

Power-Lock® KE Series

Sizes : $\phi 5 \sim \phi 100$
 Shaft tolerance : h8
 Hub bore tolerance : H8
 Surface roughness : Ra1.6

Shafts that do not have the recommended tolerance.
 Standard shaft tolerance is h8. If shafts with h9 or h10 tolerances are used, transmissible torque will reduce by 10%.
 ※ Electroless nickel-plated models specifically require h8 tolerance shafts.

Outer Shaft Diameter Tolerance	Inner Hub Diameter Tolerance	Transmissible Torque Mt
h9 · h10	H8	Catalog Value × 90 %
h6 · h7		Catalog Value (Catalog Value × 90 % for Keyed Shafts)
js6 · js7		
k6		
m6		



All models are RoHS compliant.

Features

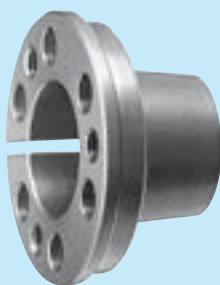
- 1 Wide Range of Shaft Tolerances**
 Compatible with m6,k6,js6,h6~h10 shaft tolerances.
 ※ Excludes electroless nickel-plated models.
- 2 Self-Centering**
 These units provide accurate shaft-hub alignment and concentricity, allowing straight bore mounting.
- 3 Designed to Fit Small Diameters**
 The small difference between the inner and outer diameters reduces contact pressure and makes mounting to small hubs possible.
- 4 Options to Fit Every Application**
 Available in stainless steel and electroless nickel-plated finish. Suitable for operation conducted in clean room or corrosive environments.

Parts

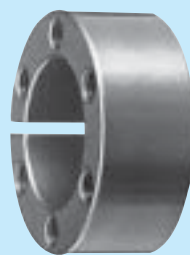
Locking Bolts



Inner Ring



Outer Ring



"Power-Lock" KE Series shaft-hub locking devices are simply constructed of the following three parts: inner and outer rings and a few locking bolts. Simply tighten these bolts to achieve a completely secure connection.

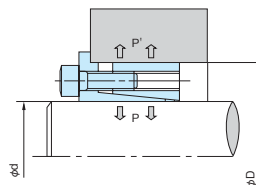
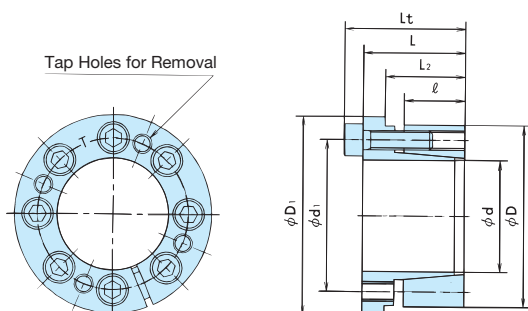
Reference Number System

PL 005 X 016 KE

KE : Standard
 KE-SS : Stainless Steel
 KE-KP : Electroless Nickel-Plated
 Outer Diameter mm
 Shaft Diameter mm
 Power-Lock

Model Numbers and Specifications

Standard KE Models



P and P' represent the average contact pressure applied to the shaft and hub respectively. These values may vary within $\pm 20\%$ depending on the amount of friction applied to the bolts. Transmissible torque Mt and transmissible thrust Pax are calculated from the minimum allowable contact pressure.

