

Felton's Metal Strip Brushes...

Description

Aluminum Extrusions/Flex-Guard® (stocked brushes)

H-Strip

Standard Sizes/Shapes and Designs

Mounting/Trims

Materials/Filaments

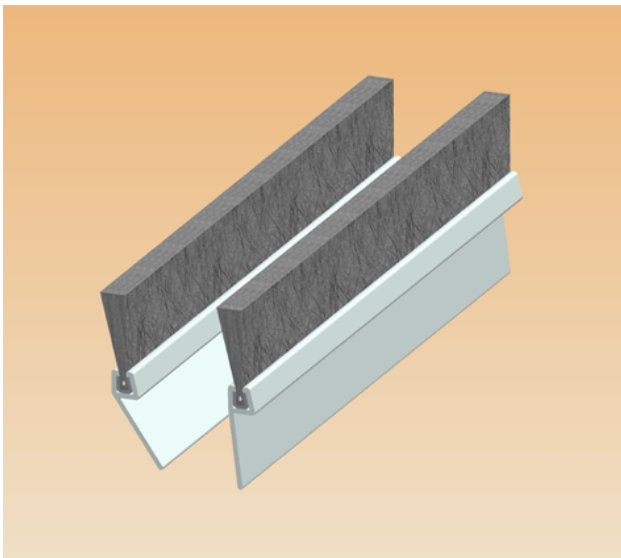
How We Do It

Description

...are simple to manufacture, ideally suited to highly automated, high volume production and—after basic manufacture—can be easily coiled or formed into special shapes and configurations, or combined into special assemblies.

There are no tooling costs unless an application requires special forms, trims and channel shapes, or secondary-assembly tooling is needed.

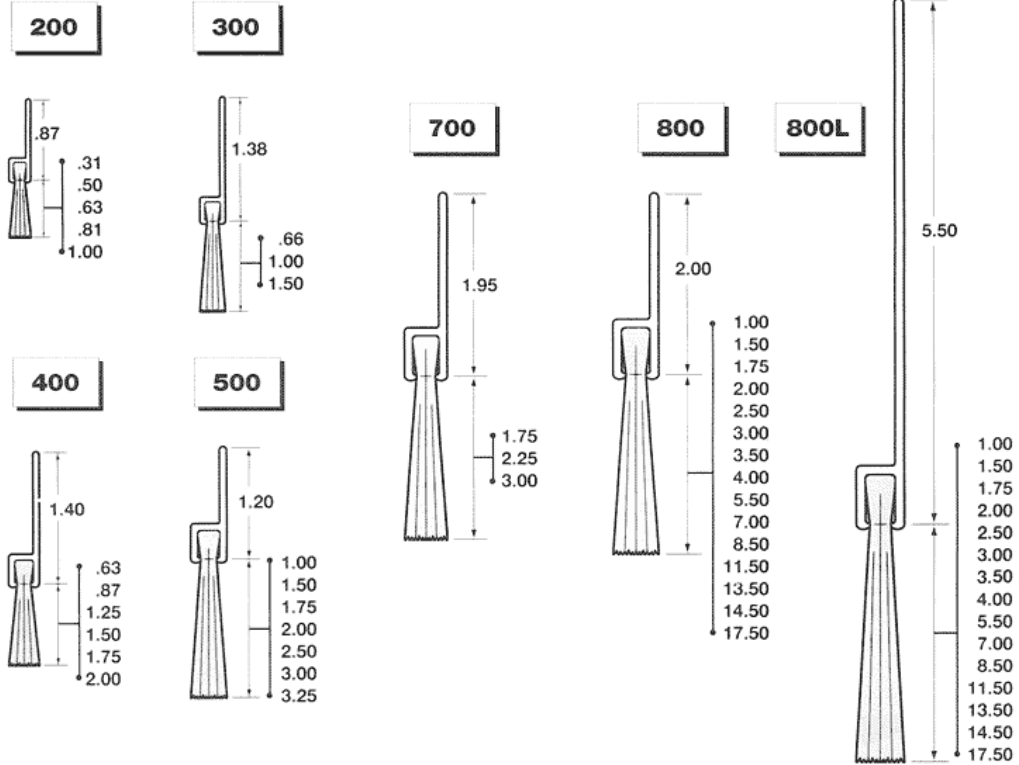
Aluminum Extrusions/Flex-Guard® (Stocked Brushes)



