

TSUBAKI[®]

POWER-LOCK[®]

The solution for shaft locking devices



www.ustsubaki.com

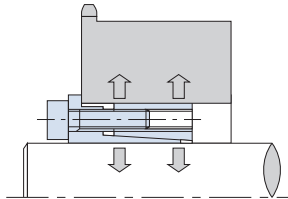
POWER-LOCK Selection Guide



KE Series



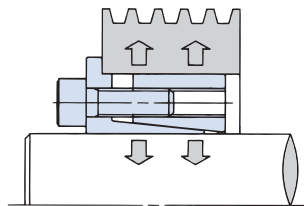
1. Designed to suit a wide range of shaft tolerances.
2. Compact with only a small difference between the inner and outer diameters.
3. Self-centering.
4. Excellent for locking small shafts.



AE Series



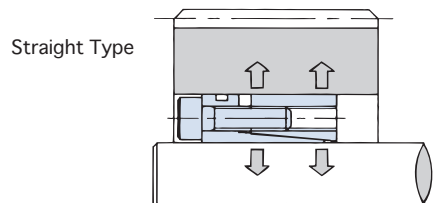
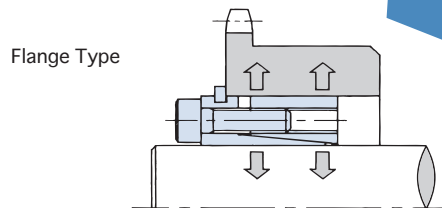
1. Self-centering.
2. Generally the same inner and outer diameters as an AS Series POWER-LOCK.



RE Series Stainless Steel



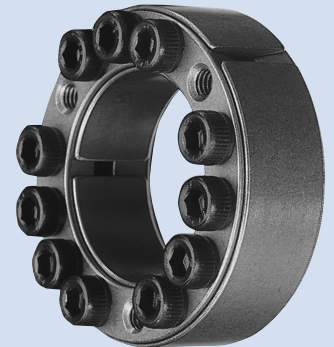
1. RE Series can be installed without snap ring.
2. Offers corrosion protection.