* Note) 3

Model No. d X D (Shaft Diameter X Outer Diameter) mm	Dimensions mm						Transmissible Torque		Transmissible Thrust		Contact Pressure				Locking Bolts				Mass kg
	ℓ	L2	L	Lt	d1	D1	Mt		Pax		Shaft P		Hub P'		Quantity	Size	Tightening Torque MA		
							N · m	{kgf · m}	kN	{kgf}	MPa	{kgf/mm²}	MPa	{kgf/mm²}			N · m	{kgf · m}	
PL005 X 016 KE	8	12	13.5	16.5	11.5	18.5	7.5	0.77	2.86	292	223	22.8	70	7.1	3	M 3 × 10	1.86	0.19	0.02
PL006 X 017 KE	8	12	13.5	16.5	12.5	19.5	9.0	0.92	2.86	292	186	19.0	66	6.7	3	M 3 × 10	1.86	0.19	0.02
PL008 X 021 KE	10	14.5	16.5	20.5	15.6	23.5	24.5	2.5	5.96	608	232	23.7	88	9.0	3	M 4 × 12	4.8	0.49	0.03
PL010 X 023 KE	10	14.5	16.5	20.5	17.6	25.5	31.4	3.2	5.96	608	186	19.0	80	8.2	3	M 4 × 12	4.8	0.49	0.04
PL011 X 024 KE	10	14.5	16.5	20.5	18.6	26.5	34.3	3.5	5.96	608	169	17.2	77	7.9	3	M 4 × 12	4.8	0.49	0.04
PL012 X 026 KE	10	14.5	16.5	20.5	20	28.5	50.0	5.1	7.94	810	207	21.1	95	9.7	4	M 4 × 12	4.8	0.49	0.05
PL014 X 028 KE	12	17.5	20	24	22	30.5	73.5	7.5	9.90	1010	184	18.8	92	9.4	5	M 4 × 14	4.8	0.49	0.06
PL015 X 029 KE	12	17.5	20	24	23	31.5	94.1	9.6	11.9	1210	207	21.1	107	10.9	6	M 4 × 14	4.8	0.49	0.07
PL016 X 030 KE	12	17.5	20	24	24	32.5	101	10.3	11.9	1210	194	19.8	103	10.5	6	M 4 × 14	4.8	0.49	0.07
PL017 X 031 KE	12	17.5	20	24	25	33.5	107	10.9	11.9	1210	182	18.6	100	10.2	6	M 4 × 14	4.8	0.49	0.07
PL018 X 032 KE	12	17.5	20	24	26	34.5	113	11.5	11.9	1210	172	17.6	97	9.9	6	M 4 × 14	4.8	0.49	0.08
PL019 X 033 KE	12	17.5	20	24	27	35.5	120	12.2	11.9	1210	163	16.6	94	9.6	6	M 4 × 14	4.8	0.49	0.08
PL020 X 038 KE	15	20.5	25	30	30	42	206	21.0	19.4	1980	203	20.7	107	10.9	6	M 5 × 18	9.8	1.0	0.14
PL022 X 040 KE	15	20.5	25	30	32	44	226	23.1	19.4	1980	184	18.8	101	10.3	6	M 5 × 18	9.8	1.0	0.15
PL024 X 042 KE	15	20.5	25	30	34	46	329	33.6	25.9	2640	225	23.0	128	13.1	8	M 5 × 18	9.8	1.0	0.16
PL025 X 043 KE	15	20.5	25	30	35	47	343	35.0	25.9	2640	216	22.0	125	12.8	8	M 5 × 18	9.8	1.0	0.17
PL028 X 046 KE	17	22.5	28	33	38.5	50	432	44.1	29.2	2980	191	19.5	117	11.9	9	M 5 × 18	9.8	1.0	0.21
PL030 X 048 KE	17	22.5	28	33	40.5	52	515	52.5	32.4	3310	199	20.3	124	12.7	10	M 5 × 18	9.8	1.0	0.22
PL032 X 050 KE	17	22.5	28	33	42.5	54	549	56.0	32.4	3310	186	19.0	120	12.2	10	M 5 × 18	9.8	1.0	0.23
PL035 X 057 KE	19	25	32	38	47.5	62	678	69.2	36.6	3730	172	17.5	106	10.8	8	M 6 × 22	16.7	1.7	0.36
PL038 X 060 KE	19	25	32	38	50.5	65	921	94.0	45.8	4670	198	20.2	125	12.8	10	M 6 × 22	16.7	1.7	0.39
PL040 X 062 KE	19	25	32	38	52.5	67	969	98.9	45.8	4670	188	19.2	122	12.4	10	M 6 × 22	16.7	1.7	0.40
PL042 X 064 KE	19	25	32	38	54.5	69	1010	103	45.8	4670	179	18.3	118	12.0	10	M 6 × 22	16.7	1.7	0.42
PL045 X 067 KE	19	25	32	38	57.5	72	1090	111	45.8	4670	168	17.1	113	11.5	10	M 6 × 22	16.7	1.7	0.44
PL048 X 070 KE	19	25	32	38	60.5	75	1390	142	54.9	5600	188	19.2	129	13.2	12	M 6 × 22	16.7	1.7	0.46
PL050 X 072 KE	19	26	34.5	40.5	63.5	77	1700	173	64.1	6540	211	21.5	146	14.9	14	M 6 × 25	16.7	1.7	0.50
PL055 X 077 KE	19	26	34.5	40.5	67.5	82	1860	190	64.1	6540	191	19.5	137	14.0	14	M 6 × 25	16.7	1.7	0.55
PL060 X 082 KE	19	26	34.5	40.5	72.5	87	2180	222	68.6	7000	188	19.2	137	14.0	15	M 6 × 25	16.7	1.7	0.59
PL065 X 087 KE	19	26	34.5	40.5	77.5	92	2360	241	68.6	7000	173	17.7	129	13.2	15	M 6 × 25	16.7	1.7	0.63
PL070 X 097 KE	22	31.5	40.5	48.5	85.5	102	3750	383	101	10300	206	21.0	148	15.1	12	M 8 × 30	40.2	4.1	0.99
PL075 X 102 KE	22	31.5	40.5	48.5	90.5	107	4030	411	101	10300	192	19.6	141	14.4	12	M 8 × 30	40.2	4.1	1.0
PL080 X 107 KE	22	31.5	41.5	49.5	95.5	112	5010	511	118	12000	210	21.4	157	16.0	14	M 8 × 30	40.2	4.1	1.1
PL085 X 112 KE	22	31.5	41.5	49.5	100.5	117	5320	543	118	12000	198	20.2	150	15.3	14	M 8 × 30	40.2	4.1	1.2
PL090 X 123 KE	29	41.5	54	64	109.5	128	8960	914	187	19100	224	22.9	165	16.8	14	M10 × 40	81.3	8.3	2.1
PL095 X 128 KE	29	41.5	54	64	114.5	133	9460	965	187	19100	213	21.7	158	16.1	14	M10 × 40	81.3	8.3	2.2
PL100 X 133 KE	29	41.5	54	64	119.5	138	9900	1010	187	19100	203	20.7	152	15.5	14	M10 × 40	81.3	8.3	2.3

Notes) 1. Stocked models are in bold.

2. Mt indicates torque at 0 transmissible thrust, while Pax indicates transmissible thrust at 0 torque. If transmissible torque and thrust apply simultaneously calculate and compare the combined value with the transmissible torque provided in the table.

3. Dimensions when this product is attached to the shaft and hub.

Model Numbers and Specifications

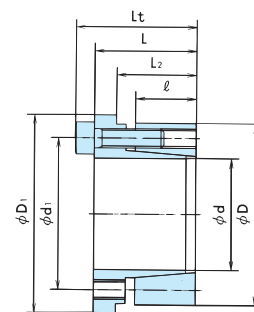
Electroless Nickel-Plated (KE-KP) Models

● Important Notes

1. Dimensions and transmissible torque are the same as the standard KE models.
2. The units are plated with peel-proof electroless nickel.
3. The locking bolts are DISGO treated so that assembly lubrication is not necessary. The electroless nickel-plated models are chrome-free and environmentally friendly.

