

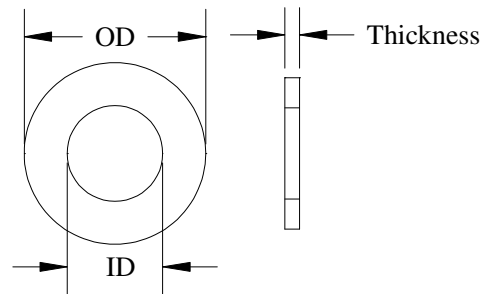
# SAE Hardened Flat Washer

## 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 Narrow Series, that are commonly called SAE Hardened Washers .

Our SAE “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.

SAE hardened washers are typically used in grade 8 applications where clearance around the head or nut is tight and a washer with a smaller OD than is found on the USS series is required. 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.



### SAE Washer Dimensions

Size (Bolt Dia)	Outside Diameter	Inside Diameter	Thickness
	Nom	Nom	Nom
<b>1/4</b>	5/8	9/32	.065"
<b>5/16</b>	11/16	11/32	.065"
<b>3/8</b>	13/16	13/32	.065"
<b>7/16</b>	59/64	15/32	.065"
<b>1/2</b>	1 1/16	17/32	.095"
<b>9/16</b>	1 5/32	19/32	.095"
<b>5/8</b>	1 5/16	21/32	.095"
<b>3/4</b>	1 15/32	13/16	.134"
<b>7/8</b>	1 3/4	15/16	.134"
<b>1</b>	2	1 1/16	.134"
<b>1 1/8</b>	2 1/4	1 1/4	.134"
<b>1 1/4</b>	2 1/2	1 3/8	.165"
<b>1 3/8</b>	2 3/4	1 5/8	.165"
<b>1 1/2</b>	3	1 5/8	.165"