

<Conversion>

1 ft./lbs. = 0.1382 kgfm = 1.3550 N•m

1 psi = 0.0007 kgf/mm² = 0.0069 MPa

unit:mm

Model Number Inside Dia. X Outside Dia. (d X D)	Tolerance		Dimensions inch							Transmissible Torque Mt ft./lbs.	Transmissible Thrust Pax lbs.	Contact Pressure		Locking Bolts			Wt. lbs.
	Shaft O.D.	Hub I.D.	L ₁	L ₂	L	L ₁	t ₁	t ₂	D ₁			Shaft P psi	Hub P' psi	Qty.	Size	Tightening Torque M _A ft./lbs.	
PL019X047 AE	-0.0013" +0	+0.0013" -0	0.7480	0.9764	1.0748	1.3110	0.0984	0.0787	2.0866	195.6	6,320	41,640	13,490	6	M6X18	12.3	0.618
PL020X047 AE			0.7480	0.9764	1.0748	1.3110	0.0984	0.0787	2.0866	202.2	6,320	39,470	13,490	6	M6X18	12.3	0.596
PL022X047 AE			0.7480	0.9764	1.0748	1.3110	0.0984	0.0787	2.0866	224.4	6,320	35,980	13,490	6	M6X18	12.3	0.574
PL024X050 AE			0.7480	0.9961	1.0945	1.3307	0.0984	0.0787	2.2441	289.3	7,380	39,760	14,800	7	M6X18	12.3	0.640
PL025X050 AE			0.7480	0.9961	1.0945	1.3307	0.0984	0.0787	2.2441	304.1	7,380	40,920	14,800	7	M6X18	12.3	0.640
PL028X055 AE			0.7480	0.9961	1.1260	1.3622	0.1299	0.0787	2.4409	383.0	8,440	39,030	15,380	8	M6X18	12.3	0.773
PL030X055 AE			0.7480	0.9961	1.1260	1.3622	0.1299	0.0787	2.4409	412.5	8,440	36,420	15,380	8	M6X18	12.3	0.751
PL032X060 AE	-0.0015" +0	+0.0015" -0	0.8070	1.0748	1.2165	1.4528	0.1417	0.0984	2.6378	549.8	10,570	38,740	16,400	10	M6X18	12.3	0.971
PL035X060 AE			0.8070	1.0748	1.2165	1.4528	0.1417	0.0984	2.6378	607.4	10,570	35,400	16,400	10	M6X18	12.3	0.905
PL038X065 AE			0.8070	1.0827	1.2244	1.4606	0.1417	0.0984	2.8740	658.3	10,570	33,080	15,090	10	M6X18	12.3	1.060
PL040X065 AE			0.8070	1.0827	1.2244	1.4606	0.1417	0.0984	2.8740	687.1	10,570	31,490	15,090	10	M6X18	12.3	0.993
PL042X075 AE			0.9252	1.2126	1.3701	1.6850	0.1575	0.1181	3.2677	1,210.0	17,590	41,350	18,860	9	M8X22	29.7	1.678
PL045X075 AE			0.9252	1.2126	1.3701	1.6850	0.1575	0.1181	3.2677	1,292.0	17,590	38,600	18,860	9	M8X22	29.7	1.567
PL048X080 AE			0.9252	1.2205	1.3780	1.6929	0.1575	0.1181	3.4646	1,520.0	19,550	40,630	19,730	10	M8X22	29.7	1.788
