

FlexiSeal® Face Seals

Introduction

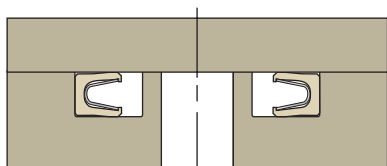
Catalog EPS 5340/USA

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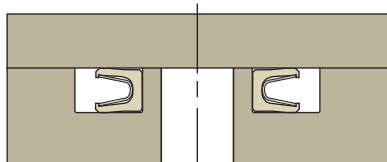
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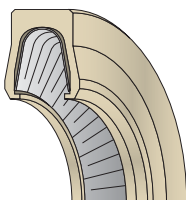
FlexiSeal Face Seals



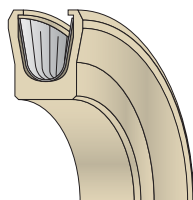
Internal Pressure



External Pressure



Internal Face Seal



External Face Seal

Internal/external pressure face seals drop in like O-rings.

Creating a face seal gland can be as simple as cutting a groove in the face of the hardware and dropping the FlexiSeal into it like an O-ring. The FlexiSeal is designed to have a clearance fit on the non-pressure side of the seal so it will press easily into the groove. Of course it is not necessary to have a completely enclosed gland wall on the pressure side since the forces will never push the seal against that side of the groove.

Face seals can be configured to seal internal pressure like in a pressurized chemical vat, or as an external seal like in a vacuum chamber.

Applications

The FlexiSeal face seal's advantages over conventional elastomeric seals make it ideal for many applications including:

- Chemical Vats
- Dynamic Rotary Dust Excluders
- Pressurized Beverage Containers
- Quick Disconnects
- Scroll Compressors
- Vacuum Chambers
- Many more

Markets

FlexiSeal face seals are easy to install and suitable for the extreme conditions of many markets including:

- Aerospace
- Chemical Process
- Appliances
- Machine Tools
- Medical
- Pharmaceutical
- Food & Beverage
- Oil & Gas
- Semiconductor
- Plastics

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Choosing the Right Design

Face seals are used in applications involving high pressures and temperatures, cryogenic fluids, corrosive media and other service conditions which exceed the limits of conventional elastomeric seals.

Face seals are designed for either internal or external pressure. For internal pressure, the open side of the spring cavity faces the inside of the vessel. Fluid pressure actuates the seal lips. For external pressure, the spring cavity faces out (see illustration on **Page 6-1**).

Gland Design

Face seal glands are similar to O-ring glands. The inner wall of the internal face seal gland and the outer wall of the external face seal gland are not required to retain the seal. The FlexiSeal Face Seal maintains its own shape and won't move out of its gland.

Surface Finish

The typical surface finish for a static face seal gland is 16 – 32 $\mu\text{in Ra}$. A smoother finish may be needed when sealing light gases or cryogenic fluids, or in dynamic service. General surface finish requirements are discussed in further detail on **Page 2-9**.

Extrusion Gap

In face seal hardware, the extrusion gap is usually zero. It can be as much as 0.003 inches without affecting the seal's rated pressure. When the lifting force due to fluid pressure exceeds the holding force of the vessel's flange bolts, the top of the gland can separate from the cylinder, increasing the extrusion gap. In such applications, a separate backup ring is recommended to fill the gap.

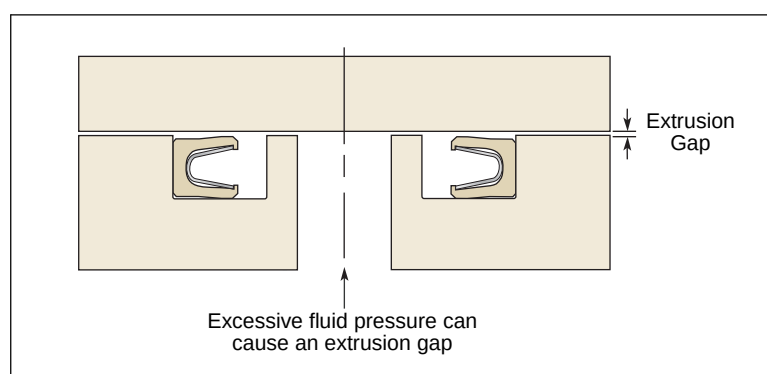


Figure 6-1. Fluid Pressure Causes Extrusion Gap

Spring Load

For static sealing, use a medium or heavy spring load. In dynamic service the medium load is usually preferred. In cryogenic service the seal material becomes harder and does not conform to the mating surface as readily; to compensate for the increased hardness of the seal jacket, a heavier spring load should be selected. Light load spring can be used when low closure force is required.

Design Selection

Complete the following steps to select a face seal design.

1. Choose a seal design category based on the type of spring used — V Series with cantilever spring, C Series with canted-coil spring, or H Series with helical ribbon spring. For details on the different spring types and seal design concepts, refer to **Pages 2-12 through 2-17**.
2. Select the seal cross-section and diameter using the gland tables beginning on **Page 6-9**.
3. Select the jacket and spring materials with reference to **Tab 3**.

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FlexiSeal® Face Seals

Materials

Catalog EPS 5340/USA

Common Materials Used in this Product

The most popular PTFE fillers used for FlexiSeal Face Seal products are graphite, carbon fiber and aromatic polyester. Virgin PTFE is also one of the most common material choices for face seals, especially when chemical compatibility is critical.



A number of other fillers are used in combination with PTFE, and non-PTFE compounds are available. More information on these materials and their properties is available in **Tab 3**. For best results for your sealing applications, please contact the EPS Division Application Engineering team at (801) 972-3000.

0100 — Virgin PTFE

Virgin PTFE has the best chemical resistance and lowest coefficient of friction of any of the material choices. Its purity also makes it suitable for food contact applications.

0301 — Graphite Filled

Graphite filled PTFE has extremely low coefficient of friction due to the low friction characteristics of graphite. Graphite is chemically inert. Graphite imparts excellent wear properties and high PV to PTFE.

0502 — Carbon Fiber Filled

Carbon fiber lowers creep, increases flex and compressive modulus and raises hardness. Coefficient of thermal expansion is lowered and thermal conductivity is higher for compounds of carbon fiber filled PTFE. Ideal for automotive applications in shock absorbers and water pumps.

0601 — Aromatic Polyester Filled

Aromatic polyester is excellent for high temperatures and has excellent wear resistance against soft, dynamic surfaces. Not recommended for sealing applications involving steam.

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FlexiSeal® Face Seals

Product Offering

Catalog EPS 5340/USA

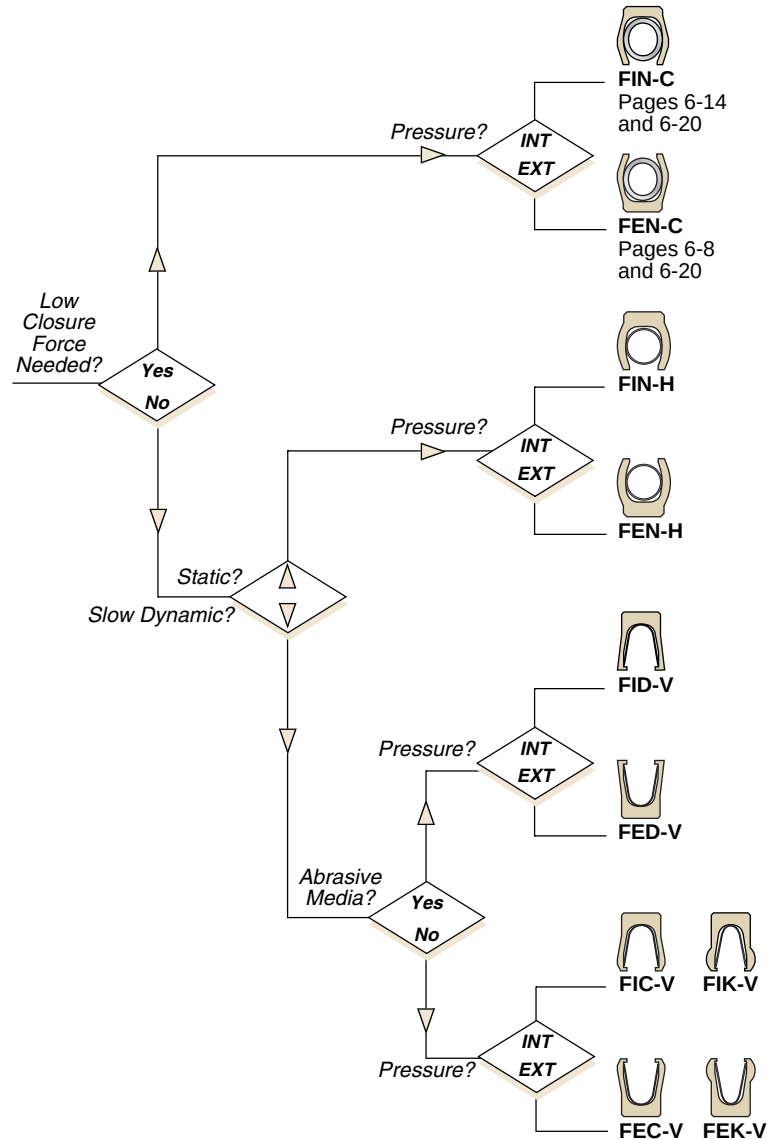
The key application considerations for static & intermittent dynamic face seal applications are closure force requirements, motion, media abrasiveness and pressure direction. Helical springs are recommended when the seals are mostly static, while canted-coil springs are recommended for dynamic applications.

