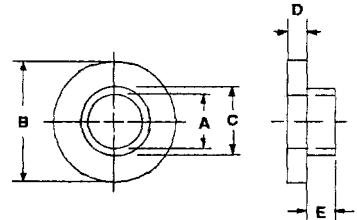


HIGH PERFORMANCE PLASTIC SHOULDER WASHERS

*Available in the following materials:

Material Code No.	Material Name	Material Code No.	Material Name
-11	Polypropylene	-40	PFA, (Teflon®)
-27	PVC	-46	Polycarbonate
-28	CPVC	-60	Nylon 6/6, 30% Short Glass-filled
-18	Nylon 6/6, (natural)	-62	Acetal
-29	Teflon®	-194	Nylon 46, 30% Glass-filled, Heat Stabilized
-37	Kynar®, (PVDF)	-195	Nylon 46, 30% Glass-filled, Heat Stabilized, Fire Retardent
-38	G-10 Fiber Glass		

*Available in other materials.
See materials list in index.
Other sizes available on request.



Conversion note: 1 inch = 25.4 mm 1 mm = 0.03937 inch
Part No. FN112 - (Size Code No.) - (Material Code No.)

Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.	Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.
-1	.046	.187	.140	.015	.015	-46	.093	.250	.152	.031	.025
-2	.055	.250	.125	.028	.028	-47	.093	.250	.152	.062	.025
-3	.055	.344	.125	.016	.060	-48	.093	.250	.157	.046	.046
-4	.061	.105	.084	.047	.047	-49	.093	.250	.185	.031	.025
-5	.063	.156	.090	.031	.025	-50	.093	.250	.185	.062	.025
-6	.063	.156	.092	.013	.017	-51	.093	.265	.157	.026	.015
-7	.063	.156	.122	.031	.025	-52	.093	.281	.158	.094	.125
-8	.063	.187	.090	.031	.025	-53	.093	.289	.215	.062	.062
-9	.063	.187	.119	.031	.078	-54	.093	.312	.122	.031	.025
-10	.063	.187	.119	.031	.187	-55	.093	.312	.122	.062	.025
-11	.063	.187	.122	.031	.025	-56	.093	.312	.152	.031	.025
-12	.063	.187	.125	.025	.030	-57	.093	.312	.152	.062	.025
-13	.063	.187	.125	.040	.020	-58	.093	.312	.185	.031	.025
-14	.063	.250	.090	.031	.025	-59	.093	.312	.185	.062	.025
-15	.063	.250	.122	.031	.025	-60	.093	.317	.183	.060	.030
-16	.063	.250	.156	.032	.075	-61	.093	.375	.122	.031	.025
-17	.075	.197	.118	.031	.281	-62	.093	.375	.122	.062	.025
-18	.076	.297	.124	.230	.125	-63	.093	.375	.152	.031	.025
-19	.076	.230	.140	.230	.020	-64	.093	.375	.152	.062	.025
-20	.078	.215	.150	.031	.050	-65	.093	.375	.185	.031	.025
-21	.080	.500	.305	.031	.047	-66	.093	.375	.185	.062	.025
-22	.083	.240	.123	.018	.022	-67	.093	.437	.185	.031	.025
-23	.083	.240	.135	.018	.022	-68	.093	.437	.185	.062	.025
-24	.085	.182	.131	.062	.031	-69	.095	.189	.119	.062	.031
-25	.085	.182	.131	.078	.031	-70	.095	.250	.187	.047	.672
-26	.089	.187	.119	.031	.016	-71	.095	.260	.154	.016	.016
-27	.093	.140	.115	.015	.004	-72	.097	.312	.160	.047	.016
-28	.093	.187	.122	.025	.031	-73	.098	.218	.170	.062	.031
-29	.093	.187	.122	.062	.025	-74	.098	.240	.150	.031	.031
-30	.093	.195	.120	.031	.062	-75	.098	.312	.138	.031	.020
-31	.093	.200	.120	.031	.062	-76	.099	.312	.128	.031	.031
-32	.093	.205	.125	.031	.078	-77	.100	.228	.138	.047	.031
-33	.093	.205	.125	.031	.109	-78	.100	.250	.114	.047	.031
-34	.093	.205	.125	.031	.187	-79	.100	.250	.114	.047	.094
-35	.093	.218	.122	.031	.025	-80	.101	.218	.152	.031	.025
-36	.093	.218	.122	.062	.025	-81	.101	.218	.152	.062	.025
-37	.093	.218	.152	.031	.025	-82	.101	.224	.152	.038	.062
-38	.093	.218	.152	.062	.025	-83	.101	.234	.123	.062	.031
-39	.093	.219	.154	.033	.008	-84	.101	.250	.152	.031	.025
-40	.093	.228	.122	.031	.031	-85	.101	.250	.152	.062	.025
-41	.093	.234	.124	.020	.007	-86	.101	.250	.160	.034	.078
-42	.093	.250	.122	.062	.025	-87	.101	.250	.171	.031	.015
-43	.093	.250	.122	.031	.025	-88	.101	.250	.185	.031	.025
-44	.093	.250	.124	.031	.025						
-45	.093	.250	.140	.031	.020						

(continued next page)

Tolerances:
 Flange O.D. and all Thicknesses +/- .005
 Shank O.D. - .005/+ .000
 I.D. + .005/- .000

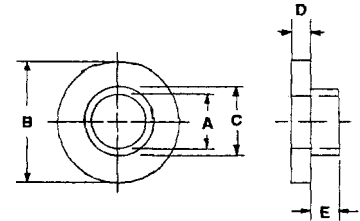
.046 I.D. to .101 I.D.

HIGH PERFORMANCE PLASTIC SHOULDER WASHERS (continued)

*Available in the following materials:

Material Code No.	Material Name	Material Code No.	Material Name
-11	Polypropylene	-40	PFA, (Teflon®)
-27	PVC	-46	Polycarbonate
-28	CPVC	-60	Nylon 6/6, 30% Short Glass-filled
-18	Nylon 6/6, (natural)	-62	Acetal
-29	Teflon®	-194	Nylon 46, 30% Glass-filled, Heat Stabilized
-37	Kynar®, (PVDF)	-195	Nylon 46, 30% Glass-filled, Heat Stabilized, Fire Retardent
-38	G-10 Fiber Glass		

*Available in other materials.
See materials list in index.
Other sizes available on request.



Conversion note: 1 inch = 25.4 mm 1 mm = 0.03937 inch
Part No. FN112 - (Size Code No.) - (Material Code No.)

Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.	Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.
-89	.101	.250	.185	.031	.050	-134	.112	.325	.140	.145	.185
-90	.101	.250	.185	.062	.025	-135	.112	.350	.300	.016	.171
-91	.101	.250	.185	.062	.050	-136	.113	.215	.139	.065	.035
-92	.101	.296	.203	.055	.055	-137	.113	.250	.140	.046	.046
-93	.101	.312	.152	.031	.025	-138	.113	.245	.150	.062	.018
-94	.101	.312	.152	.062	.025	-139	.113	.250	.143	.047	.047
-95	.101	.312	.165	.062	.063	-140	.113	.250	.187	.032	.032
-96	.101	.312	.185	.031	.025	-141	.113	.312	.203	.031	.062
-97	.101	.312	.185	.031	.050	-142	.113	.375	.244	.062	.020
-98	.101	.312	.185	.062	.025	-143	.114	.240	.135	.062	.047
-99	.101	.312	.185	.062	.050	-144	.114	.240	.138	.062	.047
-100	.101	.312	.216	.031	.025	-145	.115	.235	.132	.125	.047
-101	.101	.312	.216	.031	.050	-146	.115	.200	.136	.020	.030
-102	.101	.312	.216	.062	.025	-147	.115	.210	.137	.039	.032
-103	.101	.312	.216	.062	.050	-148	.115	.200	.140	.031	.031
-104	.101	.375	.152	.031	.025	-149	.115	.203	.140	.047	.031
-105	.101	.375	.152	.062	.025	-150	.115	.216	.135	.047	.031
-106	.101	.375	.185	.031	.025	-151	.115	.218	.135	.047	.031
-107	.101	.375	.185	.031	.050	-152	.115	.234	.147	.047	.047
-108	.101	.375	.185	.062	.025	-153	.115	.235	.137	.047	.031
-109	.101	.375	.185	.062	.050	-154	.115	.235	.140	.047	.094
-110	.101	.375	.187	.070	.062	-155	.115	.235	.145	.047	.094
-111	.101	.375	.203	.020	.020	-156	.115	.235	.145	.047	.125
-112	.101	.375	.216	.031	.025	-157	.115	.235	.145	.047	.250
-113	.101	.375	.216	.031	.050	-158	.115	.240	.139	.047	.031
-114	.101	.375	.216	.062	.025	-159	.115	.242	.140	.047	.109
-115	.101	.375	.216	.062	.050	-160	.115	.242	.140	.047	.125
-116	.101	.437	.185	.031	.025	-161	.115	.250	.143	.031	.062
-117	.101	.437	.185	.031	.050	-162	.115	.250	.145	.047	.109
-118	.101	.437	.185	.062	.025	-163	.115	.250	.145	.047	.140
-119	.101	.437	.185	.062	.050	-164	.115	.250	.145	.047	.171
-120	.101	.437	.216	.031	.025	-165	.115	.250	.150	.171	.218
-121	.101	.437	.216	.031	.050	-166	.115	.250	.156	.047	.047
-122	.101	.437	.216	.062	.025	-167	.115	.281	.175	.031	.062
-123	.101	.437	.216	.062	.050	-168	.115	.312	.149	.062	.062
-124	.101	.500	.216	.031	.025	-169	.115	.312	.187	.062	.016
-125	.101	.500	.216	.031	.050	-170	.115	.315	.150	.062	.031
-126	.101	.500	.216	.062	.025	-171	.115	.343	.185	.062	.025
-127	.101	.500	.216	.062	.050	-172	.115	.368	.146	.078	.203
-128	.102	.250	.169	.031	.062	-173	.115	.370	.145	.078	.203
-129	.109	.200	.138	.031	.047	-174	.116	.250	.185	.050	.062
-130	.110	.235	.135	.047	.156	-175	.116	.250	.185	.112	.062
-131	.111	.250	.124	.047	.016	-176	.116	.250	.187	.031	.062
-132	.112	.200	.134	.030	.031						
-133	.112	.200	.137	.030	.080						

(continued next page)

.101 I.D. to .116 I.D.

Tolerances:
Flange O.D. and all Thicknesses +/- .005
Shank O.D. -.005/+0.000
I.D. +.005/-0.000

HIGH PERFORMANCE PLASTIC SHOULDER WASHERS (continued)

Conversion note: 1 inch = 25.4 mm 1 mm = 0.03937 inch

Part No. FN112 - (Size Code No.) - (Material Code No.)

Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.	Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.
-177	.116	.200	.135	.078	.031	-234	.116	.437	.279	.062	.050
-178	.116	.250	.150	.031	.016	-235	.116	.437	.310	.031	.027
-179	.116	.250	.185	.031	.027	-236	.116	.437	.310	.031	.050
-180	.116	.250	.185	.031	.047	-237	.116	.437	.310	.062	.027
-181	.116	.250	.185	.031	.050	-238	.116	.437	.310	.062	.050
-182	.116	.250	.185	.062	.027	-239	.116	.468	.216	.031	.027
-183	.116	.250	.185	.062	.047	-240	.116	.468	.216	.031	.050
-184	.116	.250	.185	.062	.050	-241	.116	.468	.216	.062	.027
-185	.116	.279	.187	.062	.063	-242	.116	.468	.216	.062	.050
-186	.116	.312	.185	.031	.027	-243	.116	.468	.248	.031	.027
-187	.116	.312	.185	.031	.047	-244	.116	.468	.248	.031	.050
-188	.116	.312	.185	.031	.050	-245	.116	.468	.248	.062	.027
-189	.116	.312	.185	.062	.027	-246	.116	.468	.248	.062	.050
-190	.116	.312	.185	.062	.050	-247	.116	.468	.279	.031	.027
-191	.116	.312	.216	.031	.027	-248	.116	.468	.279	.031	.050
-192	.116	.312	.216	.031	.050	-249	.116	.468	.279	.062	.027
-193	.116	.312	.216	.062	.027	-250	.116	.468	.279	.062	.050
-194	.116	.312	.216	.062	.050	-251	.116	.468	.310	.031	.027
-195	.116	.316	.158	.047	.094	-252	.116	.468	.310	.031	.050
-196	.116	.343	.248	.031	.027	-253	.116	.468	.310	.062	.027
-197	.116	.343	.248	.031	.050	-254	.116	.468	.310	.062	.050
-198	.116	.343	.248	.062	.027	-255	.116	.500	.248	.031	.027
-199	.116	.343	.248	.062	.050	-256	.116	.500	.248	.031	.050
-200	.116	.375	.185	.031	.027	-257	.116	.500	.248	.062	.027
-201	.116	.375	.185	.031	.050	-258	.116	.500	.248	.062	.050
-202	.116	.375	.185	.062	.027	-259	.116	.500	.279	.031	.027
-203	.116	.375	.185	.062	.050	-260	.116	.500	.279	.031	.050
-204	.116	.375	.193	.078	.156	-261	.116	.500	.279	.062	.027
-205	.116	.375	.216	.031	.027	-262	.116	.500	.279	.062	.050
-206	.116	.375	.216	.031	.050	-263	.116	.500	.310	.031	.027
-207	.116	.375	.216	.062	.027	-264	.116	.500	.310	.031	.050
-208	.116	.375	.216	.062	.050	-265	.116	.500	.310	.062	.027
-209	.116	.375	.248	.031	.027	-266	.116	.500	.310	.062	.050
-210	.116	.375	.248	.031	.050	-267	.116	.562	.248	.031	.027
-211	.116	.375	.248	.062	.027	-268	.116	.562	.248	.031	.050
-212	.116	.375	.248	.062	.050	-269	.116	.562	.248	.062	.027
-213	.116	.375	.279	.031	.027	-270	.116	.562	.248	.062	.050
-214	.116	.375	.279	.031	.050	-271	.116	.562	.279	.031	.027
-215	.116	.375	.279	.062	.027	-272	.116	.562	.279	.031	.050
-216	.116	.375	.279	.062	.050	-273	.116	.562	.279	.062	.027
-217	.116	.378	.194	.078	.156	-274	.116	.562	.279	.062	.050
-218	.116	.378	.255	.031	.125	-275	.116	.562	.310	.031	.027
-219	.116	.437	.185	.031	.027	-276	.116	.562	.310	.031	.050
-220	.116	.437	.185	.031	.050	-277	.116	.562	.310	.062	.027
-221	.116	.437	.185	.062	.027	-278	.116	.562	.310	.062	.050
-222	.116	.437	.185	.062	.050	-279	.116	.625	.248	.031	.027
-223	.116	.437	.216	.031	.027	-280	.116	.625	.248	.031	.050
-224	.116	.437	.216	.031	.050	-281	.116	.625	.248	.062	.027
-225	.116	.437	.216	.062	.027	-282	.116	.625	.248	.062	.050
-226	.116	.437	.216	.062	.050	-283	.116	.625	.279	.031	.027
-227	.116	.437	.248	.031	.027	-284	.116	.625	.279	.031	.050
-228	.116	.437	.248	.031	.050	-285	.116	.625	.279	.062	.027
-229	.116	.437	.248	.062	.027	-286	.116	.625	.279	.062	.050
-230	.116	.437	.248	.062	.050	-287	.116	.625	.310	.031	.027
-231	.116	.437	.279	.031	.027	-288	.116	.625	.310	.031	.050
-232	.116	.437	.279	.031	.050						
-233	.116	.437	.279	.062	.027						

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Tolerances:
 Flange O.D. and all Thicknesses +/- .005
 Shank O.D. -.005/+ .000
 I.D. + .005/- .000

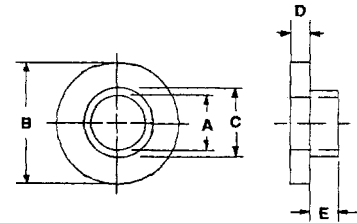
.116 I.D. to .116 I.D.

HIGH PERFORMANCE PLASTIC SHOULDER WASHERS (continued)

*Available in the following materials:

Material Code No.	Material Name	Material Code No.	Material Name
-11	Polypropylene	-40	PFA, (Teflon®)
-27	PVC	-46	Polycarbonate
-28	CPVC	-60	Nylon 6/6, 30% Short Glass-filled
-18	Nylon 6/6, (natural)	-62	Acetal
-29	Teflon®	-194	Nylon 46, 30% Glass-filled, Heat Stabilized
-37	Kynar®, (PVDF)	-195	Nylon 46, 30% Glass-filled, Heat Stabilized, Fire Retardent
-38	G-10 Fiber Glass		

*Available in other materials.
See materials list in index.
Other sizes available on request.



Conversion note: 1 inch = 25.4 mm 1 mm = 0.03937 inch
Part No. FN112 - (Size Code No.) - (Material Code No.)

Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.	Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.
-289	.116	.625	.310	.062	.027	-334	.126	.312	.185	.031	.047
-290	.116	.625	.310	.062	.050	-335	.126	.312	.185	.031	.050
-291	.117	.220	.135	.032	.040	-336	.126	.312	.185	.047	.047
-292	.118	.250	.137	.070	.036	-337	.126	.312	.185	.062	.027
-293	.118	.250	.139	.047	.125	-338	.126	.312	.185	.062	.050
-294	.118	.250	.143	.031	.062	-339	.126	.312	.188	.094	.020
-295	.118	.281	.177	.031	.015	-340	.126	.312	.190	.045	.040
-296	.120	.234	.136	.020	.044	-341	.126	.312	.216	.031	.027
-297	.120	.202	.145	.016	.047	-342	.126	.312	.216	.031	.050
-298	.120	.210	.145	.016	.047	-343	.126	.312	.216	.062	.027
-299	.120	.375	.220	.031	.031	-344	.126	.312	.216	.062	.050
-300	.120	.224	.154	.031	.062	-345	.126	.312	.225	.062	.042
-301	.120	.224	.154	.031	.437	-346	.126	.313	.188	.063	.031
-302	.120	.250	.138	.047	.062	-347	.126	.343	.218	.050	.012
-303	.120	.250	.191	.032	.027	-348	.126	.343	.248	.031	.027
-304	.120	.253	.136	.047	.078	-349	.126	.343	.248	.031	.050
-305	.120	.291	.154	.062	.234	-350	.126	.343	.248	.062	.027
-306	.120	.312	.170	.062	.062	-351	.126	.343	.248	.062	.050
-307	.120	.312	.180	.062	.031	-352	.126	.370	.255	.085	.040
-308	.120	.312	.190	.045	.045	-353	.126	.375	.185	.031	.027
-309	.120	.312	.203	.047	.031	-354	.126	.375	.185	.031	.050
-310	.120	.312	.214	.031	.031	-355	.126	.375	.185	.062	.027
-311	.120	.375	.190	.040	.022	-356	.126	.375	.185	.062	.050
-312	.121	.375	.245	.031	.063	-357	.126	.375	.187	.047	.031
-313	.121	.375	.265	.031	.094	-358	.126	.375	.190	.040	.040
-314	.122	.230	.142	.023	.041	-359	.126	.375	.216	.031	.027
-315	.122	.250	.144	.200	.062	-360	.126	.375	.216	.031	.050
-316	.122	.230	.142	.016	.047	-361	.126	.375	.216	.062	.027
-317	.124	.375	.124	.031	.062	-362	.126	.375	.216	.062	.050
-318	.124	.313	.219	.031	.031	-363	.126	.375	.248	.031	.027
-319	.125	.240	.185	.031	.094	-364	.126	.375	.248	.031	.050
-320	.125	.625	.500	.100	.125	-365	.126	.375	.248	.062	.027
-321	.126	.265	.157	.031	.031	-366	.126	.375	.248	.062	.050
-322	.126	.312	.185	.047	.047	-367	.126	.375	.250	.095	.030
-323	.126	.245	.199	.063	.093	-368	.126	.375	.250	.127	.035
-324	.126	.250	.170	.020	.020	-369	.126	.375	.279	.031	.027
-325	.126	.250	.185	.031	.027	-370	.126	.375	.279	.031	.050
-326	.126	.250	.185	.031	.050	-371	.126	.375	.279	.062	.027
-327	.126	.250	.185	.062	.027	-372	.126	.375	.279	.062	.050
-328	.126	.250	.185	.062	.050	-373	.126	.375	.312	.050	.050
-329	.126	.250	.186	.047	.171	-374	.126	.437	.171	.062	.031
-330	.126	.265	.157	.031	.031	-375	.126	.437	.185	.031	.027
-331	.126	.265	.157	.035	.028	-376	.126	.437	.185	.031	.050
-332	.126	.312	.175	.062	.025						
-333	.126	.312	.185	.031	.027						

(continued next page)

.116 I.D. to .126 I.D.

Tolerances:
Flange O.D. and all Thicknesses +/- .005
Shank O.D. - .005/+ .000
I.D. + .005/- .000

HIGH PERFORMANCE PLASTIC SHOULDER WASHERS (continued)

Conversion note: 1 inch = 25.4 mm 1 mm = 0.03937 inch
 Part No. FN112 - (Size Code No.) - (Material Code No.)

Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.	Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.
-377	.126	.437	.185	.062	.027	-434	.126	.562	.310	.031	.050
-378	.126	.437	.185	.062	.050	-435	.126	.562	.310	.062	.027
-379	.126	.437	.216	.031	.027	-436	.126	.562	.310	.062	.050
-380	.126	.437	.216	.031	.050	-437	.126	.625	.248	.031	.027
-381	.126	.437	.216	.062	.027	-438	.126	.625	.248	.031	.050
-382	.126	.437	.216	.062	.050	-439	.126	.625	.248	.062	.027
-383	.126	.437	.248	.031	.027	-440	.126	.625	.248	.062	.050
-384	.126	.437	.248	.031	.050	-441	.126	.625	.279	.031	.027
-385	.126	.437	.248	.062	.027	-442	.126	.625	.279	.031	.050
-386	.126	.437	.248	.062	.050	-443	.126	.625	.279	.062	.027
-387	.126	.437	.279	.031	.027	-444	.126	.625	.279	.062	.050
-388	.126	.437	.279	.031	.050	-445	.126	.625	.310	.031	.027
-389	.126	.437	.279	.062	.027	-446	.126	.625	.310	.031	.050
-390	.126	.437	.279	.062	.050	-447	.126	.625	.310	.062	.027
-391	.126	.437	.310	.031	.027	-448	.126	.625	.310	.062	.050
-392	.126	.437	.310	.031	.050	-449	.127	.312	.170	.062	.047
-393	.126	.437	.310	.062	.027	-450	.128	.312	.185	.078	.031
-394	.126	.437	.310	.062	.050	-451	.128	.234	.150	.046	.046
-395	.126	.438	.219	.047	.047	-452	.128	.281	.193	.062	.055
-396	.126	.468	.216	.031	.027	-453	.128	.312	.185	.031	.062
-397	.126	.468	.216	.031	.050	-454	.128	.312	.185	.031	.078
-398	.126	.468	.216	.062	.027	-455	.128	.312	.185	.050	.024
-399	.126	.468	.216	.062	.050	-456	.128	.312	.187	.047	.094
-400	.126	.468	.248	.031	.027	-457	.128	.312	.187	.047	.100
-401	.126	.468	.248	.031	.050	-458	.128	.312	.218	.031	.062
-402	.126	.468	.248	.062	.027	-459	.128	.320	.265	.040	.085
-403	.126	.468	.248	.062	.050	-460	.128	.345	.185	.062	.028
-404	.126	.468	.279	.031	.027	-461	.128	.375	.185	.031	.020
-405	.126	.468	.279	.031	.050	-462	.128	.378	.185	.050	.024
-406	.126	.468	.279	.062	.027	-463	.128	.437	.215	.053	.020
-407	.126	.468	.279	.062	.050	-464	.130	.312	.180	.085	.032
-408	.126	.468	.310	.031	.027	-465	.130	.228	.175	.078	.053
-409	.126	.468	.310	.031	.050	-466	.130	.250	.195	.031	.125
-410	.126	.468	.310	.062	.027	-467	.130	.308	.223	.038	.022
-411	.126	.468	.310	.062	.050	-468	.130	.312	.154	.031	.312
-412	.126	.469	.279	.062	.050	-469	.130	.335	.187	.040	.085
-413	.126	.500	.248	.031	.027	-470	.130	.343	.190	.031	.031
-414	.126	.500	.248	.031	.050	-471	.130	.375	.250	.062	.045
-415	.126	.500	.248	.062	.027	-472	.130	.437	.192	.031	.044
-416	.126	.500	.248	.062	.050	-473	.132	.343	.206	.024	.020
-417	.126	.500	.279	.031	.027	-474	.132	.355	.242	.060	.080
-418	.126	.500	.279	.031	.050	-475	.133	.343	.219	.062	.118
-419	.126	.500	.279	.062	.027	-476	.135	.325	.183	.085	.062
-420	.126	.500	.279	.062	.050	-477	.135	.296	.235	.031	.218
-421	.126	.500	.310	.031	.027	-478	.135	.312	.187	.031	.015
-422	.126	.500	.310	.031	.050	-479	.135	.328	.187	.062	.035
-423	.126	.500	.310	.062	.027	-480	.135	.328	.187	.063	.010
-424	.126	.500	.310	.062	.050	-481	.135	.343	.226	.062	.040
-425	.126	.562	.248	.031	.027	-482	.135	.437	.187	.062	.015
-426	.126	.562	.248	.031	.050	-483	.135	.438	.250	.031	.140
-427	.126	.562	.248	.062	.027	-484	.136	.250	.187	.032	.032
-428	.126	.562	.248	.062	.050	-485	.136	.250	.187	.063	.032
-429	.126	.562	.279	.031	.027	-486	.136	.312	.185	.050	.024
-430	.126	.562	.279	.031	.050	-487	.136	.312	.187	.062	.032
-431	.126	.562	.279	.062	.027	-488	.136	.312	.198	.062	.046
-432	.126	.562	.279	.062	.050						
-433	.126	.562	.310	.031	.027						

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Tolerances:
 Flange O.D. and all Thicknesses +/- .005
 Shank O.D. - .005/+ .000
 I.D. + .005/- .000

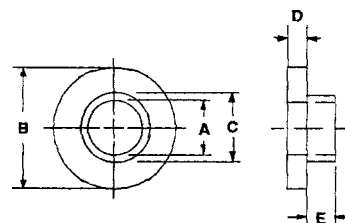
.126 I. D. to .136 I. D.

HIGH PERFORMANCE PLASTIC SHOULDER WASHERS (continued)

*Available in the following materials:

Material Code No.	Material Name	Material Code No.	Material Name
-11	Polypropylene	-40	PFA, (Teflon®)
-27	PVC	-46	Polycarbonate
-28	CPVC	-60	Nylon 6/6, 30% Short Glass-filled
-18	Nylon 6/6, (natural)	-62	Acetal
-29	Teflon®	-194	Nylon 46, 30% Glass-filled, Heat Stabilized
-37	Kynar®, (PVDF)	-195	Nylon 46, 30% Glass-filled, Heat Stabilized, Fire Retardent
-38	G-10 Fiber Glass		

*Available in other materials.
 See materials list in index.
 Other sizes available on request.



Conversion note: 1 inch = 25.4 mm 1 mm = 0.03937 inch
Part No. FN112 - (Size Code No.) - (Material Code No.)

Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.	Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.
-489	.136	.313	.219	.031	.031	-534	.140	.500	.312	.090	.062
-490	.136	.375	.195	.047	.109	-535	.140	.313	.187	.023	.039
-491	.136	.375	.245	.062	.078	-536	.140	.313	.187	.031	.016
-492	.136	.375	.248	.062	.094	-537	.140	.324	.204	.062	.031
-493	.136	.562	.437	.031	.031	-538	.140	.328	.187	.064	.086
-494	.138	.293	.218	.047	.187	-539	.140	.340	.250	.078	.047
-495	.138	.375	.240	.062	.109	-540	.140	.343	.185	.031	.027
-496	.138	.375	.250	.094	.062	-541	.140	.343	.185	.031	.050
-497	.139	.250	.186	.031	.031	-542	.140	.343	.185	.062	.027
-498	.139	.310	.183	.062	.016	-543	.140	.343	.185	.062	.050
-499	.140	.312	.178	.050	.048	-544	.140	.343	.216	.031	.027
-500	.140	.312	.185	.027	.062	-545	.140	.343	.216	.031	.050
-501	.140	.312	.185	.050	.062	-546	.140	.343	.216	.062	.027
-502	.140	.312	.185	.062	.050	-547	.140	.343	.216	.062	.050
-503	.140	.281	.200	.062	.031	-548	.140	.343	.221	.062	.016
-504	.140	.375	.235	.030	.060	-549	.140	.343	.248	.031	.027
-505	.140	.375	.237	.180	.060	-550	.140	.343	.248	.031	.050
-506	.140	.343	.248	.050	.062	-551	.140	.343	.248	.062	.027
-507	.140	.250	.185	.031	.027	-552	.140	.343	.248	.062	.050
-508	.140	.250	.185	.031	.050	-553	.140	.349	.248	.047	.062
-509	.140	.250	.185	.062	.027	-554	.140	.375	.185	.016	.094
-510	.140	.250	.185	.062	.050	-555	.140	.375	.185	.031	.027
-511	.140	.250	.187	.032	.032	-556	.140	.375	.185	.031	.050
-512	.140	.250	.187	.063	.032	-557	.140	.375	.185	.031	.062
-513	.140	.250	.190	.062	.047	-558	.140	.375	.185	.031	.094
-514	.140	.252	.186	.031	.031	-559	.140	.375	.185	.045	.035
-515	.140	.260	.190	.062	.047	-560	.140	.375	.185	.062	.031
-516	.140	.290	.170	.047	.031	-561	.140	.375	.185	.062	.050
-517	.140	.290	.170	.047	.047	-562	.140	.375	.199	.218	.078
-518	.140	.290	.170	.047	.250	-563	.140	.375	.216	.031	.027
-519	.140	.295	.234	.031	.218	-564	.140	.375	.216	.031	.050
-520	.140	.312	.170	.047	.062	-565	.140	.375	.216	.062	.027
-521	.140	.312	.180	.031	.031	-566	.140	.375	.216	.062	.050
-522	.140	.312	.185	.031	.027	-567	.140	.375	.218	.062	.047
-523	.140	.312	.185	.031	.031	-568	.140	.375	.248	.031	.027
-524	.140	.312	.185	.060	.040	-569	.140	.375	.248	.031	.050
-525	.140	.312	.185	.062	.027	-570	.140	.375	.248	.062	.027
-526	.140	.312	.185	.062	.032	-571	.140	.375	.248	.062	.050
-527	.140	.312	.185	.062	.050	-572	.140	.375	.250	.094	.062
-528	.140	.312	.198	.031	.031	-573	.140	.375	.279	.031	.027
-529	.140	.312	.210	.055	.035	-574	.140	.375	.279	.031	.050
-530	.140	.312	.216	.031	.027	-575	.140	.375	.279	.062	.027
-531	.140	.312	.216	.031	.050	-576	.140	.375	.279	.062	.050
-532	.140	.312	.216	.062	.027						
-533	.140	.312	.216	.062	.050						

(continued next page)

.136 I.D. to .140 I.D.

Tolerances:
 Flange O.D. and all Thicknesses +/- .005
 Shank O.D. -.005/+0.000
 I.D. +.005/-0.000

HIGH PERFORMANCE PLASTIC SHOULDER WASHERS (continued)

Conversion note: 1 inch = 25.4 mm 1 mm = 0.03937 inch

Part No. FN112 - (Size Code No.) - (Material Code No.)

Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.	Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.
-577	.140	.381	.185	.062	.047	-634	.140	.500	.279	.031	.050
-578	.140	.400	.275	.125	.125	-635	.140	.500	.279	.062	.027
-579	.140	.437	.185	.031	.027	-636	.140	.500	.279	.062	.050
-580	.140	.437	.185	.031	.050	-637	.140	.500	.310	.031	.027
-581	.140	.437	.185	.062	.027	-638	.140	.500	.310	.031	.050
-582	.140	.437	.185	.062	.050	-639	.140	.500	.310	.062	.027
-583	.140	.437	.216	.031	.027	-640	.140	.500	.310	.062	.050
-584	.140	.437	.216	.031	.050	-641	.140	.562	.185	.031	.027
-585	.140	.437	.216	.062	.027	-642	.140	.562	.185	.031	.050
-586	.140	.437	.216	.062	.050	-643	.140	.562	.185	.062	.027
-587	.140	.437	.248	.031	.027	-644	.140	.562	.185	.062	.050
-588	.140	.437	.248	.031	.050	-645	.140	.562	.216	.031	.027
-589	.140	.437	.248	.062	.027	-646	.140	.562	.216	.031	.050
-590	.140	.437	.248	.062	.050	-647	.140	.562	.216	.062	.027
-591	.140	.437	.279	.031	.027	-648	.140	.562	.216	.062	.050
-592	.140	.437	.279	.031	.050	-649	.140	.562	.248	.031	.027
-593	.140	.437	.279	.062	.027	-650	.140	.562	.248	.031	.050
-594	.140	.437	.279	.062	.050	-651	.140	.562	.248	.062	.027
-595	.140	.437	.310	.031	.027	-652	.140	.562	.248	.062	.050
-596	.140	.437	.310	.031	.050	-653	.140	.562	.279	.031	.027
-597	.140	.437	.310	.062	.027	-654	.140	.562	.279	.031	.050
-598	.140	.437	.310	.062	.050	-655	.140	.562	.279	.062	.027
-599	.140	.468	.185	.031	.027	-656	.140	.562	.279	.062	.050
-600	.140	.468	.185	.031	.050	-657	.140	.562	.310	.031	.027
-601	.140	.468	.185	.062	.027	-658	.140	.562	.310	.031	.050
-602	.140	.468	.185	.062	.050	-659	.140	.562	.310	.062	.027
-603	.140	.468	.216	.031	.027	-660	.140	.562	.310	.062	.050
-604	.140	.468	.216	.031	.050	-661	.140	.578	.185	.062	.047
-605	.140	.468	.216	.062	.027	-662	.140	.625	.185	.031	.027
-606	.140	.468	.216	.062	.050	-663	.140	.625	.185	.031	.050
-607	.140	.468	.248	.031	.027	-664	.140	.625	.185	.062	.027
-608	.140	.468	.248	.031	.050	-665	.140	.625	.185	.062	.050
-609	.140	.468	.248	.062	.027	-666	.140	.625	.216	.031	.027
-610	.140	.468	.248	.062	.047	-667	.140	.625	.216	.031	.050
-611	.140	.468	.248	.062	.050	-668	.140	.625	.216	.062	.027
-612	.140	.468	.279	.031	.027	-669	.140	.625	.216	.062	.050
-613	.140	.468	.279	.031	.050	-670	.140	.625	.248	.031	.027
-614	.140	.468	.279	.062	.027	-671	.140	.625	.248	.031	.050
-615	.140	.468	.279	.062	.050	-672	.140	.625	.248	.062	.027
-616	.140	.468	.310	.031	.027	-673	.140	.625	.248	.062	.050
-617	.140	.468	.310	.031	.050	-674	.140	.625	.279	.031	.027
-618	.140	.468	.310	.062	.027	-675	.140	.625	.279	.031	.050
-619	.140	.468	.310	.062	.050	-676	.140	.625	.279	.062	.027
-620	.140	.470	.312	.078	.281	-677	.140	.625	.279	.062	.050
-621	.140	.500	.185	.031	.027	-678	.140	.625	.310	.031	.027
-622	.140	.500	.185	.031	.050	-679	.140	.625	.310	.031	.050
-623	.140	.500	.185	.062	.027	-680	.140	.625	.310	.062	.027
-624	.140	.500	.185	.062	.050	-681	.140	.625	.310	.062	.050
-625	.140	.500	.216	.031	.027	-682	.141	.234	.187	.062	.063
-626	.140	.500	.216	.031	.050	-683	.141	.375	.240	.062	.031
-627	.140	.500	.216	.062	.027	-684	.141	.257	.187	.062	.031
-628	.140	.500	.216	.062	.050	-685	.141	.312	.187	.062	.031
-629	.140	.500	.248	.031	.027	-686	.141	.330	.206	.062	.031
-630	.140	.500	.248	.031	.050	-687	.141	.344	.189	.109	.047
-631	.140	.500	.248	.062	.027	-688	.141	.374	.246	.031	.031
-632	.140	.500	.248	.062	.050						
-633	.140	.500	.279	.031	.027						

