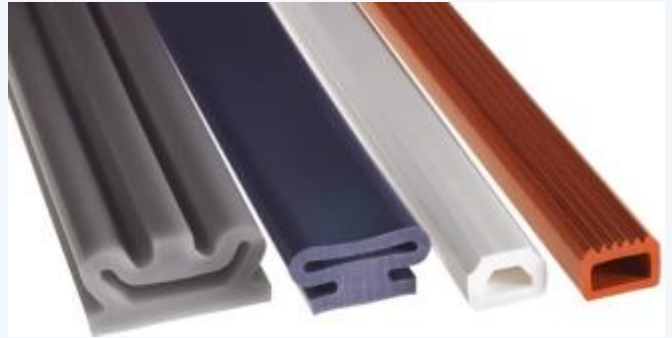


Inflatable Seals

Description

The Rubber Company manufactures rubber inflatable seals that can be used for a variety of applications.

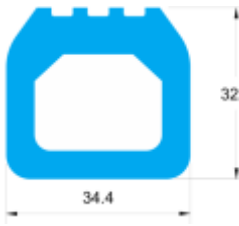
An inflatable seal is suitable when there are two surfaces that move in relation to each other that require sealing. By introducing a medium such as air or fluid, the rubber seal will begin to expand at a specified rate until a determined size of inflation is achieved.

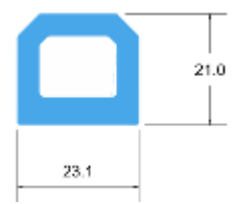


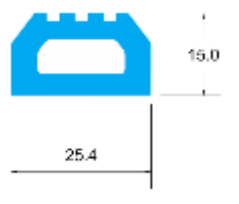
Seal Profiles

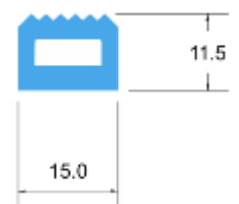
Castellated Profiles

- ✓ Are intended for heavy duty applications
- ✓ Can seal against high differential pressures
- ✓ Are commonly used in radial, axial and straight configurations
- ✓ Must have comparatively small sealing gaps

RC – IS0368 (34.4mm x 32mm)		
	Min pressure:	20 PSI
	Recommended pressure:	30 PSI
	Max pressure:	35 PSI
	Inflated Height:	38mm
	Grove specification:	33mm wide x 22mm deep
	Material:	RC-INF60

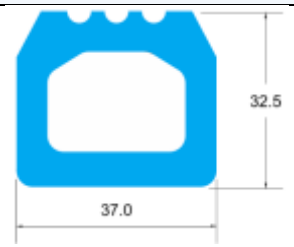
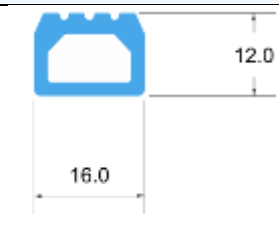
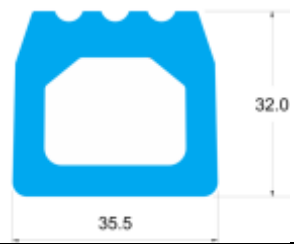
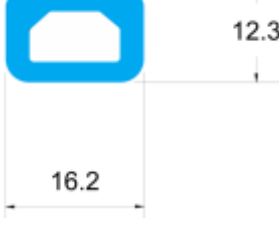
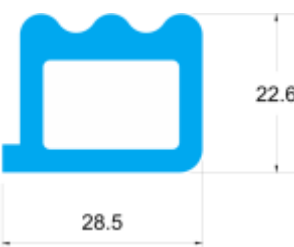
RC – IS3192 (23.1mm x 21mm)		
	Min pressure:	13 PSI
	Recommended pressure:	15 PSI
	Max pressure:	20 PSI
	Inflated Height:	25mm
	Grove specification:	21mm wide x 18mm deep
	Material:	RC-INF60