The decision trees in this guide are to be used as an engineering guide only. Often several other parameters must be considered to optimize seal design. Contact Parker's PTFE Engineering Team for confirmation of your choice or further recommendations. Parker also recommends that any seal be tested in the application conditions before releasing for production.

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Decision Trees

Static & Intermittent Dynamic Face Seal Applications



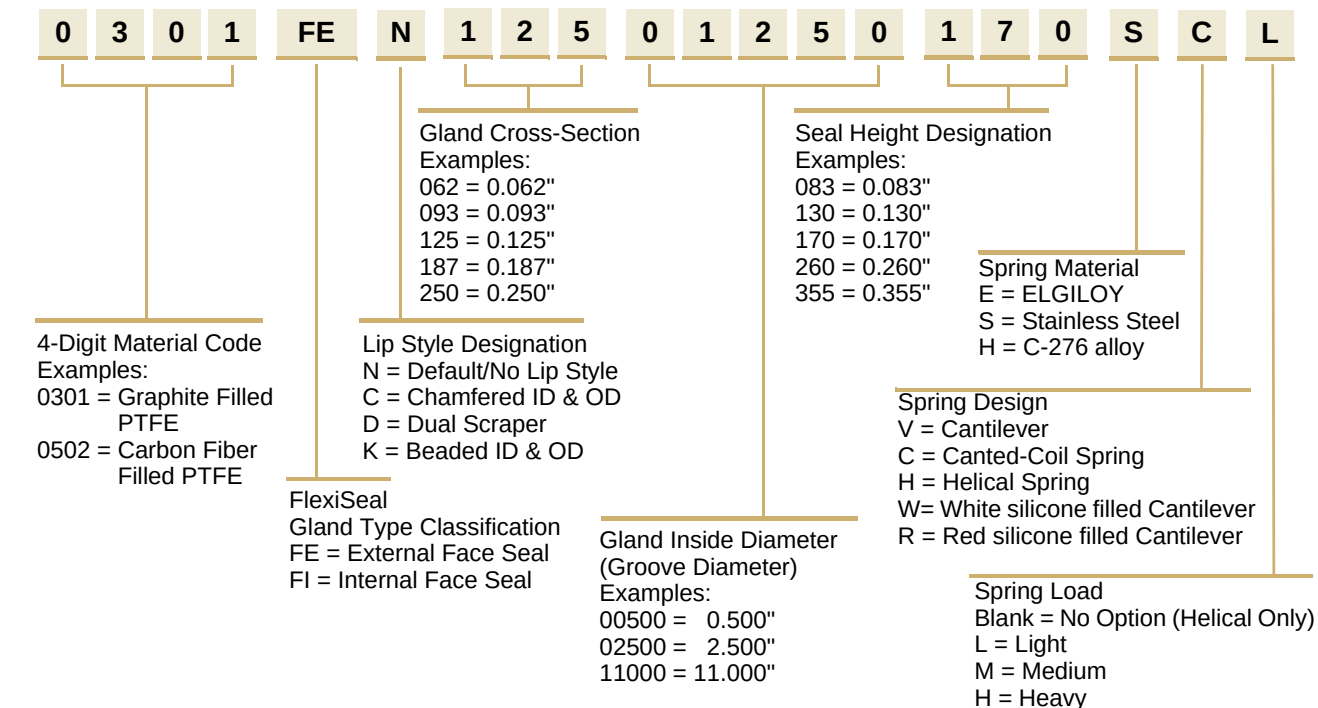
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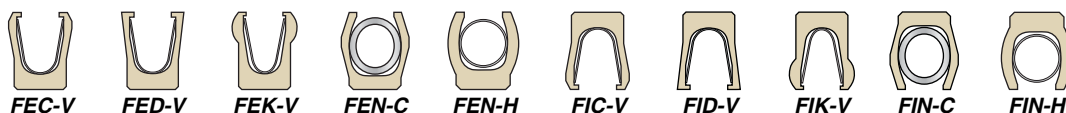
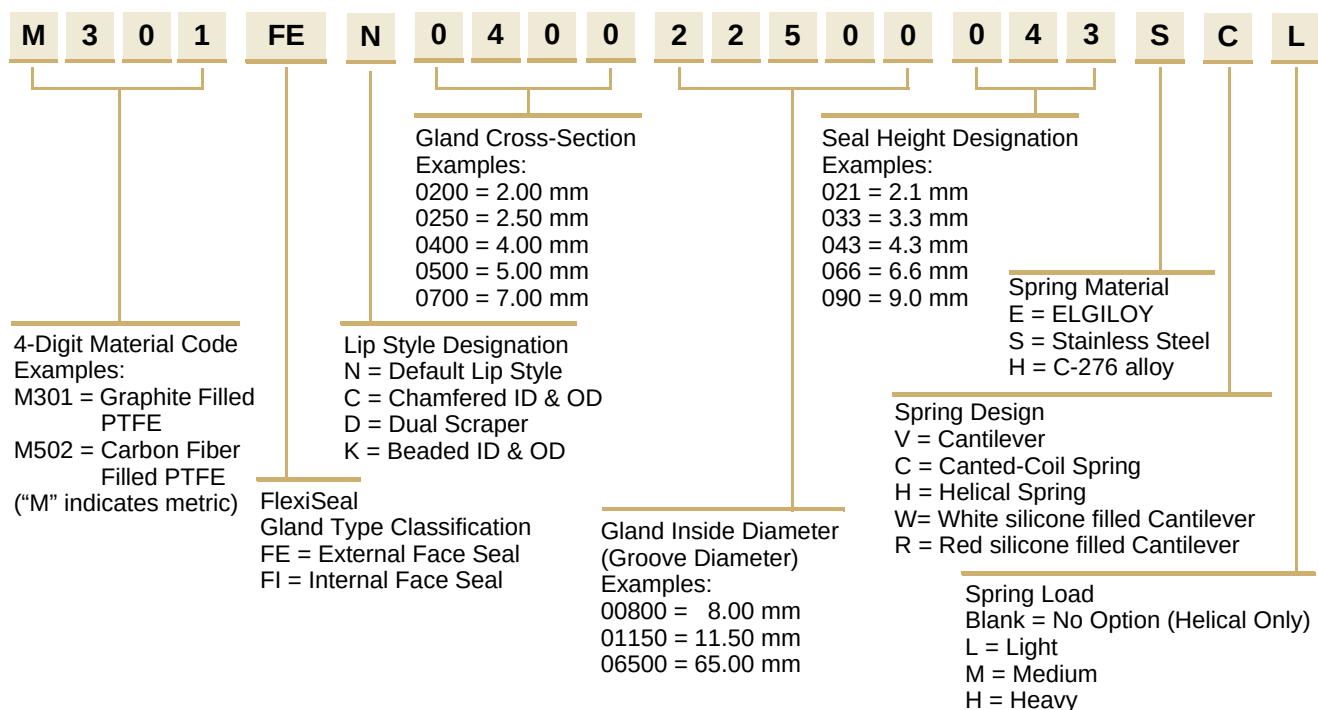
Part Number Nomenclature — FlexiSeal Face Seal

Table 6-1. FlexiSeal Face Seal Part Number Nomenclature

English



Metric



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Profiles

Table 6-2. Product Profiles

Profile	Features	Recom- mended Applications	Available as Standard in High Pressure Extended Heel (up to 10,000 psi)	Friction Rating	Low Pressure Sealability	Good in Abrasive Media	Gland Dimension Table Location	Available in Mil-G-5514 Glands
FEN-H 	Lips Facing Out, Rounded Lips, Helical Spring	Seals external pressure. High sealability and closure force.	No	High Closure Force	Excellent	No	Pages 6-8, 6-20	No
FEC-V 	Lips Facing Out, Chamfered Lips, Cantilever Spring	Seals external pressure. Good sealability for non-abrasive fluids.	No	Medium Closure Force	Very Good	No	Pages 6-8, 6-20	No
FED-V 	Lips Facing Out, Scraper Lips, Cantilever Spring	Seals external pressure. Good sealability for abrasive fluids.	No	Medium Closure Force	Very Good	Yes	Pages 6-8, 6-20	No
FEK-V 	Lips Facing Out, Beaded Lips, Cantilever Spring	Seals external pressure. Good sealability for non-abrasive fluids. Rounded like O-ring.	No	Medium Closure Force	Very Good	No	Pages 6-8, 6-20	No
FEN-C 	Lips Facing Out, Back-Beveled Lips, Canted-Coil Spring	Seals external pressure. Low closure force for non-abrasive fluids.	No	Low Closure Force	Good	No	Pages 6-8, 6-20	No

Table 6-2. Product Profiles (Continued)

