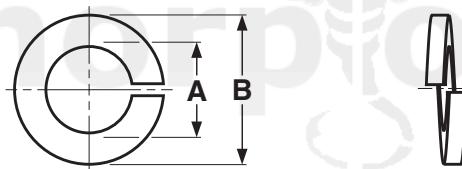
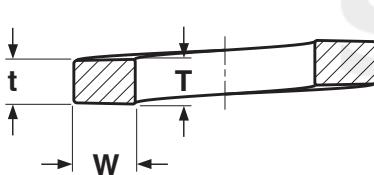


WASHERS

HEAVY SPLIT & EXTRA DUTY

Steel Lockwashers



HEAVY SPLIT HELICAL SPRING LOCK WASHERS

ASME B18.21.1-2009

| Nominal Washer Size Max | A | | B | $\frac{(T+t)}{2}$ | W |
|----------------------------|-----------------|-------|------------------|---------------------------|---------------|
| | Inside Diameter | | Outside Diameter | Mean Section Thickness | Section Width |
| | Max | Min | Max | Min | Min |
| #10 | 0.190 | 0.200 | 0.193 | 0.350 | 0.056 |
| 1/4 | 0.250 | 0.260 | 0.252 | 0.489 | 0.077 |
| 5/16 | 0.312 | 0.322 | 0.314 | 0.593 | 0.097 |
| 3/8 | 0.375 | 0.385 | 0.377 | 0.688 | 0.115 |
| 7/16 | 0.438 | 0.450 | 0.440 | 0.784 | 0.133 |
| 1/2 | 0.500 | 0.512 | 0.502 | 0.879 | 0.151 |
| 9/16 | 0.562 | 0.574 | 0.564 | 0.975 | 0.170 |
| 5/8 | 0.625 | 0.641 | 0.628 | 1.087 | 0.189 |
| 3/4 | 0.750 | 0.766 | 0.753 | 1.285 | 0.226 |
| 7/8 | 0.875 | 0.894 | 0.878 | 1.489 | 0.266 |
| 1 | 1.000 | 1.024 | 1.003 | 1.700 | 0.306 |
| 1-1/8 | 1.125 | 1.153 | 1.129 | 1.903 | 0.345 |
| 1-1/4 | 1.250 | 1.280 | 1.254 | 2.104 | 0.384 |
| 1-1/2 | 1.500 | 1.534 | 1.504 | 2.491 | 0.458 |

EXTRA DUTY HELICAL SPLIT LOCKWASHERS

| | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|
| 3/8 | 0.375 | 0.385 | 0.377 | 0.738 | 0.123 | 0.170 |
| 5/8 | 0.625 | 0.641 | 0.628 | 1.151 | 0.202 | 0.242 |

| | |
|-----------------------------|--|
| Description | Similar to a regular split lock washer, but with a greater outside diameter and thickness. |
| Applications/ Advantages | The increased bearing area makes this suitable for applications involving higher tightening torques. |
| Material | SAE 1055 - 1065 carbon steel. |
| Hardness | Rockwell C38 - 46 |
| Twist Test | With the washer in a vice with the split ends free and straight above the vice jaws, a 90° segment of the free end is gripped with a wrench and bent. Washers are to withstand being twisted through a 90° angle without signs of fracture. When the washer ultimately fractures beyond the prescribed 90° limit, the structure at the breaking point shall show a fine grain. |
| Plating | See Appendix-A for information about plating heavy split lock washers. |