



**INDUSTRIAL FASTENERS & COMPONENTS,
AND PREMIUM LIFTING HARDWARE**

SPECIALTY FASTENERS & SPRING WASHERS



Wave Spring
Washers



Curved Spring
Washers



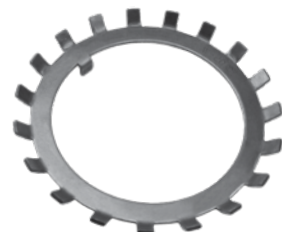
Finger Spring
Washers



Belleville Spring
Washers



Lock Nuts



Lock Washers

LOW MINIMUMS • GREAT PRICES • EASY ORDERING



Spring Washers	3
Wave Spring Washers	4
Belleville Spring Washers	6
Curved (Single Wave) Spring Washers	8
Finger Spring Washers	10
Lock Nuts	12
Lock Washers	13

Minimum Order \$25 (special items/requirements may apply)

FOB: Minneapolis, KS

Terms: Net 30 Days. Credit application required to open account.

SPRING WASHERS



WAVE SPRING WASHERS provide greater load-bearing capability because of their three-point contact and sharper curves or waves. They are typically used in thrust-loading applications for small deflections, particularly where radial space is limited. Applied loads are evenly distributed and there are no sharp edges to interfere or gall. The height and material thickness regulate the load function. *See page 4.*



BELLEVILLE SPRING WASHERS – also known as Conical or Disc Spring Washers – provide the greatest load-bearing capacity for its size. They compensate for joint expansion and contraction, spans holes, and maintains high tension in screw and nut assemblies. By combining them in varying sequence, each size gives numerous load-carrying possibilities. *See page 6.*



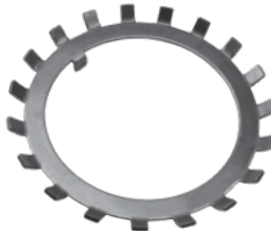
CURVED (single wave) SPRING WASHERS are commonly used for simple spring applications. Curved Washers exert relatively light thrust loads and are often used to absorb axial end play or as Lock Washers for fasteners. The height of the form and material thickness are variables which can be adapted to a specific load/deflection function. *See page 8.*



FINGER SPRING WASHERS are used for preloading ball bearings and general applications. They counteract excess wear, vibration, noise, and end play. They promote efficiency and smooth operation, reducing skidding wear on rotating elements. They are also extremely useful in cases of unavoidable loose internal clearances due to special application conditions. *See page 10.*

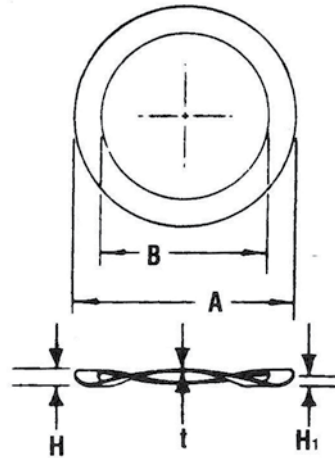


SHAFT LOCK NUTS are made of low carbon steel. They require a lock washer and the cutting of a key way in the shaft. *See page 12.*



SHAFT LOCK WASHERS are used with lock nut series "N/AN." The key is bent in the opposite direction of the tangs. *See page 13.*

WAVE SPRING WASHERS



WAVE SPRING WASHERS provide greater load-bearing capability because of their three-point contact and sharper curves or waves. They are typically used in thrust-loading applications for small deflections, particularly where radial space is limited. Applied loads are evenly distributed and there are no sharp edges to interfere or gall. The height and material thickness regulate the load function.

FOR LOADING BALL BEARINGS OR OTHER PURPOSES

STOCK SIZES IN HIGH CARBON STEEL OR STAINLESS STEEL OR MANUFACTURED TO YOUR SPECIFICATIONS

MATERIAL

Stainless Steel 300 Series
1050 Spring Steel
1074 Spring Steel
1095 Spring Steel
and others

FINISHES

Per customer specifications

J I T PROGRAM AVAILABLE • CONSISTENT ACCURACY

Blanket orders accepted with total order pricing for your weekly, bi-weekly, monthly, etc. releases

