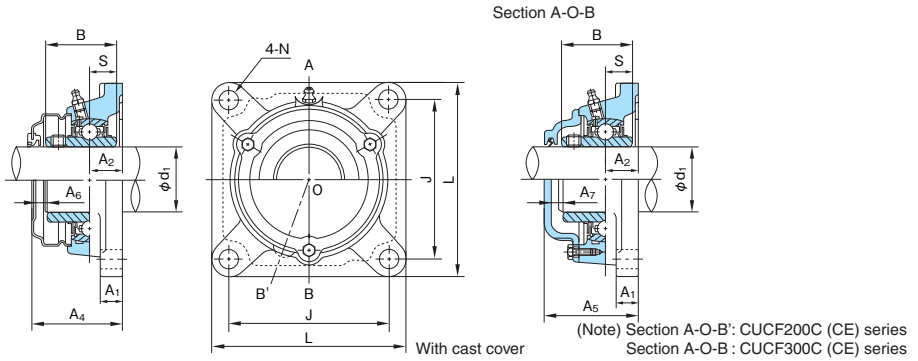
UCF type

With set screws

Cylindrical bore

Shaft dia.:
65～140mm





(Note) Section A-O-B': CUCF200C (CE) series
Section A-O-B : CUCF300C (CE) series

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)													Bolt size	Bearings			Housing No.	Unit No. with steel cover	Unit No. with cast cover	Mass of Unit (kg)		
		L	A	J	N	A_1	A_2	A_0	B	S	A_4	A_5	A_6	A_7		No.	Basic load rating (N) Cr	Cor		Cover with rubber seal (End cover)	Cover with rubber seal (End cover)	standard	With steel cover	With cast cover
65	**UCF213**	187	50	149	19	20	30	69.7	65.1	25.4	81	89	10	13	M16	UC213	57500	40000	F213	**UCF213C(E)**	**CUCF213C(CE)**	5.5	5.8	7.1
	UCFX13	187	59	149	19	21	34	78.4	74.6	30.2	—	—	—	—	M16	UCX13	62000	44000	FX13	—	—	5.5	—	—
	UCF313	208	58	166	23	22	33	78	75	30	—	103	—	17	M20	UC313	92500	59700	F313	—	**CUCF313C(CE)**	7.8	—	11.5
70	**UCF214**	193	54	152	19	24	31	75.4	74.6	30.2	—	98	—	16	M16	UC214	62000	44000	F214	—	**CUCF214C(CE)**	6.1	—	7.8
	UCFX14	197	60	152	23	24	37	81.5	77.8	33.3	—	—	—	—	M20	UCX14	66000	48200	FX14	—	—	7.7	—	—
	UCF314	226	61	178	25	25	36	81	78	33	—	106	—	17	M22	UC314	104000	68000	F314	—	**CUCF314C(CE)**	9.6	—	12.1
75	**UCF215**	200	56	159	19	24	34	78.5	77.8	33.3	—	102	—	17	M16	UC215	66000	48200	F215	—	**CUCF215C(CE)**	6.9	—	8.6
	UCFX15	197	68	152	23	24	40	89.3	82.6	33.3	—	—	—	—	M20	UCX15	72500	53000	FX15	—	—	7.7	—	—
	UCF315	236	66	184	25	25	39	89	82	32	—	114	—	17	M22	UC315	114000	76900	F315	—	**CUCF315C(CE)**	11.7	—	13.6
80	**UCF216**	208	58	165	23	24	34	83.3	82.6	33.3	—	107	—	15	M20	UC216	72500	53000	F216	—	**CUCF216C(CE)**	7.8	—	10.0
	UCFX16	214	70	171	23	24	40	91.6	85.7	34.1	—	—	—	—	M20	UCX16	83500	61800	FX16	—	—	10.2	—	—
	UCF316	250	68	196	31	27	38	90	86	34	—	115	—	17	M27	UC316	123000	86400	F316	—	**CUCF316C(CE)**	13.7	—	15.9
85	**UCF217**	220	63	175	23	26	36	87.6	85.7	34.1	—	111	—	15	M20	UC217	83500	61800	F217	—	**CUCF217C(CE)**	9.3	—	11.8
	UCFX17	214	70	171	23	24	40	96.3	96	39.7	—	—	—	—	M20	UCX17	95500	71400	FX17	—	—	10.2	—	—
	UCF317	260	74	204	31	27	44	100	96	40	—	126	—	18	M27	UC317	132000	96500	F317	—	**CUCF317C(CE)**	15.2	—	18.4
90	**UCF218**	235	68	187	23	26	40	96.3	96	39.7	—	122	—	17	M20	UC218	95500	71400	F218	—	**CUCF218C(CE)**	11.3	—	14.9
	UCFX18	214	76	171	23	24	45	106.1	104	42.9	—	—	—	—	M20	UCX18	109000	81600	FX18	—	—	10.6	—	—
	UCF318	280	76	216	35	30	44	100	96	40	—	128	—	20	M30	UC318	143000	107200	F318	—	**CUCF318C(CE)**	18.8	—	21.5
95	**UCF319**	290	94	228	35	30	59	121	103	41	—	149	—	20	M30	UC319	153000	118400	F319	—	**CUCF319C(CE)**	20.7	—	24.2
100	**UCFX20**	268	97	211	31	31	59	127.3	117.5	49.2	—	—	—	—	M27	UCX20	134000	104700	FX20	—	—	16.8	—	—
	UCF320	310	94	242	38	32	59	125	108	42	—	154	—	21	M33	UC320	173000	140400	F320	—	**CUCF320C(CE)**	24.8	—	29.6
105	**UCF321**	310	94	242	38	32	59	127	112	44	—	156	—	21	M33	UC321	183000	153100	F321	—	**CUCF321C(CE)**	25.6	—	32.2
110	**UCF322**	340	96	266	41	35	60	131	117	46	—	165	—	26	M36	UC322	205000	178800	F322	—	**CUCF322C(CE)**	34.7	—	38.7
120	**UCF324**	370	110	290	41	40	65	140	126	51	—	175	—	25	M36	UC324	207000	184800	F324	—	**CUCF324C(CE)**	47.2	—	52.3
130	**UCF326**	410	115	320	41	45	65	146	135	54	—	180	—	24	M36	UC326	229000	214300	F326	—	**CUCF326C(CE)**	62.7	—	67.3
140	**UCF328**	450	125	350	41	55	75	161	145	59	—	195	—	24	M36	UC328	255000	246000	F328	—	**CUCF328C(CE)**	87.0	—	89.4

Remarks: 1. Grease nipple : 1/4-28UNF for bore number 13 and under
PF1/8 for bore number 14 and over

Remarks: 2. Examples of unit numbers with cover:
With steel cover { Cover with rubber seal :UCF213C
End cover :UCF213E
With cast cover { Cover with rubber seal :CUCF213C
End cover :CUCF213CE

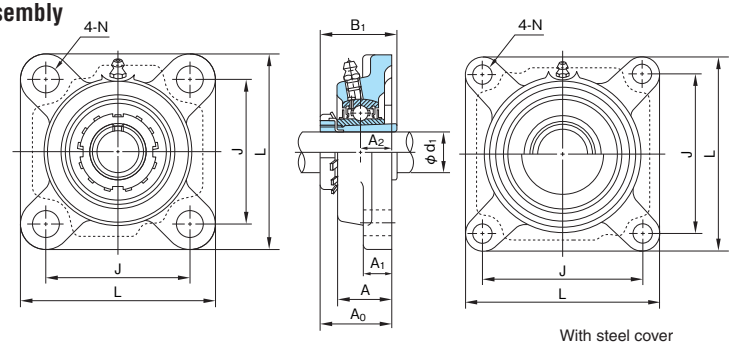
■ Square Flange Units

UKF+H type

With adapter assembly

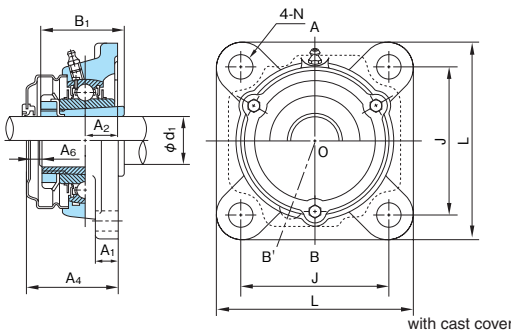
Tapered bore

Shaft dia.:
20～60mm

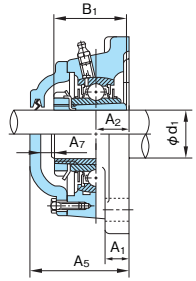


With steel cover

Section A-O-B



with cast cover



(Note) Section A-O-B': CUKF200C (CE) series+H series
Section A-O-B : CUKF300C (CE) series+H series

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)												Bolt size	Bearings			Housing No.	Unit No. with steel cover	Unit No. with cast cover	Mass of Unit (kg)		
		L	A	J	N	A_1	A_2	A_0	B_1	A_4	A_5	A_6	A_7		No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Cover with rubber seal (End cover)	Cover with rubber seal (End cover)	standard	With steel cover	with cast cover
20	**UKF205+H2305**	95	27	70	12	14	16	35.5	35	48	51	11	9	M10	UK205+H2305	14000	7900	F205	**UKF205C(E)+H2305**	**CUKF205C(CE)+H2305**	0.87	0.91	1.3
	UKFX05+H2305	108	30	83	12	13	18	39	35	51	—	10	—	M10	UKX05+H2305	19600	11300	FX05	**UKFX05C(E)+H2305**	—	1.1	1.2	—
	UKF305+H2305	110	29	80	16	13	16	37	35	—	55	—	12	M14	UK305+H2305	21300	10900	F305	—	**CUKF305C(CE)+H2305**	1.2	—	1.7
25	**UKF206+H2306**	108	31	83	12	14	18	39	38	51	55	10	10	M10	UK206+H2306	19600	11300	F206	**UKF206C(E)+H2306**	**CUKF206C(CE)+H2306**	1.2	1.3	1.7
	UKFX06+H2306	117	34	92	16	14	19	40.5	38	54	—	12	—	M14	UKX06+H2306	25900	15400	FX06	**UKFX06C(E)+H2306**	—	1.4	1.4	—
	UKF306+H2306	125	32	95	16	15	18	40.5	38	—	60	—	13	M14	UK306+H2306	26800	15000	F306	—	**CUKF306C(CE)+H2306**	1.7	—	2.2
30	**UKF207+H2307**	117	34	92	14	16	19	41.5	43	54	59	11	11	M12	UK207+H2307	25900	15400	F207	**UKF207C(E)+H2307**	**CUKF207C(CE)+H2307**	1.5	1.7	2.2
	UKFX07+H2307	130	38	102	16	14	21	44.5	43	63	—	17	—	M14	UKX07+H2307	29300	17900	FX07	**UKFX07C(E)+H2307**	—	1.8	1.8	—
	UKF307+H2307	135	36	100	19	16	20	44.5	43	—	65	—	14	M16	UK307+H2307	33500	19200	F307	—	**CUKF307C(CE)+H2307**	2.1	—	2.7
35	**UKF208+H2308**	130	36	102	16	16	21	45.5	46	62	66	15	14	M14	UK208+H2308	29300	17900	F208	**UKF208C(E)+H2308**	**CUKF208C(CE)+H2308**	2.1	2.2	2.8
	UKFX08+H2308	137	40	105	19	14	22	47	46	63	—	15	—	M16	UKX08+H2308	33000	20500	FX08	**UKFX08C(E)+H2308**	—	1.8	1.8	—
	UKF308+H2308	150	40	112	19	17	23	50	46	—	73	—	17	M16	UK308+H2308	40500	23900	F308	—	**CUKF308C(CE)+H2308**	3.0	—	3.5
40	**UKF209+H2309**	137	38	105	16	18	22	48	50	63	67	14	13	M14	UK209+H2309	33000	20500	F209	**UKF209C(E)+H2309**	**CUKF209C(CE)+H2309**	2.5	2.6	3.2
	UKFX09+H2309	143	40	111	19	14	23	49.5	50	67	—	16	—	M16	UKX09+H2309	35500	23200	FX09	**UKFX09C(E)+H2309**	—	2.4	2.5	—
	UKF309+H2309	160	44	125	19	18	25	54.5	50	—	78	—	17	M16	UK309+H2309	51500	29500	F309	—	**CUKF309C(CE)+H2309**	3.6	—	4.4
45	**UKF210+H2310**	143	40	111	16	18	22	49.5	55	66	71	15	15	M14	UK210+H2310	35500	23200	F210	**UKF210C(E)+H2310**	**CUKF210C(CE)+H2310**	2.7	2.8	3.8
	UKFX10+H2310	162	44	130	19	20	26	54.5	55	70	—	14	—	M16	UKX10+H2310	43000	29400	FX10	**UKFX10C(E)+H2310**	—	3.6	3.7	—
	UKF310+H2310	175	48	132	23	19	28	60	55	—	85	—	19	M20	UK310+H2310	61500	38200	F310	—	**CUKF310C(CE)+H2310**	4.8	—	5.8
50	**UKF211+H2311**	162	43	130	19	20	25	53.5	59	69	75	14	15	M16	UK211+H2311	43000	29400	F211	**UKF211C(E)+H2311**	**CUKF211C(CE)+H2311**	3.6	3.8	4.8
	UKFX11+H2311	175	49	143	19	20	29	59	59	79	—	19	—	M16	UKX11+H2311	52500	36100	FX11	**UKFX11C(E)+H2311**	—	4.3	4.4	—
	UKF311+H2311	185	52	140	23	20	30	63.5	59	—	90	—	20	M20	UK311+H2311	71500	44800	F311	—	**CUKF311C(CE)+H2311**	5.7	—	6.8
55	**UKF212+H2312**	175	48	143	19	20	29	60	62	80	86	19	20	M16	UK212+H2312	52500	36100	F212	**UKF212C(E)+H2312**	**CUKF212C(CE)+H2312**	4.6	4.9	6.0
	UKFX12+H2312	187	59	149	19	21	34	66	62	86	—	19	—	M16	UKX12+H2312	57500	40000	FX12	**UKFX12C(E)+H2312**	—	5.3	5.4	—
	UKF312+H2312	195	56	150	23	22	33	69	62	—	98	—	23	M20	UK312+H2312	81500	52000	F312	—	**CUKF312C(CE)+H2312**	6.7	—	7.8
60	**UKF213+H2313**	187	50	149	19	20	30	63	65	81	89	17	20	M16	UK213+H2313	57500	40000	F213	**UKF213C(E)+H2313**	**CUKF213C(CE)+H2313**	5.7	6.0	7.2
	UKFX13+H2313	187	59	149	19	21	34	68	65	—	—	—	—	M16	UKX13+H2313	62000	44000	FX13	—	—	5.2	—	—
	UKF313+H2313	208	58	166	23	22	33	71	65	—	103	—	24	M20	UK313+H2313	92500	59700	F313	—	**CUKF313C(CE)+H2313**	7.7	—	11.5

Remarks: 1. Grease nipple: 1/4-28UNF

Remarks: 2. Examples of unit numbers with cover:

With steel cover { Cover with rubber seal :UKF210C+H2310
End cover :UKF210E+H2310

with cast cover { Cover with rubber seal :CUKF210C+H2310
End cover :CUKF210CE+H2310

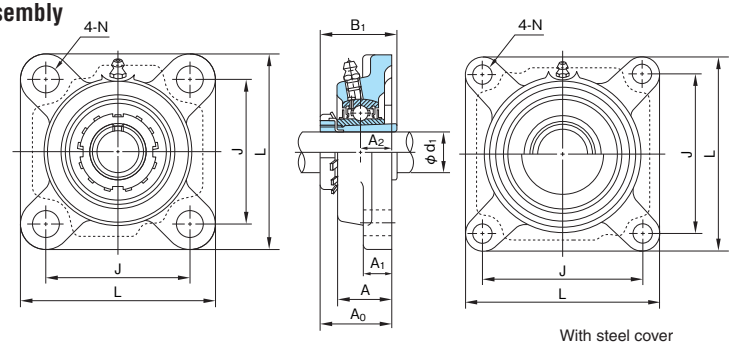
■ Square Flange Units

UKF+H type

With adapter assembly

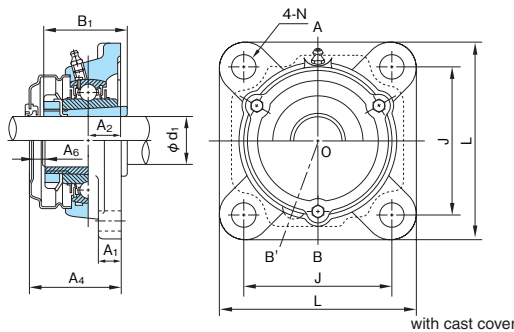
Tapered bore

Shaft dia.:
65～125mm

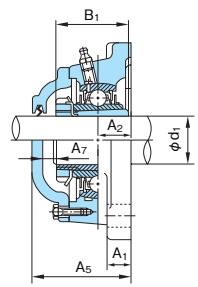


With steel cover

Section A-O-B



with cast cover



(Note) Section A-O-B': CUKF200C (CE) series+H series
Section A-O-B : CUKF300C (CE) series+H series

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)												Bolt size	Bearings			Housing No.	Unit No. with steel cover	Unit No. with cast cover	Mass of Unit (kg)		
		L	A	J	N	A_1	A_2	A_0	B_1	A_4	A_5	A_6	A_7		No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Cover with rubber seal (End cover)	Cover with rubber seal (End cover)	standard	With steel cover	with cast cover
65	**UKF215+H2315**	200	56	159	19	24	34	69.5	73	—	102	—	26	M16	UK215+H2315	66000	48200	F215	—	**CUKF215C(CE)+H2315**	7.3	—	9.0
	UKFX15+H2315	197	68	152	23	24	40	77	73	—	—	—	—	M20	UKX15+H2315	72500	53000	FX15	—	—	7.7	—	—
	UKF315+H2315	236	66	184	25	25	39	81	73	—	114	—	25	M22	UK315+H2315	114000	76900	F315	—	**CUKF315C(CE)+H2315**	11.8	—	14.0
70	**UKF216+H2316**	208	58	165	23	24	34	73	78	—	107	—	26	M20	UK216+H2316	72500	53000	F216	—	**CUKF216C(CE)+H2316**	8.2	—	10.4
	UKFX16+H2316	214	70	171	23	24	40	80	78	—	—	—	—	M20	UKX16+H2316	83500	61800	FX16	—	—	10.2	—	—
	UKF316+H2316	250	68	196	31	27	38	83.5	78	—	115	—	23	M27	UK316+H2316	123000	86400	F316	—	**CUKF316C(CE)+H2316**	13.9	—	16.3
75	**UKF217+H2317**	220	63	175	23	26	36	77	82	—	111	—	26	M20	UK217+H2317	83500	61800	F217	—	**CUKF217C(CE)+H2317**	9.8	—	12.4
	UKFX17+H2317	214	70	171	23	24	40	82.5	82	—	—	—	—	M20	UKX17+H2317	95500	71400	FX17	—	—	10.1	—	—
	UKF317+H2317	260	74	204	31	27	44	92	82	—	126	—	26	M27	UK317+H2317	132000	96500	F317	—	**CUKF317C(CE)+H2317**	15.1	—	18.6
80	**UKF218+H2318**	235	68	187	23	26	40	82.5	86	—	122	—	31	M20	UK218+H2318	95500	71400	F218	—	**CUKF218C(CE)+H2318**	11.7	—	15.3
	UKFX18+H2318	214	76	171	23	24	45	89	86	—	—	—	—	M20	UKX18+H2318	109000	81600	FX18	—	—	10.2	—	—
	UKF318+H2318	280	76	216	35	30	44	93.5	86	—	128	—	26	M30	UK318+H2318	143000	107200	F318	—	**CUKF318C(CE)+H2318**	19.0	—	22.5
85	**UKF319+H2319**	290	94	228	35	30	59	111	90	—	149	—	30	M30	UK319+H2319	153000	118400	F319	—	**CUKF319C(CE)+H2319**	20.8	—	24.4
90	**UKFX20+H2320**	268	97	211	31	31	59	108	97	—	—	—	—	M27	UKX20+H2320	134000	104700	FX20	—	—	15.9	—	—
	UKF320+H2320	310	94	242	38	32	59	115	97	—	154	—	31	M33	UK320+H2320	173000	140400	F320	—	**CUKF320C(CE)+H2320**	24.8	—	30.2
100	**UKF322+H2322**	340	96	266	41	35	60	121	105	—	165	—	36	M36	UK322+H2322	205000	178800	F322	—	**CUKF322C(CE)+H2322**	34.8	—	39.4
110	**UKF324+H2324**	370	110	290	41	40	65	130	112	—	175	—	35	M36	UK324+H2324	207000	184800	F324	—	**CUKF324C(CE)+H2324**	46.7	—	52.5
115	**UKF326+H2326**	410	115	320	41	45	65	134	121	—	180	—	36	M36	UK326+H2326	229000	214300	F326	—	**CUKF326C(CE)+H2326**	63.0	—	68.8
125	**UKF328+H2328**	450	125	350	41	55	75	148	131	—	195	—	37	M36	UK328+H2328	255000	246000	F328	—	**CUKF328C(CE)+H2328**	87.3	—	90.9

Remarks: 1. Grease nipple : PF1/8

Remarks: 2. Examples of unit numbers with cover:
With cast cover { Cover with rubber seal :CUKF215C+H2315
End cover :CUKF215CE+H2315

NACHI

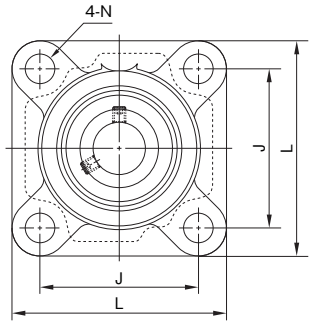
Square Flange Units

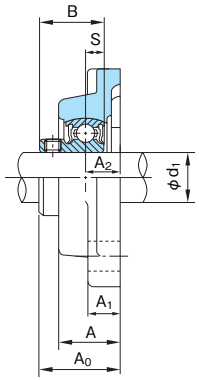
BF type

With set screws

Cylindrical bore

Shaft dia.: 20～35mm





1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)									Bolt size		Bearings			Housing No.	Mass of Unit (kg)
		L	A	J	N	A_1	A_2	A_0	B	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor		
20	BF204	86	25.5	64	12	12	15	32.7	24.7	7	M10		B4	12800	6600	F204 G00	0.55
25	BF205	95	27	70	12	14	16	36.2	27	7.5	M10		B5	14000	7900	F205 G00	0.79
30	BF206	108	31	83	12	14	18	40.3	30.3	8	M10		B6	19600	11300	F206 G00	1.1
35	BF207	117	34	92	14	16	19	43.4	32.9	8.5	M12		B7	25900	15400	F207 G00	1.5

NACHI

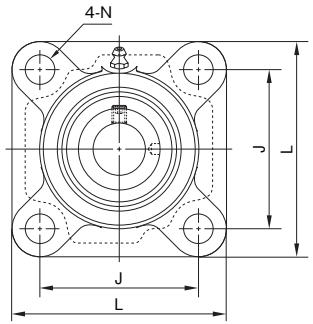
Square Flange Units

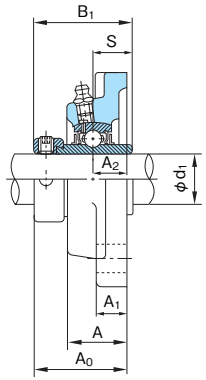
UGF type

With eccentric collar

Cylindrical bore

Shaft dia.: 20～60mm





1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)									Bolt size		Bearings			Housing No.	Mass of Unit (kg)
		L	A	J	N	A_1	A_2	A_0	B_1	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor		
20	UGF204	86	25.5	64	12	12	15	41.6	43.7	17.1	M10		UG204+ER	12800	6600	F204	0.63
25	UGF205	95	27	70	12	14	16	42.9	44.4	17.5	M10		UG205+ER	14000	7900	F205	0.76
30	UGF206	108	31	83	12	14	18	48.1	48.4	18.3	M10		UG206+ER	19600	11300	F206	1.1
35	UGF207	117	34	92	14	16	19	51.3	51.1	18.8	M12		UG207+ER	25900	15400	F207	1.5
40	UGF208	130	36	102	16	16	21	55.9	56.3	21.4	M14		UG208+ER	29300	17900	F208	1.9
45	UGF209	137	38	105	16	18	22	56.9	56.3	21.4	M14		UG209+ER	33000	20500	F209	2.9
50	UGF210	143	40	111	16	18	22	60.1	62.7	24.6	M14		UG210+ER	35500	23200	F210	2.5
55	UGF211	162	43	130	19	20	25	68.6	71.4	27.8	M16		UG211+ER	43000	29400	F211	3.6
60	UGF212	175	48	143	19	20	29	75.8	77.8	31	M16		UG212+ER	52500	36100	F212	4.3

Remark: Grease nipple: 1/4-28UNF

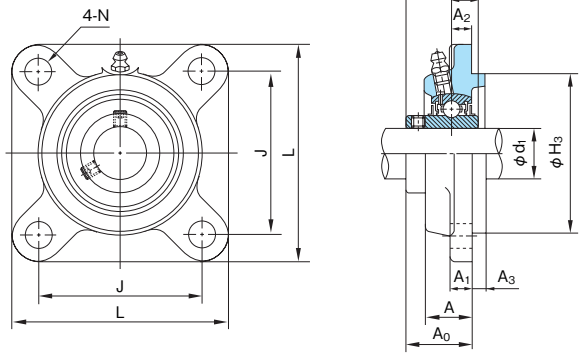
Square Flange Units with spigot joint

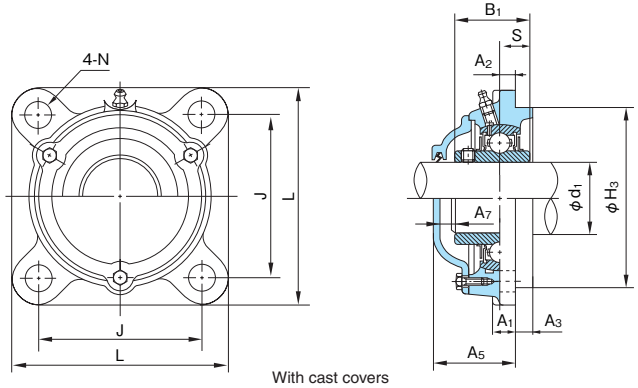
UCFS type

With set screws

Cylindrical bore

Shaft dia.: 25～140mm





With cast covers

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)													Bolt size		Bearings			Housing No.	Unit No. with cast cover	Mass of Unit (kg)	
		L	A	J	N	A_1	A_2	A_3	H_3	A_0	B	S	A_5	A_7			No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Cover with rubber seal (End cover)	standard	With cast cover
25	UCFS305	110	22	80	16	13	9	7	80	32	38	15	48	10	M14		UC305	21300	10900	FS305	CUCFS305C(CE)	1.4	1.7
30	UCFS306	125	24	95	16	15	10	8	90	36	43	17	52	10	M14		UC306	26800	15000	FS306	CUCFS306C(CE)	1.9	2.3
35	UCFS307	135	27	100	19	16	11	9	100	40	48	19	56	10	M16		UC307	33500	19200	FS307	CUCFS307C(CE)	2.4	2.8
40	UCFS308	150	30	112	19	17	13	10	115	46	52	19	63	11	M16		UC308	40500	23900	FS308	CUCFS308C(CE)	3.3	3.8
45	UCFS309	160	33	125	19	18	14	11	125	49	57	22	67	12	M16		UC309	51500	29500	FS309	CUCFS309C(CE)	4.0	4.8
50	UCFS310	175	36	132	23	19	16	12	140	55	61	22	73	12	M20		UC310	61500	38200	FS310	CUCFS310C(CE)	5.3	6.1
55	UCFS311	185	39	140	23	20	17	13	150	58	66	25	77	13	M20		UC311	71500	44800	FS311	CUCFS311C(CE)	6.2	8.2
60	UCFS312	195	42	150	23	22	19	14	160	64	71	26	84	14	M20		UC312	81500	52000	FS312	CUCFS312C(CE)	7.4	8.5
65	UCFS313	208	40	166	23	22	15	18	175	60	75	30	85	17	M20		UC313	92500	59700	FS313	CUCFS313C(CE)	8.6	10.6
70	UCFS314	226	43	178	25	25	18	18	185	63	78	33	88	17	M22		UC314	104000	68000	FS314	CUCFS314C(CE)	11.2	13.0
75	UCFS315	236	48	184	25	25	21	18	200	71	82	32	96	17	M22		UC315	114000	76900	FS315	CUCFS315C(CE)	12.7	15.5
80	UCFS316	250	48	196	31	27	18	20	210	70	86	34	95	17	M27		UC316	123000	86400	FS316	CUCFS316C(CE)	14.3	17.6
85	UCFS317	260	54	204	31	27	24	20	220	80	96	40	106	18	M27		UC317	132000	96500	FS317	CUCFS317C(CE)	17.2	20.7
90	UCFS318	280	56	216	35	30	24	20	240	80	96	40	108	20	M30		UC318	143000	107200	FS318	CUCFS318C(CE)	20.4	24.9
95	UCFS319	290	74	228	35	30	39	20	250	101	103	41	129	20	M30		UC319	153000	118400	FS319	CUCFS319C(CE)	23.9	27.4
100	UCFS320	310	74	242	38	32	39	20	260	105	108	42	134	21	M33		UC320	173000	140400	FS320	CUCFS320C(CE)	27.1	33.9
105	UCFS321	310	74	242	38	32	39	20	260	107	112	44	136	21	M33		UC321	183000	153100	FS321	CUCFS321C(CE)	28.5	35.7
110	UCFS322	340	71	266	41	35	35	25	300	106	117	46	140	26	M36		UC322	205000	178800	FS322	CUCFS322C(CE)	36.8	43.6
120	UCFS324	370	80	290	41	40	35	30	330	110	126	51	145	25	M36		UC324	207000	184800	FS324	CUCFS324C(CE)	50.6	58.6
130	UCFS326	410	85	320	41	45	35	30	360	116	135	54	150	24	M36		UC326	229000	214300	FS326	CUCFS326C(CE)	67.8	75.7
140	UCFS328	450	95	350	41	55	45	30	400	131	145	59	165	24	M36		UC328	255000	246000	FS328	CUCFS328C(CE)	96.3	100

Remarks: 1. Grease nipple: 1/4-28UNF for bore number 13 and under
PF1/8 for bore number 14 and over

Remarks: 2. Examples of unit numbers with cover:
With cast cover { Cover with rubber seal :CUCFS310C
End cover :CUCFS310CE

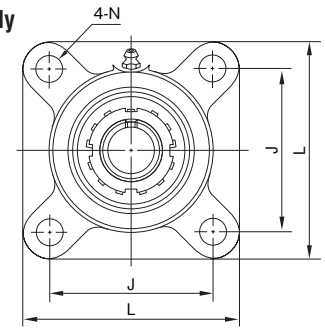
■ Square Flange Units with spigot joint

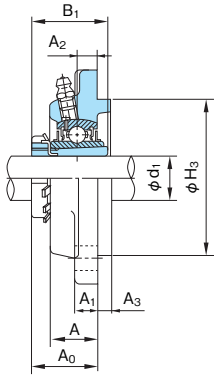
UKFS+H type

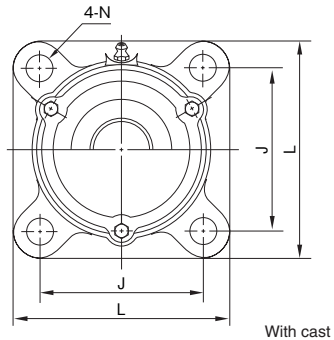
With adapter assembly

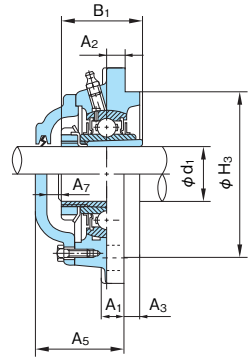
Tapered bore

Shaft dia. : 20～125mm









With cast covers

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)												Bolt size		Bearings			Housing No.	Unit No. with cast cover	Mass of Unit (kg)	
		L	A	J	N	A_1	A_2	A_3	H_3	A_0	B_1	A_5	A_7			No.	Basic load rating (N) Cr	Cor		Cover with rubber seal (End cover)	standard	With cast cover
20	UKFS305+H2305	110	22	80	16	13	9	7	80	30	35	48	12	M14		UK305+H2305	21300	10900	FS305	CUKFS305C(CE)+H2305	1.4	1.8
25	UKFS306+H2306	125	24	95	16	15	10	8	90	32.5	38	52	13	M14		UK306+H2306	26800	15000	FS306	CUKFS306C(CE)+H2306	1.9	2.4
30	UKFS307+H2307	135	27	100	19	16	11	9	100	35.5	43	56	14	M16		UK307+H2307	33500	19200	FS307	CUKFS307C(CE)+H2307	2.4	2.9
35	UKFS308+H2308	150	30	112	19	17	13	10	115	40	46	63	17	M16		UK308+H2308	40500	23900	FS308	CUKFS308C(CE)+H2308	3.3	3.9
40	UKFS309+H2309	160	33	125	19	18	14	11	125	43.5	50	67	17	M16		UK309+H2309	51500	29500	FS309	CUKFS309C(CE)+H2309	4.0	4.9
45	UKFS310+H2310	175	36	132	23	19	16	12	140	48	55	73	19	M20		UK310+H2310	61500	38200	FS310	CUKFS310C(CE)+H2310	5.3	6.4
50	UKFS311+H2311	185	39	140	23	20	17	13	150	50.5	59	77	20	M20		UK311+H2311	71500	44800	FS311	CUKFS311C(CE)+H2311	6.2	8.3
55	UKFS312+H2312	195	42	150	23	22	19	14	160	55	62	84	23	M20		UK312+H2312	81500	52000	FS312	CUKFS312C(CE)+H2312	7.4	8.6
60	UKFS313+H2313	208	40	166	23	22	15	18	175	53	65	85	24	M20		UK313+H2313	92500	59700	FS313	CUKFS313C(CE)+H2313	8.5	10.6
65	UKFS315+H2315	236	48	184	25	25	21	18	200	63	73	96	25	M22		UK315+H2315	114000	76900	FS315	CUKFS315C(CE)+H2315	12.8	15.9
70	UKFS316+H2316	250	48	196	31	27	18	20	210	63.5	78	95	23	M27		UK316+H2316	123000	86400	FS316	CUKFS316C(CE)+H2316	14.5	18.0
75	UKFS317+H2317	260	54	204	31	27	24	20	220	72	82	106	26	M27		UK317+H2317	132000	96500	FS317	CUKFS317C(CE)+H2317	17.2	20.9
80	UKFS318+H2318	280	56	216	35	30	24	20	240	73.5	86	108	26	M30		UK318+H2318	143000	107200	FS318	CUKFS318C(CE)+H2318	20.6	25.9
85	UKFS319+H2319	290	74	228	35	30	39	20	250	91	90	129	30	M30		UK319+H2319	153000	118400	FS319	CUKFS319C(CE)+H2319	23.9	27.6
90	UKFS320+H2320	310	74	242	38	32	39	20	260	95	97	134	31	M33		UK320+H2320	173000	140400	FS320	CUKFS320C(CE)+H2320	27.1	34.5
100	UKFS322+H2322	340	71	266	41	35	35	25	300	96	105	140	36	M36		UK322+H2322	205000	178800	FS322	CUKFS322C(CE)+H2322	36.7	44.3
110	UKFS324+H2324	370	80	290	41	40	35	30	330	100	112	145	35	M36		UK324+H2324	207000	184800	FS324	CUKFS324C(CE)+H2324	50.1	58.8
115	UKFS326+H2326	410	85	320	41	45	35	30	360	104	121	150	36	M36		UK326+H2326	229000	214300	FS326	CUKFS326C(CE)+H2326	68.1	77.2
125	UKFS328+H2328	450	95	350	41	55	45	30	400	118	131	165	37	M36		UK238+H2328	255000	246000	FS328	CUKFS328C(CE)+H2328	96.6	102.0

Remarks: 1. Grease nipple: 1/4-28UNF for bore number 13 and under
PF1/8 for bore number 14 and over

Remarks: 2. Examples of unit numbers with cover:
With cast cover { Cover with rubber seal :CUKFS310C+H2310
End cover :CUKFS310CE+H2310

NACHI

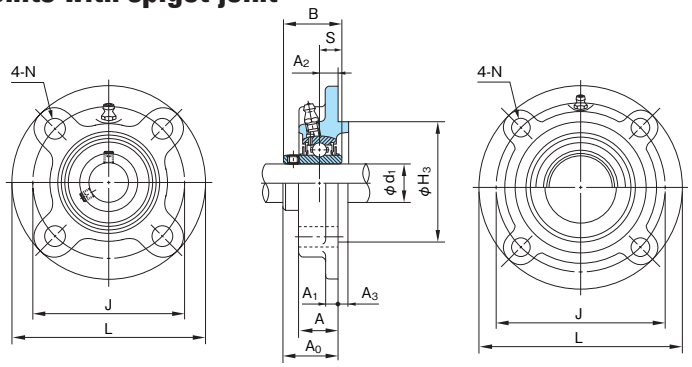
Round Flange Units with spigot joint

UCFC type

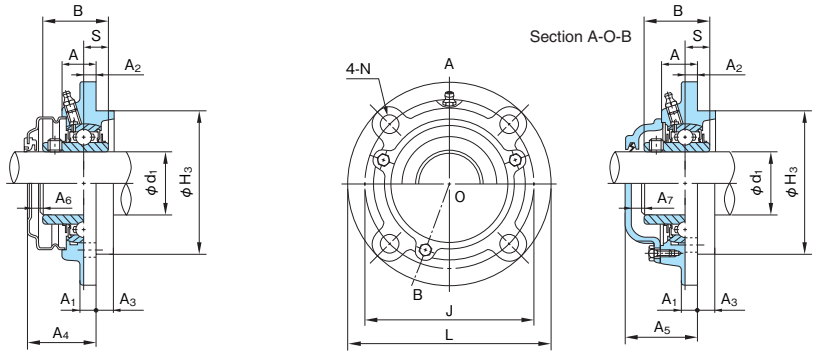
With set screws

Cylindrical bore

Shaft dia.: 12～70mm



With steel cover



With cast cover

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)															Bolt size		Bearings			Housing No.	Unit No. with steel cover	Unit No. with cast cover	Mass of Unit (kg)		
		L	A	J	N	A_1	A_2	A_3	H_3	A_0	B	S	A_4	A_5	A_6	A_7			No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Cover with rubber seal (End cover)	Cover with rubber seal (End cover)	standard	With steel cover	With cast cover
12	UCFC201	100	20.5	78	12	7	10	5	62	28.3	31	12.7	38	41	8	6	M10		UC201	12800	6600	FC204	UCFC201C(E)	CUCFC201C(CE)	0.89	0.92	1.2
15	UCFC202	100	20.5	78	12	7	10	5	62	28.3	31	12.7	38	41	8	6	M10		UC202	12800	6600	FC204	UCFC202C(E)	CUCFC202C(CE)	0.87	0.90	1.2
17	UCFC203	100	20.5	78	12	7	10	5	62	28.3	31	12.7	38	41	8	6	M10		UC203	12800	6600	FC204	UCFC203C(E)	CUCFC203C(CE)	0.86	0.89	1.2
20	UCFC204	100	20.5	78	12	7	10	5	62	28.3	31	12.7	38	41	8	6	M10		UC204	12800	6600	FC204	UCFC204C(E)	CUCFC204C(CE)	0.84	0.87	1.2
25	UCFC205	115	21	90	12	7	10	6	70	29.7	34	14.3	42	45	11	9	M10		UC205	14000	7900	FC205	UCFC205C(E)	CUCFC205C(CE)	1.1	1.1	1.5
	UCFCX05	111	24	92	9.5	9.5	10	6	76	32.2	38.1	15.9	43	—	9	—	M 8		UCX05	19600	11300	FCX05	UCFCX05C(E)	—	1.1	1.1	—
30	UCFC206	125	23	100	12	8	10	8	80	32.2	38.1	15.9	43	47	9	8	M10		UC206	19600	11300	FC206	UCFC206C(E)	CUCFC206C(CE)	1.5	1.5	2.0
	UCFCX06	127	22.5	105	12	9.5	8	9.5	85	33.4	42.9	17.5	43	—	8	—	M10		UCX06	25900	15400	FCX06	UCFCX06C(E)	—	1.4	1.4	—
35	UCFC207	135	26	110	14	9	11	8	90	36.4	42.9	17.5	46	51	8	8	M12		UC207	25900	15400	FC207	UCFC207C(E)	CUCFC207C(CE)	1.7	1.8	2.4
	UCFCX07	133	26	111	12	11	9	11	92	39.2	49.2	19	48	—	7	—	M10		UCX07	29300	17900	FCX07	UCFCX07C(E)	—	1.8	1.8	—
40	UCFC208	145	26	120	14	9	11	10	100	41.2	49.2	19	52	56	10	8	M12		UC208	29300	17900	FC208	UCFC208C(E)	CUCFC208C(CE)	2.1	2.1	2.8
	UCFCX08	133	26	111	12	11	9	11	92	39.2	49.2	19	50	—	10	—	M10		UCX08	33000	20500	FCX08	UCFCX08C(E)	—	1.8	1.8	—
45	UCFC209	160	26	132	16	14	10	12	105	40.2	49.2	19	51	55	10	8	M14		UC209	33000	20500	FC309	UCFC209C(E)	CUCFC209C(CE)	3.0	3.1	3.7
	UCFCX09	155	25	130	14	11	8	12	108	40.6	51.6	19	52	—	10	—	M12		UCX09	35500	23200	FCX09	UCFCX09C(E)	—	2.5	2.6	—
50	UCFC210	165	28	138	16	14	10	12	110	42.6	51.6	19	54	59	9	10	M14		UC210	35500	23200	FC210	UCFC210C(E)	CUCFC210C(CE)	3.1	3.3	4.2
	UCFCX10	162	25	136	14	11	7	16	118	40.4	55.6	22.2	51	—	9	—	M12		UCX10	43000	29400	FCX10	UCFCX10C(E)	—	2.9	3.0	—
55	UCFC211	185	31	150	19	15	13	12	125	46.4	55.6	22.2	57	63	9	10	M16		UC211	43000	29400	FC211	UCFC211C(E)	CUCFC211C(CE)	3.9	4.0	5.0
	UCFCX11	180	26	152	16	13	4	22	127	43.7	65.1	25.4	54	—	9	—	M14		UCX11	52500	36100	FCX11	UCFCX11C(E)	—	4.0	4.2	—
60	UCFC212	195	36	160	19	15	17	12	135	56.7	65.1	25.4	68	74	10	11	M16		UC212	52500	36100	FC212	UCFC212C(E)	CUCFC212C(CE)	4.4	4.6	6.0
	UCFCX12	194	33	165	16	14	11	20	140	50.7	65.1	25.4	63	—	11	—	M14		UCX12	57500	40000	FCX12	UCFCX12C(E)	—	4.6	4.8	—
65	UCFC213	205	36	170	19	15	16	14	145	55.7	65.1	25.4	67	75	10	13	M16		UC213	57500	40000	FC213	UCFC213C(E)	CUCFC213C(CE)	5.3	5.5	7.0
	UCFCX13	194	33	165	16	14	11	20	140	55.4	74.6	30.2	—	—	—	—	M14		UCX13	62000	44000	FCX13	—	—	4.9	—	—
70	UCFC214	215	40	177	19	18	17	14	150	61.4	74.6	30.2	—	84	—	16	M16		UC214	62000	44000	FC214	—	CUCFC214C(CE)	6.8	—	8.2
	UCFCX14	222	36	190	19	14	14	20	164	58.5	77.8	33.3	—	—	—	—	M16		UCX14	66000	48200	FCX14	—	—	7.4	—	—

Remarks: 1. Grease nipple: 1/4-28UNF for bore number 13 and under
PF1/8 for bore number 14 and over

Remarks: 2. Examples of unit numbers with cover:

With steel cover { Cover with rubber seal :UCFC210C
End cover :UCFC210E

With cast cover { Cover with rubber seal :CUCFC210C
End cover :CUCFC210CE

NACHI

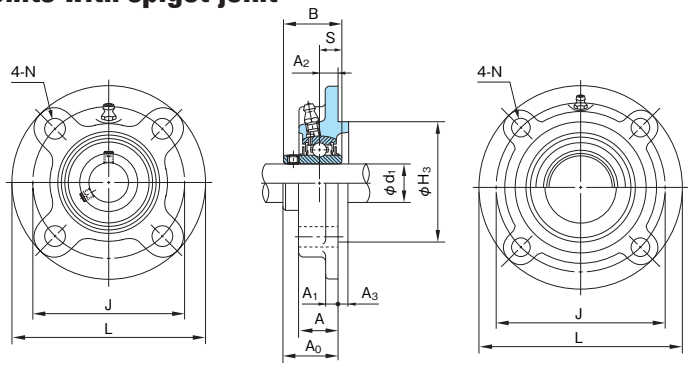
Round Flange Units with spigot joint

UCFC type

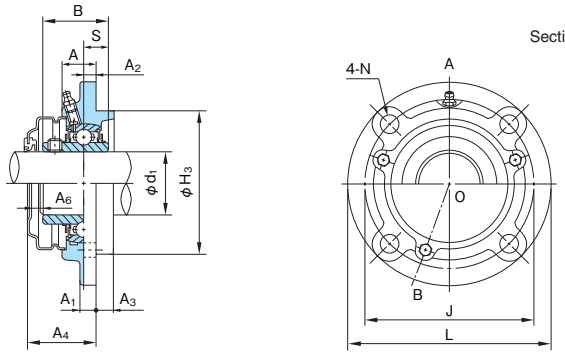
With set screws

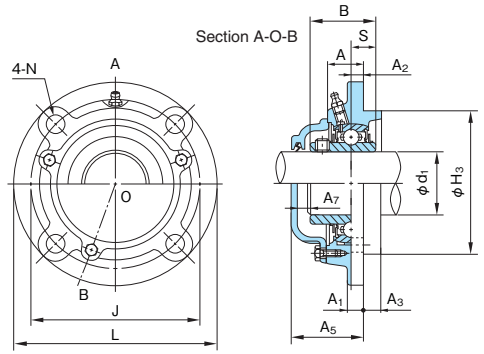
Cylindrical bore

Shaft dia.: 75～100mm



With steel cover





With cast cover

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)															Bolt size		Bearings			Housing No.	Unit No. with steel cover	Unit No. with cast cover	Mass of Unit (kg)		
		L	A	J	N	A_1	A_2	A_3	H_3	A_0	B	S	A_4	A_5	A_6	A_7			No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Cover with rubber seal (End cover)	Cover with rubber seal (End cover)	standard	With steel cover	With cast cover
75	**UCFC215**	220	40	184	19	18	18	16	160	62.5	77.8	33.3	—	86	—	17	M16		UC215	66000	48200	FC215	—	**CUCFC215C(CE)**	7.4	—	8.8
	UCFCX15	222	35	190	19	16	12	22	164	61.3	82.6	33.3	—	—	—	—	M16		UCX15	72500	53000	FCX15	—	—	7.4	—	—
80	**UCFC216**	240	42	200	23	18	18	16	170	67.3	82.6	33.3	—	91	—	15	M20		UC216	72500	53000	FC216	—	**CUCFC216C(CE)**	9.2	—	11.3
	UCFCX16	260	36	219	23	19	10	25	186	61.6	85.7	34.1	—	—	—	—	M20		UCX16	83500	61800	FCX16	—	—	11.5	—	—
85	**UCFC217**	250	45	208	23	20	18	18	180	69.6	85.7	34.1	—	93	—	15	M20		UC217	83500	61800	FC217	—	**CUCFC217C(CE)**	10.6	—	12.8
	UCFCX17	260	36	219	23	19	10	25	186	66.3	96	39.7	—	—	—	—	M20		UCX17	95500	71400	FCX17	—	—	11.1	—	—
90	**UCFC218**	265	50	220	23	20	22	18	190	78.3	96	39.7	—	104	—	17	M20		UC218	95500	71400	FC218	—	**CUCFC218C(CE)**	12.7	—	15.9
	UCFCX18	260	43	219	23	19	12	28	186	73.1	104	42.9	—	—	—	—	M20		UCX18	109000	81600	FCX18	—	—	11.3	—	—
100	**UCFCX20**	276	66	238	23	22	22	28	206	90.3	117.5	49.2	—	—	—	—	M20		UCX20	134000	104700	FCX20	—	—	15.9	—	—

Remarks: 1. Grease nipple: PF1/8

Remarks: 2. Examples of unit numbers with cover:

With cast cover { Cover with rubber seal :CUCFC215C
End cover :CUCFC215CE

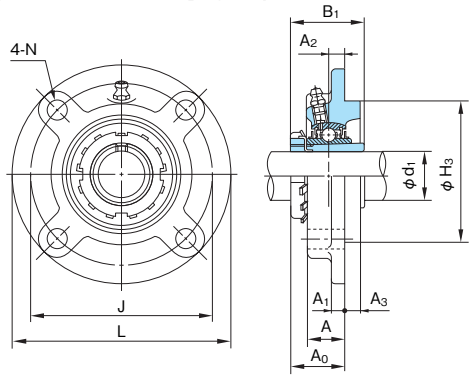
Round Flange Units with spigot joint

UKFC+H type

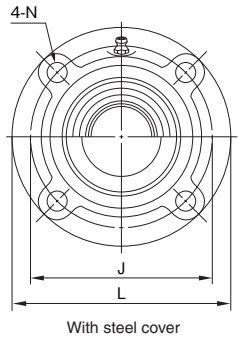
With adapter assembly

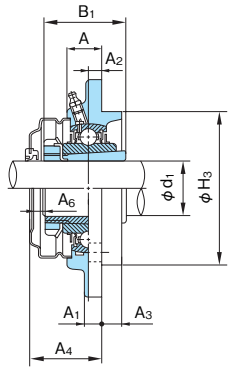
Tapered bore

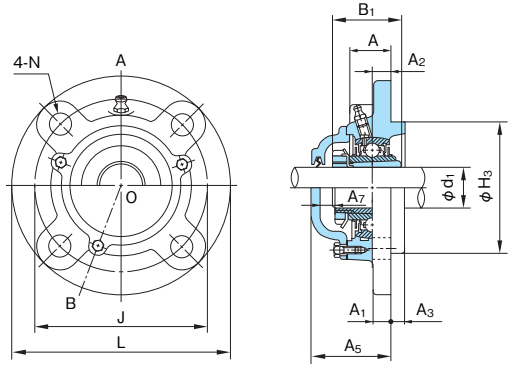
Shaft dia.:
20～90mm



With steel cover







With cast cover

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)														Bolt size	Bearings			Housing No.	Unit No. with steel cover	Unit No. with cast cover	Mass of Unit (kg)		
		L	A	J	N	A_1	A_2	A_3	H_3	A_0	B_1	A_4	A_5	A_6	A_7		No.	Basic load rating (N) Cr	Cor		Cover with rubber seal (End cover)	Cover with rubber seal (End cover)	standard	With steel cover	With cast cover
20	**UKFC205+H2305**	115	21	90	12	7	10	6	70	29.5	35	42	45	11	9	M10	UK205+H2305	14000	7900	FC205	**UKFC205C(E)+H2305**	**CUKFC205C(CE)+H2305**	1.1	1.2	1.6
	UKFCX05+H2305	111	24	92	9.5	9.5	10	6	76	31	35	43	—	10	—	M 8	UKX05+H2305	19600	11300	FCX05	**UKFCX05C(E)+H2305**	—	1.1	1.1	—
25	**UKFC206+H2306**	125	23	100	12	8	10	8	80	31	38	43	47	10	10	M10	UK206+H2306	19600	11300	FC206	**UKFC206C(E)+H2306**	**CUKFC206C(CE)+H2306**	1.6	1.6	2.1
	UKFCX06+H2306	127	22.5	105	12	9.5	8	9.5	85	29.5	38	43	—	12	—	M10	UKX06+H2306	25900	15400	FCX06	**UKFCX06C(E)+H2306**	—	1.5	1.5	—
30	**UKFC207+H2307**	135	26	110	14	9	11	8	90	33.5	43	46	51	11	11	M12	UK207+H2307	25900	15400	FC207	**UKFC207C(E)+H2307**	**CUKFC207C(CE)+H2307**	1.8	1.9	2.5
	UKFCX07+H2307	133	26	111	12	11	9	11	92	32.5	43	48	—	14	—	M10	UKX07+H2307	29300	17900	FCX07	**UKFCX07C(E)+H2307**	—	1.8	1.8	—
35	**UKFC208+H2308**	145	26	120	14	9	11	10	100	35.5	46	52	56	15	14	M12	UK208+H2308	29300	17900	FC208	**UKFC208C(E)+H2308**	**CUKFC208C(CE)+H2308**	2.2	2.2	2.9
	UKFCX08+H2308	133	26	111	12	11	9	11	92	34	46	50	—	15	—	M10	UKX08+H2308	33000	20500	FCX08	**UKFCX08C(E)+H2308**	—	1.8	1.8	—
40	**UKFC209+H2309**	160	26	132	16	14	10	12	105	36	50	51	55	14	13	M14	UK209+H2309	33000	20500	FC209	**UKFC209C(E)+H2309**	**CUKFC209C(CE)+H2309**	3.1	3.2	3.8
	UKFCX09+H2309	155	25	130	14	11	8	12	108	34.5	50	52	—	16	—	M12	UKX09+H2309	35500	23200	FCX09	**UKFCX09C(E)+H2309**	—	2.5	2.6	—
45	**UKFC210+H2310**	165	28	138	16	14	10	12	110	37.5	55	54	59	15	15	M14	UK210+H2310	35500	23200	FC210	**UKFC210C(E)+H2310**	**CUKFC210C(CE)+H2310**	3.3	3.5	4.4
	UKFCX10+H2310	162	25	136	14	11	7	16	118	35.5	55	51	—	14	—	M12	UKX10+H2310	43000	29400	FCX10	**UKFCX10C(E)+H2310**	—	2.9	3.0	—
50	**UKFC211+H2311**	185	31	150	19	15	13	12	125	41.5	59	57	63	14	15	M16	UK211+H2311	43000	29400	FC211	**UKFC211C(E)+H2311**	**CUKFC211C(CE)+H2311**	4.0	4.2	5.2
	UKFCX11+H2311	180	26	152	16	13	4	22	127	34	59	54	—	19	—	M14	UKX11+H2311	52500	36100	FCX11	**UKFCX11C(E)+H2311**	—	3.9	4.0	—
55	**UKFC212+H2312**	195	36	160	19	15	17	12	135	48	62	68	74	19	20	M16	UK212+H2312	52500	36100	FC212	**UKFC212C(E)+H2312**	**CUKFC212C(CE)+H2312**	4.4	4.7	6.1
	UKFCX12+H2312	194	33	165	16	14	11	20	140	43	62	63	—	19	—	M14	UKX12+H2312	57500	40000	FCX12	**UKFCX12C(E)+H2312**	—	4.6	4.7	—
60	**UKFC213+H2313**	205	36	170	19	15	16	14	145	49	65	67	75	17	20	M16	UK213+H2313	57500	40000	FC213	**UKFC213C(E)+H2313**	**CUKFC213C(CE)+H2313**	5.4	5.7	7.2
	UKFCX13+H2313	194	33	165	16	14	11	20	140	45	65	—	—	—	—	M14	UKX13+H2313	62000	44000	FCX13	—	—	4.7	—	—
65	**UKFC215+H2315**	220	40	184	19	18	18	16	160	53.5	73	—	86	—	26	M16	UK215+H2315	66000	48200	FC215	—	**CUKFC215C(CE)+H2315**	7.8	—	9.2
	UKFCX15+H2315	222	35	190	19	16	12	22	164	49	73	—	—	—	—	M16	UKX15+H2315	72500	53000	FCX15	—	—	7.4	—	—
70	**UKFC216+H2316**	240	42	200	23	18	18	16	170	57	78	—	91	—	26	M20	UK216+H2316	72500	53000	FC216	—	**CUKFC216C(CE)+H2316**	9.6	—	11.7
	UKFCX16+H2316	260	36	219	23	19	10	25	186	50	78	—	—	—	—	M20	UKX16+H2316	83500	61800	FCX16	—	—	11.6	—	—
75	**UKFC217+H2317**	250	45	208	23	20	18	18	180	59	82	—	93	—	26	M20	UK217+H2317	83500	61800	FC217	—	**CUKFC217C(CE)+H2317**	11.1	—	13.4
	UKFCX17+H2317	260	36	219	23	19	10	25	186	52.5	82	—	—	—	—	M20	UKX17+H2317	95500	71400	FCX17	—	—	11.0	—	—
80	**UKFC218+H2318**	265	50	220	23	20	22	18	190	64.5	86	—	104	—	31	M20	UK218+H2318	95500	71400	FC218	—	**CUKFC218C(CE)+H2318**	13.1	—	16.3
	UKFCX18+H2318	260	43	219	23	19	12	28	186	56	86	—	—	—	—	M20	UKX18+H2318	109000	81600	FCX18	—	—	11.0	—	—
90	**UKFCX20+H2320**	276	66	238	23	22	22	28	206	71	97	—	—	—	—	M20	UKX20+H2320	134000	104700	FCX20	—	—	14.9	—	—

Remarks: 1. Grease nipple : 1/4-28UNF for bore number 13 and under
PF1/8 for bore number 14 and over

Remarks: 2. Examples of unit numbers with cover:
With steel cover { Cover with rubber seal :UKFC210C+H2310
End cover :UKFC210E+H2310
With cast cover { Cover with rubber seal :CUKFC210C+H2310
End cover :CUKFC210CE+H2310

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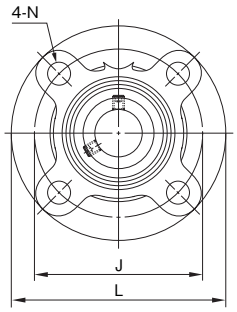
Round Flange Units with spigot joint

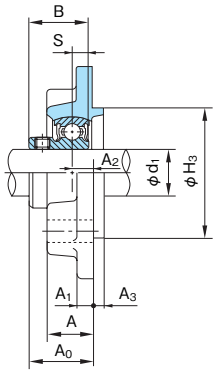
BFC type

With set screws

Cylindrical bore

Shaft dia.: 20～35mm





1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)											Bolt size		Bearings			Housing No.	Mass of Unit (kg)
		L	A	J	N	A_1	A_2	A_3	H_3	A_0	B	S			No.	Basic load rating (N)			
																Cr	Cor		
20	**BFC204**	100	20.5	78	12	7	10	5	62	27.7	24.7	7	M10		B4	12800	6600	FC204 G00	0.8
25	**BFC205**	115	21	90	12	7	10	6	70	30.2	27	7.5	M10		B5	14000	7900	FC205 G00	1.0
30	**BFC206**	125	23	100	12	8	10	8	80	32.3	30.3	8	M10		B6	19600	11300	FC206 G00	1.4
35	**BFC207**	135	26	110	14	9	11	8	90	35.4	32.9	8.5	M12		B7	25900	15400	FC207 G00	1.7

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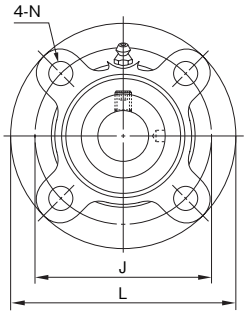
Round Flange Units with spigot joint

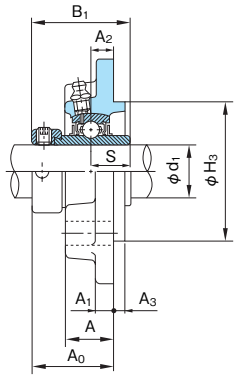
UGF type

With eccentric collar

Cylindrical bore

Shaft dia.: 20～60mm





1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)											Bolt size		Bearings			Housing No.	Mass of Unit (kg)
		L	A	J	N	A_1	A_2	A_3	H_3	A_0	B_1	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor		
20	**UGFC204**	100	20.5	78	12	7	10	5	62	36.6	43.7	17.1	M10		UG204+ER	12800	6600	FC204	0.89
25	**UGFC205**	115	21	90	12	7	10	6	70	36.9	44.4	17.5	M10		UG205+ER	14000	7900	FC205	1.0
30	**UGFC206**	125	23	100	12	8	10	8	80	40.1	48.4	18.3	M10		UG206+ER	19600	11300	FC206	1.2
35	**UGFC207**	135	26	110	14	9	11	8	90	43.3	51.1	18.8	M12		UG207+ER	25900	15400	FC207	1.7
40	**UGFC208**	145	26	120	14	9	11	10	100	45.9	56.3	21.4	M12		UG208+ER	29300	17900	FC208	2.0
45	**UGFC209**	160	26	132	16	14	10	12	105	44.9	56.3	21.4	M14		UG209+ER	33000	20500	FC209	2.5
50	**UGFC210**	165	28	138	16	14	10	12	110	48.1	62.7	24.6	M14		UG210+ER	35500	23200	FC210	2.8
55	**UGFC211**	185	31	150	19	15	13	12	125	56.6	71.4	27.8	M16		UG211+ER	43000	29400	FC211	4.1
60	**UGFC212**	195	36	160	19	15	17	12	135	63.8	77.8	31	M16		UG212+ER	52500	36100	FC212	4.8

Remark: Grease nipple:1/4-28UNF

NACHI

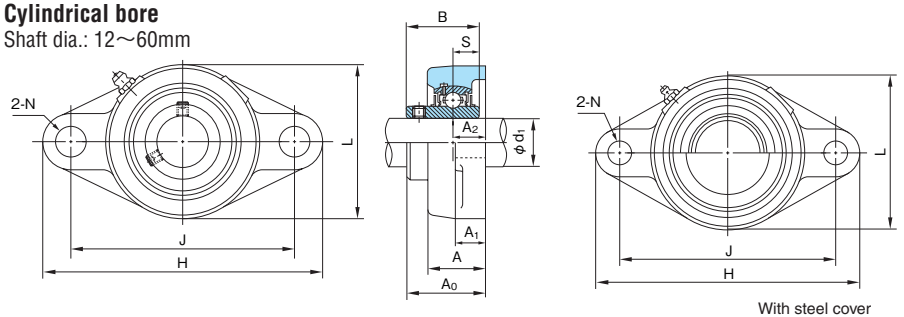
Rhombic Flange Units

UCFL type

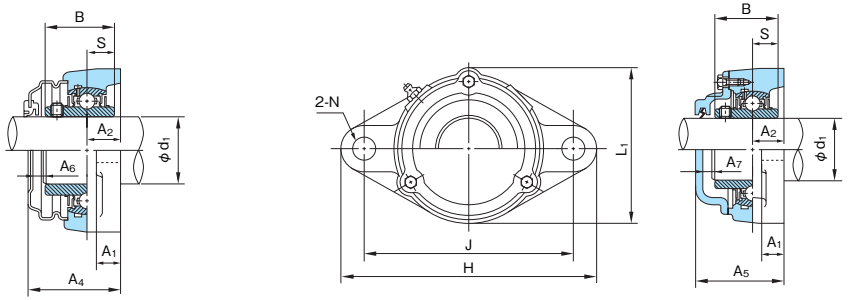
With set screws

Cylindrical bore

Shaft dia.: 12～60mm



With steel cover



With cast cover

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)															Bolt size		Bearings			Housing No.	Unit No. with steel cover	Unit No. with cast cover	Mass of Unit (kg)		
		H	L	L_1	A	J	N	A_1	A_2	A_0	B	S	A_4	A_5	A_6	A_7			No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Cover with rubber seal (End cover)	Cover with rubber seal (End cover)	standard	With steel cover	With cast cover
12	UCFL201	113	60	66	25.5	90	12	12	15	33.3	31	12.7	43	46	8	6	M10		UC201	12800	6600	FL204	UCFL201C(E)	CUCFL201C(CE)	0.50	0.53	0.8
15	UCFL202	113	60	66	25.5	90	12	12	15	33.3	31	12.7	43	46	8	6	M10		UC202	12800	6600	FL204	UCFL202C(E)	CUCFL202C(CE)	0.48	0.51	0.8
17	UCFL203	113	60	66	25.5	90	12	12	15	33.3	31	12.7	43	46	8	6	M10		UC203	12800	6600	FL204	UCFL203C(E)	CUCFL203C(CE)	0.47	0.50	0.8
20	UCFL204	113	60	66	25.5	90	12	12	15	33.3	31	12.7	43	46	8	6	M10		UC204	12800	6600	FL204	UCFL204C(E)	CUCFL204C(CE)	0.45	0.48	0.8
25	UCFL205	130	68	73	27	99	16	14	16	35.7	34	14.3	47	51	10	9	M14		UC205	14000	7900	FL205	UCFL205C(E)	CUCFL205C(CE)	0.63	0.67	1.0
	UCFLX05	141	83	—	30	117	12	13	18	40.2	38.1	15.9	51	—	8	—	M10		UCX05	19600	11300	FLX05	UCFLX05C(E)	—	1.0	1.0	—
	UCFL305	150	80	84	29	113	19	13	16	39	38	15	—	55	—	10	M16		UC305	21300	10900	FL305	—	CUCFL305C(CE)	1.1	—	1.4
30	UCFL206	148	80	84	31	117	16	14	18	40.2	38.1	15.9	49	55	8	8	M14		UC206	19600	11300	FL206	UCFL206C(E)	CUCFL206C(CE)	0.96	1.0	1.5
	UCFLX06	156	95	—	34	130	16	14	19	44.4	42.9	17.5	54	—	8	—	M14		UCX06	25900	15400	FLX06	UCFLX06C(E)	—	1.4	1.4	—
	UCFL306	180	90	94	32	134	23	15	18	44	43	17	—	60	—	10	M20		UC306	26800	15000	FL306	—	CUCFL306C(CE)	1.5	—	1.9
35	UCFL207	161	90	94	34	130	16	16	19	44.4	42.9	17.5	54	59	8	8	M14		UC207	25900	15400	FL207	UCFL207C(E)	CUCFL207C(CE)	1.2	1.3	1.9
	UCFLX07	171	105	—	38	144	16	14	21	51.2	49.2	19	63	—	10	—	M14		UCX07	29300	17900	FLX07	UCFLX07C(E)	—	1.9	2.0	—
	UCFL307	185	100	104	36	141	23	16	20	49	48	19	—	65	—	10	M20		UC307	33500	19200	FL307	—	CUCFL307C(CE)	1.8	—	2.3
40	UCFL208	175	100	104	36	144	16	16	21	51.2	49.2	19	61	66	9	8	M14		UC208	29300	17900	FL208	UCFL208C(E)	CUCFL208C(CE)	1.6	1.7	2.3
	UCFLX08	179	111	—	40	148	16	14	22	52.2	49.2	19	63	—	10	—	M14		UCX08	33000	20500	FLX08	UCFLX08C(E)	—	2.0	2.1	—
	UCFL308	200	112	118	40	158	23	17	23	56	52	19	—	73	—	11	M20		UC308	40500	23900	FL308	—	CUCFL308C(CE)	2.4	—	2.9
45	UCFL209	188	108	113	38	148	19	18	22	52.2	49.2	19	63	67	10	8	M16		UC209	33000	20500	FL209	UCFL209C(E)	CUCFL209C(CE)	1.9	2.0	2.7
	UCFLX09	189	116	—	40	157	16	14	23	55.6	51.6	19	67	—	9	—	M14		UCX09	35500	23200	FLX09	UCFLX09C(E)	—	2.4	2.5	—
	UCFL309	230	125	132	44	177	25	18	25	60	57	22	—	78	—	12	M22		UC309	51500	29500	FL309	—	CUCFL309C(CE)	3.4	—	4.2
50	UCFL210	197	115	120	40	157	19	18	22	54.6	51.6	19	66	71	9	10	M16		UC210	35500	23200	FL210	UCFL210C(E)	CUCFL210C(CE)	2.2	2.3	3.2
	UCFLX10	216	133	—	44	184	19	20	26	59.4	55.6	22.2	70	—	9	—	M16		UCX10	43000	29400	FLX10	UCFLX10C(E)	—	3.6	3.7	—
	UCFL310	240	140	144	48	187	25	19	28	67	61	22	—	85	—	12	M22		UC310	61500	38200	FL310	—	CUCFL310C(CE)	4.3	—	5.2
55	UCFL211	224	130	134	43	184	19	20	25	58.4	55.6	22.2	69	75	9	10	M16		UC211	43000	29400	FL211	UCFL211C(E)	CUCFL211C(CE)	3.2	3.3	4.3
	UCFL311	250	150	154	52	198	25	20	30	71	66	25	—	90	—	13	M22		UC311	71500	44800	FL311	—	CUCFL311C(CE)	5.1	—	6.0
60	UCFL212	250	140	144	48	202	23	20	29	68.7	65.1	25.4	80	86	10	11	M20		UC212	52500	36100	FL212	UCFL212C(E)	CUCFL212C(CE)	4.1	4.3	5.4
	UCFL312	270	160	164	56	212	31	22	33	78	71	26	—	98	—	14	M27		UC312	81500	52000	FL312	—	CUCFL312C(CE)	6.2	—	7.3