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Tolerances:
 Flange O.D. and all Thicknesses +/- .005
 Shank O.D. - .005/+ .000
 I.D. + .005/- .000

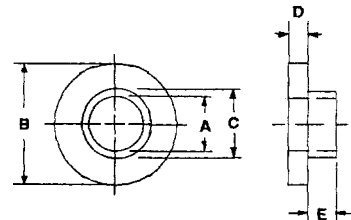
.140 I. D. to .141 I. D.

HIGH PERFORMANCE PLASTIC SHOULDER WASHERS (continued)

*Available in the following materials:

Material Code No.	Material Name	Material Code No.	Material Name
-11	Polypropylene	-40	PFA, (Teflon®)
-27	PVC	-46	Polycarbonate
-28	CPVC	-60	Nylon 6/6, 30% Short Glass-filled
-18	Nylon 6/6, (natural)	-62	Acetal
-29	Teflon®	-194	Nylon 46, 30% Glass-filled, Heat Stabilized
-37	Kynar®, (PVDF)	-195	Nylon 46, 30% Glass-filled, Heat Stabilized, Fire Retardent
-38	G-10 Fiber Glass		

*Available in other materials.
 See materials list in index.
 Other sizes available on request.



Conversion note: 1 inch = 25.4 mm 1 mm = 0.03937 inch

Part No. FN112 - (Size Code No.) - (Material Code No.)

Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.	Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.
-689	.141	.375	.237	.062	.032	-734	.160	.300	.194	.047	.062
-690	.141	.415	.243	.156	.047	-735	.160	.343	.220	.047	.031
-691	.141	.418	.243	.109	.062	-736	.160	.575	.430	.060	.200
-692	.141	.500	.234	.064	.045	-737	.160	.625	.435	.094	.031
-693	.141	.500	.318	.031	.016	-738	.161	.359	.218	.031	.015
-694	.141	.500	.318	.031	.047	-739	.161	.433	.275	.078	.091
-695	.142	.265	.205	.031	.156	-740	.162	.300	.210	.062	.031
-696	.143	.313	.175	.031	.031	-741	.162	.625	.250	.032	.046
-697	.144	.312	.187	.060	.030	-742	.163	.437	.213	.046	.046
-698	.144	.312	.234	.047	.062	-743	.165	.437	.265	.040	.050
-699	.144	.312	.234	.047	.125	-744	.165	.437	.312	.062	.031
-700	.144	.375	.250	.047	.100	-745	.165	.500	.250	.078	.016
-701	.144	.437	.250	.062	.125	-746	.165	.625	.281	.031	.016
-702	.144	.437	.312	.062	.050	-747	.167	.375	.246	.031	.062
-703	.145	.250	.203	.062	.125	-748	.167	.375	.246	.062	.031
-704	.145	.375	.250	.062	.062	-749	.167	.500	.250	.125	.437
-705	.145	.375	.250	.063	.031	-750	.168	.375	.250	.062	.047
-706	.145	.375	.265	.062	.016	-751	.168	.375	.250	.062	.125
-707	.145	.385	.240	.062	.031	-752	.168	.437	.250	.069	.031
-708	.145	.500	.275	.094	.047	-753	.169	.312	.218	.062	.031
-709	.145	.500	.375	.063	.031	-754	.169	.375	.215	.062	.031
-710	.146	.328	.218	.047	.047	-755	.169	.375	.215	.063	.062
-711	.147	.500	.230	.062	.031	-756	.169	.375	.250	.031	.031
-712	.147	.500	.358	.062	.078	-757	.169	.562	.312	.125	.031
-713	.148	.380	.220	.062	.203	-758	.170	.312	.250	.062	.063
-714	.149	.375	.250	.062	.025	-759	.170	.344	.202	.062	.140
-715	.150	.355	.250	.040	.090	-760	.170	.375	.234	.062	.031
-716	.150	.380	.244	.078	.047	-761	.171	.625	.248	.050	.031
-717	.150	.500	.330	.062	.062	-762	.171	.421	.279	.040	.190
-718	.150	.750	.250	.062	.250	-763	.171	.312	.216	.031	.027
-719	.152	.296	.203	.038	.085	-764	.171	.312	.216	.031	.050
-720	.152	.378	.199	.055	.027	-765	.171	.312	.216	.062	.027
-721	.152	.750	.359	.094	.062	-766	.171	.312	.216	.062	.050
-722	.153	.296	.219	.015	.007	-767	.171	.343	.216	.031	.027
-723	.156	.500	.250	.031	.094	-768	.171	.343	.216	.031	.050
-724	.156	.312	.250	.062	.187	-769	.171	.343	.216	.062	.027
-725	.156	.375	.250	.042	.010	-770	.171	.343	.216	.062	.050
-726	.156	.400	.243	.047	.047	-771	.171	.343	.248	.031	.027
-727	.156	.557	.422	.185	.055	-772	.171	.343	.248	.031	.050
-728	.156	.428	.245	.062	.031	-773	.171	.343	.248	.062	.027
-729	.156	.437	.245	.062	.031	-774	.171	.343	.248	.062	.050
-730	.156	.437	.250	.062	.063	-775	.171	.345	.209	.062	.047
-731	.156	.500	.250	.094	.031	-776	.171	.375	.195	.031	.062
-732	.156	.500	.312	.031	.031						
-733	.156	.562	.437	.062	.060						

(continued next page)

.141 I.D. to .171 I.D.

Tolerances:
 Flange O.D. and all Thicknesses +/- .005
 Shank O.D. - .005/+ .000
 I.D. + .005/- .000

HIGH PERFORMANCE PLASTIC SHOULDER WASHERS (continued)

Conversion note: 1 inch = 25.4 mm 1 mm = 0.03937 inch
 Part No. FN112 - (Size Code No.) - (Material Code No.)

Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.	Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.
-777	.171	.375	.216	.031	.027	-834	.171	.500	.310	.031	.027
-778	.171	.375	.216	.031	.050	-835	.171	.500	.310	.031	.050
-779	.171	.375	.216	.062	.027	-836	.171	.500	.310	.062	.027
-780	.171	.375	.216	.062	.050	-837	.171	.500	.310	.062	.050
-781	.171	.375	.248	.031	.027	-838	.171	.500	.375	.063	.031
-782	.171	.375	.248	.031	.050	-839	.171	.510	.250	.062	.406
-783	.171	.375	.248	.062	.027	-840	.171	.562	.216	.031	.027
-784	.171	.375	.248	.062	.050	-841	.171	.562	.216	.031	.050
-785	.171	.375	.250	.062	.031	-842	.171	.562	.216	.062	.027
-786	.171	.375	.279	.031	.027	-843	.171	.562	.216	.062	.050
-787	.171	.375	.279	.031	.050	-844	.171	.562	.248	.031	.027
-788	.171	.375	.279	.062	.027	-845	.171	.562	.248	.031	.050
-789	.171	.375	.279	.062	.050	-846	.171	.562	.248	.062	.027
-790	.171	.437	.216	.031	.027	-847	.171	.562	.248	.062	.050
-791	.171	.437	.216	.031	.050	-848	.171	.562	.279	.031	.027
-792	.171	.437	.216	.062	.027	-849	.171	.562	.279	.031	.050
-793	.171	.437	.216	.062	.050	-850	.171	.562	.279	.062	.027
-794	.171	.437	.248	.031	.027	-851	.171	.562	.279	.062	.050
-795	.171	.437	.248	.031	.050	-852	.171	.562	.310	.031	.027
-796	.171	.437	.248	.062	.027	-853	.171	.562	.310	.031	.050
-797	.171	.437	.248	.062	.050	-a54	.171	.562	.310	.062	.027
-798	.171	.437	.279	.031	.027	-855	.171	.562	.310	.062	.050
-799	.171	.437	.279	.031	.050	-856	.171	.625	.216	.031	.027
-800	.171	.437	.279	.062	.027	-857	.171	.625	.216	.031	.050
-801	.171	.437	.279	.062	.050	-858	.171	.625	.216	.062	.027
-802	.171	.437	.310	.031	.027	-859	.171	.625	.216	.062	.050
-803	.171	.437	.310	.031	.050	-860	.171	.625	.248	.031	.027
-804	.171	.437	.310	.062	.027	-861	.171	.625	.248	.031	.050
-805	.171	.437	.310	.062	.050	-862	.171	.625	.248	.062	.027
-806	.171	.468	.216	.031	.027	-863	.171	.625	.248	.062	.050
-807	.171	.468	.216	.031	.050	-864	.171	.625	.279	.031	.027
-808	.171	.468	.216	.062	.027	-865	.171	.625	.279	.031	.050
-809	.171	.468	.248	.031	.027	-866	.171	.625	.279	.062	.027
-810	.171	.468	.248	.031	.050	-867	.171	.625	.279	.062	.050
-811	.171	.468	.248	.062	.027	-868	.171	.625	.310	.031	.027
-812	.171	.468	.248	.062	.050	-869	.171	.625	.310	.031	.050
-813	.171	.468	.279	.031	.027	-870	.171	.625	.310	.062	.027
-814	.171	.468	.279	.031	.050	-871	.171	.625	.310	.062	.050
-815	.171	.468	.279	.062	.027	-872	.171	.630	.248	.031	.047
-816	.171	.468	.279	.062	.050	-873	.172	.500	.312	.140	.078
-817	.171	.468	.310	.031	.027	-874	.172	.375	.218	.063	.063
-818	.171	.468	.310	.031	.050	-875	.172	.375	.246	.063	.031
-819	.171	.468	.310	.062	.027	-876	.172	.625	.310	.062	.047
-820	.171	.468	.310	.062	.050	-877	.173	.344	.205	.062	.375
-821	.171	.500	.216	.031	.027	-878	.173	.345	.205	.062	.375
-822	.171	.500	.216	.031	.050	-879	.173	.500	.370	.063	.093
-823	.171	.500	.216	.062	.027	-880	.175	.340	.220	.062	.094
-824	.171	.500	.216	.062	.050	-881	.175	.437	.260	.038	.050
-825	.171	.500	.248	.031	.027	-882	.175	.500	.312	.060	.023
-826	.171	.500	.248	.031	.050	-883	.175	.500	.312	.060	.055
-827	.171	.500	.248	.062	.027	-884	.176	.505	.242	.028	.062
-828	.171	.500	.248	.062	.050	-885	.176	.500	.243	.028	.062
-829	.171	.500	.250	.100	.087	-886	.176	.493	.376	.094	.406
-830	.171	.500	.279	.031	.027	-887	.184	.312	.234	.031	.187
-831	.171	.500	.279	.031	.050	-888	.187	.312	.250	.062	.031
-832	.171	.500	.279	.062	.027						
-833	.171	.500	.279	.062	.050						

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Tolerances:
 Flange O.D. and all Thicknesses +/- .005
 Shank O.D. -.005/+ .000
 I.D. +.005/- .000

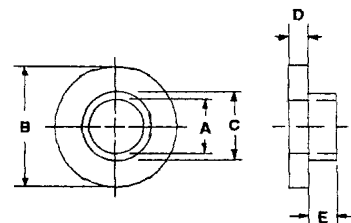
.171 I.D. to .187 I.D.