OFF OUR SHELVES IN TENS, TWENTIES, HUNDREDS, AND THOUSANDS

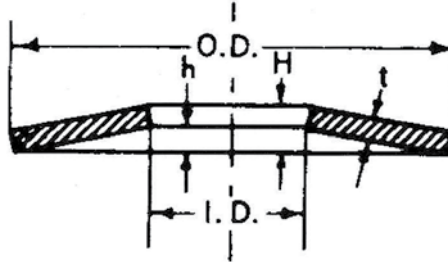
LOW MINIMUMS • GREAT PRICES • EASY ORDERING

S = Stainless Steel

Part #	Legacy Precision Specialties #	Blank Size Pre Bending A	Blank Size Pre Bending B	Stock Thickness T	Height (Approx.) H	Compressed Height H1	Load at Height of H1 (lbs.)
WW3-0242-006-SS	PSWW0242-006S	0.242"	0.194"	0.006"	0.030"	0.015"	.5 - 1
WW3-0367-006	PSWW0367-006	0.367"	0.265"	0.006"	0.030"	0.015"	2 - 4
WW3-0367-006-SS	PSWW0367-006S	0.367"	0.265"	0.006"	0.030"	0.015"	2 - 4
WW3-0492-007	PSWW0492-007	0.492"	0.350"	0.007"	0.035"	0.020"	3 - 5
WW3-0492-007-SS	PSWW0492-007S	0.492"	0.350"	0.007"	0.035"	0.020"	3 - 5
WW3-0618-008	PSWW0618-008	0.618"	0.440"	0.008"	0.040"	0.025"	3 - 5
WW3-0618-008-SS	PSWW0618-008S	0.618"	0.440"	0.008"	0.040"	0.025"	3 - 5
WW3-0734-009	PSWW0734-009	0.734"	0.531"	0.009"	0.050"	0.030"	4 - 7
WW3-0734-009-SS	PSWW0734-009S	0.734"	0.531"	0.009"	0.050"	0.030"	4 - 7
WW3-0855-010	PSWW0855-010	0.855"	0.650"	0.010"	0.060"	0.030"	4 - 7
WW3-0855-010-BO	PSWW0855-010BO	0.855"	0.650"	0.010"	0.060"	0.030"	4 - 7
WW3-0855-010-SS	PSWW0855-010S	0.855"	0.650"	0.010"	0.060"	0.030"	4 - 7
WW3-1004-011	PSWW1004-011	1.004"	0.780"	0.011"	0.071"	0.035"	7 - 10
WW3-1080-012	PSWW1080-012	1.080"	0.839"	0.012"	0.073"	0.036"	8 - 12
WW3-1102-012	PSWW1102-012	1.102"	0.856"	0.012"	0.075"	0.037"	9 - 13
WW3-1159-013	PSWW1159-013	1.159"	0.901"	0.013"	0.080"	0.040"	10 - 14
WW3-1159-013-SS	PSWW1159-013S	1.159"	0.901"	0.013"	0.080"	0.040"	10 - 14
WW3-1235-014	PSWW1235-014	1.235"	0.961"	0.014"	0.087"	0.043"	12 - 18
WW3-1351-015	PSWW1351-015	1.351"	1.051"	0.015"	0.099"	0.049"	15 - 21
WW3-1351-015-SS	PSWW1351-015S	1.351"	1.051"	0.015"	0.099"	0.049"	14 - 20
WW3-1543-017	PSWW1543-017	1.543"	1.201"	0.017"	0.105"	0.052"	17 - 25
WW3-1543-020	PSWW1543-020	1.543"	1.201"	0.020"	0.125"	0.063"	25 - 37
WW3-1543-020-ZC	PSWW1543-020Z	1.543"	1.201"	0.020"	0.125"	0.063"	25 - 37
WW3-1621-019	PSWW1621-019	1.621"	1.261"	0.019"	0.112"	0.056"	21 - 30
WW3-1819-020	PSWW1819-020	1.819"	1.404"	0.020"	0.125"	0.063"	25 - 35
WW3-2028-022	PSWW2028-022	2.028"	1.575"	0.022"	0.140"	0.069"	29 - 41
WW3-2028-022-ZY	PSWW2028-022ZYD	2.028"	1.575"	0.022"	0.140"	0.069"	29 - 41
WW3-2132-023	PSWW2132-023	2.132"	1.658"	0.023"	0.148"	0.073"	31 - 45
WW3-2420-025	PSWW2420-025	2.420"	1.872"	0.025"	0.168"	0.082"	37 - 53
WW3-2645-028	PSWW2645-028	2.645"	2.057"	0.028"	0.184"	0.090"	47 - 67
WW3-2816-030	PSWW2816-030	2.816"	2.200"	0.030"	0.197"	0.097"	53 - 77
WW3-3118-035	PSWW3118-035	3.118"	2.420"	0.035"	0.207"	0.104"	72 - 104
WW3-3328-036	PSWW3328-036	3.328"	2.603"	0.036"	0.227"	0.112"	74 - 106
WW3-3519-038	PSWW3519-038	3.519"	2.740"	0.038"	0.234"	0.116"	82 - 118
WW3-3917-042	PSWW3917-042	3.917"	3.047"	0.042"	0.258"	0.128"	98 - 142
WW3-4300-045	PSWW4300-045	4.300"	3.370"	0.045"	0.302"	0.148"	115 - 165
WW3-4627-047	PSWW4627-047	4.627"	3.612"	0.047"	0.334"	0.162"	130 - 188
WW3-4997-050	PSWW4997-050	4.997"	3.890"	0.050"	0.355"	0.172"	145 - 209
WW3-5408-053	PSWW5408-053	5.408"	4.208"	0.053"	0.388"	0.187"	162 - 232
WW3-5817-055	PSWW5817-055	5.817"	4.530"	0.055"	0.440"	0.209"	178 - 256
WW3-6173-058	PSWW6173-058	6.173"	4.803"	0.058"	0.463"	0.220"	196-282
WW3-6550-061	PSWW6550-061	6.550"	5.120"	0.061"	0.496"	0.235"	209 - 301
WW3-6945-063	PSWW6945-063	6.945"	5.408"	0.063"	0.538"	0.253"	231 - 333