RC – IS1565 (25.4mm x 15mm)		
	Min pressure:	10 PSI
	Recommended pressure:	15 PSI
	Max pressure:	20 PSI
	Inflated Height:	19mm
	Grove specification:	25mm wide x 14.5mm deep
	Material:	RC-INF60

RC – IS3886 (15mm x 11.5mm)		
	Min pressure:	10 PSI
	Recommended pressure:	15 PSI
	Max pressure:	20 PSI
	Inflated Height:	13.5mm
	Grove specification:	-
	Material:	RC-INF60

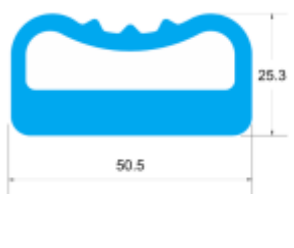
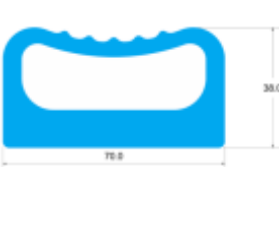
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RC – IS4145 (37mm x 32.5mm)			RC – IS4539 (16mm x 12mm)		
	Min pressure:	20 PSI		Min pressure:	10 PSI
	Recommended pressure:	30 PSI		Recommended pressure:	15 PSI
	Max pressure:	35 PSI		Max pressure:	18 PSI
	Inflated Height:	37mm		Inflated Height:	14mm
	Grove specification:	-		Grove specification:	-
	Material:	RC-INF60		Material:	RC-INF60
RC – IS5101 (35.5mm x 32mm)			RC – IS5233 (16.2mm x 12.3mm)		
	Min pressure:	20 PSI		Min pressure:	10 PSI
	Recommended pressure:	30 PSI		Recommended pressure:	15 PSI
	Max pressure:	35 PSI		Max pressure:	20 PSI
	Inflated Height:	36.5mm		Inflated Height:	14mm
	Grove specification:	-		Grove specification:	-
	Material:	RC-INF60		Material:	RC-INF60
RC – IS5917 (28.5mm x 22.6mm)					
	Min pressure:	8 PSI			
	Recommended pressure:	10 PSI			
	Max pressure:	12 PSI			
	Inflated Height:	25.5mm			
	Grove specification:	-			
	Material:	RC-INF60			


Unique Profiles


- ✓ To fit individual needs & applications

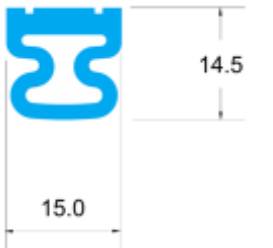
RC – IS2357 (50.5mm x 25.3mm)			RC – IS2668 (70mm x 38mm)		
	Min pressure:	8 PSI		Min pressure:	20 PSI
	Recommended pressure:	10 PSI		Recommended pressure:	25 PSI
	Max pressure:	13 PSI		Max pressure:	30 PSI
	Inflated Height:	41mm		Inflated Height:	50mm
	Grove specification:	50mm wide x 17mm deep		Grove specification:	-
	Material:	RC-INF60		Material:	RC-INF60

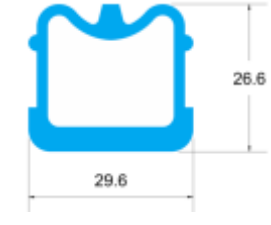
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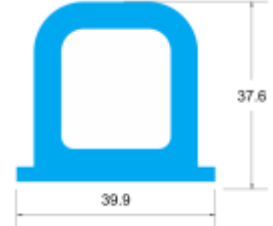
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RC – IS3104 (40mm x 28mm)		
	Min pressure:	20 PSI
	Recommended pressure:	25 PSI
	Max pressure:	35 PSI
	Inflated Height:	34mm
	Grove specification:	39mm wide x 26mm deep
	Material:	RC-INF60