Remarks: 1. Grease nipple: 1/4-28UNF

Remarks: 2. Examples of unit numbers with cover:

With steel cover { Cover with rubber seal :UCFL210C
End cover :UCFL210E

With cast cover { Cover with rubber seal :CUCFL210C
End cover :CUCFL210CE

NACHI

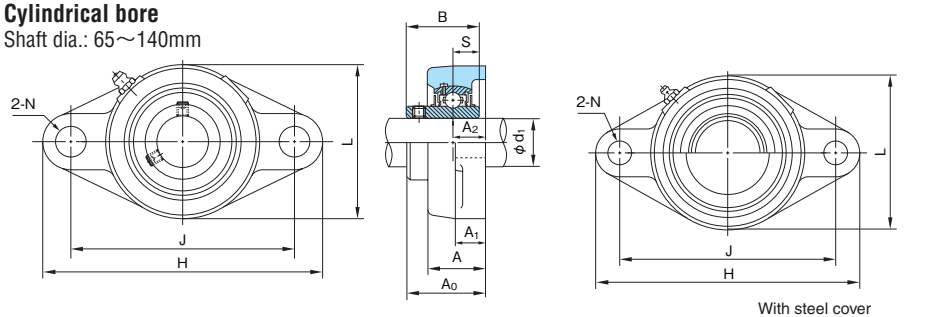
Rhombic Flange Units

UCFL type

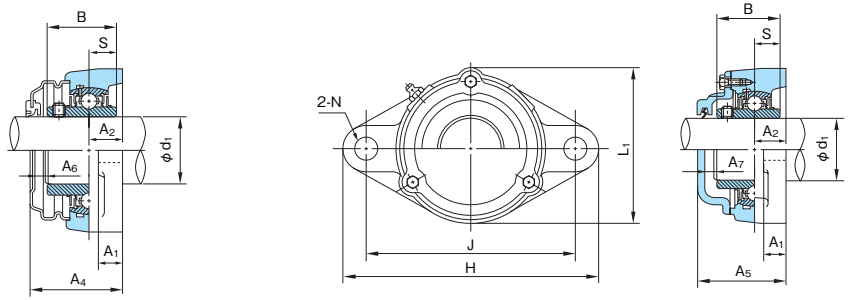
With set screws

Cylindrical bore

Shaft dia.: 65～140mm



With steel cover



With cast cover

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)															Bolt size	Bearings			Housing No.	Unit No. with steel cover	Unit No. with cast cover	Mass of Unit (kg)		
		H	L	L_1	A	J	N	A_1	A_2	A_0	B	S	A_4	A_5	A_6	A_7		No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Cover with rubber seal (End cover)	Cover with rubber seal (End cover)	standard	With steel cover	With cast cover
65	**UCFL213**	258	155	157	50	210	23	24	30	69.7	65.1	25.4	81	89	10	13	M20	UC213	57500	40000	FL213	**UCFL213C(E)**	**CUCFL213C(CE)**	5.1	5.3	6.7
	UCFL313	295	175	186	58	240	31	25	33	78	75	30	—	103	—	17	M27	UC313	92500	59700	FL313	—	**CUCFL313C(CE)**	7.4	—	9.4
70	**UCFL214**	265	160	163	54	216	23	24	31	75.4	74.6	30.2	—	98	—	16	M20	UC214	62000	44000	FL214	—	**CUCFL214C(CE)**	6.0	—	7.4
	UCFL314	315	185	196	61	250	35	28	36	81	78	33	—	106	—	17	M30	UC314	104000	68000	FL314	—	**CUCFL314C(CE)**	9.0	—	11.8
75	**UCFL215**	275	165	168	56	225	23	24	34	78.5	77.8	33.3	—	102	—	17	M20	UC215	66000	48200	FL215	—	**CUCFL215C(CE)**	6.5	—	7.9
	UCFL315	320	195	206	66	260	35	30	39	89	82	32	—	114	—	17	M30	UC315	114000	76900	FL315	—	**CUCFL315C(CE)**	10.0	—	12.2
80	**UCFL216**	290	180	188	58	233	25	24	34	83.3	82.6	33.3	—	107	—	15	M22	UC216	72500	53000	FL216	—	**CUCFL216C(CE)**	8.0	—	10.2
	UCFL316	355	210	218	68	285	38	32	38	90	86	34	—	115	—	17	M33	UC316	123000	86400	FL316	—	**CUCFL316C(CE)**	12.6	—	15.5
85	**UCFL217**	305	190	198	63	248	25	26	36	87.6	85.7	34.1	—	111	—	15	M22	UC217	83500	61800	FL217	—	**CUCFL217C(CE)**	9.5	—	11.8
	UCFL317	370	220	232	74	300	38	32	44	100	96	40	—	126	—	18	M33	UC317	132000	96500	FL317	—	**CUCFL317C(CE)**	14.5	—	18.2
90	**UCFL218**	320	205	211	68	265	25	26	40	96.3	96	39.7	—	122	—	17	M22	UC218	95500	71400	FL218	—	**CUCFL218C(CE)**	11.9	—	15.0
	UCFL318	385	235	245	76	315	38	36	44	100	96	40	—	128	—	20	M33	UC318	143000	107200	FL318	—	**CUCFL318C(CE)**	17.1	—	20.7
95	**UCFL319**	405	250	257	94	330	41	40	59	121	103	41	—	149	—	20	M36	UC319	153000	118400	FL319	—	**CUCFL319C(CE)**	21.8	—	25.8
100	**UCFL320**	440	270	277	94	360	44	40	59	125	108	42	—	154	—	21	M39	UC320	173000	140400	FL320	—	**CUCFL320C(CE)**	26.5	—	30.6
105	**UCFL321**	440	270	282	94	360	44	40	59	127	112	44	—	156	—	21	M39	UC321	183000	153100	FL321	—	**CUCFL321C(CE)**	28.2	—	31.9
110	**UCFL322**	470	300	305	96	390	44	42	60	131	117	46	—	165	—	26	M39	UC322	205000	178800	FL322	—	**CUCFL322C(CE)**	33.1	—	38.7
120	**UCFL324**	520	330	333	110	430	47	48	65	140	126	51	—	175	—	25	M42	UC324	207000	184800	FL324	—	**CUCFL324C(CE)**	45.7	—	52.4
130	**UCFL326**	550	360	360	115	460	47	50	65	146	135	54	—	180	—	24	M42	UC326	229000	214300	FL326	—	**CUCFL326C(CE)**	57.5	—	64.4
140	**UCFL328**	600	400	400	125	500	51	60	75	161	145	59	—	195	—	24	M45	UC328	255000	246000	FL328	—	**CUCFL328C(CE)**	79.7	—	86.3

Remarks: 1. Grease nipple: 1/4-28UNF for bore number 13 and under
PF1/8 for bore number 14 and over

Remarks: 2. Examples of unit numbers with cover:

With steel cover { Cover with rubber seal :UCFL213C
End cover :UCFL213E

With cast cover { Cover with rubber seal :CUCFL213C
End cover :CUCFL213CE

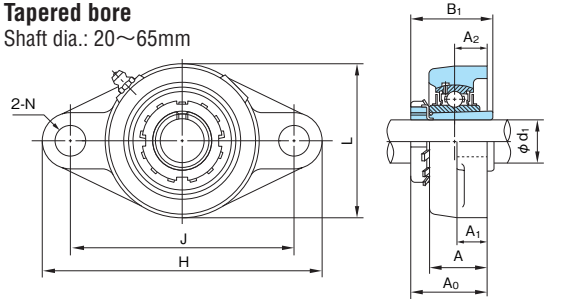
Rhombic Flange Units

UKFL+H type

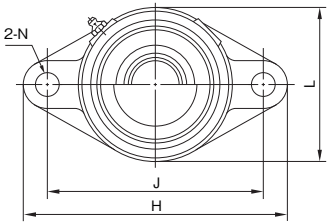
With adapter assembly

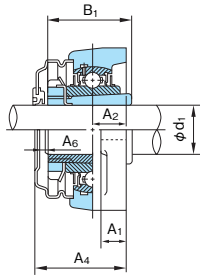
Tapered bore

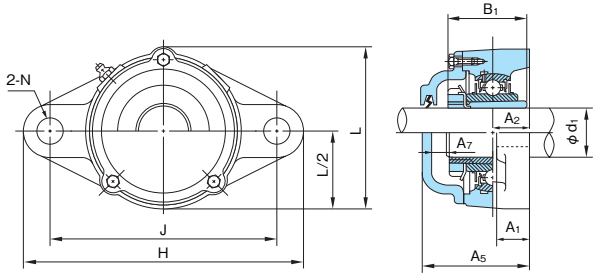
Shaft dia.: 20～65mm



With steel cover







With cast cover

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)														Bolt size	Bearings			Housing No.	Unit No. with steel cover	Unit No. with cast cover	Mass of Unit (kg)		
		H	L	L_1	A	J	N	A_1	A_2	A_0	B_1	A_4	A_5	A_6	A_7		No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Cover with rubber seal (End cover)	Cover with rubber seal (End cover)	standard	With steel cover	With cast cover
20	**UKFL205+H2305**	130	68	73	27	99	16	14	16	35.5	35	47	51	10	9	M14	UK205+H2305	14000	7900	FL205	**UKFL205C(E)+H2305**	**CUKFL205C(CE)+H2305**	0.68	0.72	1.1
	UKFLX05+H2305	141	83	—	30	117	12	13	18	39	35	51	—	9	—	M10	UKX05+H2305	19600	11300	FLX05	**UKFLX05C(E)+H2305**	—	1.0	1.0	—
	UKFL305+H2305	150	80	84	29	113	19	13	16	37	35	—	55	—	12	M16	UK305+H2305	21300	10900	FL305	—	**CUKFL305C(CE)+H2305**	1.1	—	1.5
25	**UKFL206+H2306**	148	80	84	31	117	16	14	18	39	38	49	55	9	10	M14	UK206+H2306	19600	11300	FL206	**UKFL206C(E)+H2306**	**CUKFL206C(CE)+H2306**	1.0	1.1	1.6
	UKFLX06+H2306	156	95	—	34	130	16	14	19	40.5	38	54	—	12	—	M14	UKX06+H2306	25900	15400	FLX06	**UKFLX06C(E)+H2306**	—	1.5	1.5	—
	UKFL306+H2306	180	90	94	32	134	23	15	18	40.5	38	—	60	—	13	M20	UK306+H2306	26800	15000	FL306	—	**CUKFL306C(CE)+H2306**	1.5	—	2.0
30	**UKFL207+H2307**	161	90	94	34	130	16	16	19	41.5	43	54	59	11	11	M14	UK207+H2307	25900	15400	FL207	**UKFL207C(E)+H2307**	**CUKFL207C(CE)+H2307**	1.3	1.4	2.0
	UKFLX07+H2307	171	105	—	38	144	16	14	21	44.5	43	63	—	17	—	M14	UKX07+H2307	29300	17900	FLX07	**UKFLX07C(E)+H2307**	—	1.9	2.0	—
	UKFL307+H2307	185	100	104	36	141	23	16	20	44.5	43	—	65	—	14	M20	UK307+H2307	33500	19200	FL307	—	**CUKFL307C(CE)+H2307**	1.9	—	2.4
35	**UKFL208+H2308**	175	100	104	36	144	16	16	21	45.5	46	61	66	14	14	M14	UK208+H2308	29300	17900	FL208	**UKFL208C(E)+H2308**	**CUKFL208C(CE)+H2308**	1.7	1.8	2.4
	UKFLX08+H2308	179	111	—	40	148	16	14	22	47	46	63	—	15	—	M14	UKX08+H2308	33000	20500	FLX08	**UKFLX08C(E)+H2308**	—	2.1	2.1	—
	UKFL308+H2308	200	112	118	40	158	23	17	23	50	46	—	73	—	17	M20	UK308+H2308	40500	23900	FL308	—	**CUKFL308C(CE)+H2308**	2.5	—	3.0
40	**UKFL209+H2309**	188	108	113	38	148	19	18	22	48	50	63	67	14	13	M16	UK209+H2309	33000	20500	FL209	**UKFL209C(E)+H2309**	**CUKFL209C(CE)+H2309**	2.0	2.1	2.8
	UKFLX09+H2309	189	116	—	40	157	16	14	23	49.5	50	67	—	16	—	M14	UKX09+H2309	35500	23200	FLX09	**UKFLX09C(E)+H2309**	—	2.4	2.5	—
	UKFL309+H2309	230	125	132	44	177	25	18	25	54.5	50	—	78	—	17	M22	UK309+H2309	51500	29500	FL309	—	**CUKFL309C(CE)+H2309**	3.4	—	4.3
45	**UKFL210+H2310**	197	115	120	40	157	19	18	22	49.5	55	66	71	15	15	M16	UK210+H2310	35500	23200	FL210	**UKFL210C(E)+H2310**	**CUKFL210C(CE)+H2310**	2.3	2.5	3.4
	UKFLX10+H2310	216	133	—	44	184	19	20	26	54.5	55	70	—	14	—	M16	UKX10+H2310	43000	29400	FLX10	**UKFLX10C(E)+H2310**	—	3.6	3.7	—
	UKFL310+H2310	240	140	144	48	187	25	19	28	60	55	—	85	—	19	M22	UK310+H2310	61500	38200	FL310	—	**CUKFL310C(CE)+H2310**	4.4	—	5.5
50	**UKFL211+H2311**	224	130	134	43	184	19	20	25	53.5	59	69	75	14	15	M16	UK211+H2311	43000	29400	FL211	**UKFL211C(E)+H2311**	**CUKFL211C(CE)+H2311**	3.3	3.5	4.5
	UKFL311+H2311	250	150	154	52	198	25	20	30	63.5	59	—	90	—	20	M22	UK311+H2311	71500	44800	FL311	—	**CUKFL311C(CE)+H2311**	5.1	—	6.1
55	**UKFL212+H2312**	250	140	144	48	202	23	20	29	60	62	80	86	19	20	M20	UK212+H2312	52500	36100	FL212	**UKFL212C(E)+H2312**	**CUKFL212C(CE)+H2312**	4.1	4.4	5.5
	UKFL312+H2312	270	160	164	56	212	31	22	33	69	62	—	98	—	23	M27	UK312+H2312	81500	52000	FL312	—	**CUKFL312C(CE)+H2312**	6.1	—	7.4
60	**UKFL213+H2313**	258	155	157	50	210	23	24	30	63	65	81	89	17	20	M20	UK213+H2313	57500	40000	FL213	**UKFL213C(E)+H2313**	**CUKFL213C(CE)+H2313**	5.2	5.5	6.9
	UKFL313+H2313	295	175	186	58	240	31	25	33	71	65	—	103	—	24	M27	UK313+H2313	92500	59700	FL313	—	**CUKFL313C(CE)+H2313**	7.4	—	9.4
65	**UKFL215+H2315**	275	165	168	56	225	23	24	34	69.5	73	—	102	—	26	M20	UK215+H2315	66000	48200	FL215	—	**CUKFL215C(CE)+H2315**	6.8	—	8.3
	UKFL315+H2315	320	195	206	66	260	35	30	39	81	73	—	114	—	25	M30	UK315+H2315	11400	76900	FL315	—	**CUKFL315C(CE)+H2315**	10.2	—	12.6

Remarks: 1. Grease nipple: 1/4-28UNF for bore number 13 and under
PF1/8 for bore number 14 and over

Remarks: 2. Examples of unit numbers with cover:

With steel cover { Cover with rubber seal :UKFL210C+H2310
End cover :UKFL210E+H2310

With cast cover { Cover with rubber seal :CUKFL210C+H2310
End cover :CUKFL210CE+H2310

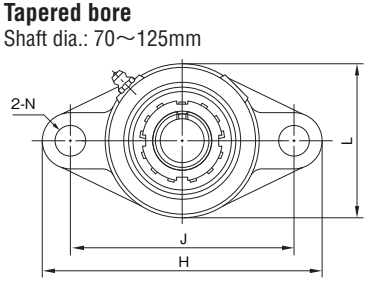
Rhombic Flange Units

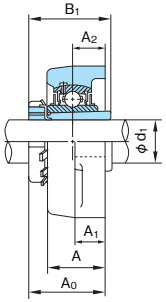
UKFL+H type

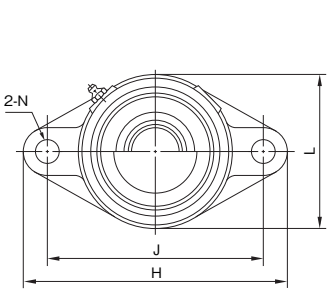
With adapter assembly

Tapered bore

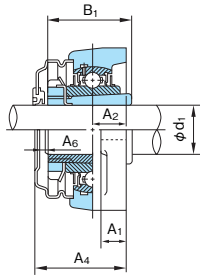
Shaft dia.: 70～125mm

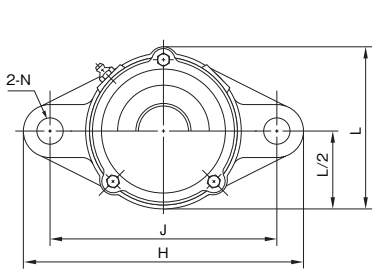


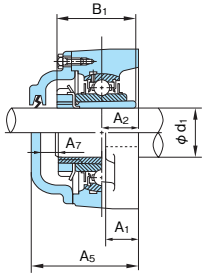




With steel cover







With cast cover

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)														Bolt size	Bearings			Housing No.	Unit No. with steel cover	Unit No. with cast cover	Mass of Unit (kg)		
		H	L	L_1	A	J	N	A_1	A_2	A_0	B_1	A_4	A_5	A_6	A_7		No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Cover with rubber seal (End cover)	Cover with rubber seal (End cover)	standard	With steel cover	With cast cover
70	**UKFL216+H2316**	290	180	188	58	233	25	24	34	73	78	—	107	—	26	M22	UK216+H2316	72500	53000	FL216	—	**CUKFL216C(CE)+H2316**	8.4	—	10.6
	UKFL316+H2316	355	210	218	68	285	38	32	38	83.5	78	—	115	—	23	M33	UK316+H2316	123000	86400	FL316	—	**CUKFL316C(CE)+H2316**	12.8	—	15.9
75	**UKFL217+H2317**	305	190	198	63	248	25	26	36	77	82	—	111	—	26	M22	UK217+H2317	83500	61800	FL217	—	**CUKFL217C(CE)+H2317**	10.0	—	12.4
	UKFL317+H2317	370	220	232	74	300	38	32	44	92	82	—	126	—	26	M33	UK317+H2317	132000	96500	FL317	—	**CUKFL317C(CE)+H2317**	14.5	—	18.4
80	**UKFL218+H2318**	320	205	211	68	265	25	26	40	82.5	86	—	122	—	31	M22	UK218+H2318	95500	71400	FL218	—	**CUKFL218C(CE)+H2318**	12.3	—	15.4
	UKFL318+H2318	385	235	245	76	315	38	36	44	93.5	86	—	128	—	26	M33	UK318+H2318	143000	107200	FL318	—	**CUKFL318C(CE)+H2318**	17.2	—	21.7
85	**UKFL319+H2319**	405	250	257	94	330	41	40	59	111	90	—	149	—	30	M36	UK319+H2319	153000	118400	FL319	—	**CUKFL319C(CE)+H2319**	21.8	—	26.0
90	**UKFL320+H2320**	440	270	277	94	360	44	40	59	115	97	—	154	—	31	M39	UK320+H2320	173000	140400	FL320	—	**CUKFL320C(CE)+H2320**	26.5	—	31.2
100	**UKFL322+H2322**	470	300	305	96	390	44	42	60	121	105	—	165	—	36	M39	UK322+H2322	205000	178800	FL322	—	**CUKFL322C(CE)+H2322**	33.2	—	39.4
110	**UKFL324+H2324**	520	330	333	110	430	47	48	65	130	112	—	175	—	35	M42	UK324+H2324	207000	184800	FL324	—	**CUKFL324C(CE)+H2324**	45.2	—	52.6
115	**UKFL326+H2326**	550	360	360	115	460	47	50	65	134	121	—	180	—	36	M42	UK326+H2326	229000	214300	FL326	—	**CUKFL326C(CE)+H2326**	57.8	—	65.9
125	**UKFL328+H2328**	600	400	400	125	500	51	60	75	148	131	—	195	—	37	M45	UK328+H2328	255000	246000	FL328	—	**CUKFL328C(CE)+H2328**	80.0	—	87.8

Remarks: 1. Grease nipple: PF1/8

Remarks: 2. Examples of unit numbers with cover:

With cast cover { Cover with rubber seal :CUKFL320C+H2320
End cover :CUKFL320CE+H2320

NACHI

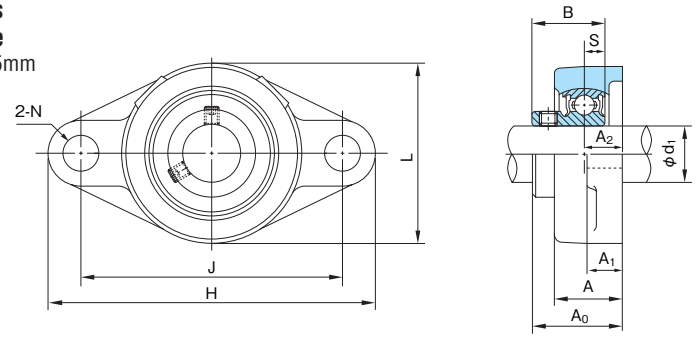
Rhombic Flange Units

BFL type

With set screws

Cylindrical bore

Shaft dia.: 20～35mm



1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)										Bolt size		Bearings			Housing No.	Mass of Unit (kg)
		H	L	A	J	N	A_1	A_2	A_0	B	S			No.	Basic load rating (N)			
															Cr	Cor		
20	**BFL204**	113	60	25.5	90	12	12	15	32.7	24.7	7	M10		B4	12800	6600	FL204 G00	0.41
25	**BFL205**	130	68	27	99	16	14	16	36.2	27	7.5	M14		B5	14000	7900	FL205 G00	0.60
30	**BFL206**	148	80	31	117	16	14	18	40.3	30.3	8	M14		B6	19600	11300	FL206 G00	0.88
35	**BFL207**	161	90	34	130	16	16	19	43.4	32.9	8.5	M14		B7	25900	15400	FL207 G00	1.2

NACHI

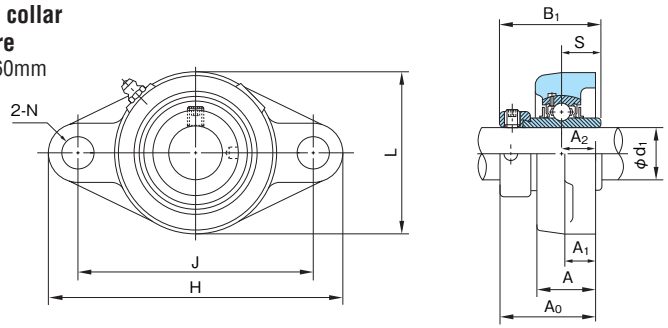
Rhombic Flange Units

UGFL type

With eccentric collar

Cylindrical bore

Shaft dia.: 20～60mm



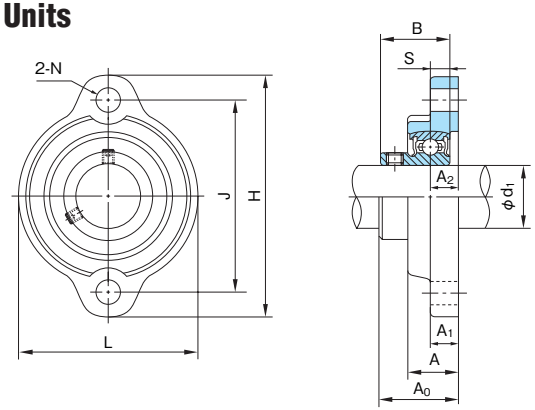
1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)										Bolt size		Bearings			Housing No.	Mass of Unit (kg)
		H	L	A	J	N	A_1	A_2	A_0	B_1	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor		
20	UGFL204	113	60	25.5	90	12	12	15	41.6	43.7	17.1	M10		UG204+ER	12800	6600	FL204	0.47
25	UGFL205	130	68	27	99	16	14	16	42.9	44.4	17.5	M14		UG205+ER	14000	7900	FL205	0.63
30	UGFL206	148	80	31	117	16	14	18	48.1	48.4	18.3	M14		UG206+ER	19600	11300	FL206	0.96
35	UGFL207	161	90	34	130	16	16	19	51.3	51.1	18.8	M14		UG207+ER	25900	15400	FL207	1.3
40	UGFL208	175	100	36	144	16	16	21	55.9	56.3	21.4	M14		UG208+ER	29300	17900	FL208	1.7
45	UGFL209	188	108	38	148	19	18	22	56.9	56.3	21.4	M16		UG209+ER	33000	20500	FL209	2.0
50	UGFL210	197	115	40	157	19	18	22	60.1	62.7	24.6	M16		UG210+ER	35500	23200	FL210	2.3
55	UGFL211	224	130	43	184	19	20	25	68.6	71.4	27.8	M16		UG211+ER	43000	29400	FL211	3.4
60	UGFL212	250	140	48	202	23	20	29	75.8	77.8	31	M20		UG212+ER	52500	36100	FL212	4.4

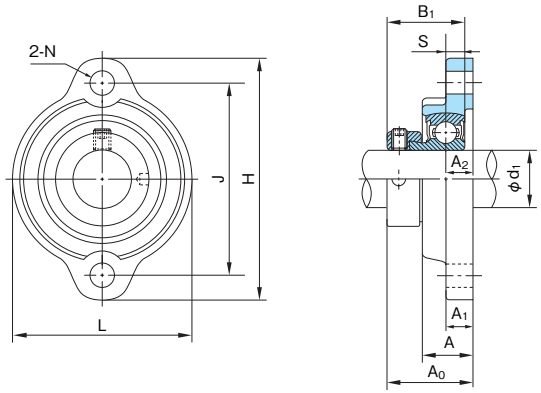
Remark: Grease nipple: 1/4-28UNF

■ Rhombic Flange Units

BLFL type
With set screws
Cylindrical bore
Shaft dia.: 12～35mm



KHLFL type
With eccentric collar
Cylindrical bore
Shaft dia.: 12～35mm



BLFL type

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)										Bolt size		Bearings			Housing No.	Mass of Unit (kg)
		H	L	A	J	N	A_1	A_2	A_0	B	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor		
12	BLFL1J	81	56	18	63.5	7	9.5	9.5	25.5	22	6	M 6		B1	9550	4800	LFL3J	0.28
15	BLFL2J	81	56	18	63.5	7	9.5	9.5	25.5	22	6	M 6		B2	9550	4800	LFL3J	0.27
17	BLFL3J	81	56	18	63.5	7	9.5	9.5	25.5	22	6	M 6		B3	9550	4800	LFL3J	0.25
20	BLFL4J	90	63	20	71.5	10	11	11	28.7	24.7	7	M 8		B4	12800	6600	LFL4J	0.30
25	BLFL5J	95	69	20	76	10	11	11	31.2	27	7.5	M 8		B5	14000	7900	LFL5J	0.40
30	BLFL6J	113	79	22.5	90.5	12	12	12	34.3	30.3	8	M10		B6	19600	11300	LFL6J	0.58
35	BLFL7J	122	89	24	100	12	13	13	37.4	32.9	8.5	M10		B7	25900	15400	LFL7J	0.81

Remark: Spherical bearing seating diameter of housing is applied tolerance class J7.

KHLFL type

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)										Bolt size		Bearings			Housing No.	Mass of Unit (kg)
		H	L	A	J	N	A_1	A_2	A_0	B_1	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor		
12	KHLFL201AJ	81	56	18	63.5	7	9.5	9.5	31.6	28.6	6.5	M 6		KH201AE	9550	4800	LFL3J	0.30
15	KHLFL202AJ	81	56	18	63.5	7	9.5	9.5	31.6	28.6	6.5	M 6		KH202AE	9550	4800	LFL3J	0.29
17	KHLFL203AJ	81	56	18	63.5	7	9.5	9.5	31.6	28.6	6.5	M 6		KH203AE	9550	4800	LFL3J	0.28
20	KHLFL204AJ	90	63	20	71.5	10	11	11	34.5	31	7.5	M 8		KH204AE	12800	6600	LFL4J	0.34
25	KHLFL205AJ	95	69	20	76	10	11	11	34.5	31	7.5	M 8		KH205AE	14000	7900	LFL5J	0.44
30	KHLFL206AJ	113	79	22.5	90.5	12	12	12	38.7	35.7	9	M10		KH206AE	19600	11300	LFL6J	0.64
35	KHLFL207AJ	122	89	24	100	12	13	13	42.4	38.9	9.5	M10		KH207AE	25900	15400	LFL7J	0.92

Remark: Spherical bearing seating diameter of housing is applied tolerance class J7.

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Rhombic Flange Units

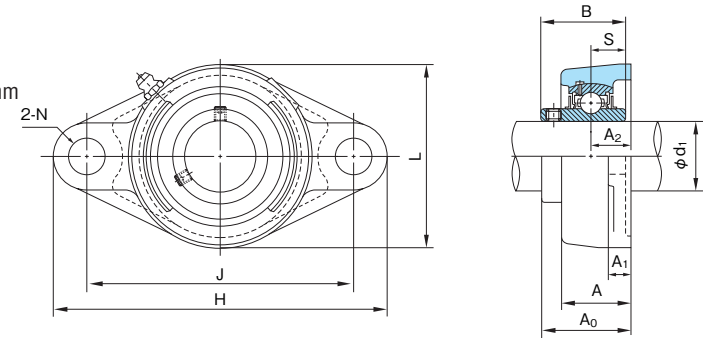
Cast Stainless Steel

MUCFL type

With set screws

Cylindrical bore

Shaft dia.: 20～50mm



1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)										Bolt size		Bearings			Housing No.	Mass of Unit (kg)
		H	L	A	J	N	A_1	A_2	A_0	B	S			No.	Basic load rating (N)			
															Cr	Cor		
20	**MUCFL204**	113	60	25.5	90	12	10	15	33.3	31	12.7	M10		MUC204	10900	5300	MFL204	0.35
25	**MUCFL205**	130	68	27	99	16	10	16	35.7	34	14.3	M14		MUC205	11900	6300	MFL205	0.50
30	**MUCFL206**	148	80	31	117	16	10	18	40.2	38.1	15.9	M14		MUC206	16700	9050	MFL206	0.80
35	**MUCFL207**	161	90	34	130	16	11	19	44.4	42.9	17.5	M14		MUC207	22000	12300	MFL207	1.05
40	**MUCFL208**	175	100	36	144	16	11	21	51.2	49.2	19	M14		MUC208	24900	14300	MFL208	1.35
45	**MUCFL209**	188	108	38	148	19	13	22	52.2	49.2	19	M16		MUC204	28100	16400	MFL209	1.65
50	**MUCFL210**	197	115	40	157	19	13	22	54.6	51.6	19	M16		MUC210	30200	18600	MFL210	1.90

Remark: Grease nipple: 1/4-28UNF

Silver series

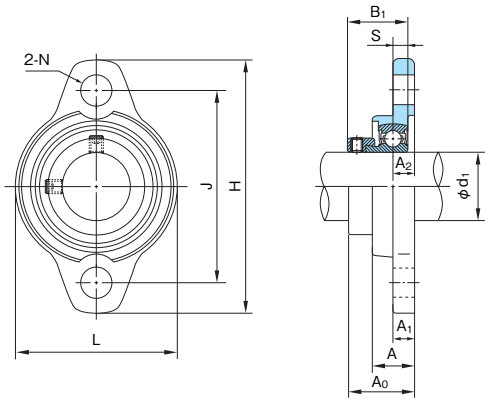
Rhombic Flange Units

UFL type

With eccentric collar

Cylindrical bore

Shaft dia.: 8～30mm

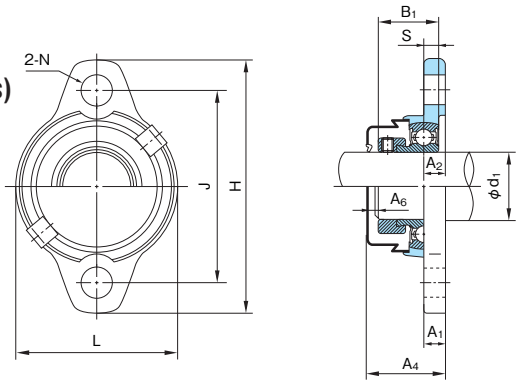


MUFL type (Stainless Silver Series)

With eccentric collar

Cylindrical bore

Shaft dia.: 10～30mm



With steel covers

UFL type

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)												Bolt size	Bearings No.	Bearings Basic load rating (N) Cr	Bearings Basic load rating (N) Cor	Housing No.	Unit No. with covers Cover with rubber seal (End cover)	Cover No. (Reference) Cover with rubber seal	Cover No. (Reference) Side end cover	Mass of Unit (kg) standard	Mass of Unit (kg) with cover
		H	L	A	J	N	A_1	A_2	A_0	B_1	S	A_4	A_6										
10	**UFL000**	60	36	11.5	45	7	5.5	5.5	19	17.5	4	22	2	M 6	U000+ER	4600	2000	FL000	**UFL000C(E)**	000CP10	000CPE	60	65
12	**UFL001**	63	38	11.5	48	7	5.5	5.5	19	17.5	4	22	2	M 6	U001+ER	5100	2400	FL001	**UFL001C(E)**	001CP12	001CPE	76	80
15	**UFL002**	67	42	13	53	7	6.5	6.5	20.5	18.5	4.5	24	2	M 6	U002+ER	5600	2800	FL002	**UFL002C(E)**	002CP15	002CPE	100	105
17	**UFL003**	71	46	14	56	7	7	7	22.5	20.5	5	26	2	M 6	U003+ER	6000	3300	FL003	**UFL003C(E)**	003CP17	003CPE	129	135
20	**UFL004**	90	55	16	71	10	8	8	26.5	24.5	6	31	3	M 8	U004+ER	9350	5100	FL04-5	**UFL004C(E)**	04-5CP20	04-5CPE	205	215
25	**UFL005**	95	60	16	75	10	8	8	27.5	25.5	6	32	3	M 8	U005+ER	10100	5800	FL05-6	**UFL005C(E)**	05-6CP25	05-6CPE	244	255
30	**UFL006**	112	70	18	85	13	9	9	29	26.5	6.5	34	4	M10	U006+ER	13200	8300	FL06-7	**UFL006C(E)**	06-7CP30	06-7CPE	354	370
8	**UFL 08**	48	27	8.5	37	4.8	4	4.5	16	15	3.5	—	—	M 4	U 08+ER(1)	3300	1360	FL08	—	—	—	30	—

Note: (1) Set screw type U08X is also available. Inner ring width B of U08X is 12mm. Dimension A_0 with U08X is 13mm.

Remark: Examples of unit numbers with cover: Both covers with rubber seal : UFL005C
One side end cover : UFL005E

MUFL type (Stainless Silver Series)

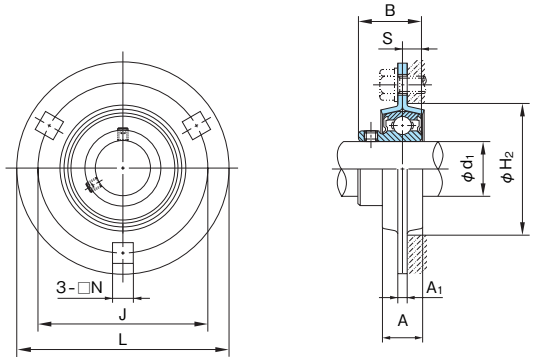
1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)												Bolt size	Bearings No.	Bearings Basic load rating (N) Cr	Bearings Basic load rating (N) Cor	Housing No.	Unit No. with covers Cover with rubber seal (End cover)	Cover No. (Reference) Cover with rubber seal	Cover No. (Reference) Side end cover	Mass of Unit (kg) standard	Mass of Unit (kg) with cover
		H	L	A	J	N	A_1	A_2	A_0	B_1	S	A_4	A_6										
10	**MUFL000**	60	36	11.5	45	7	5.5	5.5	19	17.5	4	22	2	M 6	MU000+ER	3900	1550	FL000Z3	**MUFL000C(E)**	000CP10	000CPE	60	65
12	**MUFL001**	63	38	11.5	48	7	5.5	5.5	19	17.5	4	22	2	M 6	MU001+ER	4300	1900	FL001Z3	**MUFL001C(E)**	001CP12	001CPE	76	80
15	**MUFL002**	67	42	13	53	7	6.5	6.5	20.5	18.5	4.5	24	2	M 6	MU002+ER	4750	2250	FL002Z3	**MUFL002C(E)**	002CP15	002CPE	100	105
17	**MUFL003**	71	46	14	56	7	7	7	22.5	20.5	5	26	2	M 6	MU003+ER	5100	2650	FL003Z3	**MUFL003C(E)**	003CP17	003CPE	129	135
20	**MUFL004**	90	55	16	71	10	8	8	26.5	24.5	6	31	3	M 8	MU004+ER	7900	4000	FL04-5Z3	**MUFL004C(E)**	04-5CP20	04-5CPE	205	215
25	**MUFL005**	95	60	16	75	10	8	8	27.5	25.5	6	32	3	M 8	MU005+ER	8600	4650	FL05-6Z3	**MUFL005C(E)**	05-6CP25	05-6CPE	244	255
30	**MUFL006**	112	70	18	85	13	9	9	29	26.5	6.5	34	4	M10	MU006+ER	11300	6600	FL06-7Z3	**MUFL006C(E)**	06-7CP30	06-7CPE	354	370

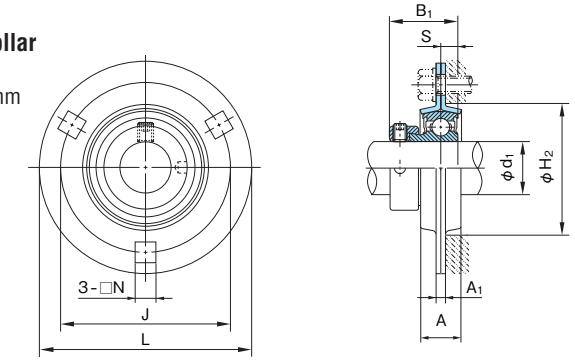
Remark: Examples of unit numbers with cover: Cover with rubber seal : MUFL005C
One side end cover : MUFL005E

■ Pressed Steel Round Flange Units

BPF type
With set screws
Cylindrical bore
Shaft dia.: 12～35mm



KHPF type
With eccentric collar
Cylindrical bore
Shaft dia.: 12～35mm



BPF type

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)								Bolt size		Bearings			Housing No.	Mass of Unit (kg)	Limiting load (N)	
		L	A	J	N	A_1	H_2 (Min)	B	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor			Radial	Axial
12	BPF1	81	14	63.5	7	4	49	22	6	M 6		B1	9550	4800	PF3	0.21	2650	1320
15	BPF2	81	14	63.5	7	4	49	22	6	M 6		B2	9550	4800	PF3	0.20	2650	1320
17	BPF3	81	14	63.5	7	4	49	22	6	M 6		B3	9550	4800	PF3	0.18	2650	1320
20	BPF4	90	16	71.5	9	4	56	24.7	7	M 8		B4	12800	6600	PF4	0.25	3100	1520
25	BPF5	95	18	76	9	4	60	27	7.5	M 8		B5	14000	7900	PF5	0.35	3550	1750
30	BPF6	113	18	90.5	11	5.2	71	30.3	8	M10		B6	19600	11300	PF6	0.54	4900	2450
35	BPF7	122	20	100	11	5.2	81	32.9	8.5	M10		B7	25900	15400	PF7	0.71	6200	3100

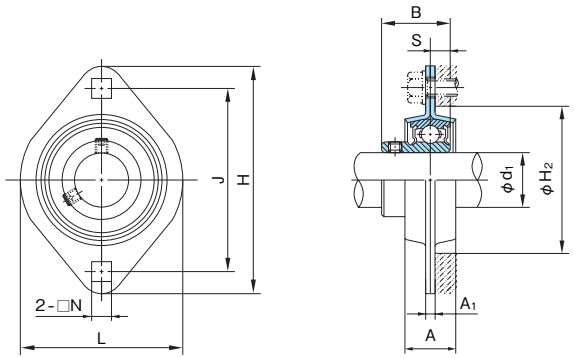
KHPF type

1N=0.102kgf

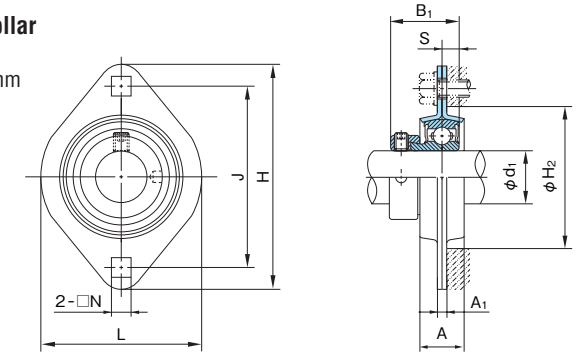
Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)								Bolt size		Bearings			Housing No.	Mass of Unit (kg)	Limiting load (N)	
		L	A	J	N	A_1	H_2 (Min)	B_1	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor			Radial	Axial
12	KHPF201A	81	14	63.5	7	4	49	28.6	6.5	M 6		KH201AE	9550	4800	PF3	0.23	2650	1320
15	KHPF202A	81	14	63.5	7	4	49	28.6	6.5	M 6		KH202AE	9550	4800	PF3	0.22	2650	1320
17	KHPF203A	81	14	63.5	7	4	49	28.6	6.5	M 6		KH203AE	9550	4800	PF3	0.21	2650	1320
20	KHPF204A	90	16	71.5	9	4	56	31	7.5	M 8		KH204AE	12800	6600	PF4	0.29	3100	1520
25	KHPF205A	95	18	76	9	4	60	31	7.5	M 8		KH205AE	14000	7900	PF5	0.39	3550	1750
30	KHPF206A	113	18	90.5	11	5.2	71	35.7	9	M10		KH206AE	19600	11300	PF6	0.60	4900	2450
35	KHPF207A	122	20	100	11	5.2	81	38.9	9.5	M10		KH207AE	25900	15400	PF7	0.82	6200	3100

■ Pressed Steel Rhombic Flange Units

BPFL type
With set screws
Cylindrical bore
Shaft dia.: 12～35mm



KHPFL type
With eccentric collar
Cylindrical bore
Shaft dia.: 12～35mm



BPFL type

1N=0.102kgf

Shaft dia. d1 (mm)	Unit No.	Boundary dimensions (mm)									Bolt size		Bearings			Housing No.	Mass of Unit (kg)	Limiting load (N)	
		H	L	A	J	N	A1	H2	B	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor			Radial	Axial
12	BPFL1	81	59	14	63.5	7	4	49	22	6	M 6		B1	9550	4800	PFL3	0.25	2650	640
15	BPFL2	81	59	14	63.5	7	4	49	22	6	M 6		B2	9550	4800	PFL3	0.24	2650	640
17	BPFL3	81	59	14	63.5	7	4	49	22	6	M 6		B3	9550	4800	PFL3	0.22	2650	640
20	BPFL4	90	67	16	71.5	9	4	56	24.7	7	M 8		B4	12800	6600	PFL4	0.29	3100	740
25	BPFL5	95	71	18	76	9	4	60	27	7.5	M 8		B5	14000	7900	PFL5	0.36	3550	900
30	BPFL6	113	84	18	90.5	11	5.2	71	30.3	8	M10		B6	19600	11300	PFL6	0.56	4900	1200
35	BPFL7	125	94	20	100	11	5.2	81	32.9	8.5	M10		B7	25900	15400	PFL7	0.70	6200	1500

KHPFL type

1N=0.102kgf

Shaft dia. d1 (mm)	Unit No.	Boundary dimensions (mm)									Bolt size		Bearings			Housing No.	Mass of Unit (kg)	Limiting load (N)	
		H	L	A	J	N	A1	H2	B1	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor			Radial	Axial
12	KHPFL201A	81	59	14	63.5	7	4	49	28.6	6.5	M 6		KH201AE	9550	4800	PFL3	0.27	2650	640
15	KHPFL202A	81	59	14	63.5	7	4	49	28.6	6.5	M 6		KH202AE	9550	4800	PFL3	0.26	2650	640
17	KHPFL203A	81	59	14	63.5	7	4	49	28.6	6.5	M 6		KH203AE	9550	4800	PFL3	0.25	2650	640
20	KHPFL204A	90	67	16	71.5	9	4	56	31	7.5	M 8		KH204AE	12800	6600	PFL4	0.33	3100	740
25	KHPFL205A	95	71	18	76	9	4	60	31	7.5	M 8		KH205AE	14000	7900	PFL5	0.40	3550	900
30	KHPFL206A	113	84	18	90.5	11	5.2	71	35.7	9	M10		KH206AE	19600	11300	PFL6	0.62	4900	1200
35	KHPFL207A	125	94	20	100	11	5.2	81	38.9	9.5	M10		KH207AE	25900	15400	PFL7	0.81	6200	1500

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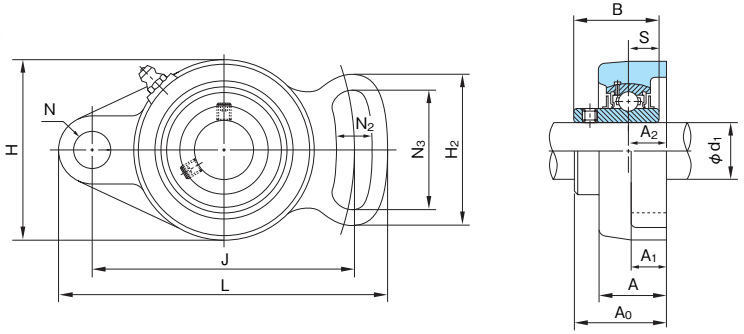
Transformed Rhombic Flange Units

UCFA type

With set screws

Cylindrical bore

Shaft dia.:
12～55mm



1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)													Bolt size		Bearings			Housing No.	Mass of Unit (kg)
		H	H_2	L	A	J	N	N_2	N_3	A_1	A_2	A_0	B	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor		
12	UCFA201	60	54	102	25.5	78	10	10	40	12	15	33.3	31	12.7	M 8		UC201	12800	6600	FA204	0.50
15	UCFA202	60	54	102	25.5	78	10	10	40	12	15	33.3	31	12.7	M 8		UC202	12800	6600	FA204	0.49
17	UCFA203	60	54	102	25.5	78	10	10	40	12	15	33.3	31	12.7	M 8		UC203	12800	6600	FA204	0.48
20	UCFA204	60	54	102	25.5	78	10	10	40	12	15	33.3	31	12.7	M 8		UC204	12800	6600	FA204	0.46
25	UCFA205	68	65	125	27	98	12	13	51	14	16	35.7	34	14.3	M10		UC205	14000	7900	FA205	0.66
30	UCFA206	80	72	144	31	117	12	13	58	14	18	40.2	38.1	15.9	M10		UC206	19600	11300	FA206	1.0
35	UCFA207	90	82	161	34	130	14	15	66	16	19	44.4	42.9	17.5	M12		UC207	25900	15400	FA207	1.4
40	UCFA208	100	87	175	36	144	14	15	71	16	21	51.2	49.2	19	M12		UC208	29300	17900	FA208	1.7
45	UCFA209	108	90	181	38	148	16	17	72	18	22	52.2	49.2	19	M14		UC209	33000	20500	FA209	2.0
50	UCFA210	115	94	190	40	157	16	17	76	18	22	54.6	51.6	19	M14		UC210	35500	23200	FA210	2.4
55	UCFA211	130	104	219	43	184	16	17	86	20	25	58.4	55.6	22.2	M14		UC211	43000	29400	FA211	3.4

Remark: Grease nipple: 1/4-28UNF

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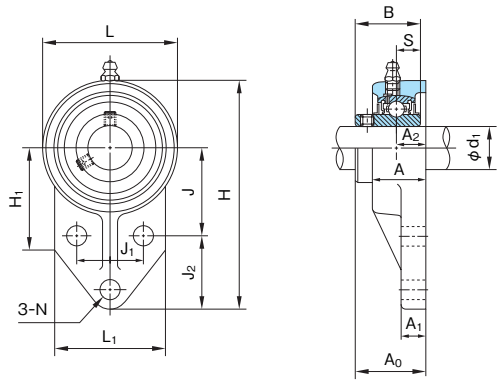
Flange Units

UCFK type

With set screws

Cylindrical bore

Shaft dia.: 12～50mm



1N=0.102kgf

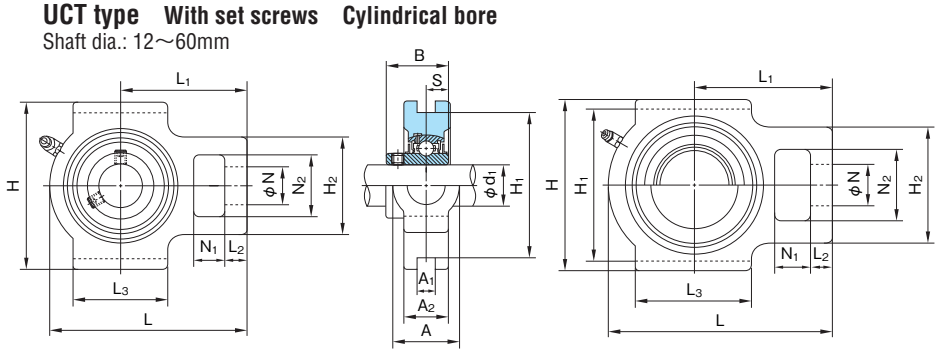
Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)														Bolt size		Bearings			Housing No.	Mass of Unit (kg)
		H	H_1	L	L_1	A	J	J_1	J_2	N	A_1	A_2	A_0	B	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor		
12	UCFK201	110	52	62	52	25.5	42	32	27	10	13	15	33.3	31	12.7	M 8		UC201	12800	6600	FK204	0.60
15	UCFK202	110	52	62	52	25.5	42	32	27	10	13	15	33.3	31	12.7	M 8		UC202	12800	6600	FK204	0.58
17	UCFK203	110	52	62	52	25.5	42	32	27	10	13	15	33.3	31	12.7	M 8		UC203	12800	6600	FK204	0.57
20	UCFK204	110	52	62	52	25.5	42	32	27	10	13	15	33.3	31	12.7	M 8		UC204	12800	6600	FK204	0.55
25	UCFK205	116	52	68	56	27	45	34	27	10	13	16	35.7	34	14.3	M 8		UC205	14000	7900	FK205	0.66
30	UCFK206	130	55	78	65	31	50	40	29	10	13	18	40.2	38.1	15.9	M 8		UC206	19600	11300	FK206	0.93
35	UCFK207	144	62	90	70	34	55	46	32	10	15	19	44.4	42.9	17.5	M 8		UC207	25900	15400	FK207	1.3
40	UCFK208	164	72	100	78	36	60	50	41	12	16	21	51.2	49.2	19	M10		UC208	29300	17900	FK208	1.7
45	UCFK209	174	76	106	80	38	65	54	43	12	18	22	52.2	49.2	19	M10		UC209	33000	20500	FK209	1.9
50	UCFK210	184	82	112	86	40	68	58	46	12	18	22	54.6	51.6	19	M10		UC210	35500	23200	FK210	2.2

Remark: Grease nipple: 1/4-28UNF

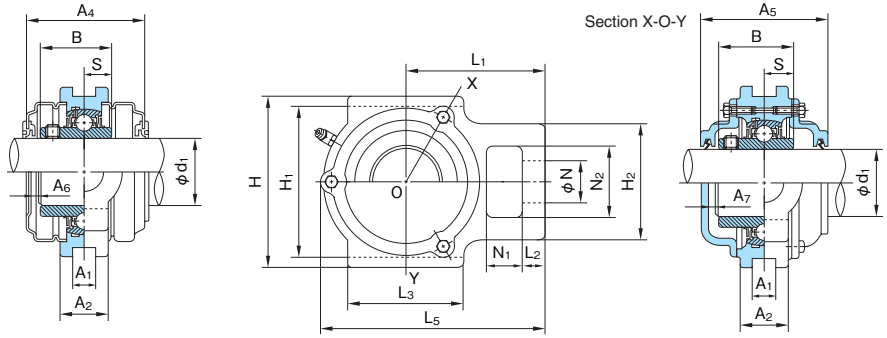
■ Take-up Units

UCT type With set screws Cylindrical bore

Shaft dia.: 12～60mm



With steel covers



With cast covers

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)																				Bearings			Housing No.	Unit No. with steel covers	Unit No. with cast covers	Mass of Unit (kg)		
		A	A_1	A_2	H	H_1	H_2	L	L_5	L_1	L_2	L_3	N	N_1	N_2	B	S	A_4	A_5	A_6	A_7	No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Covers with rubber seal (End cover on one side)	Covers with rubber seal (End cover on one side)	standard	With steel cover	With cast cover
12	**UCT201**	32	12	21	89	76	51	94	96	61	10	51	19	16	32	31	12.7	56	62	8	6	UC201	12800	6600	T204	**UCT201C(E)**	**CUCT201C(CE)**	0.79	0.85	1.2
15	**UCT202**	32	12	21	89	76	51	94	96	61	10	51	19	16	32	31	12.7	56	62	8	6	UC202	12800	6600	T204	**UCT202C(E)**	**CUCT202C(CE)**	0.77	0.83	1.2
17	**UCT203**	32	12	21	89	76	51	94	96	61	10	51	19	16	32	31	12.7	56	62	8	6	UC203	12800	6600	T204	**UCT203C(E)**	**CUCT203C(CE)**	0.76	0.82	1.2
20	**UCT204**	32	12	21	89	76	51	94	96	61	10	51	19	16	32	31	12.7	56	62	8	6	UC204	12800	6600	T204	**UCT204C(E)**	**CUCT204C(CE)**	0.74	0.80	1.2
	UCT205	32	12	24	89	76	51	97	100	62	10	51	19	16	32	34	14.3	63	70	11	9	UC205	14000	7900	T205	**UCT205C(E)**	**CUCT205C(CE)**	0.82	0.89	1.5
25	**UCTX05**	37	12	28	102	89	56	113	—	70	10	57	22	16	37	38.1	15.9	65	—	9	—	UCX05	19600	11300	TX05	**UCTX05C(E)**	—	1.3	1.3	—
	UCT305	36	12	26	89	80	62	122	122	76	12	65	26	16	36	38	15	—	78	—	10	UC305	21300	10900	T305	—	**CUCT305C(CE)**	1.4	—	2.0
	UCT206	37	12	28	102	89	56	113	113	70	10	57	22	16	37	38.1	15.9	65	74	9	8	UC206	19600	11300	T206	**UCT206C(E)**	**CUCT206C(CE)**	1.3	1.4	2.0
30	**UCTX06**	37	12	30	102	89	64	129	—	78	13	64	22	16	37	42.9	17.5	70	—	8	—	UCX06	25900	15400	TX06	**UCTX06C(E)**	—	1.6	1.6	—
	UCT306	41	16	28	100	90	70	137	137	85	14	74	28	18	41	43	17	—	84	—	10	UC306	26800	15000	T306	—	**CUCT306C(CE)**	1.8	—	2.5
	UCT207	37	12	30	102	89	64	129	129	78	13	64	22	16	37	42.9	17.5	70	80	8	8	UC207	25900	15400	T207	**UCT207C(E)**	**CUCT207C(CE)**	1.6	1.8	2.6
35	**UCTX07**	49	16	36	114	102	83	144	—	88	15	83	29	19	49	49.2	19	83	—	10	—	UCX07	29300	17900	TX07	**UCTX07C(E)**	—	2.6	2.6	—
	UCT307	45	16	32	111	100	75	150	150	94	15	80	30	20	45	48	19	—	90	—	10	UC307	33500	19200	T307	—	**CUCT307C(CE)**	2.4	—	3.3
	UCT208	49	16	33	114	102	83	144	144	88	16	83	29	19	49	49.2	19	82	90	10	8	UC208	29300	17900	T208	**UCT208C(E)**	**CUCT208C(CE)**	2.4	2.5	3.4
40	**UCTX08**	49	16	36	117	102	83	144	—	87	15	83	29	19	49	49.2	19	82	—	10	—	UCX08	33000	20500	TX08	**UCTX08C(E)**	—	2.6	2.6	—
	UCT308	50	18	34	124	112	83	162	162	100	17	89	32	22	50	52	19	—	100	—	11	UC308	40500	23900	T308	—	**CUCT308C(CE)**	3.0	—	4.0
	UCT209	49	16	35	117	102	83	144	145	87	16	83	29	19	49	49.2	19	82	90	10	8	UC209	33000	20500	T209	**UCT209C(E)**	**CUCT209C(CE)**	2.4	2.6	3.6
45	**UCTX09**	49	16	38	117	102	83	149	—	90	16	86	29	19	49	51.6	19	87	—	9	—	UCX09	35500	23200	TX09	**UCTX09C(E)**	—	2.8	3.0	—
	UCT309	55	18	38	138	125	90	178	178	110	18	97	34	24	55	57	22	—	106	—	12	UC309	51500	29500	T309	—	**CUCT309C(CE)**	4.1	—	5.5
	UCT210	49	16	37	117	102	83	149	151	90	16	86	29	19	49	51.6	19	87	98	9	10	UC210	35500	23200	T210	**UCT210C(E)**	**CUCT210C(CE)**	2.5	2.8	4.1
50	**UCTX10**	64	22	42	146	130	102	171	—	106	19	95	35	25	64	55.6	22.2	88	—	9	—	UCX10	43000	29400	TX10	**UCTX10C(E)**	—	4.4	4.6	—
	UCT310	61	20	40	151	140	98	191	191	117	20	106	37	27	61	61	22	—	114	—	12	UC310	61500	38200	T310	—	**CUCT310C(CE)**	5.2	—	6.8
	UCT211	64	22	38	146	130	102	171	174	106	19	95	35	25	64	55.6	22.2	88	100	9	10	UC211	43000	29400	T211	**UCT211C(E)**	**CUCT211C(CE)**	4.0	4.3	5.6
55	**UCTX11**	64	22	44	146	130	102	194	—	119	19	102	35	32	64	65.1	25.4	100	—	9	—	UCX11	52500	36100	TX11	**UCTX11C(E)**	—	5.2	5.5	—
	UCT311	66	22	44	163	150	105	207	207	127	21	115	39	29	66	66	25	—	120	—	13	UC311	71500	44800	T311	—	**CUCT311C(CE)**	6.4	—	8.3
	UCT212	64	22	42	146	130	102	194	194	119	19	102	35	32	64	65.1	25.4	102	114	10	11	UC212	52500	36100	T212	**UCT212C(E)**	**CUCT212C(CE)**	5.1	5.5	7.0
60	**UCTX12**	70	26	48	167	151	111	224	—	137	21	121	41	32	70	65.1	25.4	104	—	11	—	UCX12	57500	40000	TX12	**UCTX12C(E)**	—	7.2	7.4	—
	UCT312	71	22	46	178	160	113	220	220	135	23	123	41	31	71	71	26	—	130	—	14	UC312	81500	52000	T312	—	**CUCT312C(CE)**	7.6	—	10.7

Remarks: 1. Grease nipple: 1/4-28UNF

Remarks: 2. Examples of unit numbers with covers:

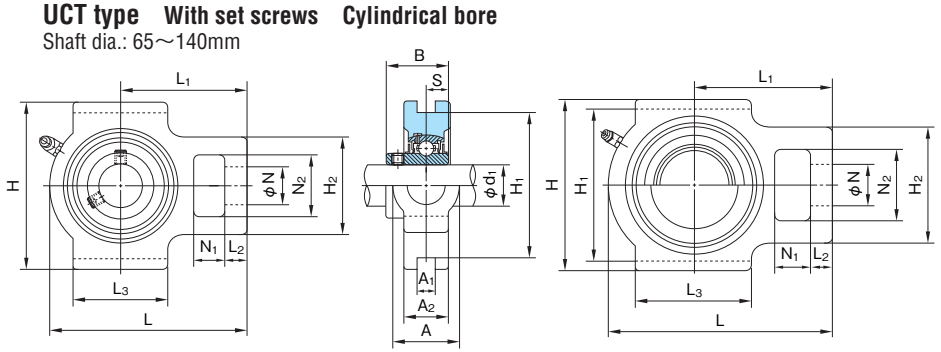
With steel cover { Covers with rubber seal on both sides :UCT210C
An end cover and a cover with rubber seal :UCT210E

With cast cover { Covers with rubber seal on both sides :CUCT210C
An end cover and a cover with rubber seal :CUCT210CE

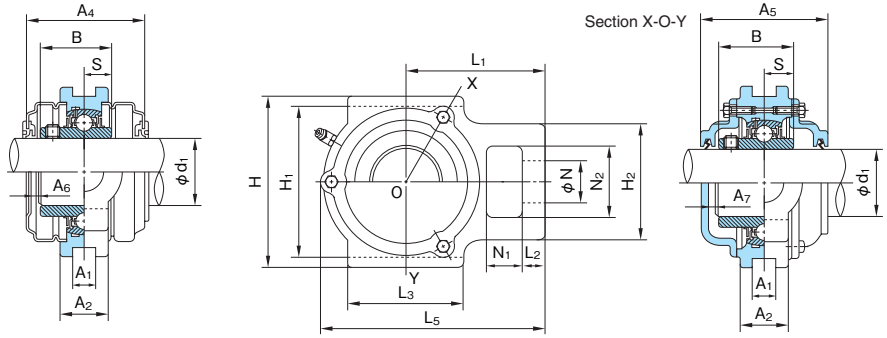
■ Take-up Units

UCT type With set screws Cylindrical bore

Shaft dia.: 65～140mm



With steel covers



With cast covers

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)																			
		A	A_1	A_2	H	H_1	H_2	L	L_5	L_1	L_2	L_3	N	N_1	N_2	B	S	A_4	A_5	A_6	A_7
65	UCT213	70	26	44	167	151	111	224	224	137	21	121	41	32	70	65.1	25.4	102	118	10	13
	UCTX13	70	26	48	167	151	111	224	—	137	21	121	41	32	70	74.6	30.2	—	—	—	—
	UCT313	80	26	50	190	170	116	238	242	146	25	134	43	32	70	75	30	—	140	—	17
70	UCT214	70	26	46	167	151	111	224	224	137	21	121	41	32	70	74.6	30.2	—	134	—	16
	UCTX14	70	26	48	167	151	111	232	—	140	21	121	41	32	70	77.8	33.3	—	—	—	—
	UCT314	90	26	52	202	180	130	252	256	155	25	140	46	36	85	78	33	—	140	—	17
75	UCT215	70	26	48	167	151	111	232	232	140	21	121	41	32	70	77.8	33.3	—	136	—	17
	UCTX15	70	28	48	184	165	111	235	—	140	21	121	41	32	70	82.6	33.3	—	—	—	—
	UCT315	90	26	55	216	192	132	262	266	160	25	150	46	36	85	82	32	—	150	—	17
80	UCT216	70	26	51	184	165	111	235	236	140	21	121	41	32	70	82.6	33.3	—	146	—	15
	UCTX16	73	28	54	198	173	124	260	—	162	28	157	48	38	73	85.7	34.1	—	—	—	—
	UCT316	102	30	60	230	204	150	282	285	174	28	160	53	42	98	86	34	—	154	—	17
85	UCT217	73	30	54	198	173	124	260	264	162	29	157	48	38	73	85.7	34.1	—	150	—	15
	UCTX17	73	28	54	198	173	124	260	—	162	28	157	48	38	73	96	39.7	—	—	—	—
	UCT317	102	32	64	240	214	152	298	302	183	30	170	53	42	98	96	40	—	164	—	18
90	UCT318	110	32	66	255	228	160	312	316	192	30	175	57	46	106	96	40	—	168	—	20
95	UCT319	110	35	72	270	240	165	322	326	197	31	180	57	46	106	103	41	—	180	—	20
100	UCT320	120	35	75	290	260	175	345	349	210	32	200	59	48	115	108	42	—	190	—	21
105	UCT321	120	35	75	290	260	175	345	354	210	32	200	59	48	115	112	44	—	194	—	21
110	UCT322	130	38	80	320	285	185	385	387	235	38	215	65	52	125	117	46	—	210	—	26
120	UCT324	140	45	90	355	320	210	432	432	267	42	230	70	60	140	126	51	—	220	—	25
130	UCT326	150	50	100	385	350	220	465	465	285	45	240	75	65	150	135	54	—	230	—	24
140	UCT328	155	50	100	415	380	230	515	515	315	50	255	80	70	160	145	59	—	240	—	24

Bearings			Housing No.	Unit No. with steel covers	Unit No. with cast covers	Mass of Unit (kg)		
No.	Basic load rating (N)			Covers with rubber seal (End cover on one side)	Covers with rubber seal (End cover on one side)	standard	With steel cover	With cast cover
	Cr	Cor						
UC213	57500	40000	T213	**UCT213C(E)**	**CUCT213C(CE)**	7.0	7.5	9.2
UCX13	62000	44000	TX13	—	—	7.4	—	—
UC313	92500	59700	T313	—	**CUCT313C(CE)**	9.2	—	12.9
UC214	62000	44000	T214	—	**CUCT214C(CE)**	7.1	—	9.8
UCX14	66000	48200	TX14	—	—	7.7	—	—
UC314	104000	68000	T314	—	**CUCT314C(CE)**	11.2	—	15.0
UC215	66000	48200	T215	—	**CUCT215C(CE)**	7.5	—	10.2
UCX15	72500	53000	TX15	—	—	8.4	—	—
UC315	114000	76900	T315	—	**CUCT315C(CE)**	13.0	—	17.2
UC216	72500	53000	T216	—	**CUCT216C(CE)**	8.5	—	12.4
UCX16	83500	61800	TX16	—	—	11.3	—	—
UC316	123000	86400	T316	—	**CUCT316C(CE)**	15.6	—	20.7
UC217	83500	61800	T217	—	**CUCT217C(CE)**	11.2	—	15.4
UCX17	95500	71400	TX17	—	—	11.0	—	—
UC317	132000	96500	T317	—	**CUCT317C(CE)**	19.3	—	24.4
UC318	143000	107200	T318	—	**CUCT318C(CE)**	21.2	—	27.4
UC319	153000	118400	T319	—	**CUCT319C(CE)**	24.4	—	31.3
UC320	173000	140400	T320	—	**CUCT320C(CE)**	30.6	—	37.9
UC321	183000	153100	T321	—	**CUCT321C(CE)**	30.2	—	38.2
UC322	205000	178800	T322	—	**CUCT322C(CE)**	38.8	—	48.2
UC324	207000	184800	T324	—	**CUCT324C(CE)**	54.6	—	67.3
UC326	229000	214300	T326	—	**CUCT326C(CE)**	68.4	—	83.5
UC328	255000	246000	T328	—	**CUCT328C(CE)**	83.2	—	101