Profile	Features	Recom- mended Applications	Available as Standard in High Pressure Extended Heel (up to 10,000 psi)	Friction Rating	Low Pressure Sealability	Good in Abrasive Media	Gland Dimension Table Location	Available in Mil-G-5514 Glands
FIN-H 	Lips Facing In, Rounded Lips, Helical Spring	Seals internal pressure. High sealability and closure force.	No	High Closure Force	Excellent	No	Pages 6-14, 6-20	No
FIC-V 	Lips Facing In, Chamfered Lips, Cantilever Spring	Seals internal pressure. Good sealability for non-abrasive fluids.	No	Medium Closure Force	Very Good	No	Pages 6-14, 6-20	No
FID-V 	Lips Facing In, Scraper Lips, Cantilever Spring	Seals internal pressure. Good sealability for abrasive fluids.	No	Medium Closure Force	Very Good	Yes	Pages 6-14, 6-20	No
FIK-V 	Lips Facing In, Beaded Lips, Cantilever Spring	Seals internal pressure. Good sealability for non-abrasive fluids. Rounded like O-ring.	No	Medium Closure Force	Very Good	No	Pages 6-14, 6-20	No
FIN-C 	Lips Facing In, Back-Beveled Lips, Canted- Coil Spring	Seals internal pressure. Low closure force for non-abrasive fluids.	No	Low Closure Force	Good	No	Pages 6-14, 6-20	No

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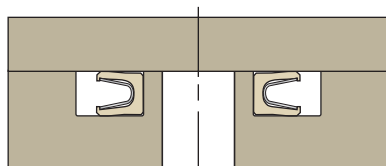
FlexiSeal® Face Seals

FE Profiles — External Pressure

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External Pressure Face Seals



External Pressure

FE Profiles

FE FlexiSeal External Pressure Face Seals are designed so that the spring cavity faces out.

Design Considerations

- Hardware Configurations/Installation, see **Page 2-3**
- Surface Finish and Hardness, see **Page 2-9**
- Extrusion Gaps and High Pressure, see **Page 2-10**
- Spring Choices, see **Page 2-12**
- Lip Shapes, see **Page 2-16**
- Face Seal Gland Considerations, see **Page 6-2**
- Shaft Misalignment Issues, see **Page 2-19**

Part Number Example

Table 6-3. FE External Pressure Part Number

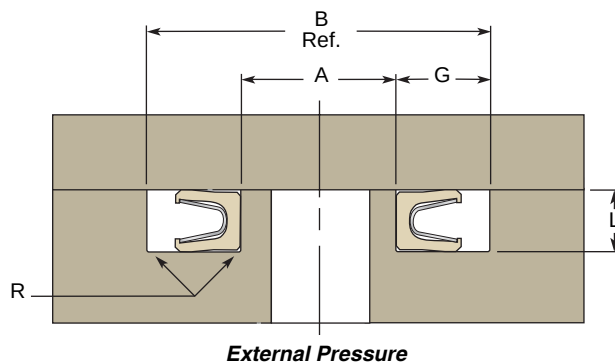
0	3	0	1	FE	N	1	2	5	0	1	2	5	0	1	7	0	S	H
				External Face Seal Default Lip Style													Helical Spring	

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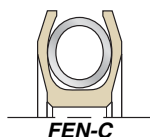
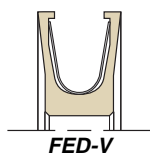
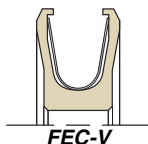
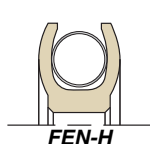


Gland Dimensions — FE Profiles

Table 6-4. FE External Pressure Gland Dimensions



Each of these FlexiSeal profiles were designed to fit into either the Inch/Fractional external pressure face seal glands on the following pages or the Metric glands on **Page 6-20**.



Dash #	A Gland ID	B Min. Gland OD	Part Number
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R = 0.007" max. radius

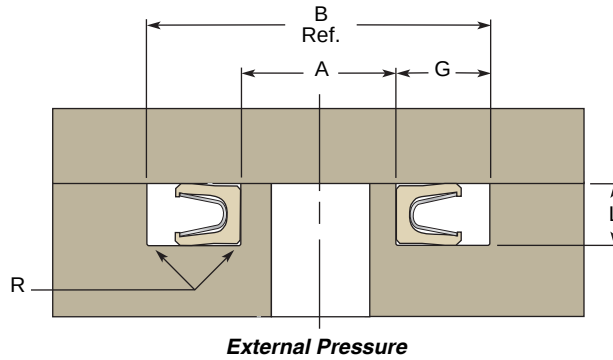
L = 0.061/0.063"

G = 0.094" minimum

	+0.000/ -0.005		
-008	0.187	0.375	xxxxFEx06200187083xxx
-009	0.218	0.406	xxxxFEx06200218083xxx
-010	0.250	0.437	xxxxFEx06200250083xxx
-011	0.312	0.500	xxxxFEx06200312083xxx
-012	0.375	0.562	xxxxFEx06200375083xxx
-013	0.437	0.625	xxxxFEx06200437083xxx
-014	0.500	0.687	xxxxFEx06200500083xxx
-015	0.562	0.750	xxxxFEx06200562083xxx
-016	0.625	0.812	xxxxFEx06200625083xxx
-017	0.687	0.875	xxxxFEx06200687083xxx
-018	0.750	0.937	xxxxFEx06200750083xxx
-019	0.812	1.000	xxxxFEx06200812083xxx
-020	0.875	1.062	xxxxFEx06200875083xxx
-021	0.937	1.125	xxxxFEx06200937083xxx
-022	1.000	1.187	xxxxFEx06201000083xxx
-023	1.062	1.250	xxxxFEx06201062083xxx
-024	1.125	1.312	xxxxFEx06201125083xxx
-025	1.187	1.375	xxxxFEx06201187083xxx
-026	1.250	1.437	xxxxFEx06201250083xxx
-027	1.312	1.500	xxxxFEx06201312083xxx
-028	1.375	1.562	xxxxFEx06201375083xxx
-029	1.500	1.687	xxxxFEx06201500083xxx
-030	1.625	1.812	xxxxFEx06201625083xxx
-031	1.750	1.937	xxxxFEx06201750083xxx
-032	1.875	2.062	xxxxFEx06201875083xxx
-033	2.000	2.187	xxxxFEx06202000083xxx
-034	2.125	2.312	xxxxFEx06202125083xxx
-035	2.250	2.437	xxxxFEx06202250083xxx
-036	2.375	2.562	xxxxFEx06202375083xxx
-037	2.500	2.687	xxxxFEx06202500083xxx
-038	2.625	2.812	xxxxFEx06202625083xxx
-039	2.750	2.937	xxxxFEx06202750083xxx

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Table 6-4. FE External Pressure Gland Dimensions (Continued)



Dash #	A Gland ID	B Min. Gland OD	Part Number
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R = 0.007" max. radius

L = 0.061/0.063"

G = 0.094" minimum

	+0.001/ -0.005		
-040	2.875	3.062	xxxxFEx06202875083xxx
-041	3.000	3.187	xxxxFEx06203000083xxx
-042	3.250	3.437	xxxxFEx06203250083xxx
-043	3.500	3.687	xxxxFEx06203500083xxx
-044	3.750	3.937	xxxxFEx06203750083xxx
-045	4.000	4.187	xxxxFEx06204000083xxx

R = 0.010" max. radius

L = 0.092/0.094"

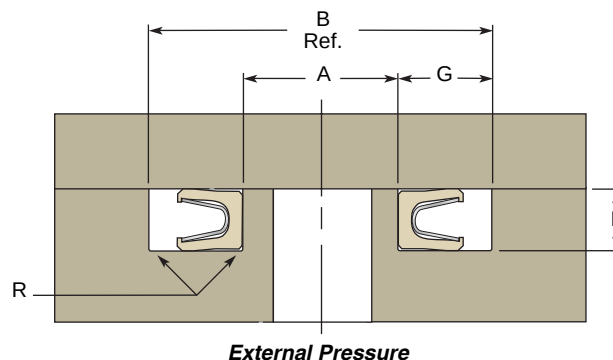
G = 0.141" minimum

	+0.001/ -0.005		
-110	0.375	0.657	xxxxFEx09300375130xxx
-111	0.437	0.719	xxxxFEx09300437130xxx
-112	0.500	0.782	xxxxFEx09300500130xxx
-113	0.562	0.844	xxxxFEx09300562130xxx
-114	0.625	0.907	xxxxFEx09300625130xxx
-115	0.687	0.969	xxxxFEx09300687130xxx
-116	0.750	1.032	xxxxFEx09300750130xxx
-117	0.812	1.094	xxxxFEx09300812130xxx
-118	0.875	1.157	xxxxFEx09300875130xxx
-119	0.937	1.219	xxxxFEx09300937130xxx
-120	1.000	1.282	xxxxFEx09301000130xxx
-121	1.062	1.344	xxxxFEx09301062130xxx
-122	1.125	1.407	xxxxFEx09301125130xxx
-123	1.187	1.469	xxxxFEx09301187130xxx
-124	1.250	1.532	xxxxFEx09301250130xxx
-125	1.312	1.594	xxxxFEx09301312130xxx
-126	1.375	1.657	xxxxFEx09301375130xxx
-127	1.437	1.719	xxxxFEx09301437130xxx
-128	1.500	1.782	xxxxFEx09301500130xxx
-129	1.562	1.844	xxxxFEx09301562130xxx
-130	1.625	1.907	xxxxFEx09301625130xxx
-131	1.687	1.969	xxxxFEx09301687130xxx