BELLEVILLE SPRING WASHERS



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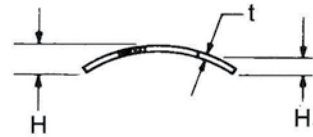
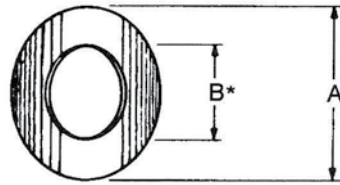
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Part #	Legacy Precision Specialties #	Bolt Size	Min I.D.	Max O.D.	Free Fit hole dia.	Thickness T	H (approx.)	H1	Load at H1 (lbs.)
BW-0187-0H-010S	PSBW0187-010S	3/32"	0.094"	0.188"	3/16"	0.010"	0.015"	0.012"	13 - 17.6
BW-0250-0G-013	PSBW0250-013	1/8"	0.125"	0.250"	1/4"	0.013"	0.020"	0.017"	23.6 - 29
BW-0250-0G-013S	PSBW0250-013S	1/8"	0.125"	0.250"	1/4"	0.013"	0.020"	0.017"	22 - 30
BW-0281-0F-015	PSBW0281-015	#6	0.138"	0.281"	9/32"	0.015"	0.023"	0.019"	30 - 37
BW-0281-0F-015S	PSBW0281-015S	#6	0.138"	0.281"	9/32"	0.015"	0.023"	0.019"	28.5 - 38.5
BW-0312-0E-017S	PSBW0312-017S	5/32"	0.156"	0.313"	5/16"	0.017"	0.025"	0.021"	35 - 48
BW-0343-0D-019	PSBW0343-019	#8	0.164"	0.344"	11/32"	0.018"	0.028"	0.023"	45 - 56
BW-0343-0D-019S	PSBW0343-019S	#8	0.164"	0.344"	11/32"	0.018"	0.028"	0.023"	43 - 58
BW-0375-0C-020	PSBW0375-020	3/16"	0.190"	0.375"	3/8"	0.020"	0.030"	0.025"	54 - 66
BW-0375-0C-020S	PSBW0375-020S	3/16"	0.190"	0.375"	3/8"	0.020"	0.030"	0.025"	51 - 69
BW-0437-0A-016S	PSBW0437-016S	#12	0.220"	0.438"	7/16"	0.016"	0.031"	0.023"	34 - 46
BW-0500-A-018	PSBW0500-018	1/4"	0.255"	0.500"	1/2"	0.018"	0.034"	0.016"	40.5 - 49.5
BW-0500-A-018S	PSBW0500-018S	1/4"	0.255"	0.500"	1/2"	0.018"	0.034"	0.016"	38 - 52
BW-0500-A-038	PSBW0500-038	1/4"	0.255"	0.500"	1/2"	0.038"	0.047"	0.009"	161 - 219
BW-0500-A-038S	PSBW0500-038S	1/4"	0.255"	0.500"	1/2"	0.038"	0.047"	0.009"	161 - 219
BW-0625-B-022	PSBW0625-022	5/16"	0.317"	0.625"	5/8"	0.022"	0.042"	0.020"	63 - 77
BW-0625-B-022S	PSBW0625-022S	5/16"	0.317"	0.625"	5/8"	0.022"	0.042"	0.020"	59 - 81
BW-0625-B-047	PSBW0625-047	5/16"	0.317"	0.625"	5/8"	0.047"	0.059"	0.012"	255 - 345
BW-0625-B-047S	PSBW0625-047S	5/16"	0.317"	0.625"	5/8"	0.047"	0.059"	0.012"	255 - 345
BW-0750-C-028	PSBW0750-028	3/8"	0.380"	0.750"	3/4"	0.028"	0.051"	0.023"	99 - 121
