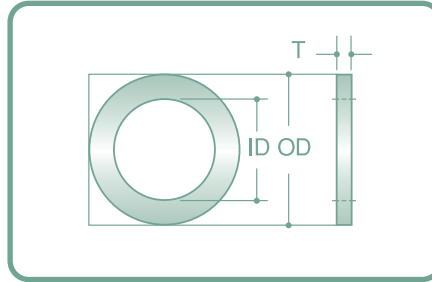
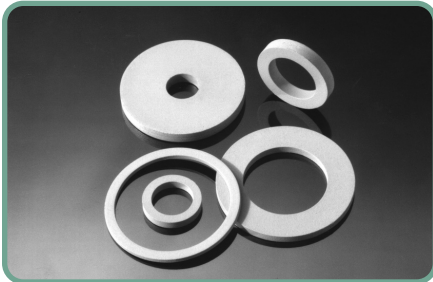




Nylon Flat Washers

STANDARD Tolerances: $OD \pm .010$, $ID \pm .005$, $T \pm .015$



These washers are made to be used with standard screw sizes #2 up to 1/2. They come in the four most popular thicknesses, from 1/32" up to 1/8". If one of these dimensions

is not quite what you need, don't forget to see our section on special nylon flat washers (pages 187-189).

Part No.	ID	OD	T
FW 2-032	.090	.250	.032
FW 2-062	.090	.250	.062
FW 2-093	.090	.250	.093
FW 2-125	.090	.250	.125
FW 4-032	.115	.250	.032
FW 4-062	.115	.250	.062
FW 4-093	.115	.250	.093
FW 4-125	.115	.250	.125
FW 6-032	.140	.312	.032
FW 6-062	.140	.312	.062
FW 6-093	.140	.312	.093
FW 6-125	.140	.312	.125
FW 8-032	.171	.375	.032
FW 8-062	.171	.375	.062
FW 8-093	.171	.375	.093
FW 8-125	.171	.375	.125
FW 10-032	.194	.375	.032
FW 10-062	.194	.375	.062
FW 10-093	.194	.375	.093
FW 10-125	.194	.375	.125

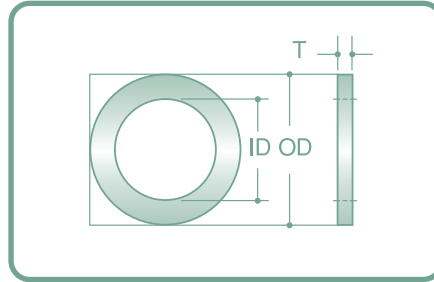
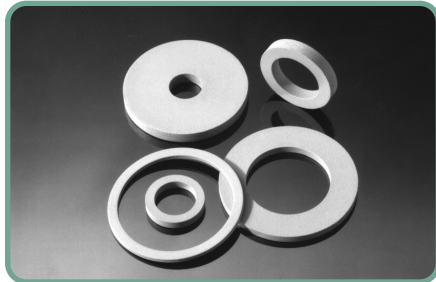
Part No.	ID	OD	T
FW 250-032	.257	.500	.032
FW 250-062	.257	.500	.062
FW 250-093	.257	.500	.093
FW 250-125	.257	.500	.125
FW 312-032	.317	.500	.032
FW 312-062	.317	.500	.062
FW 312-093	.317	.500	.093
FW 312-125	.317	.500	.125
FW 375-032	.380	.625	.032
FW 375-062	.380	.625	.062
FW 375-093	.380	.625	.093
FW 375-125	.380	.625	.125
FW 437-032	.443	.750	.032
FW 437-062	.443	.750	.062
FW 437-093	.443	.750	.093
FW 437-125	.443	.750	.125
FW 500-032	.505	.750	.032
FW 500-062	.505	.750	.062
FW 500-093	.505	.750	.093
FW 500-125	.505	.750	.125

Minimum order 1000.

Most washers are available in clear polycarbonate where quantities warrant.

