

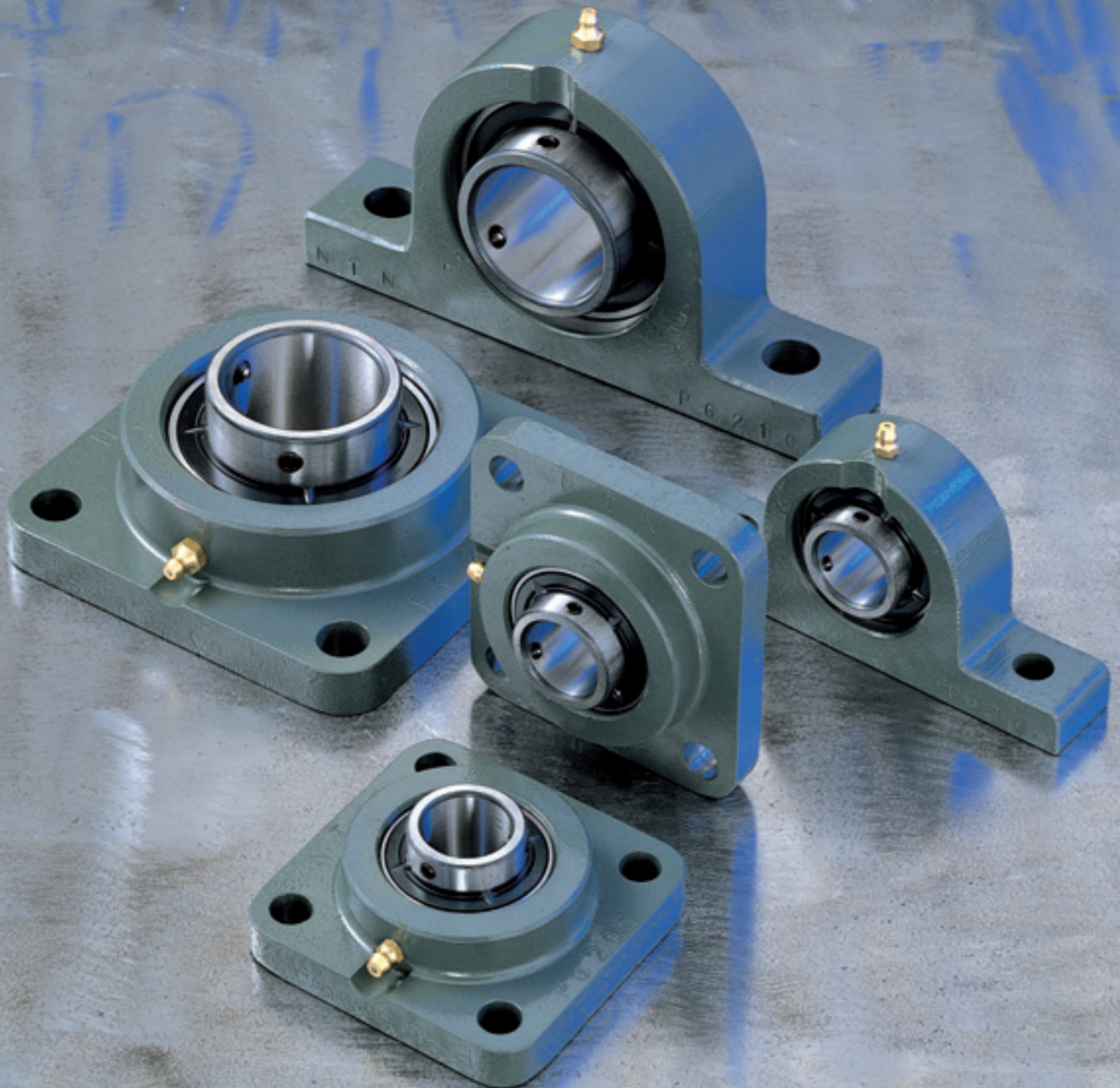
For New Technology Network

**NTN**<sup>®</sup>

NTN corporation

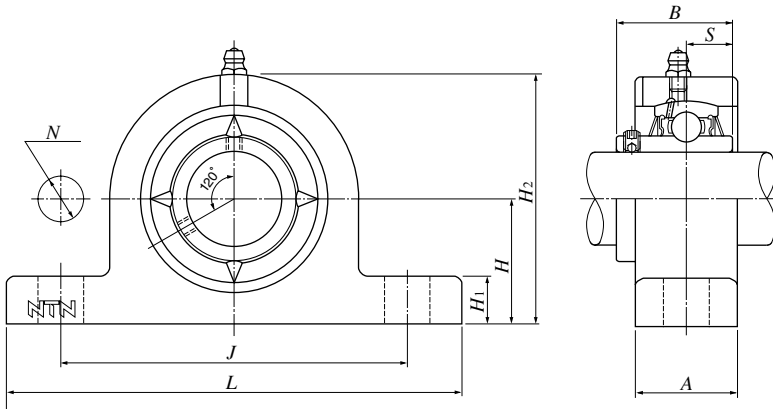
# Bearing Units Steel Series

CAT. No. 3902/E



## Pillow Block Unit; UCPG2 series

Cylindrical bore with set screw



Confidenza Kft. • 1138 Budapest, Révész u. 9. • www.confidenza.hu • confidenza@confidenza.hu • T:(36)-1-359-0800

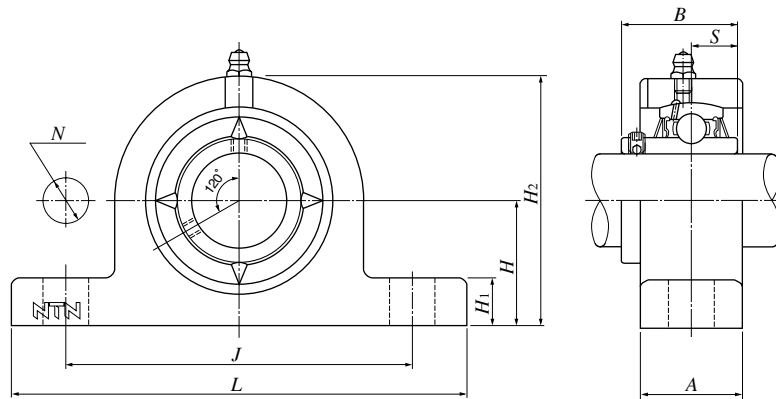
Bore dia. mm	Part number	Boundary dimensions mm									Nominal bolt dia.	Insert bearing number	Basic dynamic rated load kN Cr	Basic static rated load kN Cor	Housing part number	Mass kg (Ref.)
		H	L	J	A	N	H <sub>1</sub>	H <sub>2</sub>	B	S						
12	UCPG201D1	30.2	127	95	25	12	14	62	31	12.7	M10	UC201D1	12.8	6.65	PG203D1	0.7
15	UCPG202D1							UC202D1								
17	UCPG203D1							UC203D1								
20	UCPG204D1	33.3	65	UC204D1	PG204D1											
25	UCPG205D1	36.5	140	105	30	15	71	34	14.3	UC205D1	14.0	7.85	PG205D1	0.8		