RC – IS6044 (32.8mm x 28mm)		
	Min pressure:	8 PSI
	Recommended pressure:	10 PSI
	Max pressure:	15 PSI
	Inflated Height:	37mm
	Grove specification:	-
	Material:	RC-INF60

RC – IS4654 (15mm x 14.5mm)		
	Min pressure:	10 PSI
	Recommended pressure:	15 PSI
	Max pressure:	20 PSI
	Inflated Height:	17mm
	Grove specification:	25mm wide x 14.5mm deep
	Material:	RC-INF60

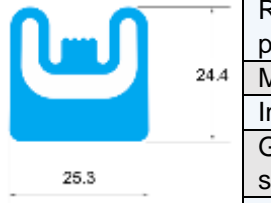
RC – IS5954 (29.6mm x 26.6mm)		
	Min pressure:	4 PSI
	Recommended pressure:	5 PSI
	Max pressure:	8 PSI
	Inflated Height:	34mm
	Grove specification:	-
	Material:	RC-INF60

RC – IS2139 (39.9mm x 37.6mm)		
	Min pressure:	20 PSI
	Recommended pressure:	30 PSI
	Max pressure:	40 PSI
	Inflated Height:	40mm
	Grove specification:	41mm with 'L' clamp fitment
	Material:	RC-INF60

RC – IS1742 (57.1mm x 25mm)		
	Min pressure:	10 PSI
	Recommended pressure:	15 PSI
	Max pressure:	20 PSI
	Inflated Height:	33mm
	Grove specification:	-
	Material:	RC-INF60

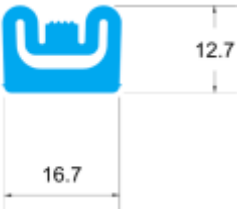
Frog Leg Profiles

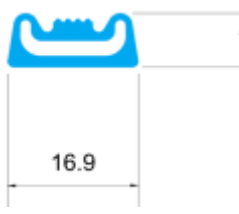
- ✓ Are designed for fitting into square channels
- ✓ Design allows expansion to cover a large distance relative to their size
- ✓ Best suit expansion axially and radially outward

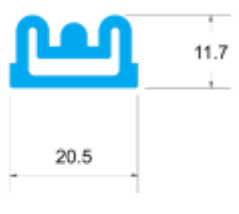
RC – IS1342 (25.3mm x 24.4mm)		
	Min pressure:	15 PSI
	Recommended pressure:	20 PSI
	Max pressure:	25 PSI
	Inflated Height:	37mm
	Grove specification:	-
	Material:	RC-INF60


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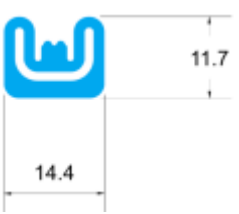
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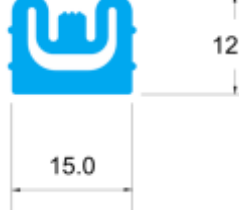
RC – IS1602 (16.7mm x 12.7mm)		
	Min pressure:	10 PSI
	Recommended pressure:	15 PSI
	Max pressure:	20 PSI
	Inflated Height:	24mm
	Grove specification:	16.5mm wide x 13.5mm deep
	Material:	RC-INF60

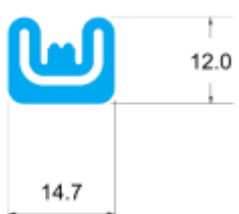
RC – IS2251 (16.9mm x 7mm)		
	Min pressure:	8 PSI
	Recommended pressure:	12 PSI
	Max pressure:	16 PSI
	Inflated Height:	11mm
	Grove specification:	16.2mm wide x 6.5mm deep
	Material:	RC-INF60


RC – IS2264 (20.5mm x 11.7mm)		
	Min pressure:	10 PSI
	Recommended pressure:	15 PSI
	Max pressure:	20 PSI
	Inflated Height:	18mm
	Grove specification:	16.5mm wide with 'L' clamp fitment
	Material:	RC-INF60