AD Series



AS Series Multipurpose



FL Series



Wide Range of Tolerances

High Torque

Multipurpose Flange

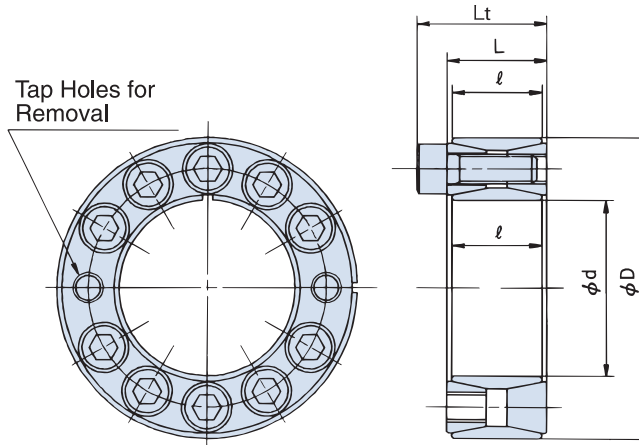
Environment Resistant

Flush Mounting



AS Metric Series

MOST POPULAR STYLE

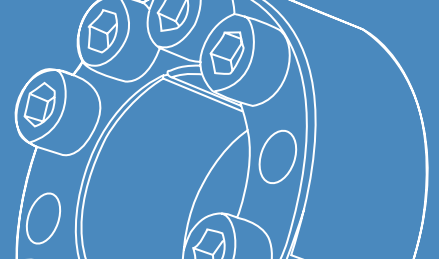


AS Metric Series POWER-LOCK® Specifications

Model Number	Shaft O.D.		Hub Counter I.D.		Dimensions inch			Transmissible Torque ft.lbs.	Transmissible Thrust lbs.	Contact Pressure psi		Locking Bolts			Wt. lbs.
	d	Tolerance t ₁	D	Tolerance t ₂	L	ℓ	Lt			Shaft P	Hub Bore P'	Qty.	Size	Tightening Torque ft.lbs.	
PL019X047 AS	0.7480	-0.0013" +0	1.8500	+0.0015" -0	0.787	0.709	1.024	181	5940	30458	12328	6	M6 X 18	12.5	0.4
PL020X047 AS	0.7870		1.8500		0.787	0.709	1.024	196	5,940	28863	12328	6	M6 X 18	12.5	0.4
PL022X047 AS	0.8660		1.8500		0.787	0.709	1.024	217	5,940	26252	12328	6	M6 X 18	12.5	0.4
PL024X050 AS	0.9450		1.9690		0.787	0.709	1.024	297	7,480	30603	14649	8	M6 X 18	12.5	0.5
PL025X050 AS	0.9840	-0.0015" +0	1.9690	+0.0018" -0	0.787	0.709	1.024	311	7,480	29443	14649	8	M6 X 18	12.5	0.5
PL028X055 AS	1.1020		2.1650		0.787	0.709	1.024	347	7,480	26107	13344	8	M6 X 18	12.5	0.6
PL030X055 AS	1.1810		2.1650		0.787	0.709	1.024	376	7,480	24512	13344	8	M6 X 18	12.5	0.5
PL032X060 AS	1.2600		2.3620		0.787	0.709	1.024	499	9,460	28718	15374	10	M6 X 18	12.5	0.6
PL035X060 AS	1.3780	-0.0018" +0	2.3620	+0.0021" -0	0.787	0.709	1.024	550	9,460	26252	15374	10	M6 X 18	12.5	0.6
PL038X065 AS	1.4960		2.5590		0.787	0.709	1.024	658	10,560	26542	15519	11	M6 X 18	12.5	0.7
PL040X065 AS	1.5750		2.5590		0.787	0.709	1.024	694	10,560	25237	15519	11	M6 X 18	12.5	0.7
PL042X075 AS	1.6540		2.9530		0.945	0.827	1.260	1,099	15,840	31039	17550	9	M8 X 22	30	1.1
PL045X075 AS	1.7720	-0.0021" +0	2.9530	+0.0025" -0	0.945	0.827	1.260	1,180	15,840	29008	17550	9	M8 X 22	30	1.1
PL048X080 AS	1.8900		3.1500		0.945	0.827	1.260	1,254	15,840	27268	16390	9	M8 X 22	30	1.2
PL050X080 AS	1.9690		3.1500		0.945	0.827	1.260	1,306	15,840	26107	16390	9	M8 X 22	30	1.2
PL055X085 AS	2.1650		3.3460		0.945	0.827	1.260	1,763	19,360	29153	18855	11	M8 X 22	30	1.3
PL060X090 AS	2.3620	-0.0028" +0	3.5430	+0.0032" -0	0.945	0.827	1.260	1,925	19,360	26687	17840	11	M8 X 22	30	1.4
