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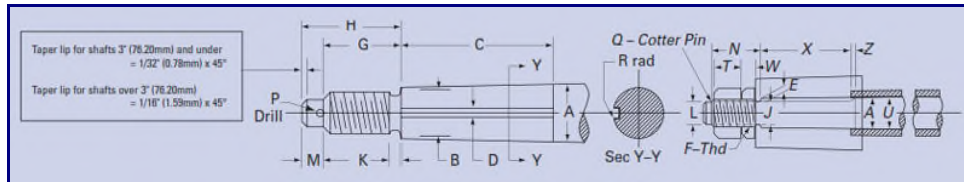
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Marine Propeller Shaft Dimensions

SAE Specification J755



Nominal Shaft Dia., in. (mm)	Dia. Small End, in. (mm)		Taper Length, in. (mm)	Keyway Width, in. (mm)			Keyway Side Depth, in. (mm)			Keyway Fillet Radius, in. (mm)	Thread, in. (mm)		End of Taper to End of Thread, in. (mm)	Extension Beyond Taper, in. (mm)
	B			D			E				F			
	Min	Max		Nominal	Min	Max	Nominal	Min	Max		Diameter	Threads per in. (25.4mm)		
A	C								R			G	H	
Dimensions for Shafts 3/4 to 8 inches (19.05 to 203.20mm) in diameter														
3/4 (19.05)	0.624 (15.85)	0.626 (15.90)	2 (50.80)	3/16 (4.76)	0.1865 (4.74)	0.1875 (4.76)	3/32 (2.38)	0.095 (2.41)	0.097 (2.46)	1/32 (0.80)	1/2 (12.70)	13	1-1/16 (26.99)	1-5/16 (33.34)
7/8 (22.23)	0.726 (18.44)	0.728 (18.49)	2-3/8 (60.33)	1/4 (6.35)	0.249 (6.32)	0.250 (6.35)	1/8 (3.18)	0.125 (3.18)	0.127 (3.23)	1/32 (0.80)	5/8 (15.88)	11	1-1/4 (31.75)	1-1/2 (38.10)
1 (25.40)	0.827 (21.01)	0.829 (21.06)	2-3/4 (69.85)	1/4 (6.35)	0.249 (6.32)	0.250 (6.35)	1/8 (3.18)	0.125 (3.18)	0.127 (3.23)	1/32 (0.80)	3/4 (19.05)	10	1-7/16 (36.51)	1-3/4 (44.45)
1-1/8 (28.58)	0.929 (23.60)	0.931 (23.65)	3-1/8 (79.38)	1/4 (6.35)	0.249 (6.32)	0.250 (6.35)	1/8 (3.18)	0.125 (3.18)	0.127 (3.23)	1/32 (0.80)	3/4 (19.05)	10	1-7/16 (36.51)	1-3/4 (44.45)
1-1/4 (31.75)	1.030 (26.16)	1.032 (26.21)	3-1/2 (88.90)	5/16 (7.94)	0.3115 (7.91)	0.3125 (7.94)	5/32 (3.97)	0.157 (3.99)	0.160 (4.06)	1/16 (1.59)	7/8 (22.23)	9	1-5/8 (41.28)	2 (50.80)
1-3/8 (34.93)	1.132 (28.75)	1.134 (28.80)	3-7/8 (98.43)	5/16 (7.94)	0.3115 (7.91)	0.3125 (7.94)	5/32 (3.97)	0.157 (3.99)	0.160 (4.06)	1/16 (1.59)	1 (25.40)	8	1-13/16 (46.04)	2-1/4 (57.15)
1-1/2 (38.10)	1.233 (31.32)	1.235 (31.37)	4-1/4 (107.95)	3/8 (9.53)	0.374 (9.50)	0.375 (9.53)	3/16 (4.76)	0.189 (4.80)	0.192 (4.88)	1/16 (1.59)	1-1/8 (28.58)	7	2 (50.80)	2-7/16 (61.91)
1-3/4 (44.45)	1.437 (36.50)	1.439 (36.55)	5 (127.0)	7/16 (11.11)	0.4365 (11.09)	0.4375 (11.11)	7/32 (5.56)	0.219 (5.56)	0.222 (5.64)	1/16 (1.59)	1-1/4 (31.75)	7	2-1/4 (57.15)	2-3/4 (69.85)
2 (50.80)	1.640 (41.66)	1.642 (41.71)	5-3/4 (146.05)	1/2 (12.70)	0.499 (12.67)	0.500 (12.70)	1/4 (6.35)	0.251 (6.38)	0.254 (6.45)	1/16 (1.59)	1-1/2 (38.10)	6	2-5/8 (66.68)	3-1/8 (79.38)