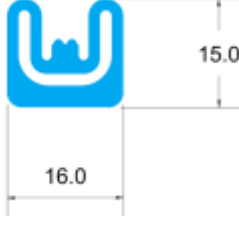
RC – IS2296 (36mm x 29mm)		
	Min pressure:	10 PSI
	Recommended pressure:	15 PSI
	Max pressure:	18 PSI
	Inflated Height:	53mm
	Grove specification:	35mm wide x 28mm deep
	Material:	RC-INF60


RC – IS2427 (14.4mm x 11.7mm)		
	Min pressure:	10 PSI
	Recommended pressure:	15 PSI
	Max pressure:	18 PSI
	Inflated Height:	19.5mm
	Grove specification:	13.8mm wide x 11.8mm deep
	Material:	RC-INF60

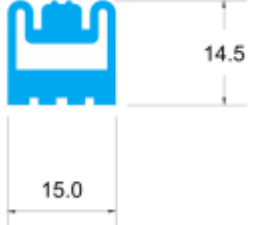
RC – IS2774 (15mm x 12.5mm)		
	Min pressure:	10 PSI
	Recommended pressure:	15 PSI
	Max pressure:	20 PSI
	Inflated Height:	19mm
	Grove specification:	15mm wide x 13.5mm deep
	Material:	RC-INF60

RC – IS3158 (14.7mm x 12mm)		
	Min pressure:	10 PSI
	Recommended pressure:	15 PSI
	Max pressure:	18 PSI
	Inflated Height:	20.5mm
	Grove specification:	13.8mm wide x 12.5mm deep
	Material:	RC-INF60

RC – IS4245 (16.4mm x 13.1mm)		
	Min pressure:	10 PSI
	Recommended pressure:	15 PSI
	Max pressure:	20 PSI
	Inflated Height:	21mm
	Grove specification:	-
	Material:	RC-INF60

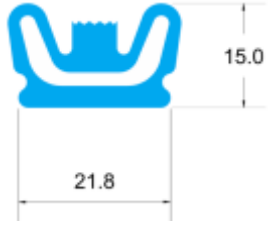
RC – IS4272 (16mm x 15mm)		
	Min pressure:	8 PSI
	Recommended pressure:	10 PSI
	Max pressure:	15 PSI
	Inflated Height:	26mm
	Grove specification:	15mm wide x 13mm deep
	Material:	RC-INF60

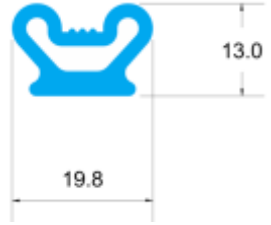
RC – IS4725 (23.4mm x 20mm)		
	Min pressure:	18 PSI
	Recommended pressure:	20 PSI
	Max pressure:	25 PSI
	Inflated Height:	35mm
	Grove specification:	23mm wide x 18mm deep
	Material:	RC-INF60

RC – IS4732 (15mm x 14.5mm)		
	Min pressure:	8 PSI
	Recommended pressure:	10 PSI
	Max pressure:	15 PSI
	Inflated Height:	20mm
	Grove specification:	-
	Material:	RC-INF60

Footed Snap Profiles

- ✓ Provide large expansion relative to their size (similar to frog leg profiles)
- ✓ Have a dovetail base design allowing them to be “snap fitted” into a mechanical retainer

RC – IS1091 (21.8mm x 15mm)		
	Min pressure:	15 PSI
	Recommended pressure:	20 PSI
	Max pressure:	25 PSI
	Inflated Height:	32mm
	Grove specification:	Mounted by sliding into appropriate 'C' shaped metal extrusion
	Material:	RC-INF60