BW-0750-C-028S	PSBW0750-028S	3/8"	0.380"	0.750"	3/4"	0.028"	0.051"	0.023"	93 - 127
BW-0750-C-040	PSBW0750-040	3/8"	0.380"	0.750"	3/4"	0.040"	0.059"	0.019"	199 - 271
BW-0750-C-040S	PSBW0750-040S	3/8"	0.380"	0.750"	3/4"	0.040"	0.059"	0.019"	199 - 271
BW-0750-C-056	PSBW0750-056	3/8"	0.380"	0.750"	3/4"	0.056"	0.070"	0.014"	365 - 495
BW-0750-C-056S	PSBW0750-056S	3/8"	0.380"	0.750"	3/4"	0.056"	0.070"	0.014"	365 - 495
BW-0875-D-045	PSBW0875-045	7/16"	0.442"	0.875"	7/8"	0.045"	0.067"	0.022"	243 - 297
BW-1000-E-035	PSBW1000-035	1/2"	0.505"	1.000"	1"	0.035"	0.067"	0.032"	157 - 193
BW-1000-E-035S	PSBW1000-035S	1/2"	0.505"	1.000"	1"	0.035"	0.067"	0.032"	148 - 202
BW-1000-E-043	PSBW1000-043	1/2"	0.505"	1.000"	1"	0.043"	0.071"	0.028"	225 - 275
BW-1000-E-043S	PSBW1000-043S	1/2"	0.505"	1.000"	1"	0.043"	0.071"	0.028"	225 - 275
BW-1000-E-050	PSBW1000-050	1/2"	0.505"	1.000"	1"	0.050"	0.075"	0.025"	306 - 374
BW-1000-E-050S	PSBW1000-050S	1/2"	0.505"	1.000"	1"	0.050"	0.075"	0.025"	289 - 391
BW-1000-E-073	PSBW1000-073	1/2"	0.505"	1.000"	1"	0.073"	0.091"	0.018"	573 - 777
BW-1125-C-053	PSBW1125-053	3/8"	0.380"	1.125"	1/8"	0.053"	0.080"	0.027"	269-329
BW-1250-G-040	PSBW1250-040	5/8"	0.630"	1.250"	1-1/4"	0.040"	0.082"	0.042"	207 - 253
BW-1250-G-040S	PSBW1250-040S	5/8"	0.630"	1.250"	1-1/4"	0.040"	0.082"	0.042"	195 - 265
BW-1250-G-089	PSBW1250-089	5/8"	0.630"	1.250"	1-1/4"	0.089"	0.111"	0.022"	833 - 1127
BW-1250-G-089S	PSBW1250-089S	5/8"	0.630"	1.250"	1-1/4"	0.089"	0.111"	0.022"	833 - 1127
BW-1500-E-070	PSBW1500-070	1/2"	0.505"	1.500"	1-1/2"	0.070"	0.104"	0.034"	445 - 544
BW-1500-I-045	PSBW1500-045	3/4"	0.755"	1.500"	1-1/2"	0.045"	0.094"	0.048"	241 - 326
BW-1500-I-060	PSBW1500-060	3/4"	0.755"	1.500"	1-1/2"	0.060"	0.102"	0.042"	409 - 501
BW-1500-I-072	PSBW1500-072	3/4"	0.755"	1.500"	1-1/2"	0.072"	0.107"	0.035"	598 - 732
BW-2000-K-065	PSBW2000-065	1"	1.016"	2.000"	2"	0.065"	0.130"	0.098"	531 - 649
BW-2000-K-065S	PSBW2000-065S	1"	1.016"	2.000"	2"	0.065"	0.130"	0.098"	502 - 679