30	UCPG206D1	42.9	165	121	35	17	83	38.1	15.9	M14	UC206D1	19.5	11.3	PG206D1	1.3	
35	UCPG207D1	47.6	167	127			93				42.9	17.5	UC207D1	25.7	15.3	PG207D1
40	UCPG208D1	49.2	184	137	40	18	98	49.2	19		UC208D1	29.1	17.8	PG208D1	1.9	
45	UCPG209D1	54	190	146			20				106	UC209D1	32.5	20.4	PG209D1	2.2
50	UCPG210D1	57.2	206	159	45	19	114	51.6	22.2	M16	UC210D1	35.0	23.2	PG210D1	2.6	
55	UCPG211D1	63.5	219	171			23				126	55.6	UC211D1	43.5	29.2	PG211D1
60	UCPG212D1	69.8	241	184	50	25	138	65.1	25.4		UC212D1	52.5	36.0	PG212D1	4.6	
65	UCPG213D1	76.2	265	203			27				151	UC213D1	57.5	40.0	PG213D1	5.9
70	UCPG214D1	79.4	266	210	55	27	157	74.6	30.2	M20	UC214D1	62.0	44.0	PG214D1	6.6	
75	UCPG215D1	82.6	275	217			24				28	163	77.8	33.3	UC215D1	66.0
80	UCPG216D1	88.9	292	232	60	30		175	82.6			34.1			UC216D1	72.5
85	UCPG217D1	95.2	310	247			32	187			85.7		UC217D1	83.5	64.0	PG217D1
90	UCPG218D1	101.6	327	262	65	26	33	200	96	39.7	M22	UC218D1	96.0	71.5	PG218D1	13