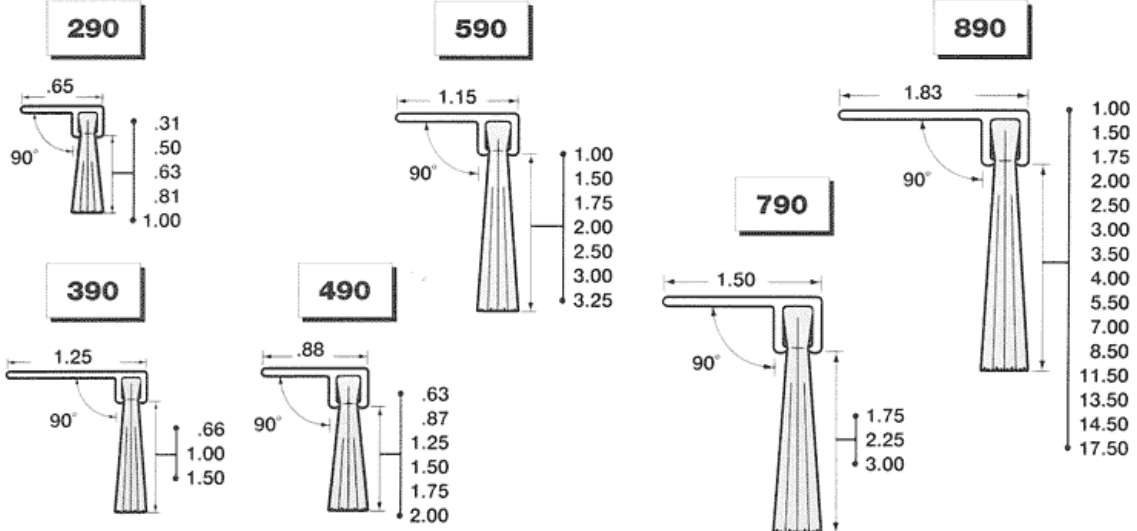
Straight strip in aluminum extrusions. Originally designed for weather stripping applications, these products are used to economically solve a broad range of in-plant and OEM applications. See list below for standard sizes.