2-1/4 (57.15)	1.843 (46.81)	1.845 (46.86)	6-1/2 (165.10)	9/16 (14.29)	0.561 (14.29)	0.5625 (14.29)	9/32 (7.14)	0.281 (7.14)	0.284 (7.21)	3/32 (2.38)	1-3/4 (44.45)	5	3 (76.20)	3-1/2 (88.90)
2-1/2 (63.50)	2.046 (51.97)	2.048 (52.02)	7-1/4 (184.15)	5/8 (15.88)	0.6235 (15.84)	0.625 (15.88)	5/16 (7.94)	0.312 (7.92)	0.315 (8.00)	3/32 (2.38)	1-3/4 (44.45)	5	3 (76.20)	3-1/2 (88.90)
2-3/4 (69.85)	2.257 (57.33)	2.259 (57.38)	7-7/8 (200.03)	5/8 (15.88)	0.6235 (15.84)	0.625 (15.88)	5/16 (7.94)	0.312 (7.95)	0.316 (8.03)	3/32 (2.38)	2 (50.80)	4-1/2	3-1/2 (88.90)	4 (101.60)
3 (76.20)	2.460 (62.48)	2.462 (62.53)	8-5/8 (219.08)	3/4 (19.05)	0.7485 (19.01)	0.750 (19.05)	5/16 (7.94)	0.311 (7.90)	0.314 (7.98)	3/32 (2.38)	2-1/4 (57.15)	4-1/2	3-7/8 (98.43)	4-3/8 (111.13)
3-1/4 (82.55)	2.663 (67.64)	2.665 (67.69)	9-3/8 (238.12)	3/4 (19.05)	0.7485 (19.01)	0.750 (19.05)	5/16 (7.94)	0.311 (7.90)	0.314 (7.98)	1/8 (3.175)	2-1/2 (63.50)	4	4-3/8 (111.12)	5-1/8 (130.17)
3-1/2 (88.90)	2.866 (72.80)	2.868 (72.85)	10-1/8 (257.17)	7/8 (22.23)	0.8735 (22.19)	0.875 (22.23)	5/16 (7.94)	0.310 (7.87)	0.313 (7.95)	1/8 (3.175)	2-1/2 (63.50)	4	4-3/8 (111.12)	5-1/8 (130.17)
3-3/4 (95.25)	3.069 (77.95)	3.071 (78.00)	10-7/8 (276.22)	7/8 (22.23)	0.8735 (22.19)	0.875 (22.23)	5/16 (7.94)	0.310 (7.87)	0.313 (7.95)	1/8 (3.175)	2-3/4 (68.85)	4	4-3/4 (120.65)	5-1/2 (139.70)
4 (101.60)	3.272 (83.11)	3.274 (83.16)	11-5/8 (295.27)	1 (25.40)	0.9985 (25.36)	1.000 (25.40)	5/16 (7.94)	0.309 (7.85)	0.312 (7.92)	1/8 (3.175)	3 (76.20)	4	5-1/8 (130.17)	5-7/8 (149.22)
4-1/2 (114.30)	3.827 (97.21)	3.829 (97.26)	10-3/4 (273)	1-1/8 (28.58)	1.123 (28.52)	1.125 (28.58)	3/8 (9.52)	0.373 (9.47)	0.376 (9.55)	5/32 (3.97)	3-1/4 (82.55)	4	5-5/8 (142.87)	6-3/8 (161.92)
5 (127.00)	4.249 (107.92)	4.251 (107.98)	12 (304.80)	1-1/4 (31.75)	1.248 (31.70)	1.250 (31.75)	7/16 (11.11)	0.434 (11.02)	0.437 (11.10)	3/16 (4.76)	3-3/4 (95.25)	4	6-3/8 (161.92)	7-1/8 (180.97)
5-1/2 (139.70)	4.671 (118.64)	4.673 (118.69)	13-1/4 (336.55)	1-1/4 (31.75)	1.248 (31.70)	1.250 (31.75)	7/16 (11.11)	0.435 (11.05)	0.438 (11.13)	3/16 (4.76)	4 (101.6)	4	6-3/4 (171.45)	7-3/4 (196.85)