HIGH PERFORMANCE PLASTIC SHOULDER WASHERS (continued)

*Available in the following materials:

Material Code No.	Material Name	Material Code No.	Material Name
-11	Polypropylene	-40	PFA, (Teflon®)
-27	PVC	-46	Polycarbonate
-28	CPVC	-60	Nylon 6/6, 30% Short Glass-filled
-18	Nylon 6/6, (natural)	-62	Acetal
-29	Teflon®	-194	Nylon 46, 30% Glass-filled, Heat Stabilized
-37	Kynar®, (PVDF)	-195	Nylon 46, 30% Glass-filled, Heat Stabilized, Fire Retardent
-38	G-10 Fiber Glass		

*Available in other materials.
 See materials list in index.
 Other sizes available on request.



Conversion note: 1 inch = 25.4 mm 1 mm = 0.03937 inch
Part No. FN112 - (Size Code No.) - (Material Code No.)

Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.	Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.
-889	.187	.375	.245	.031	.140	-934	.194	.437	.248	.062	.027
-890	.187	.375	.265	.062	.031	-935	.194	.437	.248	.062	.050
-891	.187	.437	.281	.093	.093	-936	.194	.437	.279	.031	.027
-892	.187	.437	.372	.046	.078	-937	.194	.437	.279	.031	.050
-893	.187	.500	.250	.031	.047	-938	.194	.437	.279	.062	.027
-894	.187	.562	.312	.046	.078	-939	.194	.437	.279	.062	.050
-895	.187	1.500	.281	.062	.062	-940	.194	.437	.310	.031	.027
-896	.188	.375	.250	.047	.031	-941	.194	.437	.310	.031	.050
-897	.188	.406	.278	.058	.088	-942	.194	.437	.310	.062	.027
-898	.188	.437	.313	.062	.063	-943	.194	.437	.310	.062	.050
-899	.188	.500	.280	.062	.045	-944	.194	.441	.248	.062	.047
-900	.190	.488	.250	.125	.156	-945	.194	.468	.248	.031	.027
-901	.190	.500	.250	.062	.156	-946	.194	.468	.248	.031	.050
-902	.190	.500	.312	.125	.046	-947	.194	.468	.248	.062	.027
-903	.190	.625	.310	.031	.062	-948	.194	.468	.248	.062	.050
-904	.190	.625	.375	.062	.047	-949	.194	.468	.279	.031	.027
-905	.190	.750	.315	.094	.875	-950	.194	.468	.279	.031	.050
-906	.191	.406	.275	.062	.053	-951	.194	.468	.279	.062	.027
-907	.191	.531	.279	.062	.040	-952	.194	.468	.279	.062	.050
-908	.192	.630	.255	.067	.036	-953	.194	.468	.310	.031	.027
-909	.192	.281	.233	.020	.015	-954	.194	.468	.310	.031	.050
-910	.192	.375	.245	.047	.047	-955	.194	.468	.310	.062	.027
-911	.193	.290	.250	.016	.125	-956	.194	.468	.310	.062	.050
-912	.193	.440	.312	.043	.137	-957	.194	.468	.341	.031	.027
-913	.193	.500	.318	.031	.031	-958	.194	.468	.341	.031	.050
-914	.193	.500	.318	.031	.047	-959	.194	.468	.341	.062	.027
-915	.193	.500	.318	.031	.078	-960	.194	.468	.341	.062	.050
-916	.193	.500	.368	.062	.025	-961	.194	.500	.248	.031	.027
-917	.194	.500	.248	.027	.031	-962	.194	.500	.248	.031	.050
-918	.194	.375	.312	.125	.062	-963	.194	.500	.248	.062	.027
-919	.194	.343	.248	.031	.027	-964	.194	.500	.248	.062	.050
-920	.194	.343	.248	.031	.050	-965	.194	.500	.279	.031	.027
-921	.194	.343	.248	.062	.027	-966	.194	.500	.279	.031	.050
-922	.194	.343	.248	.062	.050	-967	.194	.500	.279	.062	.027
-923	.194	.375	.248	.031	.027	-968	.194	.500	.279	.062	.050
-924	.194	.375	.248	.031	.050	-969	.194	.500	.310	.031	.027
-925	.194	.375	.248	.062	.027	-970	.194	.500	.310	.031	.050
-926	.194	.375	.248	.062	.047	-971	.194	.500	.310	.062	.027
-927	.194	.375	.248	.062	.050	-972	.194	.500	.310	.062	.050
-928	.194	.375	.279	.031	.027	-973	.194	.500	.341	.031	.027
-929	.194	.375	.279	.031	.050	-974	.194	.500	.341	.031	.050
-930	.194	.375	.279	.062	.027	-975	.194	.500	.341	.062	.027
-931	.194	.375	.279	.062	.050	-976	.194	.500	.341	.062	.050
-932	.194	.437	.248	.031	.027						
-933	.194	.437	.248	.031	.050						

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.187 I.D. to .194 I.D.

Tolerances:
 Flange O.D. and all Thicknesses +/- .005
 Shank O.D. - .005/+ .000
 I.D. + .005/- .000

HIGH PERFORMANCE PLASTIC SHOULDER WASHERS (continued)

Conversion note: 1 inch = 25.4 mm 1 mm = 0.03937 inch
 Part No. FN112 - (Size Code No.) - (Material Code No.)

Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.	Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.
-977	.194	.500	.371	.031	.027	-1034	.194	.750	.248	.031	.050
-978	.194	.500	.371	.031	.050	-1035	.194	.750	.248	.062	.027
-979	.194	.500	.371	.062	.027	-1036	.194	.750	.248	.062	.050
-980	.194	.500	.371	.062	.050	-1037	.194	.750	.279	.031	.027
-981	.194	.562	.248	.031	.027	-1038	.194	.750	.279	.031	.050
-982	.194	.562	.248	.031	.050	-1039	.194	.750	.279	.062	.027
-983	.194	.562	.248	.062	.027	-1040	.194	.750	.279	.062	.050
-984	.194	.562	.248	.062	.050	-1041	.194	.750	.310	.031	.027
-985	.194	.562	.279	.031	.027	-1042	.194	.750	.310	.031	.050
-986	.194	.562	.279	.031	.050	-1043	.194	.750	.310	.062	.027
-987	.194	.562	.279	.062	.027	-1044	.194	.750	.310	.062	.050
-988	.194	.562	.279	.062	.050	-1045	.194	.750	.341	.031	.027
-989	.194	.562	.310	.031	.027	-1046	.194	.750	.341	.031	.050
-990	.194	.562	.310	.031	.050	-1047	.194	.750	.341	.062	.027
-991	.194	.562	.310	.062	.027	-1048	.194	.750	.341	.062	.050
-992	.194	.562	.310	.062	.050	-1049	.194	.750	.371	.031	.027
-993	.194	.562	.341	.031	.027	-1051	.194	.750	.371	.031	.050
-994	.194	.562	.341	.031	.050	-1052	.194	.750	.371	.062	.027
-995	.194	.562	.341	.062	.027	-1053	.194	.750	.371	.062	.050
-996	.194	.562	.341	.062	.050	-1054	.194	.750	.432	.031	.027
-997	.194	.562	.371	.031	.027	-1055	.194	.750	.432	.031	.050
-998	.194	.562	.371	.031	.050	-1056	.194	.750	.432	.062	.027
-999	.194	.562	.371	.062	.027	-1057	.194	.750	.432	.062	.050
-1000	.194	.562	.371	.062	.050	-1058	.194	.750	.495	.031	.027
-1001	.194	.562	.432	.031	.027	-1059	.194	.750	.495	.031	.050
-1002	.194	.562	.432	.031	.050	-1060	.194	.750	.495	.062	.027
-1003	.194	.562	.432	.062	.027	-1061	.194	.750	.495	.062	.050
-1004	.194	.562	.432	.062	.050	-1062	.195	.260	.399	.060	.030
-1005	.194	.625	.248	.031	.027	-1063	.195	.375	.240	.039	.023
-1006	.194	.625	.248	.031	.050	-1064	.195	.437	.310	.047	.053
-1007	.194	.625	.248	.062	.027	-1065	.195	.490	.310	.250	.187
-1008	.194	.625	.248	.062	.050	-1066	.195	.531	.248	.040	.030
-1009	.194	.625	.279	.031	.027	-1067	.195	.630	.437	.078	.078
-1010	.194	.625	.279	.031	.050	-1068	.195	.640	.380	.062	.062
-1011	.194	.625	.279	.062	.027	-1069	.196	.380	.254	.055	.120
-1012	.194	.625	.279	.062	.050	-1070	.196	.312	.250	.062	.031
-1013	.194	.625	.310	.031	.027	-1071	.196	.375	.246	.062	.032
-1014	.194	.625	.310	.031	.050	-1072	.196	.375	.308	.062	.031
-1015	.194	.625	.310	.062	.027	-1073	.196	.390	.287	.078	.187
-1016	.194	.625	.310	.062	.050	-1074	.196	.437	.255	.031	.031
-1017	.194	.625	.341	.031	.027	-1075	.196	.440	.303	.031	.140
-1018	.194	.625	.341	.031	.050	-1076	.196	.500	.274	.045	.095
-1019	.194	.625	.341	.062	.027	-1077	.196	.625	.312	.094	.062
-1020	.194	.625	.341	.062	.050	-1078	.196	.625	.375	.031	.031
-1021	.194	.625	.371	.031	.027	-1079	.197	.408	.240	.187	.062
-1022	.194	.625	.371	.031	.050	-1080	.198	.500	.240	.062	.063
-1023	.194	.625	.371	.062	.027	-1081	.198	.588	.253	.031	.031
-1024	.194	.625	.371	.062	.050	-1082	.198	.750	.247	.075	.039
-1025	.194	.625	.432	.031	.027	-1083	.199	.433	.312	.062	.125
-1026	.194	.625	.432	.031	.050	-1084	.199	.468	.305	.078	.055
-1027	.194	.625	.432	.062	.027	-1085	.200	.399	.260	.375	.062
-1028	.194	.625	.432	.062	.050	-1086	.200	.399	.260	.062	.375
-1029	.194	.625	.495	.031	.027	-1087	.200	.437	.245	.062	.016
-1030	.194	.625	.495	.031	.050	-1088	.200	.500	.240	.062	.032
-1031	.194	.625	.495	.062	.027	-1089	.200	.500	.240	.062	.063
-1032	.194	.625	.495	.062	.050						
-1033	.194	.750	.248	.031	.027						

(continued next page)

Tolerances:
 Flange O.D. and all Thicknesses +/- .005
 Shank O.D. - .005/+ .000
 I.D. + .005/- .000

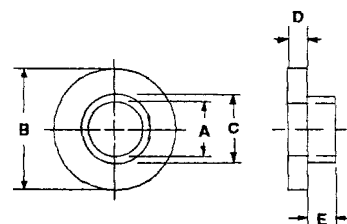
.194 I.D. to .200 I.D.

