



Fig. 12

Hub Calculation

(see pages 4 and 8-10 for additional dimensional data.)

$$D_N = \frac{D \times YP + (C3 \times p')}{YP - (C3 \times p')}$$

YP = yield point of hub material (lbs/sq. in.)
 p' = contact pressure between Locking Assembly and hub, see specification tables.

B = Hub width

D_N = required hub O.D.

C3 = stress reduction factors, depending on hub width (B)

C3 = 0.6 if hub width B = 2L1

C3 = 0.8 if B = 1.5 L1 or with two or more units and B = L3 (1 + n); n = number of units

C3 = 1.0 for B = L1

Inch					Metric				
ID In	D _N (in Inches)				ID mm	D _N (in Inches)			
	7003	7006	7005	7009		7003	7006	7005	7009
0.7500	2.78	2.52			19	2.78	2.52		
0.8750	2.81	2.52			20	2.78	2.52		
1.0000	3.18	2.82	2.56		22	2.81	2.52		
1.1250	3.36	3.00	2.88		24	2.96	2.82		
1.1875	3.36	3.00	2.88		25	3.18	2.82	2.71	
1.2500	4.00	3.45	3.01		28	3.36	3.00	2.98	
1.3750	4.00	3.45	3.01		30	3.36	3.00	2.98	
1.4375	4.26	3.71	3.52		32	4.00	3.45		
1.5000	4.26	3.71	3.52		35	4.00	3.45	3.02	
1.6250	5.41	4.65	4.26		38	4.26	3.71	3.69	
1.7500	5.41	4.65	4.26		40	4.26	3.71	3.69	
1.8750	5.52	4.87	4.28		42	5.41	4.65	4.26	
1.9375	5.52	4.87	4.28		45	5.41	4.65	4.26	
2.0000	5.52	4.87	4.28		48			4.28	
2.1250	6.28	5.27	4.62		50	5.52	4.87	4.28	
2.1875	6.28	5.27	4.62		55	6.28	5.27	4.62	
2.2500	6.35	5.37	4.98		60	6.35	5.37	4.98	
2.3750	6.35	5.37	4.98		65	7.02	5.89	5.15	
2.4375	7.02	5.89	5.15		70	8.32	6.96	6.23	5.34
2.5000	7.02	5.89	5.15		75	8.30	6.99	6.39	
2.5625	7.02	5.89	5.15		80	8.66	7.16	6.82	6.00
2.6875	8.51	6.96	6.23		85	9.46	7.75	7.24	
2.7500	8.32	6.96	6.23	6.20	90	9.38	7.91	7.39	6.53
2.8750	8.30	6.99	6.39	6.68	95	10.21	8.54	7.56	
2.9375	8.30	6.99	6.39	6.68	100	11.53	9.48	8.12	6.94
3.0000	8.66	7.16	6.82	7.18	110	11.72	9.73	8.74	7.32
3.1250			6.82	7.18	120	12.48	10.65	9.66	7.85
3.2500	9.46	7.75	7.10	7.48	130	12.99	11.39	10.27	8.65
3.3750	9.46	7.75	7.23		140	12.57	11.55	11.29	9.16
3.4375	9.38	7.91	7.39	7.84	150	14.44	12.65	11.98	9.55
3.5000	9.38	7.91	7.39	7.84	160	15.16	13.18	12.67	10.06
3.6250			7.56		170	13.84	12.60	12.69	10.88
3.7500	10.21	8.54	7.56		180	14.46	13.16	13.40	11.25
3.8750			8.12		190			14.26	11.58
3.9375	11.53	9.48	8.12	8.78	200			14.61	12.41
4.0000	11.53	9.48	8.12	8.78	220			16.19	13.38
4.3750			8.74	9.11	240			17.99	14.95
4.4375	11.72	9.73	9.07	9.25	260			19.02	15.88
4.5000			9.66	9.84	280			20.78	17.89
4.7500	12.48	10.65	9.66	9.84	300			22.46	18.70
4.9375	12.99	11.39	10.27	10.99	320			23.89	19.86
5.0000	12.99	11.39	10.27	10.99	340			25.07	20.63
5.4375	12.57	11.55	11.29	11.69	360			26.44	21.94
5.5000			11.29	11.69	380			27.60	22.75
5.9375	14.44	12.65	11.98	11.98	400			29.31	24.11
6.0000			12.67	12.67	420			30.04	25.34
6.4375	13.84	12.60	12.69	14.01	440			30.74	26.77
6.5000			12.69	14.01	460			31.31	27.49
6.9375	14.46	13.16	13.40	14.29	480			34.17	28.48
7.0000			13.40	14.29	500			34.83	29.27
7.4380			14.26	13.90	520			36.55	30.77
7.5000			14.26	13.90	540			37.17	31.56
7.9380			14.61	15.63	560			38.93	32.89
8.0000			14.78		580			40.12	33.66
9.0000			17.99		600			40.84	34.42

Note: Calculations made with a Stress Reduction Factor C3=0.8 and Hub Material Yield Point=36,000psi