6 (152.40)	4.791 (121.69)	4.793 (121.74)	14-1/2 (368.30)	1-3/8 (34.93)	1.373 (34.87)	1.375 (34.93)	1/2 (12.70)	0.493 (12.52)	0.496 (12.60)	7/32 (5.56)	4-1/4 (107.9)	4	7-1/2 (190.50)	8-1/2 (215.90)
6-1/2 (165.10)	5.187 (131.75)	5.189 (131.80)	15-3/4 (400.05)	1-3/8 (34.93)	1.373 (34.87)	1.375 (34.93)	1/2 (12.70)	0.494 (12.55)	0.497 (12.62)	7/32 (5.56)	4-1/2 (114.3)	4	8-1/4 (209.55)	9-1/4 (234.95)
7 (177.80)	5.582 (141.78)	5.584 (141.83)	17 (431.80)	1-1/2 (38.10)	1.498 (38.05)	1.500 (38.10)	9/16 (14.29)	0.555 (14.10)	0.558 (14.17)	1/4 (6.35)	5 (127.0)	4	9 (228.60)	10 (254.00)
7-1/2 (190.50)	5.978 (151.84)	5.980 (151.89)	18-1/4 (463.55)	1-1/2 (38.10)	1.498 (38.05)	1.500 (38.10)	9/16 (14.29)	0.556 (14.12)	0.559 (14.20)	1/4 (6.35)	5-1/2 (139.7)	4	9-3/8 (238.12)	10-3/8 (263.52)
8 (203.20)	6.374 (161.90)	6.376 (161.95)	19-1/2 (495.30)	1-3/4 (44.45)	1.748 (44.40)	1.750 (44.45)	9/16 (14.29)	0.553 (14.05)	0.556 (14.12)	1/4 (6.35)	5-3/4 (146.0)	4	9-3/4 (247.65)	10-3/4 (273.05)
<p>a Keyway shall be cut parallel to taper.</p> <p>b Fillets are recommended for keyways in shafts through 2" (50.8mm) in diameter. Fillets are mandatory for shafts above 2" (50.8mm) in diameter.</p> <p>c Threads are Unified and American Standard, Class 3A.</p> <p>d Nuts are to be semifinished stock, American Standard B18.2.</p> <div><p>Taper Angles</p><p>Below 6" Diameter</p><p>3/4" (19.05mm) per foot (304.8mm)</p><p>0.0625" (1.58mm) per inch (25.4mm)</p><p>3 deg 34 min 47 sec total included angle</p><p>6" Diameter and Larger</p><p>1" (25.4mm) per foot (304.8mm)</p><p>0.0633" (2.12mm) per inch (25.4mm)</p><p>4 deg 46 min 19 sec total included angle</p></div>														

Undercut, in. (mm)				Cutter Pin Hole, in. (mm)		Cutter Pin Q		Nuts*				Sleeve Dia., in. (mm)		Clearance in. (mm)	Nominal Shaft Dia., in. (mm)
J	K	Dia. of Pin End, in. (mm)	Length of Pin End, in. (mm)	N	(Drill) P	Nominal Dia., in. (mm)	Length in. (mm)	Size in. (mm)	Plain Thickness in. (mm)	Jam Thickness in. (mm)	Keyway Length in. (mm)	U			
												Min	Max		Z
25/64 (9.92)	1/8 (3.18)	3/8 (9.53)	1/4 (6.35)	1-9/64 (28.97)	9/64 (3.57)	1/8 (3.18)	3/4 (19.05)	1-1/2-13 (12.7-330.2)	1/2 (12.70)	5/16 (7.94)	1-1/2 (38.10)	—	—	—	3/4 (19.05)