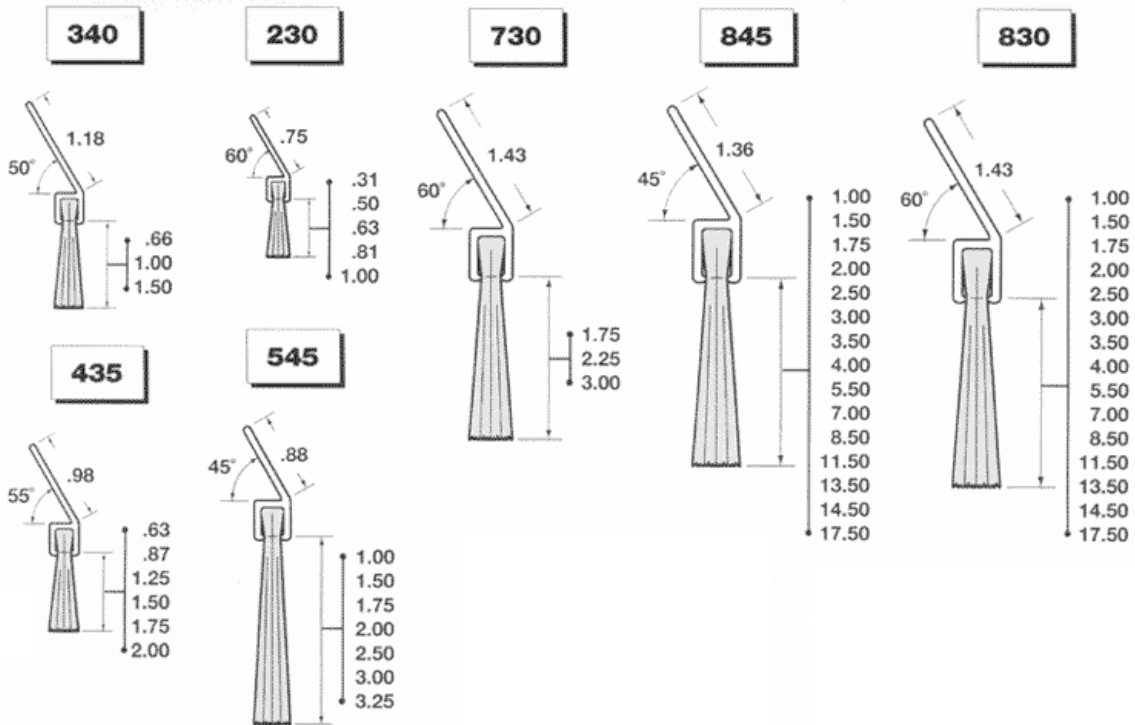
Straight Mounting



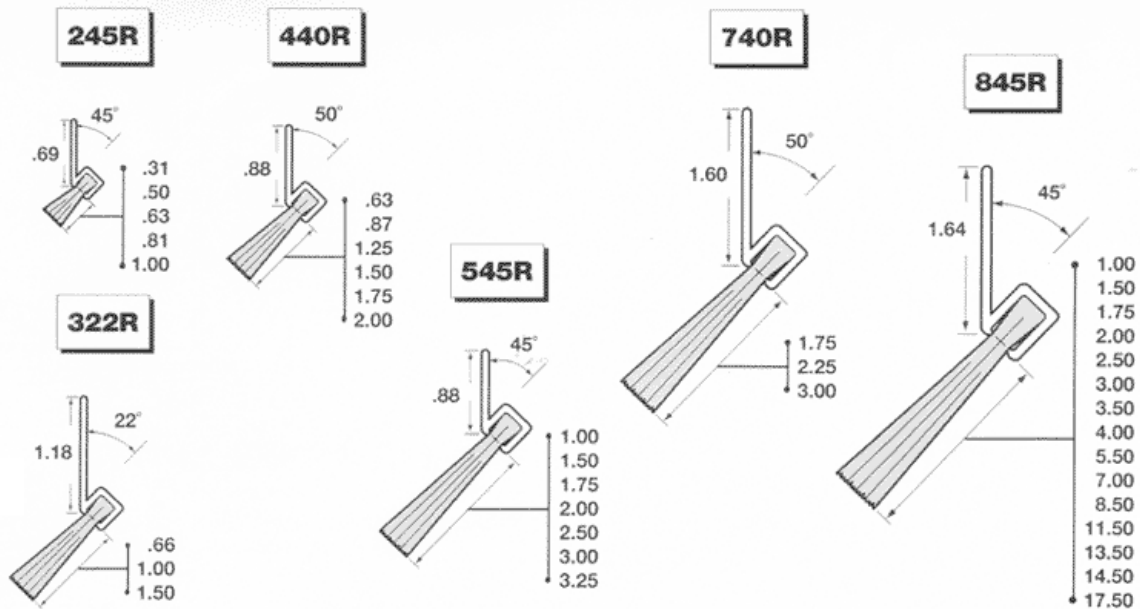
Right Angled Mounting



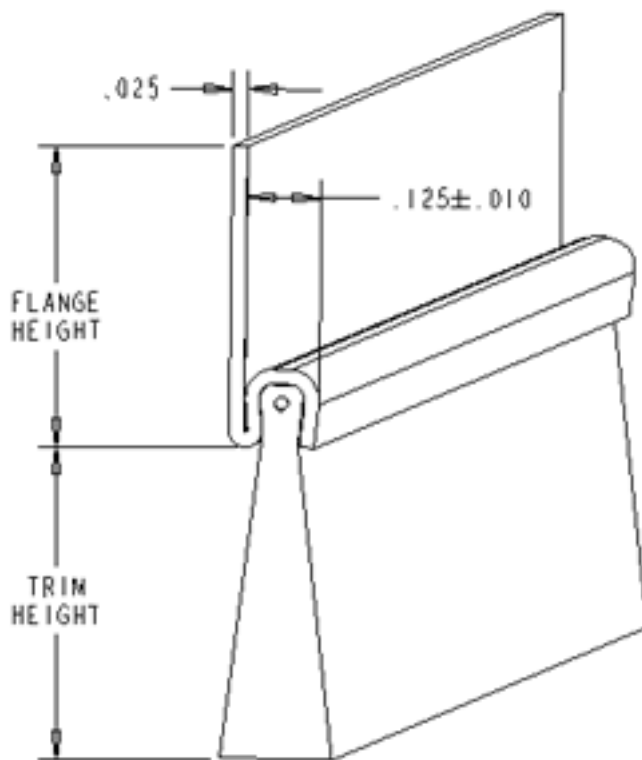
Angled Mounting



Reverse Angled Mounting



H-Strip



STANDARD FLANGE HEIGHTS

.250 - .312 - .375

The H-strip combines an “all-in-one” design with integrated strip brush, brush-in-extrusion, and a mounting flange. For the designer, the H-strip eliminates parts, facilitates assembly, and reduces