HIGH PERFORMANCE PLASTIC SHOULDER WASHERS (continued)

*Available in the following materials:

Material Code No.	Material Name	Material Code No.	Material Name
-11	Polypropylene	-40	PFA, (Teflon®)
-27	PVC	-46	Polycarbonate
-28	CPVC	-60	Nylon 6/6, 30% Short Glass-filled
-18	Nylon 6/6, (natural)	-62	Acetal
-29	Teflon®	-194	Nylon 46, 30% Glass-filled, Heat Stabilized
-37	Kynar®, (PVDF)	-195	Nylon 46, 30% Glass-filled, Heat Stabilized, Fire Retardent
-38	G-10 Fiber Glass		

*Available in other materials.
 See materials list in index.
 Other sizes available on request.



Conversion note: 1 inch = 25.4 mm 1 mm = 0.03937 inch
Part No. FN112 - (Size Code No.) - (Material Code No.)

Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.	Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.
-1090	.200	.500	.281	.062	.094	-1135	.219	.437	.310	.031	.050
-1091	.200	.500	.312	.062	.312	-1136	.219	.437	.310	.062	.027
-1092	.201	.375	.280	.062	.125	-1137	.219	.437	.310	.062	.050
-1093	.201	.437	.281	.047	.047	-1138	.219	.468	.279	.031	.027
-1094	.201	.635	.425	.140	1.109	-1139	.219	.468	.279	.031	.050
-1095	.201	.750	.358	.125	.031	-1140	.219	.468	.279	.062	.027
-1096	.201	1.000	.358	.125	.031	-1141	.219	.468	.279	.062	.050
-1097	.201	1.375	.358	.125	.031	-1142	.219	.468	.310	.031	.027
-1098	.201	1.375	.500	.105	.020	-1143	.219	.468	.310	.031	.050
-1099	.203	.500	.375	.055	.125	-1144	.219	.468	.310	.062	.027
-1100	.203	.390	.313	.078	.078	-1145	.219	.468	.310	.062	.050
-1101	.203	.438	.267	.031	.094	-1146	.219	.468	.341	.031	.027
-1102	.203	.438	.267	.062	.094	-1147	.219	.468	.341	.031	.050
-1103	.203	.437	.300	.062	.063	-1148	.219	.468	.341	.062	.027
-1104	.203	.437	.307	.062	.063	-1149	.219	.468	.341	.062	.050
-1105	.203	.468	.296	.062	.031	-1150	.219	.500	.279	.031	.027
-1106	.203	.500	.250	.093	.032	-1151	.219	.500	.279	.031	.050
-1107	.203	.750	.312	.062	.109	-1152	.219	.500	.279	.062	.027
-1108	.203	.750	.312	.093	.093	-1153	.219	.500	.279	.062	.050
-1109	.203	1.000	.298	.062	.062	-1154	.219	.500	.310	.031	.027
-1110	.205	.620	.312	.047	.047	-1155	.219	.500	.310	.031	.050
-1111	.206	.380	.277	.070	.042	-1156	.219	.500	.310	.062	.027
-1112	.206	.500	.281	.062	.078	-1157	.219	.500	.310	.062	.050
-1113	.206	.590	.324	.045	.016	-1158	.219	.500	.341	.031	.027
-1114	.208	.437	.281	.062	.016	-1159	.219	.500	.341	.031	.050
-1115	.208	.615	.315	.047	.047	-1160	.219	.500	.341	.062	.027
-1116	.210	.437	.281	.055	.025	-1161	.219	.500	.341	.062	.050
-1117	.210	.635	.380	.042	.090	-1162	.219	.500	.371	.031	.027
-1118	.212	.343	.272	.031	.025	-1163	.219	.500	.371	.031	.050
-1119	.215	.562	.365	.109	.062	-1164	.219	.500	.371	.062	.027
-1120	.218	.375	.281	.050	.030	-1165	.219	.500	.371	.062	.050
-1121	.218	.500	.310	.062	.063	-1166	.219	.562	.279	.031	.027
-1122	.218	.500	.310	.125	.062	-1167	.219	.562	.279	.031	.050
-1123	.218	.500	.373	.055	.070	-1168	.219	.562	.279	.062	.027
-1124	.218	.500	.375	.045	.090	-1169	.219	.562	.279	.062	.050
-1125	.218	.500	.375	.062	.063	-1170	.219	.562	.310	.031	.027
-1126	.219	.375	.279	.031	.027	-1171	.219	.562	.310	.031	.050
-1127	.219	.375	.279	.031	.050	-1172	.219	.562	.310	.062	.027
-1128	.219	.375	.279	.062	.027	-1173	.219	.562	.310	.062	.050
-1129	.219	.375	.279	.062	.050	-1174	.219	.562	.341	.031	.027
-1130	.219	.437	.279	.031	.027	-1175	.219	.562	.341	.031	.050
-1131	.219	.437	.279	.031	.050	-1176	.219	.562	.341	.062	.027
-1132	.219	.437	.279	.062	.027	-1177	.219	.562	.341	.062	.050
-1133	.219	.437	.279	.062	.050						
-1134	.219	.437	.310	.031	.027						

(continued next page)

.200 I.D. to .219 I.D.

Tolerances:
 Flange O.D. and all Thicknesses +/- .005
 Shank O.D. -.005/+ .000
 I.D. + .005/- .000

HIGH PERFORMANCE PLASTIC SHOULDER WASHERS (continued)

Conversion note: 1 inch = 25.4 mm 1 mm = 0.03937 inch

Part No. FN112 - (Size Code No.) - (Material Code No.)

Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.	Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.
-1178	.219	.562	.371	.031	.027	-1235	.220	.408	.240	.062	.187
-1179	.219	.562	.371	.031	.050	-1236	.225	.437	.282	.062	.375
-1180	.219	.562	.371	.062	.027	-1237	.230	.395	.299	.078	.109
-1181	.219	.562	.371	.062	.050	-1238	.230	.450	.310	.016	.047
-1182	.219	.562	.432	.031	.027	-1239	.230	.500	.307	.020	.011
-1183	.219	.562	.432	.031	.050	-1240	.233	.500	.340	.078	.055
-1184	.219	.562	.432	.062	.027	-1241	.234	.500	.343	.031	.031
-1185	.219	.562	.432	.062	.050	-1242	.234	.745	.282	.031	.187
-1186	.219	.625	.279	.031	.027	-1243	.247	.550	.380	.062	.468
-1187	.219	.625	.279	.031	.050	-1244	.248	.551	.380	.062	.250
-1188	.219	.625	.279	.062	.027	-1245	.250	.425	.310	.062	.062
-1189	.219	.625	.279	.062	.050	-1246	.250	.500	.375	.062	.437
-1190	.219	.625	.310	.031	.027	-1247	.250	.600	.370	.125	.125
-1191	.219	.625	.310	.031	.050	-1248	.250	.625	.375	.093	.047
-1192	.219	.625	.310	.062	.027	-1249	.250	.734	.488	.125	.062
-1193	.219	.625	.310	.062	.050	-1250	.250	.750	.375	.156	.468
-1194	.219	.625	.341	.031	.027	-1251	.251	1.050	.750	.187	.312
-1195	.219	.625	.341	.031	.050	-1252	.252	.625	.343	.062	.125
-1196	.219	.625	.341	.062	.027	-1253	.252	.625	.343	.125	.062
-1197	.219	.625	.341	.062	.050	-1254	.252	.375	.312	.125	.062
-1198	.219	.625	.371	.031	.027	-1255	.252	.500	.312	.031	.031
-1199	.219	.625	.371	.031	.050	-1256	.252	.500	.312	.040	.028
-1200	.219	.625	.371	.062	.027	-1257	.252	.500	.312	.062	.032
-1201	.219	.625	.371	.062	.050	-1258	.252	.500	.312	.062	.063
-1202	.219	.625	.432	.031	.027	-1259	.252	.500	.312	.031	.031
-1203	.219	.625	.432	.031	.050	-1260	.252	.500	.312	.062	.031
-1204	.219	.625	.432	.062	.027	-1261	.252	.500	.372	.062	.025
-1205	.219	.625	.432	.062	.050	-1262	.252	.500	.375	.031	.032
-1206	.219	.625	.495	.031	.027	-1263	.252	.625	.343	.125	.062
-1207	.219	.625	.495	.031	.050	-1264	.252	.625	.437	.062	.032
-1208	.219	.625	.495	.062	.027	-1265	.252	.750	.312	.062	.063
-1209	.219	.625	.495	.062	.050	-1266	.253	.750	.341	.050	.031
-1210	.219	.750	.279	.031	.027	-1267	.253	.437	.278	.040	.030
-1211	.219	.750	.279	.031	.050	-1268	.253	.437	.310	.031	.027
-1212	.219	.750	.279	.062	.027	-1269	.253	.437	.310	.031	.031
-1213	.219	.750	.279	.062	.050	-1270	.253	.437	.310	.031	.050
-1214	.219	.750	.310	.031	.027	-1271	.253	.437	.310	.062	.027
-1215	.219	.750	.310	.031	.050	-1272	.253	.437	.310	.062	.050
-1216	.219	.750	.310	.062	.027	-1273	.253	.437	.312	.062	.094
-1217	.219	.750	.310	.062	.050	-1274	.253	.468	.310	.031	.027
-1218	.219	.750	.341	.031	.027	-1275	.253	.468	.310	.031	.050
-1219	.219	.750	.341	.031	.050	-1276	.253	.468	.310	.062	.027
-1220	.219	.750	.341	.062	.027	-1277	.253	.468	.310	.062	.050
-1221	.219	.750	.341	.062	.050	-1278	.253	.468	.341	.031	.027
-1222	.219	.750	.371	.031	.027	-1279	.253	.468	.341	.031	.050
-1223	.219	.750	.371	.031	.050	-1280	.253	.468	.341	.062	.027
-1224	.219	.750	.371	.062	.027	-1281	.253	.468	.341	.062	.050
-1225	.219	.750	.371	.062	.050	-1282	.253	.500	.310	.031	.027
-1226	.219	.750	.432	.031	.027	-1283	.253	.500	.310	.031	.050
-1227	.219	.750	.432	.031	.050	-1284	.253	.500	.310	.062	.027
-1228	.219	.750	.432	.062	.027	-1285	.253	.500	.310	.062	.050
-1229	.219	.750	.432	.062	.050	-1286	.253	.500	.341	.031	.027
-1230	.219	.750	.495	.031	.027	-1287	.253	.500	.341	.031	.050
-1231	.219	.750	.495	.031	.050	-1288	.253	.500	.341	.062	.027
-1232	.219	.750	.495	.062	.027	-1289	.253	.500	.341	.062	.050
-1233	.219	.750	.495	.062	.050						
-1234	.220	.375	.260	.031	.093						

(continued next page)

Tolerances:
 Flange O.D. and all Thicknesses +/- .005
 Shank O.D. -.005/+0.000
 I.D. +.005/-0.000

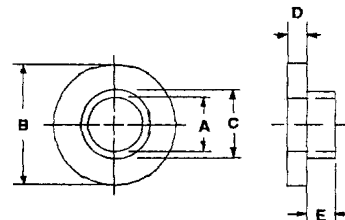
.219 I.D. to .253 I.D.

