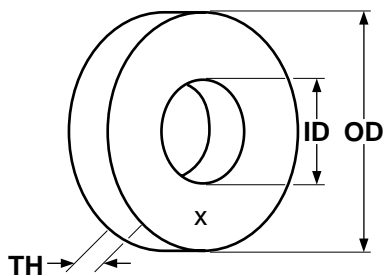


**Extra
Thick**

SAE Through-Hardened

Washers



SAE THROUGH-HARDENED FLAT WASHERS - EXTRA THICK

ASME B18.22.1,
Wrought Washer

| Bolt Size | Outside Diameter | | | Inside Diameter | | | Thickness | | Approximate Number per 50 Pounds |
|-----------|------------------|-------|-------|-----------------|-------|-------|-----------|------|----------------------------------|
| | Nominal | Max | Min | Nominal | Max | Min | Max | Min | |
| 1/4 | 5/8 | 0.640 | 0.620 | 9/32 | 0.296 | 0.276 | .080 | .064 | 9400 |
| 5/16 | 11/16 | 0.703 | 0.681 | 11/32 | 0.359 | 0.339 | .093 | .079 | 8000 |
| 3/8 | 13/16 | 0.827 | 0.805 | 13/32 | 0.419 | 0.401 | .093 | .079 | 5300 |
| 7/16 | 59/64 | 0.937 | 0.915 | 15/32 | 0.484 | 0.464 | .106 | .090 | 3600 |
| 1/2 | 1-1/16 | 1.092 | 1.055 | 17/32 | 0.546 | 0.526 | .146 | .122 | 2000 |
| 9/16 | 1-3/16 | 1.186 | 1.149 | 19/32 | 0.609 | 0.589 | .146 | .122 | 1600 |
| 5/8 | 1-5/16 | 1.342 | 1.305 | 21/32 | 0.686 | 0.649 | .160 | .136 | 1150 |
| 3/4 | 1-15/32 | 1.499 | 1.462 | 13/16 | 0.842 | 0.805 | .160 | .136 | 950 |
| 7/8 | 1-3/4 | 1.780 | 1.743 | 15/16 | 0.968 | 0.931 | .160 | .136 | 650 |
| 1 | 2 | 2.030 | 1.993 | 1-1/16 | 1.092 | 1.055 | .160 | .136 | 500 |

| | |
|---------------------------------|---|
| Description | Has identical inside and outside diameters as SAE thru-hardened washer, but can be as much as 50% thicker. They are manufactured from a medium grade of steel and heat-treated. |
| Applications/ Advantages | Designed for heavy duty use in machinery construction, assembly, in-plant maintenance and building construction |
| Material | SAE 1035 - 1050 steel |
| Hardness | Rockwell C38 - 45 |
| Plating | Parts are mechanically zinc yellow plated. |