

TSUBAKI[®]

POWER-LOCK[®]

The solution for shaft locking devices



www.ustsubaki.com

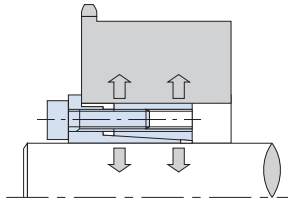
POWER-LOCK Selection Guide



KE Series



1. Designed to suit a wide range of shaft tolerances.
2. Compact with only a small difference between the inner and outer diameters.
3. Self-centering.
4. Excellent for locking small shafts.



AD Series



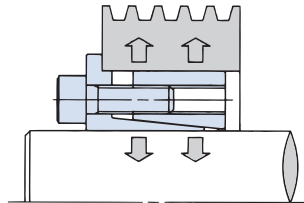
Wide Range of Tolerances

High Torque

AE Series

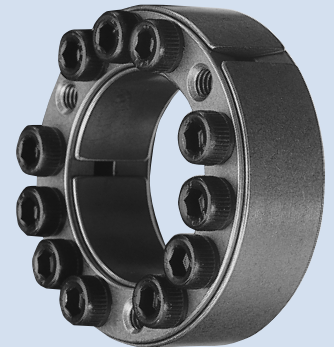


1. Self-centering.
2. Generally the same inner and outer diameters as an AS Series POWER-LOCK.



Multipurpose Flange

AS Series Multipurpose



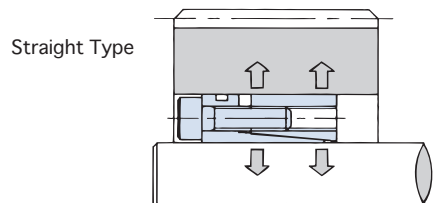
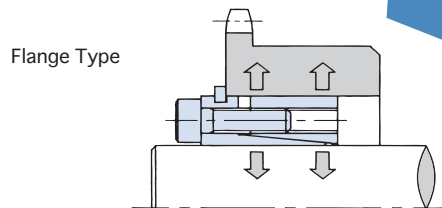
Environment Resistant