RC – IS5974 (19.8mm x 13mm)		
	Min pressure:	8 PSI
	Recommended pressure:	10 PSI
	Max pressure:	14 PSI
	Inflated Height:	17mm
	Grove specification:	-
	Material:	RC-INF60

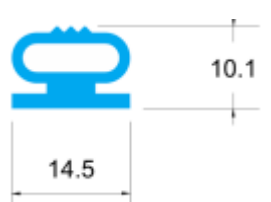
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Stem/Foot Location Profiles

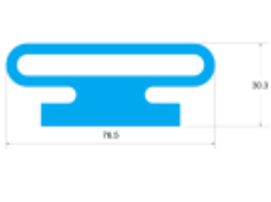
- ✓ Have a wide range of applications
- ✓ Are easily fitted into a variety of mechanical retainers
- ✓ Are fully rounded when inflated, creating a large expansion range
- ✓ Are suitable for use in radial, axial or straight applications


RC – IS1092 (30mm x 17.5mm)		
	Min pressure:	10 PSI
	Recommended pressure:	15 PSI
	Max pressure:	20 PSI
	Inflated Height:	29.5mm
	Grove specification:	30mm wide x 20mm deep
	Material:	RC-INF60

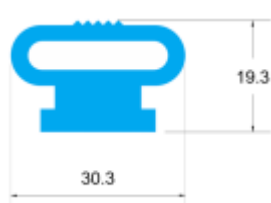
RC – IS2969 (14.5mm x 10.1mm)		
	Min pressure:	8 PSI
	Recommended pressure:	10 PSI
	Max pressure:	15 PSI
	Inflated Height:	15mm
	Grove specification:	14.5mm wide x 8mm deep
	Material:	RC-INF60

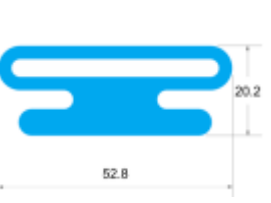
RC – IS3069 (42.9mm x 21mm)		
	Min pressure:	15 PSI
	Recommended pressure:	20 PSI
	Max pressure:	25 PSI
	Inflated Height:	49mm
	Grove specification:	-
	Material:	RC-INF60

RC – IS4418 (51.4mm x 23mm)		
	Min pressure:	15 PSI
	Recommended pressure:	20 PSI
	Max pressure:	25 PSI
	Inflated Height:	42mm
	Grove specification:	-
	Material:	RC-INF60

RC – IS4565 (76.5mm x 30.3mm)		
	Min pressure:	8 PSI
	Recommended pressure:	10 PSI
	Max pressure:	15 PSI
	Inflated Height:	63mm
	Grove specification:	-
	Material:	RC-INF60

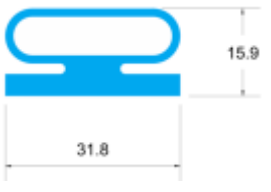
RC – IS4739 (30.3mm x 18.8mm)		
	Min pressure:	8 PSI
	Recommended pressure:	10 PSI
	Max pressure:	15 PSI
	Inflated Height:	28mm
	Grove specification:	-
	Material:	RC-INF60


RC – IS4822 (30.3mm x 19.3mm)		
	Min pressure:	8 PSI
	Recommended pressure:	10 PSI
	Max pressure:	15 PSI
	Inflated Height:	27mm
	Grove specification:	-
	Material:	RC-INF60

RC – IS5485 (52.8mm x 20.2mm)		
	Min pressure:	20 PSI
	Recommended pressure:	25 PSI
	Max pressure:	30 PSI
	Inflated Height:	42mm
	Grove specification:	-
	Material:	RC-INF60

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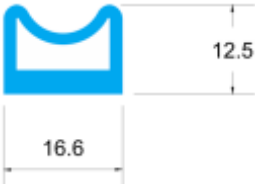
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RC – IS6154 (31.8mm x 15.9mm)		
	Min pressure:	5 PSI
	Recommended pressure:	8 PSI
	Max pressure:	12 PSI
	Inflated Height:	26mm
	Grove specification:	-
	Material:	RC-INF60