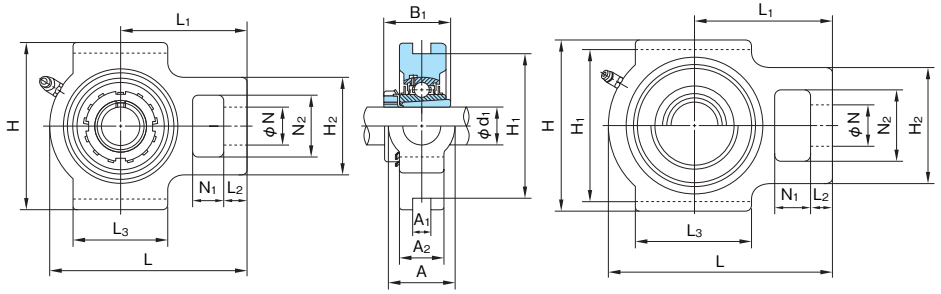
Remarks: 1. Grease nipple: 1/4-28UNF for bore number 13 and under
PF1/8 for bore number 14 and over

Remarks: 2. Examples of unit numbers with covers:
With steel cover { Covers with rubber seal on both sides :UCT213C
An end cover and a cover with rubber seal :UCT213E
With cast cover { Covers with rubber seal on both sides :CUCT213C
An end cover and a cover with rubber seal :CUCT213CE

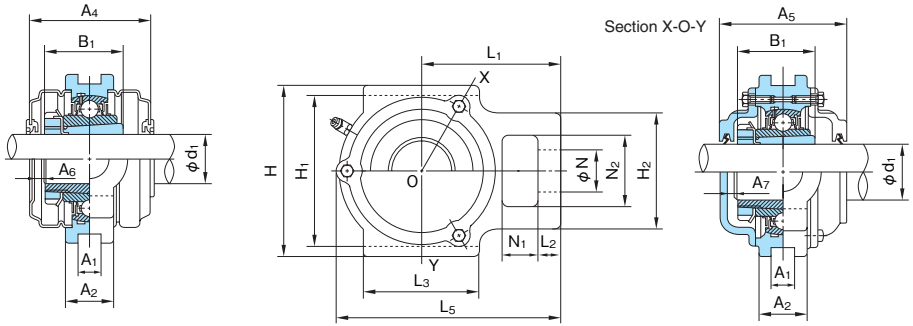
■ Take-up Units

UKT+H type With adapter assembly Tapered bore

Shaft dia.: 20～60mm



With steel covers



With cast covers

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)																			Bearings			Housing No.	Unit No. with steel covers	Unit No. with cast covers	Mass of Unit (kg)		
		A	A_1	A_2	H	H_1	H_2	L	L_5	L_1	L_2	L_3	N	N_1	N_2	B_1	A_4	A_5	A_6	A_7	No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Covers with rubber seal (End cover on one side)	Covers with rubber seal (End cover on one side)	standard	With steel cover	With cast cover
20	**UKT205+H2305**	32	12	24	89	76	51	97	100	62	10	51	19	16	32	35	63	70	11	9	UK205+H2305	14000	7900	T205	**UKT205C(E)+H2305**	**CUKT205C(CE)+H2305**	0.83	0.94	1.6
	UKTX05+H2305	37	12	28	102	89	56	113	—	70	10	57	22	16	37	35	65	—	10	—	UKX05+H2305	19600	11300	TX05	**UKTX05C(E)+H2305**	—	1.3	1.3	—
	UKT305+H2305	36	12	26	89	80	62	122	122	76	12	65	26	16	36	35	—	78	—	12	UK305+H2305	21300	10900	T305	—	**CUKT305C(CE)+H2305**	1.4	—	2.1
25	**UKT206+H2306**	37	12	28	102	89	56	113	113	70	10	57	22	16	37	38	65	74	10	10	UK206+H2306	19600	11300	T206	**UKT206C(E)+H2306**	**CUKT206C(CE)+H2306**	1.4	1.5	2.1
	UKTX06+H2306	37	12	30	102	89	64	129	—	78	13	64	22	16	37	38	70	—	12	—	UKX06+H2306	25900	15400	TX06	**UKTX06C(E)+H2306**	—	1.7	1.7	—
	UKT306+H2306	41	16	28	100	90	70	137	137	85	14	74	28	18	41	38	—	84	—	13	UK306+H2306	26800	15000	T306	—	**CUKT306C(CE)+H2306**	1.8	—	2.6
30	**UKT207+H2307**	37	12	30	102	89	64	129	129	78	13	64	22	16	37	43	70	80	11	11	UK207+H2307	25900	15400	T207	**UKT207C(E)+H2307**	**CUKT207C(CE)+H2307**	1.7	1.9	2.7
	UKTX07+H2307	49	16	36	114	102	83	144	—	88	15	83	29	19	49	43	83	—	17	—	UKX07+H2307	29300	17900	TX07	**UKTX07C(E)+H2307**	—	2.6	2.6	—
	UKT307+H2307	45	16	32	111	100	75	150	150	94	15	80	30	20	45	43	—	90	—	14	UK307+H2307	33500	19200	T307	—	**CUKT307C(CE)+H2307**	2.5	—	3.4
35	**UKT208+H2308**	49	16	33	114	102	83	144	144	88	16	83	29	19	49	46	82	90	15	14	UK208+H2308	29300	17900	T208	**UKT208C(E)+H2308**	**CUKT208C(CE)+H2308**	2.5	2.6	3.5
	UKTX08+H2308	49	16	36	117	102	83	144	—	87	15	83	29	19	49	46	82	—	15	—	UKX08+H2308	33000	20500	TX08	**UKTX08C(E)+H2308**	—	2.6	2.6	—
	UKT308+H2308	50	18	34	124	112	83	162	162	100	17	89	32	22	50	46	—	100	—	17	UK308+H2308	40500	23900	T308	—	**CUKT308C(CE)+H2308**	3.1	—	4.1
40	**UKT209+H2309**	49	16	35	117	102	83	144	145	87	16	83	29	19	49	50	82	90	14	13	UK209+H2309	33000	20500	T209	**UKT209C(E)+H2309**	**CUKT209C(CE)+H2309**	2.5	2.7	3.8
	UKTX09+H2309	49	16	38	117	102	83	149	—	90	16	86	29	19	49	50	87	—	16	—	UKX09+H2309	35500	23200	TX09	**UKTX09C(E)+H2309**	—	2.8	3.0	—
	UKT309+H2309	55	18	38	138	125	90	178	178	110	18	97	34	24	55	50	—	106	—	17	UK309+H2309	51500	29500	T309	—	**CUKT309C(CE)+H2309**	4.1	—	5.6
45	**UKT210+H2310**	49	16	37	117	102	83	149	151	90	16	86	29	19	49	55	87	98	15	15	UK210+H2310	35500	23200	T210	**UKT210C(E)+H2310**	**CUKT210C(CE)+H2310**	2.7	3.0	4.3
	UKTX10+H2310	64	22	42	146	130	102	171	—	106	19	95	35	25	64	55	88	—	14	—	UKX10+H2310	43000	29400	TX10	**UKTX10C(E)+H2310**	—	4.4	4.6	—
	UKT310+H2310	61	20	40	151	140	98	191	191	117	20	106	37	27	61	55	—	114	—	19	UK310+H2310	61500	38200	T310	—	**CUKT310C(CE)+H2310**	5.3	—	7.1
50	**UKT211+H2311**	64	22	38	146	130	102	171	174	106	19	95	35	25	64	59	88	100	14	15	UK211+H2311	43000	29400	T211	**UKT211C(E)+H2311**	**CUKT211C(CE)+H2311**	4.1	4.5	5.8
	UKTX11+H2311	64	22	44	146	130	102	194	—	119	19	102	35	32	64	59	100	—	19	—	UKX11+H2311	52500	36100	TX11	**UKTX11C(E)+H2311**	—	5.1	5.3	—
	UKT311+H2311	66	22	44	163	150	105	207	207	127	21	115	39	29	66	59	—	120	—	20	UK311+H2311	71500	44800	T311	—	**CUKT311C(CE)+H2311**	6.4	—	8.4
55	**UKT212+H2312**	64	22	42	146	130	102	194	194	119	19	102	35	32	64	62	102	114	19	20	UK212+H2312	52500	36100	T212	**UKT212C(E)+H2312**	**CUKT212C(CE)+H2312**	5.1	5.6	7.2
	UKTX12+H2312	70	26	48	167	151	111	224	—	137	21	121	41	32	70	62	104	—	19	—	UKX12+H2312	57500	40000	TX12	**UKTX12C(E)+H2312**	—	7.1	7.3	—
	UKT312+H2312	71	22	46	178	160	113	220	220	135	23	123	41	31	71	62	—	130	—	23	UK312+H2312	81500	52000	T312	—	**CUKT312C(CE)+H2312**	7.6	—	10.8
60	**UKT213+H2313**	70	26	44	167	151	111	224	224	137	21	121	41	32	70	65	102	118	17	20	UK213+H2313	57500	40000	T213	**UKT213C(E)+H2313**	**CUKT213C(CE)+H2313**	7.1	7.6	9.5
	UKTX13+H2313	70	26	48	167	151	111	224	—	137	21	121	41	32	70	65	—	—	—	—	UKX13+H2313	62000	44000	TX13	—	—	7.2	—	—
	UKT313+H2313	80	26	50	190	170	116	238	242	146	25	134	43	32	70	65	—	140	—	24	UK313+H2313	92500	59700	T313	—	**CUKT313C(CE)+H2313**	9.1	—	12.9

Remarks: 1. Grease nipple: 1/4-28UNF

Remarks: 2. Examples of unit numbers with covers:

With steel cover { Covers with rubber seal on both sides :UKP210C+H2310
An end cover and a cover with rubber seal :UKT210E+H2310

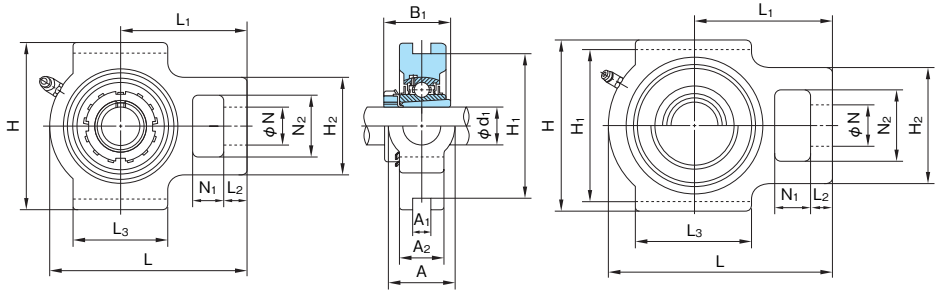
With cast cover { Covers with rubber seal on both sides :UKP210C+H2310
An end cover and a cover with rubber seal :CUKT210CE+H2310

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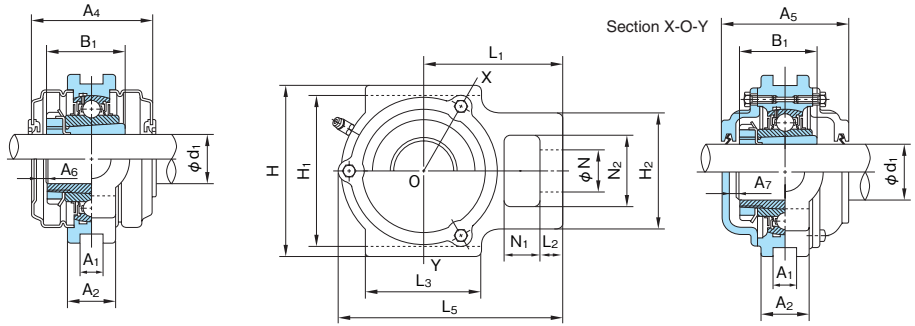
Take-up Units

UKT+H type With adapter assembly Tapered bore

Shaft dia.: 65～125mm



With steel covers



With cast covers

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)																			Bearings			Housing No.	Unit No. with steel covers	Unit No. with cast covers	Mass of Unit (kg)		
		A	A_1	A_2	H	H_1	H_2	L	L_5	L_1	L_2	L_3	N	N_1	N_2	B_1	A_4	A_5	A_6	A_7	No.	Basic load rating (N) Cr	Basic load rating (N) Cor		Covers with rubber seal (End cover on one side)	Covers with rubber seal (End cover on one side)	standard	With steel cover	With cast cover
65	**UKT215+H2315**	70	26	48	167	151	111	232	232	140	21	121	41	32	70	73	—	136	—	26	UK215+H2315	66000	48200	T215	—	**CUKT215C(CE)+H2315**	7.9	—	10.7
	UKTX15+H2315	70	28	48	184	165	111	235	—	140	21	121	41	32	70	73	—	—	—	—	UKX15+H2315	72500	53000	TX15	—	—	8.4	—	—
	UKT315+H2315	90	26	55	216	192	132	262	266	160	25	150	46	36	85	73	—	150	—	25	UK315+H2315	114000	76900	T315	—	**CUKT315C(CE)+H2315**	13.1	—	17.6
70	**UKT216+H2316**	70	26	51	184	165	111	235	236	140	21	121	41	32	70	78	—	146	—	26	UK216+H2316	72500	53000	T216	—	**CUKT216C(CE)+H2316**	8.9	—	12.9
	UKTX16+H2316	73	28	54	198	173	124	260	—	162	28	157	48	38	73	78	—	—	—	—	UKX16+H2316	83500	61800	TX16	—	—	11.4	—	—
	UKT316+H2316	102	30	60	230	204	150	282	285	174	28	160	53	42	98	78	—	154	—	23	UK316+H2316	123000	86400	T316	—	**CUKT316C(CE)+H2316**	15.9	—	21.1
75	**UKT217+H2317**	73	30	54	198	173	124	260	264	162	29	157	48	38	73	82	—	150	—	26	UK217+H2317	83500	61800	T217	—	**CUKT217C(CE)+H2317**	11.7	—	16.1
	UKTX17+H2317	73	28	54	198	173	124	260	—	162	28	157	48	38	73	82	—	—	—	—	UKX17+H2317	95500	71400	TX17	—	—	10.9	—	—
	UKT317+H2317	102	32	64	240	214	152	298	302	183	30	170	53	42	98	82	—	164	—	26	UK317+H2317	132000	96500	T317	—	**CUKT317C(CE)+H2317**	19.3	—	24.6
80	**UKT318+H2318**	110	32	66	255	228	160	312	316	192	30	175	57	46	106	86	—	168	—	26	UK318+H2318	143000	107200	T318	—	**CUKT318C(CE)+H2318**	21.4	—	28.4
85	**UKT319+H2319**	110	35	72	270	240	165	322	326	197	31	180	57	46	106	90	—	180	—	30	UK319+H2319	153000	118400	T319	—	**CUKT319C(CE)+H2319**	24.4	—	31.5
90	**UKT320+H2320**	120	35	75	290	260	175	345	349	210	32	200	59	48	115	97	—	190	—	31	UK320+H2320	173000	140400	T320	—	**CUKT320C(CE)+H2320**	30.6	—	38.5
100	**UKT322+H2322**	130	38	80	320	285	185	385	387	235	38	215	65	52	125	105	—	210	—	36	UK322+H2322	205000	178800	T322	—	**CUKT322C(CE)+H2322**	38.9	—	48.9
110	**UKT324+H2324**	140	45	90	355	320	210	432	432	267	42	230	70	60	140	112	—	220	—	35	UK324+H2324	207000	184800	T324	—	**CUKT324C(CE)+H2324**	54.1	—	67.5
115	**UKT326+H2326**	150	50	100	385	350	220	465	465	285	45	240	75	65	150	121	—	230	—	36	UK326+H2326	229000	214300	T326	—	**CUKT326C(CE)+H2326**	68.7	—	85.0
125	**UKT328+H2328**	155	50	100	415	380	230	515	515	315	50	255	80	70	160	131	—	240	—	37	UK328+H2328	255000	246000	T328	—	**CUKT328C(CE)+H2328**	83.5	—	103

Remarks: 1. Grease nipple: PF1/8

Remarks: 2. Examples of unit numbers with covers:

With cast cover { Covers with rubber seal on both sides :CUKT315C+H2315
An end cover and a cover with rubber seal :CUKT315CE+H2315

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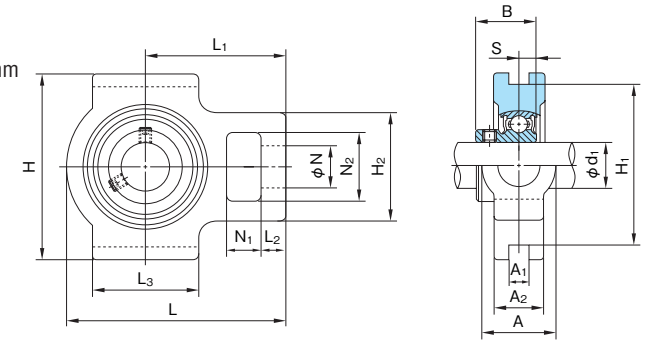
Take-up Units

BT200 type

With set screws

Cylindrical bore

Shaft dia.: 20～35mm



1N=0.102kgf

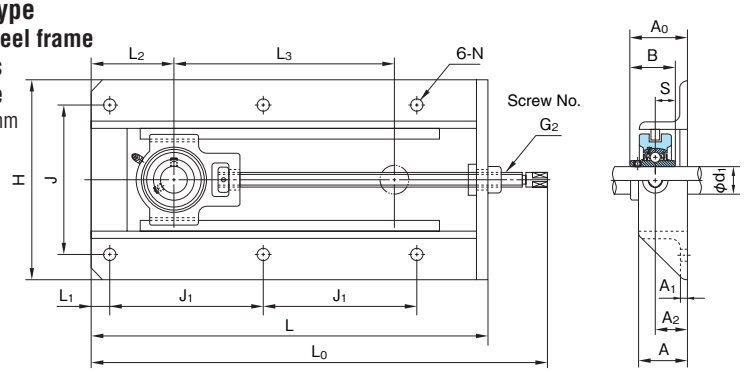
Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)																Bearings			Housing No.	Mass of Unit (kg)
		A	A_1	A_2	H	H_1	H_2	L	L_1	L_2	L_3	N	N_1	N_2	B	S		No.	Basic load rating (N) Cr	Basic load rating (N) Cor		
20	**BT204**	32	12	21	89	76	51	94	61	10	51	19	16	32	24.7	7		B4	12800	6600	T204 G00	0.70
25	**BT205**	32	12	24	89	76	51	97	62	10	51	19	16	32	27	7.5		B5	14000	7900	T205 G00	0.79
30	**BT206**	37	12	28	102	89	56	113	70	10	57	22	16	37	30.3	8		B6	19600	11300	T206 G00	1.2
35	**BT207**	37	12	30	102	89	64	129	78	13	64	22	16	37	32.9	8.5		B7	25900	15400	T207 G00	1.6

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Take-up Units

UCT200+WB type

With pressed steel frame
With set screws
Cylindrical bore
Shaft dia.: 12～65mm



1N=0.102kgf

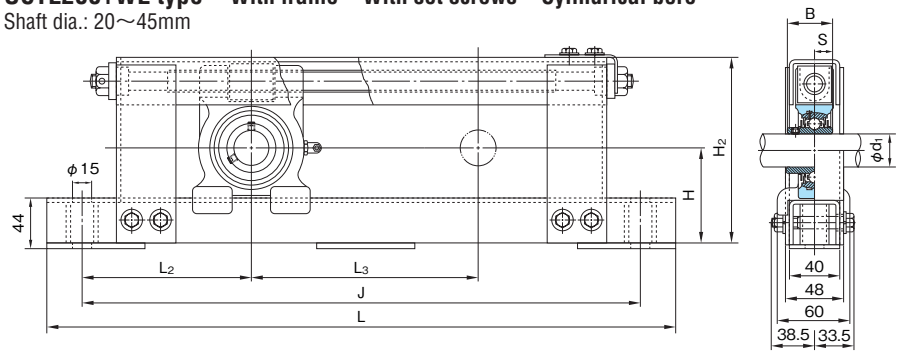
Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)																Bolt size		Frame No.	Bearings			Mass of Unit (kg)
		H	L	J	J_1	N	L_1	L_2	L_3	G_2	L_0	A	A_1	A_2	A_0	B	S				No.	Basic load rating (N) Cr	Basic load rating (N) Cor	
12	UCT201+WB	199	317	154	117	12	19	83	150	Tr16	367	50	29	6	47.3	31	12.7	M10		WB205	UC201	12800	6600	5.0
15	UCT202+WB	199	317	154	117	12	19	83	150	Tr16	367	50	29	6	47.3	31	12.7	M10		WB205	UC202	12800	6600	5.0
17	UCT203+WB	199	317	154	117	12	19	83	150	Tr16	367	50	29	6	47.3	31	12.7	M10		WB205	UC203	12800	6600	5.0
20	UCT204+WB	199	317	154	117	12	19	83	150	Tr16	367	50	29	6	47.3	31	12.7	M10		WB205	UC204	12800	6600	5.0
25	UCT205+WB	199	317	154	117	12	19	83	150	Tr16	368	50	29	6	48.7	34	14.3	M10		WB205	UC205	14000	7900	5.0
30	UCT206+WB	212	337	166	127	12	19	95	150	Tr18	396	50	30	6	52.2	38.1	15.9	M10		WB206	UC206	19600	11300	5.9
35	UCT207+WB	212	429	166	173	12	19	99	230	Tr18	490	50	30	6	55.4	42.9	17.5	M10		WB207	UC207	25900	15400	7.9
40	UCT208+WB	233	520	192	219	15	22	108	300	Tr26	591	50	30	6	60.2	49.2	19	M12		WB210	UC208	29300	17900	11.1
45	UCT209+WB	233	520	192	219	15	22	108	300	Tr26	590	50	30	6	60.2	49.2	19	M12		WB210	UC209	33000	20500	11.1
50	UCT210+WB	233	520	192	219	15	22	108	300	Tr26	593	50	30	6	62.6	51.6	19	M12		WB210	UC210	35500	23200	11.2
55	UCT211+WB	301	542	240	230	15	22	114	300	Tr30	631	65	38	6	71.4	55.6	22.2	M12		WB211	UC211	43000	29400	17.3
60	UCT212+WB	301	568	240	243	15	22	127	300	Tr30	657	65	38	6	77.7	65.1	25.4	M12		WB212	UC212	52500	36100	18.7
65	UCT213+WB	322	606	260	260	15	22	144	300	Tr36	699	65	38	6	77.7	65.1	25.4	M12		WB213	UC213	57500	40000	23.4

Remark: Grease nipple: 1/4-28UNF

■ Take-up Units

UCTL200+WL type With frame With set screws Cylindrical bore

Shaft dia.: 20～45mm



1N=0.102kgf

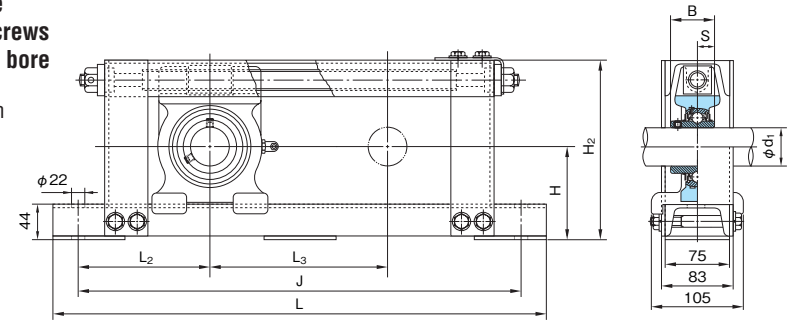
Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)								Bolt size		Bearings			Housing No.	Frame No.	Mass of Unit (kg)
		H	H_2	L	J	L_2	L_3	B	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor			
20	*UCTL204+WL100*	77	146	430	370	135	100	31	12.7	M12		UC204	12800	6600	TL204	*WL204-100*	5.6
	UCTL204+WL200			530	470		200									WL204-200	6.3
	UCTL204+WL300			630	570		300									*WL204-300*	7.0
	UCTL204+WL400			730	670		400									*WL204-400*	7.7
25	*UCTL205+WL100*	82	156	440	380	140	100	34	14.3	M12		UC205	14000	7900	TL205	*WL205-100*	6.0
	UCTL205+WL200			540	480		200									WL205-200	6.7
	UCTL205+WL300			640	580		300									WL205-300	7.4
	UCTL205+WL400			740	680		400									*WL205-400*	8.1
30	*UCTL206+WL100*	87	166	450	390	145	100	38.1	15.9	M12		UC206	19600	11300	TL206	*WL206-100*	6.5
	UCTL206+WL200			550	490		200									WL206-200	7.2
	UCTL206+WL300			650	590		300									WL206-300	7.9
	UCTL206+WL400			750	690		400									*WL206-400*	8.6
35	*UCTL207+WL100*	92	176	460	400	150	100	42.9	17.5	M12		UC207	25900	15400	TL207	*WL207-100*	7.1
	UCTL207+WL200			560	500		200									WL207-200	7.8
	UCTL207+WL300			660	600		300									WL207-300	8.5
	UCTL207+WL400			760	700		400									*WL207-400*	9.2
40	*UCTL208+WL100*	97	186	470	410	155	100	49.2	19	M12		UC208	29300	17900	TL208	*WL208-100*	7.8
	UCTL208+WL200			570	510		200									WL208-200	8.5
	UCTL208+WL300			670	610		300									WL208-300	9.2
	UCTL208+WL400			770	710		400									*WL208-400*	9.9
45	*UCTL209+WL100*	100	192	480	420	160	100	49.2	19	M12		UC209	33000	20500	TL209	*WL209-100*	8.2
	UCTL209+WL200			580	520		200									WL209-200	8.9
	UCTL209+WL300			680	620		300									WL209-300	9.6
	UCTL209+WL400			780	720		400									*WL209-400*	10.3

Remarks: 1. Please contact NACHI for *unit numbers appearing* in italic.
2. Grease nipple: PF1/8

■ Take-up Units

UCTU200+WU type

With frame
With set screws
Cylindrical bore
Shaft dia.:
40～60mm



1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)								Bolt size		Bearings			Housing No.	Frame No.	Mass of Unit (kg)
		H	H_2	L	J	L_2	L_3	B	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor			
40	UCTU208+WU500	97	190	870	810	155	500	49.2	19	M18		UC208	29300	17900	TC208	WU208-500	19.0
	UCTU208+WU600			970	910		600									*WU208-600*	20.6
	UCTU208+WU700			1070	1010		700									*WU208-700*	22.2
	UCTU208+WU800			1170	1110		800									*WU208-800*	23.8
	UCTU208+WU900			1270	1210		900									*WU208-900*	25.3
45	UCTU209+WU500	102	200	880	820	160	500	19.2	19	M18		UC209	33000	20500	TC209	WU209-500	19.7
	UCTU209+WU600			980	920		600									*WU209-600*	21.3
	UCTU209+WU700			1080	1020		700									*WU209-700*	22.9
	UCTU209+WU800			1180	1120		800									*WU209-800*	24.5
	UCTU209+WU900			1280	1220		900									*WU209-900*	26.1
50	UCTU210+WU500	107	210	890	830	165	500	51.6	19	M18		UC210	35500	23200	TC210	WU210-500	20.5
	UCTU210+WU600			990	930		600									*WU210-600*	22.2
	UCTU210+WU700			1090	1030		700									*WU210-700*	23.8
	UCTU210+WU800			1190	1130		800									*WU210-800*	25.4
	UCTU210+WU900			1290	1230		900									*WU210-900*	27.0
55	UCTU211+WU500	115	230	910	850	175	500	55.6	22.2	M18		UC211	43000	29400	TC211	WU211-500	22.4
	UCTU211+WU600			1010	950		600									*WU211-600*	23.7
	UCTU211+WU700			1110	1050		700									*WU211-700*	25.8
	UCTU211+WU800			1210	1150		800									*WU211-800*	27.4
	UCTU211+WU900			1310	1250		900									*WU211-900*	29.1
60	UCTU212+WU500	120	240	920	860	180	500	65.1	25.4	M18		UC212	52500	36100	TC212	WU212-500	23.9
	UCTU212+WU600			1020	960		600									*WU212-600*	25.6
	UCTU212+WU700			1120	1060		700									*WU212-700*	27.2
	UCTU212+WU800			1220	1160		800									*WU212-800*	28.9
	UCTU212+WU900			1320	1260		900									*WU212-900*	30.6

Remarks: 1. Please contact NACHI for *unit numbers appearing* in italic.
2. Grease nipple: PF1/8

Take-up Units

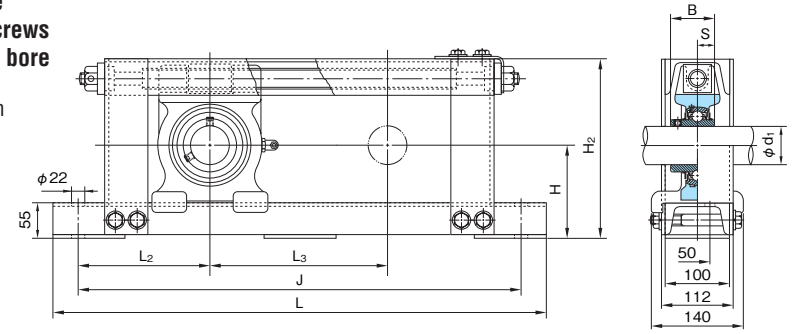
UCTU300+WU type

With frame

With set screws

Cylindrical bore

Shaft dia.:
65～90mm



1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)								Bolt size		Bearings			Housing No.	Frame No.	Mass of Unit (kg)
		H	H_2	L	J	L_2	L_3	B	S			No.	Basic load rating (N) Cr	Basic load rating (N) Cor			
65	UCTU313+WU500	145	285	940	880	190	500	75	30	M18		UC313	92500	59700	TU313	WU313-500	38.3
	UCTU313+WU600			1040	980		600									*WU313-600*	40.6
	UCTU313+WU700			1140	1080		700									*WU313-700*	42.9
	UCTU313+WU800			1240	1180		800									*WU313-800*	45.3
	UCTU313+WU900			1340	1280		900									*WU313-900*	47.6
70	UCTU314+WU500	150	295	960	900	200	500	78	33	M18		UC314	104000	68000	TU314	WU314-500	40.8
	UCTU314+WU600			1060	1000		600									*WU314-600*	43.1
	UCTU314+WU700			1160	1100		700									*WU314-700*	45.4
	UCTU314+WU800			1260	1200		800									*WU314-800*	47.8
	UCTU314+WU900			1360	1300		900									*WU314-900*	50.1
75	UCTU315+WU500	155	305	980	920	210	500	82	32	M18		UC315	114000	76900	TU315	WU315-500	43.6
	UCTU315+WU600			1080	1020		600									*WU315-600*	45.9
	UCTU315+WU700			1180	1120		700									*WU315-700*	48.3
	UCTU315+WU800			1280	1220		800									*WU315-800*	50.6
	UCTU315+WU900			1380	1320		900									*WU315-900*	52.9
80	UCTU316+WU500	160	315	1000	940	220	500	86	34	M18		UC316	123000	86400	TU316	WU316-500	45.1
	UCTU316+WU600			1100	1040		600									*WU316-600*	47.4
	UCTU316+WU700			1200	1140		700									*WU316-700*	49.7
	UCTU316+WU800			1300	1240		800									*WU316-800*	52.0
	UCTU316+WU900			1400	1340		900									*WU316-900*	54.4
85	UCTU317+WU500	165	325	1020	960	230	500	96	40	M18		UC317	132000	96500	TU317	WU317-500	49.8
	UCTU317+WU600			1120	1060		600									*WU317-600*	52.1
	UCTU317+WU700			1220	1160		700									*WU317-700*	54.4
	UCTU317+WU800			1320	1260		800									*WU317-800*	56.7
	UCTU317+WU900			1420	1360		900									*WU317-900*	59.0
90	UCTU318+WU500	170	335	1050	990	245	500	96	40	M18		UC318	143000	107200	TU318	WU318-500	53.1
	UCTU318+WU600			1150	1090		600									*WU318-600*	55.4
	UCTU318+WU700			1250	1190		700									*WU318-700*	57.7
	UCTU318+WU800			1350	1290		800									*WU318-800*	60.1
	UCTU318+WU900			1450	1390		900									*WU318-900*	62.4

Remarks: 1. Please contact NACHI for *unit numbers appearing* in italic.
2. Grease nipple: PF1/8

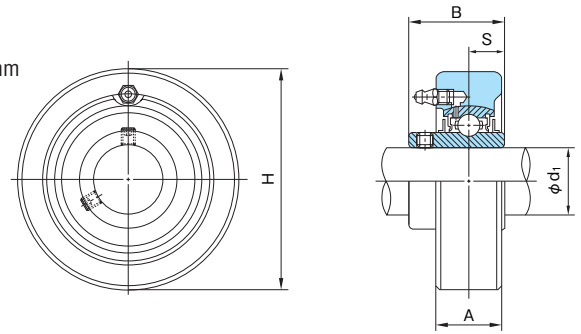
Cylindrical Cartridge Units

UCC type

With set screws

Cylindrical bore

Shaft dia.: 12～140mm



1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)				Bearings			Housing No.	Mass of Unit (kg)
		H	A	B	S	No.	Basic load rating (N) Cr	Cor		
12	UCC201	72	20	31	12.7	UC201	12800	6600	C204	0.54
15	UCC202	72	20	31	12.7	UC202	12800	6600	C204	0.52
17	UCC203	72	20	31	12.7	UC203	12800	6600	C204	0.51
20	UCC204	72	20	31	12.7	UC204	12800	6600	C204	0.49
25	UCC205	80	22	34	14.3	UC205	14000	7900	C205	0.65
	UCCX05	90	27	38.1	15.9	UCX05	19600	11300	CX05	1.0
	UCC305	90	26	38	15	UC305	21300	10900	C305	1.1
30	UCC206	85	27	38.1	15.9	UC206	19600	11300	C206	0.82
	UCCX06	100	30	42.9	17.5	UCX06	25900	15400	CX06	1.3
	UCC306	100	28	43	17	UC306	26800	15000	C306	1.3
35	UCC207	90	28	42.9	17.5	UC207	25900	15400	C207	0.93
	UCCX07	110	34	49.2	19	UCX07	29300	17900	CX07	1.9
	UCC307	110	32	48	19	UC307	33500	19200	C307	1.8
40	UCC208	100	30	49.2	19	UC208	29300	17900	C208	1.2
	UCCX08	120	38	49.2	19	UCX08	33000	20500	CX08	2.3
	UCC308	120	34	52	19	UC308	40500	23900	C308	2.2
45	UCC209	110	31	49.2	19	UC209	33000	20500	C209	1.5
	UCCX09	120	38	51.6	19	UCX09	35500	23200	CX09	2.3
	UCC309	130	38	57	22	UC309	51500	29500	C309	2.7
50	UCC210	120	33	51.6	19	UC210	35500	23200	C210	1.9
	UCCX10	130	40	55.6	22.2	UCX10	43000	29400	CX10	2.8
	UCC310	140	40	61	22	UC310	61500	38200	C310	3.3
55	UCC211	125	35	55.6	22.2	UC211	43000	29400	C211	2.1
	UCCX11	150	42	65.1	25.4	UCX11	52500	36100	CX11	4.7
	UCC311	150	44	66	25	UC311	71500	44800	C311	3.9
60	UCC212	130	38	65.1	25.4	UC212	52500	36100	C212	2.5
	UCCX12	160	44	65.1	25.4	UCX12	57500	40000	CX12	5.1
	UCC312	160	46	71	26	UC312	81500	52000	C312	4.8
65	UCC213	140	40	65.1	25.4	UC213	57500	40000	C213	3.0
	UCC313	170	50	75	30	UC313	92500	59700	C313	5.7
70	UCC314	180	52	78	33	UC314	104000	68000	C314	6.6
75	UCC315	190	55	82	32	UC315	114000	76900	C315	7.7
80	UCC316	200	60	86	34	UC316	123000	86400	C316	8.9
85	UCC317	215	64	96	40	UC317	132000	96500	C317	11.2
90	UCC318	225	66	96	40	UC318	143000	107200	C318	12.3
95	UCC319	240	72	103	41	UC319	153000	118400	C319	15.2

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)				Bearings			Housing No.	Mass of Unit (kg)
		H	A	B	S	No.	Basic load rating (N) Cr	Cor		
100	UCC320	260	75	108	42	UC320	173000	140400	C320	19.2
105	UCC321	260	75	112	44	UC321	183000	153100	C321	18.9
110	UCC322	300	80	117	46	UC322	205000	178800	C322	28.1
120	UCC324	320	90	126	51	UC324	207000	184800	C324	35.0
130	UCC326	340	100	135	54	UC326	229000	214300	C326	42.2
140	UCC328	360	100	145	59	UC328	255000	246000	C328	48.9

Remark: Grease nipple: 1/4-28UNF for bore number 13 and under
PF1/8 for bore number 14 and over

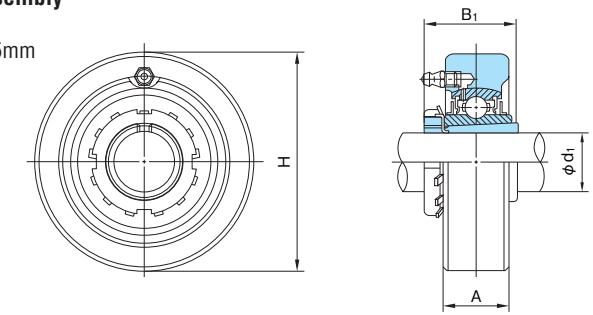
Cylindrical Cartridge Units

UKC+H type

With adapter assembly

Tapered bore

Shaft dia.: 20～125mm



1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)			Bearings			Housing No.	Mass of Unit (kg)
		H	A	B_1	No.	Basic load rating (N)			
						Cr	Cor		
20	**UKC205+H2305**	80	22	35	UK205+H2305	14000	7900	C205	0.70
	UKCX05+H2305	90	27	35	UKX05+H2305	19600	11300	CX05	1.0
	UKC305+H2305	90	26	35	UK305+H2305	21300	10900	C305	1.1
25	**UKC206+H2306**	85	27	38	UK206+H2306	19600	11300	C206	0.90
	UKCX06+H2306	100	30	38	UKX06+H2306	25900	15400	CX06	1.4
	UKC306+H2306	100	28	38	UK306+H2306	26800	15000	C306	1.4
30	**UKC207+H2307**	90	28	43	UK207+H2307	25900	15400	C207	0.99
	UKCX07+H2307	110	34	43	UKX07+H2307	29300	17900	CX07	1.8
	UKC307+H2307	110	32	43	UK307+H2307	33500	19200	C307	1.8
35	**UKC208+H2308**	100	30	46	UK208+H2308	29300	17900	C208	1.3
	UKCX08+H2308	120	38	46	UKX08+H2308	33000	20500	CX08	2.3
	UKC308+H2308	120	34	46	UK308+H2308	40500	23900	C308	2.2
40	**UKC209+H2309**	110	31	50	UK209+H2309	33000	20500	C209	1.7
	UKCX09+H2309	120	38	50	UKX09+H2309	35500	23200	CX09	2.3
	UKC309+H2309	130	38	50	UK309+H2309	51500	29500	C309	2.7
45	**UKC210+H2310**	120	33	55	UK210+H2310	35500	23200	C210	2.1
	UKCX10+H2310	130	40	55	UKX10+H2310	43000	29400	CX10	2.8
	UKC310+H2310	140	40	55	UK310+H2310	61500	38200	C310	3.3
50	**UKC211+H2311**	125	35	59	UK211+H2311	43000	29400	C211	2.3
	UKCX11+H2311	150	42	59	UKX11+H2311	52500	36100	CX11	4.6
	UKC311+H2311	150	44	59	UK311+H2311	71500	44800	C311	3.9
55	**UKC212+H2312**	130	38	62	UK212+H2312	52500	36100	C212	2.6
	UKCX12+H2312	160	44	62	UKX12+H2312	57500	40000	CX12	5.1
	UKC312+H2312	160	46	62	UK312+H2312	81500	52000	C312	4.7
60	**UKC213+H2313**	140	40	65	UK213+H2313	57500	40000	C212	3.1
	UKC313+H2313	170	50	65	UK313+H2313	92500	59700	C312	5.6
65	**UKC315+H2315**	190	55	73	UK315+H2315	114000	76900	C315	7.8
70	**UKC316+H2316**	200	60	78	UK316+H2316	123000	86400	C316	9.1
75	**UKC317+H2317**	215	64	82	UK317+H2317	132000	96500	C317	11.2
80	**UKC318+H2318**	225	66	86	UK318+H2318	143000	107200	C318	12.5
85	**UKC319+H2319**	240	72	90	UK319+H2319	153000	118400	C319	15.2
90	**UKC320+H2320**	260	75	97	UK320+H2320	173000	140400	C320	19.2

1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)			Bearings			Housing No.	Mass of Unit (kg)
		H	A	B_1	No.	Basic load rating (N)			
						Cr	Cor		
100	**UKC322+H2322**	300	80	105	UK322+H2322	205000	178800	C322	28.2
110	**UKC324+H2324**	320	90	112	UK324+H2324	207000	184800	C324	34.5
115	**UKC326+H2326**	340	100	121	UK326+H2326	229000	214300	C326	42.5
125	**UKC328+H2328**	360	100	131	UK328+H2328	255000	246000	C328	49.2

Remark: Grease nipple: 1/4-28UNF for bore number 13 and under
PF1/8 for bore number 14 and over

NACHI

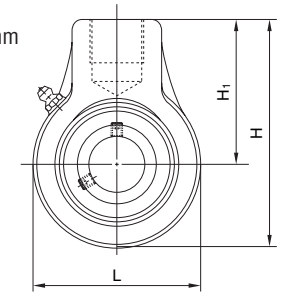
Hanger Units

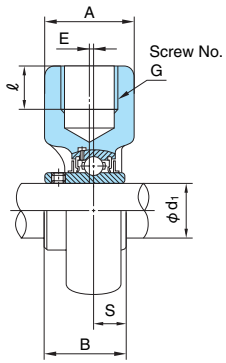
UCECH type

With set screws

Cylindrical bore

Shaft dia.: 12～60mm





1N=0.102kgf

Shaft dia. d_1 (mm)	Unit No.	Boundary dimensions (mm)										Bearings			Housing No.	Mass of Unit (kg)
		H	L	H_1	A	G	ℓ	B	S	E		No.	Basic load rating (N)			
													Cr	Cor		
12	UCECH201	96	64	64	40	PF3/4	19	31	12.7	0		UC201	12800	6600	ECH204	0.85
15	UCECH202	96	64	64	40	PF3/4	19	31	12.7	0		UC202	12800	6600	ECH204	0.83
17	UCECH203	96	64	64	40	PF3/4	19	31	12.7	0		UC203	12800	6600	ECH204	0.82
20	UCECH204	96	64	64	40	PF3/4	19	31	12.7	0		UC204	12800	6600	ECH204	0.80
25	UCECH205	99	70	64	40	PF3/4	19	34	14.3	0		UC205	14000	7900	ECH205	0.74
30	UCECH206	104	80	64	40	PF3/4	19	38.1	15.9	0		UC206	19600	11300	ECH206	0.91
35	UCECH207	116	92	70	40	PF3/4	19	42.9	17.5	0		UC207	25900	15400	ECH207	1.2
40	UCECH208	121	96	73	40	PF3/4	19	49.2	19	2		UC208	29300	17900	ECH208	1.4
45	UCECH209	136	108	82	48	PF1	21	49.2	19	4		UC209	33000	20500	ECH209	1.8
50	UCECH210	140	114	83	48	PF1	21	51.6	19	5		UC210	35500	23200	ECH210	1.9
55	UCECH211	160	126	97	60	PF1¼	28	55.6	22.2	6		UC211	43000	29400	ECH211	2.3
60	UCECH212	173	142	102	60	PF1¼	28	65.1	25.4	9		UC212	52500	36100	ECH212	4.2

Remark: Grease nipple: 1/4-28UNF

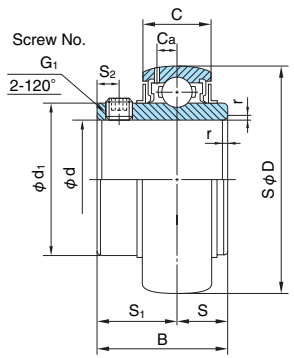
Ball Bearings for Units

UC type

With set screws

Cylindrical bore

Shaft dia.: 12～140mm



1N=0.102kgf

Shaft dia. (mm)	Ball Bearing No.	Boundary dimensions (mm)											Basic load rating (N)		Mass (kg)
		d	D	B	C	r	S	S_1	S_2	G_1	Ca	d_1	Cr	Cor	
12	UC201	12	47	31	17	1	12.7	18.3	4.5	M 6×0.75	4.5	29	12800	6600	0.21
15	UC202	15	47	31	17	1	12.7	18.3	4.5	M 6×0.75	4.5	29	12800	6600	0.19
17	UC203	17	47	31	17	1	12.7	18.3	4.5	M 6×0.75	4.5	29	12800	6600	0.18
20	UC204	20	47	31	17	1.5	12.7	18.3	4.5	M 6×0.75	4.5	29	12800	6600	0.16
25	UC205	25	52	34	17	1.5	14.3	19.7	5	M 6×0.75	4.5	34	14000	7900	0.19
	UCX05	25	62	38.1	19	1.5	15.9	22.2	5	M 6×0.75	5.1	40.5	19600	11300	0.37
	UC305	25	62	38	21	2	15	23	6	M 6×0.75	6.1	36.9	21300	10900	0.44
30	UC206	30	62	38.1	19	1.5	15.9	22.2	5	M 6×0.75	5.1	40.5	19600	11300	0.31
	UCX06	30	72	42.9	20	1.5	17.5	25.4	6	M 8×1	5.8	48	25900	15400	0.46
	UC306	30	72	43	23	2	17	26	6	M 6×0.75	6.7	45	26800	15000	0.56
35	UC207	35	72	42.9	20	2	17.5	25.4	6	M 8×1	5.8	48	25900	15400	0.48
	UCX07	35	80	49.2	21	2	19	30.2	8	M 8×1	6.2	53	29300	17900	0.74
	UC307	35	80	48	25	2.5	19	29	8	M 8×1	7.4	50.5	33500	19200	0.71
40	UC208	40	80	49.2	21	2	19	30.2	8	M 8×1	6.2	53	29300	17900	0.62
	UCX08	40	85	49.2	22	2	19	30.2	8	M 8×1	6.5	57.3	33000	20500	0.80
	UC308	40	90	52	27	2.5	19	33	10	M10×1.25	8.2	56	40500	23900	1.00
45	UC209	45	85	49.2	22	2	19	30.2	8	M 8×1	6.5	57.3	33000	20500	0.67
	UCX09	45	90	51.6	23	2	19	32.6	9	M10×1.25	6.5	63	35500	23200	0.92
	UC309	45	100	57	30	2.5	22	35	10	M10×1.25	9	63	51500	29500	1.28
50	UC210	50	90	51.6	23	2	19	32.6	9	M10×1.25	6.5	63	35500	23200	0.78
	UCX10	50	100	55.6	24	2	22.2	33.4	9	M10×1.25	7.3	70	43000	29400	1.21
	UC310	50	110	61	32	3	22	39	12	M12×1.5	10	70.5	61500	38200	1.65
55	UC211	55	100	55.6	24	2.5	22.2	33.4	9	M10×1.25	7.3	70	43000	29400	1.03
	UCX11	55	110	65.1	26	2.5	25.4	39.7	10	M10×1.25	7.7	77	52500	36100	1.72
	UC311	55	120	66	34	3	25	41	12	M12×1.5	10.7	76.5	71500	44800	2.07
60	UC212	60	110	65.1	26	2.5	25.4	39.7	10	M10×1.25	7.7	77	52500	36100	1.45
	UCX12	60	120	65.1	27	2.5	25.4	39.7	10	M10×1.25	8.3	82.1	57500	40000	1.97
	UC312	60	130	71	36	3.5	26	45	12	M12×1.5	11.5	82.5	81500	52000	2.59
65	UC213	65	120	65.1	27	2.5	25.4	39.7	10	M10×1.25	8.3	82.1	57500	40000	1.71
	UCX13	65	125	74.6	29	2.5	30.2	44.4	12	M12×1.5	8.7	87	62000	44000	2.33
	UC313	65	140	75	38	3.5	30	45	12	M12×1.5	12.2	88.5	92500	59700	3.15
70	UC214	70	125	74.6	29	2.5	30.2	44.4	12	M12×1.5	8.7	87	62000	44000	2.06
	UCX14	70	130	77.8	30	2.5	33.3	44.5	12	M12×1.5	9.2	91.5	66000	48200	2.57
	UC314	70	150	78	40	3.5	33	45	12	M12×1.5	13	95.2	104000	68000	3.83

1N=0.102kgf

Shaft dia. (mm)	Ball Bearing No.	Boundary dimensions (mm)											Basic load rating (N)		Mass (kg)
		d	D	B	C	r	S	S_1	S_2	G_1	Ca	d_1	Cr	Cor	
75	UC215	75	130	77.8	30	2.5	33.3	44.5	14	M12×1.5	9.2	91.5	66000	48200	2.22
	UCX15	75	140	82.6	32	2.5	33.3	49.3	12	M12×1.5	9.6	98.5	72500	53000	3.22
	UC315	75	160	82	42	3.5	32	50	14	M14×1.5	13.8	101.5	114000	76900	4.59
80	UC216	80	140	82.6	32	3	33.3	49.3	14	M12×1.5	9.6	98.5	72500	53000	2.82
	UCX16	80	150	85.7	34	3	34.1	51.6	12	M12×1.5	10.5	105	83500	61800	3.81
	UC316	80	170	86	44	3.5	34	52	14	M14×1.5	14.5	108	123000	86400	5.40
85	UC217	85	150	85.7	34	3	34.1	51.6	14	M12×1.5	10.5	105	83500	61800	3.38
	UCX17	85	160	96	36	3	39.7	56.3	12	M12×1.5	11.1	111.5	95500	71400	4.83
	UC317	85	180	96	46	4	40	56	16	M16×1.5	15	114.5	132000	96500	6.58
90	UC218	90	160	96	36	3	39.7	56.3	15	M12×1.5	11.1	111.5	95500	71400	4.34
	UCX18	90	170	104	38	3	42.9	61.1	14	M14×1.5	11.9	118	109000	81600	5.49
	UC318	90	190	96	48	4	40	56	16	M16×1.5	15.9	121	143000	107200	7.34
95	UC319	95	200	103	50	4	41	62	16	M16×1.5	16.7	127.5	153000	118400	8.70
100	UCX20	100	190	117.5	42	3.5	49.2	68.3	16	M16×1.5	13	132.5	134000	104700	9.04
	UC320	100	215	108	54	4	42	66	18	M18×1.5	18	135.5	173000	140400	10.8
105	UC321	105	225	112	56	4	44	68	18	M18×1.5	19	142	183000	153100	12.2
110	UC322	110	240	117	60	4	46	71	18	M18×1.5	21	152	205000	178800	14.3
120	UC324	120	260	126	64	4	51	75	18	M18×1.5	22	165	207000	184800	18.5
130	UC326	130	280	135	68	5	54	81	20	M20×1.5	23	178	229000	214300	23.0
140	UC328	140	300	145	73	5	59	86	20	M20×1.5	25	191.5	255000	246000	28.5

Remark: Chamfer dimensions **"r"** shown in the table are nominal dimension.

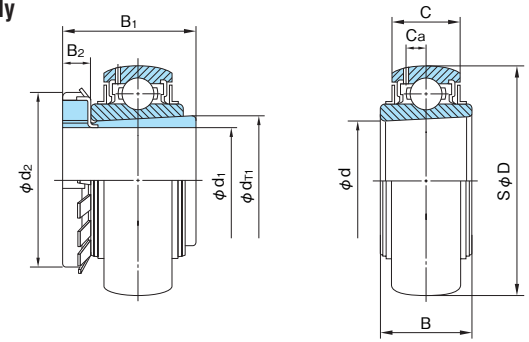
Ball Bearings for Units

UK+H type

With adapter assembly

Tapered bore

Shaft dia.: 20～125mm



1N=0.102kgf

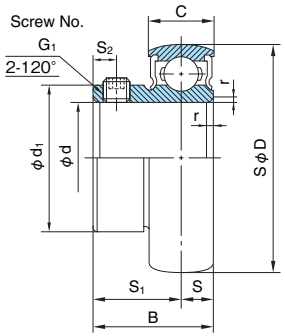
Shaft dia. (mm)	Ball Bearing No.	Boundary dimensions (mm)										Basic load rating (N)		Mass (kg)
		d_1	D	B_1	d	B	C	C_a	B_2	d_2	dT_1	Cr	Cor	
20	UK205+H2305	20	52	35	25	23	17	4.5	8	38	27.5	14000	7900	0.24
	UKX05+H2305	20	62	35	25	26	19	5.1	8	38	27.5	19600	11300	0.37
	UK305+H2305	20	62	35	25	26	21	6.1	8	38	27.5	21300	10900	0.48
25	UK206+H2306	25	62	38	30	26	19	5.1	8	45	32.5	19600	11300	0.40
	UKX06+H2306	25	72	38	30	27	20	5.8	8	45	32.5	25900	15400	0.54
	UK306+H2306	25	72	38	30	29	23	6.7	8	45	32.5	26800	15000	0.59
30	UK207+H2307	30	72	43	35	27	20	5.8	9	52	38	25900	15400	0.53
	UKX07+H2307	30	80	43	35	29	21	6.2	9	52	38	29300	17900	0.70
	UK307+H2307	30	80	43	35	31	25	7.4	9	52	38	33500	19200	0.74
35	UK208+H2308	35	80	46	40	29	21	6.2	10	58	43	29300	17900	0.69
	UKX08+H2308	35	85	46	40	30	22	6.5	10	58	43	33000	20500	0.81
	UK308+H2308	35	90	46	40	34	27	8.2	10	58	43	40500	23900	1.01
40	UK209+H2309	40	85	50	45	30	22	6.5	11	65	48.5	33000	20500	0.77
	UKX09+H2309	40	90	50	45	31	23	6.5	11	65	48.5	35500	23200	0.94
	UK309+H2309	40	100	50	45	37	30	9	11	65	48.5	51500	29500	1.31
45	UK210+H2310	45	90	55	50	31	23	6.5	12	70	54	35500	23200	0.93
	UKX10+H2310	45	100	55	50	33	24	7.3	12	70	54	43000	29400	1.22
	UK310+H2310	45	110	55	50	40	32	10	12	70	54	61500	38200	1.68
50	UK211+H2311	50	100	59	55	33	24	7.3	12	75	59	43000	29400	1.16
	UKX11+H2311	50	110	59	55	36	26	7.7	12	75	59	52500	36100	1.54
	UK311+H2311	50	120	59	55	43	34	10.7	12	75	59	71500	44800	2.06
55	UK212+H2312	55	110	62	60	36	26	7.7	13	80	64.5	52500	36100	1.47
	UKX12+H2312	55	120	62	60	38	27	8.3	13	80	64.5	57500	40000	1.89
	UK312+H2312	55	130	62	60	46	36	11.5	13	80	64.5	81500	52000	2.53
60	UK213+H2313	60	120	65	65	38	27	8.3	14	85	69.5	57500	40000	1.82
	UKX13+H2313	60	125	65	65	40	29	8.7	14	85	69.5	62000	44000	2.09
	UK313+H2313	60	140	65	65	48	38	12.2	14	85	69.5	92500	59700	3.07
65	UK215+H2315	65	130	73	75	41	30	9.2	15	98	80	66000	48200	2.59
	UKX15+H2315	65	140	73	75	44	32	9.6	15	98	80	72500	53000	3.25
	UK315+H2315	65	160	73	75	54	42	13.8	15	98	80	114000	76900	4.74
70	UK216+H2316	70	140	78	80	44	32	9.6	17	105	85.5	72500	53000	3.27
	UKX16+H2316	70	150	78	80	46	34	10.5	17	105	85.5	83500	61800	3.86
	UK316+H2316	70	170	78	80	57	44	14.5	17	105	85.5	123000	86400	5.62
75	UK217+H2317	75	150	82	85	46	34	10.5	18	110	90.5	83500	61800	3.92
	UKX17+H2317	75	160	82	85	49	36	11.1	18	110	90.5	95500	71400	4.72
	UK317+H2317	75	180	82	85	60	46	15	18	110	90.5	132000	96500	6.56

1N=0.102kgf

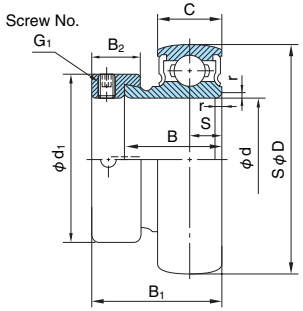
Shaft dia. (mm)	Ball Bearing No.	Boundary dimensions (mm)										Basic load rating (N)		Mass (kg)
		d_1	D	B_1	d	B	C	C_a	B_2	d_2	dT_1	Cr	Cor	
80	UK218+H2318	80	160	86	90	49	36	11.1	18	120	96	95500	71400	4.68
	UKX18+H2318	80	170	86	90	52	38	11.9	18	120	96	109000	81600	5.11
	UK318+H2318	80	190	86	90	63	48	15.9	18	120	96	143000	107200	7.52
85	UK319+H2319	85	200	90	95	66	50	16.7	19	125	101	153000	118400	8.72
90	UKX20+H2320	90	190	97	100	58	42	13	20	130	106.5	134000	104700	8.10
	UK320+H2320	90	215	97	100	72	54	18	20	130	106.5	173000	140400	10.8
100	UK322+H2322	100	240	105	110	80	60	21	21	145	117	205000	178800	14.4
110	UK324+H2324	110	260	112	120	86	64	22	22	155	127.5	207000	184800	18.0
115	UK326+H2326	115	280	121	130	92	68	23	23	165	138.5	229000	214300	23.3
125	UK328+H2328	125	300	131	140	98	73	25	24	180	149	255000	246000	28.8

Ball Bearings for Units

B type
With set screws
Cylindrical bore
Shaft dia.: 12～35mm



KHAE type
With eccentric collar
Cylindrical bore
Shaft dia.: 12～35mm



B type

1N=0.102kgf

Shaft dia. (mm)	Ball Bearing No.	Boundary dimensions (mm)											Basic load rating (N)		Mass (kg)
		d	D	B	C	r	S	S_1	S_2	G_1	d_1		Cr	Cor	
12	B1	12	40	22	12	1	6	16	4	M5×0.8	24.7		9550	4800	0.10
15	B2	15	40	22	12	1	6	16	4	M5×0.8	24.7		9550	4800	0.09
17	B3	17	40	22	12	1	6	16	4	M5×0.8	24.7		9550	4800	0.07
20	B4	20	47	24.7	14	1.5	7	17.7	4.5	M5×0.8	29		12800	6600	0.12
25	B5	25	52	27	15	1.5	7.5	19.5	5	M6×0.75	34		14000	7900	0.16
30	B6	30	62	30.3	16	1.5	8	22.3	5	M6×0.75	40.5		19600	11300	0.25
35	B7	35	72	32.9	17	2	8.5	24.4	6	M8×1	48		25900	15400	0.38

Remark: Chamfer dimensions **"r"** shown in the table are nominal dimension.

KHAE type

1N=0.102kgf

Shaft dia. (mm)	Ball Bearing No.	Boundary dimensions (mm)										Basic load rating (N)		Mass (kg)
		d	D	B_1	B	C	r	S	d_1	B_2	G		Cr	Cor	
12	KH201AE	12	40	28.6	19.1	12	1	6.5	28.6	13.5	M 6×0.75		9550	4800	0.12
15	KH202AE	15	40	28.6	19.1	12	1	6.5	28.6	13.5	M 6×0.75		9550	4800	0.11
17	KH203AE	17	40	28.6	19.1	12	1	6.5	28.6	13.5	M 6×0.75		9550	4800	0.10
20	KH204AE	20	47	31	21.5	14	1.5	7.5	33.3	13.5	M 6×0.75		12800	6600	0.16
25	KH205AE	25	52	31	21.5	15	1.5	7.5	38.1	13.5	M 6×0.75		14000	7900	0.20
30	KH206AE	30	62	35.7	23.8	16	1.5	9	44.5	15.9	M 8×1		19600	11300	0.31
35	KH207AE	35	72	38.9	25.4	17	2	9.5	55.6	17.5	M10×1.25		25900	15400	0.49

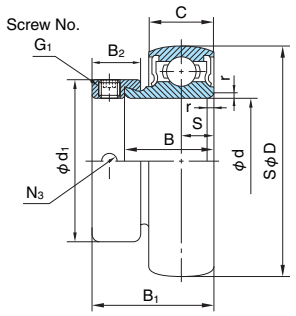
Remark: Chamfer dimensions **"r"** shown in the table are nominal dimension.

Silver series

Ball Bearings for Units

With eccentric collar
Cylindrical bore
U+ER type
Shaft dia.: 8～30mm

MU+ER type (Stainless Silver Series)
Shaft dia.: 10～30mm



U+ER type

1N=0.102kgf

Shaft dia. (mm)	Ball Bearing No.	Boundary dimensions (mm)												Basic load rating (N)		Mass (kg)
		d	D	B_1	B	C	r	S	d_1	B_2	G_1	N_3		Cr	Cor	
10	U000+ER	10	26	17.5	11	8	0.5	4	17	8.5	M4×0.7	3.5		4600	2000	30
12	U001+ER	12	28	17.5	11	8	0.5	4	19	8.5	M4×0.7	3.5		5100	2400	36
15	U002+ER	15	32	18.5	12	9	0.5	4.5	22	8.5	M4×0.7	3.5		5600	2800	50
17	U003+ER	17	35	20.5	13.5	10	0.5	5	25	9.5	M4×0.7	3.5		6000	3300	62
20	U004+ER	20	42	24.5	16.5	12	1	6	30	11	M5×0.8	5		9350	5100	104
25	U005+ER	25	47	25.5	17.5	12	1	6	36	12	M5×0.8	5		10100	5800	133
30	U006+ER	30	55	26.5	18.5	13	1.5	6.5	42	12	M5×0.8	5		13200	8300	186
8	U 08+ER(1)	8	22	15	10	7	0.3	3.5	14	7	M3×0.5	2.5		3300	1360	16

Note: (1) U08X with set screws is available. U08X: B=12, d1=11.3, set screw 2-M3×0.5 S2=2.5 (side surface to set screw center)
Remark: Chamfer dimensions **"r"** shown in the table are nominal dimension.

MU+ER type (Stainless Silver Series)

1N=0.102kgf

Shaft dia. (mm)	Ball Bearing No.	Boundary dimensions (mm)												Basic load rating (N)		Mass (kg)
		d	D	B_1	B	C	r	S	d_1	B_2	G_1	N_3		Cr	Cor	
10	MU000+ER	10	26	17.5	11	8	0.5	4	17	8.5	M4×0.7	3.5		3900	1550	30
12	MU001+ER	12	28	17.5	11	8	0.5	4	19	8.5	M4×0.7	3.5		4300	1900	36
15	MU002+ER	15	32	18.5	12	9	0.5	4.5	22	8.5	M4×0.7	3.5		4750	2250	50
17	MU003+ER	17	35	20.5	13.5	10	0.5	5	25	9.5	M4×0.7	3.5		5100	2650	62
20	MU004+ER	20	42	24.5	16.5	12	1	6	30	11	M5×0.8	5		7900	4000	104
25	MU005+ER	25	47	25.5	17.5	12	1	6	36	12	M5×0.8	5		8600	4650	133
30	MU006+ER	30	55	26.5	18.5	13	1.5	6.5	42	12	M5×0.8	5		11300	6600	186

Remark: Chamfer dimensions **"r"** shown in the table are nominal dimension.

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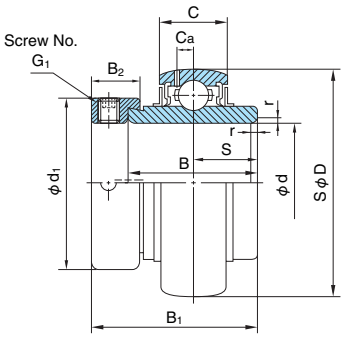
Ball Bearings for Units

UG+ER type

With eccentric collar

Cylindrical bore

Shaft dia.: 20～60mm



1N=0.102kgf

Shaft dia. (mm)	Ball Bearing No.	Boundary dimensions (mm)											Basic load rating (N)		Mass (kg)
		d	D	B_1	B	C	r	S	d_1	B_2	G_1		Cr	Cor	
20	UG204+ER	20	47	43.7	34.2	17	1.5	17.1	33.3	13.5	M 6×0.75		12800	6600	0.21
25	UG205+ER	25	52	44.4	34.9	17	1.5	17.5	38.1	13.5	M 6×0.75		14000	7900	0.23
30	UG206+ER	30	62	48.4	36.5	19	1.5	18.3	44.5	15.9	M 8×1		19600	11300	0.37
35	UG207+ER	35	72	51.1	37.6	20	2	18.8	55.6	17.5	M10×1.25		25900	15400	0.60
40	UG208+ER	40	80	56.3	42.8	21	2	21.4	60.3	18.3	M10×1.25		29300	17900	0.76
45	UG209+ER	45	85	56.3	42.8	22	2	21.4	63.5	18.3	M10×1.25		33000	20500	0.79
50	UG210+ER	50	90	62.7	49.2	23	2	24.6	69.9	18.3	M10×1.25		35500	23200	0.91
55	UG211+ER	55	100	71.4	55.5	24	2.5	27.8	76.2	20.7	M12×1.5		43000	29400	1.26
60	UG212+ER	60	110	77.8	61.9	26	2.5	31	84.2	22.3	M12×1.5		52500	36100	1.70

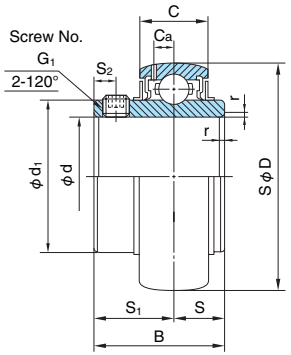
Remark: Chamfer dimensions **"r"** shown in the table are nominal dimension.

NACHI

■ Ball Bearings for Units

With stainless
MUC type
With set screws
Cylindrical bore

Shaft dia.: 20～50mm



1N=0.102kgf

Shaft dia. (mm)	Ball Bearing No.	Boundary dimensions (mm)												Basic load rating (N)		Mass (kg)
		d	D	B	C	r	S	S_1	S_2	G_1	C_a	d_1		Cr	Cor	
20	MUC204	20	47	31	17	1.5	12.7	18.3	4.5	M 6×1	4.5	29		10900	5300	0.16
25	MUC205	25	52	34	17	1.5	14.3	19.7	5	M 6×1	4.5	34		11900	6300	0.19
30	MUC206	30	62	38.1	19	1.5	15.9	22.2	5	M 6×1	5.1	40.5		16700	9050	0.31
35	MUC207	35	72	42.9	20	2	17.5	25.4	6	M 8×1	5.8	48		22000	12300	0.48
40	MUC208	40	80	49.2	21	2	19	30.2	8	M 8×1	6.2	53		24900	14300	0.62
45	MUC209	45	85	49.2	22	2	19	30.2	8	M 8×1	6.5	57.3		28100	16400	0.67
50	MUC210	50	90	51.6	23	2	19	32.6	9	M10×1.25	6.5	63		30200	18600	0.78

Remark: Chamfer dimensions **"r"** shown in the table are nominal dimension.