Flush Mounting

RE Series Stainless Steel



1. RE Series can be installed without snap ring.
2. Offers corrosion protection.



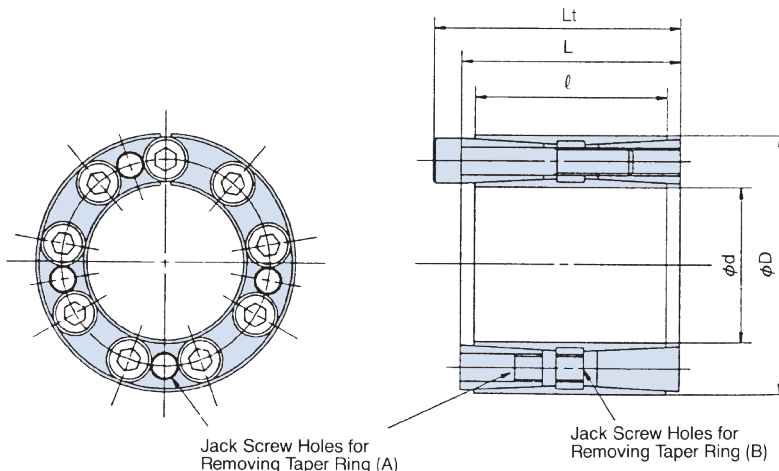
FL Series





AD Metric Series

DOUBLE TORQUE SERIES

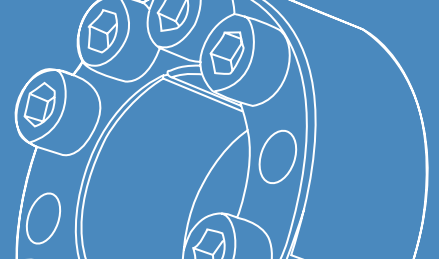


AD Metric Series POWER-LOCK® Specifications

Model Number	Shaft O.D.		Hub Counter I.D.		Dimensions inch			Transmissible Torque	Transmissible Thrust	Contact Pressure psi		Locking Bolts			Wt. lbs.
	d	Tolerance t ₁	D	Tolerance t ₂	ℓ	L	Lt	ft.lbs.	lbs.	Shaft P	Hub Bore P'	Qty.	Size	Tightening Torque ft.lbs.	
PL019X047 AD	0.7480	-0.0013" +0	1.8504	+0.0015" -0	1.181	1.378	1.614	282	9,127	34375	13924	6	M6 X 28	12.5	0.8
PL020X047 AD	0.7874		1.8504		1.181	1.378	1.614	297	9,127	32634	13924	6	M6 X 28	12.5	0.8
PL022X047 AD	0.8661		1.8504		1.181	1.378	1.614	325	9,127	29588	13924	6	M6 X 28	12.5	0.7
PL024X050 AD	0.9449		1.9685		1.378	1.575	1.811	477	12,184	31039	14939	8	M6 X 30	12.5	0.9
PL025X050 AD	0.9843		1.9685		1.378	1.575	1.811	499	12,184	29733	14939	8	M6 X 30	12.5	0.9
PL028X055 AD	1.1024	-0.0015" +0	2.1654	+0.0018" -0	1.378	1.575	1.811	557	12,184	26542	13489	8	M6 X 30	12.5	1.1
PL030X055 AD	1.1811		2.1654		1.378	1.575	1.811	578	12,184	24802	13489	8	M6 X 30	12.5	1.0
PL032X060 AD	1.2598		2.3622		1.772	1.969	2.205	937	18,209	27413	14649	10	M6 X 35	12.5	1.6
PL035X060 AD	1.3780		2.3622		1.772	1.969	2.205	1,011	18,209	24947	14649	10	M6 X 35	12.5	1.5
PL038X065 AD	1.4961		2.5591		2.047	2.244	2.480	1,232	20,007	21901	12764	11	M6 X 40	12.5	1.9
PL040X065 AD	1.5748	-0.0015" +0	2.5591	+0.0021" -0	2.047	2.244	2.480	1,298	20,007	20886	12764	11	M6 X 40	12.5	1.8
PL042X075 AD	1.6535		2.9528		2.205	2.520	2.835	2,604	38,216	27848	15664	9	M8 X 50	30	3.0
PL045X075 AD	1.7717		2.9528		2.205	2.520	2.835	2,818	38,216	25962	15664	9	M8 X 50	30	2.8
PL048X080 AD	1.8898		3.1496		2.205	2.520	2.835	3,002	38,216	24367	14649	9	M8 X 50	30	3.1
PL050X080 AD	1.9685		3.1496		2.205	2.520	2.835	3,105	38,216	23497	14649	9	M8 X 50	30	3.0
PL055X085 AD	2.1654	-0.0018" +0	3.3465	+0.0025" -0	2.205	2.520	2.835	3,400	38,216	21321	13779	9	M8 X 50	30	3.3
PL060X090 AD	2.3622		3.5433		2.205	2.520	2.835	4,551	46,758	23932	15954	11	M8 X 50	30	3.5