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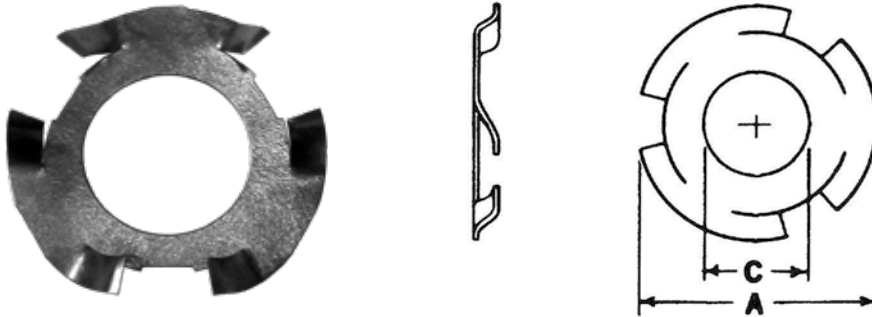
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Part #	Legacy Precision Specialties #	Bolt Size	Min I.D.	Max O.D.	Free Fit hole dia.	Thickness T	H (approx.)	H1	Load at H1 +/- 15% (lbs.)
CW-125-004-SS	PSCW125-004S	#5	0.135"	0.245"	1/4"	0.004	0.028"	0.015"	1.50"
CW-125-007-SS	PSCW125-007S	#5	0.135"	0.270"	9/32"	0.007"	0.029"	0.018"	3.00"
CW-125-008-SS	PSCW125-008S	#5	0.135"	0.307"	5/16"	0.008"	0.034"	0.020"	6.00"
CW-138-007-SS	PSCW138-007S	#6	0.148"	0.270"	9/32"	0.007"	0.035"	0.022"	2.50"
CW-138-008-SS	PSCW138-008S	#6	0.148"	0.322"	11/32"	0.008"	0.037"	0.021"	5.00"
CW-138-010-SS	PSCW138-010S	#6	0.148"	0.322"	11/32"	0.010"	0.034"	0.021"	7.50"
CW-164-005-SS	PSCW164-005S	#8	0.174"	0.322"	11/32"	0.005"	0.064"	0.034"	1.50"
CW-164-009-SS	PSCW164-009S	#8	0.174"	0.370"	3/8"	0.009"	0.044"	0.024"	6.00"
CW-164-011-SS	PSCW164-011S	#8	0.174"	0.370"	3/8"	0.012"	0.039"	0.024"	9.00"
CW-190-005-SS	PSCW190-005S	#10	0.203"	0.322"	11/32"	0.005"	0.053"	0.026"	1.12"
CW-190-009-SS	PSCW190-009S	#10	0.200"	0.370"	3/8"	0.009"	0.047"	0.028"	4.50"
CW-190-011-SS	PSCW190-011S	#10	0.200"	0.423"	7/16"	0.012"	0.047"	0.027"	9.00"
CW-216-010-SS	PSCW216-010S	#12	0.231"	0.423"	7/16"	0.010"	0.053"	0.032"	5.00"
CW-216-015	PSCW216-015	#12	0.231"	0.490"	1/2"	0.015"	0.050"	0.032"	15.00"
CW-250-007-SS	PSCW250-007S	1/4"	0.265"	0.490"	1/2"	0.007"	0.091"	0.046"	3.50"
CW-250-008-SS	PSCW250-008S	1/4"	0.269"	0.423"	7/16"	0.008"	0.055"	0.032"	2.50"
CW-250-011-SS	PSCW250-011S	1/4"	0.265"	0.490"	1/2"	0.012"	0.063"	0.034"	7.00"