PL050X080 AE	-0.0018" +0	+0.0018" -0	0.9252	1.2205	1.3780	1.6929	0.1575	0.1181	3.4646	1,594.0	19,550	39,130	19,730	10	M8X22	29.7	1.700
PL055X085 AE			0.9252	1.2126	1.3701	1.6850	0.1575	0.1181	3.7008	1,734.0	19,550	35,110	18,570	10	M8X22	29.7	1.854
PL060X090 AE			0.9252	1.2126	1.3701	1.6850	0.1575	0.1181	3.8976	1,882.0	19,550	31,780	17,700	10	M8X22	29.7	1.987
PL065X095 AE			0.9252	1.2126	1.3701	1.6850	0.1575	0.1181	4.0946	2,458.0	23,390	35,690	19,880	12	M8X22	29.7	2.119
PL070X110 AE			1.1024	1.4370	1.6142	2.0079	0.1772	0.1575	4.7244	3,542.0	30,900	35,840	19,150	10	M10X25	60.0	3.753
PL075X115 AE			1.1024	1.4370	1.6142	2.0079	0.1772	0.1575	4.9213	3,764.0	30,900	33,370	18,280	10	M10X25	60.0	3.951
PL080X120 AE			1.1024	1.4370	1.6142	2.0079	0.1772	0.1575	5.1181	4,849.0	37,080	37,080	21,040	12	M10X25	60.0	4.172
PL085X125 AE	-0.0021" +0	+0.0021" -0	1.1024	1.4370	1.6142	2.0079	0.1772	0.1575	5.3150	5,136.0	37,080	35,400	20,170	12	M10X25	60.0	4.371
PL090X130 AE			1.1024	1.4763	1.6929	2.0866	0.2165	0.1575	5.5118	5,498.0	37,080	34,970	19,440	12	M10X25	60.0	4.746
PL095X135 AE			1.1024	1.4763	1.6929	2.0866	0.2165	0.1575	5.7087	6,723.0	43,480	38,740	21,910	14	M10X25	60.0	4.945
PL100X145 AE			1.3386	1.7323	1.9685	2.3622	0.2362	0.1575	6.1024	7,601.0	46,570	31,595	17,850	15	M10X25	60.0	6.777
PL110X155 AE			1.3386	1.7323	1.9685	2.3622	0.2362	0.1575	6.5748	8,413.0	46,570	28,730	16,830	15	M10X25	60.0	7.395
PL120X165 AE			1.3386	1.7323	1.9685	2.3622	0.2362	0.1575	6.9685	10,996.0	55,840	31,595	18,860	18	M10X25	60.0	7.925
PL130X180 AE			-0.0025" +0	+0.0025" -0	1.4961	1.9685	2.2441	2.7165	0.2756	0.2362	7.6772	14,460.0	67,770	31,050	18,720	15	M12X35
PL140X190 AE	+0	-0	1.4961	1.9685	2.2441	2.7165	0.2756	0.2362	8.0709	15,570.0	67,770	28,730	17,850	15	M12X35	105.0	11.876
PL150X200 AE			1.4961	1.9685	2.2835	2.7559	0.3150	0.2362	8.4646	19,930.0	81,230	32,070	20,310	18	M12X35	105.0	12.826