PL065X095 AS	2.5590		3.7400		0.945	0.827	1.260	2,279	21,120	26687	18275	12	M8 X 22	30	1.5
PL070X110 AS	2.7560		4.3310		1.102	0.984	1.496	3,540	31,020	30458	19290	11	M10 X 25	60	2.7
PL075X115 AS	2.9530		4.5280		1.102	0.984	1.496	3,828	31,020	28428	18420	11	M10 X 25	60	2.8
PL080X120 AS	3.1500	-0.0025" +0	4.7240	+0.0028" -0	1.102	0.984	1.496	4,049	31,020	26687	17840	11	M10 X 25	60	2.9
PL085X125 AS	3.3460		4.9210		1.102	0.984	1.496	4,698	33,660	27413	18565	12	M10 X 25	60	3.1
PL090X130 AS	3.5430		5.1180		1.102	0.984	1.496	4,986	33,660	25817	17840	12	M10 X 25	60	3.2
PL095X135 AS	3.7400		5.3150		1.102	0.984	1.496	5,709	36,520	26542	18710	13	M10 X 25	60	3.4
PL100X145 AS	3.9370	-0.0028" +0	5.7090	+0.0035" -0	1.299	1.142	1.772	7,376	45,100	26687	18420	11	M12 X 30	105	4.6
PL110X155 AS	4.3310		6.1020		1.299	1.142	1.772	8,187	45,100	24367	17405	11	M12 X 30	105	5.0
PL120X165 AS	4.7240		6.4960		1.299	1.142	1.772	9,662	49,280	24367	17840	12	M12 X 30	105	5.3
PL130X180 AS	5.1180		7.0870		1.496	1.339	1.969	13,129	61,600	24077	17405	15	M12 X 35	105	7.4
PL140X190 AS	5.5120	-0.0032" +0	7.4800	+0.0035" -0	1.496	1.339	1.969	15,120	65,560	23787	17550	16	M12 X 35	105	7.9
PL150X200 AS	5.9060		7.8740		1.496	1.339	1.969	18,218	73,920	24947	18710	18	M12 X 35	105	8.4
PL160X210 AS	6.2990		8.2680		1.496	1.339	1.969	20,430	77,880	24657	18710	19	M12 X 35	105	8.9
PL170X225 AS	6.6930		8.8580		1.732	1.575	2.283	25,151	90,200	22771	17260	16	M14 X 40	166	12
PL180X235 AS	7.0870	-0.0028" +0	9.2520	+0.0032" -0	1.732	1.575	2.283	28,322	95,700	22916	17550	17	M14 X 40	166	13
PL190X250 AS	7.4800		9.8430		2.047	1.890	2.598	35,108	112,640	21321	16245	20	M14 X 45	166	17
PL200X260 AS	7.8740		10.2360		2.047	1.890	2.598	38,869	118,360	21176	16390	21	M14 X 45	166	18
PL220X285 AS	8.6610		11.2200		2.205	2.008	2.835	50,965	141,020	21611	16680	18	M16 X 50	257	23
PL240X305 AS	9.4490	-0.0032" +0	12.0080	+0.0035" -0	2.205	2.008	2.835	61,808	156,640	22046	17405	20	M16 X 50	257	25
PL260X325 AS	10.2360		12.7950		2.205	2.008	2.835	76,706	180,180	23351	18710	23	M16 X 50	257	27
PL280X355 AS	11.0240		13.9760		2.598	2.402	3.307	95,145	207,240	20886	16535	22	M18 X 60	351	41
PL300X375 AS	11.8110		14.7640		2.598	2.402	3.307	111,372	224,400	21321	17115	24	M18 X 60	351	44