Dash #	A Gland ID	B Min. Gland OD	Part Number
-132	1.750	2.032	xxxxFEx09301750130xxx
-133	1.812	2.094	xxxxFEx09301812130xxx
-134	1.875	2.157	xxxxFEx09301875130xxx
-135	1.937	2.219	xxxxFEx09301937130xxx
-136	2.000	2.282	xxxxFEx09302000130xxx
-137	2.062	2.344	xxxxFEx09302062130xxx
-138	2.125	2.407	xxxxFEx09302125130xxx
-139	2.187	2.469	xxxxFEx09302187130xxx
-140	2.250	2.532	xxxxFEx09302250130xxx
-141	2.312	2.594	xxxxFEx09302312130xxx
-142	2.375	2.657	xxxxFEx09302375130xxx
-143	2.437	2.719	xxxxFEx09302437130xxx
-144	2.500	2.782	xxxxFEx09302500130xxx
-145	2.562	2.844	xxxxFEx09302562130xxx
-146	2.625	2.907	xxxxFEx09302625130xxx
-147	2.687	2.969	xxxxFEx09302687130xxx
-148	2.750	3.032	xxxxFEx09302750130xxx
-149	2.812	3.094	xxxxFEx09302812130xxx
-150	2.875	3.157	xxxxFEx09302875130xxx
-151	3.000	3.282	xxxxFEx09303000130xxx
-152	3.250	3.532	xxxxFEx09303250130xxx
-153	3.500	3.782	xxxxFEx09303500130xxx
-154	3.750	4.032	xxxxFEx09303750130xxx
-155	4.000	4.282	xxxxFEx09304000130xxx
-156	4.250	4.532	xxxxFEx09304250130xxx
-157	4.500	4.782	xxxxFEx09304500130xxx
-158	4.750	5.032	xxxxFEx09304750130xxx
-159	5.000	5.282	xxxxFEx09305000130xxx
-160	5.250	5.532	xxxxFEx09305250130xxx
-161	5.500	5.782	xxxxFEx09305500130xxx
-162	5.750	6.032	xxxxFEx09305750130xxx
-163	6.000	6.282	xxxxFEx09306000130xxx
-164	6.250	6.532	xxxxFEx09306250130xxx
-165	6.500	6.782	xxxxFEx09306500130xxx

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Table 6-4. FE External Pressure Gland Dimensions (Continued)



Dash #	A Gland ID	B Min. Gland OD	Part Number
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R = 0.010" max. radius

L = 0.124/0.125"

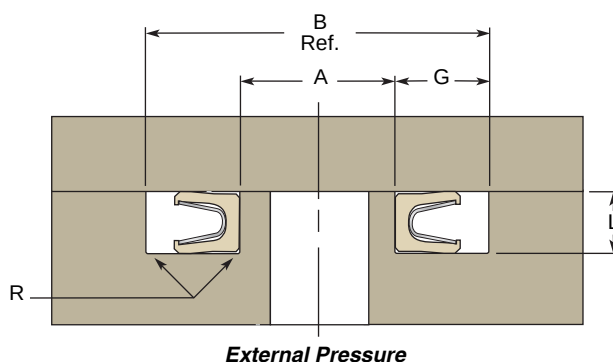
G = 0.188" minimum

	$\pm 0.001 / -0.005$		
-208	0.625	1.000	xxxxFEx12500625170xxx
-209	0.687	1.062	xxxxFEx12500687170xxx
-210	0.750	1.125	xxxxFEx12500750170xxx
-211	0.812	1.187	xxxxFEx12500812170xxx
-212	0.875	1.250	xxxxFEx12500875170xxx
-213	0.937	1.312	xxxxFEx12500937170xxx
-214	1.000	1.375	xxxxFEx12501000170xxx
-215	1.062	1.437	xxxxFEx12501062170xxx
-216	1.125	1.500	xxxxFEx12501125170xxx
-217	1.187	1.562	xxxxFEx12501187170xxx
-218	1.250	1.625	xxxxFEx12501250170xxx
-219	1.312	1.687	xxxxFEx12501312170xxx
-220	1.375	1.750	xxxxFEx12501375170xxx
-221	1.437	1.812	xxxxFEx12501437170xxx
-222	1.500	1.875	xxxxFEx12501500170xxx
-223	1.625	2.000	xxxxFEx12501625170xxx
-224	1.750	2.125	xxxxFEx12501750170xxx
-225	1.875	2.250	xxxxFEx12501875170xxx
-226	2.000	2.375	xxxxFEx12502000170xxx
-227	2.125	2.500	xxxxFEx12502125170xxx
-228	2.250	2.625	xxxxFEx12502250170xxx
-229	2.375	2.750	xxxxFEx12502375170xxx
-230	2.500	2.875	xxxxFEx12502500170xxx
-231	2.625	3.000	xxxxFEx12502625170xxx
-232	2.750	3.125	xxxxFEx12502750170xxx
-233	2.875	3.250	xxxxFEx12502875170xxx
-234	3.000	3.375	xxxxFEx12503000170xxx
-235	3.125	3.500	xxxxFEx12503125170xxx
-236	3.250	3.625	xxxxFEx12503250170xxx
-237	3.375	3.750	xxxxFEx12503375170xxx
-238	3.500	3.875	xxxxFEx12503500170xxx
-239	3.625	4.000	xxxxFEx12503625170xxx
-240	3.750	4.125	xxxxFEx12503750170xxx
-241	3.875	4.250	xxxxFEx12503875170xxx
-242	4.000	4.375	xxxxFEx12504000170xxx
-243	4.125	4.500	xxxxFEx12504125170xxx

Dash #	A Gland ID	B Min. Gland OD	Part Number
-244	4.250	4.625	xxxxFEx12504250170xxx
-245	4.375	4.750	xxxxFEx12504375170xxx
-246	4.500	4.875	xxxxFEx12504500170xxx
-247	4.625	5.000	xxxxFEx12504625170xxx
-248	4.750	5.125	xxxxFEx12504750170xxx
-249	4.875	5.250	xxxxFEx12504875170xxx
-250	5.000	5.375	xxxxFEx12505000170xxx
-251	5.125	5.500	xxxxFEx12505125170xxx
-252	5.250	5.625	xxxxFEx12505250170xxx
-253	5.375	5.750	xxxxFEx12505375170xxx
-254	5.500	5.875	xxxxFEx12505500170xxx
-255	5.625	6.000	xxxxFEx12505625170xxx
-256	5.750	6.125	xxxxFEx12505750170xxx
-257	5.875	6.250	xxxxFEx12505875170xxx
-258	6.000	6.375	xxxxFEx12506000170xxx
-259	6.250	6.625	xxxxFEx12506250170xxx
-260	6.500	6.875	xxxxFEx12506500170xxx
-261	6.750	7.125	xxxxFEx12506750170xxx
-262	7.000	7.375	xxxxFEx12507000170xxx
-263	7.250	7.625	xxxxFEx12507250170xxx
-264	7.500	7.875	xxxxFEx12507500170xxx
-265	7.750	8.125	xxxxFEx12507750170xxx
-266	8.000	8.375	xxxxFEx12508000170xxx
-267	8.250	8.625	xxxxFEx12508250170xxx
-268	8.500	8.875	xxxxFEx12508500170xxx
-269	8.750	9.125	xxxxFEx12508750170xxx
-270	9.000	9.375	xxxxFEx12509000170xxx
-271	9.250	9.625	xxxxFEx12509250170xxx
-272	9.500	9.875	xxxxFEx12509500170xxx
-273	9.750	10.125	xxxxFEx12509750170xxx
-274	10.000	10.375	xxxxFEx12510000170xxx
-275	10.500	10.875	xxxxFEx12510500170xxx
-276	11.000	11.375	xxxxFEx12511000170xxx
-277	11.500	11.875	xxxxFEx12511500170xxx
-278	12.000	12.375	xxxxFEx12512000170xxx
-279	13.000	13.375	xxxxFEx12513000170xxx
-280	14.000	14.375	xxxxFEx12514000170xxx
-281	15.000	15.375	xxxxFEx12515000170xxx

02/15/08

Table 6-4. FE External Pressure Gland Dimensions (Continued)



Dash #	A Gland ID	B Min. Gland OD	Part Number
--------	------------	-----------------	-------------

R = 0.015" max. radius

L = 0.186/0.188"