● Applications

Most suitable for clean-room operation requiring minimum rust.



* Note) 3

Model No. d X D Shaft Diameter X Outer Diameter mm	Dimensions mm						Transmissible Torque		Transmissible Thrust		Contact Pressure				Locking Bolts			Mass kg	
	ℓ	L ₂	L	L _t	d ₁	D ₁	Mt		Pax		Shaft P		Hub P'		Quantity	Size	Tightening Torque M _A		
							N · m	{kgf · m}	kN	{kgf}	MPa	{kgf/mm ² }	MPa	{kgf/mm ² }			N · m		{kgf · m}
PL005 X 016 KE-KP	8	12	13.5	16.5	11.5	18.5	7.5	0.77	2.86	292	223	22.8	70	7.1	3	M 3 × 10	1.86	0.19	0.02
PL006 X 017 KE-KP	8	12	13.5	16.5	12.5	19.5	9.0	0.92	2.86	292	186	19.0	66	6.7	3	M 3 × 10	1.86	0.19	0.02
PL008 X 021 KE-KP	10	14.5	16.5	20.5	15.6	23.5	24.5	2.5	5.96	608	232	23.7	88	9.0	3	M 4 × 12	4.8	0.49	0.03
PL010 X 023 KE-KP	10	14.5	16.5	20.5	17.6	25.5	31.4	3.2	5.96	608	186	19.0	80	8.2	3	M 4 × 12	4.8	0.49	0.04
PL011 X 024 KE-KP	10	14.5	16.5	20.5	18.6	26.5	34.3	3.5	5.96	608	169	17.2	77	7.9	3	M 4 × 12	4.8	0.49	0.04
PL012 X 026 KE-KP	10	14.5	16.5	20.5	20	28.5	50.0	5.1	7.94	810	207	21.1	95	9.7	4	M 4 × 12	4.8	0.49	0.05
PL014 X 028 KE-KP	12	17.5	20	24	22	30.5	73.5	7.5	9.90	1010	184	18.8	92	9.4	5	M 4 × 14	4.8	0.49	0.06
PL015 X 029 KE-KP	12	17.5	20	24	23	31.5	94.1	9.6	11.9	1210	207	21.1	107	10.9	6	M 4 × 14	4.8	0.49	0.07
PL016 X 030 KE-KP	12	17.5	20	24	24	32.5	101	10.3	11.9	1210	194	19.8	103	10.5	6	M 4 × 14	4.8	0.49	0.07
PL017 X 031 KE-KP	12	17.5	20	24	25	33.5	107	10.9	11.9	1210	182	18.6	100	10.2	6	M 4 × 14	4.8	0.49	0.07
PL018 X 032 KE-KP	12	17.5	20	24	26	34.5	113	11.5	11.9	1210	172	17.6	97	9.9	6	M 4 × 14	4.8	0.49	0.08
PL019 X 033 KE-KP	12	17.5	20	24	27	35.5	120	12.2	11.9	1210	163	16.6	94	9.6	6	M 4 × 14	4.8	0.49	0.08
PL020 X 038 KE-KP	15	20.5	25	30	30	42	206	21.0	19.4	1980	203	20.7	107	10.9	6	M 5 × 18	9.8	1.0	0.14
PL022 X 040 KE-KP	15	20.5	25	30	32	44	226	23.1	19.4	1980	184	18.8	101	10.3	6	M 5 × 18	9.8	1.0	0.15
PL024 X 042 KE-KP	15	20.5	25	30	34	46	329	33.6	25.9	2640	225	23.0	128	13.1	8	M 5 × 18	9.8	1.0	0.16
PL025 X 043 KE-KP	15	20.5	25	30	35	47	343	35.0	25.9	2640	216	22.0	125	12.8	8	M 5 × 18	9.8	1.0	0.17
PL028 X 046 KE-KP	17	22.5	28	33	38.5	50	432	44.1	29.2	2980	191	19.5	117	11.9	9	M 5 × 18	9.8	1.0	0.21
PL030 X 048 KE-KP	17	22.5	28	33	40.5	52	515	52.5	32.4	3310	199	20.3	124	12.7	10	M 5 × 18	9.8	1.0	0.22
PL032 X 050 KE-KP	17	22.5	28	33	42.5	54	549	56.0	32.4	3310	186	19.0	120	12.2	10	M 5 × 18	9.8	1.0	0.23
PL035 X 057 KE-KP	19	25	32	38	47.5	62	678	69.2	36.6	3730	172	17.5	106	10.8	8	M 6 × 22	16.7	1.7	0.36
PL038 X 060 KE-KP	19	25	32	38	50.5	65	921	94.0	45.8	4670	198	20.2	125	12.8	10	M 6 × 22	16.7	1.7	0.39
PL040 X 062 KE-KP	19	25	32	38	52.5	67	969	98.9	45.8	4670	188	19.2	122	12.4	10	M 6 × 22	16.7	1.7	0.40
PL042 X 064 KE-KP	19	25	32	38	54.5	69	1010	103	45.8	4670	179	18.3	118	12.0	10	M 6 × 22	16.7	1.7	0.42
PL045 X 067 KE-KP	19	25	32	38	57.5	72	1090	111	45.8	4670	168	17.1	113	11.5	10	M 6 × 22	16.7	1.7	0.44
PL048 X 070 KE-KP	19	25	32	38	60.5	75	1390	142	54.9	5600	188	19.2	129	13.2	12	M 6 × 22	16.7	1.7	0.46
PL050 X 072 KE-KP	19	26	34.5	40.5	63.5	77	1700	173	64.1	6540	211	21.5	146	14.9	14	M 6 × 25	16.7	1.7	0.50
PL055 X 077 KE-KP	19	26	34.5	40.5	67.5	82	1860	190	64.1	6540	191	19.5	137	14.0	14	M 6 × 25	16.7	1.7	0.55
PL060 X 082 KE-KP	19	26	34.5	40.5	72.5	87	2180	222	68.6	7000	188	19.2	137	14.0	15	M 6 × 25	16.7	1.7	0.59
PL065 X 087 KE-KP	19	26	34.5	40.5	77.5	92	2360	241	68.6	7000	173	17.7	129	13.2	15	M 6 × 25	16.7	1.7	0.63
PL070 X 097 KE-KP	22	31.5	40.5	48.5	85.5	102	3750	383	101	10300	206	21.0	148	15.1	12	M 8 × 30	40.2	4.1	0.99
PL075 X 102 KE-KP	22	31.5	40.5	48.5	90.5	107	4030	411	101	10300	192	19.6	141	14.4	12	M 8 × 30	40.2	4.1	1.0
PL080 X 107 KE-KP	22	31.5	41.5	49.5	95.5	112	5010	511	118	12000	210	21.4	157	16.0	14	M 8 × 30	40.2	4.1	1.1
PL085 X 112 KE-KP	22	31.5	41.5	49.5	100.5	117	5320	543	118	12000	198	20.2	150	15.3	14	M 8 × 30	40.2	4.1	1.2
PL090 X 123 KE-KP	29	41.5	54	64	109.5	128	8960	914	187	19100	224	22.9	165	16.8	14	M10 × 40	81.3	8.3	2.1
PL095 X 128 KE-KP	29	41.5	54	64	114.5	133	9460	965	187	19100	213	21.7	158	16.1	14	M10 × 40	81.3	8.3	2.2
PL100 X 133 KE-KP	29	41.5	54	64	119.5	138	9900	1010	187	19100	203	20.7	152	15.5	14	M10 × 40	81.3	8.3	2.3