PL065X095 AD	2.5591		3.7402		2.205	2.520	2.835	4,986	46,758	18855	12909	11	M8 X 50	30	3.8
PL070X110 AD	2.7559		4.3307		2.756	3.071	3.465	8,556	74,184	25962	16535	11	M10 X 70	60	7.0
PL075X115 AD	2.9528		4.5276		2.756	3.071	3.465	9,072	74,184	24222	15809	11	M10 X 70	60	7.4
PL080X120 AD	3.1496	-0.0021" +0	4.7244	+0.0028" -0	2.756	3.071	3.465	10,621	80,928	24802	16535	12	M10 X 70	60	7.7
PL085X125 AD	3.3465		4.9213		2.756	3.071	3.465	11,285	80,928	23351	15809	12	M10 X 70	60	8.1
PL090X130 AD	3.5433		5.1181		2.756	3.071	3.465	12,907	87,672	23932	16535	13	M10 X 70	60	8.5
PL095X135 AD	3.7402		5.3150		2.756	3.071	3.465	13,645	87,672	22626	15954	13	M10 X 70	60	8.9
PL100X145 AD	3.9370		5.7087		3.543	3.937	4.409	19,545	119,369	22771	15664	12	M12 X 90	105	14
PL110X155 AD	4.3307	-0.0025" +0	6.1024	+0.0032" -0	3.543	3.937	4.409	23,381	129,485	22481	15954	13	M12 X 90	105	15
PL120X165 AD	4.7244		6.4961		3.543	3.937	4.409	29,429	149,267	23787	17260	15	M12 X 90	105	16
PL130X180 AD	5.1181		7.0866		4.094	4.567	5.118	37,394	175,119	22191	16099	13	M14 X 90	166	18
PL140X190 AD	5.5118		7.4803		4.094	4.567	5.118	46,393	202,320	23787	17550	15	M14 X 90	166	19
PL150X200 AD	5.9055		7.8740		4.094	4.567	5.118	53,031	215,583	23787	17840	16	M14 X 90	166	20
PL160X210 AD	6.2992	-0.0028" +0	8.2677	+0.0035" -0	4.094	4.567	5.118	60,111	229,296	23642	17840	17	M14 X 90	166	21
PL170X225 AD	6.6929		8.8583		5.276	5.748	6.378	78,181	278,572	21176	15954	15	M16 X 120	257	39
PL180X235 AD	7.0866		9.2520		5.276	5.748	6.378	88,507	298,984	21321	16390	16	M16 X 120	257	41
PL190X250 AD	7.4803		9.8425		5.276	5.748	6.378	98,833	316,968	21466	16390	17	M16 X 120	257	47
PL200X260 AD	7.8740		10.2362		5.276	5.748	6.378	103,996	316,968	20306	15664	17	M16 X 120	257	50
PL220X285 AD	8.6614	-0.0032" +0	11.2205	+0.0035" -0	5.276	5.748	6.378	134,974	375,416	21756	17115	20	M16 X 120	257	59
PL240X305 AD	9.4488		12.0079		5.276	5.748	6.378	162,263	411,384	21901	17405	22	M16 X 120	257	63
PL260X325 AD	10.2362		12.7953		5.276	5.748	6.378	175,539	411,384	16535	13199	22	M16 X 120	257	68
PL280X355 AD	11.0236		13.9764		6.496	6.969	7.756	268,472	584,480	21756	17115	20	M20 X 150	499	103
PL300X375 AD	11.8110		14.7638		6.496	6.969	7.756	316,413	642,928	22336	17840	22	M20 X 150	499	109