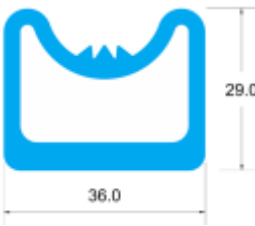
RC – IS6226 (30mm x 17.5mm)		
	Min pressure:	8 PSI
	Recommended pressure:	10 PSI
	Max pressure:	15 PSI
	Inflated Height:	29mm
	Grove specification:	-
	Material:	RC-INF60


Channel-Fit Profiles

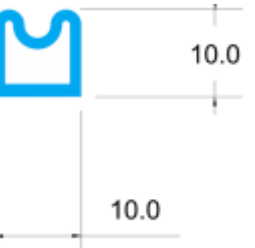
- ✓ Their expansion design allows a large coverage relative to their width
- ✓ Can be easily retained in a square channel
- ✓ Are most suited for applications requiring outward and axial expansion

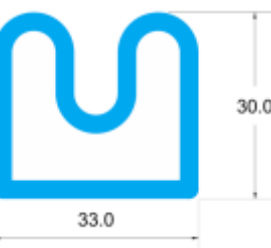
RC – IS2924 (16.6mm x 12.5mm)		
	Min pressure:	10 PSI
	Recommended pressure:	15 PSI
	Max pressure:	20 PSI
	Inflated Height:	18.5mm
	Grove specification:	16mm wide x 13.5 mm deep
	Material:	RC-INF60

RC – IS3015 (14mm x 10mm)		
	Min pressure:	10 PSI
	Recommended pressure:	15 PSI
	Max pressure:	20 PSI
	Inflated Height:	14.5mm
	Grove specification:	-
	Material:	RC-INF60

RC – IS3074 (36mm x 29mm)		
	Min pressure:	15 PSI
	Recommended pressure:	20 PSI
	Max pressure:	25 PSI
	Inflated Height:	52mm
	Grove specification:	35mm wide x 26mm deep
	Material:	RC-INF60

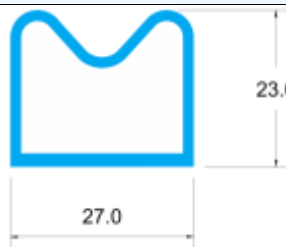
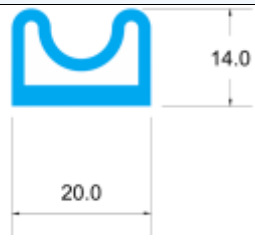
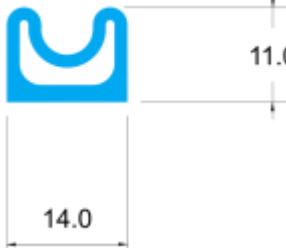
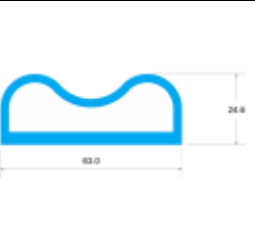

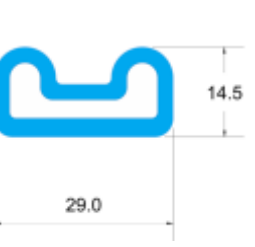

RC – IS3091 (14mm x 13mm)		
	Min pressure:	10 PSI
	Recommended pressure:	20 PSI
	Max pressure:	25 PSI
	Inflated Height:	23mm
	Grove specification:	13.5mm x 14mm deep
	Material:	RC-INF60

RC – IS3991 (10mm x 10mm)		
	Min pressure:	5 PSI
	Recommended pressure:	8 PSI
	Max pressure:	10 PSI
	Inflated Height:	13mm
	Grove specification:	-
	Material:	RC-INF60