Notes) 1. Stocked models are in bold.

2. Mt indicates torque at 0 transmissible thrust, while Pax indicates transmissible thrust at 0 torque. If transmissible torque and thrust apply simultaneously calculate and compare the combined value with the transmissible torque provided in the table.

3. Dimensions when this product is attached to the shaft and hub.

Model Numbers and Specifications

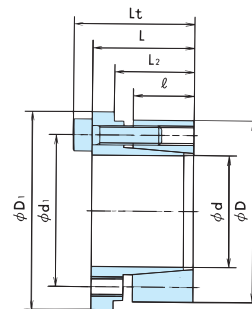
Stainless Steel (KE-SS) Models

Notes

1. The main unit is made of highly anticorrosive austenite stainless steel.
2. Locking bolts are lubricated so that no additional lubrication is necessary during assembly.

Applications

Most suitable for clean-room operation requiring minimum rust.



* Note) 3

Model No. d X D Shaft Diameter X Outer Diameter mm	Dimensions mm						Transmissible Torque		Transmissible Thrust		Contact Pressure				Locking Bolts				Mass kg
	ℓ	L ₂	L	L _t	d ₁	D ₁	Mt		Pax		Shaft P		Hub P'		Quantity	Size	Tightening Torque M _A		
							N · m	{kgf · m}	kN	{kgf}	MPa	{kgf/mm ² }	MPa	{kgf/mm ² }			N · m	{kgf · m}	
PL005 X 016 KE-SS	8	12	13.5	16.5	11.5	18.5	5.0	0.51	1.89	193	111	11.3	35	3.5	3	M 3 × 10	0.9	0.092	0.02
PL006 X 017 KE-SS	8	12	13.5	16.5	12.5	19.5	6.0	0.61	1.89	193	92	9.4	33	3.3	3	M 3 × 10	0.9	0.092	0.02
PL008 X 021 KE-SS	10	14.5	16.5	20.5	15.6	23.5	14.2	1.5	3.37	344	98	10.1	38	3.8	3	M 4 × 14	2.2	0.22	0.03
PL010 X 023 KE-SS	10	14.5	16.5	20.5	17.6	25.5	17.7	1.8	3.37	344	79	8.0	34	3.5	3	M 4 × 14	2.2	0.22	0.04
PL011 X 024 KE-SS	10	14.5	16.5	20.5	18.6	26.5	19.6	2.0	3.37	344	72	7.3	33	3.4	3	M 4 × 14	2.2	0.22	0.04
PL012 X 026 KE-SS	10	14.5	16.5	20.5	20	28.5	28.4	2.9	4.49	458	88	8.9	40	4.1	4	M 4 × 14	2.2	0.22	0.05
PL014 X 028 KE-SS	12	17.5	20	24	22	30.5	41.6	4.2	5.61	573	78	8.0	39	4.0	5	M 4 × 14	2.2	0.22	0.06
PL015 X 029 KE-SS	12	17.5	20	24	23	31.5	44.5	4.5	5.61	573	73	7.4	38	3.9	5	M 4 × 14	2.2	0.22	0.07
PL016 X 030 KE-SS	12	17.5	20	24	24	32.5	47.4	4.8	5.61	573	68	7.0	36	3.7	5	M 4 × 14	2.2	0.22	0.07
PL017 X 031 KE-SS	12	17.5	20	24	25	33.5	60.6	6.2	6.73	687	77	7.9	42	4.3	6	M 4 × 14	2.2	0.22	0.07
PL018 X 032 KE-SS	12	17.5	20	24	26	34.5	64.1	6.5	6.73	687	73	7.4	41	4.2	6	M 4 × 14	2.2	0.22	0.08
PL019 X 033 KE-SS	12	17.5	20	24	27	35.5	67.7	6.9	6.73	687	69	7.1	40	4.1	6	M 4 × 14	2.2	0.22	0.08
PL020 X 038 KE-SS	15	20.5	25	30	30	42	141	14.4	13.4	1363	104	10.6	55	5.6	6	M 5 × 20	5.3	0.54	0.14
PL022 X 040 KE-SS	15	20.5	25	30	32	44	156	15.9	13.4	1363	95	9.7	52	5.3	6	M 5 × 20	5.3	0.54	0.15
PL024 X 042 KE-SS	15	20.5	25	30	34	46	170	17.3	13.4	1363	87	8.9	50	5.1	6	M 5 × 20	5.3	0.54	0.16
PL025 X 043 KE-SS	15	20.5	25	30	35	47	177	18.0	13.4	1363	83	8.5	48	4.9	6	M 5 × 20	5.3	0.54	0.17
PL028 X 046 KE-SS	17	22.5	28	33	38.5	50	264	26.9	17.8	1818	88	8.9	53	5.4	8	M 5 × 20	5.3	0.54	0.21
PL030 X 048 KE-SS	17	22.5	28	33	40.5	52	283	28.9	17.8	1818	82	8.3	51	5.2	8	M 5 × 20	5.3	0.54	0.22
PL032 X 050 KE-SS	17	22.5	28	33	42.5	54	302	30.8	17.8	1818	77	7.8	49	5.0	8	M 5 × 20	5.3	0.54	0.23
PL035 X 057 KE-SS	19	25	32	38	47.5	62	351	35.8	18.9	1932	67	6.8	41	4.2	6	M 6 × 25	9.0	0.92	0.36
PL038 X 060 KE-SS	19	25	32	38	50.5	65	508	51.8	25.2	2577	82	8.4	52	5.3	8	M 6 × 25	9.0	0.92	0.39
PL040 X 062 KE-SS	19	25	32	38	52.5	67	535	54.6	25.2	2577	78	7.9	50	5.1	8	M 6 × 25	9.0	0.92	0.40
PL042 X 064 KE-SS	19	25	32	38	54.5	69	561	57.3	25.2	2577	74	7.6	49	5.0	8	M 6 × 25	9.0	0.92	0.42
PL045 X 067 KE-SS	19	25	32	38	57.5	72	602	61.4	25.2	2577	69	7.1	46	4.7	8	M 6 × 25	9.0	0.92	0.44
PL048 X 070 KE-SS	19	25	32	38	60.5	75	722	73.7	28.4	2899	73	7.4	50	5.1	9	M 6 × 25	9.0	0.92	0.46
PL050 X 072 KE-SS	19	26	34.5	40.5	63.5	77	836	85.3	31.6	3221	78	7.9	54	5.5	10	M 6 × 25	9.0	0.92	0.50

Notes) 1. All models are in stock.

2. Mt indicates torque at 0 transmissible thrust, while Pax indicates transmissible thrust at 0 torque. If transmissible torque and thrust apply simultaneously calculate and compare the combined value with the transmissible torque provided in the table.

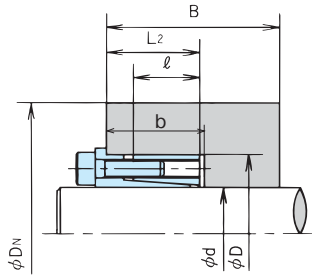
3. Dimensions when this product is attached to the shaft and hub.

Hub Diameters (1)

Standard KE and Electroless Nickel-Plated KE-KP Models (Same dimensions and capacities)

(1) Installing to hubs with a guide portion
when $B \geq 2 \ell$
(See Installation Example A)

ϕD_N is the minimum hub diameter required to tolerate P' or the pressure exerted from within the hub.



Installation Example(A)
When installing to hubs with a guide portion,
the hub configuration coefficient is as follows: $K_3 = 0.8$