Nylon Flat Washers CONTINUED

SPECIAL Tolerances: OD and ID $\pm .015$, T $\pm .010$



Seal, insulate, absorb shock and vibration. They prevent galling and marring, and may also be used as spacers, guides, bearings, bushings, etc.

For washers thicker than .125", look at our standard and special spacers on pages 136-139. Metric washers can be

found on page 191.

Other sizes can be tooled for moulding or stamping in any plastic. Request a quotation, specifying size, tolerance and quantity. See the list at the end of this section for other non-metallic materials available.

Part No.	ID	OD	T
FW 031-4	.031	.090	.031
FW 035-4	.035	.100	.020
FW 093-5	.093	.187	.020
FW 093-10	.093	.187	.031
FW 105-5	.105	.250	.031
FW 105-10	.105	.250	.062
FW 113-1	.113	.240	.040
FW 120-20	.120	.250	.031
FW 120-25	.120	.281	.020
FW 120-30	.120	.281	.030
FW 120-35	.120	.281	.040
FW 120-40	.120	.281	.050
FW 120-45	.120	.310	.047
FW 125-5	.125	.281	.030
FW 125-10	.125	.281	.062
FW 125-15	.125	.312	.031
FW 125-20	.125	.312	.062
FW 125-25	.125	.375	.031
FW 125-30	.125	.500	.100
FW 126-4	.126	.250	.025
FW 130-5	.130	.250	.093
FW 130-8	.130	.350	.062
FW 140-10	.140	.250	.062
FW 140-15	.140	.250	.080
FW 140-20	.140	.285	.118

Part No.	ID	OD	T
FW 140-25	.140	.312	.047
FW 141-4	.141	.375	.031
FW 146-15	.146	.312	.050
FW 146-20	.146	.375	.062
FW 147-3	.147	.437	.062
FW 150-10	.150	.312	.040
FW 150-15	.150	.312	.050
FW 150-20	.150	.312	.062
FW 156-3	.156	.250	.093
FW 156-10	.156	.312	.020
FW 156-15	.156	.312	.031
FW 156-25	.156	.375	.031
FW 160-5	.170	.248	.100
FW 162-5	.162	.312	.062
FW 165-10	.165	.500	.075
FW 167-4	.167	.302	.062
FW 168-5	.168	.500	.062
FW 172-5	.172	.375	.060
FW 175-5	.175	.375	.040
FW 184-2	.184	.280	.040
FW 187-5	.187	.375	.032
FW 187-10	.187	.500	.040
FW 187-14	.187	.625	.062
FW 189-5	.189	1.006	.064
FW 190-5	.190	.330	.062

Minimum order 1000.

Continued



Nylon Flat Washers

SPECIAL CONTINUED Tolerances: OD and ID ± .015, T ±.010

Part No.	ID	OD	T
FW 190-10	.190	.437	.032
FW 190-15	.190	.885	.062
FW 191-4	.191	.335	.032
FW 194-1	.194	.312	.032
W 6252	.194	.625	.124
FW 195-5	.195	.437	.030
W 4501	.200	.450	.048
FW200-10	.200	.625	.062
FW 201-10	.201	.437	.062
FW 203-5	.203	.437	.031
FW 203-10	.203	.437	.093
FW 218-5	.218	.437	.031
FW 218-10	.218	.437	.040
FW 218-14	.218	.625	.062
FW 218-15	.218	.750	.062
FW 220-2	.220	.435	.078
FW 225-5	.225	.415	.050
FW 250-4	.250	.375	.016
W 4351	.250	.435	.094
FW 250-5	.250	.625	.062
FW 250-8	.250	.719	.062
FW 253-4	.253	.375	.084
FW 253-5	.253	.550	.032
FW 254-4	.254	.565	.094
FW 255-1	.255	.555	.047
FW 255-2	.255	.375	.115
FW 256-5	.256	.626	.020
FW 257-5	.257	.500	.080
FW 257-6	.257	.750	.062
FW 257-7	.257	.875	.031
FW 257-8	.257	.875	.060
FW 260-5	.260	.362	.060
FW 260-10	.260	.437	.047
FW 260-15	.260	.562	.062
FW 260-18	.260	.687	.040
FW 260-20	.260	.687	.060
FW 265-12	.265	.625	.060
FW 278-4	.278	.437	.032
FW 281-5	.281	.500	.031
FW 281-10	.281	.625	.030