RC – IS4008 (33mm x 30mm)		
	Min pressure:	15 PSI
	Recommended pressure:	20 PSI
	Max pressure:	25 PSI
	Inflated Height:	42mm
	Grove specification:	-
	Material:	RC-INF60

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RC – IS4681 (27mm x 23mm)			Min pressure: 5 PSI Recommended pressure: 8 PSI Max pressure: 15 PSI Inflated Height: 30mm Grove specification: - Material: RC-INF60
RC – IS4805 (20mm x 14mm)			Min pressure: 5 PSI Recommended pressure: 5 PSI Max pressure: 10 PSI Inflated Height: 19mm Grove specification: - Material: RC-INF60
RC – IS4812 (14mm x 11mm)			Min pressure: 10 PSI Recommended pressure: 15 PSI Max pressure: 18 PSI Inflated Height: 17mm Grove specification: - Material: RC-INF60
RC – IS4893 (63mm x 24.6mm)			Min pressure: 5 PSI Recommended pressure: 5 PSI Max pressure: 10 PSI Inflated Height: 34mm Grove specification: - Material: RC-INF60
RC – IS5296 (24mm x 24mm)			Min pressure: 8 PSI Recommended pressure: 12 PSI Max pressure: 15 PSI Inflated Height: 34mm Grove specification: - Material: RC-INF60
RC – IS5407 (29mm x 15.5mm)			Min pressure: 8 PSI Recommended pressure: 10 PSI Max pressure: 15 PSI Inflated Height: 21mm Grove specification: - Material: RC-INF60
RC – IS5592 (45mm x 45mm)			Min pressure: 6 PSI Recommended pressure: 8 PSI Max pressure: 10 PSI Inflated Height: 70mm Grove specification: - Material: RC-INF60

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Applications



Transportation & Rail



Marine



Pharmaceutical



Aerospace

Other Applications:

- ✓ Nuclear Vessels
- ✓ Pneumatic Conveyors
- ✓ Chemical Processing
- ✓ Medical
- ✓ Sliding or quick lock doors

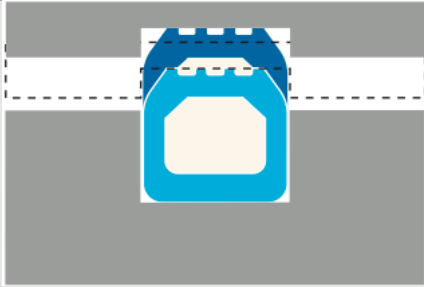
- ✓ Telecommunications
- ✓ Power generation
- ✓ Autoclaves and sterilisers
- ✓ Mechanical handling
- ✓ Storage and transport containers

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Handling Uses & End Plugs

Inflatable Seals have various handling uses for intricate objects, examples illustrated below.



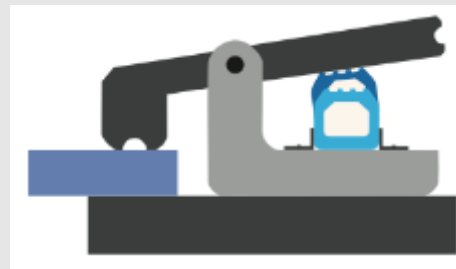
Lifting



Pressing



Holding



Clamping

End Plugs

Seals can also be manufactured in straight lengths, by sealing the ends of extrusions with solid plugs. The plugged segment of the inflator is neutralised and does not expand. Illustrated below in image 1 are retracted ends. To clasp the inflatable seal in position and stop tearing caused by expansion, flanges are essential, displayed in image 2.