Hub Configuration Coefficient $K_3 = 0.8$

Minimum hub diameter $\phi D_N(\text{mm})$

Model No. [d X D Shaft Diameter X Outer Diameter] mm	Yield Point of Hub Material $\sigma_{0.2}$										Hub boring depth b (mm)
	MPa		206	225	245	274	294	343	392	441	
	{kgf/mm ² }		21	23	25	28	30	35	40	45	
	Hub Contact Pressure P' MPa {kgf/mm ² }		FC350 SS400 SC410 S10C FCMB310	SC450 S15C SF440	FCD400 SS490 SC480 S20C SF490	S30C SF540	FCD450 S35C SF590	FCD500 S45C	FCD600 S55C	FCD700	
PL005 X 016 KE (-KP)	70	7.1	22	21	21	20	20	19	19	19	14
PL006 X 017 KE (-KP)	66	6.7	23	22	22	21	21	20	20	20	14
PL008 X 021 KE (-KP)	88	9.0	31	30	29	28	27	26	26	25	17
PL010 X 023 KE (-KP)	80	8.2	32	31	31	30	29	28	28	27	17
PL011 X 024 KE (-KP)	77	7.9	33	32	32	31	30	29	29	28	17
PL012 X 026 KE (-KP)	95	9.7	39	37	36	35	34	33	32	31	17
PL014 X 028 KE (-KP)	92	9.4	41	40	39	37	37	35	34	34	20
PL015 X 029 KE (-KP)	107	10.9	46	44	42	41	40	38	37	36	20
PL016 X 030 KE (-KP)	103	10.5	46	44	43	41	41	39	38	37	20
PL017 X 031 KE (-KP)	100	10.2	47	45	44	42	41	40	39	38	20
PL018 X 032 KE (-KP)	97	9.9	48	46	45	43	42	41	40	39	20
PL019 X 033 KE (-KP)	94	9.6	49	47	46	44	43	42	41	40	20
PL020 X 038 KE (-KP)	107	10.9	60	57	55	53	52	50	48	47	23
PL022 X 040 KE (-KP)	101	10.3	61	59	57	55	54	51	50	49	23
PL024 X 042 KE (-KP)	128	13.1	73	69	66	63	61	58	55	54	23
PL025 X 043 KE (-KP)	125	12.8	74	70	67	64	62	59	56	55	23
PL028 X 046 KE (-KP)	117	11.9	76	72	69	66	64	61	59	58	25
PL030 X 048 KE (-KP)	124	12.7	82	78	74	71	69	65	63	61	25
PL032 X 050 KE (-KP)	120	12.2	83	79	76	72	71	67	65	63	25
PL035 X 057 KE (-KP)	106	10.8	89	85	82	79	77	74	71	70	27
PL038 X 060 KE (-KP)	125	12.8	103	97	93	89	86	82	78	76	27
PL040 X 062 KE (-KP)	122	12.4	104	99	95	90	88	83	80	78	27
PL042 X 064 KE (-KP)	118	12.0	105	100	96	92	90	85	82	80	27
PL045 X 067 KE (-KP)	113	11.5	108	103	99	95	92	88	85	83	27
PL048 X 070 KE (-KP)	129	13.2	122	115	110	105	102	96	92	89	27
PL050 X 072 KE (-KP)	146	14.9	138	128	121	114	110	103	98	95	28
PL055 X 077 KE (-KP)	137	14.0	140	132	125	118	114	108	103	100	28
PL060 X 082 KE (-KP)	137	14.0	149	140	133	126	122	115	110	106	28
PL065 X 087 KE (-KP)	129	13.2	152	143	137	130	126	119	115	111	28
PL070 X 097 KE (-KP)	148	15.1	187	174	165	154	149	140	133	128	34
PL075 X 102 KE (-KP)	141	14.4	189	177	168	158	153	144	138	133	34
PL080 X 107 KE (-KP)	157	16.0	218	201	189	176	169	158	150	144	34
PL085 X 112 KE (-KP)	150	15.3	219	203	192	179	173	162	154	149	34
PL090 X 123 KE (-KP)	165	16.8	263	241	225	208	200	185	175	168	44
PL095 X 128 KE (-KP)	158	16.1	262	242	227	211	203	189	179	172	44
PL100 X 133 KE (-KP)	152	15.5	263	244	230	215	207	193	184	177	44

Notes) 1. The above figures do not take safety rates into account. Consider them prior to operation.
2. Calculate hub diameters using the formula $K_3=0.8$ as discussed in Selection Procedure.

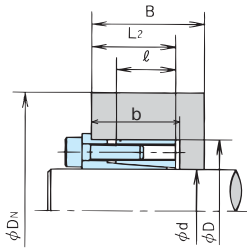
Hub Diameters (2)

Standard KE and Electroless Nickel-Plated KE-KP Models (Same dimensions and capacities)

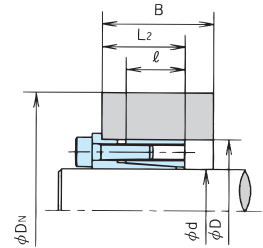
(2) Installing to hubs with a guide portion
when $L_2 < B < 2\ell$
(See Installation Example B)

(3) Installing to hubs without a guide portion
(See Installation Example C)

D_N is the minimum hub diameter required to tolerate P' or the pressure exerted from within the hub.



Installation Example(B)
When installing to hubs
with a guide portion, the hub configuration
coefficient is as follows: $K_3 = 1.0$



Installation Example(C)
When installing to hubs
without a guide portion, the hub configuration
coefficient is as follows: $K_3 = 1.0$