Plummer Block Housings

Plummer Block housings ease to constitute bearing units by using with self-aligning ball bearings or spherical roller bearings.
NACHI Plummer Block housing design is improved in term of accuracy, strength and rigidity.

● Features

- Wide range of sizes and configurations allows selection of optimal housing.
- Low weight to strength ratio.
- For straight shaft, the bearings with tapered bore and adapter can be mounted at any selected shaft position.
- For stepped-shaft, the bearings with cylindrical bore are fixed by shaft nut.

Remark: Housings not listed in the dimensions tables are also manufactured, consult NACHI for more information.

Table of contents

Type		Symbol	Bore diameter on both sides	Applicable Bearing	Shaft Dia. (mm)	Page
Split type	SN Standard type	SN5	Same	Tapered bore with adapter	20～140	page 545
		SN6			20～140	
		SN30			10～170	
		SN31			00～170	
	SN Flat bottom type	SN5F	Same	Tapered bore with adapter	20～140	page 553
		SN6F			20～140	
	SN Large bore dia on both sides	SN2	Same	Cylindrical bore	25～160	page 559
		SN3			25～ 85	
		SN2C	Difference	Cylindrical bore	25～160	
		SN3C			25～ 85	
	SN Large bore dia on both sides Flat bottom	SN2F	Same	Cylindrical bore	25～160	page 565
		SN3F			25～ 85	
		SN2FC	Difference	Cylindrical bore	25～160	
		SN3FC			25～ 85	
	SD Standard type	SD5	Same	Tapered bore with adapter	150～300	page 571
		SD6			150～260	
		SD30			150～300	
		SD31			150～300	
One-piece type	V Standard type	V	Same	Tapered bore with adapter	30～200	page 575
			Difference	Cylindrical bore	35～220	page 583

Remark: Please contact NACHI for housings not listed in table, special dimension, and with special accessories.

1. Materials for Plummer Block Housings

NACHI Plummer Blocks are made of gray cast iron FC200.
Spheroidal graphite iron castings FCD450 or carbon steel castings SC450 can be used for severe conditions such as vibration, shock and heavy load.
Materials for accessories are shown in right table.

Materials for Accessories

Accessory	Material	Symbol
Bolt	Rolled steels for general structure	SS400
Spring lock washer	High carbon steel wire rods	SWRH62B
Cover of V series	Gray iron castings	FC200
Oil seal	Nitrile rubber	NBR
Drainage plug	Carbon steels for machine structure use	S10C
Eyebolt	Rolled steels for general structure	SS400
Grease nipple	Free-cutting brass	C3604B
Locating ring	Gray iron castings	FC200
Adapter sleeve, Locknut, Lockplate	Carbon steels for machine structure use or Rolled steels for general structure	S25C or SS400
Plain washer	Rolled steels for general structure	SS400

2. Designations

(1) Designations of Plummer Block Housings

Designations of Plummer Block Housings are shown as follows.

• Split-housings

SN 2 20 D F2 C — Supplementary symbol: E NA P3 S0

Type symbol
SN: Standard type
SD: Large type for heavy load

Dimension series number
5,6,30,31: Applied to Tapered bore bearing
2,3 : Applied to Cylindrical bore bearing

Bore diameter number (Same as bore diameter number of applied bearing)

Material symbol
(None): Gray cast iron FC200
D : Spheroidal graphite iron castings FCD450
S : Carbon steel castings SC450

Bottom face symbol
(None): Hollow bottom (Standard)
F : Flat bottom (without bolt hole)
F2 : Flat bottom (with 2 bolt holes)
F4 : Flat bottom (with 4 bolt holes)

Bore dia. on both sides
(None): Same
C : Difference

Oil seal
(None): GS seal(Standard)
ZS : ZF seal
SO : Without oil seal

Drainage cap
(None): Standard (one side except SD type)
PD : Both sides
P3 : PT3/8 threads for cap
P4 : PT1/2 threads for cap

Grease nipple
(None): A type nipple (Standard)
NB : B type nipple

End cover
(None): Without end cover
E : Insert type
EH : Bolt attach type
EM : one-piece type

Remarks 1. When symbol are omitted, shift to left side.
2. Threads and number of grease inlet/outlet are shown in tables.
3. Grease nipple A type is attached at grease inlet.

• One-piece housings

V 215 D C 135 – 110

Type symbol: V

Housing seating diameter (Same as outside diameter of bearing)

Material symbol
(None): Gray cast iron FC200
D : Spheroidal graphite iron castings FCD450
S : Carbon steel castings SC450

Cover symbol

Shaft diameter of small diameter side
Numerical: Shaft diameter (mm)
0: End cover

Shaft diameter of large diameter side
Numerical: Shaft diameter (mm)

Remarks 1. When symbol are omitted, shift to left side.
2. Supplementary symbols accord with split housing.
3. Threads and number of oil inlet/outlet are shown in tables.
4. Grease nipple of button-head type is attached at grease inlet.

(2) Locating Rings

Locating ring for fixed side housing is identified as follows. locating ring should be prepared besides plummer block housings.
The dimension table show the designation and number of ring required for each bearing.

SR 180 × 12.1 × 2

Locating ring symbol: SR

Outside diameter (mm) (Same as outside diameter of bearing)

Width (mm)

Required number

Remark: The necessary number of locating rings is shown as "X number or required locating rings" immediately after the part number.

(3) Combination of Plummer Block Housing, Bearing, Adapter and Locating Ring

The designations of combination are obtained by adding each with '+' as following order.

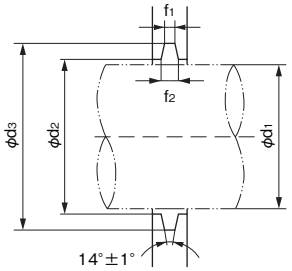
SN520 + 22220EX + H320X + SR200×13.5 × 2

Plummer block housing + Bearing + Adapter + Locating ring SR outer diameter (mm) × width (mm) × Number of locating ring

Remark: Designations for parts not required are omitted.

3. Tolerances for Plummer Block Housings

The tolerances of housing seating bore, width and height from mounting face to centerline of housing seating bore are shown in dimension tables.
The bore diameter and tolerance of the openings at both sides of housings are shown in right table.



Side opening of housing

Dimensions and Tolerances of Side Openings Unit: mm

Shaft Dia d_1	d_2		d_3		f_1		f_2	Oil seal (Ref.)
	Nominal	Tolerance (H12)	Nominal	Tolerance (H12)	Nominal	Tolerance (H13)	Nominal	
20	21.5	+0.210 0	31	+0.250 0	3	+0.140 0	4.2	GS 5
25	26.5		38		4		5.4	GS 6
30	31.5		43		4		5.4	GS 7
35	36.5	+0.250 0	48		4		5.4	GS 8
40	41.5		53	+0.300 0	4		5.4	GS 9
45	46.5		58		4		5.4	GS 10
50	51.5	+0.300 0	67		5	+0.180 0	6.9	GS 11
55	56		72		5		6.9	GS 12
60	62		77		5		6.9	GS 13
65	67		82	+0.350 0	5		6.8	GS 15
70	72		89		6		8.1	GS 16
75	77		94		6		8.1	GS 17
80	82	+0.350 0	99		6		8.1	GS 18
85	87		104		6		8.1	GS 19
90	92		111		7		9.3	GS 20
95	97		116		7	+0.220 0	9.3	GS 21
100	102		125	+0.400 0	8		10.8	GS 22
105	107		130		8		10.8	GS 23
110	113	+0.400 0	135		8		10.7	GS 24
115	118		140		8		10.7	GS 26
120	123		145		8		10.7	GS 27
125	128		154		9		12.2	GS 28
130	133		159		9		12.2	GS 29
135	138		164		9		12.2	GS 30
140	143		173		00		13.7	GS 32
145	148		178		10		13.7	GS 33
150	153		183	+0.460 0	10		13.7	GS 34
155	158		188		10		13.7	GS 35
160	163		193		10		13.7	GS 36
165	168		198		10		13.7	GS 37
170	173	+0.460 0	203		10		13.7	GS 38
175	178		208		10		13.7	GS 39
180	183		213		10		13.7	GS 40
190	193		223		10		13.7	GS 42
200	203		240		11		15.5	GS 44
210	213		250		11		15.5	GS 46
220	223		260	+0.520 0	11		15.5	GS 48
230	233		270		11		15.5	GS 50
240	243		286		12		17.3	GS 52
250	253	+0.520 0	296		12		17.3	GS 54
260	263		306		12		17.3	GS 56
270	273		322		13		19	GS 58
280	283		332	+0.570 0	13	+0.270 0	19	GS 60
300	303		352		13		19	GS 64
320	323		370		14		19.8	GS 68
340	343	+0.570 0	390		14		19.8	GS 72
360	363		412		13		19	GS 76
380	383		432	+0.630 0	13		19	GS 80
400	403		452		14		20	GS 84
410	413	+0.630 0	460		14		19.8	GS 88
430	433		480		14		19.8	GS 92
450	453		505	+0.700 0	14		20.3	GS 96

Remark: Number of oil seal is applicable to ZF seal with same number.

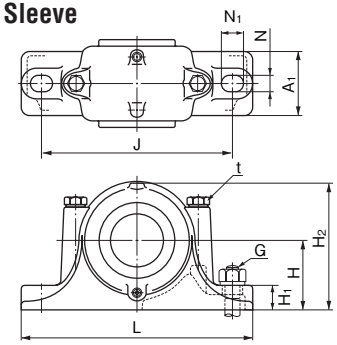
〔Reference〕

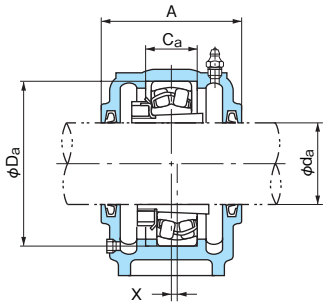
Bearing type / Housing type	Self-aligning Ball Bearings				Spherical Roller Bearings					
	12	22	13	23	230	231	222	232	213	223
SN5 SN5F	05K ～22K	05K ～22K	—	—	—	—	05K ～32K	18K ～32K	—	—
SN6 SN6F	—	—	05K ～22K	05K ～22K	—	—	—	—	05K ～22K	08K ～32K
SN30	—	—	—	—	24K ～38K	—	—	—	—	—
SN31	—	—	—	—	—	22K ～38K	—	—	—	—
SN2 SN2F	05 ～22	05 ～22	—	—	—	—	05 ～32	18 ～32	—	—
SN3 SN3F	—	—	05 ～17	05 ～17	—	—	—	—	05 ～17	08 ～17
SD5	—	—	—	—	—	—	34K ～64K	—	—	—
SD6	—	—	—	—	—	—	—	—	—	34K ～56K
SD30	—	—	—	—	34K ～64K	—	—	—	—	—
SD31	—	—	—	—	—	34K ～64K	—	—	—	—
V	08(K) ～22(K)	08(K) ～22(K)	07(K) ～22(K)	07(K) ～22(K)	22(K) ～44(K)	22(K) ～40(K)	08(K) ～38(K)	22(K) ～38(K)	07(K) ～22(K)	08(K) ～32(K)

Plummer Block Housings

SN5, SN6, SN30, SN31 Series
for Bearing with Adapter Sleeve

Shaft Diameter: 20～55mm

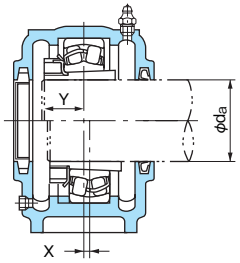




Through Shaft Type

Free side

Fixed side



Shaft End Type

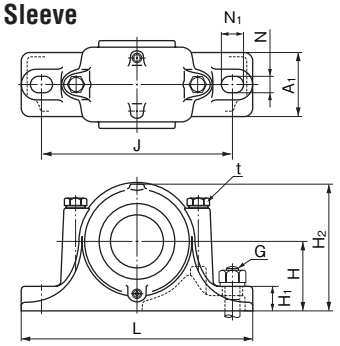
Shaft dia. da (mm)	Dimensions (mm)													Mass (kg) (Reference)	Designations		Applicable parts					Y (Reference)
	Da (H8)	H (h13)	J	N	N1	A	L	A1	H1	H2	Ca (H13)	G (Nominal)	t (Nominal) (Reference)		Through Shaft Type	Shaft End Type	Self-aligning ball bearings	Spherical roller bearings	Adapter sleeve	Oil seal	Locating ring Designations	Locating ring Q'ty	
20	52	40	130	15	20	67	165	46	22	75	25	M12	M 8	1.1	SN505	SN505E	1205K	—	H205X	GS 5	SR52×5	2	17
																	2205K	22205EXK	H305X		SR52×7	1	19
	62	50	150	15	20	80	185	52	22	90	34	M12	M 8	1.6	SN605	SN605E	1305K	21305EK	H305X	GS 5	SR62×8.5	2	18
																	2305K	—	H2305X		SR62×10	1	22
25	62	50	150	15	20	77	185	52	22	90	30	M12	M 8	1.7	SN506	SN506E	1206K	—	H206X	GS 6	SR62×7	2	18
																	2206K	22206EXK	H306X		SR62×10	1	20
	72	50	150	15	20	82	185	52	22	95	37	M12	M10	1.8	SN606	SN606E	1306K	21306EK	H306X	GS 6	SR72×9	2	19
																	2306K	—	H2306X		SR72×10	1	23
30	72	50	150	15	20	82	185	52	22	95	33	M12	M10	1.9	SN507	SN507E	1207K	—	H207X	GS 7	SR72×8	2	19
																	2207K	22207EXK	H307X		SR72×10	1	22
	80	60	170	15	20	90	205	60	25	110	41	M12	M10	2.6	SN607	SN607E	1307K	21307EK	H307X	GS 7	SR80×10	2	21
																	2307K	—	H2307X		SR80×10	1	26
35	80	60	170	15	20	85	205	60	25	110	33	M12	M10	2.6	SN508	SN508E	1208K	—	H208X	GS 8	SR80×7.5	2	21
																	2208K	22208EXK	H308X		SR80×10	1	23
	90	60	170	15	20	95	205	60	25	115	43	M12	M10	2.9	SN608	SN608E	1308K	21308EK	H308X	GS 8	SR90×10	2	23
																	2308K	22308EXK	H2308X		SR90×10	1	28
40	85	60	170	15	20	85	205	60	25	112	31	M12	M10	2.8	SN509	SN509E	1209K	—	H209X	GS 9	SR85×6	2	22
																	2209K	22209EXK	H309X		SR85×8	1	24
	100	70	210	18	23	105	255	70	28	130	46	M16	M12	4.1	SN609	SN609E	1309K	21309EK	H309X	GS 9	SR100×10.5	2	25
																	2309K	22309EXK	H2309X		SR100×10	1	31
45	90	60	170	15	20	90	205	60	25	115	33	M12	M10	3.0	SN510	SN510E	1210K	—	H210X	GS10	SR90×6.5	2	24
																	2210K	22210EXK	H310X		SR90×10	1	25
	110	70	210	18	23	115	255	70	30	135	50	M16	M12	4.7	SN610	SN610E	1310K	21310EK	H310X	GS10	SR110×11.5	2	27
																	2310K	22310EXK	H2310X		SR110×10	1	34
50	100	70	210	18	23	95	255	70	28	130	33	M16	M12	4.5	SN511	SN511E	1211K	—	H211X	GS11	SR100×6	2	25
																	2211K	22211EXK	H311X		SR100×8	1	27
	120	80	230	18	23	120	275	80	30	150	53	M16	M12	5.8	SN611	SN611E	1311K	21311EK	H311X	GS11	SR120×12	2	29
																	2311K	22311EXK	H2311X		SR120×10	1	36
55	110	70	210	18	23	105	255	70	30	135	38	M16	M12	5.0	SN512	SN512E	1212K	—	H212X	GS12	SR110×8	2	26
																	2212K	22212EXK	H312X		SR110×10	1	29
	130	80	230	18	23	125	280	80	30	155	56	M16	M12	6.5	SN612	SN612E	1312K	21312EK	H312X	GS12	SR130×12.5	2	31
																	2312K	22312EXK	H2312X		SR130×10	1	39

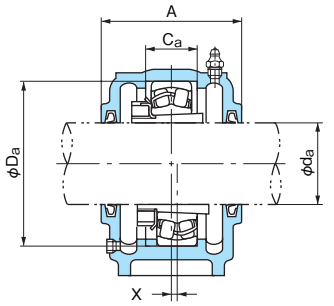
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only.
To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, adapter sleeve and locating rings but the bolts.
3. H8, H13 and h13 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the plummer block housing is a half of the locating ring width.
6. The threads for plugs are PT1/8. SN505 does not have a drain hole.
7. ZF type oil seals are also available instead of GS type seals.
8. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

Plummer Block Housings

SN5, SN6, SN30, SN31 Series for Bearing with Adapter Sleeve

Shaft Diameter: 60～90mm

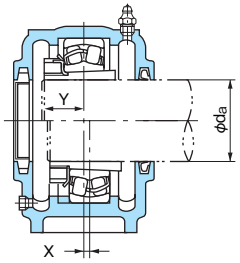




Through Shaft Type

Free side

Fixed side



Shaft End Type

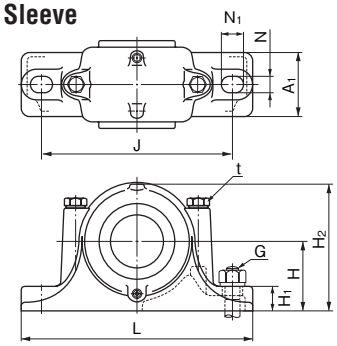
Shaft dia. da (mm)	Dimensions (mm)													Mass (kg) (Reference)	Designations		Applicable parts					Y (Reference)
	Da (H8)	H (h13)	J	N	N1	A	L	A1	H1	H2	Ca (H13)	G (Nominal)	t (Nominal) (Reference)		Through Shaft Type	Shaft End Type	Self-aligning ball bearings	Spherical roller bearings	Adapter sleeve	Oil seal	Locating ring Designations	Locating ring Q'ty	
60	120	80	230	18	23	110	275	80	30	150	43	M16	M12	5.6	SN513	SN513E	1213K	—	H213X	GS13	SR120×10	2	28
																	2213K	22213EXK	H313X		SR120×12	1	32
	140	95	260	22	27	130	315	90	32	175	58	M20	M16	8.7	SN613	SN613E	1313K	21313EK	H313X	GS13	SR140×12.5	2	33
																	2313K	22313EXK	H2313X		SR140×10	1	40
65	130	80	230	18	23	115	280	80	30	155	41	M16	M12	7.0	SN515	SN515E	1215K	—	H215X	GS15	SR130×8	2	30
																	2215K	22215EXK	H315X		SR130×10	1	33
	160	100	290	22	27	140	345	100	35	195	65	M20	M16	11	SN615	SN615E	1315K	21315EK	H315X	GS15	SR160×14	2	36
																	2315K	22315EXK	H2315X		SR160×10	1	45
70	140	95	260	22	27	120	315	90	32	175	43	M20	M16	9.0	SN516	SN516E	1216K	—	H216X	GS16	SR140×8.5	2	32
																	2216K	22216EXK	H316X		SR140×10	1	36
	170	112	290	22	27	145	345	100	35	212	68	M20	M16	13	SN616	SN616E	1316K	21316EK	H316X	GS16	SR170×14.5	2	39
																	2316K	22316EXK	H2316X		SR170×10	1	48
75	150	95	260	22	27	125	320	90	32	185	46	M20	M16	10	SN517	SN517E	1217K	—	H217X	GS17	SR150×9	2	34
																	2217K	22217EXK	H317X		SR150×10	1	38
	180	112	320	26	32	155	380	110	40	223	70	M24	M20	15	SN617	SN617E	1317K	21317EK	H317X	GS17	SR180×14.5	2	41
																	2317K	22317EXK	H2317X		SR180×10	1	50
80	160	100	290	22	27	145	345	100	35	195	62.4	M20	M16	13	SN518	SN518E	1218K	—	H218X	GS18	SR160×16.2	2	35
																	2218K	22218EXK	H318X		SR160×11.2	2	40
																	—	23218EK	H2318X		SR160×10	1	46
	190	112	320	26	32	160	380	110	40	230	74	M24	M20	19	SN618	SN618E	1318K	21318EK	H318X	GS18	SR190×15.5	2	42
																	2318K	22318EXK	H2318X		SR190×10	1	52
85	170	112	290	22	27	140	345	100	35	210	53	M20	M16	15	SN519	SN519E	1219K	—	H219X	GS19	SR170×10.5	2	37
																	2219K	22219EXK	H319X		SR170×10	1	43
	200	125	350	26	32	170	410	120	45	250	77	M24	M20	22	SN619	SN619E	1319K	21319EK	H319X	GS19	SR200×16	2	44
																	2319K	22319EXK	H2319X		SR200×10	1	55
90	180	112	320	26	32	160	380	110	40	218	70.3	M24	M20	19	SN520	SN520E	1220K	—	H220X	GS20	SR180×18.1	2	39
																	2220K	22220EXK	H320X		SR180×12.1	2	45
																	—	23220EK	H2320X		SR180×10	1	52
	215	140	350	26	32	175	410	120	45	270	83	M24	M20	25	SN620	SN620E	1320K	21320EK	H320X	GS20	SR215×18	2	46
																	2320K	22320EXK	H2320X		SR215×10	1	59

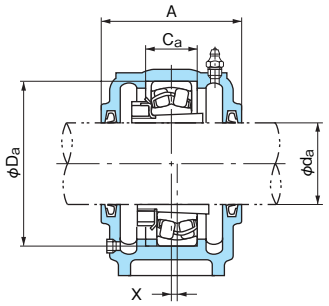
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only.
To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, adapter sleeve and locating rings but the bolts.
3. H8, H13 and h13 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. Plummer block housings SN3028, SN3126, SN524, SN620 and larger are provided with eye bolts.
6. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the plummer block housing is a half of the locating ring width.
7. The threads for plugs are PT1/8 for SN519, SN616 and smaller, and PT1/4 for the others.
8. ZF type oil seals are also available instead of GS type seals.
9. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

Plummer Block Housings

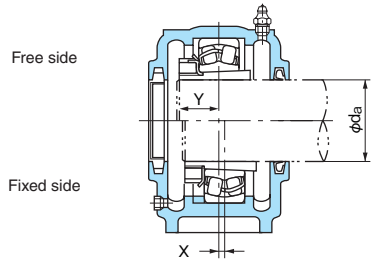
SN5, SN6, SN30, SN31 Series for Bearing with Adapter Sleeve

Shaft Diameter: 100～135mm





Through Shaft Type



Shaft End Type

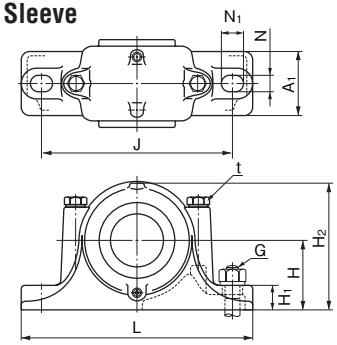
Shaft dia. da (mm)	Dimensions (mm)													Mass (kg) (Reference)	Designations		Applicable parts					Y (Reference)
	Da (H8)	H (h13)	J	N	N1	A	L	A1	H1	H2	Ca (H13)	G (Nominal)	t (Nominal) (Reference)		Through Shaft Type	Shaft End Type	Self-aligning ball bearings	Spherical roller bearings	Adapter sleeve	Oil seal	Locating ring Designations	Locating ring Q'ty	
100	180	112	320	26	32	155	380	110	40	223	66	M24	M20	18	SN3122	SN3122E	—	23122EK	H3122X	GS22	SR180×10	1	51
	200	125	350	26	32	175	410	120	45	240	80	M24	M20	20	SN522	SN522E	1222K	—	H222X	GS22	SR200×21	2	42
																	2222K	22222EXK	H322X		SR200×13.5	2	50
																	—	23222EK	H2322X		SR200×10	1	58
	240	150	390	28	36	190	450	130	50	300	90	M24	M24	32	SN622	SN622E	1322K	21322EK	H322X	GS22	SR240×20	2	48
																	2322K	22322EXK	H2322X		SR240×10	1	63
110	180	112	320	26	32	150	380	110	40	223	56	M24	M20	16	SN3024	SN3024E	—	23024EK	H3024X	GS24	SR180×10	1	47
	200	125	350	26	32	165	410	120	45	245	72	M24	M20	20	SN3124	SN3124E	—	23124EK	H3124X	GS24	SR200×10	1	55
	215	140	350	26	32	185	410	120	45	270	86	M24	M20	25	SN524	SN524E	—	22224EK	H3124X	GS24	SR215×14	2	53
																	—	23224EK	H2324X		SR215×10	1	62
	260	160	450	33	42	200	530	160	60	320	96	M30	M24	48	SN624	SN624E	—	22324EK	H2324X	GS24	SR260×10	1	67
115	200	125	350	26	32	160	410	120	45	245	62	M24	M20	19	SN3026	SN3026E	—	23026EK	H3026	GS26	SR200×10	1	51
	210	140	350	26	32	170	410	120	45	270	74	M24	M20	26	SN3126	SN3126E	—	23126EK	H3126	GS26	SR210×10	1	57
	230	150	380	28	36	190	445	130	50	290	90	M24	M24	30	SN526	SN526E	—	22226EK	H3126	GS26	SR230×13	2	57
																	—	23226EK	H2326		SR230×10	1	65
	280	170	470	33	42	210	550	160	60	340	103	M30	M24	56	SN626	SN626E	—	22326EK	H2326	GS26	SR280×10	1	72
125	210	140	350	26	32	170	410	120	45	270	63	M24	M20	25	SN3028	SN3028E	—	23028EK	H3028	GS28	SR210×10	1	53
	225	150	380	28	36	180	445	130	50	290	78	M24	M24	32	SN3128	SN3128E	—	23128EK	H3128	GS28	SR225×10	1	60
	250	150	420	33	42	205	500	150	50	305	98	M30	M24	38	SN528	SN528E	—	22228EXK	H3128	GS28	SR250×15	2	60
																	—	23228EK	H2328		SR250×10	1	70
	300	180	520	35	45	235	610	170	65	365	112	M30	M30	72	SN628	SN628E	—	22328EK	H2328	GS28	SR300×10	1	77
135	225	150	380	28	36	175	445	130	50	290	66	M24	M24	29	SN3030	SN3030E	—	23030EK	H3030	GS30	SR225×10	1	56
	250	150	420	33	42	200	500	150	50	305	90	M30	M24	38	SN3130	SN3130E	—	23130EK	H3130	GS30	SR250×10	1	68
	270	160	450	33	42	220	530	160	60	325	106	M30	M24	46	SN530	SN530E	—	22230EK	H3130	GS30	SR270×16.5	2	65
																	—	23230EK	H2330		SR270×10	1	76
	320	190	560	35	45	245	650	180	65	385	118	M30	M30	98	SN630	SN630E	—	22330EK	H2330	GS30	SR320×10	1	82

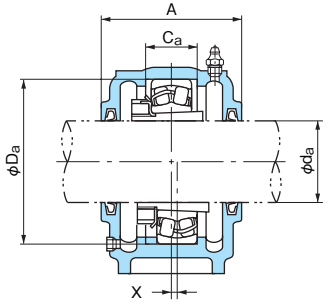
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only.
To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, adapter sleeve and locating rings but the bolts.
3. H8, H13 and h13 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. Plummer block housings SN3028, SN3126, SN524, SN620 and larger are provided with eye bolts.
6. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the plummer block housing is a half of the locating ring width.
7. The threads for plugs are PT1/4.
8. ZF type oil seals are also available instead of GS type seals.
9. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

Plummer Block Housings

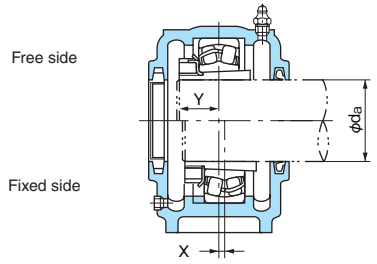
SN5, SN6, SN30, SN31 Series
for Bearing with Adapter Sleeve

Shaft Diameter: 140～170mm





Through Shaft Type



Shaft End Type

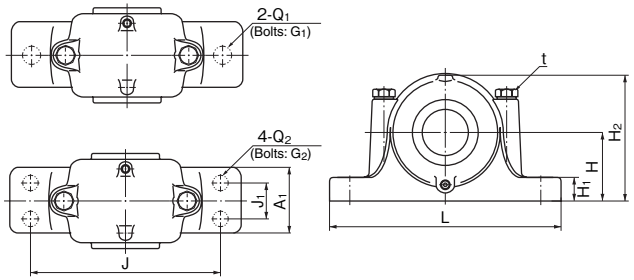
Shaft dia. da (mm)	Dimensions (mm)													Mass (kg) (Reference)	Designations		Applicable parts					Y (Reference)
	Da (H8)	H (h13)	J	N	N1	A	L	A1	H1	H2	Ca (H13)	G (Nominal)	t (Nominal) (Reference)		Through Shaft Type	Shaft End Type	Spherical roller bearings	Adapter sleeve	Oil seal	Locating ring		
																				Designations	Q'ty	
140	240	150	390	28	36	190	450	130	50	300	70	M24	M24	32	SN3032	SN3032E	23032EK	H3032	GS32	SR240×10	1	61
	270	160	450	33	42	215	530	160	60	325	96	M30	M24	48	SN3132	SN3132E	23132EK	H3132	GS32	SR270×10	1	74
	290	170	470	33	42	235	550	160	60	345	114	M30	M24	50	SN532	SN532E	22232EK	H3132	GS32	SR290×17	2	71
																	23232EK	H2332		SR290×10	1	83
	340	200	580	42	50	255	680	190	70	405	124	M36	M30	115	SN632	SN632E	22332EK	H2332	GS32	SR340×10	1	88
150	260	160	450	33	42	200	530	160	60	320	77	M30	M24	40	SN3034	SN3034E	23034EK	H3034	GS34	SR260×10	1	66
	280	170	470	33	42	220	550	160	60	340	98	M30	M24	58	SN3134	SN3134E	23134EK	H3134	GS34	SR280×10	1	76
160	280	170	470	33	42	210	550	160	60	340	84	M30	M24	50	SN3036	SN3036E	23036EK	H3036	GS36	SR280×10	1	70
	300	180	520	35	45	230	610	170	65	365	106	M30	M30	70	SN3136	SN3136E	23136EK	H3136	GS36	SR300×10	1	81
170	290	170	470	33	42	210	550	160	60	345	85	M30	M24	55	SN3038	SN3038E	23038EK	H3038	GS38	SR290×10	1	72
	320	190	560	35	45	240	650	180	65	385	114	M30	M30	90	SN3138	SN3138E	23138EK	H3138	GS38	SR320×10	1	86

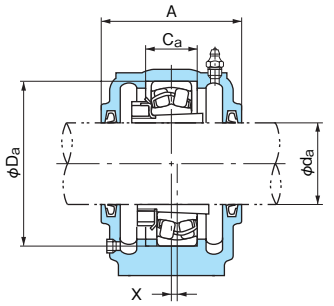
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only.
To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, adapter sleeve and locating rings but the bolts.
3. H8, H13 and h13 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. Plummer block housings SN3028, SN3126,SN524, SN620 and larger are provided with eye bolts.
6. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the plummer block housing is a half of the locating ring width.
7. The threads for plugs are PT1/4.
8. ZF type oil seals are also available instead of GS type seals.
9. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

Plummer Block Housings

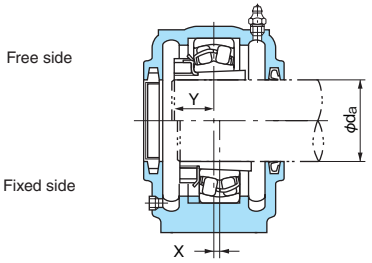
Flat Bottom Type SN5F, SN6F Series for Bearing with Adapter Sleeve

Shaft Diameter: 20～55mm





Through Shaft Type



Shaft End Type

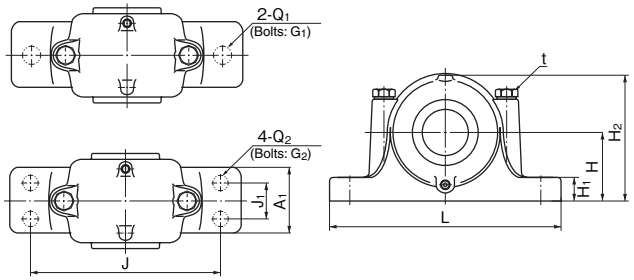
Shaft dia. da (mm)	Dimensions (mm)								Bolt holes (Reference) (mm)						t (Nominal) (Reference)	Mass (kg) (Reference)	Designations		Applicable parts						Y (Reference)
	Da (H8)	H (h13)	A	L	A1	H1	H2	Ca (H13)	J	Q1	G1 (Nominal)	J1	Q2	G2 (Nominal)			Through Shaft Type	Shaft End Type	Self-aligning ball bearings	Spherical roller bearings	Adapter sleeve	Oil seal	Locating ring Designations	Locating ring Q'ty	
20	52	40	67	165	46	22	75	25	130	15	M12	25	10	M 8	M 8	1.7	SN505F	SN505FE	1205K	—	H205X	GS 5	SR52×5	2	17
																			2205K	22205EXK	H305X		SR52×7	1	19
	62	50	80	185	52	22	90	34	150	15	M12	25	12	M10	M 8	2.4	SN605F	SN605FE	1305K	21305EK	H305X	GS 5	SR62×8.5	2	18
																			2305K	—	H2305X		SR62×10	1	22
25	62	50	77	185	52	22	90	30	150	15	M12	25	12	M10	M 8	2.5	SN506F	SN506FE	1206K	—	H206X	GS 6	SR62×7	2	18
																			2206K	22206EXK	H306X		SR62×10	1	20
	72	50	82	185	52	22	95	37	150	15	M12	25	12	M10	M10	2.5	SN606F	SN606FE	1306K	21306EK	H306X	GS 6	SR72×9	2	19
																			2306K	—	H2306X		SR72×10	1	23
30	72	50	82	185	52	22	95	33	150	15	M12	25	12	M10	M10	2.6	SN507F	SN507FE	1207K	—	H207X	GS 7	SR72×8	2	19
																			2207K	22207EXK	H307X		SR72×10	1	22
	80	60	90	205	60	25	110	41	170	15	M12	30	12	M10	M10	3.8	SN607F	SN607FE	1307K	21307EK	H307X	GS 7	SR80×10	2	21
																			2307K	—	H2307X		SR80×10	1	26
35	80	60	85	205	60	25	110	33	170	15	M12	30	12	M10	M10	4.0	SN508F	SN508FE	1208K	—	H208X	GS 8	SR80×7.5	2	21
																			2208K	22208EXK	H308X		SR80×10	1	23
	90	60	95	205	60	25	115	43	170	15	M12	30	12	M10	M10	4.0	SN608F	SN608FE	1308K	21308EK	H308X	GS 8	SR90×10	2	23
																			2308K	22308EXK	H2308X		SR90×10	1	28
40	85	60	85	205	60	25	112	31	170	15	M12	30	12	M10	M10	4.4	SN509F	SN509FE	1209K	—	H209X	GS 9	SR85×6	2	22
																			2209K	22209EXK	H309X		SR85×8	1	24
	100	70	105	255	70	28	130	46	210	19	M16	35	15	M12	M12	6.0	SN609F	SN609FE	1309K	21309EK	H309X	GS 9	SR100×10.5	2	25
																			2309K	22309EXK	H2309X		SR100×10	1	31
45	90	60	90	205	60	25	115	33	170	15	M12	30	12	M10	M10	4.7	SN510F	SN510FE	1210K	—	H210X	GS10	SR90×6.5	2	24
																			2210K	22210EXK	H310X		SR90×10	1	25
	110	70	115	255	70	30	135	50	210	19	M16	35	15	M12	M12	6.5	SN610F	SN610FE	1310K	21310EK	H310X	GS10	SR110×11.5	2	27
																			2310K	22310EXK	H2310X		SR110×10	1	34
50	100	70	95	255	70	28	130	33	210	19	M16	35	15	M12	M12	6.3	SN511F	SN511FE	1211K	—	H211X	GS11	SR100×6	2	25
																			2211K	22211EXK	H311X		SR100×8	1	27
	120	80	120	275	80	30	150	53	230	19	M16	40	15	M12	M12	8.5	SN611F	SN611FE	1311K	21311EK	H311X	GS11	SR120×12	2	29
																			2311K	22311EXK	H2311X		SR120×10	1	36
55	110	70	105	255	70	30	135	38	210	19	M16	35	15	M12	M12	6.9	SN512F	SN512FE	1212K	—	H212X	GS12	SR110×8	2	26
																			2212K	22212EXK	H312X		SR110×10	1	29
	130	80	125	280	80	30	155	56	230	19	M16	40	15	M12	M12	9.0	SN612F	SN612FE	1312K	21312EK	H312X	GS12	SR130×12.5	2	31
																			2312K	22312EXK	H2312X		SR130×10	1	39

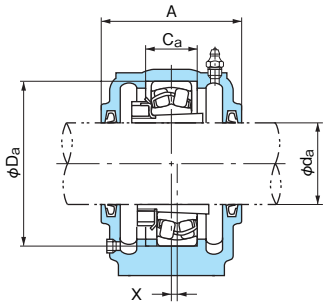
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only.
To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, adapter sleeve and locating rings but the bolts.
3. H8, H13 and h13 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the plummer block housing is a half of the locating ring width.
6. The threads for plugs are PT1/8. SN505F does not have a drain hole.
7. ZF type oil seals are also available instead of GS type seals.
8. Please specify number of bolt holes.
9. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

Plummer Block Housings

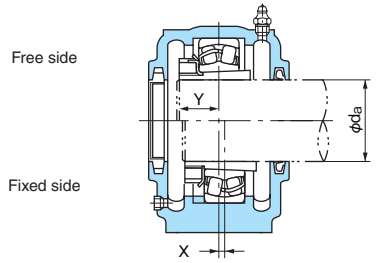
Flat Bottom Type SN5F, SN6F Series for Bearing with Adapter Sleeve

Shaft Diameter: 60～90mm





Through Shaft Type



Shaft End Type

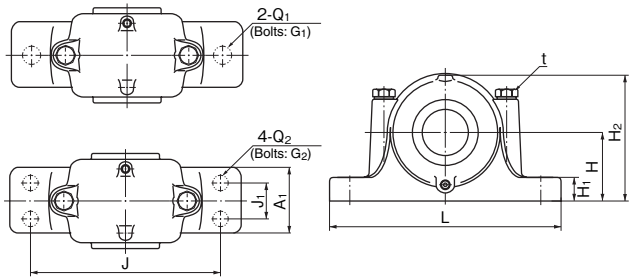
Shaft dia. da (mm)	Dimensions (mm)								Bolt holes (Reference)						t (Nominal) (Reference)	Mass (kg) (Reference)	Designations		Applicable parts						Y (Reference)
	Da (H8)	H (h13)	A	L	A1	H1	H2	Ca (H13)	J	Q1	G1 (Nominal)	J1	Q2	G2 (Nominal)			Through Shaft Type	Shaft End Type	Self-aligning ball bearings	Spherical roller bearings	Adapter sleeve	Oil seal	Locating ring Designations	Locating ring Q'ty	
60	120	80	110	275	80	30	150	43	230	19	M16	40	15	M12	M12	7.0	SN513F	SN513FE	1213K	—	H213X	GS13	SR120×10	2	28
																			2213K	22213EXK	H313X		SR120×12	1	32
	140	95	130	315	90	32	175	58	260	24	M20	50	19	M16	M16	13	SN613F	SN613FE	1313K	21313EK	H313X	GS13	SR140×12.5	2	33
																			2313K	22313EXK	H2313X		SR140×10	1	40
65	130	80	115	280	80	30	155	41	230	19	M16	40	15	M12	M12	8.8	SN515F	SN515FE	1215K	—	H215X	GS15	SR130×8	2	30
																			2215K	22215EXK	H315X		SR130×10	1	33
	160	100	140	345	100	35	195	65	290	24	M20	50	19	M16	M16	16	SN615F	SN615FE	1315K	21315EK	H315X	GS15	SR160×14	2	36
																			2315K	22315EXK	H2315X		SR160×10	1	45
70	140	95	120	315	90	32	175	43	260	24	M20	50	19	M16	M16	13	SN516F	SN516FE	1216K	—	H216X	GS16	SR140×8.5	2	32
																			2216K	22216EXK	H316X		SR140×10	1	36
	170	112	145	345	100	35	212	68	290	24	M20	50	19	M16	M16	17	SN616F	SN616FE	1316K	21316EK	H316X	GS16	SR170×14.5	2	39
																			2316K	22316EXK	H2316X		SR170×10	1	48
75	150	95	125	320	90	32	185	46	260	24	M20	50	19	M16	M16	14	SN517F	SN517FE	1217K	—	H217X	GS17	SR150×9	2	34
																			2217K	22217EXK	H317X		SR150×10	1	38
	180	112	155	380	110	40	223	70	320	28	M24	60	24	M20	M20	24	SN617F	SN617FE	1317K	21317EK	H317X	GS17	SR180×14.5	2	41
																			2317K	22317EXK	H2317X		SR180×10	1	50
80	160	100	145	345	100	35	195	62.4	290	24	M20	50	19	M16	M16	18	SN518F	SN518FE	1218K	—	H218X	GS18	SR160×16.2	2	35
																			2218K	22218EXK	H318X		SR160×11.2	2	40
																			—	23218EK	H2318X		SR160×10	1	46
	190	112	160	380	110	40	230	74	320	28	M24	60	24	M20	M20	26	SN618F	SN618FE	1318K	21318EK	H318X	GS18	SR190×15.5	2	42
																			2318K	22318EXK	H2318X		SR190×10	1	52
85	170	112	140	345	100	35	210	53	290	24	M20	50	19	M16	M16	20	SN519F	SN519FE	1219K	—	H219X	GS19	SR170×10.5	2	37
																			2219K	22219EXK	H319X		SR170×10	1	43
	200	125	170	410	120	45	250	77	350	28	M24	70	24	M20	M20	30	SN619F	SN619FE	1319K	21319EK	H319X	GS19	SR200×16	2	44
																			2319K	22319EXK	H2319X		SR200×10	1	55
90	180	112	160	380	110	40	218	70.3	320	28	M24	60	24	M20	M20	26	SN520F	SN520FE	1220K	—	H220X	GS20	SR180×18.1	2	39
																			2220K	22220EXK	H320X		SR180×12.1	2	45
																			—	23220EK	H2320X		SR180×10	1	52
	215	140	175	410	120	45	270	83	350	28	M24	70	24	M20	M20	35	SN620F	SN620FE	1320K	21320EK	H320X	GS20	SR215×18	2	46
																			2320K	22320EXK	H2320X		SR215×10	1	59

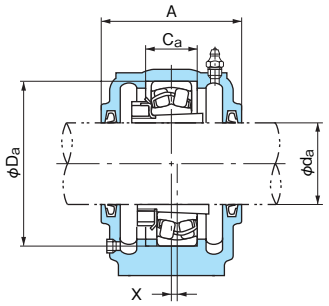
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only.
To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, adapter sleeve and locating rings but the bolts.
3. H8, H13 and h13 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. Plummer block housings SN524F, SN620F and larger are provided with eye bolts.
6. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the plummer block housing is a half of the locating ring width.
7. The threads for plugs are PT1/8 for SN519F, SN616F and smaller, and PT1/4 for the others.
8. ZF type oil seals are also available instead of GS type seals.
9. Please specify number of bolt holes.
10. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

Plummer Block Housings

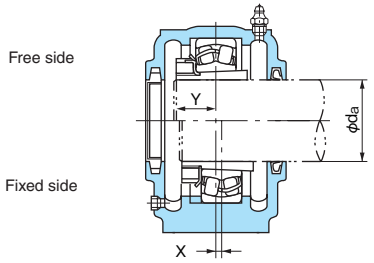
Flat Bottom Type SN5F, SN6F Series for Bearing with Adapter Sleeve

Shaft Diameter: 100～140mm





Through Shaft Type



Shaft End Type

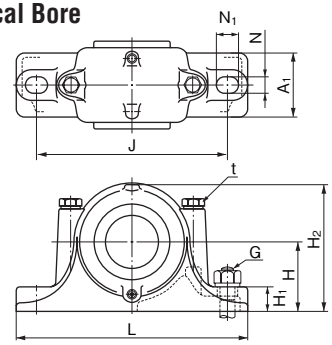
Shaft dia. da (mm)	Dimensions (mm)								Bolt holes (Reference)						t (Nominal) (Reference)	Mass (kg) (Reference)	Designations		Applicable parts					Y (Reference)
	Da (H8)	H (h13)	A	L	A1	H1	H2	Ca (H13)	J	Q1	G1 (Nominal)	J1	Q2	G2 (Nominal)			Through Shaft Type	Shaft End Type	Self-aligning ball bearings	Spherical roller bearings	Adapter sleeve	Oil seal	Locating ring Designations	Locating ring Q'ty	
100	200	125	175	410	120	45	240	80	350	28	M24	70	24	M20	M20	28	SN522F	SN522FE	1222K	—	H222X	GS22	SR200×21	2	42
																			2222K	22222EXK	H322X		SR200×13.5	2	50
																			—	23222EK	H2322X		SR200×10	1	58
	240	150	190	450	130	50	300	90	390	28	M24	70	28	M24	M24	45	SN622F	SN622FE	1322K	21322EK	H322X	GS22	SR240×20	2	48
																			2322K	22322EXK	H2322X		SR240×10	1	63
110	215	140	185	410	120	45	270	86	350	28	M24	70	24	M20	M20	35	SN524F	SN524FE	—	22224EXK	H3124X	GS24	SR215×14	2	53
																			—	23224EK	H2324X		SR215×10	1	62
	260	160	200	530	160	60	320	96	450	35	M30	90	28	M24	M24	63	SN624F	SN624FE	—	22324EK	H2324X	GS24	SR260×10	1	67
115	230	150	190	445	130	50	290	90	380	28	M24	70	28	M24	M24	42	SN526F	SN526FE	—	22226EXK	H3126	GS26	SR230×13	2	57
																			—	23226EK	H2326		SR230×10	1	65
	280	170	210	550	160	60	340	103	470	35	M30	90	28	M24	M24	74	SN626F	SN626FE	—	22326EK	H2326	GS26	SR280×10	1	72
125	250	150	205	500	150	50	305	98	420	35	M30	80	28	M24	M24	52	SN528F	SN528FE	—	22228EXK	H3128	GS28	SR250×15	2	60
																			—	23228EK	H2328		SR250×10	1	70
	300	180	235	610	170	65	365	112	520	35	M30	100	28	M24	M30	92	SN628F	SN628FE	—	22328EK	H2328	GS28	SR300×10	1	77
135	270	160	220	530	160	60	325	106	450	35	M30	90	28	M24	M24	61	SN530F	SN530FE	—	22230EK	H3130	GS30	SR270×16.5	2	65
																			—	23230EK	H2330		SR270×10	1	76
	320	190	245	650	180	65	385	118	560	35	M30	110	28	M24	M30	120	SN630F	SN630FE	—	22330EK	H2330	GS30	SR320×10	1	82
140	290	170	235	550	160	60	345	114	470	35	M30	90	28	M24	M24	68	SN532F	SN532FE	—	22232EK	H3132	GS32	SR290×17	2	71
																			—	23232EK	H2332		SR290×10	1	83
	340	200	255	680	190	70	405	124	580	42	M36	110	35	M30	M30	140	SN632F	SN632FE	—	22332EK	H2332	GS32	SR340×10	1	88

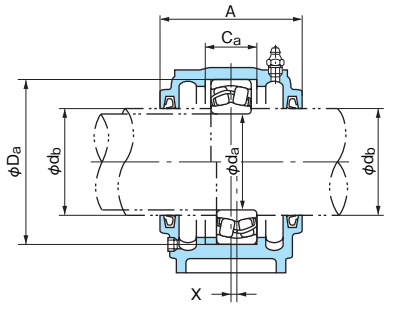
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only.
To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, adapter sleeve and locating rings but the bolts.
3. H8, H13 and h13 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. Plummer block housings SN524F, SN620F and larger are provided with eye bolts.
6. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the plummer block housing is a half of the locating ring width.
7. The threads for plugs are PT1/4.
8. ZF type oil seals are also available instead of GS type seals.
9. Please specify number of bolt holes.
10. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

■ Plummer Block Housings

SN2, SN3 Series
for Bearing with Cylindrical Bore

Shaft Diameter: 25～55mm

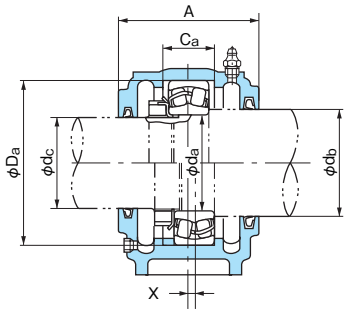




Same Bore Type

Free side

Fixed side



Different Bore Type

Shaft dia. (mm)			Dimensions (mm)													Mass (kg) (Reference)	Designations		Applicable parts								Y (Reference)
																						Oil seal		Locating ring			
da	db	dc	Da (H8)	H (h13)	J	N	N1	A	L	A1	H1	H2	Ca (H13)	G (Nominal)	t (Nominal) (Reference)		Same Bore Type	Different Bore Type	Self-aligning ball bearings	Spherical roller bearings	Nut	Locking washer	db side	dc side	Designations	Q'ty	
25	30(1)	20	52	40	130	15	20	67	165	46	22	75	25	M12	M 8	1.1	SN205	SN205C	1205	—	AN05	AW05X	GS 7	GS 5	SR52×5	2	17
																			2205	22205EX					SR52×7	1	19
			62	50	150	15	20	80	185	52	22	90	34	M12	M 8	1.6	SN305	SN305C	1305	21305E	AN05	AW05X	GS 7	GS 5	SR62×8.5	2	18
																			2305	—					SR62×10	1	22
30	35(1)	25	62	50	150	15	20	77	185	52	22	90	30	M12	M 8	1.7	SN206	SN206C	1206	—	AN06	AW06X	GS 8	GS 6	SR62×7	2	18
																			2206	22206EX					SR62×10	1	20
			72	50	150	15	20	82	185	52	22	95	37	M12	M10	1.8	SN306	SN306C	1306	21306E	AN06	AW06X	GS 8	GS 6	SR72×9	2	19
																			2306	—					SR72×10	1	23
35	45	30	72	50	150	15	20	82	185	52	22	95	33	M12	M10	1.9	SN207	SN207C	1207	—	AN07	AW07X	GS10	GS 7	SR72×8	2	19
																			2207	22207EX					SR72×10	1	22
			80	60	170	15	20	90	205	60	25	110	41	M12	M10	2.6	SN307	SN307C	1307	21307E	AN07	AW07X	GS10	GS 7	SR80×10	2	21
																			2307	—					SR80×10	1	26
40	50	35	80	60	170	15	20	85	205	60	25	110	33	M12	M10	2.6	SN208	SN208C	1208	—	AN08	AW08X	GS11	GS 8	SR80×7.5	2	21
																			2208	22208EX					SR80×10	1	23
			90	60	170	15	20	95	205	60	25	115	43	M12	M10	2.9	SN308	SN308C	1308	21308E	AN08	AW08X	GS11	GS 8	SR90×10	2	23
																			2308	22308EX					SR90×10	1	28
45	55	40	85	60	170	15	20	85	205	60	25	112	31	M12	M10	2.8	SN209	SN209C	1209	—	AN09	AW09X	GS12	GS 9	SR85×6	2	22
																			2209	22209EX					SR85×8	1	24
			100	70	210	18	23	105	255	70	28	130	46	M16	M12	4.1	SN309	SN309C	1309	21309E	AN09	AW09X	GS12	GS 9	SR100×10.5	2	25
																			2309	22309EX					SR100×10	1	31
50	60	45	90	60	170	15	20	90	205	60	25	115	33	M12	M10	3.0	SN210	SN210C	1210	—	AN10	AW10X	GS13	GS10	SR90×6.5	2	24
																			2210	22210EX					SR90×10	1	25
			110	70	210	18	23	115	255	70	30	135	50	M16	M12	4.7	SN310	SN310C	1310	21310E	AN10	AW10X	GS13	GS10	SR110×11.5	2	27
																			2310	22310EX					SR110×10	1	34
55	65	50	100	70	210	18	23	95	255	70	28	130	33	M16	M12	4.5	SN211	SN211C	1211	—	AN11	AW11X	GS15	GS11	SR100×6	2	25
																			2211	22211EX					SR100×8	1	27
			120	80	230	18	23	120	275	80	30	150	53	M16	M12	5.8	SN311	SN311C	1311	21311E	AN11	AW11X	GS15	GS11	SR120×12	2	29
																			2311	22311EX					SR120×10	1	36

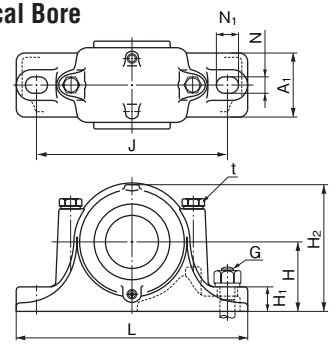
Note: (1) When heavy axial load is applied, a spacer with large O.D. and small inner chamfer must be used between the bearing and shaft shoulder to obtain a sufficient contact area.

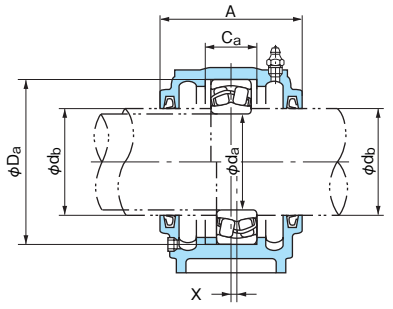
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only. To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, nut and locating rings but the bolts.
3. H8, H13 and h13 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. The threads for plugs are PT1/8. SN205 does not have a drain holes.
6. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the plummer block housing is a half of the locating ring width.
7. ZF type oil seals are also available instead of GS type seals.
8. SNxxxC type housings for shaft diameters different from the dimensions db or dc shown in the table can be custom ordered.
9. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

Plummer Block Housings

SN2, SN3 Series
for Bearing with Cylindrical Bore

Shaft Diameter: 60～95mm

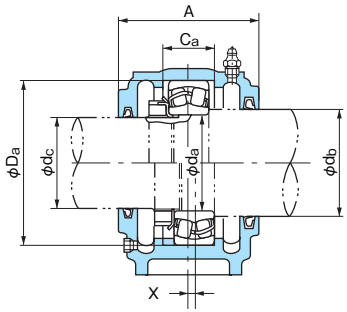




Same Bore Type

Free side

Fixed side



Different Bore Type

Shaft dia. (mm)			Dimensions (mm)													Mass (kg) (Reference)	Designations		Applicable parts								Y (Reference)
																									Locating ring		
da	db	dc	Da (H8)	H (h13)	J	N	N1	A	L	A1	H1	H2	Ca (H13)	G (Nominal)	t (Nominal) (Reference)		Same Bore Type	Different Bore Type	Self-aligning ball bearings	Spherical roller bearings	Nut	Locking washer	Oil seal db side	Oil seal dc side	Designations	Q'ty	
60	70	55	110	70	210	18	23	105	255	70	30	135	38	M16	M12	5.0	SN212	SN212C	1212	—	AN12	AW12X	GS16	GS12	SR110×8	2	26
																			2212	22212EX					SR110×10	1	29
	70(1)	55	130	80	230	18	23	125	280	80	30	155	56	M16	M12	6.5	SN312	SN312C	1312	21312E	AN12	AW12X	GS16	GS12	SR130×12.5	2	31
																			2312	22312EX					SR130×10	1	39
65	75	60	120	80	230	18	23	110	275	80	30	150	43	M16	M12	5.6	SN213	SN213C	1213	—	AN13	AW13X	GS17	GS13	SR120×10	2	28
																			2213	22213EX					SR120×12	1	32
	75(1)	60	140	95	260	22	27	130	315	90	32	175	58	M20	M16	8.7	SN313	SN313C	1313	21313E	AN13	AW13X	GS17	GS13	SR140×12.5	2	33
																			2313	22313EX					SR140×10	1	40
70	80	65	125	80	230	18	23	115	275	80	30	155	44	M16	M12	6.2	SN214	SN214C	1214	—	AN14	AW14X	GS18	GS15	SR125×10	2	28
																			2214	22214EX					SR125×13	1	32
	80(1)	65	150	95	260	22	27	130	320	90	32	185	61	M20	M16	10	SN314	SN314C	1314	21314E	AN14	AW14X	GS18	GS15	SR150×13	2	34
																			2314	22314EX					SR150×10	1	42
75	85	70	130	80	230	18	23	115	280	80	30	155	41	M16	M12	7.0	SN215	SN215C	1215	—	AN15	AW15X	GS19	GS16	SR130×8	2	30
																			2215	22215EX					SR130×10	1	33
	85(1)	70	160	100	290	22	27	140	345	100	35	195	65	M20	M16	11	SN315	SN315C	1315	21315E	AN15	AW15X	GS19	GS16	SR160×14	2	36
																			2315	22315EX					SR160×10	1	45
80	90	75	140	95	260	22	27	120	315	90	32	175	43	M20	M16	9.0	SN216	SN216C	1216	—	AN16	AW16X	GS20	GS17	SR140×8.5	2	32
																			2216	22216EX					SR140×10	1	36
	90(1)	75	170	112	290	22	27	145	345	100	35	212	68	M20	M16	13	SN316	SN316C	1316	21316E	AN16	AW16X	GS20	GS17	SR170×14.5	2	39
																			2316	22316EX					SR170×10	1	48
85	95	80	150	95	260	22	27	125	320	90	32	185	46	M20	M16	10	SN217	SN217C	1217	—	AN17	AW17X	GS21	GS18	SR150×9	2	34
																			2217	22217EX					SR150×10	1	38
	95(1)	80	180	112	320	26	32	155	380	110	40	223	70	M24	M20	15	SN317	SN317C	1317	21317E	AN17	AW17X	GS21	GS18	SR180×14.5	2	41
																			2317	22317EX					SR180×10	1	50
90	100	85	160	100	290	22	27	145	345	100	35	195	62.4	M20	M16	13	SN218	SN218C	1218	—	AN18	AW18X	GS22	GS19	SR160×16.2	2	35
																			2218	22218EX					SR160×11.2	2	40
																			—	23218E					SR160×10	1	46
95	110	90	170	112	290	22	27	140	345	100	35	210	53	M20	M16	15	SN219	SN219C	1219	—	AN19	AW19X	GS24	GS20	SR170×10.5	2	37
																			2219	22219EX					SR170×10	1	43

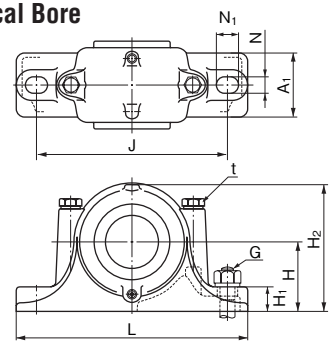
Note: (1) When heavy axial load is applied, a spacer with large O.D. and small inner chamfer must be used between the bearing and shaft shoulder to obtain a sufficient contact area.

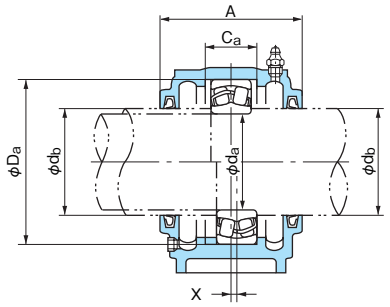
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only. To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, nut and locating rings but the bolts.
3. H8, H13 and h13 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. Plummer block housings SN224 and larger are provided with eye bolts.
6. The threads for plugs are PT1/8 for SN316F and smaller, and PT1/4 for the others.
7. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the plummer block housing is a half of the locating ring width.
8. ZF type oil seals are also available instead of GS type seals.
9. SNxxxC type housings for different shaft diameters db or dc from the dimensions shown above are also available.
10. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

Plummer Block Housings

SN2, SN3 Series
for Bearing with Cylindrical Bore

Shaft Diameter: 100～160mm

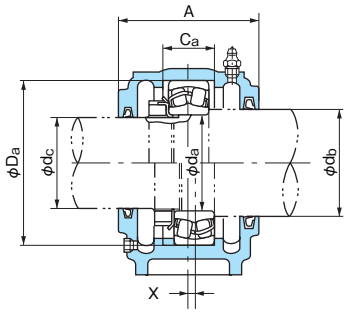




Same Bore Type

Free side

Fixed side



Different Bore Type

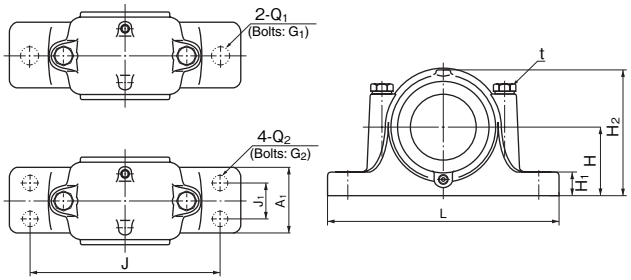
Shaft dia. (mm)			Dimensions (mm)													Mass (kg) (Reference)	Designations		Applicable parts							Y (Reference)
																								Oil seal		Locating ring		
da	db	dc	Da (H8)	H (h13)	J	N	N1	A	L	A1	H1	H2	Ca (H13)	G (Nominal)	t (Nominal) (Reference)		Same Bore Type	Different Bore Type	Self-aligning ball bearings	Spherical roller bearings	Nut	Locking washer	db side	dc side	Designations	Q'ty	
100	115	95	180	112	320	26	32	160	380	110	40	218	70.3	M24	M20	19	SN220	SN220C	1220	—	AN20	AW20X	GS26	GS21	SR180×18.1	2	39
																			2220	22220EX					SR180×12.1	2	45
																			—	23220E					SR180×10	1	52
110	125	105	200	125	350	26	32	175	410	120	45	240	80	M24	M20	20	SN222	SN222C	1222	—	AN22	AW22X	GS28	GS23	SR200×21	2	42
																			2222	22222EX					SR200×13.5	2	50
																			—	23222E					SR200×10	1	58
120	135	115	215	140	350	26	32	185	410	120	45	270	86	M24	M20	25	SN224	SN224C	—	22224EX	AN24	AW24X	GS30	GS26	SR215×14	2	53
																			—	23224E					SR215×10	1	62
130	145	125	230	150	380	28	36	190	445	130	50	290	90	M24	M24	30	SN226	SN226C	—	22226EX	AN26	AW26	GS33	GS28	SR230×13	2	57
																			—	23226E					SR230×10	1	65
140	155	135	250	150	420	33	42	205	500	150	50	305	98	M30	M24	38	SN228	SN228C	—	22228EX	AN28	AW28	GS35	GS30	SR250×15	2	60
																			—	23228E					SR250×10	1	70
150	165	145	270	160	450	33	42	220	530	160	60	325	106	M30	M24	46	SN230	SN230C	—	22230E	AN30	AW30	GS37	GS33	SR270×16.5	2	65
																			—	23230E					SR270×10	1	76
160	175	150	290	170	470	33	42	235	550	160	60	345	114	M30	M24	50	SN232	SN232C	—	22232E	AN32	AW32	GS39	GS34	SR290×17	2	71
																			—	23232E					SR290×10	1	83

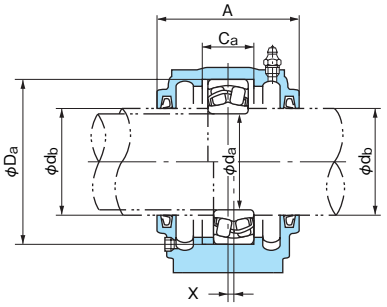
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only.
To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, nut and locating rings but the bolts.
3. H8, H13 and h13 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. Plummer block housings SN224 and larger are provided with eye bolts.
6. The threads for plugs are PT1/8 for SN316F and smaller, and PT1/4 for the others.
7. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the plummer block housing is a half of the locating ring width.
8. ZF type oil seals are also available instead of GS type seals.
9. SNxxxC type housings for different shaft diameters db or dc from the dimensions shown above are also available.
10. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

Plummer Block Housings

Flat Bottom Type SN2F, SN3F Series for Bearing with Cylindrical Bore

Shaft Diameter: 25～55mm

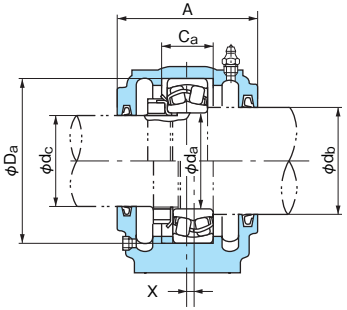




Same Bore Type

Free side

Fixed side



Different Bore Type

Shaft dia. (mm)			Dimensions (mm)								Bolt holes (Reference)						t (Nominal) (Reference)	Mass (kg) (Reference)	Designations		Applicable parts							Y (Reference)
da	db	dc	Da (H8)	H (h13)	A	L	A1	H1	H2	Ca (H13)	J	Q1	G1 (Nominal)	J1	Q2	G2 (Nominal)			Same Bore Type	Different Bore Type	Self-aligning ball bearings	Spherical roller bearings	Nut	Locking washer	Oil seal db side	Oil seal dc side	Locating ring Designations	Locating ring Q'ty	
25	30(1)	20	52	40	67	165	46	22	75	25	130	15	M12	25	10	M 8	M 8	1.7	SN205F	SN205FC	1205	—	AN05	AW05X	GS 7	GS 5	SR52×5	2	17
																					2205	22205EX					SR52×7	1	19
			62	50	80	185	52	22	90	34	150	15	M12	25	12	M10	M 8	2.4	SN305F	SN305FC	1305	21305E	AN05	AW05X	GS 7	GS 5	SR62×8.5	2	18
																					2305	—					SR62×10	1	22
30	35(1)	25	62	50	77	185	52	22	90	30	150	15	M12	25	12	M10	M 8	2.5	SN206F	SN206FC	1206	—	AN06	AW06X	GS 8	GS 6	SR62×7	2	18
																					2206	22206EX					SR62×10	1	20
			72	50	82	185	52	22	95	37	150	15	M12	25	12	M10	M10	2.5	SN306F	SN306FC	1306	21306E	AN06	AW06X	GS 8	GS 6	SR72×9	2	19
																					2306	—					SR72×10	1	23
35	45	30	72	50	82	185	52	22	95	33	150	15	M12	25	12	M10	M10	2.6	SN207F	SN207FC	1207	—	AN07	AW07X	GS10	GS 7	SR72×8	2	19
																					2207	22207EX					SR72×10	1	22
			80	60	90	205	60	25	110	41	170	15	M12	30	12	M10	M10	3.8	SN307F	SN307FC	1307	21307E	AN07	AW07X	GS10	GS 7	SR80×10	2	21
																					2307	—					SR80×10	1	26
40	50	35	80	60	85	205	60	25	110	33	170	15	M12	30	12	M10	M10	4.0	SN208F	SN208FC	1208	—	AN08	AW08X	GS11	GS 8	SR80×7.5	2	21
																					2208	22208EX					SR80×10	1	23
			90	60	95	205	60	25	115	43	170	15	M12	30	12	M10	M10	4.0	SN308F	SN308FC	1308	21308E	AN08	AW08X	GS11	GS 8	SR90×10	2	23
																					2308	22308EX					SR90×10	1	28
45	55	40	85	60	85	205	60	25	112	31	170	15	M12	30	12	M10	M10	4.4	SN209F	SN209FC	1209	—	AN09	AW09X	GS12	GS 9	SR85×6	2	22
																					2209	22209EX					SR85×8	1	24
			100	70	105	255	70	28	130	46	210	19	M16	35	15	M12	M12	6.0	SN309F	SN309FC	1309	21309E	AN09	AW09X	GS12	GS 9	SR100×10.5	2	25
																					2309	22309EX					SR100×10	1	31
50	60	45	90	60	90	205	60	25	115	33	170	15	M12	30	12	M10	M10	4.7	SN210F	SN210FC	1210	—	AN10	AW10X	GS13	GS10	SR90×6.5	2	24
																					2210	22210EX					SR90×10	1	25
			110	70	115	255	70	30	135	50	210	19	M16	35	15	M12	M12	6.5	SN310F	SN310FC	1310	21310E	AN10	AW10X	GS13	GS10	SR110×11.5	2	27
																					2310	22310EX					SR110×10	1	34
55	65	50	100	70	95	255	70	28	130	33	210	19	M16	35	15	M12	M12	6.3	SN211F	SN211FC	1211	—	AN11	AW11X	GS15	GS11	SR100×6	2	25
																					2211	22211EX					SR100×8	1	27
			120	80	120	275	80	30	150	53	230	19	M16	40	15	M12	M12	8.5	SN311F	SN311FC	1311	21311E	AN11	AW11X	GS15	GS11	SR120×12	2	29
																					2311	22311EX					SR120×10	1	36

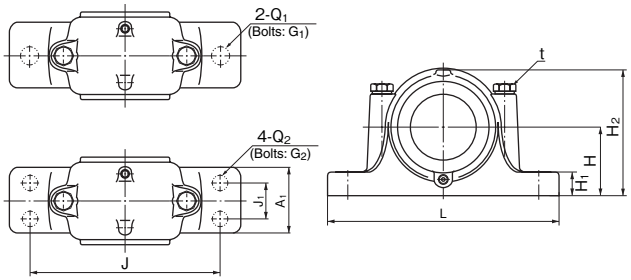
Note: (1) When heavy axial load is applied, a spacer with large O.D. and small inner chamfer must be used between the bearing and shaft shoulder to obtain a sufficient contact area.