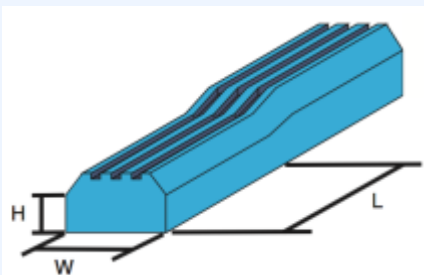


Image 1

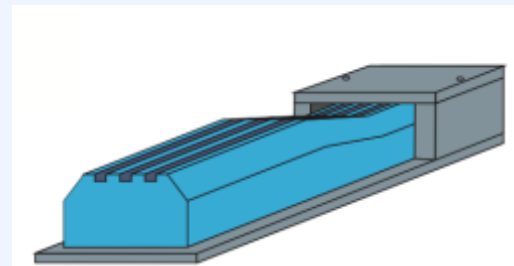
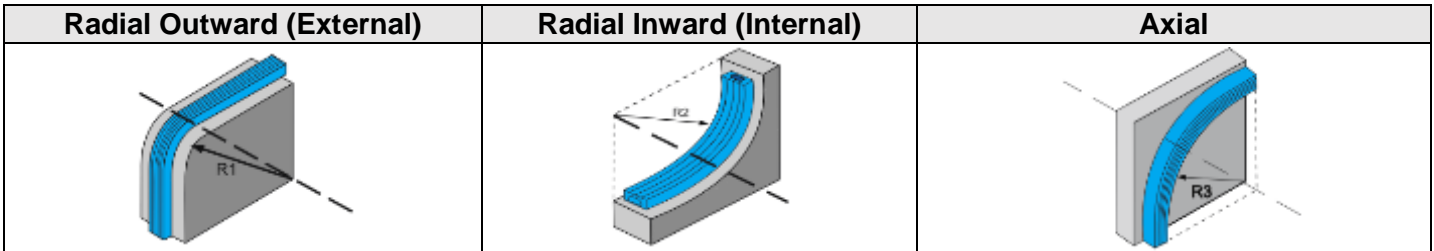


Image 2

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Minimum Radius by Direction of Expansion



Inflatable seals can be produced in a extensive variety of shapes and sizes. The seals can be provided in continuous loops and expand radially inwards and outwards, in addition to axially. Using pre-moulded corners, the seals can be made into axial expanding rectangles, “U” shapes or similar. By sealing the ends of a length of extrusion, straight length inflator seals can also be produced. In the cases of tight corners, moulder corners will be needed, but usually the inflator profiles will fit to the corners of a given application.

Illustrated above are three different seal configurations, commonly radial outward, radial inward and axial.

Presented in the tables below are the minimum bend radii for radial outwards, inwards and axial expansion.

Minimum Radius in Direction of Expansion

Inflator	External	Internal	Axial
368	130	500	450
1091	130	230	210
1092	150	420	335
1342	210	195	250
1565	40	140	140
1602	40	140	120
1742	205	185	420
2139			
2251	35	120	90
2264	90	150	440
2296	145	190	400
2357	125	240	450
2427	40	90	70
2668	200	20	N/A
2774	80	180	150
2924			
2969			
3015			
3069	150	220	255
3074	N/A	150	N/A
3091	100	180	130
3104	160	130	300
3158	75	135	200
3192	60	110	150
3886			
3991			

Minimum Radius in Direction of Expansion

Inflator	External	Internal	Axial
4008			
4145	250	350	500
4245			
4272	40	100	80
4418	275	280	485
4565			
4654			
4725	70	150	130
4732			
4739	80	150	130
4822			
4893			
5101			
5233			
5296			
5407			
5485	245	275	N/A
5592			
5917	220	425	390
5954			
5974			
6044	160	280	250
6154	150	180	465
6158			
6226			

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RC-INF60 - Data Sheet

Description:

A custom compound purposely intended for use in the production of inflatable seals. Features include high tear strength. Supplied in colour; cobalt blue only.

FDA approved to 21 CFR 177.2600

Characteristics:

Shore hardness:	60° ± 5°		
Tensile Strength:	10MPA		
Specific Gravity:	1.16		
Compression Set:	35%		
Elongation at break:	450%		
Temperature range°:	-70°C	to	+200°C
Tear Strength:	25Kn/M		

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