Part No.	ID	OD	T
FW 281-15	.281	.625	.115
FW 281-30	.281	1.250	.062
FW 290-3	.290	.445	.033
FW 296-5	.296	.625	.039
FW 312-2	.312	.625	.062
FW 315-4	.315	.625	.031
FW 315-6	.315	.626	.124
FW 315-7	.315	.872	.062
FW 323-3	.323	.750	.062
FW 327-5	.327	.562	.093
FW 330-5	.330	.562	.062
FW 331-4	.331	.709	.079
FW 333-5	.333	.562	.031
FW 340-5	.340	.687	.056
FW 343-3	.343	.500	.109
FW 343-5	.343	.875	.062
W 7507	.352	.750	.031
FW 375-5	.375	.500	.080
FW 375-15	.375	.875	.062
FW 375-16	.375	.900	.055
FW 378-2	.378	.626	.064
FW 380-5	.380	.875	.093
FW 381-10	.381	.750	.062
FW 381-15	.381	1.000	.062
FW 385-5	.385	.750	.045
FW 390-5	.390	.625	.093
FW 390-15	.390	1.500	.062
W 12505	.390	1.250	.040
FW 392-2	.392	.755	.123
W 12604	.400	1.270	.062
FW 405-4	.405	.540	.112
FW 406-10	.406	.812	.062
FW 406-15	.406	.875	.093
FW 406-18	.406	.984	.124
FW 406-20	.406	1.000	.062
FW 408-4	.408	.875	.060
FW 433-10	.433	.551	.059
FW 500-10	.500	.687	.062
FW 500-15	.500	1.000	.062
FW 500-17	.500	1.125	.122

Minimum order 1000.

Continued



Nylon Flat Washers

SPECIAL CONTINUED Tolerances: OD and ID ± .015, T ± .010

Part No.	ID	OD	T
FW 500-20	.500	1.250	.062
FW 500-25	.500	1.375	.062
FW 505-10	.505	.780	.062
FW 508-2	.508	1.000	.062
FW 510-5	.510	.890	.062
FW 510-10	.510	.890	.093
FW 510-15	.510	.900	.075
FW 515-4	.515	.716	.015
FW 515-5	.515	.890	.031
FW 515-10	.515	1.000	.080
FW 515-14	.515	1.468	.050
FW 516-4	.516	1.250	.060
FW 525-13	.525	1.375	.125
FW 531-5	.531	1.000	.060
FW 531-12	.531	1.250	.093

Minimum order 1000.

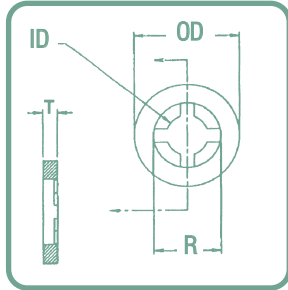
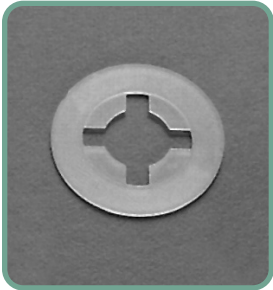
Part No.	ID	OD	T
FW 551-10	.551	.945	.079
FW 562-10	.562	1.250	.062
FW 625-2	.625	1.000	.062
FW 625-5	.625	1.250	.062
FW 625-10	.625	1.625	.062
FW 645-2	.645	1.310	.120
FW 660-5	.660	1.500	.093
FW 697-8	.697	1.425	.100
FW 750-2	.750	1.000	.060
FW 765-4	.765	1.250	.080
FW 810-5	.810	1.480	.062
FW 844-4	.844	1.031	.040
FW 875-10	.875	1.250	.124
FW 1031-2	1.031	1.218	.040
FW 1280-2	1.280	1.937	.062
FW 1375-2	1.375	1.625	.110

Need longer washers? You might find a solution in our round spacers on pages 136–139.