Note: If your application requires slightly larger tolerances than noted, refer to page D-28.

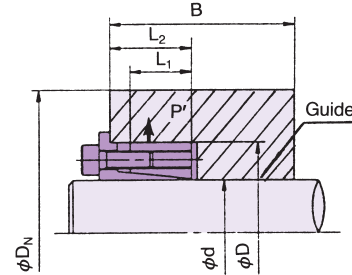
AE Metric Series

Minimum Hub Diameter (D_N) When Using Hub with Guide

This table shows minimum hub D_N , which can tolerate surface pressure P' .

Based on: $B \geq 2L_1$

<EXAMPLE> Hub Material Yield Point = 50,000 psi } Min. D_N = 2.7953"
PL030X055AE



<Conversion>

1 psi = 0.0007 kgf/mm² = 0.0069 MPa

Min. Hub Dia. (D_N in inches)

Model Number	Contact Pressure in the Hub Bore P' psi	Yield Point of Various Hub Material Y.P. (psi) Y.P. = $\sigma_{0.2}$					
		32,000	35,000	40,000	45,000	50,000	56,000
		Class No. 40 Grade No. 60-30	Class No. 50 Grade No. 65-35	Class No. 60 Grade No. 40010	Grade No. 45006	Grade No. 50005 Grade No. 80-65	Grade No. 1040, 1045 1137, 1141 1144 Grade No. 60004
PL019X047 AE	13,490	2.6378	2.5591	2.4409	2.3622	2.3228	2.2835
PL020X047 AE	13,490	2.6378	2.5591	2.4409	2.3622	2.3228	2.2835
PL022X047 AE	13,490	2.6378	2.5591	2.4409	2.3622	2.3228	2.2835
PL024X050 AE	14,800	2.9134	2.8346	2.6772	2.5984	2.5197	2.4409
PL025X050 AE	14,800	2.9134	2.8346	2.6772	2.5984	2.5197	2.4409
PL028X055 AE	15,380	3.2677	3.1496	2.9921	2.8740	2.7953	2.7165
PL030X055 AE	15,380	3.2677	3.1496	2.9921	2.8740	2.7953	2.7165
PL032X060 AE	16,400	3.6614	3.5039	3.3465	3.1890	3.1102	3.0315
PL035X060 AE	16,400	3.6614	3.5039	3.3465	3.1890	3.1102	3.0315
PL038X065 AE	15,090	3.8189	3.7008	3.5039	3.3858	3.3071	3.1890
PL040X065 AE	15,090	3.8189	3.7008	3.5039	3.3858	3.3071	3.1890
PL042X075 AE	18,860	4.9606	4.6850	4.4094	4.2126	4.0551	3.8976
PL045X075 AE	18,860	4.9606	4.6850	4.4094	4.2126	4.0551	3.8976
PL048X080 AE	19,730	5.4331	5.1181	4.8031	4.5669	4.3701	4.2126
PL050X080 AE	19,730	5.4331	5.1181	4.8031	4.5669	4.3701	4.2126
PL055X085 AE	18,570	5.5512	5.2756	4.9606	4.7244	4.5669	4.4094
PL060X090 AE	17,700	5.7087	5.4724	5.1575	4.9213	4.7638	4.6063
PL065X095 AE	19,880	6.4567	6.1417	5.7087	5.4331	5.1969	5.0394
PL070X110 AE	19,150	7.3220	6.9291	6.4961	6.1811	5.9449	5.7480
PL075X115 AE	18,280	7.4409	7.0866	6.6535	6.3780	6.1417	5.9449
PL080X120 AE	21,040	8.5039	7.9921	7.4016	7.0079	6.7323	6.4567
PL085X125 AE	20,170	8.5827	8.1102	7.5591	7.1654	6.8898	6.6535
PL090X130 AE	19,440	8.7008	8.2677	7.7165	7.3622	7.0866	6.8110
PL095X135 AE	21,910	9.8425	9.2126	8.5039	8.0315	7.6772	7.3622
PL100X145 AE	17,850	9.2520	8.8189	8.3071	7.9528	7.6772	7.4409
PL110X155 AE	16,830	9.5669	9.1732	8.6614	8.3071	8.0709	7.7953
PL120X165 AE	18,860	10.8661	10.3150	9.6850	9.2126	8.8976	8.5827
PL130X180 AE	18,720	11.7717	11.2205	10.5118	10.0394	9.6850	9.3307
PL140X190 AE	17,850	12.0866	11.5354	10.8661	10.3937	10.0394	9.7244
PL150X200 AE	20,310	13.7795	13.0315	12.1260	11.4961	11.0630	10.6299

Note: Min. Hub Dia. (D_N) calculated based upon the Formula (3) at (K) = 0.8. Refer to page D-29.

Minimum Hub Diameter (D_N)

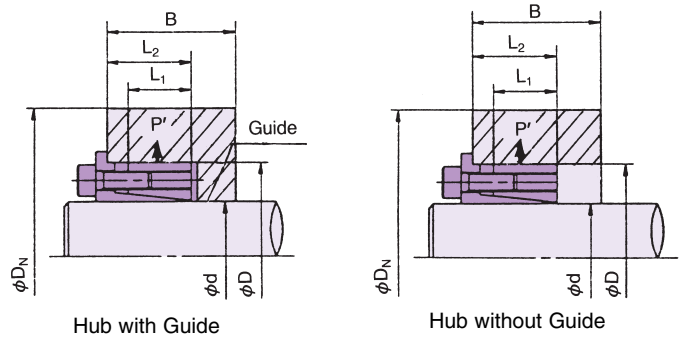
1. When Using Hub with Guide

Based on: $L_2 < B < 2L_1$

or

2. When Using Hub without Guide

This table shows minimum hub D_N , which can tolerate surface pressure P'