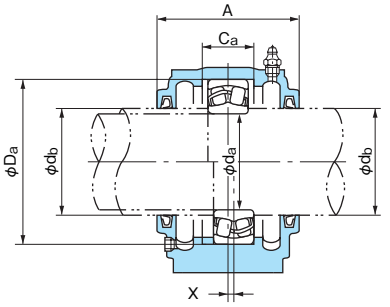
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only. To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, nut and locating rings but the bolts.
3. H8, H13 and h13 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. The threads for plugs are PT1/8. SN205 does not have a drain holes.
6. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the plummer block housing is a half of the locating ring width.
7. ZF type oil seals are also available instead of GS type seals.
8. SNxxxC type housings for shaft diameters different from the dimensions db or dc shown in the table can be custom ordered.
9. Please specify number of bolt holes.
10. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

Plummer Block Housings

Flat Bottom Type SN2F, SN3F Series for Bearing with Cylindrical Bore

Shaft Diameter: 60～95mm

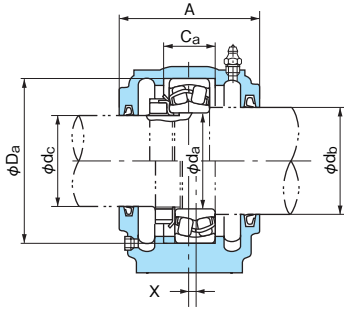




Same Bore Type

Free side

Fixed side



Different Bore Type

Shaft dia. (mm)			Dimensions (mm)								Bolt holes (Reference)						t (Nominal) (Reference)	Mass (kg) (Reference)	Designations		Applicable parts							Y (Reference)
																					Self-aligning ball bearings	Spherical roller bearings	Nut	Locking washer	Oil seal		Locating ring		
da	db	dc	Da (H8)	H (h13)	A	L	A1	H1	H2	Ca (H13)	J	Q1	G1 (Nominal)	J1	Q2	G2 (Nominal)			Same Bore Type	Different Bore Type					db side	dc side	Designations	Q'ty	
60	70	55	110	70	105	255	70	30	135	38	210	19	M16	35	15	M12	M12	6.9	SN212F	SN212FC	1212	—	AN12	AW12X	GS16	GS12	SR110×8	2	26
																					2212	22212EX					SR110×10	1	29
	70(1)	55	130	80	125	280	80	30	155	56	230	19	M16	40	15	M12	M12	9.0	SN312F	SN312FC	1312	21312E	AN12	AW12X	GS16	GS12	SR130×12.5	2	31
																					2312	22312EX					SR130×10	1	39
65	75	60	120	80	110	275	80	30	150	43	230	19	M16	40	15	M12	M12	7.0	SN213F	SN213FC	1213	—	AN13	AW13X	GS17	GS13	SR120×10	2	28
																					2213	22213EX					SR120×12	1	32
	75(1)	60	140	95	130	315	90	32	175	58	260	24	M20	50	19	M16	M16	13	SN313F	SN313FC	1313	21313E	AN13	AW13X	GS17	GS13	SR140×12.5	2	33
																					2313	22313EX					SR140×10	1	40
70	80	65	125	80	115	275	80	30	155	44	230	19	M16	40	15	M12	M12	7.6	SN214F	SN214FC	1214	—	AN14	AW14X	GS18	GS15	SR125×10	2	28
																					2214	22214EX					SR125×13	1	32
	80(1)	65	150	95	130	320	90	32	185	61	260	24	M20	50	19	M16	M16	15	SN314F	SN314FC	1314	21314E	AN14	AW14X	GS18	GS15	SR150×13	2	34
																					2314	22314EX					SR150×10	1	42
75	85	70	130	80	115	280	80	30	155	41	230	19	M16	40	15	M12	M12	8.8	SN215F	SN215FC	1215	—	AN15	AW15X	GS19	GS16	SR130×8	2	30
																					2215	22215EX					SR130×10	1	33
	85(1)	70	160	100	140	345	100	35	195	65	290	24	M20	50	19	M16	M16	16	SN315F	SN315FC	1315	21315E	AN15	AW15X	GS19	GS16	SR160×14	2	36
																					2315	22315EX					SR160×10	1	45
80	90	75	140	95	120	315	90	32	175	43	260	24	M20	50	19	M16	M16	13	SN216F	SN216FC	1216	—	AN16	AW16X	GS20	GS17	SR140×8.5	2	32
																					2216	22216EX					SR140×10	1	36
	90(1)	75	170	112	145	345	100	35	212	68	290	24	M20	50	19	M16	M16	17	SN316F	SN316FC	1316	21316E	AN16	AW16X	GS20	GS17	SR170×14.5	2	39
																					2316	22316EX					SR170×10	1	48
85	95	80	150	95	125	320	90	32	185	46	260	24	M20	50	19	M16	M16	14	SN217F	SN217FC	1217	—	AN17	AW17X	GS21	GS18	SR150×9	2	34
																					2217	22217EX					SR150×10	1	38
	95(1)	80	180	112	155	380	110	40	223	70	320	28	M24	60	24	M20	M20	24	SN317F	SN317FC	1317	21317E	AN17	AW17X	GS21	GS18	SR180×14.5	2	41
																					2317	22317EX					SR180×10	1	50
90	100	85	160	100	145	345	100	35	195	62.4	290	24	M20	50	19	M16	M16	18	SN218F	SN218FC	1218	—	AN18	AW18X	GS22	GS19	SR160×16.2	2	35
																					2218	22218EX					SR160×11.2	2	40
																					—	23218E					SR160×10	1	46
95	110	90	170	112	140	345	100	35	210	53	290	24	M20	50	19	M16	M16	20	SN219F	SN219FC	1219	—	AN19	AW19X	GS24	GS20	SR170×10.5	2	37
																					2219	22219EX					SR170×10	1	43

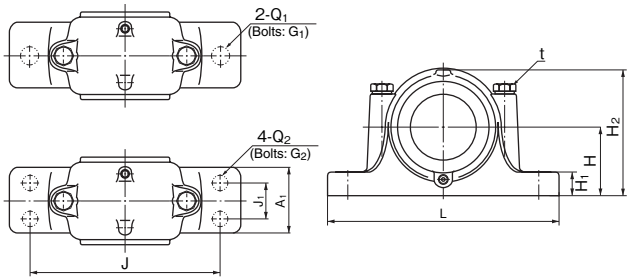
Note: (1) When heavy axial load is applied, a spacer with large O.D. and small inner chamfer must be used between the bearing and shaft shoulder to obtain a sufficient contact area.

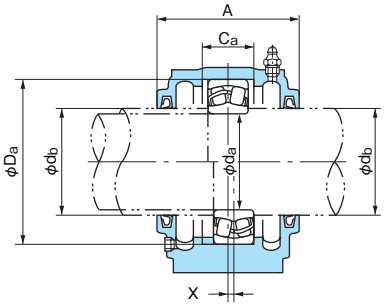
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only. To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, nut and locating rings but the bolts.
3. H8, H13 and h13 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. Plummer block housings SN224F and larger are provided with eye bolts.
6. The threads for plugs are PT1/8 for SN219F, SN316F and smaller, and PT1/4 for the others.
7. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the plummer block housing is a half of the locating ring width.
8. ZF type oil seals are also available instead of GS type seals.
9. SNxxxC type housings for shaft diameters different from the dimensions db or dc shown in the table can be custom ordered.
10. Please specify number of bolt holes.
11. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

Plummer Block Housings

Flat Bottom Type SN2F, SN3F Series for Bearing with Cylindrical Bore

Shaft Diameter: 100～160mm

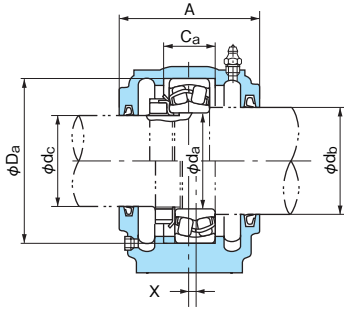




Same Bore Type

Free side

Fixed side



Different Bore Type

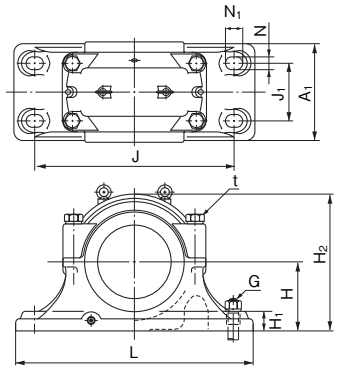
Shaft dia. (mm)			Dimensions (mm)								Bolt holes (Reference)						t (Nominal) (Reference)	Mass (kg) (Reference)	Designations		Applicable parts							Y (Reference)
																					Self-aligning ball bearings	Spherical roller bearings	Nut	Locking washer	Oil seal		Locating ring		
da	db	dc	Da (H8)	H (h13)	A	L	A1	H1	H2	Ca (H13)	J	Q1	G1 (Nominal)	J1	Q2	G2 (Nominal)			Same Bore Type	Different Bore Type					db side	dc side	Designations	Q'ty	
100	115	95	180	112	160	380	110	40	218	70.3	320	28	M24	60	24	M20	M20	26	SN220F	SN220FC	1220	—	AN20	AW20X	GS26	GS21	SR180×18.1	2	39
																					2220	22220EX					SR180×12.1	2	45
																					—	23220E					SR180×10	1	52
110	125	105	200	125	175	410	120	45	240	80	350	28	M24	70	24	M20	M20	28	SN222F	SN222FC	1222	—	AN22	AW22X	GS28	GS23	SR200×21	2	42
																					2222	22222EX					SR200×13.5	2	50
																					—	23222E					SR200×10	1	58
120	135	115	215	140	185	410	120	45	270	86	350	28	M24	70	24	M20	M20	35	SN224F	SN224FC	—	22224EX	AN24	AW24X	GS30	GS26	SR215×14	2	53
																					—	23224E					SR215×10	1	62
130	145	125	230	150	190	445	130	50	290	90	380	28	M24	70	28	M24	M24	42	SN226F	SN226FC	—	22226EX	AN26	AW26	GS33	GS28	SR230×13	2	57
																					—	23226E					SR230×10	1	65
140	155	135	250	150	205	500	150	50	305	98	420	35	M30	80	28	M24	M24	52	SN228F	SN228FC	—	22228EX	AN28	AW28	GS35	GS30	SR250×15	2	60
																					—	23228E					SR250×10	1	70
150	165	145	270	160	220	530	160	60	325	106	450	35	M30	90	28	M24	M24	61	SN230F	SN230FC	—	22230E	AN30	AW30	GS37	GS33	SR270×16.5	2	65
																					—	23230E					SR270×10	1	76
160	175	150	290	170	235	550	160	60	345	114	470	35	M30	90	28	M24	M24	68	SN232F	SN232FC	—	22232E	AN32	AW32	GS39	GS34	SR290×17	2	71
																					—	23232E					SR290×10	1	83

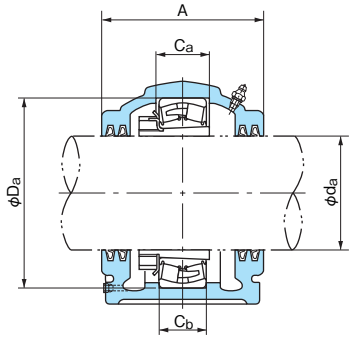
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only.
To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, nut and locating rings but the bolts.
3. H8, H13 and h13 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. Plummer block housings SN224F and larger are provided with eye bolts.
6. The threads for plugs are PT1/8 for SN219F, SN316F and smaller, and PT1/4 for the others.
7. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the plummer block housing is a half of the locating ring width.
8. ZF type oil seals are also available instead of GS type seals.
9. SNxxxC type housings for shaft diameters different from the dimensions db or dc shown in the table can be custom ordered.
10. Please specify number of bolt holes.
11. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

Plummer Block Housings

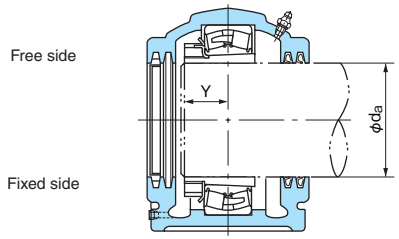
SD5, SD6, SD30, SD31 Series for Bearing with Adapter Sleeve

Shaft Diameter: 150～240mm





Through Shaft Type



Shaft End Type

Shaft dia. da (mm)	Dimensions (mm)															Mass (kg) (Reference)	Designations		Applicable parts			Y (Reference)
	Da (H8)	H (h13)	J	J1	N	N1	A	L	A1	H1	H2	Ca (H13)	Cb (H13)	G (Nominal)	t (Nominal) (Reference)		Free side	Fixed side	Spherical roller bearings	Adapter sleeve	Oil seal	
150	260	160	450	110	36	46	230	540	200	50	315	77	67	M30	M24	70	SD3034	SD3034G	23034EK	H3034	GS34	66
	280	170	470	120	36	46	250	560	220	50	335	98	88	M30	M24	75	SD3134	SD3134G	23134EK	H3134	GS34	76
	310	180	510	140	36	46	270	620	250	60	360	96	86	M30	M24	100	SD534	SD534G	22234EK	H3134	GS34	75
	360	210	610	170	36	46	300	740	290	65	420	130	120	M30	M30	160	SD634	SD634G	22334EK	H2334	GS34	92
160	280	170	470	120	36	46	250	560	220	50	335	84	74	M30	M24	79	SD3036	SD3036G	23036EK	H3036	GS36	70
	300	180	520	140	36	46	270	630	250	55	355	106	96	M30	M24	94	SD3136	SD3136G	23136EK	H3136	GS36	81
	320	190	540	150	36	46	280	650	260	60	380	96	86	M30	M24	110	SD536	SD536G	22236EK	H3136	GS36	76
	380	225	640	180	43	59	320	780	310	70	450	136	126	M36	M30	195	SD636	SD636G	22336EK	H2336	GS36	96
170	290	170	470	120	36	46	250	560	220	50	340	85	75	M30	M24	87	SD3038	SD3038G	23038EK	H3038	GS38	72
	320	190	560	140	36	46	290	680	270	55	385	114	104	M30	M24	110	SD3138	SD3138G	23138EK	H3138	GS38	86
	340	200	570	160	36	46	290	700	280	65	400	102	92	M30	M30	130	SD538	SD538G	22238EK	H3138	GS38	80
	400	240	680	190	43	59	330	820	320	70	475	142	132	M36	M30	210	SD638	SD638G	22338EK	H2338	GS38	100
180	310	180	510	140	36	46	270	620	250	60	360	92	82	M30	M24	100	SD3040	SD3040G	23040EK	H3040	GS40	76
	340	200	570	160	36	46	310	700	280	65	400	122	112	M30	M30	130	SD3140	SD3140G	23140EK	H3140	GS40	91
	360	210	610	170	36	46	300	740	290	65	420	108	98	M30	M30	155	SD540	SD540G	22240EK	H3140	GS40	84
	420	250	710	200	43	59	350	860	340	85	500	148	138	M36	M36	240	SD640	SD640G	22340EK	H2340	GS40	104
200	340	200	570	160	36	46	290	700	280	65	400	100	90	M30	M30	130	SD3044	SD3044G	23044EK	H3044	GS44	79
	370	225	640	180	43	59	320	780	310	70	445	130	120	M36	M30	180	SD3144	SD3144G	23144EK	H3144	GS44	96
	400	240	680	190	43	59	330	820	320	70	475	118	108	M36	M30	205	SD544	SD544G	22244EK	H3144	GS44	90
	460	280	770	210	43	59	360	920	350	85	550	155	145	M36	M36	315	SD644	SD644G	22344EK	H2344	GS44	109
220	360	210	610	170	36	46	300	740	290	65	420	102	92	M30	M30	160	SD3048	SD3048G	23048EK	H3048	GS48	84
	400	240	680	190	43	59	330	820	320	70	475	138	128	M36	M30	210	SD3148	SD3148G	23148EK	H3148	GS48	102
	440	260	740	200	43	59	340	880	330	85	515	130	120	M36	M36	240	SD548	SD548G	22248EK	H3148	GS48	98
	500	300	830	230	50	67	390	990	380	100	590	165	155	M42	M36	405	SD648	SD648G	22348EK	H2348	GS48	116
240	400	240	680	190	43	59	340	820	320	70	475	114	104	M36	M30	210	SD3052	SD3052G	23052EK	H3052	GS52	90
	440	260	740	200	43	59	360	880	350	85	515	154	144	M36	M36	240	SD3152	SD3152G	23152EK	H3152	GS52	112
	480	280	790	210	43	59	370	940	360	85	560	140	130	M36	M36	315	SD552	SD552G	22252EK	H3152	GS52	105
	540	325	890	250	50	67	410	1060	400	100	640	175	165	M42	M36	480	SD652	SD652G	22352EK	H2352	GS52	123

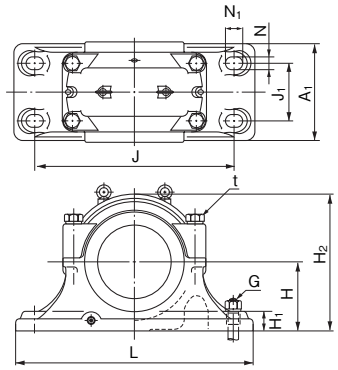
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only.
To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. Dimension Ca is for the free side housings and dimension Cb for the fixed side housings. (Locating rings are not required in the fixed side housings.)
3. The masses in the table do not include the bearing and adapter sleeve but the bolts.
4. H8, H13 and h13 in the table means tolerance classes specified in JIS B 0401.
5. The thread for a grease nipple is PT1/4, and the threads for tow drain plugs are PT3/8.
6. Plummer block housings listed in the above table are provided with eye bolts.
7. Designations of shaft end type housings have suffix “E” at the end.
8. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

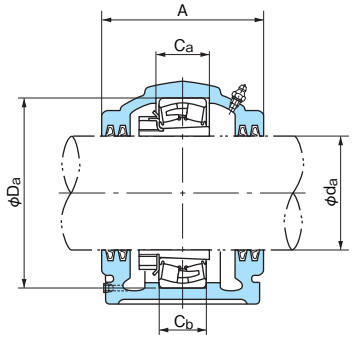
NACHI

Plummer Block Housings

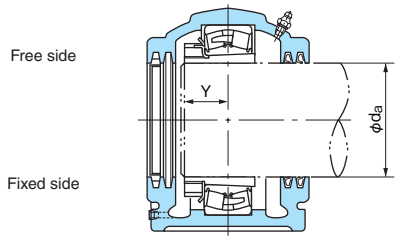
SD5, SD6, SD30, SD31 Series for Bearing with Adapter Sleeve

Shaft Diameter: 260～300mm





Through Shaft Type



Shaft End Type

Shaft dia. da (mm)	Dimensions (mm)															Mass (kg) (Reference)	Designations		Applicable parts			Y (Reference)
	Da (H8)	H (h13)	J	J1	N	N1	A	L	A1	H1	H2	Ca (H13)	Cb (H13)	G (Nominal)	t (Nominal) (Reference)		Free side	Fixed side	Spherical roller bearings	Adapter sleeve	Oil seal	
260	420	250	710	200	43	59	350	860	340	85	500	116	106	M36	M36	240	**SD3056**	**SD3056G**	23056EK	H3056	GS56	95
	460	280	770	210	43	59	360	920	350	85	550	156	146	M36	M36	315	**SD3156**	**SD3156G**	23156EK	H3156	GS56	115
	500	300	830	230	50	67	390	990	380	100	590	140	130	M42	M36	390	**SD556**	**SD556G**	22256EK	H3156	GS56	107
	580	355	930	270	57	77	440	1110	430	110	690	185	175	M48	M42	610	**SD656**	**SD656G**	22356EK	H2356	GS56	130
280	460	280	770	210	43	59	360	920	350	85	550	128	118	M36	M36	300	**SD3060**	**SD3060G**	23060EK	H3060	GS60	105
	500	300	830	230	50	67	390	990	380	100	590	170	160	M42	M36	405	**SD3160**	**SD3160G**	23160EK	H3160	GS60	124
	540	325	890	250	50	67	410	1060	400	100	640	150	140	M42	M36	465	**SD560**	**SD560G**	22260EK	H3160	GS60	114
300	480	280	790	210	43	59	380	940	360	85	560	131	121	M36	M36	320	**SD3064**	**SD3064G**	23064EK	H3064	GS64	108
	540	325	890	250	50	67	430	1060	400	100	640	186	176	M42	M36	480	**SD3164**	**SD3164G**	23164EK	H3164	GS64	135
	580	355	930	270	57	77	440	1110	430	110	690	160	150	M48	M42	595	**SD564**	**SD564G**	22264EK	H3164	GS64	122

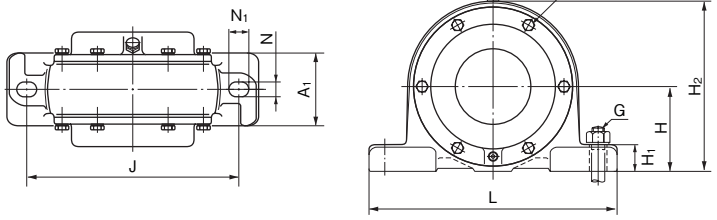
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only.
To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. Dimension Ca is for the free side housings and dimension Cb for the fixed side housings. (Locating rings are not required in the fixed side housings.)
3. The masses in the table do not include the bearing and adapter sleeve but the bolts.
4. H8, H13 and h13 in the table means tolerance classes specified in JIS B 0401.
5. The thread for a grease nipple is PT1/4, and the threads for tow drain plugs are PT3/8.
6. Plummer block housings listed in the above table are provided with eye bolts.
7. Designations of shaft end type housings have suffix "E" at the end.
8. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

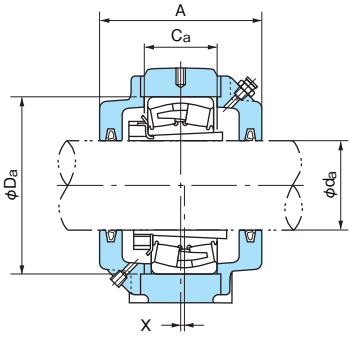
One piece type Plummer Block Housings

V Series

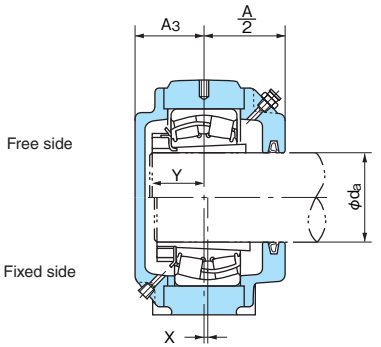
for Bearing with Adapter Sleeve

Shaft Diameter: 30～60mm





Through Shaft Type



Shaft End Type

Shaft dia. da (mm)	Dimensions (mm)														Mass (kg) (Reference)	Designations		Applicable parts					Y (Reference)
	Da (H7)	H (h11)	J	N	N1	A	L	A1	A3	H1	H2	Ca	G (Nominal)	t (Nominal) (Reference)		Through Shaft Type	Shaft End Type	Self-aligning ball bearings	Spherical roller bearings	Adapter sleeve	Oil seal	Locating ring Designations	Locating ring Q'ty	
30	80	60	170	16	20	95	205	60	40.5	25	118	37	M14	M6	4.8	V080C30-30	V080C30-0	1307K	21307EK	H307X	GS 7	SR80×8	2	21
																		2307K	—	H2307X		SR80×6	1	26
35	80	60	170	16	20	95	205	60	40.5	25	118	37	M14	M6	4.3	V080C35-35	V080C35-0	1208K	—	H208X	GS 8	SR80×9.5	2	21
																		2208K	22208EXK	H308X		SR80×7	2	23
	90	67	170	16	20	100	205	60	42.5	25	128	39	M14	M6	5.1	V090C35-35	V090C35-0	1308K	21308EK	H308X	GS 8	SR90×8	2	23
																		2308K	22308EXK	H2308X		SR90×6	1	28
40	85	63	170	16	20	98	205	60	42.5	25	125	39	M14	M6	4.7	V085C40-40	V085C40-0	1209K	—	H209X	GS 9	SR85×10	2	22
																		2209K	22209EXK	H309X		SR85×8	2	24
	100	71	210	16	23	106	255	70	47	28	140	42	M14	M6	6.9	V100C40-40	V100C40-0	1309K	21309EK	H309X	GS 9	SR100×8.5	2	25
																		2309K	22309EXK	H2309X		SR100×6	1	31
45	90	67	170	16	20	100	205	60	42.5	25	128	39	M14	M6	4.6	V090C45-45	V090C45-0	1210K	—	H210X	GS10	SR90×9.5	2	24
																		2210K	22210EXK	H310X		SR90×8	2	25
	110	80	210	21	25	112	255	70	47	30	155	46	M18	M6	8.9	V110C45-45	V110C45-0	1310K	21310EK	H310X	GS10	SR110×9.5	2	27
																		2310K	22310EXK	H2310X		SR110×6	1	34
50	100	71	210	16	23	106	255	70	47	28	140	42	M14	M6	6.4	V100C50-50	V100C50-0	1211K	—	H211X	GS11	SR100×10.5	2	25
																		2211K	22211EXK	H311X		SR100×8.5	2	27
	120	85	230	21	25	118	275	80	50	30	165	49	M18	M6	11	V120C50-50	V120C50-0	1311K	21311EK	H311X	GS11	SR120×10	2	29
																		2311K	22311EXK	H2311X		SR120×6	1	36
55	110	80	210	21	25	112	255	70	47	30	155	46	M18	M6	8.0	V110C55-55	V110C55-0	1212K	—	H212X	GS12	SR110×12	2	26
																		2212K	22212EXK	H312X		SR110×9	2	29
	130	90	230	21	25	118	280	80	50	30	175	50	M18	M6	12	V130C55-55	V130C55-0	1312K	21312EK	H312X	GS12	SR130×9.5	2	31
																		2312K	22312EXK	H2312X		SR130×4	1	39
60	120	85	230	21	25	118	275	80	50	30	165	49	M18	M6	10	V120C60-60	V120C60-0	1213K	—	H213X	GS13	SR120×13	2	28
																		2213K	22213EXK	H313X		SR120×9	2	32
	125	90	230	21	25	118	280	80	50	30	175	50	M18	M6	11	V125C60-60	V125C60-0	—	22214EXK	H314X	GS13	SR125×9.5	2	32
	140	100	260	25	30	136	315	90	58	32	195	56	M22	M8	18	V140C60-60	V140C60-0	1313K	21313EK	H313X	GS13	SR140×11.5	2	33
																		2313K	22313EXK	H2313X		SR140×8	1	40
	150	100	260	25	30	140	315	90	60	32	195	56	M22	M8	16	V150C60-60	V150C60-0	—	21314EK	H314X	GS13	SR150×10.5	2	34
																		—	22314EXK	H2314X		SR150×5	1	42

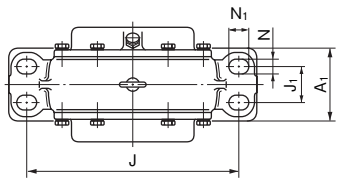
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only.
To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, adapter sleeve and locating rings.
3. H7 and h11 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. Plummer block housings V180 and larger are provided with eye bolts.
6. The threads for plugs and grease nipples are PT1/8 for V170 and smaller, and PT1/4 for V180 and larger.
7. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the housing is a half of the locating ring width.
8. ZF type oil seals are also available instead of GS type seals.
9. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

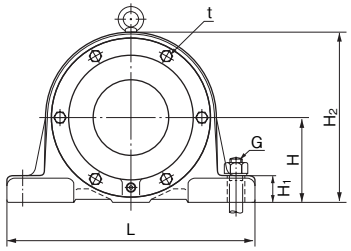
One piece type Plummer Block Housings

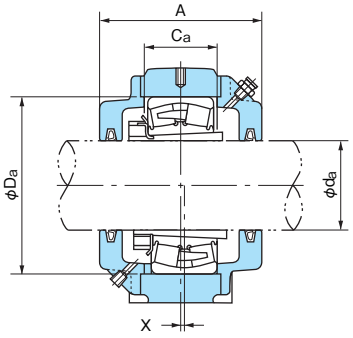
V Series

for Bearing with Adapter Sleeve

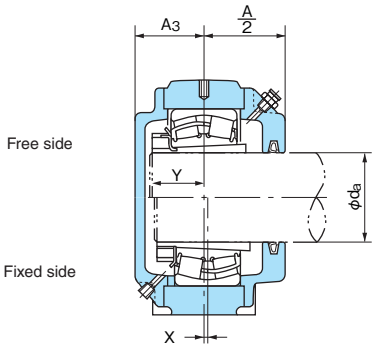
Shaft dia.: 65～90mm







Through Shaft Type



Shaft End Type

Shaft dia. da (mm)	Dimensions (mm)															Mass (kg) (Reference)	Designations		Applicable parts						Y (Reference)
	Da (H7)	H (h11)	J	J1	N	N1	A	L	A1	A3	H1	H2	Ca	G (Nominal)	t (Nominal) (Reference)		Through Shaft Type	Shaft End Type	Self-aligning ball bearings	Spherical roller bearings	Adapter sleeve	Oil seal	Locating ring Designations	Locating ring Q'ty	
65	130	90	230	—	21	25	118	280	80	50	30	175	50	M18	M 6	11	**V130C65-65**	**V130C65-0**	1215K	—	H215X	GS15	SR130×12.5	2	30
																			2215K	22215EXK	H315X		SR130×9.5	2	33
	160	112	290	—	25	30	150	345	100	65	35	224	62	M22	M 8	24	**V160C65-65**	**V160C65-0**	1315K	21315EK	H315X	GS15	SR160×12.5	2	36
																			2315K	22315EXK	H2315X		SR160×7	1	45
70	140	100	260	—	25	30	136	315	90	58	32	195	56	M22	M 8	17	**V140C70-70**	**V140C70-0**	1216K	—	H216X	GS16	SR140×15	2	32
																			2216K	22216EXK	H316X		SR140×11.5	2	36
	170	112	290	—	25	30	165	345	100	72.5	35	224	62	M22	M 8	22	**V170C70-70**	**V170C70-0**	1316K	21316EK	H316X	GS16	SR170×11.5	2	39
																			2316K	22316EXK	H2316X		SR170×4	1	48
75	150	100	260	—	25	30	140	315	90	60	32	195	56	M22	M 8	16	**V150C75-75**	**V150C75-0**	1217K	—	H217X	GS17	SR150×14	2	34
																			2217K	22217EXK	H317X		SR150×10	2	38
	180	125	320	56	23	32	170	380	110	75	40	243	70	M20	M 8	29	**V180C75-75**	**V180C75-0**	1317K	21317EK	H317X	GS17	SR180×14.5	2	41
																			2317K	22317EXK	H2317X		SR180×10	1	50
80	160	112	290	—	25	30	150	345	100	65	35	224	62	M22	M 8	24	**V160C80-80**	**V160C80-0**	1218K	—	H218X	GS18	SR160×16	2	35
																			2218K	22218EXK	H318X		SR160×11	2	40
	190	125	320	56	23	32	170	380	110	75	40	243	70	M20	M 8	26	**V190C80-80**	**V190C80-0**	1318K	21318EK	H318X	GS18	SR190×13.5	2	42
																			2318K	22318EXK	H2318X		SR190×6	1	52
85	170	112	290	—	25	30	165	345	100	72.5	35	224	62	M22	M 8	22	**V170C85-85**	**V170C85-0**	1219K	—	H219X	GS19	SR170×15	2	37
																			2219K	22219EXK	H319X		SR170×9.5	2	43
	200	132	350	60	23	32	190	410	120	82	45	265	82	M20	M10	40	**V200C85-85**	**V200C85-0**	1319K	21319EK	H319X	GS19	SR200×18.5	2	44
																			2319K	22319EXK	H2319X		SR200×15	1	55
90	180	125	320	56	23	32	170	380	110	75	40	243	70	M20	M 8	28	**V180C90-90**	**V180C90-0**	1220K	—	H220X	GS20	SR180×18	2	39
																			2220K	22220EXK	H320X		SR180×12	2	45
	215	140	350	60	23	32	190	410	120	82	45	280	82	M20	M10	42	**V215C90-90**	**V215C90-0**	1320K	21320EK	H320X	GS20	SR215×17.5	2	46
																			2320K	22320EXK	H2320X		SR215×9	1	59

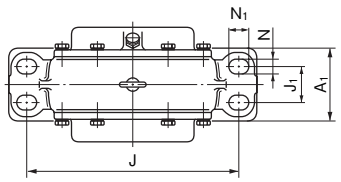
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only.
To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, adapter sleeve and locating rings.
3. H7 and h11 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. Plummer block housings V180 and larger are provided with eye bolts.
6. The threads for plugs and grease nipples are PT1/8 for V170 and smaller, and PT1/4 for V180 and larger.
7. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the housing is a half of the locating ring width.
8. ZF type oil seals are also available instead of GS type seals.
9. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

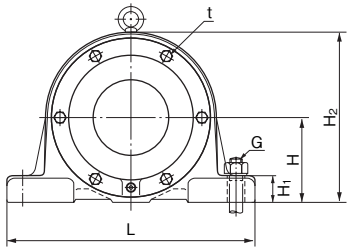
One piece type Plummer Block Housings

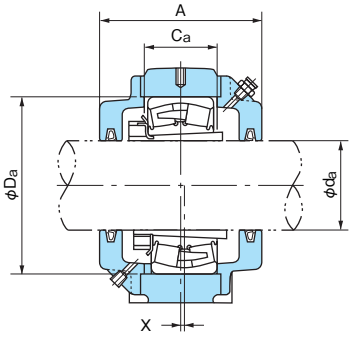
V Series

for Bearing with Adapter Sleeve

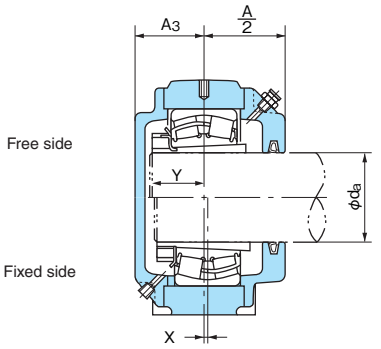
Shaft Diameter: 100～135mm







Through Shaft Type



Shaft End Type

Shaft dia. da (mm)	Dimensions (mm)															Mass (kg) (Reference)	Designations		Applicable parts					Y (Reference)
	Da (H7)	H (h11)	J	J1	N	N1	A	L	A1	A3	H1	H2	Ca	G (Nominal)	t (Nominal) (Reference)		Through Shaft Type	Shaft End Type	Self-aligning ball bearings	Spherical roller bearings	Adapter sleeve	Oil seal	Locating ring Designations	Locating ring Q'ty	
	170	112	290	—	25	30	165	345	100	72.5	35	224	62	M22	M 8	20	V170C100-100	V170C100-0	—	23022EK	H322X	GS22	SR170×8.5	2	46
	180	125	320	56	23	32	170	380	110	75	40	243	70	M20	M 8	26	V180C100-100	V180C100-0	—	23122EK	H3122X	GS22	SR180×14	1	51
	200	132	350	60	23	32	190	410	120	82	45	265	82	M20	M10	39	V200C100-100	V200C100-0	1222K	—	H222X	GS22	SR200×22	2	42
100																			2222K	22222EXK	H322X		SR200×14.5	2	50
																			—	23222EK	H2322X		SR200×12.2	1	58
	240	160	390	80	23	32	218	470	150	96	50	315	96	M20	M10	60	V240C100-100	V240C100-0	1322K	21322EK	H322X	GS22	SR240×23	2	48
																			2322K	22322EXK	H2322X		SR240×16	1	63
	180	125	320	56	23	32	170	380	110	75	40	243	70	M20	M 8	25	V180C110-110	V180C110-0	—	23024EK	H3024X	GS24	SR180×12	2	47
	200	132	350	60	23	32	190	410	120	82	45	265	82	M20	M10	39	V200C110-110	V200C110-0	—	23124EK	H3124X	GS24	SR200×20	1	55
110	215	140	350	60	23	32	190	410	120	82	45	280	82	M20	M10	41	V215C110-110	V215C110-0	—	22224EXK	H3124X	GS24	SR215×12	2	53
																			—	23224EK	H2324X		SR215×6	1	62
	260	170	450	92	29	42	236	540	160	105	60	335	103	M24	M10	72	V260C110-110	V260C110-0	—	22324EK	H2324X	GS24	SR260×17	1	67
	200	132	350	60	23	32	190	410	120	82	45	265	82	M20	M10	38	V200C115-115	V200C115-0	—	23026EK	H3026	GS26	SR200×15	2	51
	210	140	350	60	23	32	190	410	120	82	45	280	82	M20	M10	42	V210C115-115	V210C115-0	—	23126EK	H3126	GS26	SR210×18	1	57
115	230	150	380	65	23	32	200	450	130	87	50	300	86	M20	M10	50	V230C115-115	V230C115-0	—	22226EXK	H3126	GS26	SR230×11	2	57
																			—	23226EK	H2326		SR230×6	1	65
	280	180	470	92	29	42	243	560	160	108.5	60	355	108	M24	M10	82	V280C115-115	V280C115-0	—	22326EK	H2326	GS26	SR280×15	1	72
	210	140	350	60	23	32	190	410	120	82	45	280	82	M20	M10	40	V210C125-125	V210C125-0	—	23028EK	H3028	GS28	SR210×14.5	2	53
	225	150	380	65	23	32	200	450	130	87	50	300	86	M20	M10	50	V225C125-125	V225C125-0	—	23128EK	H3128	GS28	SR225×18	1	60
125	250	160	420	80	23	32	218	500	150	96	50	315	94	M20	M10	54	V250C125-125	V250C125-0	—	22228EXK	H3128	GS28	SR250×13	2	60
																			—	23228EK	H2328		SR250×6	1	70
	300	190	520	92	29	50	250	610	170	112	65	375	113	M24	M12	97	V300C125-125	V300C125-0	—	22328EK	H2328	GS28	SR300×11	1	77
	225	150	380	65	23	32	200	450	130	87	50	300	86	M20	M10	50	V225C135-135	V225C135-0	—	23030EK	H3030	GS30	SR225×15	2	56
	250	160	420	80	23	32	218	500	150	96	50	315	94	M20	M10	52	V250C135-135	V250C135-0	—	23130EK	H3130	GS30	SR250×14	1	68
135	270	170	450	92	29	42	236	540	160	105	60	335	103	M24	M10	64	V270C135-135	V270C135-0	—	22230EK	H3130	GS30	SR270×15	2	65
																			—	23230EK	H2330		SR270×7	1	76
	320	200	560	92	29	50	258	660	180	116	65	405	122	M24	M12	128	V320C135-135	V320C135-0	—	22330EK	H2330	GS30	SR320×14	1	82

Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only.
To make a complete unit, please order the corresponding bearing, adapter sleeve and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, adapter sleeve and locating rings.
3. H7 and h11 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. Plummer block housings V180 and larger are provided with eye bolts.
6. The threads for plugs and grease nipples are PT1/8 for V170 and smaller, and PT1/4 for V180 and larger.
7. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the housing is a half of the locating ring width.
8. ZF type oil seals are also available instead of GS type seals.
9. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

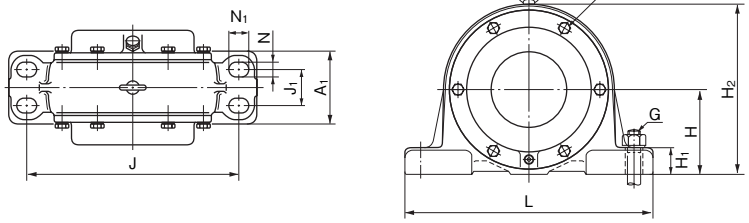
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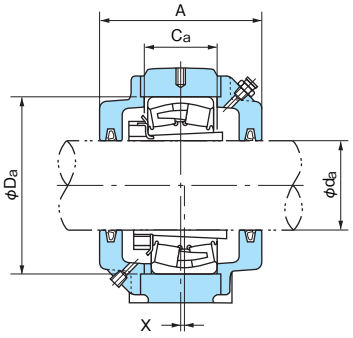
One piece type Plummer Block Housings

V Series

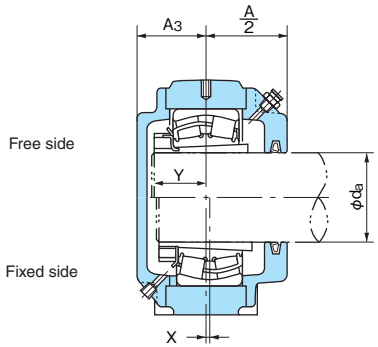
for Bearing with Adapter Sleeve

Shaft Diameter: 140～200mm





Through Shaft Type



Shaft End Type

Shaft dia. da (mm)	Dimensions (mm)															Mass (kg) (Reference)	Designations		Applicable parts					Y (Reference)
	Da (H7)	H (h11)	J	J1	N	N1	A	L	A1	A3	H1	H2	Ca	G (Nominal)	t (Nominal) (Reference)		Through Shaft Type	Shaft End Type	Spherical roller bearings	Adapter sleeve	Oil seal	Locating ring Designations	Locating ring Q'ty	
140	240	160	390	80	23	32	218	470	150	96	50	315	96	M20	M10	57	V240C140-140	V240C140-0	23032EK	H3032	GS32	SR240×18	2	61
	270	170	450	92	29	42	236	540	160	105	60	335	103	M24	M10	60	V270C140-140	V270C140-0	23132EK	H3132	GS32	SR270×17	1	74
	290	190	470	92	29	50	250	560	170	112	60	375	113	M24	M12	100	V290C140-140	V290C140-0	22232EK	H3132	GS32	SR290×16.5	2	71
																			23232EK	H2332		SR290×9	1	83
	340	212	580	104	33	54	300	680	190	137	65	425	130	M27	M12	143	V340C140-140	V340C140-0	22332EK	H2332	GS32	SR340×16	1	88
150	260	170	450	92	29	42	236	540	160	105	60	335	103	M24	M10	69	V260C150-150	V260C150-0	23034EK	H3034	GS34	SR260×18	2	66
	280	180	470	92	29	42	243	560	160	108.5	60	355	108	M24	M10	80	V280C150-150	V280C150-0	23134EK	H3134	GS34	SR280×20	1	76
	310	200	560	92	29	50	258	660	180	116	65	405	122	M24	M12	120	V310C150-150	V310C150-0	22234EK	H3134	GS34	SR310×18	2	75
																			23234EK	H2334		SR310×12	1	87
160	280	180	470	92	29	42	243	560	160	108.5	60	355	108	M24	M10	79	V280C160-160	V280C160-0	23036EK	H3036	GS36	SR280×17	2	70
	300	190	520	92	29	50	250	610	170	112	65	375	113	M24	M12	95	V300C160-160	V300C160-0	23136EK	H3136	GS36	SR300×17	1	81
	320	200	560	92	29	50	258	660	180	116	65	405	122	M24	M12	115	V320C160-160	V320C160-0	22236EK	H3136	GS36	SR320×18	2	76
																			23236EK	H2336		SR320×10	1	89
170	290	190	470	92	29	50	250	560	170	112	60	375	113	M24	M12	94	V290C170-170	V290C170-0	23038EK	H3038	GS38	SR290×19	2	72
	320	200	560	92	29	50	258	660	180	116	65	405	122	M24	M12	124	V320C170-170	V320C170-0	23138EK	H3138	GS38	SR320×18	1	86
	340	212	580	104	33	54	300	680	190	137	65	425	130	M27	M12	140	V340C170-170	V340C170-0	22238EK	H3138	GS38	SR340×19	2	80
																			23238EK	H2338		SR340×10	1	94
180	310	200	560	92	29	50	258	660	180	116	65	405	122	M24	M12	117	V310C180-180	V310C180-0	23040EK	H3040	GS40	SR310×20	2	76
	340	212	580	104	33	54	300	680	190	137	65	425	130	M27	M12	138	V340C180-180	V340C180-0	23140EK	H3140	GS40	SR340×18	1	91
200	340	212	580	104	33	54	300	680	190	137	65	425	130	M27	M12	136	V340C200-200	V340C200-0	23044EK	H3044	GS44	SR340×20	2	79

Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only.
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2. The masses in the table do not include the bearing, adapter sleeve and locating rings.
3. H7 and h11 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. Plummer block housings V180 and larger are provided with eye bolts.
6. The threads for plugs and grease nipples are PT1/8 for V170 and smaller, and PT1/4 for V180 and larger.
7. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the housing is a half of the locating ring width.
8. ZF type oil seals are also available instead of GS type seals.
9. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

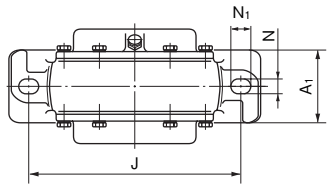
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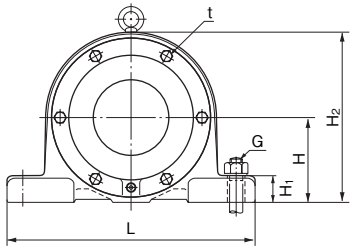
One piece type Plummer Block Housings

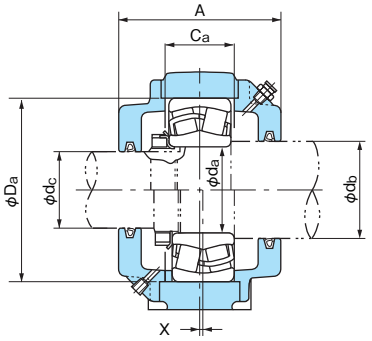
V Series

for Bearing with Cylindrical Bore

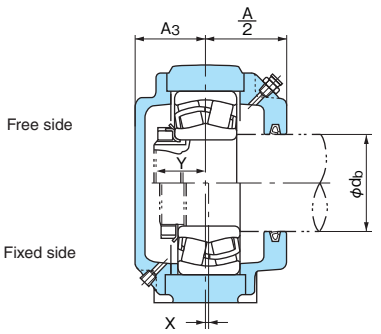
Shaft Diameter: 35～70mm







Through Shaft Type



Shaft End Type

Shaft dia. (mm)			Dimensions (mm)														Mass (kg) (Reference)	Designations		Applicable parts								Y (Reference)
																				Self-aligning ball bearings	Spherical roller bearings	Nut	Locking washer	Oil seal		Locating ring		
da	db	dc	Da (H7)	H (h11)	J	N	N1	A	L	A1	A3	H1	H2	Ca	G (Nominal)	t (Nominal) (Reference)		Through Shaft Type	Shaft End Type					db side	dc side	Designations	Q'ty	
35	45	30	80	60	170	16	20	95	205	60	40.5	25	118	37	M14	M6	4.5	V080C45-30	V080C45-0	1307	21307E	AN07	AW07X	GS10	GS 7	SR80×8	2	21
																				2307	—					SR80×6	1	26
40	50	35	80	60	170	16	20	95	205	60	40.5	25	118	37	M14	M6	4.0	V080C50-35	V080C50-0	1208	—	AN08	AW08X	GS11	GS 8	SR80×9.5	2	21
																				2208	22208EX					SR80×7	2	23
			90	67	170	16	20	100	205	60	42.5	25	128	39	M14	M6	4.8	V090C50-35	V090C50-0	1308	21308E	AN08	AW08X	GS11	GS 8	SR90×8	2	23
																				2308	22308EX					SR90×6	1	28
45	55	40	85	63	170	16	20	98	205	60	42.5	25	125	39	M14	M6	4.5	V085C55-40	V085C55-0	1209	—	AN09	AW09X	GS12	GS 9	SR85×10	2	22
																				2209	22209EX					SR85×8	2	24
			100	71	210	16	23	106	255	70	47	28	140	42	M14	M6	6.4	V100C55-40	V100C55-0	1309	21309E	AN09	AW09X	GS12	GS 9	SR100×8.5	2	25
																				2309	22309EX					SR100×6	1	31
50	60	45	90	67	170	16	20	100	205	60	42.5	25	128	39	M14	M6	4.3	V090C60-45	V090C60-0	1210	—	AN10	AW10X	GS13	GS10	SR90×9.5	2	24
																				2210	22210EX					SR90×8	2	25
			110	80	210	21	25	112	255	70	47	30	155	46	M18	M6	7.8	V110C60-45	V110C60-0	1310	21310E	AN10	AW10X	GS13	GS10	SR110×9.5	2	27
																				2310	22310EX					SR110×6	1	34
55	65	50	100	71	210	16	23	106	255	70	47	28	140	42	M14	M6	6.0	V100C65-50	V100C65-0	1211	—	AN11	AW11X	GS15	GS11	SR100×10.5	2	25
																				2211	22211EX					SR100×8.5	2	27
			120	85	230	21	25	118	275	80	50	30	165	49	M18	M6	10	V120C65-50	V120C65-0	1311	21311E	AN11	AW11X	GS15	GS11	SR120×10	2	29
																				2311	22311EX					SR120×6	1	36
60	70	55	110	80	210	21	25	112	255	70	47	30	155	46	M18	M6	7.6	V110C70-55	V110C70-0	1212	—	AN12	AW12X	GS16	GS12	SR110×12	2	26
																				2212	22212EX					SR110×9	2	29
	70(1)	55	130	90	230	21	25	118	280	80	50	30	175	50	M18	M6	11	V130C70-55	V130C70-0	1312	21312E	AN12	AW12X	GS16	GS12	SR130×9.5	2	31
																				2312	22312EX					SR130×4	1	39
65	75	60	120	85	230	21	25	118	275	80	50	30	165	49	M18	M6	9.6	V120C75-60	V120C75-0	1213	—	AN13	AW13X	GS17	GS13	SR120×13	2	28
																				2213	22213EX					SR120×9	2	32
	75(1)	60	140	100	260	25	30	136	315	90	58	32	195	56	M22	M8	17	V140C75-60	V140C75-0	1313	21313E	AN13	AW13X	GS17	GS13	SR140×11.5	2	33
																				2313	22313EX					SR140×8	1	40
70	80	60	125	90	230	21	25	118	280	80	50	30	175	50	M18	M6	10	V125C80-60	V125C80-0	1214	—	AN14	AW14X	GS18	GS13	SR125×13	2	28
																				2214	22214EX					SR125×9.5	2	32
	80(1)	60	150	100	260	25	30	140	315	90	60	32	195	56	M22	M8	16	V150C80-60	V150C80-0	1314	21314E	AN14	AW14X	GS18	GS13	SR150×10.5	2	34
																				2314	22314EX					SR150×5	1	42

Note: (1) When heavy axial load is applied, a spacer with large O.D. and small inner chamfer must be used between the bearing and shaft shoulder to obtain a sufficient contact area.

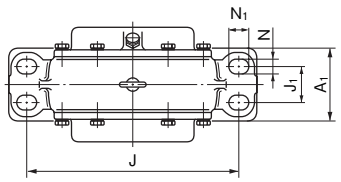
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only. To make a complete unit, please order the corresponding bearing, nuts and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, nuts and locating rings.
3. H7 and h11 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. Plummer block housings V180 and larger are provided with eye bolts.
6. The threads for plugs and grease nipples are PT1/8 for V170 and smaller, and PT1/4 for V180 and larger.
7. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the housing is a half of the locating ring width.
8. ZF type oil seals are also available instead of GS type seals.
9. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

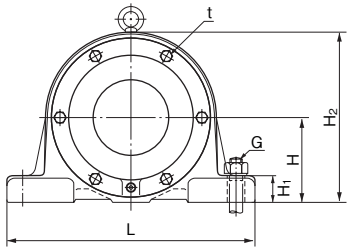
One piece type Plummer Block Housings

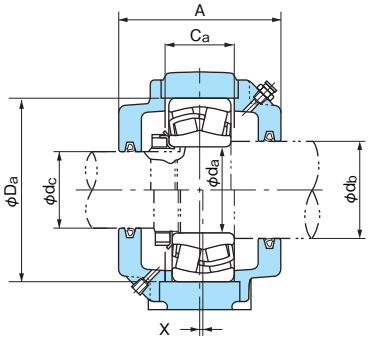
V Series

for Bearing with Cylindrical Bore

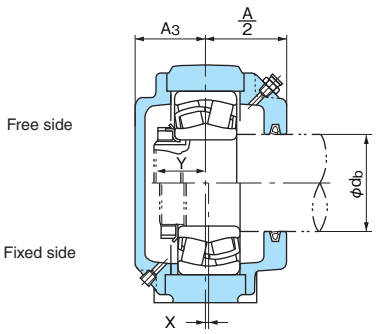
Shaft Diameter: 75～100mm







Through Shaft Type



Shaft End Type

Shaft dia. (mm)			Dimensions (mm)															Mass (kg) (Reference)	Designations		Applicable parts							Y (Reference)
																					Self-aligning ball bearings	Spherical roller bearings	Nut	Locking washer	Oil seal		Locating ring		
da	db	dc	Da (H7)	H (h11)	J	J1	N	N1	A	L	A1	A3	H1	H2	Ca	G (Nominal)	t (Nominal) (Reference)		Through Shaft Type	Shaft End Type				db side	dc side	Designations	Q'ty	
75	85	65	130	90	230	—	21	25	118	280	80	50	30	175	50	M18	M 6	10	V130C85-65	V130C85-0	1215	—	AN15	AW15X	GS19	GS15	SR130×12.5	2	30
						—															2215	22215EX					SR130×9.5	2	33
	85(1)	65	160	112	290	—	25	30	150	345	100	65	35	224	62	M22	M 8	23	V160C85-65	V160C85-0	1315	21315E	AN15	AW15X	GS19	GS15	SR160×12.5	2	36
						—															2315	22315EX					SR160×7	1	45
80	90	70	140	100	260	—	25	30	136	315	90	58	32	195	56	M22	M 8	17	V140C90-70	V140C90-0	1216	—	AN16	AW16X	GS20	GS16	SR140×15	2	32
						—															2216	22216EX					SR140×11.5	2	36
	90(1)	70	170	112	290	—	25	30	165	345	100	72.5	35	224	62	M22	M 8	21	V170C90-70	V170C90-0	1316	21316E	AN16	AW16X	GS20	GS16	SR170×11.5	2	39
						—															2316	22316EX					SR170×4	1	48
85	95	75	150	100	260	—	25	30	140	315	90	60	32	195	56	M22	M 8	15	V150C95-75	V150C95-0	1217	—	AN17	AW17X	GS21	GS17	SR150×14	2	34
																					2217	22217EX					SR150×10	2	38
	95(1)	75	180	125	320	56	23	32	170	380	110	75	40	243	70	M20	M 8	28	V180C95-75	V180C95-0	1317	21317E	AN17	AW17X	GS21	GS17	SR180×14.5	2	41
																					2317	22317EX					SR180×10	1	50
90	100	80	160	112	290	—	25	30	150	345	100	65	35	224	62	M22	M 8	23	V160C100-80	V160C100-0	1218	—	AN18	AW18X	GS22	GS18	SR160×16	2	35
																					2218	22218EX					SR160×11	2	40
	100(1)	80	190	125	320	56	23	32	170	380	110	75	40	243	70	M20	M 8	25	V190C100-80	V190C100-0	1318	21318E	AN18	AW18X	GS22	GS18	SR190×13.5	2	42
																					2318	22318EX					SR190×6	1	52
95	110	85	170	112	290	—	25	30	165	345	100	72.5	35	224	62	M22	M 8	21	V170C110-85	V170C110-0	1219	—	AN19	AW19X	GS24	GS19	SR170×15	2	37
																					2219	22219EX					SR170×9.5	2	43
			200	132	350	60	23	32	190	410	120	82	45	265	82	M20	M10	39	V200C110-85	V200C110-0	1319	21319E	AN19	AW19X	GS24	GS19	SR200×18.5	2	44
																					2319	22319EX					SR200×15	1	55
100	115	90	180	125	320	56	23	32	170	380	110	75	40	243	70	M20	M 8	27	V180C115-90	V180C115-0	1220	—	AN20	AW20X	GS26	GS20	SR180×18	2	39
																					2220	22220EX					SR180×12	2	45
			215	140	350	60	23	32	190	410	120	82	45	280	82	M20	M10	40	V215C115-90	V215C115-0	1320	21320E	AN20	AW20X	GS26	GS20	SR215×17.5	2	46
																					2320	22320EX					SR215×9	1	59

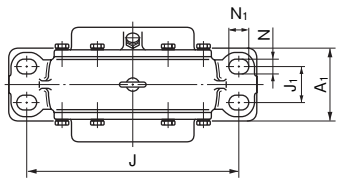
Note: (1) When heavy axial load is applied, a spacer with large O.D. and small inner chamfer must be used between the bearing and shaft shoulder to obtain a sufficient contact area.

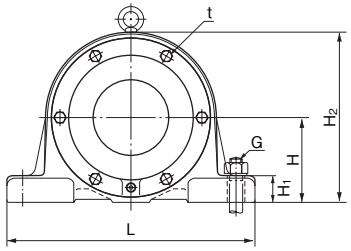
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only. To make a complete unit, please order the corresponding bearing, nuts and locating rings shown in the table additionally.
2. The masses in the table do not include the bearing, nuts and locating rings.
3. H7 and h11 in the table means tolerance classes specified in JIS B 0401.
4. The tolerance of locating ring O.D. is h12, and 0 ~ -0.2 for the width.
5. Plummer block housings V180 and larger are provided with eye bolts.
6. The threads for plugs and grease nipples are PT1/8 for V170 and smaller, and PT1/4 for V180 and larger.
7. When one locating ring is used for fixed-end, the offset (X dimension) of bearing center from the center of the housing is a half of the locating ring width.
8. ZF type oil seals are also available instead of GS type seals.
9. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

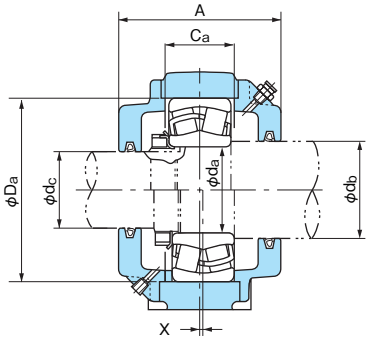
One piece type Plummer Block Housings

V Series
for Bearing with Cylindrical Bore

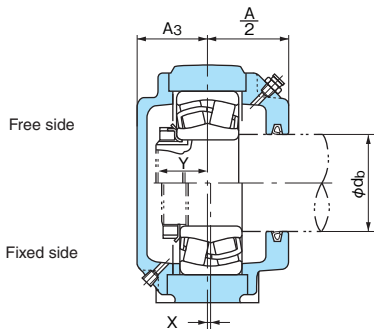
Shaft Diameter: 110～160mm







Through Shaft Type



Shaft End Type

Shaft dia. (mm)			Dimensions (mm)															Mass (kg) (Reference)	Designations		Applicable parts							Y (Reference)
																					Self-aligning ball bearings	Spherical roller bearings	Nut	Locking washer	Oil seal		Locating ring		
da	db	dc	Da (H7)	H (h11)	J	J1	N	N1	A	L	A1	A3	H1	H2	Ca	G (Nominal)	t (Nominal) (Reference)		Through Shaft Type	Shaft End Type					db side	dc side	Designations	Q'ty	
	120	100	170	112	290	—	25	30	165	345	100	72.5	35	224	62	M22	M 8	19	V170C120-100	V170C120-0	—	23022E	AN22	AW22X	GS27	GS22	SR170×8.5	2	46
			180	125	320	56	23	32	170	380	110	75	40	243	70	M20	M 8	25	V180C120-100	V180C120-0	—	23122E	AN22	AW22X	GS27	GS22	SR180×14	1	51
	125	100	200	132	350	60	23	32	190	410	120	82	45	265	82	M20	M10	38	V200C125-100	V200C125-0	1222	—	AN22	AW22X	GS28	GS22	SR200×22	2	42
110																					2222	22222EX					SR200×14.5	2	50
																					—	23222E					SR200×12.2	1	58
			240	160	390	80	23	32	218	470	150	96	50	315	96	M20	M10	58	V240C125-100	V240C125-0	1322	21322E	AN22	AW22X	GS28	GS22	SR240×23	2	48
																					2322	22322EX					SR240×16	1	63
	130	110	180	125	320	56	23	32	170	380	110	75	40	243	70	M20	M 8	24	V180C130-110	V180C130-0	—	23024E	ANL24	AWL24X	GS29	GS24	SR180×12	2	47
			200	132	350	60	23	32	190	410	120	82	45	265	82	M20	M10	37	V200C130-110	V200C130-0	—	23124E	AN24	AW24X	GS29	GS24	SR200×20	1	55
120	135	110	215	140	350	60	23	32	190	410	120	82	45	280	82	M20	M10	40	V215C135-110	V215C135-0	—	22224EX	AN24	AW24X	GS30	GS24	SR215×12	2	53
																					—	23224E					SR215×6	1	62
			260	170	450	92	29	42	236	540	160	105	60	335	103	M24	M10	64	V260C135-110	V260C135-0	—	22324E	AN24	AW24X	GS30	GS24	SR260×17	1	67
	140	115	200	132	350	60	23	32	190	410	120	82	45	265	82	M20	M10	36	V200C140-115	V200C140-0	—	23026E	ANL26	AWL26	GS32	GS26	SR200×15	2	51
			210	140	350	60	23	32	190	410	120	82	45	280	82	M20	M10	40	V210C140-115	V210C140-0	—	23126E	AN26	AW26	GS32	GS26	SR210×18	1	57
130	145	115	230	150	380	65	23	32	200	450	130	87	50	300	86	M20	M10	48	V230C145-115	V230C145-0	—	22226EX	AN26	AW26	GS33	GS26	SR230×11	2	57
																					—	23226E					SR230×6	1	65
	150	115	280	180	470	92	29	42	243	560	160	108.5	60	355	108	M24	M10	80	V280C150-115	V280C150-0	—	22326E	AN26	AW26	GS34	GS26	SR280×15	1	72
	150	125	210	140	350	60	23	32	190	410	120	82	45	280	82	M20	M10	39	V210C150-125	V210C150-0	—	23028E	ANL28	AWL28	GS34	GS28	SR210×14.5	2	53
	155	125	225	150	380	65	23	32	200	450	130	87	50	300	86	M20	M10	48	V225C155-125	V225C155-0	—	23128E	AN28	AW28	GS35	GS28	SR225×18	1	60
140			250	160	420	80	23	32	218	500	150	96	50	315	94	M20	M10	53	V250C155-125	V250C155-0	—	22228EX	AN28	AW28	GS35	GS28	SR250×13	2	60
																					—	23228E					SR250×6	1	70
	160	125	300	190	520	92	29	50	250	610	170	112	65	375	113	M24	M12	94	V300C160-125	V300C160-0	—	22328E	AN28	AW28	GS36	GS28	SR300×11	1	77
	160(1)	135	225	150	380	65	23	32	200	450	130	87	50	300	86	M20	M10	48	V225C160-135	V225C160-0	—	23030E	ANL30	AWL30	GS36	GS30	SR225×15	2	56
	165	135	250	160	420	80	23	32	218	500	150	96	50	315	94	M20	M10	50	V250C165-135	V250C165-0	—	23130E	AN30	AW30	GS37	GS30	SR250×14	1	68
150			270	170	450	92	29	42	236	540	160	105	60	335	103	M24	M10	62	V270C165-135	V270C165-0	—	22230E	AN30	AW30	GS37	GS30	SR270×15	2	65
																					—	23230E					SR270×7	1	76
	170	135	320	200	560	92	29	50	258	660	180	116	65	405	122	M24	M12	113	V320C170-135	V320C170-0	—	22330E	AN30	AW30	GS38	GS30	SR320×14	1	82
	170(1)	140	240	160	390	80	23	32	218	470	150	96	50	315	96	M20	M10	55	V240C170-140	V240C170-0	—	23032E	ANL32	AWL32	GS38	GS32	SR240×18	2	61
	175	140	270	170	450	92	29	42	236	540	160	105	60	335	103	M24	M10	58	V270C175-140	V270C175-0	—	23132E	AN32	AW32	GS39	GS32	SR270×17	1	74
160			290	190	470	92	29	50	250	560	170	112	60	375	113	M24	M12	96	V290C175-140	V290C175-0	—	22232E	AN32	AW32	GS39	GS32	SR290×16.5	2	71
																					—	23232E					SR290×9	1	83
	180	140	340	212	580	104	33	54	300	680	190	137	65	425	130	M27	M12	138	V340C180-140	V340C180-0	—	22332E	AN32	AW32	GS40	GS32	SR340×16	1	88

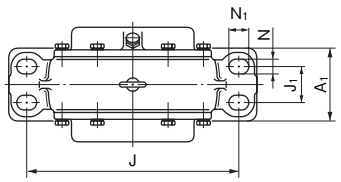
Note: (1) When heavy axial load is applied, a spacer with large O.D. and small inner chamfer must be used between the bearing and shaft shoulder to obtain a sufficient contact area.

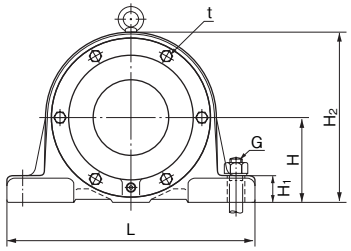
Remarks: 1. Plummer block housings are housings with oil seals, a plug and a grease nipple only. To make a complete unit, please order the corresponding bearing, nuts and locating rings shown in the table additionally.
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9. The dimension Y indicates the distance from the bearing center to the outer side face of the nut.