Hub Configuration Coefficient $K_3 = 1.0$

Minimum hub diameter $\phi D_N(\text{mm})$

Model No. d X D Shaft Diameter X Outer Diameter mm	Yield Point of Hub Material $\sigma_{0.2}$										Hub boring depth b (mm)
	MPa		206	225	245	274	294	343	392	441	
	{kgf/mm²}		21	23	25	28	30	35	40	45	
	Hub Contact Pressure P'		FC350 SS400 SC410 S10C FCMB310	SC450 S15C SF440	FCD400 SS490 SC480 S20C SF490		FCD450 S30C SF540	FCD500 S35C SF590	FCD600 S45C	FCD700 S55C	
	MPa	{kgf/mm²}									
PL005 X 016 KE (-KP)	70	7.1	23	23	22	21	21	20	20	19	14
PL006 X 017 KE (-KP)	66	6.7	24	23	23	22	22	21	21	20	14
PL008 X 021 KE (-KP)	88	9.0	34	32	31	30	29	28	27	26	17
PL010 X 023 KE (-KP)	80	8.2	35	34	33	32	31	30	29	28	17
PL011 X 024 KE (-KP)	77	7.9	36	35	34	33	32	31	30	29	17
PL012 X 026 KE (-KP)	95	9.7	43	41	40	38	37	35	34	33	17
PL014 X 028 KE (-KP)	92	9.4	46	44	42	40	39	37	36	35	20
PL015 X 029 KE (-KP)	107	10.9	52	49	47	44	43	41	39	38	20
PL016 X 030 KE (-KP)	103	10.5	52	50	47	45	44	41	40	39	20
PL017 X 031 KE (-KP)	100	10.2	53	50	48	46	45	42	41	40	20
PL018 X 032 KE (-KP)	97	9.9	54	51	49	47	46	43	42	41	20
PL019 X 033 KE (-KP)	94	9.6	55	52	50	48	46	44	43	41	20
PL020 X 038 KE (-KP)	107	10.9	68	64	61	58	56	53	51	49	23
PL022 X 040 KE (-KP)	101	10.3	69	65	62	59	58	55	53	51	23
PL024 X 042 KE (-KP)	128	13.1	88	81	76	70	68	63	60	57	23
PL025 X 043 KE (-KP)	125	12.8	88	81	76	71	68	64	60	58	23
PL028 X 046 KE (-KP)	117	11.9	88	82	78	73	70	66	63	61	25
PL030 X 048 KE (-KP)	124	12.7	97	90	85	79	76	71	67	65	25
PL032 X 050 KE (-KP)	120	12.2	98	91	86	80	77	72	69	67	25
PL035 X 057 KE (-KP)	106	10.8	101	95	91	86	84	79	76	73	27
PL038 X 060 KE (-KP)	125	12.8	122	113	106	99	95	89	84	81	27
PL040 X 062 KE (-KP)	122	12.4	123	114	107	100	97	90	86	83	27
PL042 X 064 KE (-KP)	118	12.0	123	115	108	102	98	92	88	85	27
PL045 X 067 KE (-KP)	113	11.5	124	117	111	104	101	95	91	88	27
PL048 X 070 KE (-KP)	129	13.2	147	135	126	117	113	105	99	95	27
PL050 X 072 KE (-KP)	146	14.9	175	156	144	131	125	114	107	102	28
PL055 X 077 KE (-KP)	137	14.0	173	157	145	134	128	118	111	107	28
PL060 X 082 KE (-KP)	137	14.0	184	167	155	143	136	126	119	114	28
PL065 X 087 KE (-KP)	129	13.2	183	168	157	146	140	130	123	118	28
PL070 X 097 KE (-KP)	148	15.1	240	214	196	178	169	154	145	138	34
PL075 X 102 KE (-KP)	141	14.4	237	213	197	181	173	158	149	143	34
PL080 X 107 KE (-KP)	157	16.0	292	253	229	205	194	176	164	156	34
PL085 X 112 KE (-KP)	150	15.3	283	250	229	207	197	179	168	160	34
PL090 X 123 KE (-KP)	165	16.8	370	312	278	247	232	208	193	183	44
PL095 X 128 KE (-KP)	158	16.1	353	305	276	247	234	211	197	187	44
PL100 X 133 KE (-KP)	152	15.5	343	302	275	249	236	215	201	191	44

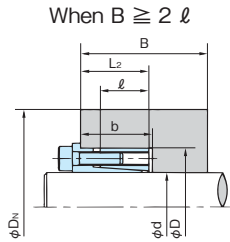
