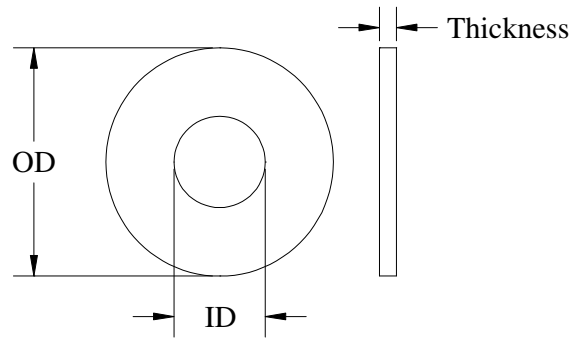


Earnest's line of USS Carbon Steel flat washers are made from low carbon steel. Typical hardness is Rb 70/85. Washers are available with a plain finish or zinc plated with a clear chromate (silver color) or with a yellow chromate (bronze to gold color) for superior corrosion protection.

The dimensions of USS Washers (also called Wide Series) are per ASME B18.22.1 Type A Wide

Earnest recommends the use of standard carbon steel washers on low strength assemblies (grade 2 or 5) where a flat smooth surface is required that will distribute the load over a wide area. For high strength and critical assemblies Earnest recommends the use of a hardened washer.

Washers are designed to provide a smooth bearing surface for the bolt and nut to clamp down onto and to distribute the load evenly over larger areas under the head and nut.


USS Washers

Size (Bolt Dia)	Outside Diameter OD			Inside Diameter ID			Thickness		
	nom	Max	Min	nom	max	min	nom	max	min
1/4	3/4	.749	.727	5/16	.327	.307	.065"	.080	.051
5/16	7/8	.905	.868	3/8	.390	.370	.083"	.104	.064
3/8	1	1.030	.993	7/16	.453	.433	.083"	.104	.064
7/16	1 1/4	1.280	1.243	1/2	.515	.495	.083"	.104	.064
1/2	1 3/8	1.405	1.368	9/16	.577	.557	.109"	.132	.086
9/16	1 1/2	1.499	1.462	5/8	.640	.620	.109"	.132	.086
5/8	1 3/4	1.780	1.743	11/16	.718	.681	.134"	.160	.108
3/4	2	2.030	1.993	13/16	.842	.805	.148"	.177	.122
7/8	2 1/4	2.280	2.243	15/16	.968	.931	.165"	.192	.136
1	2 1/2	2.530	2.493	1 1/16	1.092	1.055	.165"	.192	.136
1 1/8	2 3/4	2.780	2.743	1 1/4	1.280	1.243	.165"	.192	.136
1 1/4	3	3.030	2.993	1 3/8	1.405	1.368	.165"	.192	.136
1 3/8	3 1/4	3.295	3.240	1 1/2	1.545	1.490	.180"	.213	.153
1 1/2	3 1/2	3.545	3.490	1 5/8	1.670	1.615	.180"	.213	.153
1 5/8	3 3/4	3.795	3.740	1 3/4	1.798	1.740	.180"	.213	.153
1 3/4	4	4.045	3.990	1 7/8	1.920	1.865	.180"	.213	.153
1 7/8	4 1/4	4.295	4.240	2	2.045	1.990	.180"	.213	.153
2	4 1/2	4.545	4.493	2 1/8	2.170	2.115	.180"	.213	.153
2 1/4	4 3/4	4.795	4.740	2 3/8	2.420	2.365	.220"	.248	.193
2 1/2	5	5.045	4.990	2 5/8	2.710	2.615	.238"	.280	.210
2 3/4	5 1/4	5.315	5.240	2 7/8	2.940	2.865	.259"	.310	.228
3	5 1/2	5.565	5.490	3 1/8	3.190	3.115	.284"	.327	.249