CW-250-014	PSCW250-014	1/4"	0.265"	0.551"	9/16"	0.014"	0.060"	0.034"	14.00"
CW-250-018	PSCW250-018	1/4"	0.265"	0.551"	9/16"	0.018"	0.052"	0.034"	21.00"
CW-250-018-SS	PSCW250-018S	1/4"	0.265"	0.551"	9/16"	0.018"	0.052"	0.034"	21.00"
CW-312-007-SS	PSCW312-007S	5/16"	0.331"	0.490"	1/2"	0.007"	0.077"	0.041"	2.25"
CW-312-009-SS	PSCW312-009S	5/16"	0.327"	0.612"	5/8"	0.009"	0.113"	0.060"	4.50"
CW-312-011-SS	PSCW312-011S	5/16"	0.331"	0.490"	1/2"	0.012"	0.062"	0.035"	4.50"
CW-312-013-SS	PSCW312-013S	5/16"	0.327"	0.612"	5/8"	0.013"	0.077"	0.042"	9.00"
CW-312-017	PSCW312-017	5/16"	0.327"	0.735"	3/4"	0.018"	0.076"	0.046"	15.00"
CW-375-009-SS	PSCW375-009S	3/8"	0.400"	0.612"	5/8"	0.009"	0.098"	0.056"	3.00"
CW-375-010-SS	PSCW375-010S	3/8"	0.400"	0.672"	11/16"	0.010"	0.115"	0.059"	4.50"
CW-375-011-SS	PSCW375-011S	3/8"	0.395"	0.735"	3/4"	0.012"	0.129"	0.073"	6.00"
CW-375-016	PSCW375-016	3/8"	0.395"	0.735"	3/4"	0.015"	0.086"	0.050"	12.00"
CW-375-016-SS	PSCW375-016S	3/8"	0.395"	0.735"	3/4"	0.015"	0.086"	0.050"	12.00"
CW-437-010-SS	PSCW437-010S	7/16"	0.467"	0.672"	11/16"	0.010"	0.115"	0.060"	3.75"
CW-437-012	PSCW437-012	7/16"	0.462"	0.857"	7/8"	0.012"	0.152"	0.079"	7.50"
CW-437-015-SS	PSCW437-015S	7/16"	0.467"	0.672"	11/16"	0.015"	0.084"	0.045"	7.50"
CW-437-018-SS	PSCW437-018S	7/16"	0.462"	0.857"	7/8"	0.018"	0.100"	0.057"	15.00"
CW-500-018	PSCW500-018	1/2"	0.525"	0.980"	1"	0.018"	0.131"	0.073"	15.00"
CW-500-021	PSCW500-021	1/2"	0.525"	0.980"	1"	0.020"	0.110"	0.063"	20.00"
CW-500-021-SS	PSCW500-021S	1/2"	0.525"	0.980"	1"	0.021"	0.110"	0.063"	20.00"