31/64 (12.30)	1/8 (3.18)	7/16 (11.11)	1/4 (6.35)	1-21/64 (33.73)	9/64 (3.57)	1/8 (3.18)	3/4 (19.05)	5/8-11 (15.88-279.4)	5/8 (15.88)	3/8 (9.53)	1-25/32 (45.24)	—	—	—	7/8 (22.23)
19/32 (15.08)	1/8 (3.18)	1/2 (12.70)	5/16 (7.94)	1-33/64 (38.50)	9/64 (3.57)	1/8 (3.18)	1 (25.40)	3/4-10 (19.05-254.0)	3/4 (19.05)	7/16 (11.11)	2-1/8 (53.38)	—	—	—	1 (25.40)
19/32 (15.08)	1/8 (3.18)	1/2 (12.70)	5/16 (7.94)	1-33/64 (38.50)	9/64 (3.57)	1/8 (3.18)	1 (25.40)	3/4-10 (19.05-254.0)	3/4 (19.05)	7/16 (11.11)	2-1/8 (53.38)	—	—	—	1-1/8 (28.58)
23/32 (18.26)	1/8 (3.18)	5/8 (15.88)	3/8 (9.53)	1-23/32 (43.66)	11/64 (4.37)	5/32 (3.97)	1-1/4 (31.75)	7/8-9 (22.23-228.6)	7/8 (22.23)	1/2 (12.70)	2-13/16 (71.44)	—	—	—	1-1/4 (31.75)
13/16 (20.64)	1/8 (3.18)	3/4 (19.05)	7/16 (11.11)	1-29/32 (48.42)	11/64 (4.37)	5/32 (3.97)	1-1/2 (38.10)	1-8 (25.4-203.2)	1 (25.40)	9/16 (14.29)	3-3/16 (80.96)	—	—	—	1-3/8 (34.93)
29/32 (23.02)	3/16 (4.76)	7/8 (22.23)	7/16 (11.11)	2-3/32 (53.18)	11/64 (4.37)	5/32 (3.97)	1-1/2 (38.10)	1-1/8-7 (28.58-177.8)	1-1/8 (28.58)	5/8 (15.88)	3-1/2 (88.90)	—	—	—	1-1/2 (38.10)
1-1/32 (26.20)	3/16 (4.76)	1 (25.40)	1/2 (12.70)	2-23/64 (59.93)	13/64 (5.16)	3/16 (4.76)	1-3/4 (44.45)	1-1/4-7 (31.75-177.8)	1-1/4 (31.75)	3/4 (19.05)	4-7/32 (107.16)	—	—	—	1-3/4 (44.45)
1-1/4 (31.75)	3/16 (4.76)	1-1/4 (31.75)	1/2 (12.70)	2-47/64 (69.45)	13/64 (5.16)	3/16 (4.76)	2 (50.80)	1-1/2-6 (38.10-152.4)	1-1/2 (38.10)	7/8 (22.23)	4-15/16 (125.41)	—	—	—	2 (50.80)
1-3/8 (34.92)	3/16 (4.76)	1-3/8 (34.92)	1/2 (12.70)	3-9/64 (79.77)	17/64 (6.75)	1/4 (6.35)	2-1/4 (57.15)	1-3/4-5 (44.45-127.0)	1-3/4 (44.45)	1 (25.40)	5-5/8 (142.88)	—	—	—	2-1/4 (57.15)
1-7/16 (36.51)	3/16 (4.76)	1-7/16 (36.51)	1/2 (12.70)	3-9/64 (79.77)	17/64 (6.75)	1/4 (6.35)	2-1/4 (57.15)	1-3/4-5 (44.45-127.0)	1-3/4 (44.45)	1 (25.40)	6-3/32 (154.78)	—	—	—	2-1/2 (63.50)
1-11/16 (42.86)	1/4 (6.35)	1-11/16 (42.86)	1/2 (12.70)	3-41/64 (92.47)	17/64 (6.75)	1/4 (6.35)	2-1/2 (63.50)	2-4-1/2 (50.8-114.3)	2 (50.80)	1-1/8 (28.58)	6-21/32 (169.09)	—	—	—	2-3/4 (69.85)
1-15/16 (49.21)	1/4 (6.35)	1-15/16 (49.21)	1/2 (12.70)	4-1/64 (102.0)	17/64 (6.75)	1/4 (6.35)	3 (76.20)	2-1/4-4-1/2 (57.15-114.3)	2-1/4 (57.15)	1-1/4 (31.75)	7-11/32 (186.53)	—	—	—	3 (76.20)