cost and installation time. In addition, a wide range of special options and additional sizes is available to the high-volume, OEM, users.

Standard Sizes/Shapes and Designs

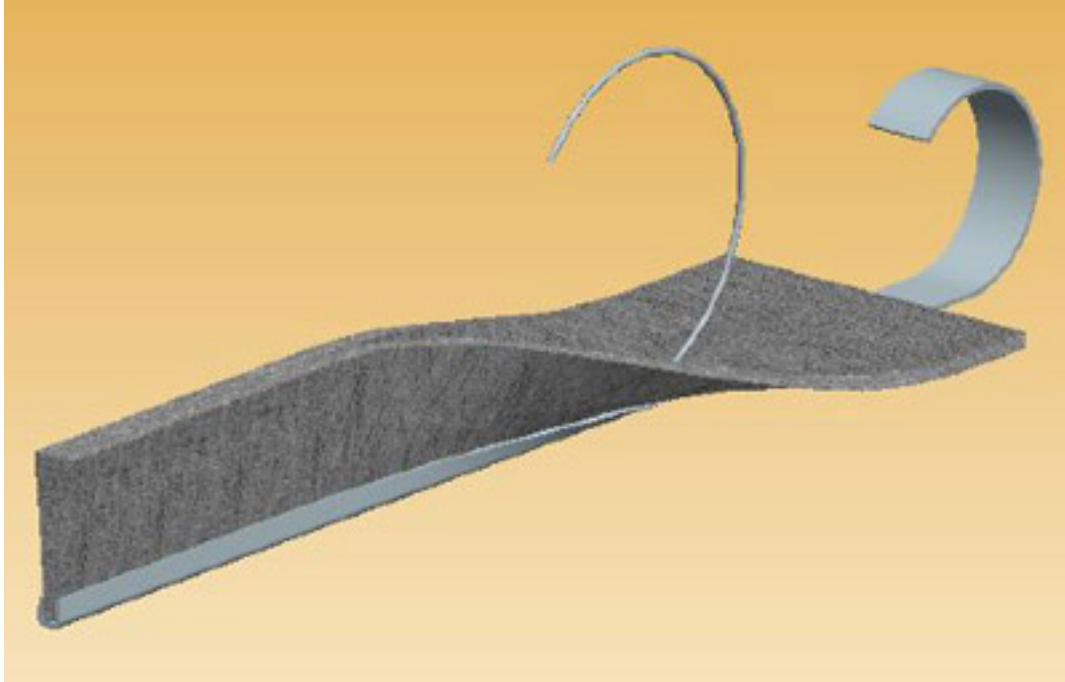
The size and shape of the metal channel determines, for the most part, brush size and density. Although its primary function is to hold the fill material, the channel itself can be used as a mounting surface or designed to fit into shaped holders.