FINGER SPRING WASHERS



FINGER SPRING WASHERS are used for preloading ball bearings and general applications. They counteract excess wear, vibration, noise, and end play. They promote efficiency and smooth operation, reducing skidding wear on rotating elements. They are also extremely useful in cases of unavoidable loose internal clearances due to special application conditions.

FOR PRELOADING BALL BEARINGS AND GENERAL APPLICATIONS

STOCK SIZES IN HIGH CARBON STEEL

MATERIAL

1074 Spring Steel

FINISHES

Per customer specifications

J I T PROGRAM AVAILABLE • CONSISTENT ACCURACY

Blanket orders accepted with total order pricing for your weekly, bi-weekly, monthly, etc. releases

OFF OUR SHELVES IN TENS, TWENTIES, HUNDREDS, AND THOUSANDS

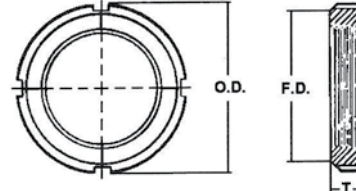
Part #	Legacy Precision Specialties #	A**	C	Stock Thickness (T)	Load at Height of 0.062"	For Use with Bearing O.D.*
FS-0728-006	PSFSW0728-006	0.728"	0.344"	0.006"	4 to 8	0.7480"
FS-0846-006	PSFSW0846-006	0.846"	0.453"	0.006"	3 to 7	0.8661"
FS-0846-008	PSFSW0846-008	0.846"	0.453"	0.008"	9 to 14	0.8661"
FS-0926-007	PSFSW0926-007	0.926"	0.453"	0.007"	6 to 10	0.9449"
FS-0926-010	PSFSW0926-010	0.926"	0.344"	0.010"	21 to 30	0.9449"
FS-1004-006	PSFSW1004-006	1.004"	0.516"	0.006"	5 to 10	1.0236"
FS-1004-007	PSFSW1004-007	1.004"	0.516"	0.007"	7 to 13	1.0236"
FS-1164-009	PSFSW1164-009	1.164"	0.688"	0.009"	8 to 14	1.1811"
FS-1164-010	PSFSW1164-010	1.164"	0.406"	0.010"	14 to 23	1.1811"
FS-1164-018	PSFSW1164-018	1.164"	0.688"	0.018"	55 to 81	1.1811"
FS-1240-008	PSFSW1240-008	1.240"	0.688"	0.008"	9 to 15	1.2598"
FS-1240-009	PSFSW1240-009	1.240"	0.563"	0.009"	15 to 22	1.2598"
FS-1240-010	PSFSW1240-010	1.240"	0.688"	0.010"	14 to 23	1.2598"
FS-1360-011	PSFSW1360-011	1.360"	0.814"	0.011"	10 to 17	1.3780"
FS-1360-014	PSFSW1360-014	1.360"	0.814"	0.014"	16 to 26	1.3780"
FS-1555-014	PSFSW1555-014	1.555"	0.971"	0.014"	13 to 23	1.5748"
FS-1555-018	PSFSW1555-018	1.555"	1.000"	0.018"	28 to 42	1.5748"
FS-1830-016	PSFSW1830-016	1.830"	1.189"	0.016"	14 to 26	1.8504"
FS-2022-019	PSFSW2022-019	2.022"	1.359"	0.019"	13 to 27	2.0472"

* Will not fit some special-shaped bearings with double-protruding seals.

** Maximum outside diameter of spring washer to be the same as specified bearing outside diameter.

Finger height is approximately 1/8" for all sizes.

SHAFT LOCK NUTS



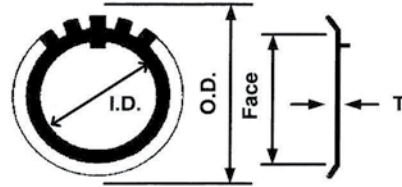
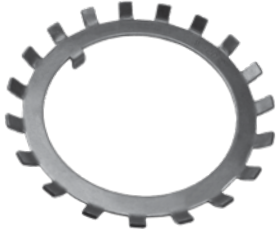
Most commonly used lock nuts, made of low carbon steel. Requires a lock washer and the cutting of a key way in the shaft.

The N-AN series through size AN-26 meets the many exacting requirements for good operation of tapered roller bearings. However, if a higher precision series is needed, please contact us.

Part #	Bearing Bore Nominal	Thread per Inch	Outside Dia. O.D.	Thickness T	Mating Lockwasher
N-00	.391"	32	.750"	.209"/.229"	W-00
N-01	.469"	32	.875"	.303"/.323"	W-01
N-02	.586"	32	1.000"	.303"/.323"	W-02
N-03	.664"	32	1.125"	.334"/.354"	W-03
N-04	.781"	32	1.375"	.365"/.385"	W-04
N-05	.969"	32	1.563"	.396"/.416"	W-05
N-06	1.173"	18	1.750"	.396"/.416"	W-06
N-065	1.312"	18	2.063"	.428"/.448"	WH-065
N-07	1.376"	18	2.063"	.428"/.448"	W-07
N-08	1.563"	18	2.250"	.428"/.448"	W-08
N-09	1.767"	18	2.531"	.428"/.448"	W-09
N-10	1.967"	18	2.688"	.490"/.510"	W-10
N-11	2.157"	18	2.969"	.490"/.510"	W-11
N-12	2.360"	18	3.156"	.521"/.541"	W-12
N-13	2.548"	18	3.375"	.553"/.573"	W-13
N-14	2.751"	18	3.625"	.553"/.573"	W-14
N-44	8.628"	8	11.000"	1.230"/1.260"	W-44