Note)

1. Stamped steel or cast iron dust covers are also available upon request.
2. Refer to catalog 2400.
3. Ball bearing tolerances according to JIS B 1558.
4. Housing tolerances according to JIS B 1559.

# Pillow Block Unit; UCPG3 series

Cylindrical bore with set screw



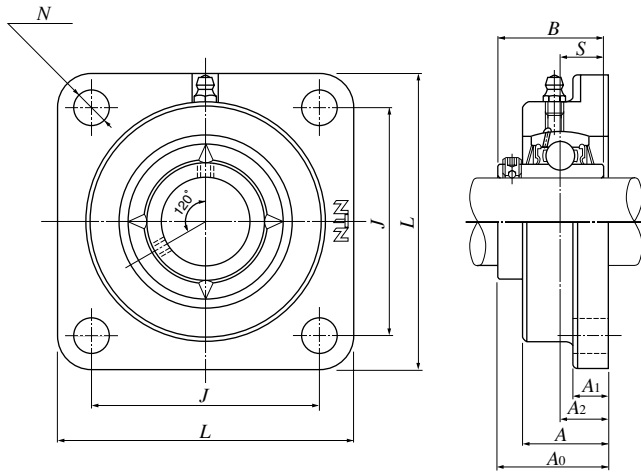
Bore dia. mm	Part number	Boundary dimensions mm									Nominal bolt dia.	Insert bearing number	Basic dynamic rated load kN C <sub>r</sub>	Basic static rated load kN C <sub>0r</sub>	Housing part number	Mass kg (Ref.)
		H	L	J	A	N	H <sub>1</sub>	H <sub>2</sub>	B	S						
25	UCPG305D1	45	175	132	35	17	15	85	38	15	M14	UC305D1	21.2	10.9	PG305D1	1.4
30	UCPG306D1	50	180	140			18	95	43	17		19	UC306D1	26.7	15.0	PG306D1
35	UCPG307D1	56	210	160	40	20	106	48	22	UC307D1			33.5	19.1	PG307D1	2.8
40	UCPG308D1	60	220	170	45	22	116	52		M16		UC308D1	40.5	24.0	PG308D1	3.0
45	UCPG309D1	67	245	190	50	24	129	57	25		UC309D1	53.0	32.0	PG309D1	4.1	
50	UCPG310D1	75	275	212	55	19	27	143			61	M20	UC310D1	62.0	38.5	PG310D1
55	UCPG311D1	80	310	236	60	30	154	66	30		UC311D1		71.5	45.0	PG311D1	7.4
60	UCPG312D1	85	330	250	65	24	32	165		71	26	M22	UC312D1	82.0	52.0	PG312D1
65	UCPG313D1	90	340	260		33	176	75	30	35	UC313D1		92.5	60.0	PG313D1	10
70	UCPG314D1	95	360	280	75	26	187	78	33		40	M27	UC314D1	104	68.0	PG314D1
75	UCPG315D1	100	380	290		32	198	82	32	45			UC315D1	113	77.0	PG315D1
80	UCPG316D1	106	400	300	80	32	210	86	34		96	M30	UC316D1	123	86.5	PG316D1
85	UCPG317D1	112	420	320		40	220	96	40	235			UC317D1	133	97.0	PG317D1
90	UCPG318D1	118	430	330	90	35	250	103	41		275	M33	UC318D1	143	107	PG318D1
95	UCPG319D1	125	470	360		45	280	112	44	300			UC319D1	153	119	PG319D1
100	UCPG320D1	140	490	380	90	50	275	108	42		320	M33	UC320D1	173	141	PG320D1
105	UCPG321D1					55	300	117	46	355			135	54	UC321D1	184
110	UCPG322D1	150	520	400	100	38	65	320	126	51	75	UC322D1	205	179	PG322D1	45
120	UCPG324D1	160	570	450		65	355	135	54	UC324D1		207	185	PG324D1	55	
130	UCPG326D1	180	600	480	110	75	390	145	59	390	UC326D1	229	214	PG326D1	72	
140	UCPG328D1	200	620	500		390	145	59	UC328D1		253	246	PG328D1	89		