HIGH PERFORMANCE PLASTIC SHOULDER WASHERS (continued)

*Available in the following materials:

Material Code No.	Material Name	Material Code No.	Material Name
-11	Polypropylene	-40	PFA, (Teflon®)
-27	PVC	-46	Polycarbonate
-28	CPVC	-60	Nylon 6/6, 30% Short Glass-filled
-18	Nylon 6/6, (natural)	-62	Acetal
-29	Teflon®	-194	Nylon 46, 30% Glass-filled, Heat Stabilized
-37	Kynar®, (PVDF)	-195	Nylon 46, 30% Glass-filled, Heat Stabilized, Fire Retardent
-38	G-10 Fiber Glass		

*Available in other materials.
 See materials list in index.
 Other sizes available on request.



Conversion note: 1 inch = 25.4 mm 1 mm = 0.03937 inch
 Part No. FN112 - (Size Code No.) - (Material Code No.)

Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.	Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.
-1290	.253	.500	.371	.031	.027	-1337	.253	.750	.310	.031	.050
-1291	.253	.500	.371	.031	.050	-1338	.253	.750	.310	.062	.027
-1292	.253	.500	.371	.062	.027	-1339	.253	.750	.310	.062	.050
-1293	.253	.500	.371	.062	.050	-1340	.253	.750	.341	.031	.027
-1294	.253	.562	.310	.031	.027	-1341	.253	.750	.341	.031	.050
-1295	.253	.562	.310	.031	.050	-1342	.253	.750	.341	.062	.027
-1296	.253	.562	.310	.062	.027	-1343	.253	.750	.341	.062	.050
-1297	.253	.562	.310	.062	.050	-1344	.253	.750	.371	.031	.027
-1298	.253	.562	.341	.031	.027	-1345	.253	.750	.371	.031	.047
-1299	.253	.562	.341	.031	.050	-1346	.253	.750	.371	.031	.050
-1300	.253	.562	.341	.062	.027	-1347	.253	.750	.371	.062	.027
-1301	.253	.562	.341	.062	.050	-1348	.253	.750	.371	.062	.050
-1302	.253	.562	.371	.031	.027	-1349	.253	.750	.432	.031	.207
-1303	.253	.562	.371	.031	.050	-1350	.253	.750	.432	.031	.050
-1304	.253	.562	.371	.062	.027	-1351	.253	.750	.432	.062	.027
-1305	.253	.562	.371	.062	.050	-1352	.253	.750	.432	.062	.050
-1306	.253	.562	.432	.031	.027	-1353	.253	.750	.495	.031	.027
-1307	.253	.562	.432	.031	.050	-1354	.253	.750	.495	.031	.050
-1308	.253	.562	.432	.062	.027	-1355	.253	.750	.495	.062	.027
-1309	.253	.562	.432	.062	.050	-1356	.253	.750	.495	.062	.050
-1310	.253	.562	.495	.031	.027	-1357	.254	.498	.375	.062	.687
-1311	.253	.562	.495	.031	.050	-1358	.254	.630	.375	.062	.187
-1312	.253	.562	.495	.062	.027	-1359	.255	.437	.275	.010	.040
-1313	.253	.562	.495	.062	.050	-1360	.255	.464	.312	.016	.078
-1314	.253	.615	.310	.031	.047	-1361	.255	.467	.312	.047	.125
-1315	.253	.625	.310	.031	.027	-1362	.255	.500	.341	.047	.069
-1316	.253	.625	.310	.031	.050	-1363	.255	.513	.312	.062	.375
-1317	.253	.625	.310	.062	.027	-1364	.255	.550	.375	.062	.422
-1318	.253	.625	.310	.062	.050	-1365	.255	.562	.375	.062	.437
-1319	.253	.625	.341	.031	.027	-1366	.255	.625	.322	.062	.187
-1320	.253	.625	.341	.031	.050	-1367	.255	.625	.375	.125	.812
-1321	.253	.625	.341	.062	.027	-1368	.256	.348	.290	.031	.062
-1322	.253	.625	.341	.062	.050	-1369	.256	.437	.355	.109	.060
-1323	.253	.625	.371	.031	.027	-1370	.257	.500	.375	.170	.125
-1324	.253	.625	.371	.031	.050	-1371	.257	.500	.343	.062	.094
-1325	.253	.625	.371	.062	.027	-1372	.257	.675	.480	.094	.062
-1326	.253	.625	.371	.062	.050	-1373	.257	.730	.375	.250	.343
-1327	.253	.625	.432	.031	.027	-1374	.258	.500	.375	.063	.031
-1328	.253	.625	.432	.031	.050	-1375	.258	.753	.409	.078	.047
-1329	.253	.625	.432	.062	.027	-1376	.258	.760	.410	.078	.047
-1330	.253	.625	.432	.062	.050	-1377	.260	.625	.300	.057	.032
-1331	.253	.625	.495	.031	.027	-1378	.260	.750	.365	.050	.031
-1332	.253	.625	.495	.031	.050	-1379	.260	.425	.377	.062	.171
-1333	.253	.625	.495	.062	.027	-1380	.260	.437	.310	.060	.052
-1334	.253	.625	.495	.062	.050	-1381	.260	.500	.312	.031	.031
-1335	.253	.740	.341	.031	.047						
-1336	.253	.750	.310	.031	.027						

(continued next page)

.253 I.D. to .260 I.D.

Tolerances:
 Flange O.D. and all Thicknesses +/- .005
 Shank O.D. - .005/+ .000
 I.D. + .005/- .000

HIGH PERFORMANCE PLASTIC SHOULDER WASHERS (continued)

Conversion note: 1 inch = 25.4 mm 1 mm = 0.03937 inch
 Part No. FN112 - (Size Code No.) - (Material Code No.)

Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.	Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.
-1382	.260	.515	.312	.062	.140	-1439	.317	.625	.432	.062	.050
-1383	.260	.550	.305	.078	.047	-1440	.317	.625	.495	.031	.027
-1384	.260	.555	.300	.078	.047	-1441	.317	.625	.495	.031	.050
-1385	.260	.562	.300	.047	.047	-1442	.317	.625	.495	.062	.027
-1386	.260	.562	.375	.094	.062	-1443	.317	.625	.495	.062	.050
-1387	.260	.625	.375	.125	.812	-1444	.317	.750	.371	.031	.027
-1388	.260	.625	.400	.125	.750	-1445	.317	.750	.371	.031	.050
-1389	.260	.625	.437	.078	.078	-1446	.317	.750	.371	.062	.027
-1390	.260	.630	.327	.062	.125	-1447	.317	.750	.371	.062	.050
-1391	.260	.750	.375	.062	.031	-1448	.317	.750	.432	.031	.027
-1392	.260	.750	.385	.140	.687	-1449	.317	.750	.432	.031	.050
-1393	.265	.492	.318	.031	.078	-1450	.317	.750	.432	.062	.027
-1394	.266	.500	.365	.062	.032	-1451	.317	.750	.432	.062	.050
-1395	.266	.697	.359	.062	.125	-1452	.317	.750	.495	.031	.027
-1396	.266	.740	.371	.094	.125	-1453	.317	.750	.495	.031	.050
-1397	.266	.740	.375	.094	.343	-1454	.317	.750	.495	.062	.027
-1398	.266	.750	.380	.094	.078	-1455	.317	.750	.495	.062	.050
-1399	.266	.750	.380	.094	.218	-1456	.319	.500	.375	.063	.031
-1400	.266	.875	.484	.093	.062	-1457	.320	.625	.405	.139	.066
-1401	.270	.720	.485	.062	.156	-1458	.320	.500	.375	.062	.046
-1402	.270	2.111	.603	.125	.703	-1459	.320	.735	.368	.031	.062
-1403	.281	.625	.312	.062	.063	-1460	.323	.750	.375	.047	.047
-1404	.281	.750	.500	.062	.063	-1461	.325	.780	.525	.100	.048
-1405	.281	1.000	.562	.125	.020	-1462	.328	.687	.437	.125	.125
-1406	.289	.531	.352	.031	.031	-1463	.328	.693	.437	.062	.125
-1407	.290	.674	.500	.094	.187	-1464	.332	.872	.617	.125	.500
-1408	.295	.625	.375	.062	.031	-1465	.343	1.000	.562	.125	.020
-1409	.296	.531	.339	.037	.036	-1466	.345	.625	.470	.062	.040
-1410	.305	.750	.437	.125	.032	-1467	.349	.502	.399	.031	.125
-1411	.306	.825	.445	.094	.406	-1468	.370	.750	.500	.078	.312
-1412	.308	.428	.350	.125	.047	-1469	.375	.750	.500	.031	.125
-1413	.312	.500	.368	.031	.025	-1470	.375	.750	.500	.110	.125
-1414	.312	.750	.434	.171	.422	-1471	.375	.750	.500	.125	.125
-1415	.313	.500	.375	.031	.016	-1472	.375	.750	.500	.195	.125
-1416	.313	.500	.437	.062	.032	-1473	.375	1.000	.500	.031	.125
-1417	.313	.625	.500	.062	.032	-1474	.375	1.000	.500	.110	.125
-1418	.315	.500	.375	.031	.062	-1475	.375	1.000	.500	.125	.125
-1419	.316	.620	.370	.062	.500	-1476	.375	1.000	.500	.195	.125
-1420	.317	.500	.371	.031	.027	-1477	.375	.625	.490	.062	.031
-1421	.317	.500	.371	.031	.050	-1478	.375	.625	.500	.031	.047
-1422	.317	.500	.371	.062	.027	-1479	.375	.625	.500	.047	.047
-1423	.317	.500	.371	.062	.050	-1480	.375	.687	.500	.093	.063
-1424	.317	.562	.371	.031	.027	-1481	.375	.725	.437	.156	.156
-1425	.317	.562	.371	.031	.050	-1482	.375	.740	.500	.062	.187
-1426	.317	.562	.371	.062	.027	-1483	.375	.743	.443	.062	.187
-1427	.317	.562	.371	.062	.050	-1484	.375	.743	.500	.094	.109
-1428	.317	.562	.432	.031	.027	-1485	.375	.750	.500	.062	.032
-1429	.317	.562	.432	.031	.050	-1486	.375	.750	.500	.062	.125
-1430	.317	.562	.432	.062	.027	-1487	.375	.750	.500	.094	.031
-1431	.317	.562	.432	.062	.050	-1488	.375	.750	.500	.125	.031
-1432	.317	.625	.371	.031	.027	-1489	.375	.750	.500	.125	.062
-1433	.317	.625	.371	.031	.050	-1490	.375	.875	.500	.062	1.000
-1434	.317	.625	.371	.062	.027	-1491	.375	1.000	.500	.062	.031
-1435	.317	.625	.371	.062	.050	-1492	.375	1.000	.625	.062	.032
-1436	.317	.625	.432	.031	.027	-1493	.375	1.005	.500	.062	.312
-1437	.317	.625	.432	.031	.050						
-1438	.317	.625	.432	.062	.027						

(continued next page)

Tolerances:
 Flange O.D. and all Thicknesses +/- .005
 Shank O.D. - .005/+ .000
 I.D. + .005/- .000

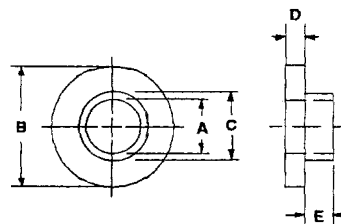
.260 I.D. to .375 I.D.