Notes) 1. The above figures do not take safety rates into account. Consider them prior to operation.
2. Calculate hub diameters using the formula $K_3=1.0$ as discussed in Selection Procedure.

Hub Diameters (3)

Stainless Steel KE-SS Models

- (1) Installing to hubs with a guide portion
when $B \geq 2 \ell$
(See Installation Example A)

D_N is the minimum hub diameter required to tolerate P' or the pressure exerted from within the hub.



Installation Example(A)
When installing to hubs with a guide portion,
the hub configuration coefficient
is as follows: $K_3 = 0.8$

Hub Configuration Coefficient $K_3 = 0.8$ (Installation Example A)

Minimum hub diameter $\phi D_N(\text{mm})$

Model No. d X D Shaft Diameter X Outer Diameter mm	Yield Point of Hub Material $\sigma_{0.2}$												Hub boring depth b (mm)
	MPa		147	176	206	225	245	274	294	343	392	441	
	(kgf/mm ²)		15	18	21	23	25	28	30	35	40	45	
	Hub Contact Pressure P'		FC250	FC300 SS330 SC360	FC350 SS400 SC410 S10C SUS405		FCD400 SS490 SC480 S20C SF490		FCD450	FCD500	FCD600	FCD700	
	MPa	(kgf/mm ²)				SC450 S15C SF440		S30C SF540	S35C SF590	S45C	S55C		
PL005 X 016 KE-SS	35	3.5	19	19	19	19	19	19	19	19	19	19	14
PL006 X 017 KE-SS	33	3.3	20	20	20	20	20	20	20	20	20	20	14
PL008 X 021 KE-SS	38	3.8	26	25	24	24	24	24	24	24	24	24	17
PL010 X 023 KE-SS	34	3.5	28	27	26	26	26	26	26	26	26	26	17
PL011 X 024 KE-SS	33	3.4	29	28	27	27	27	27	27	27	27	27	17
PL012 X 026 KE-SS	40	4.1	33	31	30	30	30	29	29	29	29	29	17
PL014 X 028 KE-SS	39	4.0	35	34	33	32	32	32	32	32	32	32	20
PL015 X 029 KE-SS	38	3.9	36	34	34	33	33	33	33	33	33	33	20
PL016 X 030 KE-SS	36	3.7	37	35	35	34	34	34	34	34	34	34	20
PL017 X 031 KE-SS	42	4.3	38	37	36	36	35	35	35	35	35	35	20
PL018 X 032 KE-SS	41	4.2	40	39	38	37	37	36	36	36	36	36	20
PL019 X 033 KE-SS	40	4.1	37	37	37	37	37	37	37	37	37	37	20
PL020 X 038 KE-SS	55	5.6	52	49	47	46	46	45	44	43	43	43	23
PL022 X 040 KE-SS	52	5.3	54	51	49	48	48	47	46	45	45	45	23
PL024 X 042 KE-SS	50	5.1	55	53	51	50	49	49	48	47	46	46	23
PL025 X 043 KE-SS	48	4.9	56	54	52	51	50	50	49	48	48	48	23
PL028 X 046 KE-SS	53	5.4	62	59	57	56	55	54	53	52	51	51	25
PL030 X 048 KE-SS	51	5.2	64	61	59	58	57	56	55	54	53	53	25
PL032 X 050 KE-SS	49	5.0	66	63	61	60	59	58	57	56	55	55	25
PL035 X 057 KE-SS	41	4.2	71	69	67	66	65	64	64	63	62	62	27
PL038 X 060 KE-SS	52	5.3	80	76	74	72	71	70	69	68	67	66	27
PL040 X 062 KE-SS	50	5.1	82	78	76	74	73	72	71	70	69	68	27
PL042 X 064 KE-SS	49	5.0	84	80	77	76	75	74	73	72	71	70	27
PL045 X 067 KE-SS	46	4.7	87	83	80	79	78	77	76	75	74	73	27
PL048 X 070 KE-SS	50	5.1	93	88	85	84	83	81	80	79	78	77	27
PL050 X 072 KE-SS	54	5.5	97	93	89	87	86	84	83	82	80	79	28