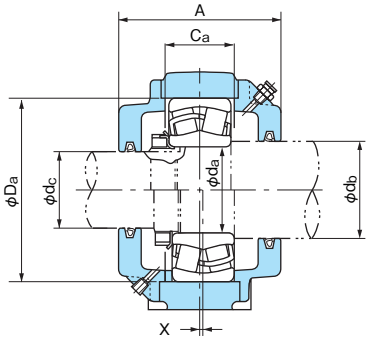
One piece type Plummer Block Housings

V Series
for Bearing with Cylindrical Bore

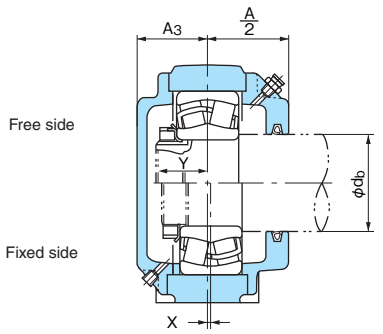
Shaft Diameter: 170～220mm







Through Shaft Type



Shaft End Type

Shaft dia. (mm)			Dimensions (mm)															Mass (kg) (Reference)	Designations		Applicable parts						Y (Reference)
																								Oil seal		Locating ring		
da	db	dc	Da (H7)	H (h11)	J	J1	N	N1	A	L	A1	A3	H1	H2	Ca	G (Nominal)	t (Nominal) (Reference)		Through Shaft Type	Shaft End Type	Spherical roller bearings	Nut	Locking washer	db side	dc side	Designations	Q'ty	
170	180(1)	150	260	170	450	92	29	42	236	540	160	105	60	335	103	M24	M10	66	V260C180-150	V260C180-0	23034E	ANL34	AWL34	GS40	GS34	SR260×18	2	66
	190	150	280	180	470	92	29	42	243	560	160	108.5	60	355	108	M24	M10	78	V280C190-150	V280C190-0	23134E	AN34	AW34	GS42	GS34	SR280×20	1	76
			310	200	560	92	29	50	258	660	180	116	65	405	122	M24	M12	115	V310C190-150	V310C190-0	22234E	AN34	AW34	GS42	GS34	SR310×18	2	75
																					23234E					SR310×12	1	87
180	190(1)	160	280	180	470	92	29	42	243	560	160	108.5	60	355	108	M24	M10	78	V280C190-160	V280C190-0	23036E	ANL36	AWL36	GS42	GS36	SR280×17	2	70
	200	160	300	190	520	92	29	50	250	610	170	112	65	375	113	M24	M12	92	V300C200-160	V300C200-0	23136E	AN36	AW36	GS44	GS36	SR300×17	1	81
			320	200	560	92	29	50	258	660	180	116	65	405	122	M24	M12	110	V320C200-160	V320C200-0	22236E	AN36	AW36	GS44	GS36	SR320×18	2	76
																					23236E					SR320×10	1	89
190	200(1)	170	290	190	470	92	29	50	250	560	170	112	60	375	113	M24	M12	91	V290C200-170	V290C200-0	23038E	ANL38	AWL38	GS44	GS38	SR290×19	2	72
	210	170	320	200	560	92	29	50	258	660	180	116	65	405	122	M24	M12	120	V320C210-170	V320C210-0	23138E	AN38	AW38	GS46	GS38	SR320×18	1	86
			340	212	580	104	33	54	300	680	190	137	65	425	130	M27	M12	135	V340C210-170	V340C210-0	22238E	AN38	AW38	GS46	GS38	SR340×19	2	80
																					23238E					SR340×10	1	94
200	210(1)	180	310	200	560	92	29	50	258	660	180	116	65	405	122	M24	M12	125	V310C210-180	V310C210-0	23040E	ANL40	AWL40	GS46	GS40	SR310×20	2	76
	220	180	340	212	580	104	33	54	300	680	190	137	65	425	130	M27	M12	135	V340C220-180	V340C220-0	23140E	AN40	AW40	GS48	GS40	SR340×18	1	91
220	230(1)	200	340	212	580	104	33	54	300	680	190	137	65	425	130	M27	M12	132	V340C230-200	V340C230-0	23044E	ANL44	ALL44	GS50	GS44	SR340×20	2	79

Note: (1) When heavy axial load is applied, a spacer with large O.D. and small inner chamfer must be used between the bearing and shaft shoulder to obtain a sufficient contact area.

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Mounting Accessories

Adapter Assemblies
Withdrawal Sleeves
Locknuts
Lockwashers
Lock plates

Adapter Assemblies and Applied Bearing Bore Numbers

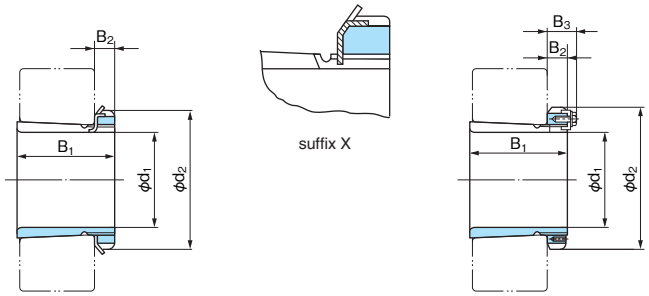
Bearing		Adapter Assembly series					
		H30	H31	H2	H32	H3	H23
Self-aligning Ball Bearings	12 K			04～22			
	22 K					04～22	
	13 K					04～22	
	23 K						04～22
Spherical Roller Bearings	230 K	24～/500					
	231 K		22～/500				
	222 K		24～64			05～22	
	232 K				60～/500		18～56
	213 K					05～22	
	223 K						08～56
Ball Bearings for Bearing Units	UK2						05～18
	UKX						05～28
	UK3						05～20

Withdrawal Sleeves and Applied Bearing Bore Numbers

Bearing		Withdrawal Sleeve series						
		AH30	AH31	AH2	AH22	AH32	AH3	AH23
Self-aligning Ball Bearings	12 K			08～22				
	22 K		22					08～20
	13 K						08～22	
	23 K							08～22
Spherical Roller Bearings	230 K	24～/500						
	231 K		22～/500					
	222 K		22～34		36～64		08～20	
	232 K					18～40 60～/500		44～56
	213 K						08～22	
	223 K							08～56

Note: In case of spherical roller bearings without outer rib on inner ring, locknut may have a larger bore than the outside diameter of the inner ring. Please check the dimensions.

Adapter Assemblies
Series H30 / HE30

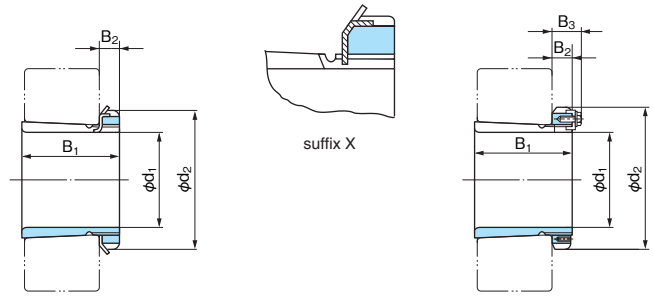


Adapter Ass'y with Lockwasher　　Adapter Ass'y with Lock Plate

Bearing bore No.	Dimensions (mm)						Mass(1) (kg) (reference)	Adapter Ass'y No.		Part No.			
	d1		d2	B1	B2	B3		H	HE	Adapter(2) sleeve	Locknut	Lockwasher	Lock Plate
	H	HE											
24	110	107.95	145	72	22	—	1.96	H3024X	HE3024X	A3024X	ANL 24	AWL 24X	—
26	115	114.30	155	80	23	—	2.85	H3026	HE3026	A3026	ANL 26	AWL 26	—
28	125	127.00	165	82	24	—	3.18	H3028	HE3028	A3028	ANL 28	AWL 28	—
30	135	133.35	180	87	26	—	3.90	H3030	HE3030	A3030	ANL 30	AWL 30	—
32	140	139.70	190	93	28	—	5.20	H3032	HE3032	A3032	ANL 32	AWL 32	—
34	150	152.40	200	101	29	—	6.00	H3034	HE3034	A3034	ANL 34	AWL 34	—
36	160	165.10	210	109	30	—	6.85	H3036	HE3036	A3036	ANL 36	AWL 36	—
38	170	171.45	220	112	31	—	7.45	H3038	HE3038	A3038	ANL 38	AWL 38	—
40	180	177.80	240	120	32	—	9.20	H3040	HE3040	A3040	ANL 40	AWL 40	—
44	200	—	260	128	30	41	10.3	H3044	—	A3044	ANL 44	—	ALL 44
48	220	—	290	133	34	46	13.4	H3048	—	A3048	ANL 48	—	ALL 48
52	240	—	310	145	34	46	15.6	H3052	—	A3052	ANL 52	—	ALL 48
56	260	—	330	152	38	50	17.7	H3056	—	A3056	ANL 56	—	ALL 56
60	280	—	360	168	42	54	22.8	H3060	—	A3060	ANL 60	—	ALL 60
64	300	—	380	171	42	55	24.6	H3064	—	A3064	ANL 64	—	ALL 64
68	320	—	400	187	45	58	28.6	H3068	—	A3068	ANL 68	—	ALL 64
72	340	—	420	188	45	58	30.6	H3072	—	A3072	ANL 72	—	ALL 72
76	360	—	450	193	48	62	35.8	H3076	—	A3076	ANL 76	—	ALL 76
80	380	—	470	210	52	66	42.1	H3080	—	A3080	ANL 80	—	ALL 76
84	400	—	490	212	52	66	44.3	H3084	—	A3084	ANL 84	—	ALL 84
88	410	—	520	228	60	77	67.0	H3088	—	A3088	ANL 88	—	ALL 88
92	430	—	540	234	60	77	71.5	H3092	—	A3092	ANL 92	—	ALL 88
96	450	—	560	237	60	77	75.2	H3096	—	A3096	ANL 96	—	ALL 96
/500	470	—	580	247	68	85	81.8	H30/500	—	A30/500	ANL100	—	ALL 96

Notes: (1) The masses in the table are for H series.
(2) The numbers in the table mean sleeves for H series.
Sleeves for HE series have prefix AE instead of A.
Remark: Suffix X means narrow axial slot type. For this type sleeves, only lockwashers with straight inner tab can be used.

Adapter Assemblies
Series H31 / HE31

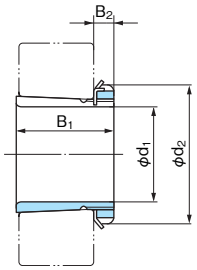


Adapter Ass'y with Lockwasher　　Adapter Ass'y with Lock Plate

Bearing bore No.	Dimensions (mm)						Mass(1) (kg) (reference)	Adapter Ass'y No.		Part No.			
	d1		d2	B1	B2	B3		H	HE	Adapter(2) sleeve	Locknut	Lockwasher	Lock Plate
	H	HE											
22	100	101.60	145	81	21	—	2.25	H3122X	HE3122X	A3122X	AN 22	AW 22X	—
24	110	107.95	155	88	22	—	2.64	H3124X	HE3124X	A3124X	AN 24	AW 24X	—
26	115	114.30	165	92	23	—	3.66	H3126	HE3126	A3126	AN 26	AW 26	—
28	125	127.00	180	97	24	—	4.34	H3128	HE3128	A3128	AN 28	AW 28	—
30	135	133.35	195	111	26	—	5.54	H3130	HE3130	A3130	AN 30	AW 30	—
32	140	139.70	210	119	28	—	7.70	H3132	HE3132	A3132	AN 32	AW 32	—
34	150	152.40	220	122	29	—	8.40	H3134	HE3134	A3134	AN 34	AW 34	—
36	160	165.10	230	131	30	—	9.50	H3136	HE3136	A3136	AN 36	AW 36	—
38	170	171.45	240	141	31	—	10.8	H3138	HE3138	A3138	AN 38	AW 38	—
40	180	177.80	250	150	32	—	12.1	H3140	HE3140	A3140	AN 40	AW 40	—
44	200	—	280	158	32	44	14.7	H3144	—	A3144	AN 44	—	AL 44
48	220	—	300	169	34	46	17.3	H3148	—	A3148	AN 48	—	AL 44
52	240	—	330	187	36	49	22.0	H3152	—	A3152	AN 52	—	AL 52
56	260	—	350	192	38	51	24.5	H3156	—	A3156	AN 56	—	AL 52
60	280	—	380	208	40	53	30.3	H3160	—	A3160	AN 60	—	AL 60
64	300	—	400	226	42	56	35.0	H3164	—	A3164	AN 64	—	AL 64
68	320	—	440	254	55	72	49.5	H3168	—	A3168	AN 68	—	AL 68
72	340	—	460	259	58	75	54.5	H3172	—	A3172	AN 72	—	AL 68
76	360	—	490	264	60	77	61.6	H3176	—	A3176	AN 76	—	AL 76
80	380	—	520	272	62	82	70.1	H3180	—	A3180	AN 80	—	AL 80
84	400	—	540	304	70	90	84.0	H3184	—	A3184	AN 84	—	AL 80
88	410	—	560	307	70	90	103	H3188	—	A3188	AN 88	—	AL 88
92	430	—	580	326	75	95	116	H3192	—	A3192	AN 92	—	AL 88
96	450	—	620	335	75	95	133	H3196	—	A3196	AN 96	—	AL 96
/500	470	—	630	356	80	100	143	H31/500	—	A31/500	AN100	—	AL100

Notes: (1) The masses in the table are for H series.
(2) The numbers in the table mean sleeves for H series.
Sleeves for HE series have prefix AE instead of A.
Remark: Suffix X means narrow axial slot type. For this type sleeves, only lockwashers with straight inner tab can be used.

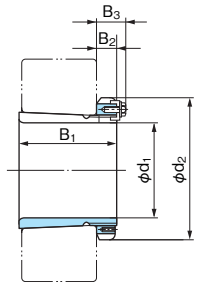
Adapter Assemblies
Series H2 / HE2 / HS2



Bearing bore No.	Dimensions (mm)						Mass(1) (kg) (reference)	Adapter Ass'y No.			Part No.		
	d1			d2	B1	B2		H	HE	HS	Adapter(2) sleeve	Locknut	Lockwasher
	H	HE	HS										
04	17	—	—	32	24	7	0.041	H204X	—	—	A204X	AN 04	AW 04X
05	20	19.050	—	38	26	8	0.070	H205X	HE205X	—	A205X	AN 05	AW 05X
06	25	25.400	22.225	45	27	8	0.099	H206X	HE206X	HS206X	A206X	AN 06	AW 06X
07	30	—	28.575	52	29	9	0.125	H207X	—	HS207X	A207X	AN 07	AW 07X
08	35	31.750	34.925	58	31	10	0.174	H208X	HE208X	HS208X	A208X	AN 08	AW 08X
09	40	38.100	—	65	33	11	0.226	H209X	HE209X	—	A209X	AN 09	AW 09X
10	45	44.450	41.275	70	35	12	0.274	H210X	HE210X	HS210X	A210X	AN 10	AW 10X
11	50	50.800	47.625	75	37	12	0.308	H211X	HE211X	HS211X	A211X	AN 11	AW 11X
12	55	—	53.975	80	38	13	0.346	H212X	—	HS212X	A212X	AN 12	AW 12X
13	60	57.150	60.325	85	40	14	0.401	H213X	HE213X	HS213X	A213X	AN 13	AW 13X
14	60	—	—	92	41	14	0.550	H214X	—	—	A214X	AN 14	AW 14X
15	65	63.500	66.675	98	43	15	0.708	H215X	HE215X	HS215X	A215X	AN 15	AW 15X
16	70	69.850	—	105	46	17	0.881	H216X	HE216X	—	A216X	AN 16	AW 16X
17	75	76.200	73.025	110	50	18	1.02	H217X	HE217X	HS217X	A217X	AN 17	AW 17X
18	80	—	79.375	120	52	18	1.18	H218X	—	HS218X	A218X	AN 18	AW 18X
19	85	82.550	85.725	125	55	19	1.37	H219X	HE219X	HS219X	A219X	AN 19	AW 19X
20	90	88.900	—	130	58	20	1.49	H220X	HE220X	—	A220X	AN 20	AW 20X
21	95	—	—	140	60	20	1.70	H221X	—	—	A221X	AN 21	AW 21X
22	100	101.600	—	145	63	21	1.93	H222X	HE222X	—	A222X	AN 22	AW 22X

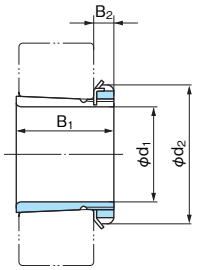
Notes: (1) The masses in the table are for H series.
(2) The numbers in the table mean sleeves for H series.
Sleeves for HE or HS series have prefix AE or AS.
Remark: Suffix X means narrow axial slot type. For this type sleeves, only lockwashers with straight inner tab can be used.

Adapter Assemblies
Series H32



Bearing bore No.	Dimensions (mm)					Mass (kg) (reference)	Adapter Ass'y No.	Part No.		
	d1	d2	B1	B2	B3			Adapter sleeve	Locknut	Lockwasher
60	280	380	240	40	53	34.0	H3260	A3260	AN 60	AL 60
64	300	400	258	42	56	39.4	H3264	A3264	AN 64	AL 64
68	320	440	288	55	72	54.6	H3268	A3268	AN 68	AL 68
72	340	460	299	58	75	60.2	H3272	A3272	AN 72	AL 68
76	360	490	310	60	77	69.6	H3276	A3276	AN 76	AL 76
80	380	520	328	62	82	80.9	H3280	A3280	AN 80	AL 80
84	400	540	352	70	90	94.6	H3284	A3284	AN 84	AL 80
88	410	560	361	70	90	118	H3288	A3288	AN 88	AL 88
92	430	580	382	75	95	133	H3292	A3292	AN 92	AL 88
96	450	620	397	75	95	153	H3296	A3296	AN 96	AL 96
/500	470	630	428	80	100	166	H32/500	A32/500	AN100	AL100

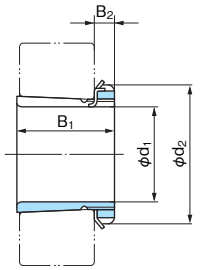
Adapter Assemblies
Series H3 / HE3 / HS3



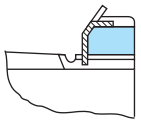
Bearing bore No.	Dimensions (mm)						Mass(1) (kg) (reference)	Adapter Ass'y No.			Part No.		
	d1			d2	B1	B2		H	HE	HS	Adapter(2) sleeve	Locknut	Lockwasher
	H	HE	HS										
04	17	—	—	32	28	7	0.045	H304X	—	—	A304X	AN 04	AW 04X
05	20	19.050	—	38	29	8	0.075	H305X	HE305X	—	A305X	AN 05	AW 05X
06	25	25.400	22.225	45	31	8	0.109	H306X	HE306X	HS306X	A306X	AN 06	AW 06X
07	30	—	28.575	52	35	9	0.142	H307X	—	HS307X	A307X	AN 07	AW 07X
08	35	31.750	34.925	58	36	10	0.189	H308X	HE308X	HS308X	A308X	AN 08	AW 08X
09	40	38.100	—	65	39	11	0.248	H309X	HE309X	—	A309X	AN 09	AW 09X
10	45	44.450	41.275	70	42	12	0.302	H310X	HE310X	HS310X	A310X	AN 10	AW 10X
11	50	50.800	47.625	75	45	12	0.345	H311X	HE311X	HS311X	A311X	AN 11	AW 11X
12	55	—	53.975	80	47	13	0.393	H312X	—	HS312X	A312X	AN 12	AW 12X
13	60	57.150	60.325	85	50	14	0.459	H313X	HE313X	HS313X	A313X	AN 13	AW 13X
14	60	—	—	92	52	14	0.723	H314X	—	—	A314X	AN 14	AW 14X
15	65	63.500	66.675	98	55	15	0.830	H315X	HE315X	HS315X	A315X	AN 15	AW 15X
16	70	69.850	—	105	59	17	1.03	H316X	HE316X	—	A316X	AN 16	AW 16X
17	75	76.200	73.025	110	63	18	1.18	H317X	HE317X	HS317X	A317X	AN 17	AW 17X
18	80	—	79.375	120	65	18	1.37	H318X	—	HS318X	A318X	AN 18	AW 18X
19	85	82.550	85.725	125	68	19	1.56	H319X	HE319X	HS319X	A319X	AN 19	AW 19X
20	90	88.900	—	130	71	20	1.69	H320X	HE320X	—	A320X	AN 20	AW 20X
21	95	—	—	140	74	20	1.93	H321X	—	—	A321X	AN 21	AW 21X
22	100	101.600	—	145	77	21	2.18	H322X	HE322X	—	A322X	AN 22	AW 22X

Notes: (1) The masses in the table are for H series.
(2) The numbers in the table mean sleeves for H series.
Sleeves for HE or HS series have prefix AE or AS.
Remark: Suffix X means narrow axial slot type. For this type sleeves, only lockwashers with straight inner tab can be used.

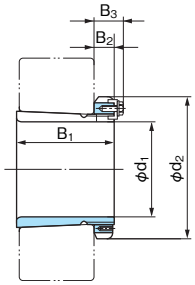
Adapter Assemblies
Series H23 / HE23



Adapter Ass'y with Lockwasher



suffix X

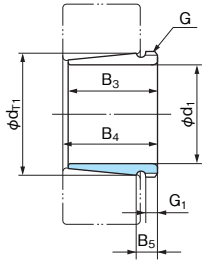


Adapter Ass'y with Lock Plate

Bearing bore No.	Dimensions (mm)						Mass(1) (kg) (reference)	Adapter Ass'y No.		Part No.			
	d1		d2	B1	B2	B3		H	HE	Adapter(2) sleeve	Locknut	Lockwasher	Lock Plate
	H	HE											
04	17	—	32	31	7	—	0.049	H2304X	—	A2304X	AN 04	AW 04X	—
05	20	19.05	38	35	8	—	0.087	H2305X	HE2305X	A2305X	AN 05	AW 05X	—
06	25	25.40	45	38	8	—	0.126	H2306X	HE2306X	A2306X	AN 06	AW 06X	—
07	30	—	52	43	9	—	0.165	H2307X	—	A2307X	AN 07	AW 07X	—
08	35	31.75	58	46	10	—	0.224	H2308X	HE2308X	A2308X	AN 08	AW 08X	—
09	40	38.10	65	50	11	—	0.280	H2309X	HE2309X	A2309X	AN 09	AW 09X	—
10	45	44.45	70	55	12	—	0.362	H2310X	HE2310X	A2310X	AN 10	AW 10X	—
11	50	50.80	75	59	12	—	0.420	H2311X	HE2311X	A2311X	AN 11	AW 11X	—
12	55	—	80	62	13	—	0.480	H2312X	—	A2312X	AN 12	AW 12X	—
13	60	57.15	85	65	14	—	0.556	H2313X	HE2313X	A2313X	AN 13	AW 13X	—
14	60	—	92	68	14	—	0.897	H2314X	—	A2314X	AN 14	AW 14X	—
15	65	63.50	98	73	15	—	1.05	H2315X	HE2315X	A2315X	AN 15	AW 15X	—
16	70	69.85	105	78	17	—	1.28	H2316X	HE2316X	A2316X	AN 16	AW 16X	—
17	75	76.20	110	82	18	—	1.45	H2317X	HE2317X	A2317X	AN 17	AW 17X	—
18	80	—	120	86	18	—	1.70	H2318X	—	A2318X	AN 18	AW 18X	—
19	85	82.55	125	90	19	—	1.94	H2319X	HE2319X	A2319X	AN 19	AW 19X	—
20	90	88.90	130	97	20	—	2.15	H2320X	HE2320X	A2320X	AN 20	AW 20X	—
21	95	—	140	101	20	—	2.45	H2321X	—	A2321X	AN 21	AW 21X	—
22	100	101.60	145	105	21	—	2.74	H2322X	HE2322X	A2322X	AN 22	AW 22X	—
24	110	107.95	155	112	22	—	3.20	H2324X	HE2324X	A2324X	AN 24	AW 24X	—
26	115	114.30	165	121	23	—	4.60	H2326	HE2326	A2326	AN 26	AW 26	—
28	125	127.00	180	131	24	—	5.52	H2328	HE2328	A2328	AN 28	AW 28	—
30	135	133.35	195	139	26	—	6.60	H2330	HE2330	A2330	AN 30	AW 30	—
32	140	139.70	210	147	28	—	9.15	H2332	HE2332	A2332	AN 32	AW 32	—
34	150	152.40	220	154	29	—	10.4	H2334	HE2334	A2334	AN 34	AW 34	—
36	160	165.10	230	161	30	—	11.3	H2336	HE2336	A2336	AN 36	AW 36	—
38	170	171.45	240	169	31	—	12.6	H2338	HE2338	A2338	AN 38	AW 38	—
40	180	177.80	250	176	32	—	13.9	H2340	HE2340	A2340	AN 40	AW 40	—
44	200	—	280	183	32	44	16.6	H2344	—	A2344	AN 44	—	AL 44
48	220	—	300	196	34	46	19.7	H2348	—	A2348	AN 48	—	AL 44
52	240	—	330	208	36	49	24.2	H2352	—	A2352	AN 52	—	AL 52
56	260	—	350	221	38	51	27.8	H2356	—	A2356	AN 56	—	AL 52

Notes: (1) The masses in the table are for H series.
(2) The numbers in the table mean sleeves for H series.
Sleeves for HE series have prefix AE instead of A.
Remarks: 1. Suffix X means narrow axial slot type. For this type sleeves, only lockwashers with straight inner tab can be used.
2. Inch bore type HS series is also available.

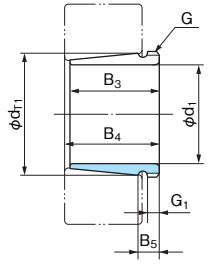
Withdrawal Sleeves
Series AH30 / AHX30



Bearing bore No.	Thread Nominal G	Dimensions (mm)						Mass (kg) (reference)	Withdrawal Sleeve No.	Locknut No.
		d_1	B_3	B_4	d_{T1}	B_5	G_1			
24	M 130×2	115	60	64	124.00	16	13	0.75	AHX3024	AN 26
26	M 140×2	125	67	71	134.50	17	14	0.93	AHX3026	AN 28
28	M 150×2	135	68	73	144.67	17	14	1.01	AHX3028	AN 30
30	M 160×3	145	72	77	154.92	18	15	1.15	AHX3030	AN 32
32	M 170×3	150	77	82	165.25	19	16	2.10	AH 3032	AN 34
34	M 180×3	160	85	90	175.83	20	17	2.50	AH 3034	AN 36
36	M 190×3	170	92	98	186.08	25	17	2.90	AH 3036	AN 38
38	Tr 205×4	180	96	102	196.50	24	18	3.40	AH 3038	HNL 41
40	Tr 215×4	190	102	108	206.92	25	19	3.80	AH 3040	HNL 43
44	Tr 235×4	200	111	117	227.58	26	20	7.40	AH 3044	HNL 47
48	Tr 260×4	220	116	123	248.00	27	21	8.80	AH 3048	HNL 52
52	Tr 280×4	240	128	135	268.83	29	23	10.7	AH 3052	HNL 56
56	Tr 300×4	260	131	139	289.08	30	24	12.0	AH 3056	HNL 60
60	Tr 320×5	280	145	153	310.08	32	26	14.4	AH 3060	HNL 64
64	Tr 345×5	300	149	157	330.33	33	27	16.0	AH 3064	HNL 69
68	Tr 365×5	320	162	171	351.42	34	28	19.5	AH 3068	HNL 73
72	Tr 385×5	340	167	176	371.67	36	30	21.0	AH 3072	HNL 77
76	Tr 410×5	360	170	180	391.92	37	31	23.5	AH 3076	HNL 82
80	Tr 430×5	380	183	193	412.83	39	33	27.2	AH 3080	HNL 86
84	Tr 450×5	400	186	196	433.00	40	34	29.1	AH 3084	HNL 90
88	Tr 470×5	420	194	205	453.67	41	35	32.1	AHX3088	HNL 94
92	Tr 490×5	440	202	213	474.17	43	37	35.3	AHX3092	HNL 98
96	Tr 520×6	460	205	217	494.42	44	38	40.0	AHX3096	HNL104
/500	Tr 540×6	480	209	221	514.58	46	40	42.5	AHX30/500	HNL108

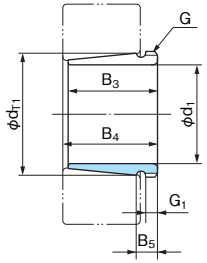
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Withdrawal Sleeves
Series AH30 / AHX30



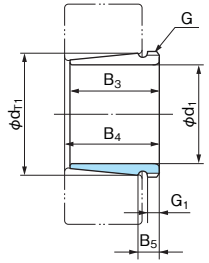
Bearing bore No.	Thread Nominal G	Dimensions (mm)						Mass (kg) (reference)	Withdrawal Sleeve No.	Locknut No.
		d_1	B_3	B_4	d_{T1}	B_5	G_1			
22	M 120×2	105	68	72	114.83	14	11	0.76	AHX3122	AN 24
24	M 130×2	115	75	79	125.33	15	12	0.95	AHX3124	AN 26
26	M 140×2	125	78	82	135.58	15	12	1.08	AHX3126	AN 28
28	M 150×2	135	83	88	145.92	17	14	1.28	AHX3128	AN 30
30	M 165×3	145	96	101	156.92	18	15	1.79	AHX3130	AN 33
32	M 180×3	150	103	108	167.42	19	16	3.20	AH 3132	AN 36
34	M 190×3	160	104	109	177.50	19	16	3.50	AH 3134	AN 38
36	M 200×3	170	116	122	188.33	22	19	4.20	AH 3136	AN 40
38	Tr 210×4	180	125	131	198.75	26	20	4.90	AH 3138	HN 42
40	Tr 220×4	190	134	140	209.42	27	21	5.60	AH 3140	HN 44
44	Tr 240×4	200	145	151	230.17	29	23	10.4	AH 3144	HN 48
48	Tr 260×4	220	154	161	250.83	31	25	12.1	AH 3148	HN 52
52	Tr 290×4	240	172	179	272.25	32	26	16.2	AH 3152	HN 58
56	Tr 310×5	260	175	183	292.42	34	28	17.6	AH 3156	HN 62
60	Tr 330×5	280	192	200	313.67	36	30	21.0	AH 3160	HN 66
64	Tr 350×5	300	209	217	335.00	37	31	24.7	AH 3164	HN 70
68	Tr 370×5	320	225	234	356.25	39	33	29.0	AH 3168	HN 74
72	Tr 400×5	340	229	238	376.42	41	35	33.1	AH 3172	HN 80
76	Tr 420×5	360	232	242	396.67	42	36	35.8	AH 3176	HN 84
80	Tr 440×5	380	240	250	417.17	44	38	38.9	AH 3180	HN 88
84	Tr 460×5	400	266	276	439.17	46	40	46.0	AH 3184	HN 92
88	Tr 480×5	420	270	281	459.42	48	42	49.2	AHX3188	HN 96
92	Tr 510×6	440	285	296	480.58	49	43	57.7	AHX3192	HN102
96	Tr 530×6	460	295	307	501.33	51	45	63.1	AHX3196	HN106
/500	Tr 550×6	480	313	325	522.67	53	47	70.9	AHX31/500	HN110

Withdrawal Sleeves
Series AH2



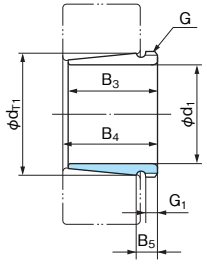
Bearing bore No.	Thread Nominal G	Dimensions (mm)						Mass (kg) (reference)	Withdrawal Sleeve No.	Locknut No.
		d_1	B_3	B_4	dT_1	B_5	G_1 (reference)			
08	M 45×1.5	35	25	27	41.50	9	6	0.094	AH 208	AN 09
09	M 50×1.5	40	26	29	46.67	9	6	0.104	AH 209	AN 10
10	M 55×2	45	28	31	51.15	10	7	0.130	AH 210	AN 11
11	M 60×2	50	29	32	56.83	10	7	0.167	AH 211	AN 12
12	M 65×2	55	32	35	62.00	11	8	0.175	AH 212	AN 13
13	M 75×2	60	32.5	36	67.08	11	8	0.242	AH 213	AN 15
14	M 80×2	65	33.5	37	72.17	11	8	0.255	AH 214	AN 16
15	M 85×2	70	34.5	38	77.25	11	8	0.280	AH 215	AN 17
16	M 90×2	75	35.5	39	82.33	11	8	0.306	AH 216	AN 18
17	M 95×2	80	38.5	42	87.50	12	9	0.353	AH 217	AN 19
18	M 100×2	85	40	44	92.67	12	9	0.427	AH 218	AN 20
19	M 105×2	90	43	47	97.83	13	10	0.486	AH 219	AN 21
20	M 110×2	95	45	49	103.00	13	10	0.525	AH 220	AN 22
21	M 115×2	100	47	51	108.08	14	11	0.580	AH 221	AN 23
22	M 120×2	105	50	54	113.33	14	11	0.647	AH 222	AN 24
24	M 130×2	115	53	57	123.50	15	12	0.755	AH 224	AN 26
26	M 140×2	125	53	57	133.50	15	12	0.815	AH 226	AN 28
28	M 150×2	135	56	61	143.75	16	13	1.00	AH 228	AN 30
30	M 160×3	145	60	65	154.00	17	14	1.16	AH 230	AN 32
32	M 170×3	150	64	69	164.25	18	15	1.91	AH 232	AN 34
34	M 180×3	160	69	74	174.58	19	16	2.21	AH 234	AN 36
36	M 190×3	170	69	74	184.58	19	16	2.34	AH 236	AN 38
38	Tr 205×4	180	73	78	194.58	23	17	2.94	AH 238	HNL41
40	Tr 215×4	190	77	82	204.83	24	18	3.12	AH 240	HNL43
44	Tr 235×4	200	85	91	225.58	24	18	6.10	AH 244	HNL47
48	Tr 260×4	220	96	102	246.17	28	22	8.16	AH 248	HNL52
52	Tr 280×4	240	105	111	266.83	29	23	9.89	AH 252	HNL56
56	Tr 300×4	260	105	113	287.00	29	23	10.4	AH 256	HNL60

Withdrawal Sleeves
Series AH22 / AH32 / AHX32



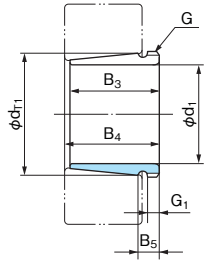
Bearing bore No.	Thread Nominal G	Dimensions (mm)						Mass (kg) (reference)	Withdrawal Sleeve No.	Locknut No.
		d_1	B_3	B_4	dT_1	B_5	G_1 (reference)			
36	M 200×3	170	105	110	187.50	20	17	3.70	AH 2236	AN 40
38	Tr 210×4	180	112	117	197.75	24	18	4.30	AH 2238	HN 42
40	Tr 220×4	190	118	123	208.17	25	19	4.70	AH 2240	HN 44
44	Tr 240×4	200	130	136	229.17	26	20	9.20	AH 2244	HN 48
48	Tr 260×4	220	144	150	250.25	27	21	11.1	AH 2248	HN 52
52	Tr 290×4	240	155	161	271.00	29	23	14.0	AH 2252	HN 58
56	Tr 310×5	260	155	163	291.08	30	24	15.2	AH 2256	HN 62
60	Tr 330×5	280	170	178	312.17	32	26	18.1	AH 2260	HN 66
64	Tr 350×5	300	180	190	333.08	33	27	20.2	AH 2264	HN 70
18	M 100×2	85	63	67	94.50	13	10	0.576	AHX3218	AN 20
19	M 105×2	90	67	71	99.75	14	11	0.680	AH 3219	AN 21
20	M 110×2	95	73	77	105.25	14	11	0.767	AHX3220	AN 22
21	M 115×2	100	78	82	110.67	14	11	0.890	AH 3221	AN 23
22	M 125×2	105	82	86	116.00	14	11	1.04	AHX3222	AN 25
24	M 135×2	115	90	94	126.50	16	13	1.30	AHX3224	AN 27
26	M 145×2	125	98	102	137.00	18	15	1.60	AHX3226	AN 29
28	M 155×3	135	104	109	147.58	18	15	1.90	AHX3228	AN 31
30	M 165×3	145	114	119	158.25	20	17	2.30	AHX3230	AN 33
32	M 180×3	150	124	130	168.92	23	20	4.09	AH 3232	AN 36
34	M 190×3	160	134	140	179.42	27	24	4.81	AH 3234	AN 38
36	M 200×3	170	140	146	189.92	27	24	5.31	AH 3236	AN 40
38	Tr 210×4	180	145	152	200.08	31	25	5.90	AH 3238	AN 42
40	Tr 220×4	190	153	160	210.75	31	25	6.67	AH 3240	AN 44
60	Tr 330×5	280	228	236	316.33	40	34	26.0	AH 3260	HN 66
64	Tr 350×5	300	246	254	337.67	42	36	30.6	AH 3264	HN 70
68	Tr 370×5	320	264	273	359.08	44	38	35.8	AH 3268	HN 74
72	Tr 400×5	340	274	283	379.75	46	40	41.6	AH 3272	HN 80
76	Tr 420×5	360	284	294	400.50	48	42	46.3	AH 3276	HN 84
80	Tr 440×5	380	302	312	421.83	50	44	52.5	AH 3280	HN 88
84	Tr 460×5	400	321	331	443.25	52	46	59.4	AH 3284	HN 92
88	Tr 480×5	420	330	341	463.92	54	48	64.7	AHX3288	HN 96
92	Tr 510×6	440	349	360	485.33	56	50	75.6	AHX3292	HN102
96	Tr 530×6	460	364	376	506.50	58	52	83.6	AHX3296	HN106
/500	Tr 550×6	480	393	405	528.75	60	54	94.7	AHX32/500	HN110

Withdrawal Sleeves
Series AH3 / AHX30



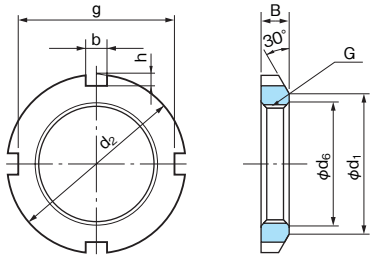
Bearing bore No.	Thread Nominal G	Dimensions (mm)						Mass (kg) (reference)	Withdrawal Sleeve No.	Locknut No.
		d_1	B_3	B_4	dT_1	B_5	G_1 (reference)			
08	M 45×1.5	35	29	32	41.92	9	6	0.096	AH 308	AN 09
09	M 50×1.5	40	31	34	47.08	9	6	0.109	AH 309	AN 10
10	M 55×2	45	35	38	52.33	10	7	0.137	AHX310	AN 11
11	M 60×2	50	37	40	57.38	11.5	7	0.161	AHX311	AN 12
12	M 65×2	55	40	43	62.38	14.5	8	0.189	AHX312	AN 13
13	M 75×2	60	42	45	67.83	11	8	0.253	AH 313	AN 15
14	M 80×2	65	43	47	73.00	11	8	0.280	AH 314	AN 16
15	M 85×2	70	45	49	78.17	11	8	0.313	AH 315	AN 17
16	M 90×2	75	48	52	83.42	11	8	0.365	AH 316	AN 18
17	M 95×2	80	52	56	88.67	12	9	0.429	AHX317	AN 19
18	M 100×2	85	53	57	93.75	12	9	0.461	AHX318	AN 20
19	M 105×2	90	57	61	99.00	13	10	0.532	AHX319	AN 21
20	M 110×2	95	59	63	104.17	13	10	0.582	AHX320	AN 22
21	M 115×2	100	62	66	109.25	15	12	0.600	AHX321	AN 23
22	M 120×2	105	63	67	114.33	15	12	0.663	AHX322	AN 24
24	M 130×2	115	69	73	124.75	16	13	0.875	AHX324	AN 26
26	M 140×2	125	74	78	135.08	17	14	1.03	AHX326	AN 28
28	M 150×2	135	77	82	145.42	17	14	1.15	AHX328	AN 30
30	M 165×3	145	83	88	155.83	18	15	1.55	AHX330	AN 33
32	M 180×3	150	88	93	166.17	19	16	2.73	AH 332	AN 36
34	M 190×3	160	93	98	176.50	20	17	3.19	AH 334	AN 38

Withdrawal Sleeves
Series AH23 / AHX23



Bearing bore No.	Thread Nominal G	Dimensions (mm)						Mass (kg) (reference)	Withdrawal Sleeve No.	Locknut No.
		d_1	B_3	B_4	dT_1	B_5	G_1 (reference)			
08	M 45×1.5	35	40	43	42.75	10	7	0.128	AH 2308	AN 09
09	M 50×1.5	40	44	47	48.00	11	7	0.164	AH 2309	AN 10
10	M 55×2	45	50	53	53.17	15	9	0.209	AHX2310	AN 11
11	M 60×2	50	54	57	58.42	16	10	0.253	AHX2311	AN 12
12	M 65×2	55	58	61	63.63	17.5	11	0.297	AHX2312	AN 13
13	M 75×2	60	61	64	69.08	15	12	0.395	AH 2313	AN 15
14	M 80×2	65	64	68	74.42	15	12	0.466	AHX2314	AN 16
15	M 85×2	70	68	72	79.75	15	12	0.534	AHX2315	AN 17
16	M 90×2	75	71	75	85.00	15	12	0.597	AHX2316	AN 18
17	M 95×2	80	74	78	90.17	16	13	0.670	AHX2317	AN 19
18	M 100×2	85	79	83	95.50	17	14	0.779	AHX2318	AN 20
19	M 105×2	90	85	89	100.83	19	16	0.886	AHX2319	AN 21
20	M 110×2	95	90	94	106.25	19	16	0.988	AHX2320	AN 22
21	—	—	—	—	—	—	—	—	—	—
22	M 125×2	105	98	102	116.92	19	16	1.35	AHX2322	AN 25
24	M 135×2	115	105	109	127.42	20	17	1.60	AHX2324	AN 27
26	M 145×2	125	115	119	138.08	22	19	2.00	AHX2326	AN 29
28	M 155×3	135	125	130	148.92	23	20	2.33	AHX2328	AN 31
30	M 165×3	145	135	140	159.42	27	24	2.82	AHX2330	AN 33
32	M 180×3	150	140	146	169.92	27	24	4.70	AH 2332	AN 36
34	M 190×3	160	146	152	180.42	27	24	5.30	AH 2334	AN 38
36	M 200×3	170	154	160	190.92	29	26	5.90	AH 2336	AN 40
38	Tr 210×4	180	160	167	201.25	32	26	6.50	AH 2338	HN 42
40	Tr 220×4	190	170	177	211.75	36	30	7.50	AH 2340	HN 44
44	Tr 240×4	200	181	189	232.75	36	30	13.4	AH 2344	HN 48
48	Tr 260×4	220	189	197	253.42	36	30	15.5	AH 2348	HN 52
52	Tr 290×4	240	205	213	274.75	36	30	20.0	AH 2352	HN 58
56	Tr 310×5	260	212	220	295.33	36	30	21.5	AH 2356	HN 62

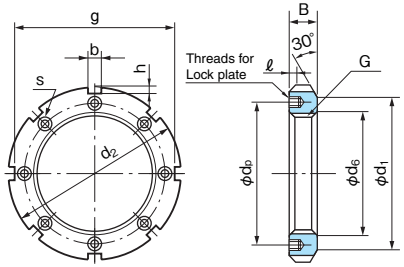
Locknuts
Series AN / ANL



No.	Thread Nominal G	Dimensions (mm)							Mass (kg) (reference)	Lockwasher No.
		d_1	d_2	B	b	h	g	d_6		
AN 02	M 15×1	21	25	5	4	2	21	15.5	0.010	AW 02
AN 03	M 17×1	24	28	5	4	2	24	17.5	0.013	AW 03
AN 04	M 20×1	26	32	6	4	2	28	20.5	0.019	AW 04
AN 05	M 25×1.5	32	38	7	5	2	34	25.8	0.025	AW 05
AN 06	M 30×1.5	38	45	7	5	2	41	30.8	0.043	AW 06
AN 07	M 35×1.5	44	52	8	5	2	48	35.8	0.053	AW 07
AN 08	M 40×1.5	50	58	9	6	2.5	53	40.8	0.085	AW 08
AN 09	M 45×1.5	56	65	10	6	2.5	60	45.8	0.119	AW 09
AN 10	M 50×1.5	61	70	11	6	2.5	65	50.8	0.148	AW 10
AN 11	M 55×2	67	75	11	7	3	69	56	0.158	AW 11
AN 12	M 60×2	73	80	11	7	3	74	61	0.174	AW 12
AN 13	M 65×2	79	85	12	7	3	79	66	0.203	AW 13
AN 14	M 70×2	85	92	12	8	3.5	85	71	0.242	AW 14
AN 15	M 75×2	90	98	13	8	3.5	91	76	0.287	AW 15
AN 16	M 80×2	95	105	15	8	3.5	98	81	0.397	AW 16
AN 17	M 85×2	102	110	16	8	3.5	103	86	0.451	AW 17
AN 18	M 90×2	108	120	16	10	4	112	91	0.556	AW 18
AN 19	M 95×2	113	125	17	10	4	117	96	0.658	AW 19
AN 20	M 100×2	120	130	18	10	4	122	101	0.698	AW 20
AN 21	M 105×2	126	140	18	12	5	130	106	0.845	AW 21
AN 22	M 110×2	133	145	19	12	5	135	111	0.965	AW 22
AN 23	M 115×2	137	150	19	12	5	140	116	1.01	AW 23
AN 24	M 120×2	138	155	20	12	5	145	121	1.08	AW 24
AN 25	M 125×2	148	160	21	12	5	150	126	1.19	AW 25
AN 26	M 130×2	149	165	21	12	5	155	131	1.25	AW 26
AN 27	M 135×2	160	175	22	14	6	163	136	1.55	AW 27
AN 28	M 140×2	160	180	22	14	6	168	141	1.56	AW 28
AN 29	M 145×2	171	190	24	14	6	178	146	2.00	AW 29
AN 30	M 150×2	171	195	24	14	6	183	151	2.03	AW 30
AN 31	M 155×3	182	200	25	16	7	186	156.5	2.21	AW 31
AN 32	M 160×3	182	210	25	16	7	196	161.5	2.59	AW 32
AN 33	M 165×3	193	210	26	16	7	196	166.5	2.43	AW 33
AN 34	M 170×3	193	220	26	16	7	206	171.5	2.80	AW 34
AN 36	M 180×3	203	230	27	18	8	214	181.5	3.07	AW 36
AN 38	M 190×3	214	240	28	18	8	224	191.5	3.39	AW 38
AN 40	M 200×3	226	250	29	18	8	234	201.5	3.69	AW 40

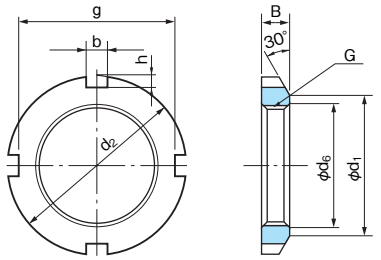
No.	Thread Nominal G	Dimensions (mm)							Mass (kg) (reference)	Lockwasher No.
		d_1	d_2	B	b	h	g	d_6		
ANL 24	M 120×2	133	145	20	12	5	135	121	0.780	AWL24
ANL 26	M 130×2	143	155	21	12	5	145	131	0.880	AWL26
ANL 28	M 140×2	151	165	22	14	6	153	141	0.990	AWL28
ANL 30	M 150×2	164	180	24	14	6	168	151	1.38	AWL30
ANL 32	M 160×3	174	190	25	16	7	176	161.5	1.56	AWL32
ANL 34	M 170×3	184	200	26	16	7	186	171.5	1.72	AWL34
ANL 36	M 180×3	192	210	27	18	8	194	181.5	1.95	AWL36
ANL 38	M 190×3	202	220	28	18	8	204	191.5	2.08	AWL38
ANL 40	M 200×3	218	240	29	18	8	224	201.5	2.98	AWL40

Locknuts
Series AN / ANL



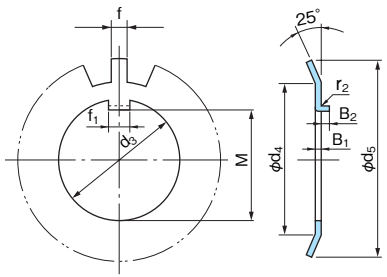
No.	Thread Nominal G	Dimensions (mm)										Mass (kg) (reference)	Lockwasher No.
		d_1	d_2	B	b	h	g	d_6	ℓ	s	d_p		
AN 44	Tr 220×4	250	280	32	20	10	260	222	15	M 8×1.25	238	5.20	AL 44
AN 48	Tr 240×4	270	300	34	20	10	280	242	15	M 8×1.25	258	5.95	AL 44
AN 52	Tr 260×4	300	330	36	24	12	306	262	18	M 10×1.5	281	8.05	AL 52
AN 56	Tr 280×4	320	350	38	24	12	326	282	18	M 10×1.5	301	9.05	AL 52
AN 60	Tr 300×4	340	380	40	24	12	356	302	18	M 10×1.5	326	11.8	AL 60
AN 64	Tr 320×5	360	400	42	24	12	376	322.5	18	M 10×1.5	345	13.1	AL 64
AN 68	Tr 340×5	400	440	55	28	15	410	342.5	21	M 12×1.75	372	23.1	AL 68
AN 72	Tr 360×5	420	460	58	28	15	430	362.5	21	M 12×1.75	392	25.1	AL 68
AN 76	Tr 380×5	450	490	60	32	18	454	382.5	21	M 12×1.75	414	30.9	AL 76
AN 80	Tr 400×5	470	520	62	32	18	484	402.5	27	M 16×2	439	36.9	AL 80
AN 84	Tr 420×5	490	540	70	32	18	504	422.5	27	M 16×2	459	43.5	AL 80
AN 88	Tr 440×5	510	560	70	36	20	520	442.5	27	M 16×2	477	45.3	AL 88
AN 92	Tr 460×5	540	580	75	36	20	540	462.5	27	M 16×2	497	50.4	AL 88
AN 96	Tr 480×5	560	620	75	36	20	580	482.5	27	M 16×2	527	62.2	AL 96
AN 100	Tr 500×5	580	630	80	40	23	584	502.5	27	M 16×2	539	63.3	AL 100
ANL 44	Tr 220×4	242	260	30	20	9	242	222	12	M 6×1	229	3.09	ALL 44
ANL 48	Tr 240×4	270	290	34	20	10	270	242	15	M 8×1.25	253	5.16	ALL 48
ANL 52	Tr 260×4	290	310	34	20	10	290	262	15	M 8×1.25	273	5.67	ALL 48
ANL 56	Tr 280×4	310	330	38	24	10	310	282	15	M 8×1.25	293	6.78	ALL 56
ANL 60	Tr 300×4	336	360	42	24	12	336	302	15	M 8×1.25	316	9.62	ALL 60
ANL 64	Tr 320×5	356	380	42	24	12	356	322.5	15	M 8×1.25	335	9.94	ALL 64
ANL 68	Tr 340×5	376	400	45	24	12	376	342.5	15	M 8×1.25	355	11.7	ALL 64
ANL 72	Tr 360×5	394	420	45	28	13	394	362.5	15	M 8×1.25	374	12.0	ALL 72
ANL 76	Tr 380×5	422	450	48	28	14	422	382.5	18	M 10×1.5	398	14.9	ALL 76
ANL 80	Tr 400×5	442	470	52	28	14	442	402.5	18	M 10×1.5	418	16.9	ALL 76
ANL 84	Tr 420×5	462	490	52	32	14	462	422.5	18	M 10×1.5	438	17.4	ALL 84
ANL 88	Tr 440×5	490	520	60	32	15	490	442.5	21	M 12×1.75	462	26.2	ALL 88
ANL 92	Tr 460×5	510	540	60	32	15	510	462.5	21	M 12×1.75	482	29.6	ALL 88
ANL 96	Tr 480×5	530	560	60	36	15	530	482.5	21	M 12×1.75	502	28.3	ALL 96
ANL100	Tr 500×5	550	580	68	36	15	550	502.5	21	M 12×1.75	522	33.6	ALL 96

Nuts for withdrawal sleeves
Series HN / HNL

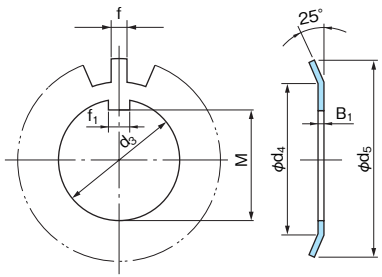


No.	Thread Nominal G	Dimensions (mm)							Mass (kg) (reference)
		d_1	d_2	B	b	h	g	d_6	
HN 42	Tr 210×4	238	270	30	20	10	250	212	4.75
HN 44	Tr 220×4	250	280	32	20	10	260	222	5.35
HN 48	Tr 240×4	270	300	34	20	10	280	242	6.20
HN 52	Tr 260×4	300	330	36	24	12	306	262	8.55
HN 58	Tr 290×4	330	370	40	24	12	346	292	11.8
HN 62	Tr 310×5	350	390	42	24	12	366	312.5	13.4
HN 66	Tr 330×5	380	420	52	28	15	390	332.5	20.4
HN 70	Tr 350×5	410	450	55	28	15	420	352.5	25.2
HN 74	Tr 370×5	430	470	58	28	15	440	372.5	28.2
HN 80	Tr 400×5	470	520	62	32	18	484	402.5	40.0
HN 84	Tr 420×5	490	540	70	32	18	504	422.5	46.9
HN 88	Tr 440×5	510	560	70	36	20	520	442.5	48.5
HN 92	Tr 460×5	540	580	75	36	20	540	462.5	55.0
HN 96	Tr 480×5	560	620	75	36	20	580	482.5	67.0
HN 102	Tr 510×6	590	650	80	40	23	604	513	69.0
HN 106	Tr 530×6	610	670	80	40	23	624	533	78.0
HN 110	Tr 550×6	640	700	80	40	23	654	553	92.5
HNL 41	Tr 205×4	232	250	30	18	8	234	207	3.43
HNL 43	Tr 215×4	242	260	30	20	9	242	217	3.72
HNL 47	Tr 235×4	262	280	34	20	9	262	237	4.60
HNL 52	Tr 260×4	290	310	34	20	10	290	262	5.80
HNL 56	Tr 280×4	310	330	38	24	10	310	282	6.72
HNL 60	Tr 300×4	336	360	42	24	12	336	302	9.60
HNL 64	Tr 320×5	356	380	42	24	12	356	322.5	10.3
HNL 69	Tr 345×5	384	410	45	28	13	384	347.5	11.5
HNL 73	Tr 365×5	404	430	48	28	13	404	367.5	14.2
HNL 77	Tr 385×5	422	450	48	28	14	422	387.5	15.0
HNL 82	Tr 410×5	452	480	52	32	14	452	412.5	19.0
HNL 86	Tr 430×5	472	500	52	32	14	472	432.5	19.8
HNL 90	Tr 450×5	490	520	60	32	15	490	452.5	23.8
HNL 94	Tr 470×5	510	540	60	32	15	510	472.5	25.0
HNL 98	Tr 490×5	550	580	60	36	15	550	492.5	34.0
HNL104	Tr 520×6	570	600	68	36	15	570	523	37.0
HNL108	Tr 540×6	590	630	68	40	20	590	543	43.5

Lockwashers
Series AW / AWL



Bended inner tab type



Straight inner tab type

No.		Dimensions (mm)									No. of Teeth	Mass (kg/100pcs) (reference)	Locknut No.
Bended inner tab	Straight inner tab	d_3	d_4	d_5	f_1	M	B_1	Bended inner tab B_2	Bended inner tab r_2	f			
AW 02	AW 02X	15	21	28	4	13.5	1	2.5	1	4	13	0.253	AN 02
AW 03	AW 03X	17	24	32	4	15.5	1	2.5	1	4	13	0.313	AN 03
AW 04	AW 04X	20	26	36	4	18.5	1	2.5	1	4	13	0.350	AN 04
AW 05	AW 05X	25	32	42	5	23	1.2	2.5	1	5	13	0.640	AN 05
AW 06	AW 06X	30	38	49	5	27.5	1.2	2.5	1	5	13	0.780	AN 06
AW 07	AW 07X	35	44	57	6	32.5	1.2	2.5	1	5	15	1.04	AN 07
AW 08	AW 08X	40	50	62	6	37.5	1.2	2.5	1	6	15	1.23	AN 08
AW 09	AW 09X	45	56	69	6	42.5	1.2	2.5	1	6	17	1.52	AN 09
AW 10	AW 10X	50	61	74	6	47.5	1.2	2.5	1	6	17	1.60	AN 10
AW 11	AW 11X	55	67	81	8	52.5	1.2	4	1	7	17	1.96	AN 11
AW 12	AW 12X	60	73	86	8	57.5	1.5	4	1.2	7	17	2.53	AN 12
AW 13	AW 13X	65	79	92	8	62.5	1.5	4	1.2	7	19	2.90	AN 13
AW 14	AW 14X	70	85	98	8	66.5	1.5	4	1.2	8	19	3.34	AN 14
AW 15	AW 15X	75	90	104	8	71.5	1.5	4	1.2	8	19	3.56	AN 15
AW 16	AW 16X	80	95	112	10	76.5	1.8	4	1.2	8	19	4.64	AN 16
AW 17	AW 17X	85	102	119	10	81.5	1.8	4	1.2	8	19	5.24	AN 17
AW 18	AW 18X	90	108	126	10	86.5	1.8	4	1.2	10	19	6.23	AN 18
AW 19	AW 19X	95	113	133	10	91.5	1.8	4	1.2	10	19	6.70	AN 19
AW 20	AW 20X	100	120	142	12	96.5	1.8	6	1.2	10	19	7.65	AN 20
AW 21	AW 21X	105	126	145	12	100.5	1.8	6	1.2	12	19	8.26	AN 21
AW 22	AW 22X	110	133	154	12	105.5	1.8	6	1.2	12	19	9.40	AN 22
AW 23	AW 23X	115	137	159	12	110.5	2	6	1.5	12	19	10.8	AN 23
AW 24	AW 24X	120	138	164	14	115	2	6	1.5	12	19	10.5	AN 24
AW 25	AW 25X	125	148	170	14	120	2	6	1.5	12	19	11.8	AN 25
AW 26	AW 26X	130	149	175	14	125	2	6	1.5	12	19	11.3	AN 26
AW 27	AW 27X	135	160	185	14	130	2	6	1.5	14	19	14.4	AN 27
AW 28	AW 28X	140	160	192	16	135	2	8	1.5	14	19	14.2	AN 28
AW 29	AW 29X	145	171	202	16	140	2	8	1.5	14	19	16.8	AN 29
AW 30	AW 30X	150	171	205	16	145	2	8	1.5	14	19	15.5	AN 30
AW 31	AW 31X	155	182	212	16	147.5	2.5	8	1.5	16	19	20.9	AN 31
AW 32	AW 32X	160	182	217	18	154	2.5	8	1.5	16	19	22.2	AN 32
AW 33	AW 33X	165	193	222	18	157.5	2.5	8	1.5	16	19	24.1	AN 33
AW 34	AW 34X	170	193	232	18	164	2.5	8	1.5	16	19	24.7	AN 34
AW 36	AW 36X	180	203	242	20	174	2.5	8	1.5	18	19	26.8	AN 36
AW 38	AW 38X	190	214	252	20	184	2.5	8	1.5	18	19	27.8	AN 38
AW 40	AW 40X	200	226	262	20	194	2.5	8	1.5	18	19	29.3	AN 40

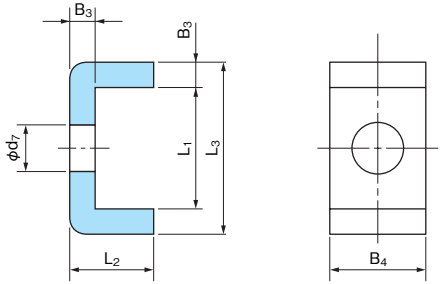
No.		Dimensions (mm)									No. of Teeth	Mass (kg/100pcs) (reference)	Locknut No.
Bended inner tab	Straight inner tab	d_3	d_4	d_5	f_1	M	B_1	Bended inner tab B_2	Bended inner tab r_2	f			
AWL 24	AWL 24X	120	133	155	14	115	2	6	1.5	12	19	7.70	ANL 24
AWL 26	AWL 26X	130	143	165	14	125	2	6	1.5	12	19	8.70	ANL 26
AWL 28	AWL 28X	140	151	175	16	135	2	8	1.5	14	19	10.9	ANL 28
AWL 30	AWL 30X	150	164	190	16	145	2	8	1.5	14	19	11.3	ANL 30
AWL 32	AWL 32X	160	174	200	18	154	2.5	8	1.5	16	19	16.2	ANL 32
AWL 34	AWL 34X	170	184	210	18	164	2.5	8	1.5	16	19	19.0	ANL 34
AWL 36	AWL 36X	180	192	220	20	174	2.5	8	1.5	18	19	18.0	ANL 36
AWL 38	AWL 38X	190	202	230	20	184	2.5	8	1.5	18	19	20.5	ANL 38
AWL 40	AWL 40X	200	218	250	20	194	2.5	8	1.5	18	19	21.4	ANL 40

Remark: Narrow slot adapters with part numbers with an X suffix in the series H2, H3 and H23 use straight type inner tabs. Wide slot adapters with part numbers with an X suffix can use either bended or straight inner tabs.

NACHI

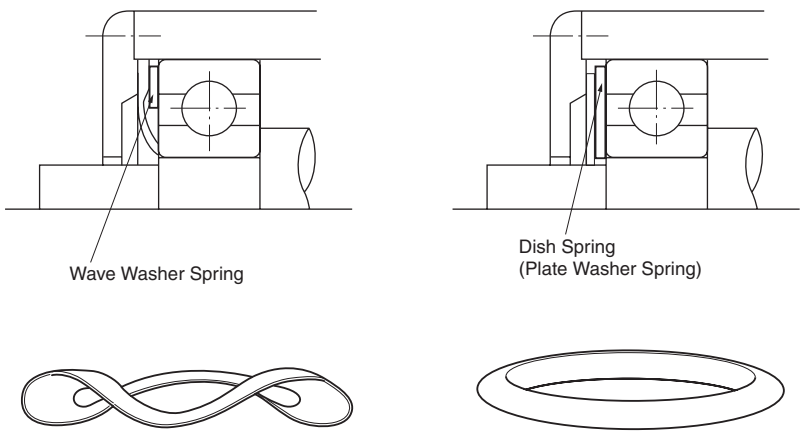
Lock Plates

Series AL / ALL



No.	Dimensions (mm)						Mass (kg/100pcs) (reference)	Nut No.
	B_3	B_4	L_2	d_7	L_1	L_3		
AL 44	4	20	12	9	22.5	30.5	2.60	AN44 , AN48
AL 52	4	24	12	12	25.5	33.5	3.39	AN52 , AN56
AL 60	4	24	12	12	30.5	38.5	3.79	AN60
AL 64	5	24	15	12	31	41	5.35	AN64
AL 68	5	28	15	14	38	48	6.65	AN68 , AN72
AL 76	5	32	15	14	40	50	7.96	AN76
AL 80	5	32	15	18	45	55	8.20	AN80 , AN84
AL 88	5	36	15	18	43	53	9.00	AN88 , AN92
AL 96	5	36	15	18	53	63	10.4	AN96
AL 100	5	40	15	18	45	55	10.5	AN100
ALL 44	4	20	12	7	13.5	21.5	2.12	ANL44
ALL 48	4	20	12	9	17.5	25.5	2.29	ANL48, ANL52
ALL 56	4	24	12	9	17.5	25.5	2.92	ANL56
ALL 60	4	24	12	9	20.5	28.5	3.16	ANL60
ALL 64	5	24	15	9	21	31	4.56	ANL64, ANL68
ALL 72	5	28	15	9	20	30	5.03	ANL72
ALL 76	5	28	15	12	24	34	5.28	ANL76, ANL80
ALL 84	5	32	15	12	24	34	6.11	ANL84
ALL 88	5	32	15	14	28	38	6.45	ANL88, ANL92
ALL 96	5	36	15	14	28	38	7.29	ANL96, ANL100

■ Dish Spring for Bearings



The application for electrical motors may sometimes require that the bearings be provided with appropriate preload when assembled.
In case of motors the residual clearance 0 after mounting is best for low noise.
Preload has the following various purposes and effects.

<Purpose of Preload>

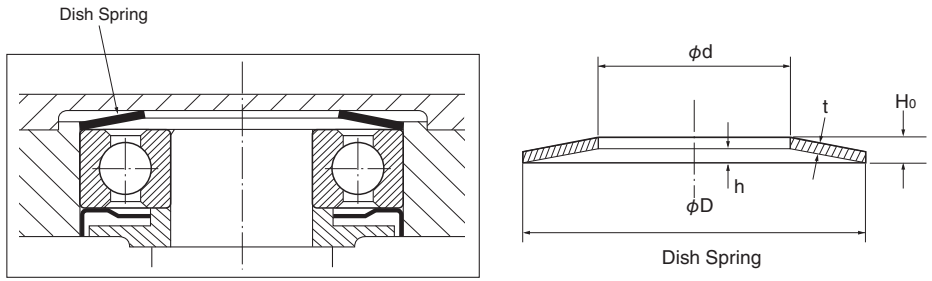
(1) Enhances rotating accuracy of shaft. Minimizes axial movements and helps to prevent vibration and decrease noise.
(2) Prevents fretting caused by external vibration.
(3) Increases rigidity of a shaft (that is, preloading can help to decrease the deflection of shafting).