The standard channel shape is “flat back, as shown below. Other shapes are possible with special tooling.

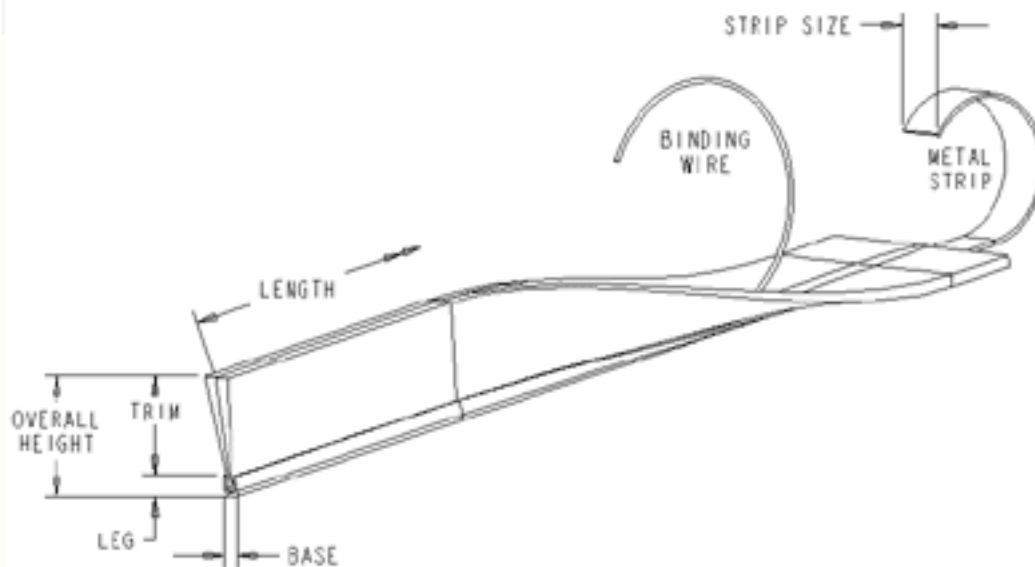


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Please note: Although different manufacturers may use the same size letter and number for a strip brush, there may be significant differences in the actual dimensions after forming. As a result, if the strip brush is to be inserted into an extrusion, holder, bracket assembly, or mating part, Felton may ask to retain a sample for use as an additional gauge to insure proper fit.



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Channel Size Chart

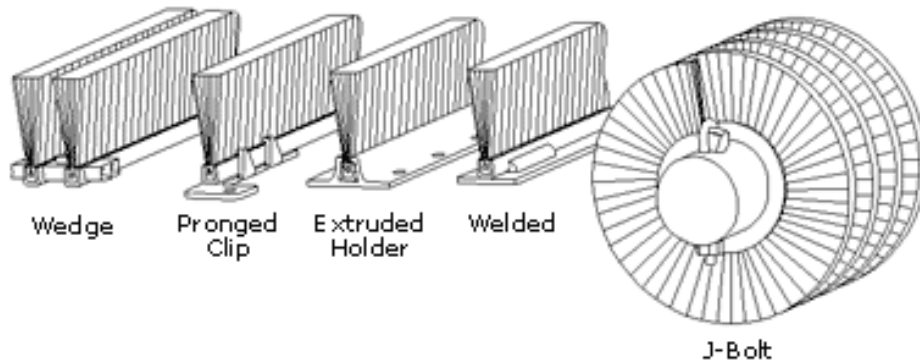
Strip size	No.	Letter	Base width +/- .010	Leg height +/- .015	Bristle Dia's.
1/4	2	AA	0.100	0.105	.003-.014
5/16	2-1/2	A	0.125	0.125	.003-.020
3/8	3	B	0.147	0.148	.003-.024
1/2	4	C	0.186	0.202	.003-.028
5/8	5	D	0.230	0.254	.003-.032
3/4	6	E	0.275	0.290	.003-.045
7/8	7	F	0.297	0.350	.003-.060
1	8	G	0.312	0.411	.003-.060
1-1/8	9	H	0.350	0.460	.003-.060
1-1/4	10	I	0.470	0.480	.003-.060

