MARINE PROPELLER SHAFT END DIMENSIONS

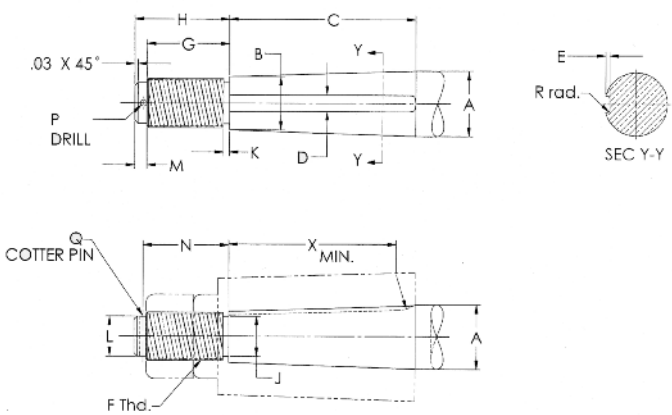
APPROVED S.A.E. STANDARD DIMENSIONS FOR SHAFTS 3/4 TO 3 INCHES IN DIAMETER

Nom Shaft Dia.	Diameter Small End B		Taper Length	Keyway Width D			Keyway Side Depth a E			Keyway Fillet Radius b R	Thread c F		End of Taper to End of Thd	Ext. Beyond Taper	Undercut		Dia. of Pin end	Lgth. of Pin end	Cotter-Pin Hole		Cotter-Pin, Q		Nuts d			Keyway Length
A	Min.	Max	C	Nom	Min	Max	Nom	Min	Max		Dia.	Tpi	G	H	J	K	L	M	N	(drill) P	Nom dia.	Length	Size	Plain thick, T	Jamb thick,W	X
3/4	0.624	0.626	2	3/16	0.1865	0.1875	3/32	0.095	0.097	1/32	1/2	13	1 1/16	1 5/16	25/64	1/8	3/8	1/4	1 9/64	9/64	1/8	3/4	1/2 -13	1/2	5/16	1 1/2
7/8	0.726	0.728	2 3/8	1/4	0.249	0.250	1/8	0.125	0.127	1/32	5/8	11	1 1/4	1 1/2	31/64	1/8	7/16	1/4	1 21/64	9/64	1/8	3/4	5/8 -11	5/8	3/8	1 25/32
1	0.827	0.829	2 3/4	1/4	0.249	0.250	1/8	0.125	0.127	1/32	3/4	10	1 7/16	1 3/4	19/32	1/8	1/2	5/16	1 33/64	9/64	1/8	1	3/4 -10	3/4	7/16	2 1/8
1 1/8	0.929	0.931	3 1/8	1/4	0.249	0.250	1/8	0.125	0.127	1/32	3/4	10	1 7/16	1 3/4	19/32	1/8	1/2	5/16	1 33/64	9/64	1/8	1	3/4 -10	3/4	7/16	2 1/8
1 1/4	1.030	1.032	3 1/2	5/16	0.3115	0.3125	5/32	0.157	0.160	1/16	7/8	9	1 5/8	2	23/32	1/8	5/8	3/8	1 23/32	11/64	5/32	1 1/4	7/8 -9	7/8	1/2	2 13/16
1 3/8	1.132	1.134	3 7/8	5/16	0.3115	0.3125	5/32	0.157	0.160	1/16	1	8	1 13/16	2 1/4	13/16	1/8	3/4	7/16	1 29/32	11/64	5/32	1 1/2	1 - 8	1	9/16	3 3/16
1 1/2	1.233	1.235	4 1/4	3/8	0.374	0.375	3/16	0.189	0.192	1/16	1 1/8	7	2	2 7/16	29/32	3/16	7/8	7/18	2 3/32	11/64	5/32	1 1/2	1 1/8-7	1 1/8	5/8	3 1/2
1 3/4	1.437	1.439	5	7/16	0.4365	0.4375	7/32	0.219	0.222	1/16	1 1/4	7	2 1/4	2 3/4	1 1/32	3/16	1	1/2	2 23/64	13/64	3/16	1 3/4	1 1/4-7	1 1/4	3/4	4 7/32
2	1.640	1.642	5 3/4	1/2	0.499	0.500	1/4	0.251	0.254	1/16	1 1/2	6	2 5/8	3 1/8	1 1/4	3/16	1 1/4	1/2	2 47/64	13/64	3/16	2	1 1/2-6	1 1/2	7/8	4 15/16
2 1/4	1.843	1.845	6 1/2	9/16	0.5610	0.5625	9/32	0.281	0.284	3/32	1 3/4	5	3	3 1/2	1 3/8	3/16	1 3/8	1/2	3 9/64	17/64	1/4	2 1/4	1 3/4-5	1 3/4	1	5 5/8
2 1/2	2.046	2.048	7 1/4	5/8	0.6235	0.625	5/16	0.312	0.315	3/32	1 3/4	5	3	3 1/2	1 7/16	3/16	1 7/16	1/2	3 9/64	17/64	1/4	2 1/4	1 3/4-5	1 3/4	1	6 3/32
2 3/4	2.257	2.259	7 7/8	5/8	0.6235	0.625	5/16	0.313	0.316	3/32	2	4 1/2	3 1/2	4	1 11/16	1/4	1 11/16	1/2	3 41/64	17/64	1/4	2 1/2	2-4 1/2	2	1 1/8	6 21/32
3	2.460	2.462	8 5/8	3/4	0.7485	0.750	5/16	0.311	0.314	3/32	2 1/4	4 1/2	3 7/8	4 3/8	1 15/16	1/4	1 5/16	1/2	4 1/64	17/64	1/4	3	2 1/4-4 1/2	2 1/4	1 1/4	7 11/32