AD Metric Series

DOUBLE TORQUE SERIES



Installing to hubs with a guide portion

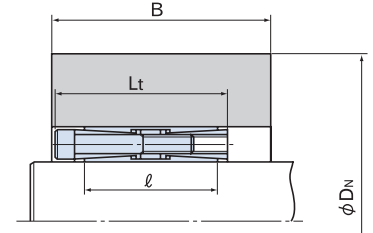
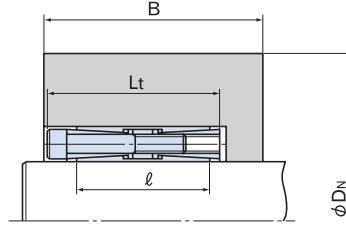
when $L_t < B < 2\ell$

(See Installation Example B)

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: $K_3 = 1.0$

<EXAMPLE> Hub Material Yield Point = 35500 psi
PL030X055AD = 3.229" min. hub diameter

Min. Hub Dia. (D_N in inches)

Model Number	Hub Contact Pressure P' (psi)	Yield Point and Material examples									
		147 Mpa	176 Mpa	206 Mpa	225 Mpa	245 Mpa	274 Mpa	294 Mpa	343 Mpa	392 Mpa	441 Mpa
		21300 psi	25500 psi	29900 psi	32600 psi	35500 psi	39700 psi	42600 psi	49700 psi	56900 psi	64000 psi
PL019X047 AD	13924	4.039	3.412	3.066	2.919	2.799	2.668	2.597	2.467	2.376	2.309
PL020X047 AD	13924	4.039	3.412	3.066	2.919	2.799	2.668	2.597	2.467	2.376	2.309
PL022X047 AD	13924	4.039	3.412	3.066	2.919	2.799	2.668	2.597	2.467	2.376	2.309
PL024X050 AD	14939	4.692	3.848	3.410	3.228	3.082	2.923	2.838	2.683	2.576	2.497
PL025X050 AD	14939	4.692	3.848	3.410	3.228	3.082	2.923	2.838	2.683	2.576	2.497
PL028X055 AD	13489	4.565	3.898	3.522	3.361	3.229	3.083	3.005	2.860	2.758	2.682
PL030X055 AD	13489	4.565	3.898	3.522	3.361	3.229	3.083	3.005	2.860	2.758	2.682
PL032X060 AD	14649	5.485	4.540	4.039	3.830	3.662	3.478	3.379	3.200	3.075	2.982
PL035X060 AD	14649	5.485	4.540	4.039	3.830	3.662	3.478	3.379	3.200	3.075	2.982
PL038X065 AD	12764	5.107	4.432	4.039	3.868	3.727	3.570	3.485	3.327	3.216	3.133
PL040X065 AD	12764	5.107	4.432	4.039	3.868	3.727	3.570	3.485	3.327	3.216	3.133
PL042X075 AD	15664	7.550	6.034	5.285	4.981	4.740	4.479	4.341	4.091	3.918	3.791
PL045X075 AD	15664	7.550	6.034	5.285	4.981	4.740	4.479	4.341	4.091	3.918	3.791
PL048X080 AD	14649	7.313	6.053	5.386	5.107	4.882	4.637	4.506	4.266	4.010	3.977
PL050X080 AD	14649	7.313	6.053	5.386	5.107	4.882	4.637	4.506	4.266	4.010	3.977
PL055X085 AD	13779	7.219	6.121	5.511	5.250	5.038	4.805	4.679	4.447	4.285	4.165
PL060X090 AD	15954	9.338	7.376	6.429	6.048	5.746	5.422	5.250	4.941	4.728	4.572
PL065X095 AD	12909	7.545	6.528	5.939	5.683	5.473	5.239	5.112	4.878	4.712	4.589
PL070X110 AD	16535	12.179	9.366	8.077	7.568	7.169	6.744	6.520	6.118	5.843	5.642
PL075X115 AD	15809	11.751	9.338	8.159	7.683	7.305	6.898	6.682	6.293	6.024	5.827
PL080X120 AD	16535	13.287	10.218	8.811	8.256	7.821	7.357	7.113	6.674	6.374	6.155
PL085X125 AD	15809	12.773	10.150	8.868	8.351	7.940	7.498	7.263	6.840	6.548	6.334
PL090X130 AD	16535	14.394	11.069	9.545	8.944	8.473	7.970	7.706	7.230	6.905	6.668
PL095X135 AD	15954	14.008	11.064	9.643	9.071	8.619	8.133	7.876	7.411	7.091	6.857
PL100X145 AD	15664	14.597	11.666	10.218	9.631	9.163	8.660	8.392	7.908	7.575	7.330
PL110X155 AD	15954	16.083	12.703	11.071	10.415	9.896	9.338	9.042	8.509	8.142	7.873
PL120X165 AD	17260	20.022	14.778	12.555	11.702	11.041	10.344	9.979	9.329	8.887	8.567
PL130X180 AD	16099	18.971	14.891	12.945	12.166	11.551	10.891	10.542	9.913	9.481	9.165
PL140X190 AD	17550	24.016	17.383	14.672	13.644	12.851	12.019	11.586	10.814	10.292	9.913
PL150X200 AD	17840	26.410	18.702	15.677	14.544	13.675	12.767	12.296	11.460	10.895	10.486
PL160X210 AD	17840	27.731	19.637	16.461	15.271	14.359	13.406	12.911	12.033	11.440	11.011
PL170X225 AD	15954	23.346	18.440	16.072	15.119	14.365	13.555	13.126	12.352	11.819	11.429
PL180X235 AD	16390	25.585	19.816	17.135	16.073	15.237	14.344	13.874	13.027	12.447	12.024
PL190X250 AD	16390	27.218	21.081	18.229	17.098	16.209	15.260	14.759	13.859	13.242	12.792
PL200X260 AD	15664	26.174	20.919	18.323	17.269	16.431	15.528	15.049	14.181	13.582	13.143
PL220X285 AD	17115	33.918	25.262	21.530	20.089	18.970	17.787	17.167	16.061	15.308	14.761
PL240X305 AD	17405	37.761	27.607	23.379	21.766	20.519	19.207	18.522	17.302	16.475	15.874
PL260X325 AD	13199	26.378	22.678	20.563	19.649	18.900	18.071	17.621	16.792	16.208	15.775
PL280X355 AD	17115	42.249	31.467	26.818	25.024	23.629	22.155	21.384	20.006	19.068	18.387
PL300X375 AD	17840	49.519	35.067	29.394	27.270	25.641	23.939	23.055	21.487	20.428	19.662