Mounting/Trims

Pronged clips are the standard means of attachment. Metal strip brushes can also be secured by the other special mounts shown below, mounted with epoxy, welded, or inserted into specially molded (or cast) rubber, plastic, or metal holders.



Mounting Methods



Trim Shapes



Flat

Standard trim as manufactured



Bevel

Elongates surface and reduces brush resistance



Offset

Less density at surface with backup support to brush





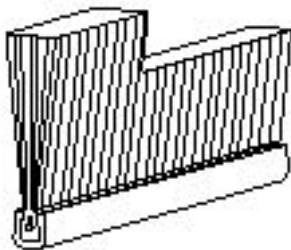
End Notch

For utilizing ends of the strip as holding areas



Slotted

Allows air or liquid to pass through brush



Stepped

For uniform brush contact on irregular surfaces

Materials/Filaments

Synthetic

Synthetic fill materials are either straight (level) or crimped. Crimping provides a denser appearance to the brush and provides a more even brushing action. Fill diameters range from .003" to .125". Synthetics fill offers a broad range of characteristics and prices.



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Nylon

Type 6.12

Superior type nylon used in applications calling for low water absorption, good recovery, and abrasion resistance

Type 6.6

Top quality, medium-priced with better wet- and dry stiffness than nylon 6; type 6.6 offers good bend recovery, as well as high heat- and abrasion resistance.

Type 6

A durable, low-cost nylon bristle

Polyester

Polyester offers many of the properties of nylon but does not lose its stiffness when wet. Polyester has excellent bend recovery and is a lower cost alternative to nylon 6.12.

Polypropylene

This versatile filament fits a wide variety of applications. Polypropylene has excellent wet stiffness, abrasive tip cleaning action, lower recovery than nylon, it's non-brittle and inert to most solvents, oils, acids, and chemicals.

Polystyrene

Polystyrene is an economical, flaggable filament available in a wide range of sizes and colors.

Abrasive Nylon

This is monofilament, impregnated with either silicon carbide or aluminum oxide, is long-wearing and extremely abrasive. Available in several sizes and grits, from .018 diameter x 500 grit up to .060 diameter x 46 grit.



Natural

Horse Hair

Available in black and gray, and several grades from very soft to quite stiff. Cost is in the medium-high to high range.

Goat Hair

Very fine and soft, but more expensive than horse hair.

Tampico

This vegetable fiber features a soft-to-medium texture that can withstand high heat and softens in water.

Bristle

Bristle is the stiffest of all natural materials. The material has a natural taper from the butt end to the tips.

Wire

High carbon steel, stainless steel, brass and phosphorous bronze are the most common materials; diameters range from .003" to the mid-.020" range. Wire can be either straight or crimped.