DIMENSIONS OF SHAFTS FROM 3-1/4 TO 8 INCHES IN DIAMETER

Nom Shaft Dia.	Diameter Small End B		Taper Length	Keyway Width D			Keyway Side Depth a E			Keyway Fillet Radius R	Thread c F		End of Taper to End of Thd	Ext. Beyond Taper	Undercut		Dia. of Pin end	Lgth. of Pin end	Cotter-Pin Hole		Cotter-Pin, Q		Nuts d			Sleeve Dia. e U		Clear-ance	Keyway Length
A	Min.	Max	C	Nom	Min	Max	Nom	Min	Max		Dia.	Tpi	G	H	J	K	L	M	N	(drill) P	Nom dia.	Length	Size	Plain thick, T	Jamb thick,W	Min	Max	Z	X
3 1/4	2.663	2.665	9 3/8	3/4	0.7485	0.750	5/16	0.311	0.314	1/8	2 1/2	4	4 3/8	5 1/8	2 1/8	3/8	2 1/8	3/4	4 37/64	3/8	3/8	3	2 1/2-4	2 1/2	1 1/2	3.870	3.872	3/8	8 1/2
3 1/2	2.866	2.868	10 1/8	7/8	0.8735	0.875	5/16	0.310	0.313	1/8	2 1/2	4	4 3/8	5 1/8	2 1/8	3/8	2 1/8	3/4	4 37/64	3/8	3/8	3	2 1/2-4	2 1/2	1 1/2	4.120	4.122	3/8	9 1/4
3 3/4	3.069	3.071	10 7/8	7/8	0.8735	0.875	5/16	0.310	0.313	1/8	2 3/4	4	4 3/4	5 1/2	2 3/8	3/8	2 3/8	3/4	4 61/64	3/8	3/8	3 1/2	2 3/4-4	2 3/4	1 5/8	4.369	4.371	3/8	10
4	3.272	3.274	11 5/8	1	0.9985	1.000	5/16	0.309	0.312	1/8	3	4	5 1/8	5 7/8	2 1/2	3/8	2 1/2	3/4	5 21/64	3/8	3/8	3 1/2	3 - 4	3	1 3/4	4.619	4.621	3/8	10 1/2
4 1/2	3.827	3.829	10 3/4	1 1/8	1.123	1.125	3/8	0.373	0.376	5/32	3 1/4	4	5 5/8	6 3/8	2 3/4	3/8	2 3/4	3/4	—	—	—	—	3 1/4-4	3 1/4	1 7/8	5.243	5.245	1/2	9 5/8
5	4.249	4.251	12	1 1/4	1.248	1.250	7/16	0.434	0.437	3/16	3 3/4	4	6 3/8	7 1/8	3 1/4	3/8	3 1/4	3/4	—	—	—	—	3 3/4-4	3 3/4	2 1/8	5.993	5.995	1/2	10 7/8
5 1/2	4.671	4.673	13 1/4	1 1/4	1.248	1.250	7/16	0.435	0.438	3/16	4	4	6 3/4	7 3/4	3 1/2	1/2	3 1/2	1	—	—	—	—	4 - 4	4	2 1/4	6.492	6.494	1/2	12 1/8
*6	4.791	4.793	14 1/2	1 3/8	1.373	1.375	1/2	0.493	0.496	7/32	4 1/4	4	7 1/2	8 1/2	3 7/8	1/2	3 7/8	1	—	—	—	—	4 1/4-4	4 1/4	2 1/4	6.992	6.994	1/2	13 1/4
*6 1/2	5.187	5.189	15 3/4	1 3/8	1.373	1.375	1/2	0.494	0.497	7/32	4 1/2	4	8 1/4	9 1/4	4 3/8	1/2	4 3/8	1	—	—	—	—	4 1/2-4	9 1/2	2 1/2	7.492	7.494	1/2	14 3/8
*7	5.582	5.584	17	1 1/2	1.498	1.500	9/16	0.555	0.558	1/4	5	4	9	10	4 7/8	1/2	4 7/8	1	—	—	—	—	5 - 4	5	2 3/4	8.117	8.120	1/2	15 5/8
*7 1/2	5.978	5.980	18 1/4	1 1/2	1.498	1.500	9/16	0.556	0.559	1/4	5 1/2	4	9 3/8	10 3/8	5 1/8	1/2	5 1/8	1	—	—	—	—	5 1/2-4	5 1/2	3	8.616	8.619	1/2	16 7/8
*8	6.374	6.376	19 1/2	1 3/4	1.748	1.750	9/16	0.553	0.556	1/4	5 3/4	4	9 3/4	10 3/4	5 3/8	1/2	5 3/8	1	—	—	—	—	5 3/4-4	5 3/4	3 1/8	9.240	9.243	1/2	18 1/8

