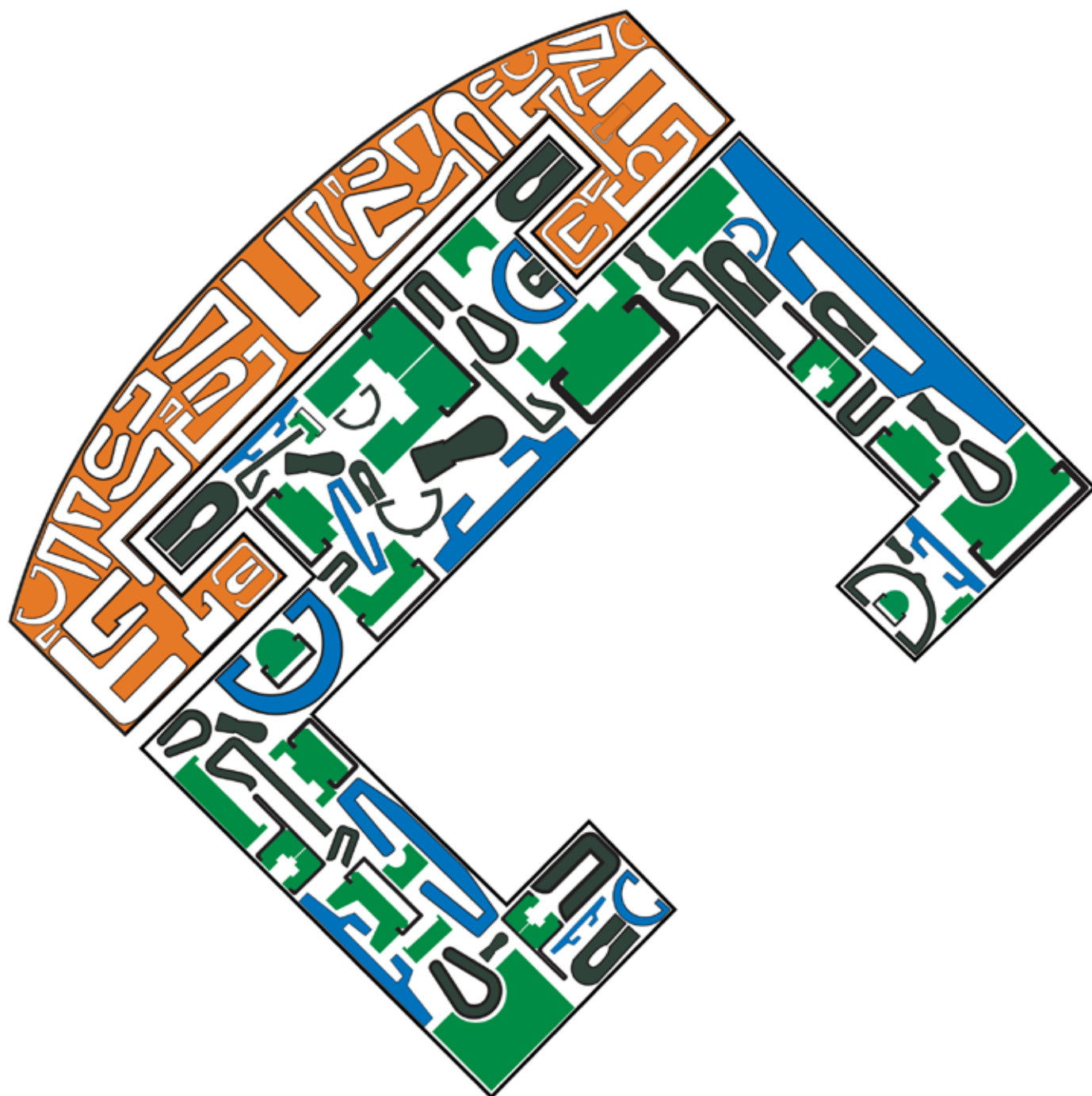


# Pennine Industrial Equipment

Products for the material handling industry



Chain and Belt Guides

UHMW-PE Rods & Sheets

UHMW-PE Extruded Wear Strips

UHMW-PE Rectangles & Slit Tape

Custom Machined Plastic Components

# Custom Machined Plastic Components

Pennine Industrial Equipment manufactures a wide range of plastic machined components utilising a comprehensive range of materials to cover a large range of applications.