<Preloading method>

Use of springs (wave washer spring or dish spring) “Constantpressure” preloading.
The preload for electrical motor bearings may be calculated by using the following equations.
Tp=Preload Force (kgf) d=Inner Ring Bore Diameter(mm)

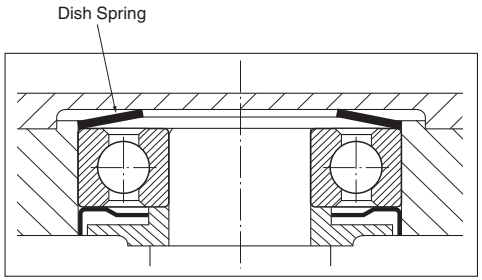
Tp=(0.4～0.8)d or Tp=0.6d-3

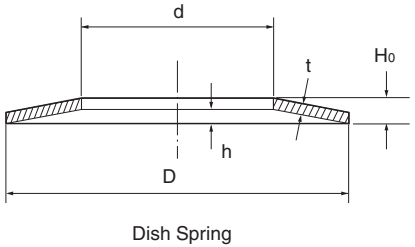
Preload by Dish Springs for Bearings



Bearing No.	Bearing I.D (dmm)	Spring No.	Target Preload (Tp N)		Recommended Preload (N)	Flexure (dmm)	Spring Hgt (Ho mm)
			Tp=(0.4～0.8)d Range	Tp=0.6d-3			
6001	12	HDS-28	47.0～94.1	41.2	88.7	0.25	0.75
6002	15	HDS-32	58.8～117.6	58.8	100.0	0.41	0.64
6003	17	HDS-35b	66.6～133.3	70.6	110.0	0.28	0.87
6004	20	HDS-42	78.4～156.8	88.2	116.0	0.38	0.97
6005	25	HDS-47	98.0～196.0	117.6	145.0	0.38	1.07
6006	30	HDS-55	117.6～235.2	147.0	163.0	0.56	0.89
6007	35	HDS-62	137.2～274.4	176.4	168.0	0.48	1.27
6008	40	HDS-68	156.8～313.6	205.8	183.0	0.64	1.01
6009	45	HDS-75	176.4～352.8	235.2	236.0	0.56	1.19
6010	50	HDS-80b	196.0～392.0	264.6	256.0	0.58	1.57
6011	55	HDS-90b	215.6～431.2	294.0	321.0	0.55	1.75
6200	10	HDS-30	39.2～78.4	29.4	84.2	0.28	0.77
6201	12	HDS-32	47.0～94.1	41.2	82.6	0.28	0.77
6202	15	HDS-35b	58.8～117.6	58.8	110.0	0.28	0.87
6203	17	HDS-40	66.6～133.3	70.6	107.0	0.33	0.92
6204	20	HDS-47	78.4～156.8	88.2	145.0	0.38	1.07
6205	25	HDS-52	98.0～196.0	117.6	128.0	0.38	1.07
6206	30	HDS-62	117.6～235.2	147.0	168.0	0.48	1.27
6207	35	HDS-72b	137.2～274.4	176.4	219.0	0.45	1.45
6208	40	HDS-80b	156.8～313.6	205.8	256.0	0.58	1.57
6209	45	HDS-85	176.4～352.8	235.2	344.0	0.55	1.75
6210	50	HDS-90b	196.0～392.0	264.6	321.0	0.55	1.75
6300	10	HDS-35a	39.2～78.4	29.4	62.0	0.28	0.77
6301	12	HDS-37	47.0～94.1	41.2	108.0	0.33	0.92
6302	15	HDS-42	58.8～117.6	58.8	116.0	0.38	0.97
6303	17	HDS-47	66.6～133.3	70.6	145.0	0.38	1.07
6304	20	HDS-52	78.4～156.8	88.2	128.0	0.38	1.07
6305	25	HDS-62	98.0～196.0	117.6	168.0	0.48	1.27
6306	30	HDS-72a	117.6～235.2	147.0	253.0	0.55	1.55
6307	35	HDS-80a	137.2～274.4	176.4	221.0	0.58	1.57
6308	40	HDS-90a	156.8～313.6	205.8	276.0	0.55	1.75
6309	45	HDS-100a	176.4～352.8	235.2	266.0	0.63	1.82
6310	50	HDS-110a	196.0～392.0	264.6	304.0	0.78	1.97

Dish Spring List for Bearings





Dish Spring

Unit (mm)

Size	Applicable Bearing No.	Dish Spring Size (mm)					Spring Load (N)			
							Flexure 0.5h		Flexure 0.75h	
		D	d	t	h	Ho	P	δ	P	δ
HDS-10	EL3 623	9.8	6.2	0.20	0.20	0.40	18.40	0.10	23.20	0.15
HDS-13	EL4 624	12.8	7.2	0.25	0.25	0.50	23.90	0.13	29.70	0.19
HDS-16	R4 EL5 625 634	15.8	8.2		0.30	0.55	19.40	0.15	23.40	0.23
HDS-19a	R5 EL6 626 635	18.8	9.2	0.30	0.35	0.65	26.60	0.18	31.50	0.26
HDS-19b	EL7 607		10.2	0.35		0.70	41.20		50.80	
HDS-22	R7 EL8 608 627 636	21.8	12.3		0.40	0.75	38.40	0.20	46.60	0.30
HDS-24	EL9 609 628	23.7	14.3	0.40	0.50	0.90	68.80	0.25	81.30	0.38
HDS-26	R9 6000 629 637	25.7					54.30		64.10	
HDS-28	6001 638	27.7	17.3	0.50		1.00	88.70		113.00	
HDS-30	6200	29.7			0.55	1.05	84.20	0.28	102.00	0.41
HDS-32	6002 6201	31.7	20.4				82.60		100.00	
HDS-35a	6300	34.6					62.70		76.00	
HDS-35b	6003 6202		22.4	0.60		1.15	110.00		139.00	
HDS-37	6301	36.6	20.4		0.65	1.25	108.00	0.33	132.00	0.49
HDS-40	6203	39.6	25.5				107.00		131.00	
HDS-42	6004 6302	41.6			0.75	1.35	116.00	0.38	135.00	0.56
HDS-47	6005 6204 6303	46.5	30.5	0.70		1.45	145.00		177.00	
HDS-52	6205 6304	51.5	35.5				128.00		156.00	
HDS-55	6006	54.5	40.5				133.00		163.00	
HDS-62	6007 6206 6305	61.5		0.80	0.95	1.75	168.00	0.48	200.00	0.71
HDS-68	6008	67.5	50.5		0.85	1.65	148.00	0.43	183.00	0.64
HDS-72a	6306	71.5	45.5	1.00	1.10	2.10	253.00	0.55	312.00	0.83
HDS-72b	6207		50.5		0.90	1.90	219.00	0.45	286.00	0.68
HDS-75	6009	74.5	55.5		0.75	1.75	177.00	0.38	236.00	0.56
HDS-80a	6307	79.5	50.5		1.15	2.15	221.00	0.58	266.00	0.86
HDS-80b	6010 6208		55.5				256.00		308.00	
HDS-85	6209	84.5	60.5	1.20	1.10	2.30	344.00	0.55	445.00	0.83
HDS-90a	6308	89.5					276.00		357.00	
HDS-90b	6011 6210		65.5				321.00		416.00	
HDS-95	6012	94.5	75.5		0.85	2.05	260.00	0.43	351.00	0.64
HDS-100a	6309	99.0	65.5		1.25	2.45	266.00	0.63	331.00	0.94
HDS-100b	6013 6211		70.5				303.00		376.00	
HDS-110a	6310	109.0			1.55	2.75	304.00	0.78	353.00	1.16
HDS-110b	6014 6212		75.5				339.00		393.00	
HDS-115	6015	114.0	90.5		1.30	2.50	321.00	0.65	396.00	0.98
HDS-120a	6311	119.0	75.5		1.55	2.75	249.00	0.78	289.00	1.16

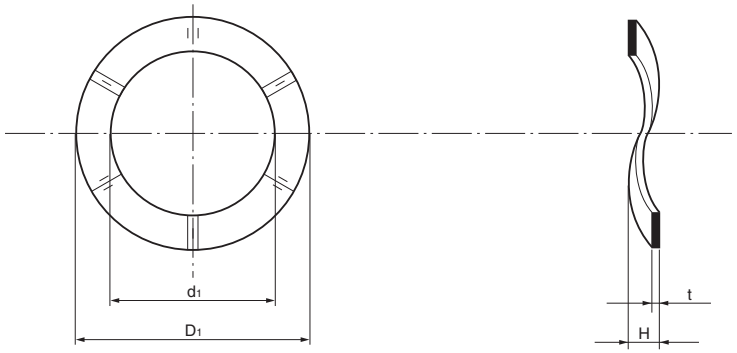
Unit (mm)

Size	Applicable Bearing No.	Dish Spring Size (mm)					Spring Load (N)			
							Flexure 0.5h		Flexure 0.75h	
		D	d	t	h	Ho	P	δ	P	δ
HDS-120b	6213	119.0	85.5	1.20	1.55	2.75	305.00	0.78	354.00	1.16
HDS-125	6016 6214	124.0	90.5				291.00		337.00	
HDS-130a	6312	129.0	85.5	1.50	1.70	3.20	438.00	0.85	533.00	1.28
HDS-130b	6017 6215		95.5				540.00		657.00	
HDS-140a	6313	139.0	90.5				368.00		448.00	
HDS-140b	6018 6216		101.0		1.75	3.25	469.00	0.88	563.00	1.31
HDS-150a	6314	149.0	95.5		1.70	3.20	313.00	0.85	381.00	1.28
HDS-150b	6217		106.0				371.00		452.00	
HDS-160a	6315	159.0	101.0	1.60	1.85	3.45	365.00	0.93	440.00	1.39
HDS-160b	6218		111.0				422.00		508.00	
HDS-170a	6316	169.0			2.05	3.65	403.00	1.03	469.00	1.54
HDS-170b	6219		121.0				467.00		544.00	
HDS-180a	6317	179.0		2.00	2.20	4.20	706.00	1.10	866.00	1.65
HDS-180b	6220		126.0				758.00		930.00	
HDS-190a	6318	189.0	121.0		2.30	4.30	629.00	1.15	762.00	1.73
HDS-190b	6221		131.0				711.00		861.00	
HDS-200a	6319	198.0			2.50	4.50	692.00	1.25	815.00	1.88
HDS-200b	6222		141.0				786.00		925.00	
HDS-215a	6320	213.0	151.0	2.30	2.20		772.00	1.10	986.00	1.65
HDS-225	6321	223.0	161.0		2.30	4.60	783.00	1.15	989.00	1.73
HDS-230	6226	228.0			2.60	4.90	870.00	1.30	1060.00	1.95
HDS-240	6322	238.0			2.85	5.15	864.00	1.43	1020.00	2.14
HDS-250	6228	248.0	171.0	2.50	2.50	5.00	819.00	1.25	1030.00	1.88
HDS-260	6324	258.0			3.00	5.50	951.00	1.50	113.000	2.25
HDS-270	6230	268.0	181.0		3.10	5.60	960.00	1.55		2.33
HDS-280	6326	278.0			3.25	5.75	917.00	1.63	1060.00	2.44
HDS-290	6232	288.0	193.0				892.00		1030.00	
HDS-300	6328	298.0					791.00		917.00	
HDS-310	6234	308.0	202.0	3.00	3.10	6.10	1070.00	1.55	1330.00	2.33
HDS-320a	6330	318.0	212.0		3.20	6.20	1080.00	1.60	1340.00	2.40
HDS-340a	6332	338.0	232.0		3.60	6.60	1220.00	1.80	1450.00	2.70
HDS-360a	6334	358.0	242.0		3.90	6.90	1210.00	1.95	1410.00	2.93
HDS-380	6336	378.0	252.0				1060.00		1230.00	
HDS-400	6338	398.0	262.0	3.50	4.20	7.70	1520.00	2.10	1810.00	3.15
HDS-420	6340	418.0	272.0	4.00	3.80	7.80	159.00	1.90	2030.00	2.85

Material: Carbon spring steel between S65CM and S75CM (JIS)
Hardness: between HRC38 and HRC45

NACHI

Wave Springs for Bearings (Reference)



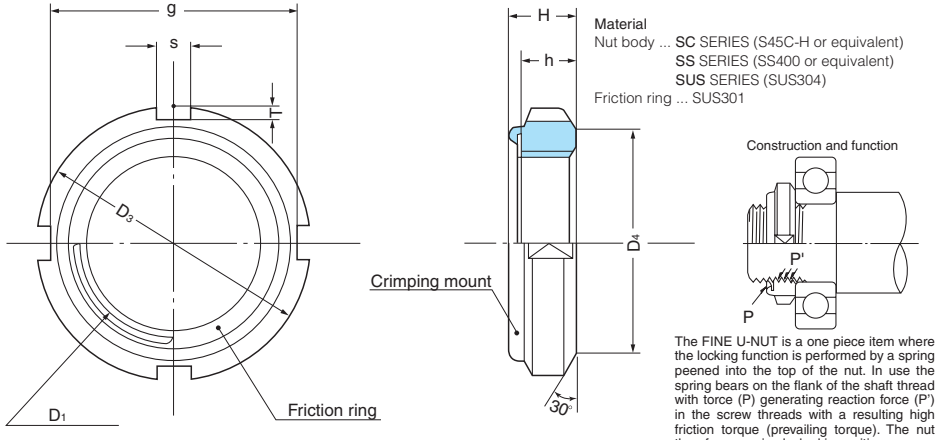
W=0.6d-3 W: Preload(Kgf)/d: Bore diameter
L=(1.94×dm3×W/(E×b×t3×N)(mm)
L: elastic displacement (mm)
dm=(d1+D1)/2 (mm) b=(D1-d1)/2 (mm)
t: thickness of sheet (mm)
E=20000 (kgf/mm2)
N: wave number

Spring No.	Outside Diameter of Bearing (mm)	d_1: Bore Diameter of Spring (mm)	D_1: Outside Diameter of Spring (mm)	H: Height of Spring (mm)	t: Thickness of Sheet (mm)		Wave Number	Spring Constant (mm/kgf)	Applied Bearing No.				
W22	22	14.5	21	2.4	0.2		3	0.2576	6900				
W26	26	19.5	24.8	3.2	0.2		3	0.9139		6000			
W28	28	20.9	26.9	3	0.25		3	0.3488	6902	6001			
W30	30	22	28.5	4.1	0.25		3	0.3796	6903		6200		
W32	32	23.5	30.5	4	0.25		3	0.4310		6002	6201		
W35	35	26.4	33.9	3.5	0.3		3	0.3242		6003	6202	6300	
W40	40	29.8	38.3	5	0.3		3	0.4120		6203			
W42	42	30.1	40.6	4.5	0.3		3	0.3732	6905	6004		6302	
W47	47	33.7	45.5	5	0.3		3	0.4688	6906	6005	6204	6303	
W52	52	38.5	50	7.2	0.3		3	0.6683		6205	6304		
W62	62	47.2	60.2	6.5	0.4		3	0.4458	6908	6007	6206	6305	6403
W72	72	55	70.5	7	0.45		3	0.4190	6910		6207	6306	6404
W80	80	61.3	77.8	8.5	0.45		3	0.5359	6911	6010	6208	6307	6405
W90	90	69	88.5	7	0.6		3	0.2777	6913	6011	6210	6308	6406
W100	100	79.3	98.8	6.5	0.7		3	0.2529	6914	6013	6211	6309	6407
W110	110	88.9	108.9	8	0.8		3	0.2263	6916	6014	6212	6310	6408
W120	120	95.8	118.9	8.5	0.8		3	0.2505	6917		6213	6311	6409
W130	130	108.3	128.3	11	0.8		3	0.3872	6919	6017	6215	6312	6410
W140	140	112.4	138.4	11	0.8		3	0.3548	6920	6018	6216	6313	6411

Material: Spring Steel (JIS G3311/JIS G3506)/HARDNESS: HRc40-50/SURFACE TREATMENT PHOSPHATE COATING
Notes: 1. 't' means thickness of raw sheet.
2. 'd_1' means inscribed circle and 'D_1' means circumscribed circle.
3. 'H' means the height of spring of which the tops of 3 waves indicate same height first of all when it is compressed between 2 parallel plates

■ Convenient Locking Nuts for Bearings

● Dimension Table for Fine U-NUT



Material
Nut body ... **SC** SERIES (S45C-H or equivalent)
SS SERIES (SS400 or equivalent)
SUS SERIES (SUS304)
Friction ring ... SUS301

Construction and function

The FINE U-NUT is a one piece item where the locking function is performed by a spring peened into the top of the nut. In use the spring bears on the flank of the shaft thread with force (P) generating reaction force (P') in the screw threads with a resulting high friction torque (prevailing torque). The nut therefore remains locked in position

Thread accuracy: ISO6H(JIS CLASS2) Unit: mm

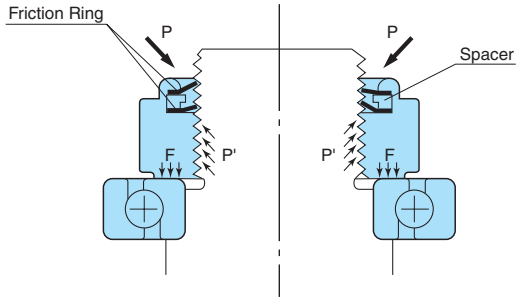
SC Series	SS Series	SUS Series	Designation of thread D_1	D_3	D_4	g	T	S	h	H		Perpendicularity of bearing surface
FU00SC	FU00SS	FU00SUS	M10×0.75	18	13.5	14.4	1.8	3	4	5.2	± 0.3	
FU01SC	FU01SS	FU01SUS	M12×1.0	22	17	18.4	1.8	3	4	5.4		
FU02SC	FU02SS	FU02SUS	M15×1.0	25	21	21.4	1.8	4	5	6.5	± 0.5	
FU03SC	FU03SS	FU03SUS	M17×1.0	28	24	24.2	1.9	4	5	6.4		
FU04SC	FU04SS	FU04SUS	M20×1.0	32	26	28.4	1.8	4	6	7.7		
FU05SC	FU05SS	FU05SUS	M25×1.5	38	32	34	2	5	7	9.1		0.05
FU06SC	FU06SS	FU06SUS	M30×1.5	45	38	41	2	5	7	9.1		
FU07SC	FU07SS	FU07SUS	M35×1.5	52	44	48	2	5	8	10.2	± 0.8	
FU08SC	FU08SS	FU08SUS	M40×1.5	58	50	53	2.5	6	9	11.2		
FU09SC	FU09SS	FU09SUS	M45×1.5	65	56	60	2.5	6	10	12.5		
FU10SC	FU10SS	FU10SUS	M50×1.5	70	61	65	2.5	6	11	13.5	± 1.0	
FU11SC	FU11SS	FU11SUS	M55×2.0	75	67	69	3	7	11	13.5		
FU12SC	FU12SS	FU12SUS	M60×2.0	80	73	74	3	7	11	13.5		
FU13SC	FU13SS	FU13SUS	M65×2.0	85	79	79	3	7	12	15		
FU14SC	FU14SS	FU14SUS	M70×2.0	92	85	85	3.5	8	12	15		
FU15SC	FU15SS	FU15SUS	M75×2.0	98	90	91	3.5	8	13	15.8		
FU16SC	FU16SS	FU16SUS	M80×2.0	105	95	98	3.5	8	15	18.6		
FU17SC	FU17SS	FU17SUS	M85×2.0	110	102	103	3.5	8	16	19.2		0.07
FU18SC	FU18SS	FU18SUS	M90×2.0	120	108	112	4	10	16	20.3		
FU19SC	FU19SS	FU19SUS	M95×2.0	125	113	117	4	10	17	21.3	± 1.5	
FU20SC	FU20SS	FU20SUS	M100×2.0	130	120	122	4	10	18	22.3		
FU21SC	—	—	M105×2.0	140	126	130	4	12	18	22.3		
FU22SC	—	—	M110×2.0	145	133	135	5	12	19	23.3		
FU23SC	—	—	M115×2.0	150	137	140	5	12	19	23.3		
FU24SC	—	—	M120×2.0	155	138	145	5	12	20	24.3		
FU25SC	—	—	M125×2.0	160	148	150	5	12	21	25.4		
FU26SC	—	—	M130×2.0	165	149	155	5	12	21	25.4		0.10
FU27SC	—	—	M135×2.0	175	160	163	6	14	22	26.6		
FU28SC	—	—	M140×2.0	180	160	168	6	14	22	26.6	± 1.5	
FU29SC	—	—	M145×2.0	190	171	178	6	14	24	28.6		
FU30SC	—	—	M150×2.0	195	171	183	6	14	24	28.3		

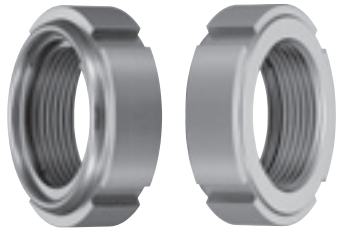
D_3: 0 / −0.5 — D_4: 0 / −0.5 — g: 0 / −0.5 — S: ± 0.2 — D_4 (FU17SC–): 0 / −0.75 — S (FU17SC–): ± 0.3

* Dimensions may be subject to change without notice due to our policy of product improvements.

● Construction and Function

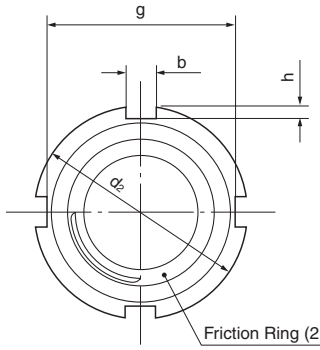
The TWIN FU-NUT has two friction rings and a spacer which are secured to the upper surface of the nut, as shown below.
The two friction rings are arranged so that stress P generated by the spring action and the reaction P' act symmetrically about the shaft centre. This arrangement ensures an even contact force F around the contact face.

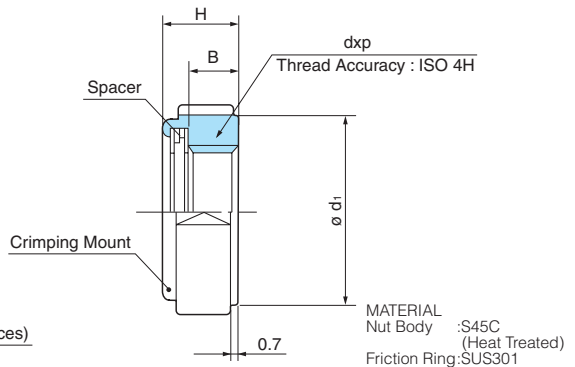




- Accuracy of thread is ISO 4H
- Excellent locking performance
- Bearing surface run out to thread form is held to within a few microns
- Simple assembly, as for a standard nut

● Dimension Table for Twin FU-NUT





MATERIAL
Nut Body :S45C (Heat Treated)
Friction Ring:SUS301
Spacer :SUS301

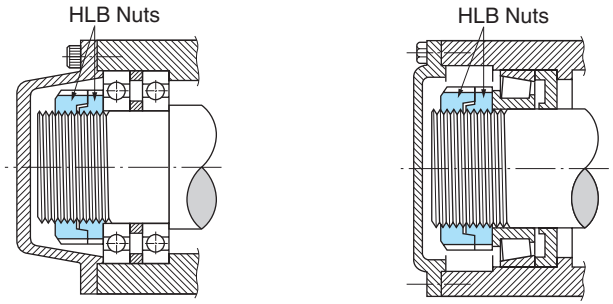
*Simultaneous processing of the thread and the bearing surface.

Dimensions in millimeters

Code No.	d×p	φ d_1	d_2	H	B	b	h	g	Imin=B+3.5p	Allowable axial dead load (KN)
TFU02SC	M15 × 1	21	25	9.9	7	4	1.8	21.4	10.5	34.1
TFU03SC	M17 × 1	23.5	28	10.1	7	4	2	24	10.5	38.6
TFU04SC	M20 × 1	27	32	12.3	9	4	2	28	12.5	59.4
TFU05SC	M25 × 1.5	33	38	14.2	10	5	2	34	15.3	80.8
TFU06SC	M30 × 1.5	40	45	14.3	10	5	2	41	15.3	97.0
TFU07SC	M35 × 1.5	47	52	16.5	12	5	2	48	17.3	137.8
TFU08SC	M40 × 1.5	52	58	17.6	13	6	2.5	53	18.3	171.4
TFU09SC	M45 × 1.5	59	65	19.7	15	6	2.5	60	20.3	224.5
TFU10SC	M50 × 1.5	64	70	20.8	16	6	2.5	65	21.3	266.8

φ d_1: 0 / −0.3 — d_2: 0 / −0.5 — H: ±0.5 — b: ±0.2 — g: 0 / −0.5

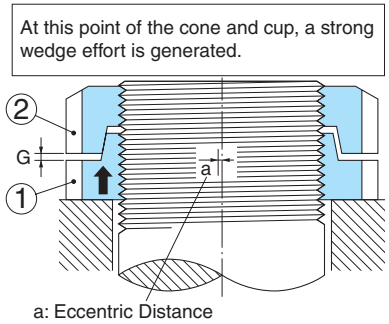
■ Convenient HLB Locking Nuts for Bearings

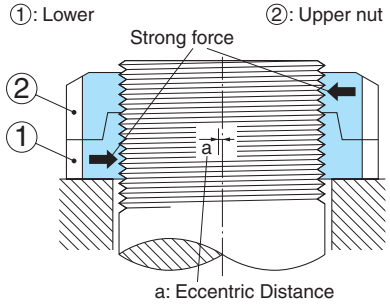


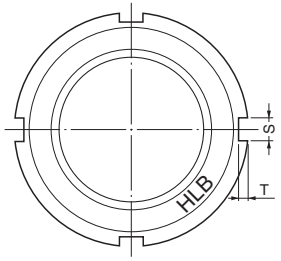
● Structure and Function

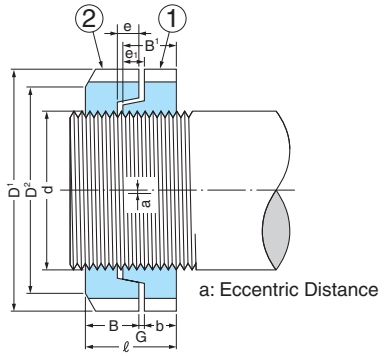
Locking performance of HLB nuts is based on the principle of a wedge.
After a lower nut is tightened, the upper nut is tightened by hand.
In this case, there is the clearance(G) between the lower nut and the upper nut.

The clearance(G) generates strong force and this force works to prevent the nuts from loosening, when the upper nut is tighted up to 0 clearance.
Because the cone of the lower nut and the cup of the upper nut are eccentric.









Material: SS400,S45C or SUS304
Outside shapes are standardized in JIS B 1554 and thread accuracy depends on ISO6H(JIS CLASS2).

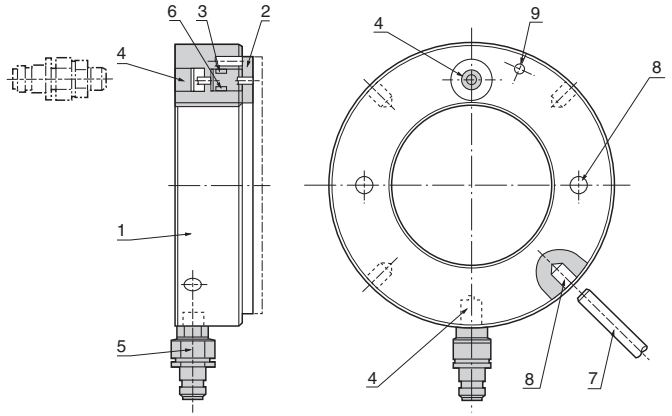
Unit: mm

Nut No.	d×p	Nut ①				Nut ②				Common to ① and ②		Set Hight L		Perpendicularity of the base (max)	Weight of 1 set (g)
		D^1	B^1	e_1	b	D^1	D^2	B	e	S	T	(min)	(max)		
HLB-01	M12×1	22	6	2.5	3.5	22	17	6	2.7	3	2	9.5	10.5	0.05	17
HLB-02	M15×1	25	7	2.5	4.5	25	21	7	2.7	4	2	11.5	12.5	0.05	23
HLB-03	M17×1	28	7	2.5	4.5	28	24	7	2.7	4	2	11.5	12.5	0.05	29
HLB-04	M20×1	32	8	2.5	5.5	32	26	8	2.7	4	2	13.5	14.5	0.05	43
HLB-05	M25×1.5	38	10	4	6	38	32	10	4.2	5	2	16	17.5	0.05	72
HLB-06	M30×1.5	45	10	4	6	45	38	10	4.2	5	2	16	17.5	0.05	103
HLB-07	M35×1.5	52	11	4	7	52	44	11	4.2	5	2	18	19.5	0.05	150
HLB-08	M40×1.5	58	9	4	5	58	50	12	4.2	6	2.5	17	18.5	0.05	170
HLB-09	M45×1.5	65	10	4	6	65	56	13	4.2	6	2.5	19	20.5	0.05	240
HLB-10	M50×1.5	70	11	4	7	70	61	14	4.2	6	2.5	21	22.5	0.05	285
HLB-11	M55×2	75	11	5	6	75	67	15	5.2	7	3	21	23	0.07	310
HLB-12	M60×2	80	11	5	6	80	73	15	5.2	7	3	21	23	0.07	340
HLB-13	M65×2	85	12	5	7	85	79	12	5.2	7	3	19	21	0.07	330
HLB-14	M70×2	92	12	5	7	92	85	12	5.2	8	3.5	19	21	0.07	390
HLB-15	M75×2	98	13	5	8	98	90	13	5.2	8	3.5	21	23	0.07	480
HLB-16	M80×2	105	15	5	10	105	95	15	5.2	8	3.5	25	27	0.07	660
HLB-17	M85×2	110	16	5	11	110	102	16	5.2	8	3.5	27	29	0.07	760
HLB-18	M90×2	120	16	5	11	120	108	16	5.2	10	4	27	29	0.07	940
HLB-19	M95×2	125	17	5	12	125	113	17	5.2	10	4	29	31	0.07	1000
HLB-20	M100×2	130	18	5	13	130	120	18	5.2	10	4	31	33	0.07	1230
HLB-21	M105×2	140	18	6	12	140	126	18	6.5	12	5	30	32	0.1	1500
HLB-22	M110×2	145	19	6	13	145	133	19	6.5	12	5	32	34	0.1	1600
HLB-23	M115×2	150	19	6	13	150	137	19	6.5	12	5	32	34	0.1	1700
HLB-24	M120×2	155	20	7	13	155	138	20	7.5	12	5	33	35	0.1	1800
HLB-25	M125×2	160	21	7	14	160	148	21	7.5	12	5	35	37	0.1	1900
HLB-26	M130×2	165	21	7	14	165	149	21	7.5	12	5	35	37	0.1	2100
HLB-27	M135×2	175	22	7	15	175	160	22	7.5	14	6	37	39	0.1	2600
HLB-28	M140×2	180	22	7	15	180	160	22	7.5	14	6	37	39	0.1	2700
HLB-29	M145×2	190	24	8	16	190	171	24	8.5	14	6	40	43	0.1	3400
HLB-30	M150×2	195	24	8	16	195	171	24	8.5	14	6	40	43	0.1	3550
HLB-31	M155×3	200	25	8	17	200	182	25	8.5	16	7	42	45	0.1	3800
HLB-32	M160×3	210	25	8	17	210	182	25	8.5	16	7	42	45	0.1	4200
HLB-33	M165×3	210	26	9	17	210	193	26	9.5	16	7	43	46	0.1	4300
HLB-34	M170×3	220	26	9	17	220	193	26	9.5	16	7	43	46	0.1	4750
HLB-36	M180×3	230	27	9	18	230	203	27	9.5	18	8	45	48	0.1	5000
HLB-38	M190×3	240	28	9	18	240	214	28	9.5	18	8	46	49	0.1	5500
HLB-40	M200×3	250	29	9	19	250	226	29	9.5	18	8	48	51	0.1	6300

■ Hydraulic Nuts for Bearings

When larger bearings are mounted and dismounted, the work is considerably eased by using hydraulic nuts. See Fig.2 and Fig.3 in case of mounting and Fig.4 and Fig.5 in case of dismounting.





1: Cylinder 2: Piston 3: O-ring 4: Connecting bore G1/4 5: Nipple G1/4
6: Pressure chamber 7: Bar for rotating cylinder 8: Hole for bar
9: Hole for indicator to measure the stroke

Fig.1. Structure

1. Structure

with two hydraulic connection bores on OD and on end face

Hydraulic nuts consist of two basic components: an internally threaded steel cylinder (1) with a circular groove in one face,and an annular piston (2) which is inserted into the cylinder.
Two O-rings (3) between cylinder and piston serve as seals.
When oil is pumped into the pressure chamber (6), the force with which the piston is ejected is sufficient to mount or dismount bearings.
The hydraulic medium is oil and can be fed through two hydraulic connection bores G1/4(4) by a pressure source (e.g. a hand pump). The connection bores are located on the end face and also on the OD. All hydraulic nuts are equipped with a nipple (5) for quick coupling to the oil supply; the threaded hole not being used is plugged by a closure nipple with ball,which is supplied with hydraulic nuts.
Unthreaded holes (8) are provided to take a drift of suitable length so that the screwing on of the nut is facilitated. Two of these holes are in the side faces and four around the circumference. The nut should be carefully turned until it abuts the bearing and the piston is fully retracted into the cylinder.
And another unthreaded hole (9) is provided to take an indicator to measure the stroke of the piston.

2. Threads

Hydraulic nuts up to and including size 40 have metric ISO threads to tolerance 6H(ISO 965/Ⅲ-1980) and the larger nuts from size 41 have metric ISO trapezoidal threads to tolerance 7H(ISO 2901-1977).
The mating thread on the shaft should be made to tolerance 6g(ISO 2901-1977) for the sizes and tolerance 7e(ISO 2901-1977) for the sizes with trapezoidal thread.

3. Material

The cylinders of nuts up to and including size 58 are made of hardened steel and the matching pistons are made of carbon chromunum (bearing) steel. From size 60 the cylinders and pistons are made of construction steel.

4. Maintenance

If hydraulic nuts are not to be used for some time, they should be protected against corrosion. The holes for the oil supply leads should also be plugged.
If oil leaves the hydraulic nut when the piston is operated, this generally means that the seal is torn or damaged and must be replaced. To do this, the piston should be pressed out of the ring. To facilitate this operation, three auxiliary holes with closure nipples are provided in the full face of the cylinder. Using pins, which are supplied with the nut, the piston can be pushed out of the cylinder.

5. How to use

5.1 Mounting

(1) When mounting rolling bearings with a tapered bore on a tapered seating, adapter sleeve or withdrawal sleeve, the hydraulic nut is screwed on to a threaded section of the shaft or on to the sleeve thread until it abuts the bearing inner ring (Fig.2), or a special nut (Fig.3), or an end plate attached to the shaft end.

(2) The piston is in the initial position, i.e. it is fully retracted.

(3) A pump is used to inject pressurised oil into the nut. This displaces the piston axially and the bearing is pressed up on to the tapered seating. The permissible stroke (axial displacement) has been chosen to enable all bearings having bores with a taper of 1:12 or 1:30 to be mounted in a single operation.

(4) After mounting has been completed, the return valve of the pump should be opened so that the pressurised oil can leave the nut. To completely empty the oil, the piston must be returned to its original position. This is most easily accomplished by screwing the nut further up the shaft or sleeve thread.

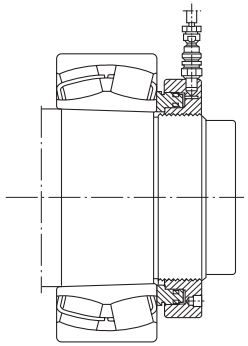


Fig.2. The threaded section of a shaft

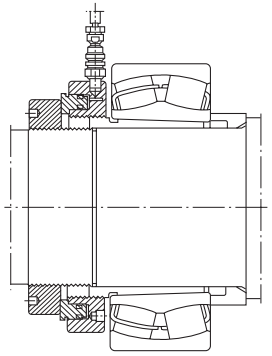


Fig.3. Sleeve thread

5.2 Dismounting

(1) When dismounting rolling bearings from withdrawal or adapter sleeves, the hydraulic nut is screwed on to the sleeve thread until it rests against the bearing inner ring (Fig.4), or a special nut, or against a special supprt ring (Fig.5).

(2) By displacing the piston, the sleeve will be withdrawn from the bearing bore, or the bearing will be pressed off the adapter sleeve.

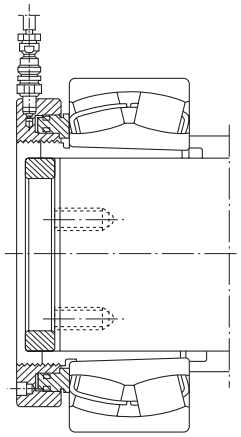


Fig.4. Sleeve thread

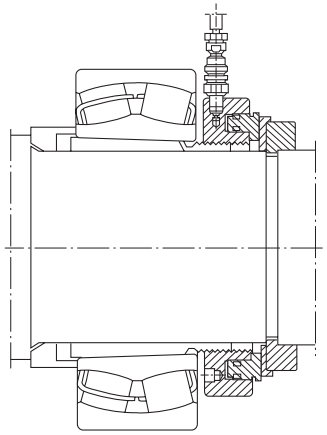


Fig.5. Sleeve thread and special supporting ring

6. Pumps

The pumps required to operate the hydraulic nuts should be suitable for pressures of 60 to 80 Mpa.

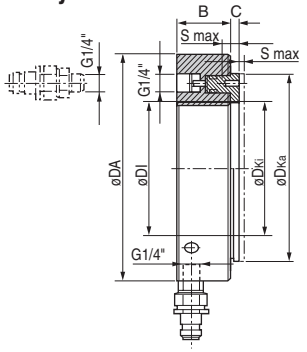
7. Pressure media

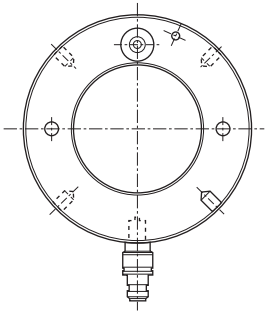
Normal machine oils having a viscosity of 300 mm2/s at the operating temperature are suitable pressure media. For mounting in the cold, less viscous oils should be used, e.g. oils for transformers.

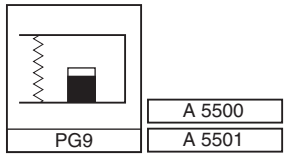


Convenient HLB Locking Nuts for Bearings

Hydraulic Nuts A 5500 and A 5501 with metric thread







$$F = \frac{A \cdot p}{10.000}$$

F: Mounting or Dismounting Force (KN)
A: Piston Area (mm^2)
p: Oil Pressure (bar)
Max. 1000 bar

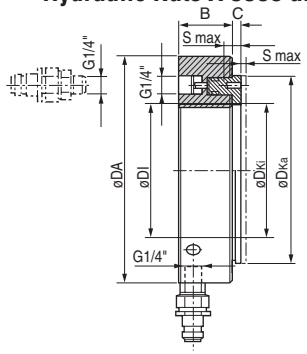
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M 50 × 1.5	A 5500.1001	A 5500.1002	46.7	A 5500.1005	114	38	4	5	50.5	85	2.900	2.70
M 55 × 2	A 5500.1101	A 5500.1102	51.1	A 5500.1105	120	38	4	5	55.5	90	3.150	2.75
M 60 × 2	A 5500.1201	A 5500.1202	56.1	A 5500.1205	125	38	5	5	60.5	95	3.300	2.80
M 65 × 2	A 5500.1301	A 5500.1302	61.1	A 5500.1305	130	38	5	5	65.5	101	3.600	3.00
M 70 × 2	A 5500.1401	A 5500.1402	66.1	A 5500.1405	135	38	5	5	70.5	107	3.800	3.20
M 75 × 2	A 5500.1501	A 5500.1502	71.1	A 5500.1505	140	38	5	5	75.5	112	4.000	3.40
M 80 × 2	A 5500.1601	A 5500.1602	76.1	A 5500.1605	146	38	5	5	80.5	117	4.200	3.70
M 85 × 2	A 5500.1701	A 5500.1702	81.1	A 5500.1705	150	38	5	5	85.5	122	4.400	3.75
M 90 × 2	A 5500.1801	A 5500.1802	86.1	A 5500.1805	156	38	5	5	90.5	127	4.700	4.00
M 95 × 2	A 5500.1901	A 5500.1902	91.1	A 5500.1905	162	38	5	5	95.5	133	4.900	4.30
M 100 × 2	A 5500.2001	A 5500.2002	96.1	A 5500.2005	166	38	6	5	100.5	138	5.100	4.40
M 105 × 2	A 5500.2101	A 5500.2102	101.1	A 5500.2105	172	38	6	5	105.5	143	5.300	4.65
M 110 × 2	A 5500.2201	A 5500.2202	106.1	A 5500.2205	178	38	6	5	110.5	149	5.600	4.95
M 115 × 2	A 5500.2301	A 5500.2302	111.1	A 5500.2305	182	38	6	5	115.5	154	5.800	5.00
M 120 × 2	A 5500.2401	A 5500.2402	116.1	A 5500.2405	188	38	6	5	120.5	159	6.000	5.25
M 125 × 2	A 5500.2501	A 5500.2502	121.1	A 5500.2505	192	38	6	5	125.5	164	6.200	5.35
M 130 × 2	A 5500.2601	A 5500.2602	126.1	A 5500.2605	198	38	6	5	130.5	170	6.400	5.65
M 135 × 2	A 5500.2701	A 5500.2702	131.1	A 5500.2705	204	38	6	5	135.5	175	6.600	5.90
M 140 × 2	A 5500.2801	A 5500.2802	136.1	A 5500.2805	208	38	7	5	140.5	180	6.800	6.00
M 145 × 2	A 5500.2901	A 5500.2902	141.1	A 5500.2905	214	39	7	5	145.5	186	7.300	6.50
M 150 × 2	A 5500.3001	A 5500.3002	146.1	A 5500.3005	220	39	7	5	150.5	191	7.500	6.60
M 155 × 3	A 5500.3101	A 5500.3102	149.8	A 5500.3105	226	39	7	5	155.5	198	8.100	6.95
M 160 × 3	A 5500.3201	A 5500.3202	154.8	A 5500.3205	232	40	7	6	160.5	204	8.600	7.60
M 165 × 3	A 5500.3301	A 5500.3302	159.8	A 5500.3305	238	40	7	6	165.5	209	8.900	7.90
M 170 × 3	A 5500.3401	A 5500.3402	164.8	A 5500.3405	244	41	7	6	170.5	215	9.400	8.40
M 180 × 3	A 5500.3601	A 5500.3602	174.8	A 5500.3605	256	41	7	6	180.5	227	10.300	9.15
M 190 × 3	A 5500.3801	A 5500.3802	184.8	A 5500.3805	270	42	8	7	191	239	11.500	10.5
M 200 × 3	A 5500.4001	A 5500.4002	194.8	A 5500.4005	282	43	8	8	201	251	12.500	11.5
TR 205 × 4	A 5500.4101	A 5500.4102	200.2	A 5500.4105	288	43	8	8	207	256	12.800	12.0
TR 210 × 4	A 5500.4201	A 5500.4202	205.2	A 5500.4205	294	44	8	9	212	262	13.400	12.5
TR 215 × 4	A 5500.4301	A 5500.4302	210.2	A 5500.4305	300	44	8	9	217	267	13.700	13.0
TR 220 × 4	A 5500.4401	A 5500.4402	215.2	A 5500.4405	306	44	8	9	222	273	14.400	13.5
TR 225 × 4	A 5500.4501	A 5500.4502	220.2	A 5500.4505	312	45	8	9	227	280	15.200	14.5
TR 230 × 4	A 5500.4601	A 5500.4602	225.2	A 5500.4605	318	45	8	9	232	285	15.500	14.5
TR 235 × 4	A 5500.4701	A 5500.4702	230.2	A 5500.4705	326	46	8	10	237	291	16.200	16.0
TR 240 × 4	A 5500.4801	A 5500.4802	235.2	A 5500.4805	330	46	9	10	242	296	16.500	16.0

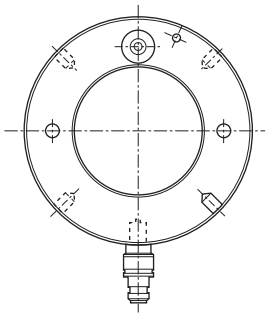
Thread DI *) (mm)	Article No. Right Hand	Article No. Left Hand	Plain Bore DI (mm)	Article No. Bore	OD DA (mm)	Height B (mm)	Projecting Length C (mm)	Stroke Smax. (mm)	Ring Piston (mm) ϕDKi	Ring Piston (mm) ϕDKa	Piston Area Ak (mm^2)	Weight (Steel) Ca. (kg)
TR 250 × 4	A 5500.5001	A 5500.5002	245.2	A 5500.5005	342	46	9	10	252	307	17.600	17.5
TR 260 × 4	A 5500.5201	A 5500.5202	255.2	A 5500.5205	356	47	9	11	262	319	18.800	19.0
TR 270 × 4	A 5500.5401	A 5500.5402	265.2	A 5500.5405	368	48	9	12	272	330	19.800	20.5
TR 280 × 4	A 5500.5601	A 5500.5602	275.2	A 5500.5605	380	49	9	12	282	341	21.100	22.0
TR 290 × 4	A 5500.5801	A 5500.5802	285.2	A 5500.5805	390	49	9	13	292	353	22.400	22.5
TR 300 × 4	A 5500.6001	A 5500.6002	295.2	A 5500.6005	404	51	10	14	302	364	23.600	25.5
TR 310 × 5	A 5500.6201	A 5500.6202	304.7	A 5500.6205	416	52	10	14	312	375	24.900	27.0
TR 320 × 5	A 5500.6401	A 5500.6402	314.7	A 5500.6405	428	53	10	14	322	387	26.300	29.5
TR 330 × 5	A 5500.6601	A 5500.6602	324.7	A 5500.6605	438	53	10	14	332	397	27.000	30.0
TR 340 × 5	A 5500.6801	A 5500.6802	334.7	A 5500.6805	450	54	10	14	342	408	28.400	31.5
TR 345 × 5	A 5500.6901	A 5500.6902	339.7	A 5500.6905	456	54	10	14	347	414	29.400	32.5
TR 350 × 5	A 5500.7001	A 5500.7002	344.7	A 5500.7005	464	56	10	14	352	420	29.900	35.0
TR 360 × 5	A 5500.7201	A 5500.7202	354.7	A 5500.7205	472	56	10	15	362	431	31.300	35.5
TR 365 × 5	A 5500.7301	A 5500.7302	359.7	A 5500.7305	482	57	11	15	367	436	31.700	38.5
TR 370 × 5	A 5500.7401	A 5500.7402	364.7	A 5500.7405	486	57	11	16	372	442	32.800	39.0
TR 380 × 5	A 5500.7601	A 5500.7602	374.7	A 5500.7605	498	58	11	16	382	452	33.500	40.5
TR 385 × 5	A 5500.7701	A 5500.7702	379.7	A 5500.7705	504	58	11	16	387	459	34.700	41.0
TR 400 × 5	A 5500.8001	A 5500.8002	394.7	A 5500.8005	522	60	11	17	402	475	36.700	45.5
TR 410 × 5	A 5500.8201	A 5500.8202	404.7	A 5500.8205	534	61	11	17	412	486	38.300	48.0
TR 420 × 5	A 5500.8401	A 5500.8402	414.7	A 5500.8405	546	61	11	17	422	498	40.000	50.0
TR 430 × 5	A 5500.8601	A 5500.8602	424.7	A 5500.8605	556	62	11	17	432	508	40.800	52.5
TR 440 × 5	A 5500.8801	A 5500.8802	434.7	A 5500.8805	566	62	12	17	442	519	42.500	54.0
TR 450 × 5	A 5500.9001	A 5500.9002	444.7	A 5500.9005	580	64	12	17	452	530	44.100	57.5
TR 460 × 5	A 5500.9201	A 5500.9202	454.7	A 5500.9205	590	64	12	17	462	541	45.100	60
TR 470 × 5	A 5500.9401	A 5500.9402	464.7	A 5500.9405	602	65	12	18	472	552	46.900	62
TR 480 × 5	A 5500.9601	A 5500.9602	474.7	A 5500.9605	612	65	12	19	482	563	48.600	63
TR 490 × 5	A 5500.9801	A 5500.9802	484.7	A 5500.9805	624	66	12	19	492	573	49.500	66
TR 500 × 5	A 5501.0001	A 5501.0002	494.7	A 5501.0005	636	67	12	19	502	585	51.500	70
TR 510 × 6	A 5501.0201	A 5501.0202	503.7	A 5501.0205	648	68	12	20	512	595	53.300	74
TR 520 × 6	A 5501.0401	A 5501.0402	513.7	A 5501.0405	658	68	13	20	522	606	54.300	75
TR 530 × 6	A 5501.0601	A 5501.0602	523.7	A 5501.0605	670	69	13	21	532	617	56.200	79
TR 540 × 6	A 5501.0801	A 5501.0802	533.7	A 5501.0805	682	69	13	21	542	629	58.200	81
TR 550 × 6	A 5501.1001	A 5501.1002	543.7	A 5501.1005	693	70	13	21	552	639	59.200	84
TR 560 × 6	A 5501.1201	A 5501.1202	553.7	A 5501.1205	704	71	13	22	562	650	61.200	88
TR 570 × 6	A 5501.1401	A 5501.1402	563.7	A 5501.1405	716	72	13	23	572	661	63.200	91
TR 580 × 6	A 5501.1601	A 5501.1602	573.7	A 5501.1605	726	72	13	23	582	671	64.200	94

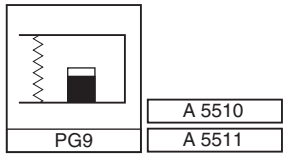
Thread DI *) (mm)	Article No.		Plain Bore DI (mm)	Article No.	OD DA (mm)	Height B (mm)	Projecting Length C (mm)	Stroke Smax. (mm)	Ring Piston (mm)		Piston Area A_K (mm^2)	Weight (Steel) Ca. (kg)
	Right Hand	Left Hand		Bore					ϕD_{Ki}	ϕD_{Ka}		
TR 600 × 6	A 5501.2001	A 5501.2002	593.7	A 5501.2005	748	73	13	23	602	693	67.300	100
TR 630 × 6	A 5501.2601	A 5501.2602	623.7	A 5501.2605	782	74	14	23	632	726	72.900	110
TR 650 × 6	A 5501.3001	A 5501.3002	643.7	A 5501.3005	804	75	14	23	652	747	76.200	115
TR 670 × 6	A 5501.3401	A 5501.3402	663.7	A 5501.3405	826	76	14	24	672	768	79.500	120
TR 690 × 6	A 5501.3801	A 5501.3802	683.7	A 5501.3805	848	77	14	25	692	791	84.200	127
TR 710 × 7	A 5501.4201	A 5501.4202	702.7	A 5501.4205	870	78	15	25	712	812	87.700	135
TR 750 × 7	A 5501.5001	A 5501.5002	742.7	A 5501.5005	912	79	15	25	752	855	95.200	146
TR 800 × 7	A 5501.6001	A 5501.6002	792.7	A 5501.6005	965	80	16	25	802	908	103.900	161
TR 850 × 7	A 5501.7001	A 5501.7002	842.7	A 5501.7005	1020	83	16	26	852	962	114.600	181
TR 900 × 7	A 5501.8001	A 5501.8002	892.7	A 5501.8005	1075	86	17	30	902	1015	124.100	205
TR 950 × 8	A 5501.9001	A 5501.9002	941.7	A 5501.9005	1126	86	17	30	952	1069	135.700	218
TR 1000 × 8	A 5502.0001	A 5502.0002	991.7	A 5502.0005	1180	88	17	34	1002	1122	145.800	239

Convenient HLB Locking Nuts for Bearings

Hydraulic Nuts A 5500 and A 5501 with metric thread and Plain bore







$$F = \frac{A \cdot p}{10.000}$$

F: Mounting or Dismounting Force (KN)
A: Piston Area (mm^2)
p: Oil Pressure (bar)
Max. 1000 bar

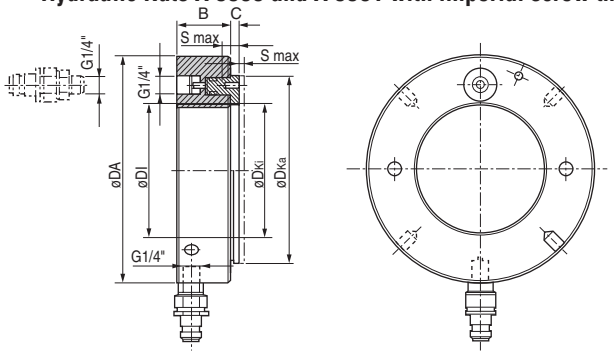
Thread DI *) (mm)	Article No.		Plain Bore DI (mm)	Article No.	OD DA (mm)	Height B (mm)	Projecting Length C (mm)	Stroke Smax. (mm)	Ring Piston (mm)		Piston Area A_K (mm^2)	Weight (Steel) Ca. (kg)
	Right Hand	Left Hand		Bore					ϕD_{Ki}	ϕD_{Ka}		
M 50 × 1.5	A 5510.1001	A 5510.1002	46.7	A 5510.1005	114	38	4	5	50.5	104	2.900	2.70
M 55 × 2	A 5510.1101	A 5510.1102	51.1	A 5510.1105	120	38	4	5	55.5	109	3.150	2.75
M 60 × 2	A 5510.1201	A 5510.1202	56.1	A 5510.1205	125	38	5	5	60.5	115	3.300	2.80
M 65 × 2	A 5510.1301	A 5510.1302	61.1	A 5510.1305	130	38	5	5	65.5	121	3.600	3.00
M 70 × 2	A 5510.1401	A 5510.1402	66.1	A 5510.1405	135	38	5	5	70.5	127	3.800	3.20
M 75 × 2	A 5510.1501	A 5510.1502	71.1	A 5510.1505	140	38	5	5	75.5	132	4.000	3.40
M 80 × 2	A 5510.1601	A 5510.1602	76.1	A 5510.1605	146	38	5	5	80.5	137	4.200	3.70
M 85 × 2	A 5510.1701	A 5510.1702	81.1	A 5510.1705	150	38	5	5	85.5	142	4.400	3.75
M 90 × 2	A 5510.1801	A 5510.1802	86.1	A 5510.1805	156	38	5	5	90.5	147	4.700	4.00
M 95 × 2	A 5510.1901	A 5510.1902	91.1	A 5510.1905	162	38	5	5	95.5	153	4.900	4.30
M 100 × 2	A 5510.2001	A 5510.2002	96.1	A 5510.2005	166	38	6	5	100.5	158	5.100	4.40
M 105 × 2	A 5510.2101	A 5510.2102	101.1	A 5510.2105	172	38	6	5	105.5	163	5.300	4.65
M 110 × 2	A 5510.2201	A 5510.2202	106.1	A 5510.2205	178	38	6	5	110.5	169	5.600	4.95
M 115 × 2	A 5510.2301	A 5510.2302	111.1	A 5510.2305	182	38	6	5	115.5	174	5.800	5.00
M 120 × 2	A 5510.2401	A 5510.2402	116.1	A 5510.2405	188	38	6	5	120.5	179	6.000	5.25
M 125 × 2	A 5510.2501	A 5510.2502	121.1	A 5510.2505	192	38	6	5	125.5	184	6.200	5.35
M 130 × 2	A 5510.2601	A 5510.2602	126.1	A 5510.2605	198	38	6	5	130.5	190	6.400	5.65
M 135 × 2	A 5510.2701	A 5510.2702	131.1	A 5510.2705	204	38	6	5	135.5	195	6.600	5.90
M 140 × 2	A 5510.2801	A 5510.2802	136.1	A 5510.2805	208	38	7	5	140.5	200	6.800	6.00
M 145 × 2	A 5510.2901	A 5510.2902	141.1	A 5510.2905	214	39	7	5	145.5	206	7.300	6.50
M 150 × 2	A 5510.3001	A 5510.3002	146.1	A 5510.3005	220	39	7	5	150.5	211	7.500	6.60
M 155 × 3	A 5510.3101	A 5510.3102	149.8	A 5510.3105	226	39	7	5	155.5	218	8.100	6.95
M 160 × 3	A 5510.3201	A 5510.3202	154.8	A 5510.3205	232	40	7	6	160.5	224	8.600	7.60
M 165 × 3	A 5510.3301	A 5510.3302	159.8	A 5510.3305	238	40	7	6	165.5	229	8.900	7.90
M 170 × 3	A 5510.3401	A 5510.3402	164.8	A 5510.3405	244	41	7	6	170.5	235	9.400	8.40
M 180 × 3	A 5510.3601	A 5510.3602	174.8	A 5510.3605	256	41	7	6	180.5	247	10.300	9.15
M 190 × 3	A 5510.3801	A 5510.3802	184.8	A 5510.3805	270	42	8	7	191	259	11.500	10.5
M 200 × 3	A 5510.4001	A 5510.4002	194.8	A 5510.4005	282	43	8	8	201	271	12.500	11.5
TR 205 × 4	A 5510.4101	A 5510.4102	200.2	A 5510.4105	288	43	8	8	207	276	12.800	12.0
TR 210 × 4	A 5510.4201	A 5510.4202	205.2	A 5510.4205	294	44	8	9	212	282	13.400	12.5
TR 215 × 4	A 5510.4301	A 5510.4302	210.2	A 5500.4305	300	44	8	9	217	287	13.700	13.0
TR 220 × 4	A 5510.4401	A 5510.4402	215.2	A 5510.4405	306	44	8	9	222	293	14.400	13.5
TR 225 × 4	A 5510.4501	A 5510.4502	220.2	A 5510.4505	312	45	8	9	227	300	15.200	14.5
TR 230 × 4	A 5510.4601	A 5510.4602	225.2	A 5510.4605	318	45	8	9	232	305	15.500	14.5
TR 235 × 4	A 5510.4701	A 5510.4702	230.2	A 5510.4705	326	46	8	10	237	311	16.200	16.0
TR 240 × 4	A 5510.4801	A 5510.4802	235.2	A 5510.4805	330	46	9	10	242	316	16.500	16.0

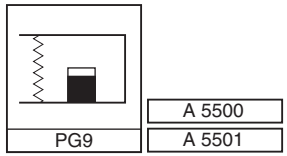
Thread DI *) (mm)	Article No.		Plain Bore DI (mm)	Article No.	OD DA (mm)	Height B (mm)	Projecting Length C (mm)	Stroke Smax. (mm)	Ring Piston (mm)		Piston Area A_k (mm^2)	Weight (Steel) Ca. (kg)
	Right Hand	Left Hand		Bore					ϕD_{Ki}	ϕD_{Ka}		
TR 250 × 4	A 5510.5001	A 5510.5002	245.2	A 5510.5005	342	46	9	10	252	329	17.600	17.5
TR 260 × 4	A 5510.5201	A 5510.5202	255.2	A 5510.5205	356	47	9	11	262	341	18.800	19.0
TR 270 × 4	A 5510.5401	A 5510.5402	265.2	A 5510.5405	368	48	9	12	272	352	19.800	20.5
TR 280 × 4	A 5510.5601	A 5510.5602	275.2	A 5510.5605	380	49	9	12	282	363	21.100	22.0
TR 290 × 4	A 5510.5801	A 5510.5802	285.2	A 5510.5805	390	49	9	13	292	375	22.400	22.5
TR 300 × 4	A 5510.6001	A 5510.6002	295.2	A 5510.6005	404	51	10	14	302	386	23.600	25.5
TR 310 × 5	A 5510.6201	A 5510.6202	304.7	A 5510.6205	416	52	10	14	312	397	24.900	27.0
TR 320 × 5	A 5510.6401	A 5510.6402	314.7	A 5510.6405	428	53	10	14	322	409	26.300	29.5
TR 330 × 5	A 5510.6601	A 5510.6602	324.7	A 5510.6605	438	53	10	14	332	419	27.000	30.0
TR 340 × 5	A 5510.6801	A 5510.6802	334.7	A 5510.6805	450	54	10	14	342	430	28.400	31.5
TR 345 × 5	A 5510.6901	A 5510.6902	339.7	A 5510.6905	456	54	10	14	347	436	29.400	32.5
TR 350 × 5	A 5510.7001	A 5510.7002	344.7	A 5510.7005	464	56	10	14	352	442	29.900	35.0
TR 360 × 5	A 5510.7201	A 5510.7202	354.7	A 5510.7205	472	56	10	15	362	455	31.300	35.5
TR 365 × 5	A 5510.7301	A 5510.7302	359.7	A 5510.7305	482	57	11	15	367	460	31.700	38.5
TR 370 × 5	A 5510.7401	A 5510.7402	364.7	A 5510.7405	486	57	11	16	372	466	32.800	39.0
TR 380 × 5	A 5510.7601	A 5510.7602	374.7	A 5510.7605	498	58	11	16	382	476	33.500	40.5
TR 385 × 5	A 5510.7701	A 5510.7702	379.7	A 5510.7705	504	58	11	16	387	483	34.700	41.0
TR 400 × 5	A 5510.8001	A 5510.8002	394.7	A 5510.8005	522	60	11	17	402	499	36.700	45.5
TR 410 × 5	A 5510.8201	A 5510.8202	404.7	A 5510.8205	534	61	11	17	412	510	38.300	48.0
TR 420 × 5	A 5510.8401	A 5510.8402	414.7	A 5510.8405	546	61	11	17	422	522	40.000	50.0
TR 430 × 5	A 5510.8601	A 5510.8602	424.7	A 5510.8605	556	62	11	17	432	532	40.800	52.5
TR 440 × 5	A 5510.8801	A 5510.8802	434.7	A 5510.8805	566	62	12	17	442	543	42.500	54.0
TR 450 × 5	A 5510.9001	A 5510.9002	444.7	A 5510.9005	580	64	12	17	452	554	44.100	57.5
TR 460 × 5	A 5510.9201	A 5510.9202	454.7	A 5510.9205	590	64	12	17	462	565	45.100	60
TR 470 × 5	A 5510.9401	A 5510.9402	464.7	A 5510.9405	602	65	12	18	472	576	46.900	62
TR 480 × 5	A 5500.9601	A 5500.9602	474.7	A 5500.9605	612	65	12	19	482	563	48.600	63
TR 490 × 5	A 5500.9801	A 5500.9802	484.7	A 5500.9805	624	66	12	19	492	573	49.500	66
TR 500 × 5	A 5501.0001	A 5501.0002	494.7	A 5501.0005	636	67	12	19	502	585	51.500	70
TR 510 × 6	A 5501.0201	A 5501.0202	503.7	A 5501.0205	648	68	12	20	512	595	53.300	74
TR 520 × 6	A 5501.0401	A 5501.0402	513.7	A 5501.0405	658	68	13	20	522	606	54.300	75
TR 530 × 6	A 5501.0601	A 5501.0602	523.7	A 5501.0605	670	69	13	21	532	617	56.200	79
TR 540 × 6	A 5501.0801	A 5501.0802	533.7	A 5501.0805	682	69	13	21	542	629	58.200	81
TR 550 × 6	A 5501.1001	A 5501.1002	543.7	A 5501.1005	693	70	13	21	552	639	59.200	84
TR 560 × 6	A 5501.1201	A 5501.1202	553.7	A 5501.1205	704	71	13	22	562	650	61.200	88
TR 570 × 6	A 5501.1401	A 5501.1402	563.7	A 5501.1405	716	72	13	23	572	661	63.200	91
TR 580 × 6	A 5501.1601	A 5501.1602	573.7	A 5501.1605	726	72	13	23	582	671	64.200	94

Thread DI *) (mm)	Article No.		Plain Bore DI (mm)	Article No.	OD DA (mm)	Height B (mm)	Projecting Length C (mm)	Stroke Smax. (mm)	Ring Piston (mm)		Piston Area A_k (mm^2)	Weight (Steel) Ca. (kg)
	Right Hand	Left Hand		Bore					ϕD_{Ki}	ϕD_{Ka}		
TR 600 × 6	A 5501.2001	A 5501.2002	593.7	A 5501.2005	748	73	13	23	602	693	67.300	100
TR 630 × 6	A 5501.2601	A 5501.2602	623.7	A 5501.2605	782	74	14	23	632	726	72.900	110
TR 650 × 6	A 5501.3001	A 5501.3002	643.7	A 5501.3005	804	75	14	23	652	747	76.200	115
TR 670 × 6	A 5501.3401	A 5501.3402	663.7	A 5501.3405	826	76	14	24	672	768	79.500	120
TR 690 × 6	A 5501.3801	A 5501.3802	683.7	A 5501.3805	848	77	14	25	692	791	84.200	127
TR 710 × 7	A 5501.4201	A 5501.4202	702.7	A 5501.4205	870	78	15	25	712	812	87.700	135
TR 750 × 7	A 5501.5001	A 5501.5002	742.7	A 5501.5005	912	79	15	25	752	855	95.200	146
TR 800 × 7	A 5501.6001	A 5501.6002	792.7	A 5501.6005	965	80	16	25	802	908	103.900	161
TR 850 × 7	A 5501.7001	A 5501.7002	842.7	A 5501.7005	1020	83	16	26	852	962	114.600	181
TR 900 × 7	A 5501.8001	A 5501.8002	892.7	A 5501.8005	1075	86	17	30	902	1015	124.100	205
TR 950 × 8	A 5501.9001	A 5501.9002	941.7	A 5501.9005	1126	86	17	30	952	1069	135.700	218
TR 1000 × 8	A 5502.0001	A 5502.0002	991.7	A 5502.0005	1180	88	17	34	1002	1122	145.800	239

Convenient HLB Locking Nuts for Bearings

Hydraulic Nuts A 5500 and A 5501 with imperial screw thread (UN or ACME thread form)





$$F = \frac{A \cdot p}{10.000}$$

F: Mounting or Dismounting Force (KN)
A: Piston Area (mm^2)
p: Oil Pressure (bar)
Max. 1000 bar

Thread DI *)	Article No.		OD DA (mm)	Height B (mm)	Projecting Length C (mm)	Stroke Smax. (mm)	Ring Piston (mm)		Piston Area A_k (mm^2)	Weight (Steel) Ca. (kg)
	Right Hand	Left Hand					ϕDKI	ϕDKa		
UN 1.967-18TPI	A 5500.1003	A 5500.1004	114	38	4	5	50.5	85	2.900	2.70
UN 2.157-18TPI	A 5500.1103	A 5500.1104	120	38	4	5	55.5	90	3.150	2.75
UN 2.360-18TPI	A 5500.1203	A 5500.1204	125	38	5	5	60.5	95	3.300	2.80
UN 2.548-18TPI	A 5500.1303	A 5500.1304	130	38	5	5	65.5	101	3.600	3.00
UN 2.751-18TPI	A 5500.1403	A 5500.1404	135	38	5	5	70.5	107	3.800	3.25
UN 2.933-12TPI	A 5500.1503	A 5500.1504	140	38	5	5	75.5	112	4.000	3.40
UN 3.137-12TPI	A 5500.1603	A 5500.1604	146	38	5	5	80.5	117	4.200	3.75
UN 3.340-12TPI	A 5500.1703	A 5500.1704	150	38	5	5	85.5	122	4.400	3.80
UN 3.527-12TPI	A 5500.1803	A 5500.1804	156	38	5	5	90.5	127	4.700	4.00
UN 3.730-12TPI	A 5500.1903	A 5500.1904	162	38	5	5	95.5	133	4.900	4.30
UN 3.918-12TPI	A 5500.2003	A 5500.2004	166	38	6	5	100.5	138	5.100	4.40
UN 4.122-12TPI	A 5500.2103	A 5500.2104	172	38	6	5	105.5	143	5.300	4.70
UN 4.325-12TPI	A 5500.2203	A 5500.2204	178	38	6	5	110.5	149	5.600	4.95
UN 4.716-12TPI	A 5500.2403	A 5500.2404	188	38	6	5	120.5	159	6.000	5.25
UN 5.106-12TPI	A 5500.2603	A 5500.2604	198	38	6	5	130.5	170	6.400	5.65
UN 5.497-12TPI	A 5500.2803	A 5500.2804	208	38	7	5	140.5	180	6.800	6.00
UN 5.888-12TPI	A 5500.3003	A 5500.3004	220	39	7	5	150.5	191	7.500	6.60
UN 6.284-8TPI	A 5500.3203	A 5500.3204	232	40	7	6	160.5	204	8.600	7.60
UN 6.659-8TPI	A 5500.3403	A 5500.3404	244	41	7	6	170.5	215	9.400	8.40
UN 7.066-8TPI	A 5500.3603	A 5500.3604	256	41	7	6	180.5	227	10.300	9.15
UN 7.472-8TPI	A 5500.3803	A 5500.3804	270	42	8	7	191	239	11.500	10.5
UN 7.847-8TPI	A 5500.4003	A 5500.4004	282	43	8	8	201	251	12.500	11.5
UN 8.628-8TPI	A 5500.4403	A 5500.4404	306	44	8	9	222	273	14.400	13.5
UN 9.442-6TPI	A 5500.4803	A 5500.4804	330	46	9	10	242	296	16.500	16.0

Thread DI *)	Article No.		OD DA (mm)	Height B (mm)	Projecting Length C (mm)	Stroke Smax. (mm)	Ring Piston (mm)		Piston Area A_k (mm^2)	Weight (Steel) Ca. (kg)
	Right Hand	Left Hand					ϕDKI	ϕDKa		
UN 10.192-6TPI	A 5500.5203	A 5500.5204	356	47	9	11	262	319	18.800	19.0
UN 11.004-6TPI	A 5500.5603	A 5500.5604	380	49	9	12	282	341	21.100	22.0
UN 11.785-6TPI	A 5500.6003	A 5500.6004	404	51	10	14	302	364	23.600	25.5
UN 12.562-6TPI	A 5500.6403	A 5500.6404	428	53	10	14	322	387	26.300	29.5
ACME 13.339-5TPI	A 5500.6803	A 5500.6804	450	54	10	14	342	408	28.400	31.5
ACME 14.170-5TPI	A 5500.7203	A 5500.7204	472	56	10	15	362	431	31.300	35.5
ACME 14.957-5TPI	A 5500.7603	A 5500.7604	498	58	11	16	382	452	33.500	40.5
ACME 15.745-5TPI	A 5500.8003	A 5500.8004	522	60	11	17	402	475	36.700	45.5
ACME 16.532-5TPI	A 5500.8403	A 5500.8404	546	61	11	17	422	498	40.000	50
ACME 17.319-5TPI	A 5500.8803	A 5500.8804	566	62	12	17	442	519	42.500	54
ACME 18.107-5TPI	A 5500.9203	A 5500.9204	590	64	12	17	462	541	45.100	60
ACME 18.894-5TPI	A 5500.9603	A 5500.9604	612	65	12	19	482	563	48.600	63
ACME 19.682-5TPI	A 5501.0003	A 5501.0004	636	67	12	19	502	585	51.500	70
ACME 20.867-4TPI	A 5501.0603	A 5501.0604	670	69	13	21	532	617	56.200	79
ACME 22.048-4TPI	A 5501.1203	A 5501.1204	704	71	13	22	562	650	61.200	88
ACME 23.623-4TPI	A 5501.2003	A 5501.2004	748	73	13	23	602	693	67.300	100
ACME 24.804-4TPI	A 5501.2603	A 5501.2604	782	74	14	23	632	726	72.900	110
ACME 26.379-4TPI	A 5501.3403	A 5501.3404	826	76	14	24	672	768	79.500	120
ACME 27.961-3TPI	A 5501.4203	A 5501.4204	870	78	15	25	712	812	87.700	135
ACME 29.536-3TPI	A 5501.5003	A 5501.5004	912	79	15	25	752	855	95.200	145
ACME 31.504-3TPI	A 5501.6003	A 5501.6004	965	80	16	25	802	908	103.900	160
ACME 33.473-3TPI	A 5501.7003	A 5501.7004	1020	83	16	26	852	962	114.600	180
ACME 35.441-3TPI	A 5501.8003	A 5501.8004	1075	86	17	30	902	1015	124.100	205
ACME 37.410-3TPI	A 5501.9003	A 5501.9004	1126	86	17	30	952	1069	135.700	220

■ Bearing Heater

Ecological and High Functional Bearing Heater

● Use

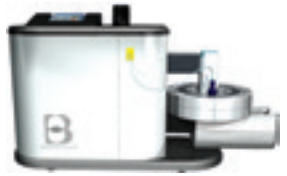
When hydraulic tools or oil injection method cannot be used, the only alternative is often to heat the bearings or bearing rings before mounting or dismounting.
If heaters are correctly used they are excellent aids both for the occasional mounting or dismounting operation as well as for the regular requirements of line operation.