* 6" through 8" shaft has 1 inch per foot taper, 1/12" per inch taper. Angle with centerline is 2° 23' 9".
a Keyway shall be cut parallel to taper.
b Fillets are recommended for keyways in shafts through 2" in diameter. fillets are mandatory for shafts above 2" in diameter.
c Threads are Unified and American Standard, Class 3A..
d Nuts are to be semi-finished stock, American Standard B18.2.
e The shaft sleeve shown is recommended practice, but the use of a sleeve is optional.

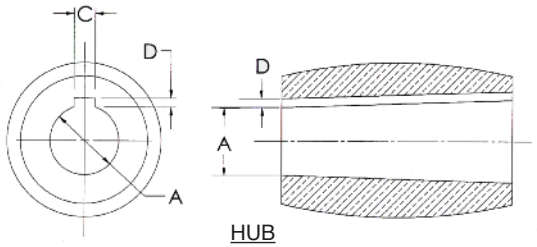


MARINE PROPELLERS HUB BORE DIMENSIONS

Taper: Per Foot = 3/4"
Per Inch - 1/16" Angle with centerline = 1° 47' 24"

Std. Taper	Dia. Small End "A"		Keyway Width "C"			Keyway Side Depth "D"		
	Min.	Max.	Nom.	Min.	Max.	Nom.	Min.	Max.
3/4	0.608	0.610	3/16	0.1865	0.1875	3/32	0.098	0.100
7/8	0.710	0.712	1/4	0.249	0.250	1/8	0.129	0.131
1	0.812	0.814	1/4	0.249	0.250	1/8	0.129	0.131
1 1/8	0.913	0.915	1/4	0.249	0.250	1/8	0.129	0.131
1 1/4	1.015	1.017	5/16	0.3115	0.3125	5/32	0.162	0.165
1 3/8	1.116	1.118	5/16	0.3115	0.3125	5/32	0.161	0.164
1 1/2	1.218	1.220	3/8	0.374	0.375	3/16	0.195	0.198
1 3/4	1.421	1.423	7/16	0.4365	0.4375	7/32	0.226	0.229
2	1.624	1.626	1/2	0.499	0.500	1/4	0.259	0.262
2 1/4	1.827	1.829	9/16	0.561	0.5625	9/32	0.291	0.294
2 1/2	2.030	2.032	5/8	0.6235	0.625	5/16	0.322	0.325
2 3/4	2.233	2.235	5/8	0.6235	0.625	5/16	0.322	0.325
3	2.437	2.439	3/4	0.7485	0.750	5/16	0.323	0.326
3 1/4	2.640	2.642	3/4	0.7485	0.750	5/16	0.323	0.326
3 1/2	2.843	2.845	7/8	0.8735	0.875	5/16	0.324	0.327
3 3/4	3.046	3.048	7/8	0.8735	0.875	5/16	0.324	0.327
4	3.249	3.251	1	0.9985	1.000	5/16	0.326	0.329
4 1/2	3.796	3.798	1 1/8	1.123	1.125	3/8	0.388	0.391
5	4.218	4.220	1 1/4	1.248	1.250	7/16	0.450	0.453
5 1/2	4.640	4.642	1 1/4	1.248	1.250	7/16	0.450	0.453
*6	4.749	4.751	1 3/8	1.373	1.375	1/2	0.517	0.520
*6 1/2	5.145	5.147	1 3/8	1.373	1.375	1/2	0.516	0.519
*7	5.541	5.543	1 1/2	1.498	1.500	9/16	0.579	0.582
*7 1/2	5.937	5.939	1 1/2	1.498	1.500	9/16	0.579	0.582
*8	6.332	6.334	1 3/4	1.748	1.750	9/16	0.582	0.585

Overseas specifications on request.



PROPELLER BORING

To insure retention of inherent factory accuracy, order your propeller factory-bored whenever possible. When bored in the field, propellers should be bored to the pilot hole, NOT to the hub or blade edges.

* 6" through 8" shaft has 1 inch per foot taper, 1/12" per inch taper. Angle with centerline is 2° 23' 9".