Components are manufactured on modern CNC machines using the latest direct CAD/CAM facilities to reduce cycle times and maximise component nesting to reduce overall costs.

Typical materials: UHMW-PE, HMW-PE, nylons, PTFE, acetal, PVC, PEEK, oil filled nylon and oil impregnated polyethylene materials for higher speeds.

We also work in technically advanced plastics for high temperature, low friction, high impact and anti-static applications.

Pennine Industrial Equipment also machine components in materials which are suitable for direct contact with food and are chemical resistant. A wide range of colours are available.

Components can be machined from our PremDetect metal detectable plastic to warn of potential contamination in the food, beverage and pharmaceutical industries.

Contact our sales department supported by qualified design engineers, who can advise on the correct product design and material specification.



## Sheets

Pennine Industrial Equipment offers UHMW-PE sheets in:

1000 grade

Regenerated 1000 grade

500 grade

Self lubricated grades

Anti-static grades

Metal detectable grades

Standard sheet thicknesses range from 10mm to 100mm from stock. Other sizes are available on request.

Standard sheet sizes are:

2 metre x 1 metre

3 metre x 1 metre

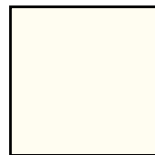
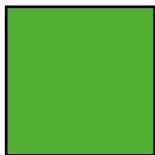
Standard colours are:

Green

Blue

Black

Natural

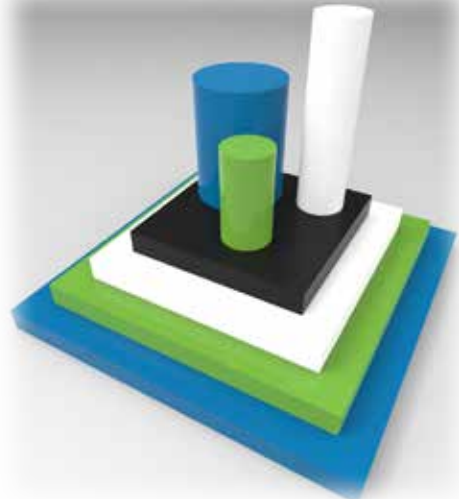


Pennine can also offer a full range of pre-cut rectangles manufactured from any of the above materials and supplied in either two or three metre lengths.

A full cutting service is available for non-standard lengths, e.g. blocks and chopping boards etc.

## Rods

Pennine Industrial Equipment can supply UHMW-PE rod in either 1000 grade, self-lubricated grades and PremDetect metal detectable. Lengths are normally one metre long, however longer lengths are available on request. White, green, black and blue are standard colours (self-lubricated - grey only, PremDetect - blue only), other colours available on request.