AS Metric Series

MOST POPULAR STYLE

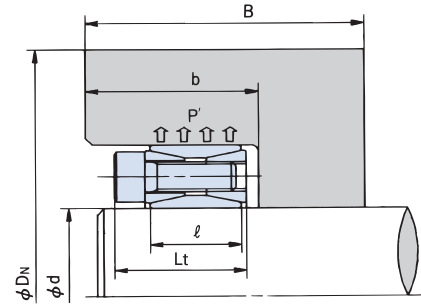


Hub Diameters for Single Unit Installation

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

$$B \geq 2\ell$$

<EXAMPLE> Hub Material Yield Point = 35500 psi
 PL030X055AS = 2.723" min. hub diameter



Hub Configuration Coefficient $K_3=0.6$

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 AS	12,328	2,657	2,494	2,383	2,330	2,286	2,234	2,205	2,149	2,109	2,078
PL020X047 AS	12,328	2,657	2,494	2,383	2,330	2,286	2,234	2,205	2,149	2,109	2,078
PL022X047 AS	12,328	2,657	2,494	2,383	2,330	2,286	2,234	2,205	2,149	2,109	2,078
PL024X050 AS	14,649	3,051	2,819	2,666	2,595	2,534	2,465	2,426	2,353	2,300	2,260
PL025X050 AS	14,649	3,051	2,819	2,666	2,595	2,534	2,465	2,426	2,353	2,300	2,260
PL028X055 AS	13,344	3,214	2,996	2,850	2,782	2,723	2,656	2,618	2,547	2,495	2,456
PL030X055 AS	13,344	3,214	2,996	2,850	2,782	2,723	2,656	2,618	2,547	2,495	2,456
PL032X060 AS	15,374	3,754	3,449	3,250	3,159	3,081	2,992	2,943	2,850	2,782	2,731
PL035X060 AS	15,374	3,754	3,449	3,250	3,159	3,081	2,992	2,943	2,850	2,782	2,731
PL038X065 AS	15,519	4,087	3,751	3,533	3,432	3,347	3,249	3,195	3,093	3,019	2,963
PL040X065 AS	15,519	4,087	3,751	3,533	3,432	3,347	3,249	3,195	3,093	3,019	2,963
PL042X075 AS	17,550	5,073	4,578	4,267	4,126	4,008	3,874	3,800	3,661	3,561	3,486
PL045X075 AS	17,550	5,073	4,578	4,267	4,126	4,008	3,874	3,800	3,661	3,561	3,486
PL048X080 AS	16,390	5,187	4,728	4,433	4,298	4,185	4,055	3,983	3,848	3,751	3,678
PL050X080 AS	16,390	5,187	4,728	4,433	4,298	4,185	4,055	3,983	3,848	3,751	3,678
PL055X085 AS	18,855	6,043	5,388	4,985	4,804	4,654	4,485	4,392	4,218	4,094	4,001
PL060X090 AS	17,840	6,154	5,540	5,155	4,981	4,835	4,670	4,579	4,409	4,287	4,195
PL065X095 AS	18,275	6,604	5,921	5,496	5,305	5,145	4,965	4,866	4,680	4,547	4,447
PL070X110 AS	19,290	7,956	7,062	6,517	6,275	6,072	5,845	5,721	5,489	5,324	5,200
PL075X115 AS	18,420	8,039	7,197	6,676	6,442	6,245	6,024	5,903	5,675	5,513	5,391
PL080X120 AS	17,840	8,205	7,386	6,873	6,641	6,447	6,227	6,106	5,879	5,716	5,594
PL085X125 AS	18,565	8,787	7,856	7,281	7,023	6,807	6,564	6,430	6,180	6,002	5,868
PL090X130 AS	17,840	8,889	8,002	7,446	7,195	6,984	6,746	6,615	6,368	6,192	6,060
PL095X135 AS	18,710	9,543	8,520	7,890	7,608	7,372	7,106	6,960	6,687	6,492	6,346
PL100X145 AS	18,420	10,136	9,075	8,417	8,122	7,875	7,596	7,443	7,156	6,951	6,797
PL110X155 AS	17,405	10,428	9,423	8,790	8,502	8,260	7,987	7,835	7,552	7,348	7,195
PL120X165 AS	17,840	11,282	10,156	9,451	9,132	8,865	8,562	8,396	8,083	7,860	7,692
PL130X180 AS	17,405	12,110	10,943	10,207	9,874	9,593	9,275	9,099	8,770	8,533	8,356
PL140X190 AS	17,550	12,851	11,599	10,810	10,453	10,153	9,813	9,626	9,274	9,022	8,832
PL150X200 AS	18,710	14,138	12,623	11,689	11,271	10,921	10,527	10,311	9,906	9,618	9,402
PL160X210 AS	18,710	14,845	13,254	12,273	11,834	11,467	11,053	10,826	10,402	10,099	9,872
PL170X225 AS	17,260	15,056	13,623	12,717	12,305	11,959	11,566	11,349	10,942	10,650	10,430
PL180X235 AS	17,550	15,895	14,346	13,370	12,929	12,558	12,137	11,905	11,470	11,159	10,924
PL190X250 AS	16,245	16,126	14,715	13,809	13,393	13,042	12,643	12,421	12,003	11,703	11,476
PL200X260 AS	16,390	16,858	15,365	14,408	13,970	13,600	13,179	12,946	12,506	12,190	11,952
PL220X285 AS	16,680	18,672	16,979	15,897	15,404	14,987	14,514	14,252	13,759	13,405	13,138
PL240X305 AS	17,405	20,519	18,543	17,296	16,730	16,254	15,716	15,418	14,860	14,459	14,158
PL260X325 AS	18,710	22,975	20,512	18,995	18,315	17,746	17,106	16,755	16,098	15,629	15,278
PL280X355 AS	16,535	23,137	21,064	19,737	19,131	18,619	18,036	17,714	17,107	16,671	16,342
PL300X375 AS	17,115	24,960	22,613	21,125	20,448	19,878	19,232	18,875	18,203	17,722	17,359

AS Metric Series

MOST POPULAR STYLE

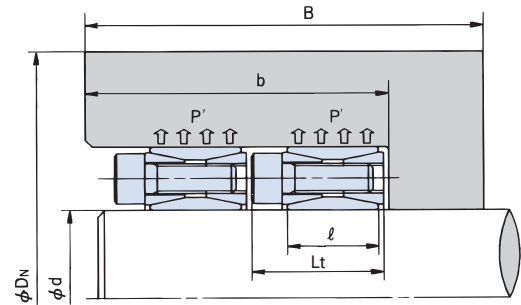
Hub Diameters for Multiple Unit Installation

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

$$B \geq Z \times (2 \times Lt)$$

Z : Number of units ($2 \leq Z \leq 4$)

<EXAMPLE> Hub Material Yield Point = 35500 psi
 PL030X055AS = 2.952" min. hub diameter