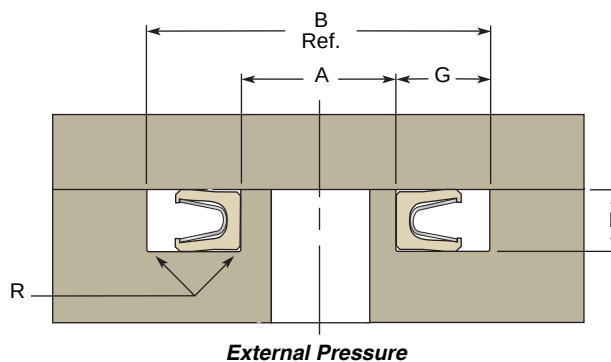
G = 0.281" minimum

	+0.001/ -0.005		
-325	1.500	2.062	xxxxFEx18701500260xxx
-326	1.625	2.187	xxxxFEx18701625260xxx
-327	1.750	2.312	xxxxFEx18701750260xxx
-328	1.875	2.437	xxxxFEx18701875260xxx
-329	2.000	2.562	xxxxFEx18702000260xxx
-330	2.125	2.687	xxxxFEx18702125260xxx
-331	2.250	2.812	xxxxFEx18702250260xxx
-332	2.375	2.937	xxxxFEx18702375260xxx
-333	2.500	3.062	xxxxFEx18702500260xxx
-334	2.625	3.187	xxxxFEx18702625260xxx
-335	2.750	3.312	xxxxFEx18702750260xxx
-336	2.875	3.437	xxxxFEx18702875260xxx
-337	3.000	3.562	xxxxFEx18703000260xxx
-338	3.125	3.687	xxxxFEx18703125260xxx
-339	3.250	3.812	xxxxFEx18703250260xxx
-340	3.375	3.937	xxxxFEx18703375260xxx
-341	3.500	4.062	xxxxFEx18703500260xxx
-342	3.625	4.187	xxxxFEx18703625260xxx
-343	3.750	4.312	xxxxFEx18703750260xxx
-344	3.875	4.437	xxxxFEx18703875260xxx
-345	4.000	4.562	xxxxFEx18704000260xxx
-346	4.125	4.687	xxxxFEx18704125260xxx
-347	4.250	4.812	xxxxFEx18704250260xxx
-348	4.375	4.937	xxxxFEx18704375260xxx
-349	4.500	5.062	xxxxFEx18704500260xxx
-350	4.625	5.187	xxxxFEx18704625260xxx
-351	4.750	5.312	xxxxFEx18704750260xxx
-352	4.875	5.437	xxxxFEx18704875260xxx
-353	5.000	5.562	xxxxFEx18705000260xxx
-354	5.125	5.687	xxxxFEx18705125260xxx
-355	5.250	5.812	xxxxFEx18705250260xxx
-356	5.375	5.937	xxxxFEx18705375260xxx

Dash #	A Gland ID	B Min. Gland OD	Part Number
-357	5.500	6.062	xxxxFEx18705500260xxx
-358	5.625	6.187	xxxxFEx18705625260xxx
-359	5.750	6.312	xxxxFEx18705750260xxx
-360	5.875	6.437	xxxxFEx18705875260xxx
-361	6.000	6.562	xxxxFEx18706000260xxx
-362	6.250	6.812	xxxxFEx18706250260xxx
-363	6.500	7.062	xxxxFEx18706500260xxx
-364	6.750	7.312	xxxxFEx18706750260xxx
-365	7.000	7.562	xxxxFEx18707000260xxx
-366	7.250	7.812	xxxxFEx18707250260xxx
-367	7.500	8.062	xxxxFEx18707500260xxx
-368	7.750	8.312	xxxxFEx18707750260xxx
-369	8.000	8.562	xxxxFEx18708000260xxx
-370	8.250	8.812	xxxxFEx18708250260xxx
-371	8.500	9.062	xxxxFEx18708500260xxx
-372	8.750	9.312	xxxxFEx18708750260xxx
-373	9.000	9.562	xxxxFEx18709000260xxx
-374	9.250	9.812	xxxxFEx18709250260xxx
-375	9.500	10.062	xxxxFEx18709500260xxx
-376	9.750	10.312	xxxxFEx18709750260xxx
-377	10.000	10.562	xxxxFEx18710000260xxx
-378	10.500	11.062	xxxxFEx18710500260xxx
-379	11.000	11.562	xxxxFEx18711000260xxx
-380	11.500	12.062	xxxxFEx18711500260xxx
-381	12.000	12.562	xxxxFEx18712000260xxx
-382	13.000	13.562	xxxxFEx18713000260xxx
-383	14.000	14.562	xxxxFEx18714000260xxx
-384	15.000	15.562	xxxxFEx18715000260xxx
-385	16.000	16.562	xxxxFEx18716000260xxx
-386	17.000	17.562	xxxxFEx18717000260xxx
-387	18.000	18.562	xxxxFEx18718000260xxx
-388	19.000	19.562	xxxxFEx18719000260xxx
-389	20.000	20.562	xxxxFEx18720000260xxx
-390	21.000	21.562	xxxxFEx18721000260xxx

01/15/06

Table 6-4. FE External Pressure Gland Dimensions (Continued)



Dash #	A Gland ID	B Min. Gland OD	Part Number
--------	------------	-----------------	-------------

R = 0.015" max. radius

L = 0.249/0.251"

G = 0.375" minimum

	$\pm 0.001 / -0.005$		
-425	4.500	5.250	xxxxFEx25004500355xxx
-426	4.625	5.375	xxxxFEx25004625355xxx
-427	4.750	5.500	xxxxFEx25004750355xxx
-428	4.875	5.625	xxxxFEx25004875355xxx
-429	5.000	5.750	xxxxFEx25005000355xxx
-430	5.125	5.875	xxxxFEx25005125355xxx
-431	5.250	6.000	xxxxFEx25005250355xxx
-432	5.375	6.125	xxxxFEx25005375355xxx
-433	5.500	6.250	xxxxFEx25005500355xxx
-434	5.625	6.375	xxxxFEx25005625355xxx
-435	5.750	6.500	xxxxFEx25005750355xxx
-436	5.875	6.625	xxxxFEx25005875355xxx
-437	6.000	6.750	xxxxFEx25006000355xxx
-438	6.250	7.000	xxxxFEx25006250355xxx
-439	6.500	7.250	xxxxFEx25006500355xxx
-440	6.750	7.500	xxxxFEx25006750355xxx
-441	7.000	7.750	xxxxFEx25007000355xxx
-442	7.250	8.000	xxxxFEx25007250355xxx
-443	7.500	8.250	xxxxFEx25007500355xxx
-444	7.750	8.500	xxxxFEx25007750355xxx

Dash #	A Gland ID	B Min. Gland OD	Part Number
-445	8.000	8.750	xxxxFEx25008000355xxx
-446	8.500	9.250	xxxxFEx25008500355xxx
-447	9.000	9.750	xxxxFEx25009000355xxx
-448	9.500	10.250	xxxxFEx25009500355xxx
-449	10.000	10.750	xxxxFEx25010000355xxx
-450	10.500	11.250	xxxxFEx25010500355xxx
-451	11.000	11.750	xxxxFEx25011000355xxx
-452	11.500	12.250	xxxxFEx25011500355xxx
-453	12.000	12.750	xxxxFEx25012000355xxx
-454	12.500	13.250	xxxxFEx25012500355xxx
-455	13.000	13.750	xxxxFEx25013000355xxx
-456	13.500	14.250	xxxxFEx25013500355xxx
-457	14.000	14.750	xxxxFEx25014000355xxx
-458	14.500	15.250	xxxxFEx25014500355xxx
-459	15.000	15.750	xxxxFEx25015000355xxx
-460	15.500	16.250	xxxxFEx25015500355xxx
-461	16.000	16.750	xxxxFEx25016000355xxx
-462	16.500	17.250	xxxxFEx25016500355xxx
-463	17.000	17.750	xxxxFEx25017000355xxx
-464	17.500	18.250	xxxxFEx25017500355xxx
-465	18.000	18.750	xxxxFEx25018000355xxx
-466	18.500	19.250	xxxxFEx25018500355xxx
-467	19.000	19.750	xxxxFEx25019000355xxx
-468	19.500	20.250	xxxxFEx25019500355xxx

02/15/08

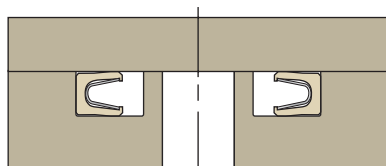
FlexiSeal® Face Seals

FI Profiles — Internal Pressure

Catalog EPS 5340/USA



Internal Pressure Face Seal



Internal Pressure

FI Profiles

FI FlexiSeal Internal Pressure Face Seals are designed so that the spring cavity faces in.

Design Considerations

- Hardware Configurations/Installation, see **Page 2-3**
- Surface Finish and Hardness, see **Page 2-9**
- Extrusion Gaps and High Pressure, see **Page 2-10**
- Spring Choices, see **Page 2-12**
- Lip Shapes, see **Page 2-16**
- Face Seal Gland Considerations, see **Page 6-2**
- Shaft Misalignment Issues, see **Page 2-19**

Part Number Example

Table 6-5. FI Internal Pressure Part Number

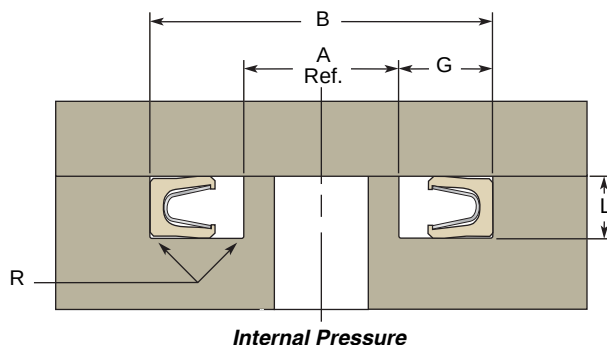
0	3	0	1	FI	N	1	2	5	0	1	2	5	0	1	7	0	S	H
				Internal Face Seal Default Lip Style													Helical Spring	

01/15/07

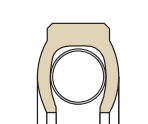
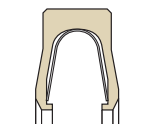
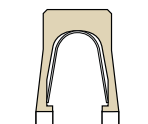
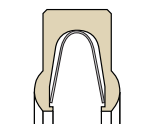
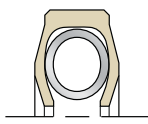


Gland Dimensions — FI Profiles

Table 6-6. FI Internal Pressure Gland Dimensions



Each of these FlexiSeal profiles were designed to fit into either the Inch/Fractional internal pressure face seal glands on the following pages or the Metric glands on **Page 6-20**.

