



| USS THROUGH-HARDENED FLAT WASHERS-EXTRA THICK |                  |       |       |                 |       |       |           |      | ANSI B18.22.1,<br>Wrought Washer |
|-----------------------------------------------|------------------|-------|-------|-----------------|-------|-------|-----------|------|----------------------------------|
| Bolt Size                                     | Outside Diameter |       |       | Inside Diameter |       |       | Thickness |      | Approximate Number per 50 Pounds |
|                                               | Nominal          | Max   | Min   | Nominal         | Max   | Min   | Max       | Min  |                                  |
| 1/4                                           | 3/4              | 0.749 | 0.727 | 5/16            | 0.327 | 0.307 | .080      | .064 | 6600                             |
| 5/16                                          | 7/8              | 0.905 | 0.868 | 3/8             | 0.390 | 0.370 | .093      | .079 | 4200                             |
| 3/8                                           | 1                | 1.030 | 0.993 | 7/16            | 0.453 | 0.433 | .093      | .079 | 3250                             |
| 7/16                                          | 1-1/4            | 1.280 | 1.243 | 1/2             | 0.515 | 0.495 | .106      | .090 | 1750                             |
| 1/2                                           | 1-3/8            | 1.405 | 1.368 | 9/16            | 0.577 | 0.557 | .146      | .122 | 1100                             |
| 9/16                                          | 1-1/2            | 1.499 | 1.462 | 5/8             | 0.640 | 0.620 | .146      | .122 | 950                              |
| 5/8                                           | 1-3/4            | 1.780 | 1.743 | 21/32           | 0.687 | 0.649 | .160      | .136 | 550                              |
| 3/4                                           | 2                | 2.030 | 1.993 | 13/16           | 0.842 | 0.805 | .160      | .136 | 450                              |
| 7/8                                           | 2-1/4            | 2.280 | 2.243 | 15/16           | 0.968 | 0.931 | .160      | .136 | 375                              |
| 1                                             | 2-1/2            | 2.530 | 2.493 | 1-1/16          | 1.092 | 1.055 | .160      | .136 | 300                              |

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