● Caution

Heating should always be done with care and it should be remembered that bearings should not be strongly heated and certainly not to temperatures above 120˚C.
Greased and sealed bearings should generally not be heated.



IHE0320, IHE0340
IHE0620, IHE0640



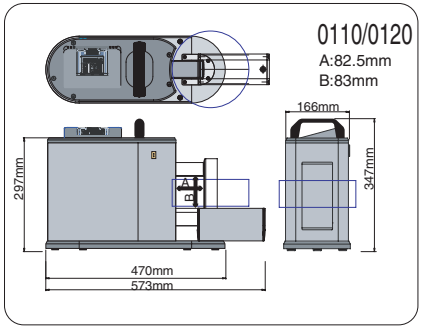
IHE0110
IHE0120

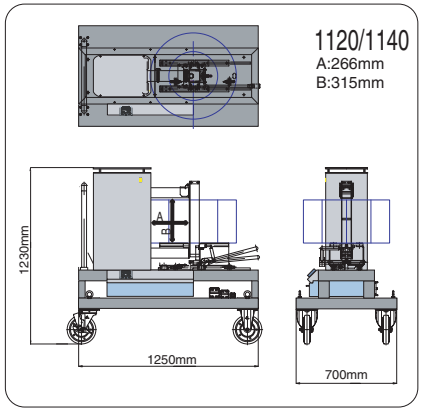
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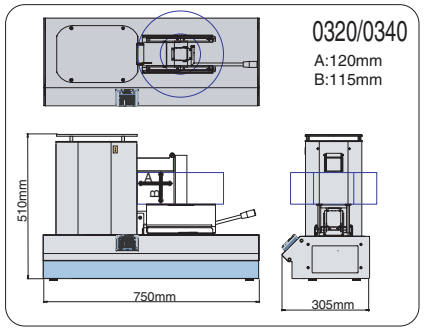
Inverter Driven Bearing Heater Standard Specifications

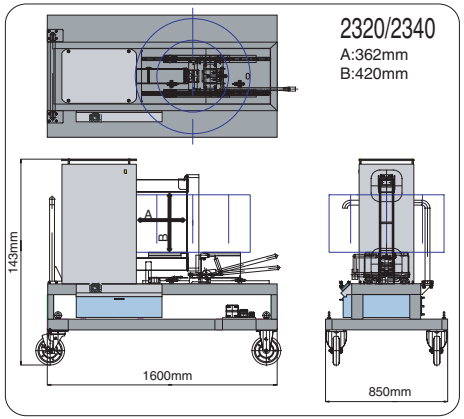
Items	detail items		1kVA100V	1kVA200V	3.3kVA		3.3kVA	6.6kVA	6.6kVA	11.8kVA	11.8kVA	23kVA	23kVA
type			IHE0110	IHE0120	IHE0320		IHE0340	IHE0620	IHE0640	IHE1120	IHE1140	IHE2320	IHE2340
Heating Capacity			1kVA	1kVA	3.3kVA		3.3kVA	6.6kVA	6.6kVA	11.8kVA	11.8kVA	23kVA	23kVA
Applicable Bearing Size	Mimimal bore diameter (mmϕ)		20	20	35		35	35	35	50	50	50	50
	Maximum outside diameter (mmϕ)		200	200	300		300	350	350	600	600	800	800
	Thickness (mm)		70	70	110		110	200	200	300	300	400	400
	Weight (kg)		12	12	40		40	80	80	300	300	600	600
Heating Bearing type	Can heat pre-greased bearing		Yes										
	Can heat sealed bearing		Yes										
Power Supply Characteristics	Phase		Single	Single	Three		Three	Three	Three	Three	Three	Three	Three
	Voltage (V)		100-120V	200-240V	200-240V		380-480V	200-240V	380-480V	200-240V	380-480V	200-240V	380-480V
	Frequency		50/60Hz	50/60Hz	50/60Hz		50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
	Input Current (A) (maximum)		16.1A	9.7A	12.8A		7.5A	30.0A	16.1A	56.9A	29A	97A	49.6A
Dimensions of body	H (mm)		347	347	510		510	660	660	1230	1230	1435	1435
	D (mm)		175	175	305		305	385	385	700	700	850	850
	W (mm)		573	573	750		750	920	920	1250	1250	1600	1600
	Total weight (kg)		14	14	42		42	72	72	172	172	278	278
Control Specifications	Temperature Control Mode	Range	0 ― 250˚C										
		temp. sensor type	K-type										
		Accuracy	1˚C										
	Time Control Mode	Range	0-60min										
		Accuracy	1s										
	Power Reduction	By 10%	50-100%										
	Demagnetization	Accuracy	300μT(3G)										
Operation Spec.	Operation		Operator with LEDs										
	Sequence Operation		Yes										
Temp. Display	Temp. Display		Celsius/Fahrenheit										
Environment specifications	Application site	Application site	Indoor (no corrosive gas,dust,etc)										
		Overvoltage Category	2	2	3		3	3	3	3	3	3	3
		Pollution Degree	2	2	2		2	2	2	2	2	2	2
	Ambient Operating Temp.		― 10˚C ～ 35˚C										
	Altitude		2000m max										
	Ambient Operating Humidity.		92% RH max										

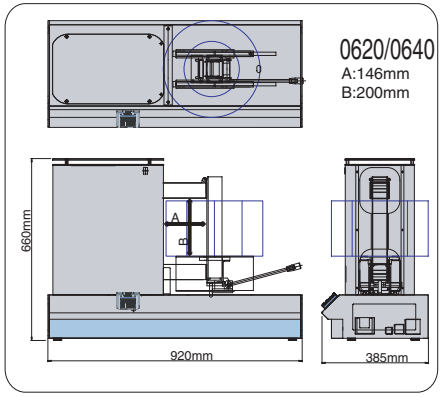
I-type core	N-CI-1815	(bore diameter 20 ～ 35)	●	●									
	N-CI-1825	(bore diameter 35 ～ 50)	●	●									
	N-CI-1835	(bore diameter 50above)	●	●									
	N-CI-2525	(bore diameter 35 ～ 50)			●		●						
	N-CI-2535	(bore diameter 50 ～ 70)			●		●						
	N-CI-2545	(bore diameter 70above)			●		●						
	N-CI-3725	(bore diameter 35 ～ 50)						●	●				
	N-CI-3735	(bore diameter 50 ～ 80)						●	●				
	N-CI-3755	(bore diameter 80above)						●	●				
	N-CI-5235	(bore diameter 50 ～ 80)								●	●		
	N-CI-5255	(bore diameter 80 ～ 100)								●	●		
	N-CI-5270	(bore diameter 100above)								●	●		
	N-CI-6735	(bore diameter 50 ～ 80)										●	●
	N-CI-6755	(bore diameter 80 ～ 130)										●	●
	N-CI-6785	(bore diameter 130above)										●	●
temperature sensor	N-CTC-300	length 300mm	●	●									
	N-CTC-500	length 500mm			●		●	●	●				
	N-CTC-1000	length 1000mm								●	●	●	●











Three Features

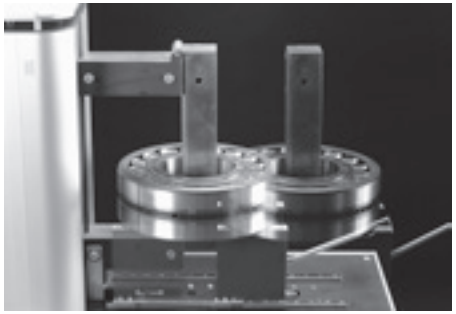
Versatile and Wide Range Use	Induction Bearing Heater is designed mainly for heating up bearings. However, it can heat up bushings, gears, pulleys, couplings and other ring shaped objects.
Built-in Demagnetization Function	Induction Bearing Heater is all digitally controlled and demagnetizes bearings automatically after heating. Also, it can demagnetize bearings manually.
Temperature Control and Timer Control	Induction Bearing Heater has two control modes: Temperature Control Mode and Timer Control Mode. In Temperature Control Mode, Temperature can be set up to 250C as standard. Depending on region where it is used, temperature indication of Celsius can be changed to Fahrenheit and vice versa with Control Panel operation. Temperature retention function keeps bearing at the set temperature infinitely after it is reached until Stop is pressed. In Timer Control Mode, time can be set up to 60 minutes.

Three Advantages

Even Heating without Damage to Bearing	Use of direct flame or blow torch to heat up bearings is hazardous, risky, and causes uneven thermal expansion and/or material alteration. Induction Bearing Heater adopts electromagnetic induction principle to heat bearing(s) evenly to be thermally expanded without any damage to bearing(s). This feature eliminates unnecessary trouble to improve work efficiency.
Quick and Efficient Heating without Fire	Induction Bearing Heater has exciting coils embedded into a core as primary winding as in a transformer. AC current flowing in the coils induces a secondary current around the inner ring of bearing to generate heat necessary for its expansion due to bearing's own electrical resistance. This leads to little waste of energy (low energy loss) and quick heating of bearing (work) only . The induction Heating Method of non-use of fire accomplishes High Safety, Reliability and Work Efficiency for drastic shortening of the time necessary for Shrink Fit Process.
Clean Heating without Impurities Intruded	The shrink fit process using an oil bath requires extra time and cost for cleaning after fitting bearing(work) even though new oil is used. Induction Bearing Heater, without the use of oil, enables heating cleanly even a grease sealed bearing that will retain original pre-lubrication inside bearing. This leads to improvement of working environment because no oil storage management is required.

Slide type Bearing Installation Table

Once bearing and I-type core are installed in Slide Type Bearing Installation Table, all you have to do is to move the table to the heating position along the guide by pushing the lever. This device enables easy mounting and dismounting of even a hot and/or heavy bearing.



Small and Sensitive Temperature Sensor

Small and sensitive temperature sensor continuously monitors the bearing temperature to ensure precise detection of bearing (work) temperature even at high temperature rising rate as well as when the sensor is set in a confined small area.

Compatibility with a Wide Range of Various Voltage of Power Supply

ETOH's Induction Bearing Heater is compatible with a wide range of various voltages and various frequencies of power supplies around the globe. Stationary types of Bearing Heater are connected to 3-phase AC power Supply while portable types are connected to single phase AC power supply.

Fault Tolerance

In the case of heating unwittingly without installing the temperature sensor on the work (bearing) and in any other abnormal incident that should happen, Bearing Heater detects the fault(s) to stop heating automatically. In this manner, for Safe Operation of Bearing Heater, all possible measures conceivable are taken.

Operation Information Availability

Operation Panel is common to all types of ETOH's induction Bearing Heater and easy-to-use, user friendly, and can be operated instinctively at sight of the push-button symbols representing the individual elemental commands of Bearing Heater, as the result of our searching user's convenience. The external control signal inputs and outputs are equipped as standard and they allow Bearing Heater to be embedded into your FA system.

Broad Range of Work Size

ETOH's induction Bearing Heater accommodates broad range of work (bearing) size by selecting I-type core suitable for the work inner ring diameter.

Optimal Heating with Accordance with Bearing (work) Applied

ETOH's induction Bearing Heater senses the electrical properties of the work (bearing) and the I-type core to heat the work (bearing) in the optimal condition. ETOH's induction Bearing Heater is featured to have convenient Power Reduction Function of setting the reduction rate 50%-100% by 10% for a delicate work (bearing) necessary to be heated amply and slowly.

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Appendix Table

inch—mm Conversion Table ——— Table 1
kgf—N Conversion Table ——— Table 2
kg—lb Conversion Table ——— Table 3
˚C—˚F Conversion Table ——— Table 4
Hardness Conversion Table ——— Table 5
Tolerance of Shaft ——— Table 6
Tolerance of Housing Bore ——— Table 7
International Units SI Conversion Table ——— Table 8
SI Prefixes ——— Table 9
Lubricating Greases ——— Table 10

■ Table 1. inch—mm Conversion Table

inch		0"	1"	2"	3"	4"	5"	6"	7"	8"
Fractions	Decimals									
0	.000000	0.0000	25.4000	50.8000	76.2000	101.6000	127.0000	152.4000	177.8000	203.2000
1/64	.015625	0.3969	25.7969	51.1969	76.5969	101.9969	127.3969	152.7969	178.1969	203.5969
1/32	.031250	0.7938	26.1938	51.5938	76.9938	102.3938	127.7938	153.1938	178.5938	203.9938
3/64	.046875	1.1906	26.5906	51.9906	77.3906	102.7906	128.1906	153.5906	178.9906	204.3906
1/16	.062500	1.5875	26.9875	52.3875	77.7875	103.1875	128.5875	153.9875	179.3875	204.7875
5/64	.078125	1.9844	27.3844	52.7844	78.1844	103.5844	128.9844	154.3844	179.7844	205.1844
3/32	.093750	2.3812	27.7812	53.1812	78.5812	103.9812	129.3812	154.7812	180.1812	205.5812
7/64	.109375	2.7781	28.1781	53.5781	78.9781	104.3781	129.7781	155.1781	180.5781	205.9781
1/ 8	.125000	3.1750	28.5750	53.9750	79.3750	104.7750	130.1750	155.5750	180.9750	206.3750
9/64	.140625	3.5719	28.9719	54.3719	79.7719	105.1719	130.5719	155.9719	181.3719	206.7719
5/32	.156250	3.9688	29.3688	54.7688	80.1688	105.5688	130.9688	156.3688	181.7688	207.1688
11/64	.171875	4.3656	29.7656	55.1656	80.5656	105.9656	131.3656	156.7656	182.1656	207.5656
3/16	.187500	4.7625	30.1625	55.5625	80.9625	106.3625	131.7625	157.1625	182.5625	207.9625
13/64	.203125	5.1594	30.5594	55.9594	81.3594	106.7594	132.1594	157.5594	182.9594	208.3594
7/32	.218750	5.5562	30.9562	56.3562	81.7562	107.1562	132.5562	157.9562	183.3562	208.7562
15/64	.234375	5.9531	31.3531	56.7531	82.1531	107.5531	132.9531	158.3531	183.7531	209.1531
1/ 4	.250000	6.3500	31.7500	57.1500	82.5500	107.9500	133.3500	158.7500	184.1500	209.5500
17/64	.265625	6.7469	32.1469	57.5469	82.9469	108.3469	133.7469	159.1469	184.5469	209.9469
9/32	.281250	7.1438	32.5438	57.9438	83.3438	108.7438	134.1438	159.5438	184.9438	210.3438
19/64	.296875	7.5406	32.9406	58.3406	83.7406	109.1406	134.5406	159.9406	185.3406	210.7406
5/16	.312500	7.9375	33.3375	58.7375	84.1375	109.5375	134.9375	160.3375	185.7375	211.1375
21/64	.328125	8.3344	33.7344	59.1344	84.5344	109.9344	135.3344	160.7344	186.1344	211.5344
11/32	.343750	8.7312	34.1312	59.5312	84.9312	110.3312	135.7312	161.1312	186.5312	211.9312
23/64	.359375	9.1281	34.5281	59.9281	85.3281	110.1250	136.1281	161.5281	186.9281	212.3281
3/ 8	.375000	9.5250	34.9250	60.3250	85.7250	111.1250	136.5250	161.9250	187.3250	212.7250
25/64	.390625	9.9219	35.3219	60.7219	86.1219	111.5219	136.9219	162.3219	187.7219	213.1219
13/32	.406250	10.3188	35.7188	61.1188	86.5188	111.9188	137.3188	162.7188	188.1188	213.5188
27/64	.218875	10.7156	36.1156	61.5156	86.9156	112.3156	137.7156	163.1156	188.5156	213.9156
7/16	.437500	11.1125	36.5125	61.9125	87.3125	112.7125	138.1125	163.5125	188.9125	214.3125
29/64	.453125	11.5094	36.9094	62.3094	87.7094	113.1094	138.5094	163.9094	189.3094	214.7094
15/32	.468750	11.9062	37.3062	62.7062	88.1062	113.5062	138.9062	164.3062	189.7062	215.1062
31/64	.484375	12.3031	37.7031	63.1031	88.5031	113.9031	139.3031	164.7031	190.1031	215.5031
1/ 2	.500000	12.7000	38.1000	63.5000	88.9000	114.3000	139.7000	165.1000	190.5000	215.9000
33/64	.515625	13.0969	38.4969	63.8969	89.2969	114.6969	140.0969	165.4969	190.8969	216.2669
17/32	.531250	13.4938	38.8938	64.2938	89.6938	115.0938	140.4938	165.8938	191.2938	216.6938
35/64	.546875	13.8906	39.2906	64.6906	90.0906	115.4906	140.8906	166.2906	191.6906	217.0906
9/16	.562500	14.2875	39.6875	65.0875	90.4875	115.8875	141.2875	166.6875	192.0875	217.4875
37/64	.578125	14.6844	40.0844	65.4844	90.8844	116.2844	141.6844	167.0844	192.4844	217.8844
19/32	.593750	15.0812	40.4812	65.8812	91.2812	116.6812	142.0812	167.4812	192.8812	218.2812
39/64	.609375	15.4781	40.8781	66.2781	91.6781	117.0781	142.4781	167.8781	193.2781	218.6781
5/ 8	.625000	15.8750	41.2750	66.6750	92.0750	117.4750	142.8750	168.2750	193.6750	219.0750
41/64	.640625	16.2719	41.6719	67.0719	92.4719	117.8719	143.2719	168.6719	194.0719	219.4719
21/32	.656250	16.6688	42.0688	67.4688	92.8688	118.2688	143.6688	169.0688	194.4688	219.8688
43/64	.671875	17.0656	42.4656	67.8656	93.2656	118.6656	144.0656	169.4656	194.8656	220.2656
11/16	.687500	17.4625	42.8625	68.2625	93.6625	119.0625	144.4625	169.8625	195.2625	220.6625
45/64	.703125	17.8594	43.2594	68.6594	94.0594	119.4594	144.8594	170.2594	195.6594	221.0594
23/32	.718750	18.2562	43.6562	69.0562	94.4652	119.8562	145.2562	170.6562	196.0562	221.4562
47/64	.734375	18.6531	44.0531	69.4531	94.8531	120.2531	145.6531	171.0531	196.4531	221.8531
3/ 4	.750000	19.0500	44.4500	69.8500	95.2500	120.6500	146.0500	171.4500	196.8500	222.2500
49/64	.765625	19.4469	44.8469	70.2469	95.6469	121.0469	146.4469	171.8469	197.2469	222.6469
25/32	.781250	19.8438	45.2438	70.6438	96.0438	121.4438	146.8438	172.2438	197.6438	223.0438
51/64	.796875	20.2406	45.6406	71.0406	96.4406	121.8406	147.2406	127.6406	198.0406	223.4406
13/16	.812500	20.6375	46.0375	71.4375	96.8375	122.2375	147.6375	173.0375	198.4375	223.8375
53/64	.828125	21.0344	46.4344	71.8344	97.2344	122.6344	148.0344	173.4344	198.8344	224.2344
27/32	.843750	21.4312	46.8312	72.2312	97.6312	123.0312	148.4312	173.8312	199.2312	224.6312
55/64	.859375	21.8281	47.2281	72.6281	98.0281	123.4281	148.8281	174.2281	199.6281	225.0281
7/ 8	.875000	22.2250	47.6250	73.0250	98.4250	123.8250	149.2250	174.6250	200.0250	225.4250
57/64	.890625	22.6219	48.0219	73.4219	98.8219	124.2219	149.6219	175.0219	200.4219	225.8219
29/32	.906250	23.0188	48.4188	73.8188	99.2188	124.6188	150.0188	175.4188	200.8188	226.2188
59/64	.921875	23.4156	48.8156	74.2156	99.6156	125.0156	150.4156	175.8156	201.2156	226.6156
15/16	.937500	23.8125	49.2125	74.6125	100.0125	125.4125	150.8125	176.2125	201.6125	227.0125
61/64	.953125	24.2094	49.6094	75.0094	100.4094	125.8094	151.2094	176.6094	202.0094	227.4094
31/32	.968750	24.6062	50.0062	75.4062	100.8062	126.2062	151.6062	177.0062	202.4062	227.8062
63/64	.984375	25.0031	50.4031	75.8031	101.2031	126.6031	152.0031	177.4031	202.8031	228.2031

Table 2. kgf—N Conversion Table

1 kgf = 9.80665 N
1 N = 0.101972 kgf

kgf		N	kgf		N	kgf		N
0.1020	1	9.8066	3.4670	34	333.43	6.8321	67	657.05
0.2039	2	19.613	3.5690	35	343.23	6.9341	68	666.85
0.3059	3	29.420	3.6710	36	353.04	7.0360	69	676.66
0.4079	4	39.227	3.7730	37	362.85	7.1380	70	686.47
0.5099	5	49.033	3.8749	38	372.65	7.2400	71	696.27
0.6118	6	58.840	3.9769	39	382.46	7.3420	72	706.08
0.7138	7	68.647	4.0789	40	392.27	7.4439	73	715.89
0.8158	8	78.453	4.1808	41	402.07	7.5459	74	725.69
0.9177	9	88.260	4.2828	42	411.88	7.6479	75	735.50
1.0197	10	98.066	4.3848	43	421.69	7.7498	76	745.31
1.1217	11	107.87	4.4868	44	431.49	7.8518	77	755.11
1.2237	12	117.68	4.5887	45	441.30	7.9538	78	764.92
1.3256	13	127.49	4.6907	46	451.11	8.0558	79	774.73
1.4276	14	137.29	4.7927	47	460.91	8.1577	80	784.53
1.5296	15	147.10	4.8946	48	470.72	8.2597	81	794.34
1.6315	16	156.91	4.9966	49	480.53	8.3617	82	804.15
1.7335	17	166.71	5.0986	50	490.33	8.4636	83	813.95
1.8355	18	176.52	5.2006	51	500.14	8.5656	84	823.76
1.9375	19	186.33	5.3025	52	509.95	8.6676	85	833.57
2.0394	20	196.13	5.4045	53	519.75	8.7696	86	843.37
2.1414	21	205.94	5.5065	54	529.56	8.8716	87	853.18
2.2434	22	215.75	5.6084	55	539.37	8.9735	88	862.99
2.3453	23	225.55	5.7104	56	549.17	9.0755	89	872.79
2.4473	24	235.36	5.8124	57	558.98	9.1774	90	882.60
2.5493	25	245.17	5.9144	58	568.79	9.2794	91	892.41
2.6513	26	254.97	6.0163	59	578.59	9.3814	92	902.21
2.7532	27	264.78	6.1183	60	588.40	9.4834	93	912.02
2.8552	28	274.59	6.2203	61	598.21	9.5853	94	921.83
2.9572	29	284.39	6.3222	62	608.01	9.6873	95	931.63
3.0591	30	294.20	6.4242	63	617.82	9.7893	96	941.44
3.1611	31	304.01	6.5262	64	627.63	9.8912	97	951.25
3.2631	32	313.81	6.6282	65	637.43	9.9932	98	961.05
3.3651	33	323.62	6.7301	66	647.24	10.0952	99	970.86

How to convert: (1) When 10kgf should be converted into N, look for the number 10 on the central column in the first file.
The number at its right hand side shows 98.066N
(2) To the contrary, 10N can be converted into 1.0197kgf.

Table 3. kg—lb Conversion Table

1 kg = 2.204622 lb
1 lb = 0.45359 kg

kg		lb	kg		lb	kg		lb
0.454	1	2.205	15.422	34	74.957	30.391	67	147.71
0.907	2	4.409	15.876	35	77.162	30.844	68	149.91
1.361	3	6.614	16.329	36	79.366	31.298	69	152.12
1.814	4	8.818	16.783	37	81.571	31.751	70	154.32
2.268	5	11.023	17.236	38	83.776	32.205	71	156.53
2.722	6	13.228	17.690	39	85.980	32.659	72	158.73
3.175	7	15.432	18.144	40	88.185	33.112	73	160.94
3.629	8	17.637	18.597	41	90.390	33.566	74	163.14
4.082	9	19.842	19.051	42	92.594	34.019	75	165.35
4.536	10	22.046	19.504	43	94.799	34.473	76	167.55
4.990	11	24.251	19.958	44	97.003	34.927	77	169.76
5.443	12	26.455	20.412	45	99.208	35.380	78	171.96
5.897	13	28.660	20.865	46	101.41	35.834	79	174.17
6.350	14	30.865	21.319	47	103.62	36.287	80	176.37
6.804	15	33.069	21.772	48	105.82	36.741	81	178.57
7.257	16	35.274	22.226	49	108.03	37.194	82	180.78
7.711	17	37.479	22.680	50	110.23	37.648	83	182.98
8.165	18	39.683	23.133	51	112.44	38.102	84	185.19
8.618	19	41.888	23.587	52	114.64	38.555	85	187.39
9.072	20	44.092	24.040	53	116.84	39.009	86	189.60
9.525	21	46.297	24.494	54	119.05	39.462	87	191.80
9.979	22	48.502	24.948	55	121.25	39.916	88	194.01
10.433	23	50.706	25.401	56	123.46	40.370	89	196.21
10.886	24	52.911	25.855	57	125.66	40.823	90	198.42
11.340	25	55.116	26.308	58	127.87	41.277	91	200.62
11.793	26	57.320	26.762	59	130.07	41.730	92	202.83
12.247	27	59.525	27.216	60	132.28	42.184	93	205.03
12.701	28	61.729	27.669	61	134.48	42.638	94	207.23
13.154	29	63.934	28.123	62	136.69	43.091	95	209.44
13.608	30	66.139	28.576	63	138.89	43.545	96	211.64
14.061	31	68.343	29.030	64	141.10	43.998	97	213.85
14.515	32	70.548	29.483	65	143.30	44.452	98	216.05
14.968	33	72.753	29.937	66	145.51	44.906	99	218.26

How to convert: (1) When 43kg should be converted into lb, look for the number 43 on the central column in the second file.
The number at its right hand side shows 94.799lb.
(2) To the contrary, 43lb can be converted into 19.504kg.

Table 4. °C—°F Conversion Table

$$C = \frac{5}{9}(F-32)$$

$$F = \frac{9}{5}C+32$$

°C		°F	°C		°F	°C		°F	°C		°F
–73	**–100**	–148	–1.7	**29**	84.2	17.8	**64**	147.2	37.2	**99**	210.2
–62	**– 80**	–112	–1.1	**30**	86.0	18.3	**65**	149.0	37.8	**100**	212.0
–51	**– 60**	– 76	–0.6	**31**	87.8	18.9	**66**	150.8	40.6	**105**	221
–40	**– 40**	– 40	0	**32**	89.6	19.4	**67**	152.6	43	**110**	230
–29	**– 20**	– 4	0.6	**33**	91.4	20.0	**68**	154.4	49	**120**	248
–23.3	**– 10**	14	1.1	**34**	93.2	20.6	**69**	156.2	54	**130**	266
–17.8	**0**	32	1.7	**35**	95.0	21.1	**70**	158.0	60	**140**	284
–17.2	**1**	33.8	2.2	**36**	96.8	21.7	**71**	159.8	66	**150**	302
–16.7	**2**	35.6	2.8	**37**	98.6	22.2	**72**	161.6	71	**160**	320
–16.1	**3**	37.4	3.3	**38**	100.4	22.8	**73**	163.4	77	**170**	338
–15.6	**4**	39.2	3.9	**39**	102.2	23.3	**74**	165.2	82	**180**	356
–15.0	**5**	41.0	4.4	**40**	104.0	23.9	**75**	167.0	88	**190**	374
–14.4	**6**	42.8	5.0	**41**	105.8	24.4	**76**	168.8	93	**200**	392
–13.9	**7**	44.6	5.6	**42**	107.6	25.0	**77**	170.6	121	**250**	482
–13.3	**8**	46.4	6.1	**43**	109.4	25.6	**78**	172.4	149	**300**	572
–12.8	**9**	48.2	6.7	**44**	111.2	26.1	**79**	174.2	177	**350**	662
–12.2	**10**	50.0	7.2	**45**	113.0	26.7	**80**	176.0	204	**400**	752
–11.7	**11**	51.8	7.8	**46**	114.8	27.2	**81**	177.8	232	**450**	842
–11.1	**12**	53.6	8.3	**47**	116.6	27.8	**82**	179.6	260	**500**	932
–10.6	**13**	55.4	8.9	**48**	118.4	28.3	**83**	181.4	288	**550**	1022
–10.0	**14**	57.2	9.4	**49**	120.2	28.9	**84**	183.2	316	**600**	1112
– 9.4	**15**	59.0	10.0	**50**	122.0	29.4	**85**	185.0	343	**650**	1202
– 8.9	**16**	60.8	10.6	**51**	123.8	30.0	**86**	186.8	371	**700**	1292
– 8.3	**17**	62.6	11.1	**52**	125.6	30.6	**87**	188.6	399	**750**	1382
– 7.8	**18**	64.4	11.7	**53**	127.4	31.1	**88**	190.4	427	**800**	1472
– 7.2	**19**	66.2	12.2	**54**	129.2	31.7	**89**	192.2	454	**850**	1562
– 6.7	**20**	68.0	12.8	**55**	131.0	32.2	**90**	194.0	482	**900**	1652
– 6.1	**21**	69.8	13.3	**56**	132.8	32.8	**91**	195.8	510	**950**	1742
– 5.6	**22**	71.6	13.9	**57**	134.6	33.3	**92**	197.6	538	**1000**	1832
– 5.0	**23**	73.4	14.4	**58**	136.4	33.9	**93**	199.4	593	**1100**	2012
– 4.4	**24**	75.2	15.0	**59**	138.2	34.4	**94**	201.2	649	**1200**	2192
– 3.9	**25**	77.0	15.6	**60**	140.0	35.0	**95**	203.0	704	**1300**	2372
– 3.3	**26**	78.8	16.1	**61**	141.8	35.6	**96**	204.8	760	**1400**	2552
– 2.8	**27**	80.6	16.7	**62**	143.6	36.1	**97**	206.6	816	**1500**	2732
– 2.2	**28**	82.4	17.2	**63**	145.4	36.7	**98**	208.4	871	**1600**	2912

How to convert: (1) When 43°C should be converted into °F, look for the number 43 on the central column in the second file.
The number at its right hand side shows 109.4°F.
(2) To the contrary, 43°F can be converted into 6.1°C.

Table 5. Hardness Conversion Table

Nearly conversion for Rockwell C scale of Steel

Rockwell C scale (1471N)	Vickers	Brinell		Rockwell		Shore
		Standard ball	Tungsten carbide ball	A scale (588.4N)	B scale (980.7N)	
68	940	—	—	85.6	—	97
67	900	—	—	85.0	—	95
66	865	—	—	84.5	—	92
65	832	—	(739)	83.9	—	91
64	800	—	(722)	83.4	—	88
63	772	—	(705)	82.8	—	87
62	746	—	(688)	82.3	—	85
61	720	—	(670)	81.8	—	83
60	697	—	(654)	81.2	—	81
59	674	—	(634)	80.7	—	80
58	653	—	615	80.1	—	78
57	633	—	595	79.6	—	76
56	613	—	577	79.0	—	75
55	595	—	560	78.5	—	74
54	577	—	543	78.0	—	72
53	560	—	525	77.4	—	71
52	544	(500)	512	76.8	—	69
51	528	(487)	496	76.3	—	68
50	513	(475)	481	75.9	—	67
49	498	(464)	469	75.2	—	66
48	484	451	455	74.7	—	64
47	471	442	443	74.1	—	63
46	458	432	432	73.6	—	62
45	446	421	421	73.1	—	60
44	434	409	409	72.5	—	58
43	423	400	400	72.0	—	57
42	412	390	390	71.5	—	56
41	402	381	381	70.9	—	55
40	392	371	371	70.4	—	54
39	382	362	362	69.9	—	52
38	372	353	353	69.4	—	51
37	363	344	344	68.9	—	50
36	354	336	336	68.4	(109.0)	49
35	345	327	327	67.9	(108.5)	48
34	336	319	319	67.4	(108.0)	47
33	327	311	311	66.8	(107.5)	46
32	318	301	301	66.3	(107.0)	44
31	310	294	294	65.8	(106.0)	43
30	302	286	286	65.3	(105.5)	42
29	294	279	279	64.7	(104.5)	41
28	286	271	271	64.3	(104.0)	41
27	279	264	264	63.8	(103.0)	40
26	272	258	258	63.3	(102.5)	38
25	266	253	253	62.8	(101.5)	38
24	260	247	247	62.4	(101.0)	37
23	254	243	243	62.0	100.0	36
22	248	237	237	61.5	99.0	35
21	243	231	231	61.0	98.5	35
20	238	226	226	60.5	97.8	34
(18)	230	219	219	—	96.7	33
(16)	222	212	212	—	95.5	32
(14)	213	203	203	—	93.9	31
(12)	204	194	194	—	92.3	29
(10)	196	187	187	—	90.7	28
(8)	188	179	179	—	89.5	27
(6)	180	171	171	—	87.1	26
(4)	173	165	165	—	85.5	25
(2)	166	158	158	—	83.5	24
(0)	160	152	152	—	81.7	24

Numbers with ( ) are for reference.

Table 6. Tolerance of Shaft

Unit: μm

Dimension (mm)		a13		c12		d6		e6		e13		f5		f6		g5		g6	
Over	Incl.	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
3	6	− 270	− 450	− 70	− 190	− 30	− 38	− 20	− 28	− 20	− 200	−10	−15	− 10	− 18	− 4	− 9	− 4	− 12
6	10	− 280	− 500	− 80	− 230	− 40	− 49	− 25	− 34	− 25	− 245	−13	−19	− 13	− 22	− 5	−11	− 5	− 14
10	18	− 290	− 560	− 95	− 275	− 50	− 61	− 32	− 43	− 32	− 302	−16	−24	− 16	− 27	− 6	−14	− 6	− 17
18	30	− 300	− 630	−110	− 320	− 65	− 78	− 40	− 53	− 40	− 370	−20	−29	− 20	− 33	− 7	−16	− 7	− 20
30	40	− 310	− 700	−120	− 370	− 80	− 96	− 50	− 66	− 50	− 440	−25	−36	− 25	− 41	− 9	−20	− 9	− 25
40	50	− 320	− 710	−130	− 380														
50	65	− 340	− 800	−140	− 440	−100	−119	− 60	− 79	− 60	− 520	−30	−43	− 30	− 49	−10	−23	−10	− 29
65	80	− 360	− 820	−150	− 450														
80	100	− 380	− 920	−170	− 520	−120	−142	− 72	− 94	− 72	− 612	−36	−51	− 36	− 58	−12	−27	−12	− 34
100	120	− 410	− 950	−180	− 530														
120	140	− 460	−1090	−200	− 600	−145	−170	− 85	−110	− 85	− 715	−43	−61	− 43	− 68	−14	−32	−14	− 39
140	160	− 520	−1150	−210	− 610														
160	180	− 580	−1210	−230	− 630														
180	200	− 660	−1380	−240	− 700	−170	−199	−100	−129	−100	− 820	−50	−70	− 50	− 79	−15	−35	−15	− 44
200	225	− 740	−1460	−260	− 720														
225	250	− 820	−1540	−280	− 740														
250	280	− 920	−1730	−300	− 820	−190	−222	−110	−142	−110	− 920	−56	−79	− 56	− 88	−17	−40	−17	− 49
280	315	−1050	−1860	−330	− 850														
315	355	−1200	−2090	−360	− 930	−210	−246	−125	−161	−125	−1015	−62	−87	− 62	− 98	−18	−43	−18	− 54
355	400	−1350	−2240	−400	− 970														
400	450	−1550	−2470	−440	−1070	−230	−270	−135	−175	−135	−1105	−68	−95	− 68	−108	−20	−47	−20	− 60
450	500	−1650	−2620	−480	−1110														
500	560	−		−	−	−260	−304	−145	−189	−	−	−	−	− 76	−120	−	−	−22	− 66
560	630																		
630	710	−		−	−	−290	−340	−160	−210	−	−	−	−	− 80	−130	−	−	−24	− 74
710	800																		
800	900	−		−	−	−320	−376	−170	−226	−	−	−	−	− 86	−142	−	−	−26	− 82
900	1000																		
1000	1120	−		−	−	−350	−416	−195	−261	−	−	−	−	− 98	−164	−	−	−28	− 94
1120	1250																		
1250	1400	−		−	−	−390	−468	−220	−298	−	−	−	−	−110	−188	−	−	−30	−108
1400	1600																		

Dimension (mm)		h4		h5		h6		h7		h8		h9		h10		h11		h13		js4		Dimension (mm)	
Over	Incl.	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	Over	Incl.
3	6	0	− 4	0	− 5	0	− 8	0	− 12	0	− 18	0	− 30	0	− 48	0	− 75	0	−180	+ 2	− 2	3	6
6	10	0	− 4	0	− 6	0	− 9	0	− 15	0	− 22	0	− 36	0	− 58	0	− 90	0	−220	+ 2	− 2	6	10
10	18	0	− 5	0	− 8	0	−11	0	− 18	0	− 27	0	− 43	0	− 70	0	−110	0	−270	+ 2.5	− 2.5	10	18
18	30	0	− 6	0	− 9	0	−13	0	− 21	0	− 33	0	− 52	0	− 84	0	−130	0	−330	+ 3	− 3	18	30
30	40	0	− 7	0	−11	0	−16	0	− 25	0	− 39	0	− 62	0	−100	0	−160	0	−390	+ 3.5	− 3.5	30	40
40	50																					40	50
50	65	0	− 8	0	−13	0	−19	0	− 30	0	− 46	0	− 74	0	−120	0	−190	0	−460	+ 4	− 4	50	65
65	80																					65	80
80	100	0	−10	0	−15	0	−22	0	− 35	0	− 54	0	− 87	0	−140	0	−220	0	−540	+ 5	− 5	80	100
100	120																					100	120
120	140	0	−12	0	−18	0	−25	0	− 40	0	− 63	0	−100	0	−160	0	−250	0	−630	+ 6	− 6	120	140
140	160																					140	160
160	180																					160	180
180	200	0	−14	0	−20	0	−29	0	− 46	0	− 72	0	−115	0	−185	0	−290	0	−720	+ 7	− 7	180	200
200	225																					200	225
225	250																					225	250
250	280	0	−16	0	−23	0	−32	0	− 52	0	− 81	0	−130	0	−210	0	−320	0	−810	+ 8	− 8	250	280
280	315																					280	315
315	355	0	−18	0	−25	0	−36	0	− 57	0	− 89	0	−140	0	−230	0	−360	0	−890	+ 9	− 9	315	355
355	400																					355	400
400	450	0	−20	0	−27	0	−40	0	− 63	0	− 97	0	−155	0	−250	0	−400	0	−970	+10	−10	400	450
450	500																					450	500
500	560	−	−	−	−	0	−44	0	− 70	0	−110	0	−175	0	−280	0	−440	−	−	−	−	500	560
560	630																					560	630
630	710	−	−	−	−	0	−50	0	− 80	0	−125	0	−200	0	−320	0	−500	−	−	−	−	630	710
710	800																					710	800
800	900	−	−	−	−	0	−56	0	− 90	0	−140	0	−230	0	−360	0	−560	−	−	−	−	800	900
900	1000																					900	1000
1000	1120	−	−	−	−	0	−66	0	−105	0	−165	0	−260	0	−420	0	−660	−	−	−	−	1000	1120
1120	1250																					1120	1250
1250	1400	−	−	−	−	0	−78	0	−125	0	−195	0	−310	0	−500	0	−780	−	−	−	−	1250	1400
1400	1600																					1400	1600

Unit: μm

Dimension (mm)		j5		js5		j6		js6		j7		k4		k5		k6		m5	
Over	Incl.	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
3	6	+3	− 2	+ 2.5	− 2.5	+ 6	− 2	+ 4	− 4	+ 8	− 4	+ 5	+1	+ 6	+1	+ 9	+1	+ 9	+ 4
6	10	+4	− 2	+ 3	− 3	+ 7	− 2	+ 4.5	− 4.5	+10	− 5	+ 5	+1	+ 7	+1	+10	+1	+12	+ 6
10	18	+5	− 3	+ 4	− 4	+ 8	− 3	+ 5.5	− 5.5	+12	− 6	+ 6	+1	+ 9	+1	+12	+1	+15	+ 7
18	30	+5	− 4	+ 4.5	− 4.5	+ 9	− 4	+ 6.8	− 6.8	+13	− 8	+ 8	+2	+11	+2	+15	+2	+17	+ 8
30	40	+6	− 5	+ 5.5	− 5.5	+11	− 5	+ 8	− 8	+15	−10	+ 9	+2	+13	+2	+18	+2	+20	+ 9
40	50																		
50	65	+6	− 7	+ 6.5	− 6.5	+12	− 7	+ 9.5	− 9.5	+18	−12	+10	+2	+15	+2	+21	+2	+24	+11
65	80																		
80	100	+6	− 9	+ 7.5	− 7.5	+13	− 9	+11	−11	+20	−15	+13	+3	+18	+3	+25	+3	+28	+13
100	120																		
120	140	+7	−11	+ 9	− 9	+14	−11	+12.5	−12.5	+22	−18	+15	+3	+21	+3	+28	+3	+33	+15
140	160																		
160	180																		
180	200	+7	−13	+10	−10	+16	−13	+14.5	−14.5	+25	−21	+18	+4	+24	+4	+33	+4	+37	+17
200	225																		
225	250																		
250	280	+7	−16	+11.5	−11.5	+16	−16	+16	−16	+26	−26	+20	+4	+27	+4	+36	+4	+43	+20
280	315																		
315	355	+7	−18	+12.5	−12.5	+18	−18	+18	−18	+29	−28	+22	+4	+29	+4	+40	+4	+46	+21
355	400																		
400	450	+7	−20	+13.5	−13.5	+20	−20	+20	−20	+31	−32	+25	+5	+32	+5	+45	+5	+50	+23
450	500																		
500	560	−	−	−	−	−	−	+22	−22	−	−	−	−	−	−	+44	0	−	−
560	630																		
630	710	−	−	−	−	−	−	+25	−25	−	−	−	−	−	−	+50	0	−	−
710	800																		
800	900	−	−	−	−	−	−	+28	−28	−	−	−	−	−	−	+56	0	−	−
900	1000																		
1000	1120	−	−	−	−	−	−	+33	−33	−	−	−	−	−	−	+66	0	−	−
1120	1250																		
1250	1400	−	−	−	−	−	−	+39	−39	−	−	−	−	−	−	+78	0	−	−
1400	1600																		

Dimension (mm)		m6		n5		n6		p5		p6		r6		r7		Base Tolerance				Dimension (mm)	
Over	Incl.	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	IT2	IT3	IT5	IT7	Over	Incl.
3	6	+ 12	+ 4	+13	+ 8	+ 16	+ 8	+17	+12	+ 20	+ 12	+ 23	+ 15	+ 27	+ 15	1.5	2.5	5	12	3	6
6	10	+ 15	+ 6	+16	+10	+ 19	+10	+21	+15	+ 24	+ 15	+ 28	+ 19	+ 34	+ 19	1.5	2.5	6	15	6	10
10	18	+ 18	+ 7	+20	+12	+ 23	+12	+26	+18	+ 29	+ 18	+ 34	+ 23	+ 41	+ 23	2	3	8	18	10	18
18	30	+ 21	+ 8	+24	+15	+ 28	+15	+31	+22	+ 35	+ 22	+ 41	+ 28	+ 49	+ 28	2.5	4	9	21	18	30
30	40	+ 25	+ 9	+28	+17	+ 33	+17	+37	+26	+ 42	+ 26	+ 50	+ 34	+ 59	+ 34	2.5	4	11	25	30	40
40	50																			40	50
50	65	+ 30	+11	+33	+20	+ 39	+20	+45	+32	+ 51	+ 32	+ 60	+ 41	+ 71	+ 41	3	5	13	30	50	65
65	80											+ 62	+ 43	+ 73	+ 43					65	80
80	100	+ 35	+13	+38	+23	+ 45	+23	+52	+37	+ 59	+ 37	+ 73	+ 51	+ 86	+ 51	4	6	15	35	80	100
100	120											+ 76	+ 54	+ 89	+ 54					100	120
120	140	+ 40	+15	+45	+27	+ 52	+27	+61	+43	+ 68	+ 43	+ 88	+ 63	+103	+ 63	5	8	18	40	120	140
140	160											+ 90	+ 65	+105	+ 65					140	160
160	180											+ 93	+ 68	+108	+ 68					160	180
180	200	+ 46	+17	+51	+31	+ 60	+31	+70	+50	+ 79	+ 50	+106	+ 77	+123	+ 77	7	10	20	46	180	200
200	225											+109	+ 80	+126	+ 80					200	225
225	250											+113	+ 84	+130	+ 84					225	250
250	280	+ 52	+20	+57	+34	+ 66	+34	+79	+56	+ 88	+ 56	+126	+ 94	+146	+ 94	8	12	23	52	250	280
280	315											+130	+ 98	+150	+ 98					280	315
315	355	+ 57	+21	+62	+37	+ 73	+37	+87	+62	+ 98	+ 62	+144	+108	+165	+108	9	13	25	57	315	355
355	400											+150	+114	+171	+114					355	400
400	450	+ 63	+23	+67	+40	+ 80	+40	+95	+68	+108	+ 68	+166	+126	+189	+126	10	15	27	63	400	450
450	500											+172	+132	+195	+132					450	500
500	560	+ 70	+26	−	−	+ 88	+44	−	−	+122	+ 78	+194	+150	+220	+150	−	−	−	70	500	560
560	630											+199	+155	+225	+155					560	630
630	710	+ 80	+30	−	−	+100	+50	−	−	+138	+ 88	+225	+175	+255	+175	−	−	−	80	630	710
710	800											+235	+185	+265	+185					710	800
800	900	+ 90	+34	−	−	+112	+56	−	−	+156	+100	+266	+210	+300	+210	−	−	−	90	800	900
900	1000											+276	+220	+310	+220					900	1000
1000	1120	+106	+40	−	−	+132	+66	−	−	+186	+120	+316	+250	+355	+250	−	−	−	105	1000	1120
1120	1250											+326	+260	+365	+260					1120	1250
1250	1400	+126	+48	−	−	+156	+78	−	−	+218	+140	+378	+300	+425	+300	−	−	−	125	1250	1400
1400	1600											+408	+330	+455	+330					1400	1600

■ Table 7. Tolerance of Housing Bore

Unit: μm

Dimension (mm)		E7		E10		E11		E12		F6		F7		F8		G6		G7		H6		H7		H8		H9		H10		H11		H13		J6		Js6		J7		Js7		K5		Dimension (mm)	
Over	Incl.	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	Over	Incl.
3	6	+ 32	+ 20	+ 68	+ 20	+ 95	+ 20	+140	+ 20	+ 18	+ 10	+ 22	+ 10	+ 28	+ 10	+ 12	+ 4	+ 16	+ 4	+ 8	0	+ 12	0	+ 18	0	+ 30	0	+ 48	0	+ 75	0	+180	0	+ 5	−3	+ 4	− 4	+ 6	− 6	+ 6	− 6	0	− 5	3	6
6	10	+ 40	+ 25	+ 83	+ 25	+115	+ 25	+175	+ 25	+ 22	+ 13	+ 28	+ 13	+ 35	+ 13	+ 14	+ 5	+ 20	+ 5	+ 9	0	+ 15	0	+ 22	0	+ 36	0	+ 58	0	+ 90	0	+220	0	+ 5	−4	+ 4.5	− 4.5	+ 8	− 7	+ 7.5	− 7.5	+1	− 5	6	10
10	18	+ 50	+ 32	+102	+ 32	+142	+ 32	+212	+ 32	+ 27	+ 16	+ 34	+ 16	+ 43	+ 16	+ 17	+ 6	+ 24	+ 6	+11	0	+ 18	0	+ 27	0	+ 43	0	+ 70	0	+110	0	+270	0	+ 6	−5	+ 5.5	− 5.5	+10	− 8	+ 9	− 9	+2	− 6	10	18
18	30	+ 61	+ 40	+124	+ 40	+170	+ 40	+250	+ 40	+ 33	+ 20	+ 41	+ 20	+ 53	+ 20	+ 20	+ 7	+ 28	+ 7	+13	0	+ 21	0	+ 33	0	+ 52	0	+ 84	0	+130	0	+330	0	+ 8	−5	+ 6.5	− 6.5	+12	− 9	+10.5	−10.5	+1	− 8	18	30
30	40	+ 75	+ 50	+150	+ 50	+210	+ 50	+300	+ 50	+ 41	+ 25	+ 50	+ 25	+ 64	+ 25	+ 25	+ 9	+ 34	+ 9	+16	0	+ 25	0	+ 39	0	+ 62	0	+100	0	+160	0	+390	0	+10	−6	+ 8	− 8	+14	−11	+12.5	−12.5	+2	− 9	30	40
40	50																																											40	50
50	65	+ 90	+ 60	+180	+ 60	+250	+ 60	+360	+ 60	+ 49	+ 30	+ 60	+ 30	+ 76	+ 30	+ 29	+10	+ 40	+10	+19	0	+ 30	0	+ 46	0	+ 74	0	+120	0	+190	0	+460	0	+13	−6	+ 9.5	− 9.5	+18	−12	+15	−15	+3	−10	50	65
65	80																																											65	80
80	100	+107	+ 72	+212	+ 72	+292	+ 72	+422	+ 72	+ 58	+ 36	+ 71	+ 36	+ 90	+ 36	+ 34	+12	+ 47	+12	+22	0	+ 35	0	+ 54	0	+ 87	0	+140	0	+220	0	+540	0	+16	−6	+11	−11	+22	−13	+17.5	−17.5	+2	−13	80	100
100	120																																											100	120
120	140	+125	+ 85	+245	+ 85	+335	+ 85	+485	+ 85	+ 68	+ 43	+ 83	+ 43	+106	+ 43	+ 39	+14	+ 54	+14	+25	0	+ 40	0	+ 63	0	+100	0	+160	0	+250	0	+630	0	+18	−7	+12.5	−12.5	+26	−14	+20	−20	+3	−15	120	140
140	160																																											140	160
160	180																																											160	180
180	200	+146	+100	+285	+100	+390	+100	+560	+100	+ 79	+ 50	+ 96	+ 50	+122	+ 50	+ 44	+15	+ 61	+15	+29	0	+ 46	0	+ 72	0	+115	0	+185	0	+290	0	+720	0	+22	−7	+14.5	−14.5	+30	−16	+23	−23	+2	−18	180	200
200	225																																											200	225
225	250																																											225	250
250	280	+146	+110	+320	+110	+430	+110	+630	+110	+ 88	+ 56	+108	+ 56	+137	+ 56	+ 49	+17	+ 69	+17	+32	0	+ 52	0	+ 81	0	+130	0	+210	0	+320	0	+810	0	+25	−7	+16	−16	+36	−16	+26	−26	+3	−20	250	280
280	315																																											280	315
315	355	+182	+125	+355	+125	+485	+125	+695	+125	+ 98	+ 62	+119	+ 62	+151	+ 62	+ 54	+18	+ 75	+18	+36	0	+ 57	0	+ 89	0	+140	0	+230	0	+360	0	+890	0	+29	−7	+18	−18	+39	−18	+28.5	−28.5	+3	−22	315	355
355	400																																											355	400
400	450	+198	+135	+385	+135	+535	+135	+765	+135	+108	+ 68	+131	+ 68	+165	+ 68	+ 60	+20	+ 83	+20	+40	0	+ 63	0	+ 97	0	+155	0	+250	0	+400	0	+970	0	+33	−7	+20	−20	+43	−20	+31.5	−31.5	+2	−25	400	450
450	500																																											450	500
500	560	+215	+145	—	—	—	—	—	—	+120	+ 76	+146	+ 76	+186	+ 76	+ 66	+22	+ 92	+22	+44	0	+ 70	0	+110	0	+175	0	+280	0	+440	0	—		—	—	+22	−22	—	—	+35	−35	—	—	500	560
560	630																																											560	630
630	710	+240	+160	—	—	—	—	—	—	+130	+ 80	+160	+ 80	+205	+ 80	+ 74	+24	+104	+24	+50	0	+ 80	0	+125	0	+200	0	+320	0	+500	0	—		—	—	+25	−25	—	—	+40	−40	—	—	630	710
710	800																																											710	800
800	900	+260	+170	—	—	—	—	—	—	+142	+ 86	+176	+ 86	+226	+ 86	+ 82	+26	+116	+26	+56	0	+ 90	0	+140	0	+230	0	+360	0	+560	0	—		—	—	+28	−28	—	—	+45	−45	—	—	800	900
900	1000																																											900	1000
1000	1120	+300	+195	—	—	—	—	—	—	+164	+ 98	+203	+ 98	+263	+ 98	+ 94	+28	+133	+28	+66	0	+105	0	+165	0	+260	0	+420	0	+660	0	—		—	—	+33	−33	—	—	+52.5	−52.5	—	—	1000	1120
1120	1250																																											1120	1250
1250	1400	+345	+220	—	—	—	—	—	—	+188	+110	+235	+110	+305	+110	+108	+30	+155	+30	+78	0	+125	0	+195	0	+310	0	+500	0	+780	0	—		—	—	+39	−39	—	—	+62.5	−62.5	—	—	1250	1400
1400	1600																																											1400	1600
1600	1800	+390	+240	—	—	—	—	—	—	+212	+120	+270	+120	+350	+120	+124	+32	+182	+32	+92	0	+150	0	+230	0	+370	0	+600	0	+920	0	—		—	—	+46	−46	—	—	+75	−75	—	—	1600	1800
1800	2000																																											1800	2000

Unit: μm

Dimension (mm)		K6		K7		M6		M7		N6		N7		P6		P7		R6		R7	
Over	Incl.	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
3	6	+2	− 6	+ 3	− 9	− 1	− 9	0	− 12	− 5	− 13	− 4	− 16	− 9	− 17	− 8	− 20	− 12	− 20	− 11	− 23
6	10	+2	− 7	+ 5	− 10	− 3	− 12	0	− 15	− 7	− 16	− 4	− 19	− 12	− 21	− 9	− 24	− 16	− 25	− 13	− 28
10	18	+2	− 9	+ 6	− 12	− 4	− 15	0	− 18	− 9	− 20	− 5	− 23	− 15	− 26	− 11	− 29	− 20	− 31	− 16	− 34
18	30	+2	−11	+ 6	− 15	− 4	− 17	0	− 21	−11	− 24	− 7	− 28	− 18	− 31	− 14	− 35	− 24	− 37	− 20	− 41
30	40	+3	−13	+ 7	− 18	− 4	− 20	0	− 25	−12	− 28	− 8	− 33	− 21	− 37	− 17	− 42	− 29	− 45	− 25	− 50
40	50																				
50	65	+4	−15	+ 9	− 21	− 5	− 24	0	− 30	−14	− 33	− 9	− 39	− 26	− 45	− 21	− 51	− 35	− 54	− 30	− 60
65	80																	− 37	− 56	− 32	− 62
80	100	+4	−18	+10	− 25	− 6	− 28	0	− 35	−16	− 38	−10	− 45	− 30	− 52	− 24	− 59	− 44	− 66	− 38	− 73
100	120																	− 47	− 69	− 41	− 76
120	140	+4	−21	+12	− 28	− 8	− 33	0	− 40	−20	− 45	−12	− 52	− 36	− 61	− 28	− 68	− 56	− 81	− 48	− 88
140	160																	− 58	− 83	− 50	− 90
160	180																	− 61	− 86	− 53	− 93
180	200	+5	−24	+13	− 33	− 8	− 37	0	− 46	−22	− 51	−14	− 60	− 41	− 70	− 33	− 79	− 68	− 97	− 60	−106
200	225																	− 71	−100	− 63	−109
225	250																	− 75	−104	− 67	−113
250	280	+5	−27	+16	− 36	− 9	− 41	0	− 52	−25	− 57	−14	− 66	− 47	− 79	− 36	− 88	− 85	−117	− 74	−126
280	315																	− 89	−121	− 78	−130
315	355	+7	−29	+17	− 40	−10	− 46	0	− 57	−26	− 62	−16	− 73	− 51	− 87	− 41	− 98	− 97	−133	− 87	−144
355	400																	−103	−139	− 93	−150
400	450	+8	−32	+18	− 45	−10	− 50	0	− 63	−27	− 67	−17	− 80	− 55	− 95	− 45	−108	−113	−153	−103	−166
450	500																	−119	−159	−109	−172
500	560	0	−44	0	− 70	−26	− 70	−26	− 96	−44	− 88	−44	−114	− 78	−122	− 78	−148	−150	−194	−150	−220
560	630																	−155	−199	−155	−225
630	710	0	−50	0	− 80	−30	− 80	−30	−110	−50	−100	−50	−130	− 88	−138	− 88	−168	−175	−225	−175	−255
710	800																	−185	−235	−185	−265
800	900	0	−56	0	− 90	−34	− 90	−34	−124	−56	−112	−56	−146	−100	−156	−100	−190	−210	−266	−210	−300
900	1000																	−220	−276	−220	−310
1000	1120	0	−66	0	−105	−40	−106	−40	−145	−66	−132	−66	−171	−120	−186	−120	−225	−250	−316	−250	−355
1120	1250																	−260	−326	−260	−365
1250	1400	0	−78	0	−125	−48	−126	−48	−173	−78	−156	−78	−203	−140	−218	−140	−265	−300	−378	−300	−425
1400	1600																	−330	−408	−330	−455
1600	1800	0	−92	0	−150	−58	−150	−58	−208	−92	−184	−92	−242	−170	−262	−170	−320	−370	−462	−370	−520
1800	2000																	−400	−492	−400	−550

Table 8. International Units SI Conversion Table

Category	Name of unit	Symbol	Conversion to SI	SI name of unit	SI abbreviation
Angle	Degree Minute Second	° ' "	$\pi/180$ $\pi/10800$ $\pi/648000$	Radian	**rad**
Length	Meter Micron Angstrom Nautical mile	**m** **μ** **Å** **mile**	1 10^{-6} 10^{-10} 1852	Meter	**m**
Area	Square meter Radius Hectare	**m^2** **a** **ha**	1 10^{2} 10^{4}	Square meter	**m^2**
Volume	Cubic meter Liter	**m^3** **ℓ**	1 10^{-3}	Cubic meter	**m^3**
Mass	Kilogram Ton Atomic mass unit	**kg** **t** **u**	1 10^{3} ≒ 1.66057×10^{-27}	Kilogram	**kg**
Time	Second Minute Hour Day	**s** **min** **h** **d**	1 60 3600 86400	Second	**s**
Speed	Meter per second Knot	**m/s** **kn**	1 1852/3600	Meter per second	**m/s**
Frequency and oscillation	Cycle	**s^{-1}**	1	Hertz	**Hz**
Speed of rotation	revolution per minute	**min^{-1}**	1/60	per second	**s^{-1}**
Angular speed	Radial per second	**rad/s**	1	Radian per second	**rad/s**
Acceleration	Meters per second squared Gravity	**m/s^2** **G**	1 9.80665	Meters per second squared	**m/s^2**
Force	Kilogram force Ton force Dyne	**kgf** **tf** **dyn**	9.80665 9806.65 10^{-5}	Newton	**N**
Moment of force	Kilogram force meter	**kgf·m**	9.80665	Newton meter	**N·m**
Stress and pressure	Kilogram force per meter squared Kilogram force per centimeter squared Kilogram force millimeter squared	**kgf/m^2** **kgf/cm^2** **kgf/mm^2**	9.80665 9.80665×10^{4} 9.80665×10^{6}	Pascal	**Pa**

Category	Name of unit	Symbol	Conversion to SI	SI name of unit	SI abbreviation
Pressure	Meter of water Millimeter of mercury Torr Atmosphere Bar	**mH_2O** **mmHg** **Torr** **atm** **bar**	9806.65 101325/760 101325/760 101325 10^{5}	Pascal	**Pa**
Energy	Erg I. T. Calorie Kilogram force meter Kilowatt hour Metric horsepower hour Electron volt	**erg** **cal_{IT}** **kgf·m** **kw·h** **PS·h** **eV**	10^{-7} 4.1868 9.80665 3.600×10^{6} ≒ 2.64779×10^{6} ≒ 1.60219×10^{-19}	Joule	**J**
Power and dynamic force	Watt Horsepower Kilogram force meter per second	**W** **PS** **kgf·m/s**	1 ≒ 735.5 9.80665	Watt	**W**
Viscosity	Poise Centipoise Kilogram force per square meter	**P** **cP** **$kgf\cdot s/m^2$**	10^{-1} 10^{-3} 9.80665	Pascal second	**Pa·s**
Kinematic viscosity	Stoke Centistoke	**St** **cSt**	10^{-4} 10^{-6}	Square meter per second	**m^2/s**

Table 9. SI Prefixes

Factor	Prefix	
	Name	Symbol
10^{18}	Exa	E
10^{15}	Peta	P
10^{12}	Tera	T
10^{9}	Giga	G
10^{6}	Mega	M
10^{3}	Kilo	k
10^{2}	Hecto	h
10	Deca	da

Factor	Prefix	
	Name	Symbol
10^{-1}	Deci	d
10^{-2}	Centi	c
10^{-3}	Milli	m
10^{-6}	Micro	μ
10^{-9}	Nano	n
10^{-12}	Pico	p
10^{-15}	Femto	f
10^{-18}	Atto	a

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■ Table 10. Lubricating Greases

Typical Lubricating Greases for Bearings

Name of Grease	Grease Maker	Base Oil	Thickener	Penetration	Dropping point (°C)		Operating temperature range (°C)	Color	Properties				
									Water Resistance	High Speed Rotation	Noise	Grease Life at High Temp.	Torque at Low Temp.
Daphne Eponech No. 2	Idemitsu Kosan	Hydrodesulfurized wax	Lithium	280	197		–40～130	Tan	○				
Beacon 325	Exxon Mobil	Diester Oil	Lithium	280	193		–54～120	Light Gray	○	○			○
Polyrex EM	Exxon Mobil	Mineral Oil	Polyurea	285	300		–20～180	Blue	○	○		○	
Mobilgrease 28	Exxon Mobil	Diester Oil+Mineral Oil+Synthetic Hydrocarbon	Microgel	270	270		–62～177	Red	○			○	
Mobilux 2	Exxon Mobil	Mineral Oil	Lithium	270	178		0～125	Brown	○				
Temprex N3	Exxon Mobil	Mineral Oil	Lithium Complex	235	300		–30～150	Green	○	○		○	
Barrierta IMI	NOK Kluber	Flourine	PTFE	280	None		–50～220	White	○	○		○	○
Isoflex NBU15	NOK Kluber	Diester+Mineral Oil	Barium Complex	280	250		–40～130	Beige	○	○			
Isoflex NCA15	NOK Kluber	Synthetic Ester Mineral Blend	Calcium Complex	280	180		–50～120	Beige	○	○			
Isoflex LDS18SA	NOK Kluber	Ester Oil	Lithium	280	190		–60～130	Yellow	○	○			○
NOXLUB BN2420P	NOK Kluber	PFPE Oil	Special Thickner	280	None		–35～220	White				○	
NOXLUB BN4020	NOK Kluber	PFPE Oil	Special Thickner	280	None		–35～260	White				○	
Stabrags NBU 8 EP	NOK Kluber	Mineral Oil	Barium Complex	280	220		–35～150	Beige					○
Multemp LRL3	Kyodo Yushi	Polyolester	Lithium	235	208		–50～150	Peach White	○		○	○	○
Multemp PS2	Kyodo Yushi	Diester Oil+Mineral Oil	Lithium	275	190		–55～130	White	○	○			
Multemp SRL	Kyodo Yushi	Tetraester	Lithium	245	191		–40～150	Light Yellow	○		○	○	○
Alvania Grease 2S	Shell	Mineral Oil	Lithium	276	185		–25～120	Tan	○		○		
Alvania Grease 3S	Shell	Mineral Oil	Lithium	240	185		–20～135	Tan	○		○	○	
AeroShell Grease 7	Shell	Diester Oil	Microgel	285	268		–73～150	Light Brown	○	○		○	○
Alvania EP Grease 2	Shell	Mineral Oil	Lithium	285	185		–15～110	Reddish Brown	○				
Retinax LX No.2	Shell	Mineral Oil	Lithium Complex	270	250		–15～150	Light Brown	○			○	○
SH44M（DC44M）	Dow Corning Toray	Silicone Oil	Lithium	260	210		–40～180	Brown	○			○	○
NIGACE WR-S	Nippon Grease	Synthetic Oil	Urea	240	290		–30～150	Light Yellow	○			○	

Remarks: 1. When the grease is used at temperature near the high or low end of the recommended operating temperature, please contact NACHI.
2. Generally Ester oil may give damage to polyacrylic rubber or ABS resin. Please be careful, when you use grease with Ester base oil.
3. Do not mix different type of greases.
4. If sodium thickener grease is mixed with water, the grease become soft and may leak.

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