**FIN-H****FIC-V****FID-V****FIK-V****FIN-C**

Dash #	A Max. Gland ID	B Gland OD	Part Number
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R = 0.007" max. radius

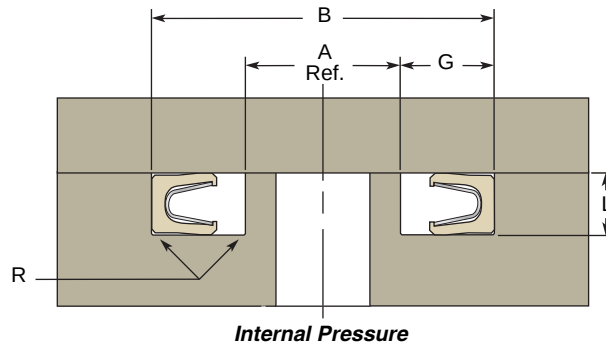
L = 0.061/0.063"

G = 0.094" minimum

		+.005/ -.000	
-012	0.312	0.500	xxxxFIx06200312083xxx
-013	0.375	0.562	xxxxFIx06200375083xxx
-014	0.437	0.625	xxxxFIx06200437083xxx
-015	0.500	0.687	xxxxFIx06200500083xxx
-016	0.562	0.750	xxxxFIx06200562083xxx
-017	0.625	0.812	xxxxFIx06200625083xxx
-018	0.687	0.875	xxxxFIx06200687083xxx
-019	0.750	0.937	xxxxFIx06200750083xxx
-020	0.812	1.000	xxxxFIx06200812083xxx
-021	0.875	1.062	xxxxFIx06200875083xxx
-022	0.937	1.125	xxxxFIx06200937083xxx
-023	1.000	1.187	xxxxFIx06201000083xxx
-024	1.062	1.250	xxxxFIx06201062083xxx
-025	1.125	1.312	xxxxFIx06201125083xxx
-026	1.187	1.375	xxxxFIx06201187083xxx
-027	1.250	1.437	xxxxFIx06201250083xxx
-028	1.312	1.500	xxxxFIx06201312083xxx
-029	1.437	1.625	xxxxFIx06201437083xxx
-030	1.562	1.750	xxxxFIx06201562083xxx
-031	1.687	1.875	xxxxFIx06201687083xxx
-032	1.812	2.000	xxxxFIx06201812083xxx
-033	1.937	2.125	xxxxFIx06201937083xxx
-034	2.062	2.250	xxxxFIx06202062083xxx
-035	2.187	2.375	xxxxFIx06202187083xxx
-036	2.312	2.500	xxxxFIx06202312083xxx
-037	2.437	2.625	xxxxFIx06202437083xxx
-038	2.562	2.750	xxxxFIx06202562083xxx
-039	2.687	2.875	xxxxFIx06202687083xxx
-040	2.812	3.000	xxxxFIx06202812083xxx
-041	2.937	3.125	xxxxFIx06202937083xxx

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Table 6-6. FI Internal Pressure Gland Dimensions (Continued)



Dash #	A Max. Gland ID	B Gland OD	Part Number
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R = 0.007" max. radius

L = 0.061/0.063"

G = 0.094" minimum

		+0.005/ -0.000	
-042	3.187	3.375	xxxxFIx06203187083xxx
-043	3.437	3.625	xxxxFIx06203437083xxx
-044	3.687	3.875	xxxxFIx06203687083xxx
-045	3.937	4.125	xxxxFIx06203937083xxx

R = 0.010" max. radius

L = 0.092/0.094"

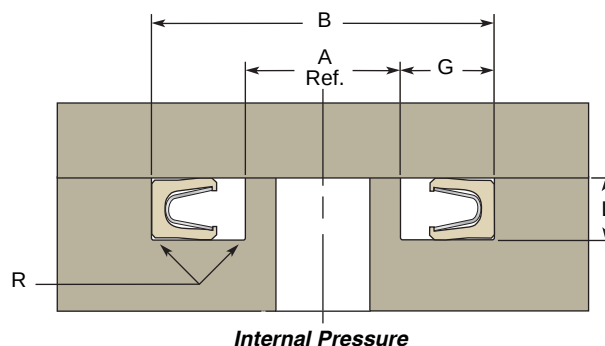
G = 0.141" minimum

		+0.005/ -0.000	
-112	0.405	0.687	xxxxFIx09300405130xxx
-113	0.468	0.750	xxxxFIx09300468130xxx
-114	0.530	0.812	xxxxFIx09300530130xxx
-115	0.593	0.875	xxxxFIx09300593130xxx
-116	0.655	0.937	xxxxFIx09300655130xxx
-117	0.718	1.000	xxxxFIx09300718130xxx
-118	0.780	1.062	xxxxFIx09300780130xxx
-119	0.843	1.125	xxxxFIx09300843130xxx
-120	0.905	1.187	xxxxFIx09300905130xxx
-121	0.968	1.250	xxxxFIx09300968130xxx
-122	1.030	1.312	xxxxFIx09301030130xxx
-123	1.093	1.375	xxxxFIx09301093130xxx
-124	1.155	1.437	xxxxFIx09301155130xxx
-125	1.218	1.500	xxxxFIx09301218130xxx
-126	1.280	1.562	xxxxFIx09301280130xxx
-127	1.343	1.625	xxxxFIx09301343130xxx
-128	1.405	1.687	xxxxFIx09301405130xxx
-129	1.468	1.750	xxxxFIx09301468130xxx
-130	1.530	1.812	xxxxFIx09301530130xxx
-131	1.593	1.875	xxxxFIx09301593130xxx
-132	1.655	1.937	xxxxFIx09301655130xxx
-133	1.718	2.000	xxxxFIx09301718130xxx
-134	1.780	2.062	xxxxFIx09301780130xxx
-135	1.843	2.125	xxxxFIx09301843130xxx

Dash #	A Max. Gland ID	B Gland OD	Part Number
-136	1.905	2.187	xxxxFIx09301905130xxx
-137	1.968	2.250	xxxxFIx09301968130xxx
-138	2.030	2.312	xxxxFIx09302030130xxx
-139	2.093	2.375	xxxxFIx09302093130xxx
-140	2.155	2.437	xxxxFIx09302155130xxx
-141	2.218	2.500	xxxxFIx09302218130xxx
-142	2.280	2.562	xxxxFIx09302280130xxx
-143	2.343	2.625	xxxxFIx09302343130xxx
-144	2.405	2.687	xxxxFIx09302405130xxx
-145	2.468	2.750	xxxxFIx09302468130xxx
-146	2.530	2.812	xxxxFIx09302530130xxx
-147	2.593	2.875	xxxxFIx09302593130xxx
-148	2.655	2.937	xxxxFIx09302655130xxx
-149	2.718	3.000	xxxxFIx09302718130xxx
-150	2.780	3.062	xxxxFIx09302780130xxx
-151	2.905	3.187	xxxxFIx09302905130xxx
-152	3.155	3.437	xxxxFIx09303155130xxx
-153	3.405	3.687	xxxxFIx09303405130xxx
-154	3.655	3.937	xxxxFIx09303655130xxx
-155	3.905	4.187	xxxxFIx09303905130xxx
-156	4.155	4.437	xxxxFIx09304155130xxx
-157	4.405	4.687	xxxxFIx09304405130xxx
-158	4.655	4.937	xxxxFIx09304655130xxx
-159	4.905	5.187	xxxxFIx09304905130xxx
-160	5.155	5.437	xxxxFIx09305155130xxx
-161	5.405	5.687	xxxxFIx09305405130xxx
-162	5.655	5.937	xxxxFIx09305655130xxx
-163	5.905	6.187	xxxxFIx09305905130xxx
-164	6.155	6.437	xxxxFIx09306155130xxx
-165	6.405	6.687	xxxxFIx09306405130xxx
-166	6.655	6.937	xxxxFIx09306655130xxx
-167	6.905	7.187	xxxxFIx09306905130xxx

02/15/08

Table 6-6. FI Internal Pressure Gland Dimensions (Continued)



Dash #	A Max. Gland ID	B Gland OD	Part Number
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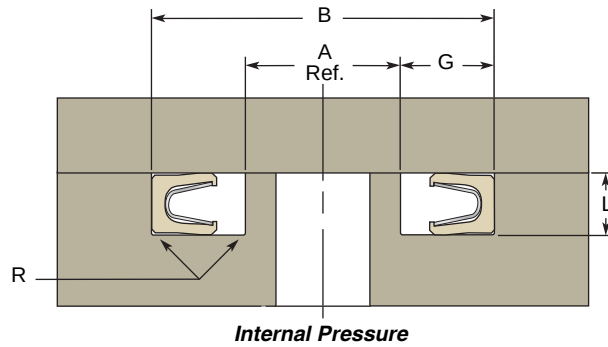
R = 0.010" max. radius
L = 0.124/0.126"
G = 0.188" minimum

