

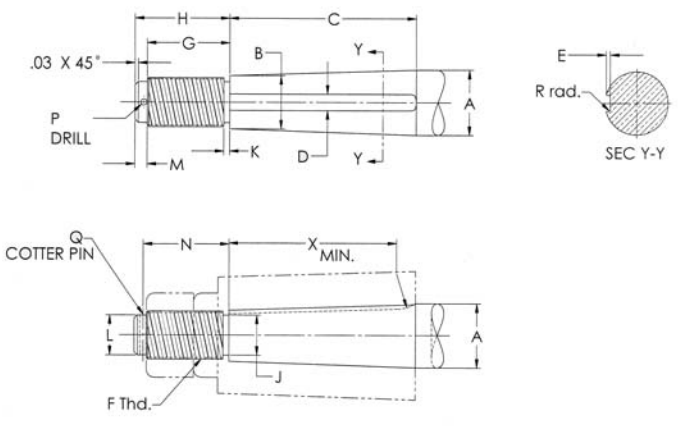
APPROVED S.A.E. STANDARD DIMENSIONS FOR SHAFTS 3/4 TO 3 INCHES IN DIAMETER

| Nom Shaft Dia. A | Diameter Small End B | | Taper Length C | Keyway Width D | | | Keyway Side Depth a E | | | Keyway Fillet Radius R | Thread c F | | End of Taper to End of Thd G | Ext. Beyond Taper H | Undercut | | Dia. of Pin end L | Lgth. of Pin end M | Cotter-Pin Hole | | Cotter-Pin, Q | | Nuts a | | | Keyway Length X |
|---------------------|----------------------|-------|-------------------|----------------|--------|--------|-----------------------|-------|-------|------------------------|------------|-------|------------------------------|---------------------|----------|------|-------------------|--------------------|-----------------|-----------|---------------|--------|---------------|----------------|---------------|-----------------|
| | Min. | Max | | Nom | Min | Max | Nom | Min | Max | | Dia. | Tpi | | | J | K | | | N | (drill) P | Nom dia. | Length | Size | Plain thick, T | Jamb thick, W | |
| 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 1/16 | 2 5/64 | 1/8 | 3/8 | 1/4 | 1 3/64 | 3/64 | 1/8 | 3/4 | 1/2 - 13 | 1/2 | 5/16 | 1 1/2 |
| 7/8 | 0.726 | 0.728 | 2 1/2 | 1/4 | 0.249 | 0.250 | 1/8 | 0.125 | 0.127 | 1/32 | 3/8 | 11 | 1 1/4 | 1 1/2 | 3 1/64 | 1/8 | 7/16 | 1/2 | 1 21/64 | 3/64 | 1/8 | 3/4 | 3/8 - 11 | 3/8 | 5/8 | 1 29/32 |
| 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 1/8 | 1 3/4 | 1 5/32 | 1/8 | 1/2 | 3/4 | 1 39/64 | 3/64 | 1/8 | 1 | 3/4 - 10 | 3/4 | 7/8 | 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 1/8 | 1 3/4 | 1 5/32 | 1/8 | 1/2 | 3/4 | 1 39/64 | 3/64 | 1/8 | 1 | 3/4 - 10 | 3/4 | 7/8 | 2 1/8 |