2-1/8 (53.97)	3/8 (9.52)	2-1/8 (53.97)	3/4 (19.05)	4-37/64 (116.28)	3/8 (9.52)	3/8 (9.52)	3 (76.20)	2-1/2-4 (63.5-101.6)	2-1/2 (63.50)	1-1/2 (38.10)	8-1/2 (215.90)	3.870 (98.30)	3.872 (98.35)	3/8 (9.52)	3-1/4 (82.55)
2-1/8 (53.97)	3/8 (9.52)	2-1/8 (53.97)	3/4 (19.05)	4-37/64 (116.28)	3/8 (9.52)	3/8 (9.52)	3 (76.20)	2-1/2-4 (63.5-101.6)	2-1/2 (63.50)	1-1/2 (38.10)	9-1/4 (234.95)	4.120 (104.65)	4.122 (104.70)	3/8 (9.52)	3-1/2 (88.90)
2-3/8 (60.32)	3/8 (9.52)	2-3/8 (60.32)	3/4 (19.05)	4-61/64 (125.81)	3/8 (9.52)	3/8 (9.52)	3-1/2 (88.90)	2-3/4-4 (69.8-101.6)	2-3/4 (69.85)	1-5/8 (41.27)	10 (254.00)	4.369 (110.97)	4.371 (111.02)	3/8 (9.52)	3-3/4 (95.25)
2-1/2 (63.50)	3/8 (9.52)	2-1/2 (63.50)	3/4 (19.05)	5-21/64 (135.33)	3/8 (9.52)	3/8 (9.52)	3-1/2 (88.90)	3-4 (76.2-101.6)	3 (76.20)	1-3/4 (44.45)	10-1/2 (266.70)	4.619 (117.32)	4.621 (117.45)	3/8 (9.52)	4 (101.60)
2-3/4 (69.85)	3/8 (9.52)	2-3/4 (69.85)	3/4 (19.05)	—	—	—	—	3-1/4-4 (82.5-101.6)	3-1/4 (82.55)	1-7/8 (47.62)	9-5/8 (244.47)	5.243 (133.17)	5.245 (133.22)	1/2 (12.70)	4-1/2 (114.30)
3-1/4 (82.55)	3/8 (9.52)	3-1/4 (82.55)	3/4 (19.05)	—	—	—	—	3-3/4-4 (95.2-101.6)	3-3/4 (95.25)	2-1/8 (54.00)	10-7/8 (276.22)	5.993 (152.22)	5.995 (152.27)	1/2 (12.70)	5 (127.00)
3-1/2 (88.90)	1/2 (12.70)	3-1/2 (88.90)	1 (25.40)	—	—	—	—	4-4 (101.6-101.6)	4 (101.60)	2-1/4 (57.15)	12-1/8 (307.97)	6.492 (164.90)	6.494 (164.95)	1/2 (12.70)	5-1/2 (139.70)
3-7/8 (98.42)	1/2 (12.70)	3-7/8 (98.42)	1 (25.40)	—	—	—	—	4-1/4-4 (107.9-101.6)	4-1/4 (107.95)	2-1/4 (57.15)	13-1/4 (336.55)	6.992 (177.60)	6.994 (177.65)	1/2 (12.70)	6 (152.40)
4-3/8 (111.12)	1/2 (12.70)	4-3/8 (111.12)	1 (25.40)	—	—	—	—	4-1/2-4 (114.3-101.6)	4-1/2 (114.30)	2-1/2 (63.50)	14-3/8 (365.12)	7.492 (190.30)	7.494 (190.35)	1/2 (12.70)	6-1/2 (165.10)
4-7/8 (123.82)	1/2 (12.70)	4-7/8 (123.82)	1 (25.40)	—	—	—	—	5-4 (127.0-101.6)	5 (127.00)	2-3/4 (69.85)	15-5/8 (396.87)	8.117 (206.17)	8.120 (206.25)	1/2 (12.70)	7 (177.80)
5-1/8 (130.17)	1/2 (12.70)	5-1/8 (130.17)	1 (25.40)	—	—	—	—	5-1/2-4 (139.7-101.6)	5-1/2 (139.70)	3 (76.20)	16-7/8 (426.62)	8.616 (218.85)	8.619 (218.91)	1/2 (12.70)	7-1/2 (190.50)
5-3/8 (136.52)	1/2 (12.70)	5-3/8 (136.52)	1 (25.40)	—	—	—	—	5-3/4-4 (146.0-101.6)	5-3/4 (146.05)	3-1/8 (79.37)	18-1/8 (460.37)	9.240 (234.70)	9.243 (234.77)	1/2 (12.70)	8 (203.20)

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