Nylon Flat Washers CONTINUED

RETAINING



Similar to our standard flat washer, but with a specially configured inside diameter designed to grip the outside of the screw shank. The washer slides on the screw easily, but is retained on the screw.

For use in applications requiring pre-assembly of the screw and washer to reduce final assembly cost.

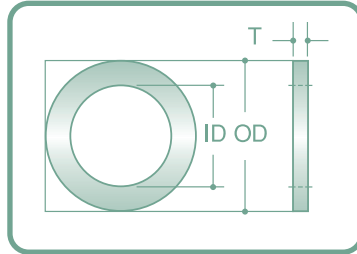
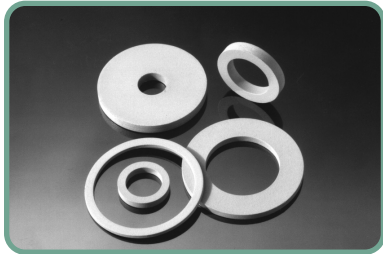
Other sizes may be tooled on request.

Part No.	ID	Retaining dia.		OD	T
		R			
FWR 2-032	.078	.115		13/64	.031
FWR 2-062	.078	.115		13/64	.062
FWR 4-032	.102	.156		17/64	.031
FWR 4-062	.102	.156		17/64	.062
FWR 6-032	.128	.198		21/64	.031
FWR 6-062	.128	.198		21/64	.062
FWR 8-032	.152	.235		25/64	.031
FWR 8-062	.152	.235		25/64	.062
FWR 10-032	.177	.277		29/64	.031
FWR 10-062	.177	.277		29/64	.062
FWR 250-032	.234	.375		19/32	.031
FWR 250-062	.234	.375		19/32	.062
FWR 312-032	.292	.470		47/64	.031
FWR 312-062	.292	.470		47/64	.062
FWR 375-032	.350	.564		57/64	.031
FWR 375-062	.350	.564		57/64	.062
FWR 437-032	.410	.570		1-1/32	.031
FWR 437-062	.410	.570		1-1/32	.062
FWR 500-032	.468	.690		1-1/8	.031
FWR 500-062	.468	.690		1-1/8	.062

Minimum order 1000.



Metric Nylon Flat Washers

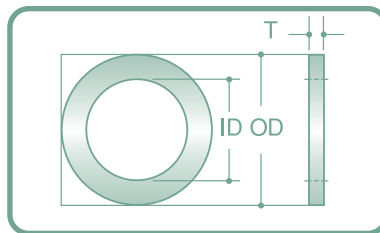
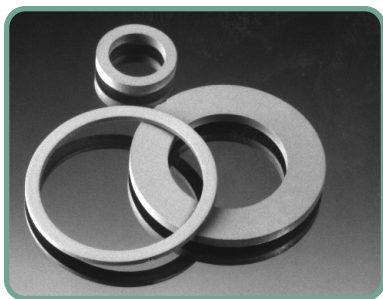


Part No.	ID		OD		T	
	mm	Inch	mm	Inch	mm	Inch
MFW 2	2.15	.085	5.00	.197	0.80	.031
MFW 2.5	2.65	.104	5.60	.220	0.80	.031
MFW 3	3.20	.125	8.00	.315	0.80	.031
MFW 3.5	3.70	.146	8.00	.315	0.80	.031
MFW 4	4.30	.169	9.00	.354	0.80	.031
MFW 5	5.30	.208	11.00	.433	1.00	.040
MFW 6	6.40	.252	12.00	.472	1.50	.060
MFW 8	8.40	.330	18.00	.709	2.00	.080
MFW 10	10.50	.413	22.00	.866	2.50	.098

Minimum order 1000.