| 1 1/4 | 1.030 | 1.032 | 3 1/2 | 3/16 | 0.3115 | 0.3125 | 5/32 | 0.157 | 0.160 | 1/16 | 7/8 | 9 | 1 1/8 | 2 | 2 3/32 | 1/8 | 5/8 | 3/4 | 1 23/32 | 1 1/64 | 5/32 | 1 1/4 | 7/8 - 9 | 7/8 | 1 1/2 | 2 19/32 |
| 1 1/2 | 1.132 | 1.134 | 3 3/8 | 3/16 | 0.3115 | 0.3125 | 5/32 | 0.157 | 0.160 | 1/16 | 1 | 8 | 1 13/16 | 2 1/4 | 1 3/16 | 1/8 | 3/4 | 3/4 | 1 29/32 | 1 1/64 | 5/32 | 1 1/2 | 1 - 8 | 1 | 9/16 | 3 1/16 |
| 1 3/4 | 1.233 | 1.235 | 4 1/4 | 3/8 | 0.374 | 0.375 | 3/16 | 0.189 | 0.192 | 1/8 | 1 1/8 | 7 | 2 | 2 7/16 | 2 5/32 | 3/16 | 7/8 | 7/16 | 2 3/32 | 1 1/64 | 5/32 | 1 1/2 | 1 1/8 - 7 | 1 1/8 | 5/8 | 3 1/2 |
| 2 | 1.437 | 1.439 | 5 | 7/16 | 0.4365 | 0.4375 | 7/32 | 0.219 | 0.222 | 1/8 | 1 1/4 | 7 | 2 1/4 | 2 3/4 | 1 5/16 | 3/16 | 1 | 1/2 | 2 23/64 | 1 3/64 | 3/16 | 1 3/4 | 1 1/4 - 7 | 1 1/4 | 3/4 | 4 7/32 |
| 2 1/4 | 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 | 1 3/64 | 3/16 | 2 | 1 1/2 - 6 | 1 1/2 | 7/8 | 4 5/16 |
| 2 1/2 | 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 1/8 | 3/16 | 1 1/8 | 1/2 | 3 3/64 | 1 1/64 | 1/4 | 2 1/4 | 1 3/4 - 5 | 1 3/4 | 1 | 5 1/8 |
| 2 3/4 | 2.046 | 2.048 | 7 1/4 | 5/8 | 0.6235 | 0.625 | 9/16 | 0.312 | 0.315 | 3/32 | 1 3/4 | 5 | 3 | 3 1/2 | 1 1/8 | 3/16 | 1 1/8 | 1/2 | 3 3/64 | 1 1/64 | 1/4 | 2 1/4 | 1 3/4 - 5 | 1 3/4 | 1 | 6 9/32 |
| 3 | 2.257 | 2.259 | 7 3/4 | 5/8 | 0.6235 | 0.625 | 9/16 | 0.313 | 0.316 | 3/32 | 2 | 4 | 4 | 4 1/2 | 1 1 1/16 | 1/4 | 1 1 1/16 | 1/2 | 3 41/64 | 1 1/64 | 1/4 | 2 1/2 | 2 - 4 1/2 | 2 | 1 1/8 | 6 21/32 |
| 3 | 2.460 | 2.462 | 8 3/4 | 3/4 | 0.7485 | 0.750 | 5/8 | 0.311 | 0.314 | 3/32 | 2 1/4 | 4 1/2 | 4 3/8 | 5 1/8 | 1 1 1/16 | 1/4 | 1 1 1/16 | 1/2 | 4 1/64 | 1 1/64 | 1/4 | 3 | 2 1/4 - 4 1/2 | 2 1/4 | 1 1/4 | 7 1 3/32 |

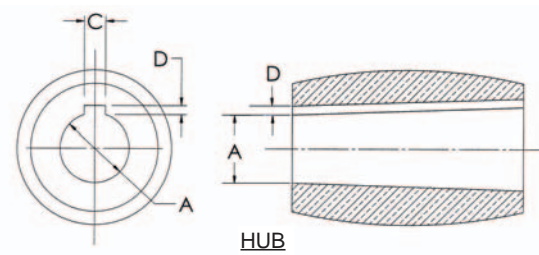
DIMENSIONS OF SHAFTS FROM 3 1/4 TO 8 INCHES IN DIAMETER

