

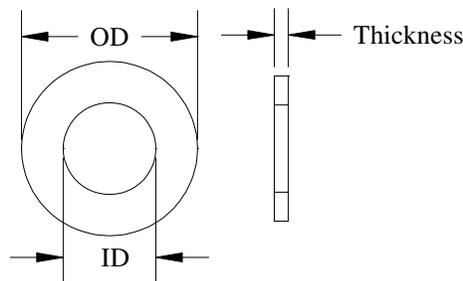
# USS Hardened Flat Washer

For Grade 8 Applications

Earnest Machine Products offers through hardened steel flat washers that are made to the requirements of ASME B18.21.1 Type A Wide Series, that are commonly called USS Hardened Washers .

Our USS “hardened” washers are made from the same material and heat treated to the same hardness that is specified by ASTM F436 for structural washers. These washers are heat treated by quench and tempering to achieve a through hardness of Rc 38/45.

USS hardened washers are typically used in grade 8 applications and provide a large bearing area under the head of the bolt and a smooth hard surface for the nut to be tightened down onto. Earnest recommends the use of the largest OD washer that will fit in the application. The larger the bearing surface of the washer will help ensure that the clamp load is spread over the largest bearing area, which results in an assembly that resist loosening and prevent failures from occurring.



## USS Washer Dimensions

Size (Bolt Dia)	Outside Diameter Nom	Inside Diameter Nom	Thickness Nom
1/4	3/4	5/16	.065"
5/16	7/8	3/8	.083"
3/8	1	7/16	.083"
7/16	1 1/4	1/2	.083"
1/2	1 3/8	9/16	.109"
9/16	1 1/2	5/8	.109"
5/8	1 3/4	11/16	.134"
3/4	2	13/16	.148"
7/8	2 1/4	15/16	.165"
1	2 1/2	1 1/16	.165"
1 1/8	2 3/4	1 1/4	.165"
1 1/4	3	1 3/8	.165"
1 3/8	3 1/4	1 1/2	.180"
1 1/2	3 1/2	1 5/8	.180"
1 5/8	3 3/4	1 3/4	.180"
1 3/4	4	1 7/8	.180"
1 7/8	4 1/4	2	.180"
2	4 1/2	2 1/8	.180"
2 1/4	4 3/4	2 3/8	.220"
2 1/2	5	2 5/8	.238"
2 3/4	5 1/4	2 7/8	.259"
3	5 1/2	3 1/8	.284"