Specifications of Filaments and Fibers

Key: E = excellent, G = good, F = fair, P = poor

Material/Data	Nylon 6	Nylon 6.6	Nylon 612	Polypro.	Polyester	Horsehair	Bristle	Vegetable Fiber
Diameters Available	.003-.060	.003-.060	.003-.060	.006-.060	.006-.060	--	--	--
Spec. Gravity	1.13	1.04	1.04	.90-.91	1.32	1.36	1.32	Varies
Tensile Strength (psi)	50M-60M	60M-70M	50M-60M	50M-80M	40M-50M	--	--	--
Melting point (F)	420	500	410	335	430	--	--	--



Heat Distortion (F)	250	250	250	225	250	--	--	--
Bend Recovery %	90	90	90	70-80	90	--	--	--
Dry Stiffness (psi)	450M	500M	450M	850M	450M	--	--	--
Wet Stiffness (psi)	65M	425M	415M	825M	447M	--	--	--
Abrasion Resistance	G	G	E	G	E	F	F	P
Bend Recovery	E	E	E	F	E	F	F	P
Resistance to set	G	G	G	P	G	G	G	F
Retention of stiffness in water	P	F	G	E	E	F	G	P

RESISTANCE

Dilute Acids	P	F	G	E	G	--	--	--
Strong Acids	F-G	F-G	F-G	G	F-G	--	--	--
Petroleum Distillates	E	E	E	G	E	--	--	--
Acetones & Keytones	G	G	G	E	E	--	--	--
Ethylacetates	G	G	E	G	E	--	--	--
Trichlorethylene Hydrocarbones	G	G	E	F-G	F-G	--	--	--
Hot Water	F-G	G	G	F-G	F-G	E	E	E
Prolonged Hot Water	G	G	G	P	G	G-E	G-E	F



How we do it

Felton manufactures strip brushes by laying filaments (natural, synthetic or wire) over a continuous metal channel while it is being formed into a U-shape. Simultaneously, we insert binding wire to force the bristle material down to the bottom of the newly formed channel. The bristle material aligns vertically as the strip is closed together. Next, we trim the brush to the required height and cut it to length.

Straight lengths are virtually unlimited; pieces can be as short as 3/8" (in the smaller strip sizes), or as long as 12'.

Felton can also manufacture strip brushes in a wide range of **standard and special configurations**. Metal-holding channels (steel, stainless, aluminum, or brass) and metal or plastic binding wires offer malleability for forming and coiling, yet they also provide consistent dimensional stability, repeatability, and structural integrity. For plastic channels, see our DesignFlex™ product line.

We offer a variety of **bristle material options**, as well as a range of solid materials such as felt, plastic and rubber, which can be inserted alone or combined with the bristle material.

Advantages

Along with Felton's wide range of design possibilities, strip brushes require minimum labor and low tooling costs for high output production on a highly repeatable basis.

METAL STRIP BRUSHES OFFER MAXIMUM DESIGN FLEXIBILITY:

10 Standard Sizes
Widths from .100" to .465"
Formed Shapes
High Volume Production
Repeatable Dimensions



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Close Tolerances
Coils, Internal and External
Ideal for Assemblies

Channel Materials

Different manufacturers may use the same size, letter or number for a given strip brush. There are often significant differences in the actual dimensions after forming, however.

As a result, if a strip brush is to be inserted into an extrusion, holder, bracket assembly, or mating part, Felton will retain a sample for use as an additional gauge to insure proper fit.

Felton's unique "h"-back strip brushes combine the brush and mounting flange into one unit. For the OEM designer, maintenance-, or process engineer, "h"-back strip brushes streamline parts stocking, facilitate assembly, and reduce cost and installation time.

Felton also offers a wide range of special options and additional sizes to the OEM user, in addition to various standard-sized "h"-back brushes and a variety of bristle materials.

Optional Channel Shapes

The styles and special channel shapes Felton offers are boundless; a few of the special shapes we have produced are:



If you have a specific requirement for a special channel shape, please request a quotation.



Flex-Guard® Benefits

Flex-Guard® flexible containment seals solve in-plant problems with air, dust, sound, light, chips, spray, and pest control. Felton stocks Flex-Guard® brushes in 12' lengths, with 16 extrusion or holder shapes and up to 10 separate brush heights per size.

We also offer design and production engineering for nearly 100 variations of brush seal products—all from stock, in twelve bristle textures and materials.



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