		+.005/ -.000	
-210	0.625	1.000	xxxxFlx12500625170xxx
-211	0.687	1.062	xxxxFlx12500687170xxx
-212	0.750	1.125	xxxxFlx12500750170xxx
-213	0.812	1.187	xxxxFlx12500812170xxx
-214	0.875	1.250	xxxxFlx12500875170xxx
-215	0.937	1.312	xxxxFlx12500937170xxx
-216	1.000	1.375	xxxxFlx12501000170xxx
-217	1.062	1.437	xxxxFlx12501062170xxx
-218	1.125	1.500	xxxxFlx12501125170xxx
-219	1.187	1.562	xxxxFlx12501187170xxx
-220	1.250	1.625	xxxxFlx12501250170xxx
-221	1.312	1.687	xxxxFlx12501312170xxx
-222	1.375	1.750	xxxxFlx12501375170xxx
-223	1.500	1.875	xxxxFlx12501500170xxx
-224	1.625	2.000	xxxxFlx12501625170xxx
-225	1.750	2.125	xxxxFlx12501750170xxx
-226	1.875	2.250	xxxxFlx12501875170xxx
-227	2.000	2.375	xxxxFlx12502000170xxx
-228	2.125	2.500	xxxxFlx12502125170xxx
-229	2.250	2.625	xxxxFlx12502250170xxx
-230	2.375	2.750	xxxxFlx12502375170xxx
-231	2.500	2.875	xxxxFlx12502500170xxx
-232	2.625	3.000	xxxxFlx12502625170xxx
-233	2.750	3.125	xxxxFlx12502750170xxx
-234	2.875	3.250	xxxxFlx12502875170xxx
-235	3.000	3.375	xxxxFlx12503000170xxx
-236	3.125	3.500	xxxxFlx12503125170xxx
-237	3.250	3.625	xxxxFlx12503250170xxx
-238	3.375	3.750	xxxxFlx12503375170xxx
-239	3.500	3.875	xxxxFlx12503500170xxx
-240	3.625	4.000	xxxxFlx12503625170xxx
-241	3.750	4.125	xxxxFlx12503750170xxx
-242	3.875	4.250	xxxxFlx12503875170xxx
-243	4.000	4.375	xxxxFlx12504000170xxx

Dash #	A Max. Gland ID	B Gland OD	Part Number
-244	4.125	4.500	xxxxFlx12504125170xxx
-245	4.250	4.625	xxxxFlx12504250170xxx
-246	4.375	4.750	xxxxFlx12504375170xxx
-247	4.500	4.875	xxxxFlx12504500170xxx
-248	4.625	5.000	xxxxFlx12504625170xxx
-249	4.750	5.125	xxxxFlx12504750170xxx
-250	4.875	5.250	xxxxFlx12504875170xxx
-251	5.000	5.375	xxxxFlx12505000170xxx
-252	5.125	5.500	xxxxFlx12505125170xxx
-253	5.250	5.625	xxxxFlx12505250170xxx
-254	5.375	5.750	xxxxFlx12505375170xxx
-255	5.500	5.875	xxxxFlx12505500170xxx
-256	5.625	6.000	xxxxFlx12505625170xxx
-257	5.750	6.125	xxxxFlx12505750170xxx
-258	5.875	6.250	xxxxFlx12505875170xxx
-259	6.125	6.500	xxxxFlx12506125170xxx
-260	6.375	6.750	xxxxFlx12506375170xxx
-261	6.625	7.000	xxxxFlx12506625170xxx
-262	6.875	7.250	xxxxFlx12506875170xxx
-263	7.125	7.500	xxxxFlx12507125170xxx
-264	7.375	7.750	xxxxFlx12507375170xxx
-265	7.625	8.000	xxxxFlx12507625170xxx
-266	7.875	8.250	xxxxFlx12507875170xxx
-267	8.125	8.500	xxxxFlx12508125170xxx
-268	8.375	8.750	xxxxFlx12508375170xxx
-269	8.625	9.000	xxxxFlx12508625170xxx
-270	8.875	9.250	xxxxFlx12508875170xxx
-271	9.125	9.500	xxxxFlx12509125170xxx
-272	9.375	9.750	xxxxFlx12509375170xxx
-273	9.625	10.000	xxxxFlx12509625170xxx
-274	9.875	10.250	xxxxFlx12509875170xxx
-275	10.375	10.750	xxxxFlx12510375170xxx
-276	10.875	11.250	xxxxFlx12510875170xxx
-277	11.375	11.750	xxxxFlx12511375170xxx
-278	11.875	12.250	xxxxFlx12511875170xxx
-279	12.375	12.750	xxxxFlx12512375170xxx
-280	12.875	13.250	xxxxFlx12512875170xxx
-281	13.375	13.750	xxxxFlx12513375170xxx

02/15/08

Table 6-6. FI Internal Pressure Gland Dimensions (Continued)



Dash #	A Max. Gland ID	B Gland OD	Part Number
--------	-----------------------	---------------	-------------

R = 0.015" max. radius

L = 0.186/0.188"

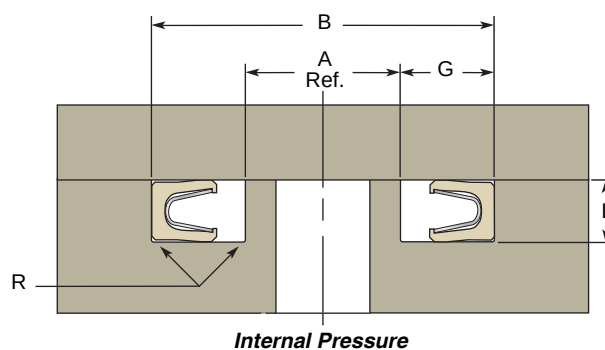
G = 0.281" minimum

		+ .005/ - .000	
-325	1.312	1.875	xxxxFlx18701312260xxx
-326	1.437	2.000	xxxxFlx18701437260xxx
-327	1.562	2.125	xxxxFlx18701562260xxx
-328	1.687	2.250	xxxxFlx18701687260xxx
-329	1.812	2.375	xxxxFlx18701812260xxx
-330	1.937	2.500	xxxxFlx18701937260xxx
-331	2.062	2.625	xxxxFlx18702062260xxx
-332	2.187	2.750	xxxxFlx18702187260xxx
-333	2.312	2.875	xxxxFlx18702312260xxx
-334	2.437	3.000	xxxxFlx18702437260xxx
-335	2.562	3.125	xxxxFlx18702562260xxx
-336	2.687	3.250	xxxxFlx18702687260xxx
-337	2.812	3.375	xxxxFlx18702812260xxx
-338	2.937	3.500	xxxxFlx18702937260xxx
-339	3.062	3.625	xxxxFlx18703062260xxx
-340	3.187	3.750	xxxxFlx18703187260xxx
-341	3.312	3.875	xxxxFlx18703312260xxx
-342	3.437	4.000	xxxxFlx18703437260xxx
-343	3.562	4.125	xxxxFlx18703562260xxx
-344	3.687	4.250	xxxxFlx18703687260xxx
-345	3.812	4.375	xxxxFlx18703812260xxx
-346	3.937	4.500	xxxxFlx18703937260xxx
-347	4.062	4.625	xxxxFlx18704062260xxx
-348	4.187	4.750	xxxxFlx18704187260xxx
-349	4.312	4.875	xxxxFlx18704312260xxx
-350	4.437	5.000	xxxxFlx18704437260xxx
-351	4.562	5.125	xxxxFlx18704562260xxx
-352	4.687	5.250	xxxxFlx18704687260xxx
-353	4.812	5.375	xxxxFlx18704812260xxx
-354	4.937	5.500	xxxxFlx18704937260xxx
-355	5.062	5.625	xxxxFlx18705062260xxx
-356	5.187	5.750	xxxxFlx18705187260xxx

Dash #	A Max. Gland ID	B Gland OD	Part Number
-357	5.312	5.875	xxxxFlx18705312260xxx
-358	5.437	6.000	xxxxFlx18705437260xxx
-359	5.562	6.125	xxxxFlx18705562260xxx
-360	5.687	6.250	xxxxFlx18705687260xxx
-361	5.812	6.375	xxxxFlx18705812260xxx
-362	6.062	6.625	xxxxFlx18706062260xxx
-363	6.312	6.875	xxxxFlx18706312260xxx
-364	6.562	7.125	xxxxFlx18706562260xxx
-365	6.812	7.375	xxxxFlx18706812260xxx
-366	7.062	7.625	xxxxFlx18707062260xxx
-367	7.312	7.875	xxxxFlx18707312260xxx
-368	7.562	8.125	xxxxFlx18707562260xxx
-369	7.812	8.375	xxxxFlx18707812260xxx
-370	8.062	8.625	xxxxFlx18708062260xxx
-371	8.312	8.875	xxxxFlx18708312260xxx
-372	8.562	9.125	xxxxFlx18708562260xxx
-373	8.812	9.375	xxxxFlx18708812260xxx
-374	9.062	9.625	xxxxFlx18709062260xxx
-375	9.312	9.875	xxxxFlx18709312260xxx
-376	9.562	10.125	xxxxFlx18709562260xxx
-377	9.812	10.375	xxxxFlx18709812260xxx
-378	10.312	10.875	xxxxFlx18710312260xxx
-379	10.812	11.375	xxxxFlx18710812260xxx
-380	11.312	11.875	xxxxFlx18711312260xxx
-381	11.812	12.375	xxxxFlx18711812260xxx
-382	12.812	13.375	xxxxFlx18712812260xxx
-383	13.812	14.375	xxxxFlx18713812260xxx
-384	14.812	15.375	xxxxFlx18714812260xxx
-385	15.812	16.375	xxxxFlx18715812260xxx
-386	16.812	17.375	xxxxFlx18716812260xxx
-387	17.812	18.375	xxxxFlx18717812260xxx
-388	18.812	19.375	xxxxFlx18718812260xxx
-389	19.812	20.375	xxxxFlx18719812260xxx
-390	20.812	21.375	xxxxFlx18720812260xxx