Hub Configuration Coefficient $K_3=0.8$

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 AS	12,328	3.053	2.781	2.607	2.528	2.461	2.384	2.342	2.262	2.205	2.162
PL020X047 AS	12,328	3.053	2.781	2.607	2.528	2.461	2.384	2.342	2.262	2.205	2.162
PL022X047 AS	12,328	3.053	2.781	2.607	2.528	2.461	2.384	2.342	2.262	2.205	2.162
PL024X050 AS	14,649	3.652	3.233	2.979	2.867	2.773	2.668	2.610	2.503	2.426	2.369
PL025X050 AS	14,649	3.652	3.233	2.979	2.867	2.773	2.668	2.610	2.503	2.426	2.369
PL028X055 AS	13,344	3.754	3.381	3.147	3.041	2.952	2.852	2.796	2.693	2.618	2.563
PL030X055 AS	13,344	3.754	3.381	3.147	3.041	2.952	2.852	2.796	2.693	2.618	2.563
PL032X060 AS	15,374	4.560	3.995	3.659	3.511	3.389	3.253	3.179	3.041	2.943	2.870
PL035X060 AS	15,374	4.560	3.995	3.659	3.511	3.389	3.253	3.179	3.041	2.943	2.870
PL038X065 AS	15,519	4.981	4.353	3.983	3.820	3.685	3.535	3.454	3.302	3.195	3.115
PL040X065 AS	15,519	4.981	4.353	3.983	3.820	3.685	3.535	3.454	3.302	3.195	3.115
PL042X075 AS	17,550	6.507	5.480	4.917	4.678	4.484	4.271	4.157	3.946	3.800	3.691
PL045X075 AS	17,550	6.507	5.480	4.917	4.678	4.484	4.271	4.157	3.946	3.800	3.691
PL048X080 AS	16,390	6.450	5.566	5.043	4.821	4.639	4.437	4.328	4.126	3.983	3.878
PL050X080 AS	16,390	6.450	5.566	5.043	4.821	4.639	4.437	4.328	4.126	3.983	3.878
PL055X085 AS	18,855	8.085	6.599	5.834	5.518	5.265	4.990	4.843	4.577	4.392	4.256
PL060X090 AS	17,840	7.962	6.663	5.960	5.663	5.423	5.160	5.019	4.760	4.579	4.446
PL065X095 AS	18,275	8.662	7.176	6.387	6.058	5.792	5.502	5.347	5.063	4.866	4.720
PL070X110 AS	19,290	10.819	8.723	7.670	7.239	6.896	6.524	6.327	5.969	5.721	5.539
PL075X115 AS	18,420	10.595	8.746	7.772	7.366	7.039	6.683	6.492	6.144	5.903	5.725
PL080X120 AS	17,840	10.616	8.884	7.946	7.551	7.231	6.880	6.692	6.347	6.106	5.928
PL085X125 AS	18,565	11.637	9.571	8.491	8.042	7.681	7.289	7.079	6.696	6.430	6.234
PL090X130 AS	17,840	11.501	9.624	8.608	8.180	7.833	7.453	7.249	6.875	6.615	6.422
PL095X135 AS	18,710	12.703	10.409	9.218	8.725	8.329	7.898	7.669	7.250	6.960	6.746
PL100X145 AS	18,420	13.358	11.027	9.799	9.287	8.875	8.426	8.186	7.747	7.443	7.218
PL110X155 AS	17,405	13.320	11.252	10.111	9.626	9.232	8.798	8.564	8.135	7.835	7.613
PL120X165 AS	17,840	14.597	12.216	10.926	10.383	9.942	9.460	9.201	8.726	8.396	8.151
PL130X180 AS	17,405	15.469	13.067	11.742	11.179	10.721	10.217	9.946	9.448	9.099	8.841
PL140X190 AS	17,550	16.485	13.883	12.456	11.851	11.360	10.821	10.530	9.998	9.626	9.350
PL150X200 AS	18,710	18.819	15.420	13.656	12.925	12.339	11.701	11.361	10.741	10.311	9.994
PL160X210 AS	18,710	19.760	16.191	14.339	13.572	12.956	12.286	11.929	11.278	10.826	10.494
PL170X225 AS	17,260	19.155	16.229	14.605	13.913	13.349	12.729	12.394	11.780	11.349	11.031
PL180X235 AS	17,550	20.389	17.171	15.406	14.658	14.051	13.384	13.024	12.366	11.905	11.565
PL190X250 AS	16,245	19.983	17.257	15.685	15.003	14.443	13.821	13.484	12.860	12.421	12.095
PL200X260 AS	16,390	20.964	18.058	16.391	15.669	15.077	14.421	14.065	13.408	12.946	12.602
PL220X285 AS	16,680	23.390	20.042	18.141	17.323	16.653	15.912	15.511	14.771	14.252	13.866
PL240X305 AS	17,405	26.211	22.141	19.896	18.942	18.166	17.312	16.853	16.008	15.418	14.981
PL260X325 AS	18,710	30.581	25.058	22.191	21.004	20.051	19.015	18.461	17.454	16.755	16.240
PL280X355 AS	16,535	28.877	24.809	22.488	21.486	20.664	19.755	19.262	18.353	17.714	17.239
PL300X375 AS	17,115	31.628	26.875	24.222	23.088	22.164	21.145	20.595	19.583	18.875	18.349