<EXAMPLE> Hub Material Yield Point = 50,000 psi } Min. D_N = 2.9921"
 PL030X055AE

Min. Hub Dia. (D_N in inches)

<Conversion>

1 psi = 0.0007 kgf/mm² = 0.0069 MPa

Model Number	Contact Pressure in the Hub Bore P' psi	Yield Point of Various Hub Material Y.P. (psi) Y.P. = $\sigma_{0.2}$					
		32,000	35,000	40,000	45,000	50,000	56,000
		Class No. 40 Grade No. 60-30	Class No. 50 Grade No. 65-35	Class No. 60 Grade No. 40010	Grade No. 45006	Grade No. 50005 Grade No. 80-65	Grade No. 1040, 1045 1137, 1141 1144 Grade No. 60004
PL019X047 AE	13,490	2.9134	2.7953	2.6378	2.5147	2.4409	2.3622
PL020X047 AE	13,490	2.9134	2.7953	2.6378	2.5197	2.4409	2.3622
PL022X047 AE	13,490	2.9134	2.7953	2.6378	2.5197	2.4409	2.3622
PL024X050 AE	14,800	3.2678	3.1102	2.9134	2.7953	2.6772	2.5984
PL025X050 AE	14,800	3.2678	3.1102	2.9134	2.7953	2.6772	2.5984
PL028X055 AE	15,380	3.6614	3.5039	3.2677	3.1102	2.9921	2.8740
PL030X055 AE	15,380	3.6614	3.5039	3.2677	3.1102	2.9921	2.8740
PL032X060 AE	16,400	4.1732	3.9370	3.6614	3.4646	3.3465	3.2283
PL035X060 AE	16,400	4.1732	3.9370	3.6614	3.4646	3.3465	3.2283
PL038X065 AE	15,090	4.2913	4.0945	3.8189	3.6614	3.5039	3.3858
PL040X065 AE	15,090	4.2913	4.0945	3.8189	3.6614	3.5039	3.3858
PL042X075 AE	18,860	5.8268	5.3937	4.9606	4.6457	4.4094	4.2126
PL045X075 AE	18,860	5.8268	5.3937	4.9606	4.6457	4.4094	4.2126
PL048X080 AE	19,730	6.4961	5.9843	5.4331	5.0394	4.8031	4.5669
PL050X080 AE	19,730	6.4961	5.9843	5.4331	5.0394	4.8031	4.5669
PL055X085 AE	18,570	6.4961	6.0630	5.5512	5.1969	4.9606	4.7244
PL060X090 AE	17,700	6.6142	6.1811	5.7087	5.3937	5.1575	4.9213
PL065X095 AE	19,880	7.7559	7.1260	6.4567	6.0236	5.7087	5.4331
PL070X110 AE	19,150	8.6614	8.0315	7.3228	6.8504	6.4961	6.1811
PL075X115 AE	18,280	8.7008	8.1102	7.4409	6.9685	6.6535	6.3780
PL080X120 AE	21,040	10.3937	9.4882	8.5039	7.8740	7.4016	7.0472
PL085X125 AE	20,170	10.3543	9.4882	8.5827	7.9921	7.5591	7.2047
PL090X130 AE	19,440	10.3937	9.6063	8.7008	8.1496	7.7165	7.3622
PL095X135 AE	21,910	12.2835	11.1024	9.8425	9.0551	8.5039	8.0315
PL100X145 AE	17,850	10.7480	10.0394	9.2520	8.7008	8.3071	7.9528
PL110X155 AE	16,830	10.9843	10.3150	9.5667	9.0551	8.6614	8.3465
PL120X165 AE	18,860	12.7953	11.8898	10.8661	10.1575	9.2520	9.2520
PL130X180 AE	18,720	13.8583	12.8740	11.7717	11.0630	10.5118	10.0394
PL140X190 AE	17,850	14.0551	13.1496	12.0866	11.3780	10.8661	10.4331
PL150X200 AE	20,310	16.6929	15.3150	13.7795	12.8346	12.1260	11.5354

Note: Min. Hub Dia. (D_N) calculated based upon the Formula (3) at (K) = 1.0. Refer to page D-29.