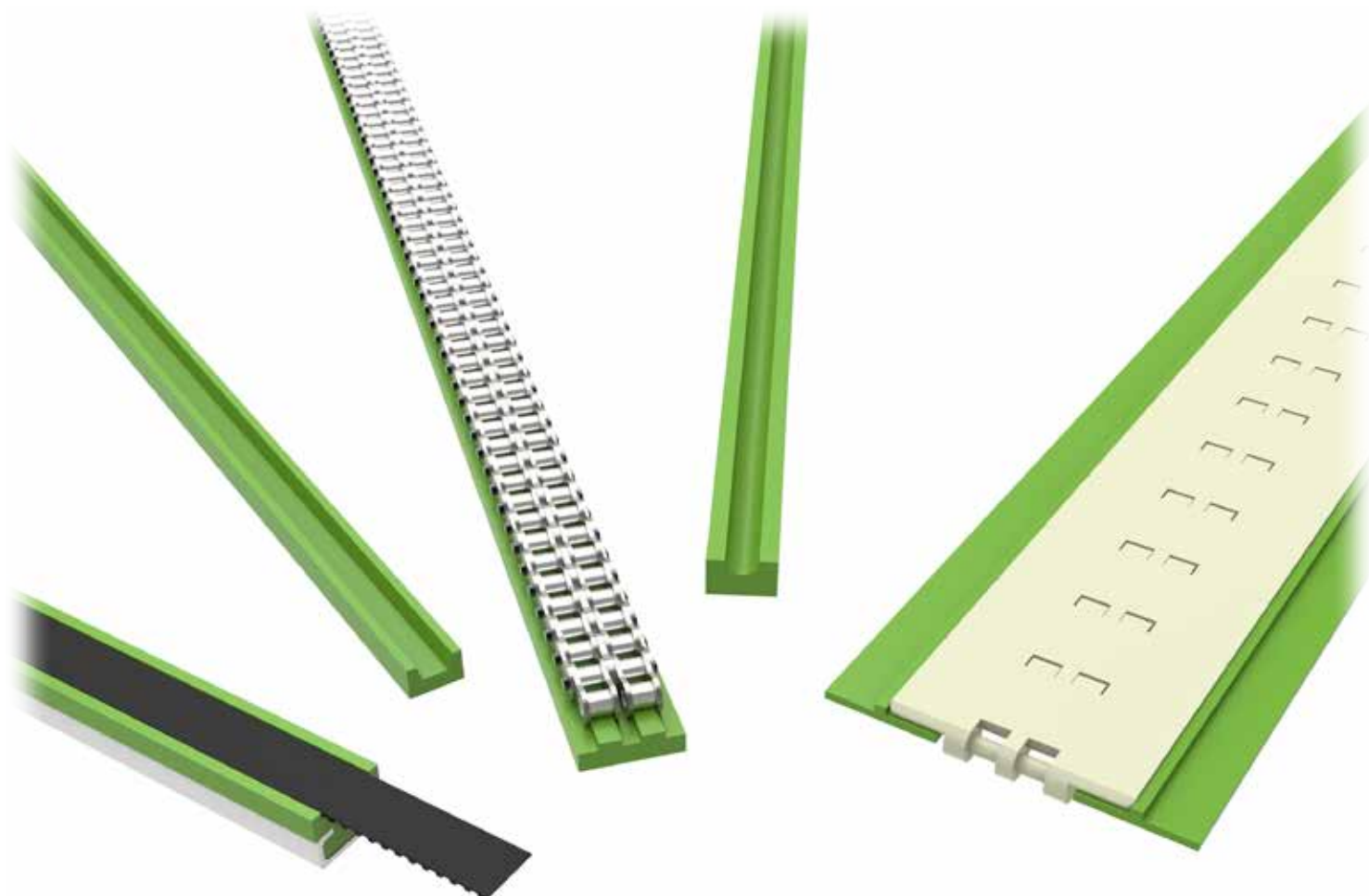


# Chain and Belt Guides

Pennine Industrial Equipment hold in stock a large standard range of both chain and belt guides, and have full machining facilities to produce any custom chain guide or belt guide required by the customer. Most popular guides are manufactured in UHMW-PE. This material has excellent impact and wear resistance, with self-lubricating and non water absorbing properties. All of this makes it an ideal material for the support and guidance of roller chain, belts and other steel chains. Use of these sections not only supports the chain but also prevents chain vibration and assists in reducing drag. This, therefore extends the life expectancy of the chain and reduces bearing and motor loads.