Note)

1. Stamped steel or cast iron dust covers are also available upon request.
2. Refer to catalog 2400.
3. Ball bearing tolerances according to JIS B 1558.
4. Housing tolerances according to JIS B 1559.

## Square Flange Unit; UCFG2 series

Cylindrical bore with set screw



Bore dia. mm	Part number	Boundary dimensions mm									Nominal bolt dia.	Insert bearing number	Basic dynamic rated load kN C <sub>r</sub>	Basic static rated load kN C <sub>0r</sub>	Housing part number	Mass kg (Ref.)
		L	J	A <sub>2</sub>	A <sub>1</sub>	A	N	A <sub>0</sub>	B	S						
12	UCFG201D1	86	64	15	11	25.5	12	33.3	31	12.7	M10	UC201D1	12.8	6.65	FG204D1	0.7
15	UCFG202D1											UC202D1				
17	UCFG203D1											UC203D1				
20	UCFG204D1											UC204D1				0.6
25	UCFG205D1	95	70	16	13	27	35.7	34	14.3	M12	UC205D1	14.0	7.85	FG205D1	0.8	
30	UCFG206D1	108	83	18		31					40.2	38.1	15.9	UC206D1	19.5	11.3
35	UCFG207D1	117	92	19	15	34	44.4	42.9	17.5	M14	UC207D1	25.7	15.3	FG207D1	1.4	
40	UCFG208D1	130	102	21		36					51.2	49.2	19	UC208D1	29.1	17.8
45	UCFG209D1	137	105	22	16	38	52.2	51.6	M16	UC209D1	32.5			20.4	FG209D1	2.2
50	UCFG210D1	143	111			40				54.6	51.6	UC210D1	35.0	23.2	FG210D1	2.4
55	UCFG211D1	162	130	25	18	43	58.4	55.6	22.2	M16	UC211D1	43.5	29.2	FG211D1	3.6	
60	UCFG212D1	175	143	29		48					68.7	65.1	25.4	UC212D1	52.5	36.0
65	UCFG213D1	187	149	30	22	50	69.7	74.6	30.2	M16	UC213D1			57.5	40.0	FG213D1
70	UCFG214D1	193	152	31		54					75.4	74.6	30.2	UC214D1	62.0	44.0
75	UCFG215D1	200	159	34	22	56	78.5	77.8	33.3	M20	UC215D1	66.0	49.5	FG215D1	6.9	
80	UCFG216D1	208	165			58					83.3	82.6	UC216D1	72.5	53.0	FG216D1
85	UCFG217D1	220	175	36	24	63	87.6	85.7	34.1	M20	UC217D1	83.5	64.0	FG217D1	9.3	
90	UCFG218D1	235	187	40		68					96.3	96	39.7	UC218D1	96.0	71.5

Note)

1. Stamped steel or cast iron dust covers are also available upon request.
2. Refer to catalog 2400.
3. Ball bearing tolerances according to JIS B 1558.
4. Housing tolerances according to JIS B 1559.