| Nom Shaft Dia. A | Diameter Small End B | | Taper Length C | Keyway Width D | | | Keyway Side Depth a E | | | Keyway Fillet Radius R | Thread c F | | End of Taper to End of Thd G | Ext. Beyond Taper H | Undercut | | Dia. of Pin end L | Lgth. of Pin end M | Cotter-Pin Hole | | Cotter-Pin, Q | | Nuts a | | | Sleeve Dia. e U | | Clearance Z | Keyway Length X |
|---------------------|----------------------|-------|-------------------|----------------|--------|-------|-----------------------|-------|-------|------------------------|------------|-----|------------------------------|---------------------|----------|-----|-------------------|--------------------|-----------------|-----------|---------------|--------|-----------|----------------|---------------|-----------------|-------|-------------|-----------------|
| | Min. | Max | | Nom | Min | Max | Nom | Min | Max | | Dia. | Tpi | | | J | K | | | N | (drill) P | Nom dia. | Length | Size | Plain thick, T | Jamb thick, W | Min | Max | | |
| 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 | 1 1/8 | 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 8 1/64 | 3/8 | 3/8 | 3 1/2 | 2 3/4 - 4 | 2 3/4 | 1 1/8 | 4.369 | 4.371 | 3/8 | 10 |
| 4 | 3.272 | 3.274 | 11 1/8 | 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 2 1/64 | 3/8 | 3/8 | 3 1/2 | 3 - 4 | 3 | 1 1/4 | 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 | 3/32 | 3 1/4 | 4 | 5 3/8 | 6 3/8 | 2 3/4 | 3/8 | 2 3/4 | 3/4 | --- | --- | --- | --- | 3 1/4 - 4 | 3 1/4 | 1 1/8 | 5.243 | 5.245 | 1/2 | 9 3/8 |
| 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 1/2 | 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 1/4 |
| *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 3/8 | 1/2 | 3 3/8 | 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 1/2 |
| *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 1/8 |
| *8 | 6.374 | 6.376 | 19 1/2 | 1 3/4 | 1.748 | 1.750 | 5/8 | 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, 1/2" 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 = 1/8" | | | | | | | | |
| 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 | 3/16 | 0.3115 | 0.3125 | 5/32 | 0.162 | 0.165 |
| 1 1/2 | 1.116 | 1.118 | 3/16 | 0.3115 | 0.3125 | 5/32 | 0.161 | 0.164 |
| 1 3/4 | 1.218 | 1.220 | 3/8 | 0.374 | 0.375 | 3/16 | 0.195 | 0.198 |
| 2 | 1.421 | 1.423 | 7/16 | 0.4365 | 0.4375 | 7/32 | 0.226 | 0.229 |
| 2 1/4 | 1.624 | 1.626 | 1/2 | 0.499 | 0.500 | 1/4 | 0.259 | 0.262 |
| 2 1/2 | 1.827 | 1.829 | 9/16 | 0.561 | 0.5625 | 9/32 | 0.291 | 0.294 |
| 2 3/4 | 2.030 | 2.032 | 5/8 | 0.6235 | 0.625 | 5/16 | 0.322 | 0.325 |
| 3 | 2.233 | 2.235 | 3/4 | 0.6235 | 0.625 | 5/16 | 0.322 | 0.325 |
| 3 1/4 | 2.437 | 2.439 | 3/4 | 0.7485 | 0.750 | 5/16 | 0.323 | 0.326 |
| 3 1/2 | 2.640 | 2.642 | 3/4 | 0.7485 | 0.750 | 5/16 | 0.323 | 0.326 |
| 3 3/4 | 2.843 | 2.845 | 7/8 | 0.8735 | 0.875 | 5/16 | 0.324 | 0.327 |
| 4 | 3.046 | 3.048 | 7/8 | 0.8735 | 0.875 | 5/16 | 0.324 | 0.327 |
| 4 1/4 | 3.249 | 3.251 | 1 | 0.9985 | 1.000 | 5/8 | 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 1/2 | 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 | 5/8 | 0.582 | 0.585 |



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, 1/2" per inch taper. Angle with centerline is 2° 23' 9".