HIGH PERFORMANCE PLASTIC SHOULDER WASHERS (continued)

*Available in the following materials:

Material Code No.	Material Name	Material Code No.	Material Name
-11	Polypropylene	-40	PFA, (Teflon®)
-27	PVC	-46	Polycarbonate
-28	CPVC	-60	Nylon 6/6, 30% Short Glass-filled
-18	Nylon 6/6, (natural)	-62	Acetal
-29	Teflon®	-194	Nylon 46, 30% Glass-filled, Heat Stabilized
-37	Kynar®, (PVDF)	-195	Nylon 46, 30% Glass-filled, Heat Stabilized, Fire Retardant
-38	G-10 Fiber Glass		

*Available in other materials.
 See materials list in index.
 Other sizes available on request.



Conversion note: 1 inch = 25.4 mm 1 mm = 0.03937 inch
Part No. FN112 - (Size Code No.) - (Material Code No.)

Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.	Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.
-1494	.376	.743	.437	.062	.187	-1540	.385	.750	.556	.062	.027
-1495	.378	.625	.448	.031	.031	-1541	.385	.750	.556	.062	.050
-1496	.378	.625	.495	.062	.031	-1542	.385	.750	.616	.031	.027
-1497	.378	.750	.498	.031	.156	-1543	.385	.750	.616	.031	.050
-1498	.378	.750	.498	.062	.187	-1544	.385	.750	.616	.062	.027
-1499	.378	.750	.505	.078	.250	-1545	.385	.750	.616	.062	.050
-1500	.380	.565	.500	.375	.062	-1546	.385	.875	.432	.031	.027
-1501	.380	.750	.505	.060	.060	-1547	.385	.875	.432	.031	.050
-1502	.380	.625	.437	.031	.031	-1548	.385	.875	.432	.062	.027
-1503	.380	.625	.442	.032	.025	-1549	.385	.875	.432	.062	.050
-1504	.380	.625	.500	.062	.020	-1550	.385	.875	.495	.031	.027
-1505	.380	.625	.500	.062	.312	-1551	.385	.875	.495	.031	.050
-1506	.380	.812	.558	.093	.040	-1552	.385	.875	.495	.062	.027
-1507	.380	.980	.556	.125	.250	-1553	.385	.875	.495	.062	.050
-1508	.382	1.000	.500	.062	.562	-1554	.385	.875	.556	.031	.027
-1509	.383	.620	.434	.047	.031	-1555	.385	.875	.556	.031	.050
-1510	.383	.743	.502	.078	.312	-1556	.385	.875	.556	.062	.027
-1511	.384	.748	.504	.125	.359	-1557	.385	.875	.556	.062	.050
-1512	.385	.562	.433	.250	.062	-1558	.385	.875	.616	.031	.027
-1513	.385	.625	.498	.031	.062	-1559	.385	.875	.616	.031	.050
-1514	.385	.562	.432	.031	.027	-1560	.385	.875	.616	.062	.027
-1515	.385	.562	.432	.031	.050	-1561	.385	.875	.616	.062	.050
-1516	.385	.562	.432	.062	.027	-1562	.385	1.000	.432	.031	.027
-1517	.385	.562	.432	.062	.050	-1563	.385	1.000	.432	.031	.050
-1518	.385	.570	.470	.062	.375	-1564	.385	1.000	.432	.062	.027
-1519	.385	1.000	.618	.172	.250	-1565	.385	1.000	.432	.062	.050
-1520	.385	.625	.432	.031	.027	-1566	.385	1.000	.495	.031	.027
-1521	.385	.625	.432	.031	.050	-1567	.385	1.000	.495	.031	.050
-1522	.385	.625	.432	.062	.027	-1568	.385	1.000	.495	.062	.027
-1523	.385	.625	.432	.062	.050	-1569	.385	1.000	.495	.062	.050
-1524	.385	.625	.495	.031	.027	-1570	.385	1.000	.556	.031	.027
-1525	.385	.625	.495	.031	.050	-1571	.385	1.000	.556	.031	.050
-1526	.385	.625	.495	.062	.027	-1572	.385	1.000	.556	.062	.027
-1527	.385	.625	.495	.062	.050	-1573	.385	1.000	.556	.062	.050
-1528	.385	.625	.500	.062	.032	-1574	.385	1.000	.616	.031	.027
-1529	.385	.687	.562	.125	.030	-1575	.385	1.000	.616	.031	.050
-1530	.385	.750	.432	.031	.027	-1576	.385	1.000	.616	.062	.027
-1531	.385	.750	.432	.031	.050	-1577	.385	1.000	.616	.062	.050
-1532	.385	.750	.432	.062	.027	-1578	.386	.562	.443	.031	.050
-1533	.385	.750	.432	.062	.050	-1579	.386	.688	.484	.031	.046
-1534	.385	.750	.495	.031	.027	-1580	.390	.625	.500	.313	.062
-1535	.385	.750	.495	.031	.050	-1581	.390	.625	.500	.375	.062
-1536	.385	.750	.495	.062	.027	-1582	.390	.750	.577	.094	.109
-1537	.385	.750	.495	.062	.050	-1583	.406	.625	.500	.031	.031
-1538	.385	.750	.556	.031	.027						
-1539	.385	.750	.556	.031	.050						

(continued next page)

.376 I.D. to .406 I.D.

Tolerances:
 Flange O.D. and all Thicknesses +/- .005
 Shank O.D. -.005/+ .000
 I.D. + .005/- .000

HIGH PERFORMANCE PLASTIC SHOULDER WASHERS (continued)

Conversion note: 1 inch = 25.4 mm 1 mm = 0.03937 inch
 Part No. FN112 - (Size Code No.) - (Material Code No.)

Size Code No.	A I.D.	B Flange O.D.	C Shank O.D.	D Flange Thk.	E Shank Thk.	Size Code No.	A I.D.	B C Flange O.D.	D Shank O.D.	E Flange Thk.	Shank Thk.
-1584	.406	.945	.470	.078	.531	-1642	.510	1.230	.980	.062	.094
-1585	.409	.625	.574	.050	.085	-1643	.515	.750	.556	.062	.027
-1586	.430	.750	.500	.187	.047	-1644	.515	.750	.556	.062	.050
-1587	.435	.735	.490	.187	.047	-1645	.515	.750	.556	.093	.027
-1588	.435	1.739	1.095	.203	.203	-1646	.515	.750	.556	.093	.050
-1589	.437	.625	.498	.031	.047	-1647	.515	.750	.616	.062	.027
-1590	.437	.750	.562	.062	.031	-1648	.515	.750	.616	.062	.050
-1591	.440	.875	.630	.125	.375	-1649	.515	.750	.616	.093	.027
-1592	.443	.625	.495	.031	.027	-1650	.515	.750	.616	.093	.050
-1593	.443	.625	.495	.031	.050	-1651	.515	.875	.556	.062	.027
-1594	.443	.625	.495	.062	.027	-1652	.515	.875	.556	.062	.050
-1595	.443	.625	.495	.062	.050	-1653	.515	.875	.556	.093	.027
-1596	.443	.750	.495	.031	.027	-1654	.515	.875	.556	.093	.050
-1597	.443	.750	.495	.031	.050	-1655	.515	.875	.616	.062	.027
-1598	.443	.750	.495	.062	.027	-1656	.515	.875	.616	.062	.050
-1599	.443	.750	.495	.062	.050	-1657	.515	.875	.616	.093	.027
-1600	.443	.750	.556	.031	.027	-1658	.515	.875	.616	.093	.050
-1601	.443	.750	.556	.031	.050	-1659	.515	1.000	.556	.062	.027
-1602	.443	.750	.556	.062	.027	-1660	.515	1.000	.556	.062	.050
-1603	.443	.750	.556	.062	.050	-1661	.515	1.000	.556	.093	.027
-1604	.443	.750	.616	.031	.027	-1662	.515	1.000	.556	.093	.050
-1605	.443	.750	.616	.031	.050	-1663	.515	1.000	.616	.062	.027
-1606	.443	.750	.616	.062	.027	-1664	.515	1.000	.616	.062	.050
-1607	.443	.750	.616	.062	.050	-1665	.515	1.000	.616	.093	.027
-1608	.443	.875	.495	.031	.027	-1666	.515	1.000	.616	.093	.050
-1609	.443	.875	.495	.031	.050	-1667	.515	1.000	.616	.094	.031
-1610	.443	.875	.495	.062	.027	-1668	.515	1.105	.752	.125	.281
-1611	.443	.875	.495	.062	.050	-1669	.515	1.125	.740	.062	.094
-1612	.443	.875	.556	.031	.027	-1670	.520	.734	.562	.062	.055
-1613	.443	.875	.556	.031	.050	-1671	.520	.825	.620	.062	.500
-1614	.443	.875	.556	.062	.027	-1672	.538	1.252	.600	.062	.406
-1615	.443	.875	.556	.062	.050	-1673	.550	.790	.625	.047	.422
-1616	.443	.875	.616	.031	.027	-1674	.562	.875	.687	.062	.094
-1617	.443	.875	.616	.031	.050	-1675	.569	.750	.616	.062	.050
-1618	.443	.875	.616	.062	.027	-1676	.569	.750	.616	.093	.050
-1619	.443	.875	.616	.062	.050	-1677	.569	.875	.616	.062	.050
-1620	.443	1.000	.495	.031	.027	-1678	.569	.875	.616	.093	.050
-1621	.443	1.000	.495	.031	.050	-1679	.569	1.000	.616	.062	.050
-1622	.443	1.000	.495	.062	.027	-1680	.569	1.000	.616	.093	.050
-1623	.443	1.000	.495	.062	.050	-1681	.569	1.125	.616	.062	.050
-1624	.443	1.000	.556	.031	.027	-1682	.569	1.125	.616	.093	.050
-1625	.443	1.000	.556	.031	.050	-1683	.569	1.250	.616	.062	.050
-1626	.443	1.000	.556	.062	.027	-1684	.569	1.250	.616	.093	.050
-1627	.443	1.000	.556	.062	.050	-1685	.612	1.064	.787	.062	.062
-1628	.443	1.000	.616	.031	.027	-1686	.617	.880	.750	.047	.203
-1629	.443	1.000	.616	.031	.050	-1687	.625	.875	.687	.062	.063
-1630	.443	1.000	.616	.062	.027	-1688	.627	1.245	.875	.125	.500
-1631	.443	1.000	.616	.062	.050	-1689	.671	1.000	.750	.062	.062
-1632	.445	.875	.530	.500	.100	-1690	.695	.995	.787	.125	.625
-1633	.471	1.251	.528	.062	.406	-1691	.695	.995	.792	.125	.187
-1634	.500	.745	.560	.031	.312	-1692	.750	1.250	.875	.062	.024
-1635	.500	1.125	.700	.094	.437	-1693	.765	1.500	.859	.060	.020
-1636	.505	.750	.562	.062	.025	-1694	.765	1.125	.875	.094	.031
-1637	.505	.875	.569	.032	.032	-1695	.806	2.060	1.050	.125	.500
-1638	.505	1.000	.750	.062	.032						
-1639	.508	.688	.543	.031	.047						
-1640	.508	.890	.560	.040	.030						
-1641	.508	1.000	.770	.078	.109						

Tolerances:
 Flange O.D. and all Thicknesses +/- .005
 Shank O.D. - .005/+ .000
 I.D. + .005/- .000

.406 I.D. to .806 I.D.