# NTN Rolled Steel Housings Ensure A Safer Design

## 1. Features

### Superior Housing Strength

Made of precision gas cut rolled steel, NTN steel housings offer superior strength characteristics when compared to cast iron and cast steel housings.

### Consistent Microstructure

The rolled steel microstructure is more consistent than cast iron or cast steel, reducing the risk of housing fracture under severe conditions.

### Interchangeability

Roller steel housing dimensions are consistent with cast units, allowing them to be interchanged with NTN standard housings and other manufacturers ISO standard.

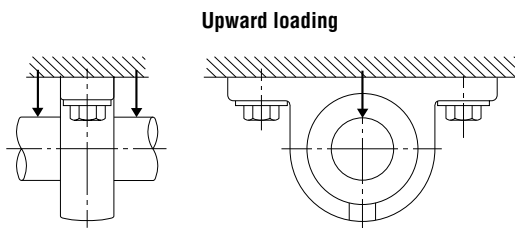
## 2. Bearing housing material

The bearing housings use material classified as SS400 of JIS G 3101 (Rolled Steel for General Structures). The table below lists the material's general mechanical properties.

Class code	Tension test				
	Steel thickness mm	Yield strength N/mm <sup>2</sup>	Tensile strength N/mm <sup>2</sup>	Elongation	
SS400	Thickness from 16 to 40	235 or more	400~510	Sample piece	%
	Thicker than 40	215 or more		No. 1A	21 or more
				No. 4	23 or more

## 3. Allowable load for bearing housings

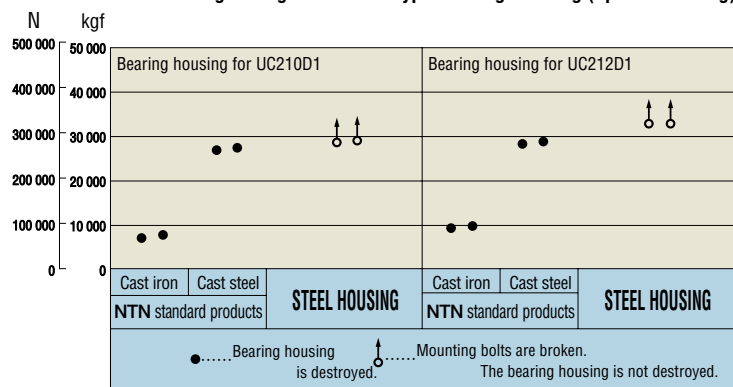
The allowable load for rolled steel housings is approximately 5 times the insert bearing's dynamic capacity. In most applications the load is transmitted through the bearing into the housing. As shown below, the static fracture strength of NTN rolled steel housings is considerably higher than that of cast iron and cast steel housings.



(Reference) Basic dynamic rated load of bearings  $C_r$   
 UC210D1=35000 N {3600kgf}  
 UC212D1=52500 N {5350kgf}

※ The above sketch shows the application of an upward load. This loading was applied for testing purposes only and is not recommended for actual use.

Static Breaking Strength of Pillow Type Bearing Housing (upward loading)



## 4. Applications

NTN rolled steel housings provide superior strength to cast steel and cast iron. Their ability to resist impact loads makes them suitable for applications involving heavy loads and vibration. Possible applications for NTN rolled steel housings include but are not limited to conveyors, trucks and overhead cranes at steel mills, mining machinery and pollution control equipment.

- Care should be taken when loads do not act through the base of the housing. For applications where loads are acting axially or at a 45 degree angle, an external retainer may be needed to prevent the housing from moving.
- The grease nipple is not installed prior to shipment to prevent breaking. It should be installed prior to using the unit.
- Other housing configurations, such as the 300 series square flange, the thick pillow block, the diamond shaped flange, the piloted round flange, the piloted square flange and the take-up type units are available. Stamped steel or cast iron dust covers are also available upon request. Ask your NTN representative about these available options.