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Table 6-6. FI Internal Pressure Gland Dimensions (Continued)



Dash #	A Max. Gland ID	B Gland OD	Part Number
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R = 0.015" max. radius

L = 0.249/0.251"

G = 0.375" minimum

		+ .005/ - .000	
-425	4.250	5.000	xxxxFlx25004250355xxx
-426	4.375	5.125	xxxxFlx25004375355xxx
-427	4.500	5.250	xxxxFlx25004500355xxx
-428	4.625	5.375	xxxxFlx25004625355xxx
-429	4.750	5.500	xxxxFlx25004750355xxx
-430	4.875	5.625	xxxxFlx25004875355xxx
-431	5.000	5.750	xxxxFlx25005000355xxx
-432	5.125	5.875	xxxxFlx25005125355xxx
-433	5.250	6.000	xxxxFlx25005250355xxx
-434	5.375	6.125	xxxxFlx25005375355xxx
-435	5.500	6.250	xxxxFlx25005500355xxx
-436	5.625	6.375	xxxxFlx25005625355xxx
-437	5.750	6.500	xxxxFlx25005750355xxx
-438	6.000	6.750	xxxxFlx25006000355xxx
-439	6.250	7.000	xxxxFlx25006250355xxx
-440	6.500	7.250	xxxxFlx25006500355xxx
-441	6.750	7.500	xxxxFlx25006750355xxx
-442	7.000	7.750	xxxxFlx25007000355xxx
-443	7.250	8.000	xxxxFlx25007250355xxx
-444	7.500	8.250	xxxxFlx25007500355xxx

Dash #	A Max. Gland ID	B Gland OD	Part Number
-445	7.750	8.500	xxxxFlx25007750355xxx
-446	8.250	9.000	xxxxFlx25008250355xxx
-447	8.750	9.500	xxxxFlx25008750355xxx
-448	9.250	10.000	xxxxFlx25009250355xxx
-449	9.750	10.500	xxxxFlx25009750355xxx
-450	10.250	11.000	xxxxFlx25010250355xxx
-451	10.750	11.500	xxxxFlx25010750355xxx
-452	11.250	12.000	xxxxFlx25011250355xxx
-453	11.750	12.500	xxxxFlx25011750355xxx
-454	12.250	13.000	xxxxFlx25012250355xxx
-455	12.750	13.500	xxxxFlx25012750355xxx
-456	13.250	14.000	xxxxFlx25013250355xxx
-457	13.750	14.500	xxxxFlx25013750355xxx
-458	14.250	15.000	xxxxFlx25014250355xxx
-459	14.750	15.500	xxxxFlx25014750355xxx
-460	15.250	16.000	xxxxFlx25015250355xxx
-461	15.750	16.500	xxxxFlx25015750355xxx
-462	16.250	17.000	xxxxFlx25016250355xxx
-463	16.750	17.500	xxxxFlx25016750355xxx
-464	17.250	18.000	xxxxFlx25017250355xxx
-465	17.750	18.500	xxxxFlx25017750355xxx
-466	18.250	19.000	xxxxFlx25018250355xxx
-467	18.750	19.500	xxxxFlx25018750355xxx
-468	19.250	20.000	xxxxFlx25019250355xxx

02/15/08

FlexiSeal® Face Seals

FE & FI Profiles — Metric

Catalog EPS 5340/USA



FlexiSeal Face Seals

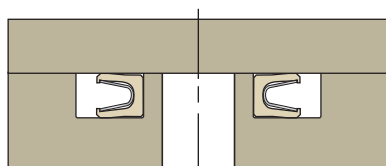
FE & FI Metric Profiles

FE FlexiSeal External Pressure Face Seals are designed so that the spring cavity faces out. FI FlexiSeal Internal Pressure Face Seals are designed so that the spring cavity faces in. FE & FI profiles are available in the Metric sizes on **Page 6-21**.

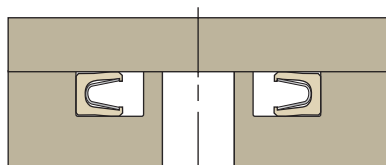
Design Considerations

- Hardware Configurations/Installation, see **Page 2-3**
- Surface Finish and Hardness, see **Page 2-9**
- Extrusion Gaps and High Pressure, see **Page 2-10**
- Spring Choices, see **Page 2-12**
- Lip Shapes, see **Page 2-16**
- Face Seal Gland Considerations, see **Page 6-2**
- Shaft Misalignment Issues, see **Page 2-19**

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External Pressure



Internal Pressure

Part Number Example

Table 6-7. Metric Face Seal Part Number

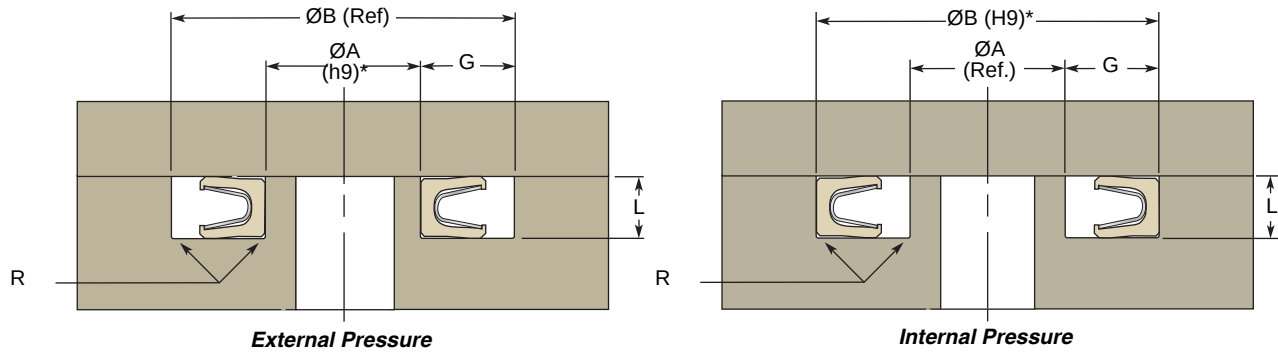
M	5	0	2	FE	N	0	2	5	0	0	2	9	5	0	0	3	3	S	H
Material Code				External Face Seal No Lip Style		Cross-Section				Gland ID				Seal Height		Spring Material		Helical Spring	

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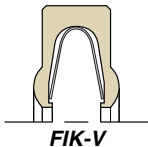
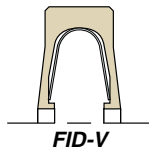
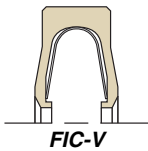
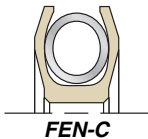
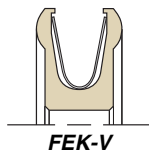
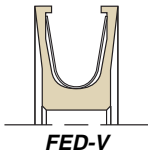
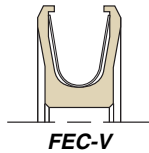
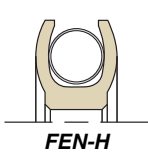


Gland Dimensions — FE & FI Profiles

Table 6-8. FE & FI Metric Gland Dimensions



Each of these FlexiSeal profiles were designed to fit into the metric glands on this page.



Cross-Section Callout	Gland Cross-Section	Heel Height Callout	Min. Groove Width (G)	Max Radius (R)
0200	2.00/2.05 mm	021	2.39 mm	0.18 mm
0250	2.50/2.55 mm	033	3.58 mm	0.25 mm
0400	4.00/4.05 mm	043	4.78 mm	0.25 mm
0500	5.00/5.05 mm	066	7.14 mm	0.38 mm
0700	7.00/7.08 mm	090	9.53 mm	0.38 mm

* For ISO Tolerances see Appendix D.

Example Part Numbers

Part Number	Groove ID (A) in mm	Groove OD (B) in mm	Groove Depth (L) in mm	Groove Width (G) in mm
FED-V Profile				
M601FED025002450033EVM	24.50 +.00/-.05	31.66 min.	2.50/2.55	3.58 min.
FIN-C Profile				
M301FIN050025500066HCH	255.00 max.	269.28 +.13/-.00	5.00/5.05	7.14 min.

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