Hub Diameters (4)

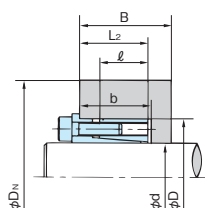
Stainless Steel KE-SS Models

- (2) Installing to hubs with a guide portion
when $L_2 < B < 2\ell$
(See Installation Example B)

- (3) Installing to hubs without a guide portion
(See Installation Example C)

D_N is the minimum hub diameter required to tolerate P' or the pressure exerted from within the hub.

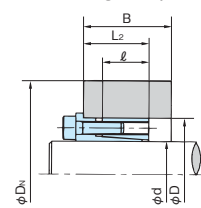
When $L_2 < B < 2\ell$



Installation Example(B)

When installing to hubs with a guide portion, the hub configuration coefficient is as follows: $K_3 = 1.0$

Hubs without a guide portion



Installation Example(C)

When installing to hubs without a guide portion, the hub configuration coefficient is as follows: $K_3 = 1.0$

Hub Configuration Coefficient $K_3 = 0.8$ (Installation Example B, C)

Minimum hub diameter ϕD_N (mm)

Model No. d X D (Shaft Diameter X Outer Diameter) mm	Yield Point of Hub Material $\sigma_{0.2}$												Hub boring depth b (mm)
	MPa		147	176	206	225	245	274	294	343	392	441	
	(kgf/mm ²)		15	18	21	23	25	28	30	35	40	45	
	Hub Contact Pressure P'		FC250	FC300 SS330 SC360	FC350 SS400 SC410 S10C SUS304	SC450 S15C SF440	FCD400 SS490 SC480 S20C SF490	S30C SF540	FCD450 S35C SF590	FCD500 S45C	FCD600 S55C	FCD700	
	MPa	(kgf/mm ²)											
PL005 X 016 KE-SS	35	3.5	20	20	19	19	19	19	19	19	19	19	14
PL006 X 017 KE-SS	33	3.3	21	21	20	20	19	19	19	19	19	20	14
PL008 X 021 KE-SS	38	3.8	27	26	25	24	24	24	24	24	24	24	17
PL010 X 023 KE-SS	34	3.5	29	28	27	27	26	26	26	26	26	26	17
PL011 X 024 KE-SS	33	3.4	34	33	32	31	31	30	30	30	28	27	17
PL012 X 026 KE-SS	40	4.1	34	33	32	31	31	30	30	29	29	29	17
PL014 X 028 KE-SS	39	4.0	37	35	34	33	33	32	32	32	32	32	20
PL015 X 029 KE-SS	38	3.9	38	36	35	34	34	33	33	33	33	33	20
PL016 X 030 KE-SS	36	3.7	39	37	36	35	35	34	34	34	34	34	20
PL017 X 031 KE-SS	42	4.3	41	39	38	37	36	36	35	35	35	35	20
PL018 X 032 KE-SS	41	4.2	43	41	39	38	38	37	37	36	36	36	20
PL019 X 033 KE-SS	40	4.1	44	42	40	39	39	38	38	37	37	37	20
PL020 X 038 KE-SS	55	5.6	56	52	50	49	48	47	46	45	44	43	23
PL022 X 040 KE-SS	52	5.3	58	54	52	51	50	48	48	47	46	45	23
PL024 X 042 KE-SS	50	5.1	60	56	54	53	52	50	50	49	48	47	23
PL025 X 043 KE-SS	48	4.9	61	57	55	54	53	51	51	50	49	48	23
PL028 X 046 KE-SS	53	5.4	67	63	60	59	57	56	55	54	53	52	25
PL030 X 048 KE-SS	51	5.2	69	65	62	60	59	58	57	56	55	54	25
PL032 X 050 KE-SS	49	5.0	71	67	64	62	61	60	59	58	57	56	25
PL035 X 057 KE-SS	41	4.2	76	72	70	69	67	66	66	64	63	63	27
PL038 X 060 KE-SS	52	5.3	87	81	78	76	74	73	72	70	69	68	27
PL040 X 062 KE-SS	50	5.1	88	83	79	78	76	75	74	72	71	70	27
PL042 X 064 KE-SS	49	5.0	90	85	81	80	78	77	76	74	72	71	27
PL045 X 067 KE-SS	46	4.7	93	88	84	83	81	80	79	77	75	74	27
PL048 X 070 KE-SS	50	5.1	100	94	90	88	86	84	83	81	80	78	27
PL050 X 072 KE-SS	54	5.5	106	99	94	92	90	88	87	84	83	81	28

Notes) 1. The above figures do not take safety rates into account. Consider them prior to operation.
2. Calculate hub diameters using the formula $K_3=1.0$ as discussed in Selection Procedure.



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