Stamped PVC Flat Washer

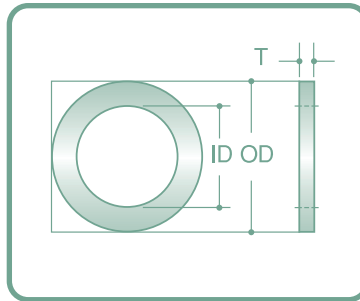
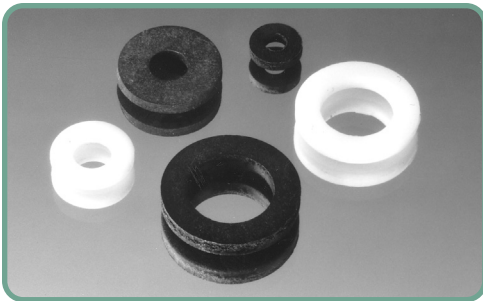


Part No.	ID	OD	T
VW 250-062	.250	1/2	.062
VW 375-062	.398	3/4	.062
VW 500-062	.530	7/8	.062

Minimum order 1000.
Other sizes available.



Black Fibre Flat Washers



Tolerance all dimensions: $\pm .005$

Part No.	ID	OD	T
FFW 093-2	.093	.250	.031
FFW 105-2	.105	.250	.031
FFW 105-4	.105	.250	.062
FFW 120-2	.120	.250	.031
FFW 120-4	.120	.250	.062
FFW 125-2	.125	.312	.031
FFW 125-4	.125	.312	.062
FFW 146-2	.146	.250	.062
FFW 146-4	.146	.375	.031
FFW 146-6	.146	.375	.062
FFW 156-2	.156	.312	.062
FFW 173-2	.173	.375	.031
FFW 173-4	.173	.375	.062
FFW 187-2	.187	.375	.031
FFW 203-2	.203	.375	.031
FFW 203-4	.203	.375	.062
FFW 203-6	.203	.437	.031
FFW 203-8	.203	.437	.062
FFW 203-10	.203	.437	.093
FFW 258-2	.258	.500	.062

Part No.	ID	OD	T
FFW 258-4	.258	.500	.093
FFW 265-2	.265	.500	.031
FFW 281-2	.281	.500	.031
FFW 320-2	.320	.500	.062
FFW 333-2	.333	.562	.031
FFW 333-4	.333	.562	.062
FFW 333-6	.333	.562	.093
FFW 385-2	.385	.625	.062
FFW 385-4	.385	.750	.062
FFW 385-6	.385	.625	.031
FFW 385-8	.385	.625	.093
FFW 458-2	.458	.750	.031
FFW 458-4	.458	.750	.062
FFW 458-6	.458	.750	.093
FFW 514-2	.514	.885	.031
FFW 514-4	.514	.885	.062
FFW 514-6	.514	.885	.093

Minimum order 1000.

Fibre to MIL-F-1148CH.



Black Neoprene Flat Washers

Tolerances: ID and OD $\pm .010$, T $\pm 10\%$

Part No.	ID	OD	T
RFW 093-2	.093	.250	.031
RFW 125-2	.125	.375	.031
RFW 125-4	.125	.375	.062
RFW 156-2	.156	.437	.062
RFW 187-2	.187	.500	.062
RFW 203-2	.203	.562	.093
RFW 281-2	.281	.750	.093

Minimum order 1000.

Neoprene 45/65 DURO



White Teflon Flat Washers

Tolerance all dimensions: $\pm .005$, Thickness $.031^*$

Part No.	ID	OD
TFW 093-2	.093	.187
TFW 105-2	.105	.250
TFW 125-2	.125	.281
TFW 125-4	.125	.312
TFW 146-2	.146	.375
TFW 156-2	.156	.312
TFW 173-2	.173	.375
TFW 203-2	.203	.437
TFW 260-2	.260	.500
TFW 328-2	.328	.562
TFW 385-2	.385	.625
TFW 390-2	.390	.750

Minimum order 1000.

*Also available in .062 thick (minimum order 10,000).

Teflon to MIL-P-22241

OTHER NON-METALLIC MATERIALS AVAILABLE

Delrin
Epoxy Glass
Fishpaper
Kapton
Melamine
Mylar
Nomex

Nylatron GS
Polyethylene
Polypropylene
Pressboard
Rubber
Silicone
Sponge