Part #	Bearing Bore Nominal	Thread per Inch	Outside Dia. O.D.	Thickness T	Mating Lockwasher
AN-15	2.933"	12	3.875"	.584"/.604"	W-15
AN-16	3.137"	12	4.156"	.584"/.604"	W-16
AN-17	3.340"	12	4.406"	.615"/.635"	W-17
AN-18	3.527"	12	4.656"	.678"/.698"	W-18
AN-19	3.730"	12	4.937"	.709"/.729"	W-19
AN-20	3.918"	12	5.187"	.735"/.760"	W-20
AN-21	4.122"	12	5.437"	.735"/.760"	W-21
AN-22	4.325"	12	5.718"	.766"/.791"	W-22
AN-24	4.716"	12	6.125"	.798"/.823"	W-24
AN-26	5.106"	12	6.750"	.860"/.885"	W-26
AN-28	5.497"	12	7.093"	.923"/.948"	W-28
AN-30	5.888"	12	7.687"	.954"/.979"	W-30
AN-32	6.284"	8	8.062"	1.016"/1.041"	W-32
AN-34	6.659"	8	8.656"	1.048"/1.073"	W-34
AN-36	7.066"	8	9.062"	1.079"/1.104"	W-36
AN-38	7.472"	8	9.468"	1.110"/1.135"	W-38
AN-40	7.847"	8	9.843"	1.173"/1.198"	W-40

SHAFT LOCK WASHERS



Most commonly used and least expensive. Note that the key is bent in the opposite direction of the tangs. These lock washers are used with lock nut series "N/AN."

Part #	Free O.D.	I.D. Min/Max	Thickness Min/Max	Tangs	Mating Lock Washer
W-00	.875"	.406"/.421"	.038"/.046"	9	N-00
W-01	1.015"	.484"/.499"	.038"/.046"	9	N-01
W-02	1.156"	.601"/.616"	.038"/.046"	11	N-02
W-03	1.328"	.679"/.694"	.038"/.046"	11	N-03
W-04	1.531"	.801"/.816"	.038"/.046"	11	N-04
W-05	1.718"	.989"/1.009"	.046"/.054"	13	N-05
W-06	1.921"	1.193"/1.213"	.046"/.054"	13	N-06
W-07	2.250"	1.396"/1.416"	.046"/.054"	15	N-07
W-08	2.468"	1.583"/1.603"	.053"/.063"	15	N-08
W-09	2.734"	1.792"/1.817"	.053"/.063"	17	N-09
W-10	2.921"	1.992"/2.017"	.053"/.063"	17	N-10
W-11	3.109"	2.182"/2.207"	.058"/.068"	17	N-11
W-12	3.343"	2.400"/2.425"	.058"/.068"	17	N-12
W-13	3.578"	2.588"/2.613"	.058"/.068"	19	N-13
W-14	3.828"	2.791"/2.816"	.058"/.068"	19	N-14
W-15	4.109"	2.973"/3.003"	.067"/.077"	19	AN-15
W-16	4.375"	3.177"/3.207"	.067"/.077"	19	AN-16

Part #	Free O.D.	I.D. Min/Max	Thickness Min/Max	Tangs	Mating Lock Washer
W-17	4.625"	3.395"/3.425"	.067"/.077"	19	AN-17
W-18	4.937"	3.582"/3.612"	.088"/.100"	19	AN-18
W-19	5.218"	3.800"/3.830"	.088"/.100"	19	AN-19
W-20	5.500"	3.988"/4.018"	.088"/.100"	19	AN-20
W-21	5.703"	4.192"/4.222"	.088"/.100"	19	AN-21
W-22	6.062"	4.395"/4.425"	.118"/.132"	19	AN-22
W-24	6.468"	4.801"/4.831"	.118"/.132"	19	AN-24
W-26	7.031"	5.191"/5.226"	.118"/.132"	19	AN-26
W-28	7.437"	5.582"/5.617"	.118"/.132"	19	AN-28
W-30	8.062"	5.983"/6.018"	.148"/.164"	19	AN-30
W-32	8.437"	6.389"/6.424"	.148"/.164"	19	AN-32
W-34	9.062"	6.764"/6.799"	.148"/.164"	19	AN-34
W-36	9.437"	7.171"/7.206"	.148"/.164"	19	AN-36
W-38	9.875"	7.577"/7.612"	.148"/.164"	19	AN-38
W-40	10.312"	7.982"/8.017"	.148"/.164"	19	AN-40
W-44	11.437"	8.701"/8.736"	.148"/.164"	19	N-44