Most chain and belt guides are made from regenerated UHMW-PE to reduce cost whilst losing none of the material's properties, the standard stock colour is green, however as with all custom made parts, we can supply in virgin (food grade), self lubricating, anti-static, and high temperature materials.

A wide range of colours are also available, for example, blue is popular in the food industry.



# Standard Chain and Belt Guides

Manufactured as standard in green regenerated 1000 grade UHMW-PE. Also available in 1000 grade, anti-static grades, self lubricated grades, high temperature grades and a range of colours. Pennine also supply a large range of metal C-Profiles in galvanised or stainless steel.



GR1



GR2



GR3



GR1C



GL1A



GR1G



GR1GC



GL1AC



CF



R/V Belt



RM Round  
Belt



R/ Flat Belt



GL1BC



GL1B-C



GR2C



G1BCV



GL1BC-H



HR 2020



RMC Round  
Belt



RC/V Belt

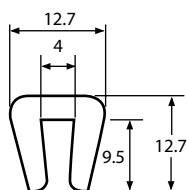


If the profile you require is not shown above, all custom-made specials are manufactured in-house on short deliveries. Full dimensions of all the profiles are available online or by scanning the QR code.

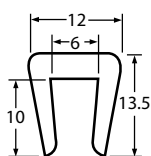


# Standard UHMW-PE Extruded Wear Strips

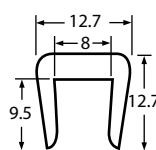
1000 grade UHMW-PE wear strips with outstanding resistance to impact and wear. All UHMW-PE wear strips are FDA and USDA approved for direct contact with food. Although these profiles are supplied as standard in White 1000 grade UHMW-PE they are also available in anti-static UHMW-PE, lubricated UHMW-PE and custom colours. Standard lengths 10ft, 20ft or coils up to 500ft. Coils can be cut into multiples of 100ft upon request.



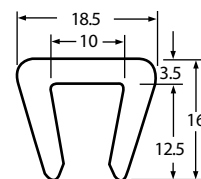
**PIE 248 •**  
4mm Snap On



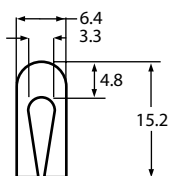
**PIE 241 •**  
6mm Snap On



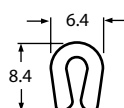
**PIE 242 •**  
8mm Snap On



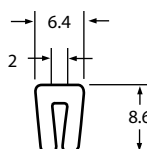
**PIE 243 •**  
10mm Snap On



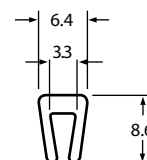
**PIE 215 •**  
 $\frac{1}{16}$ " or 1.5mm Snap On



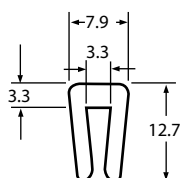
**PIE 216 •**  
 $\frac{3}{32}$ " or 2.3mm Snap On



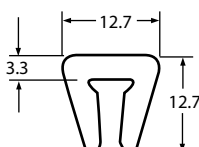
**PIE 217 •**  
 $\frac{1}{16}$ " or 1.5mm Snap On



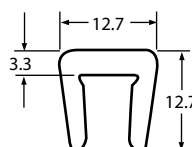
**PIE 218 •**  
 $\frac{1}{8}$ " or 3.0mm Snap On



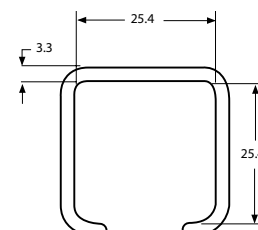
**PIE 219 •**  
 $\frac{1}{8}$ " or 3.0mm Snap On



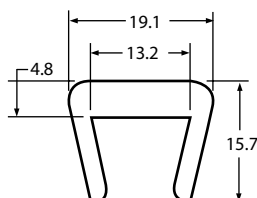
**PIE 220 •**  
 $\frac{3}{16}$ " or 4.8mm Snap On



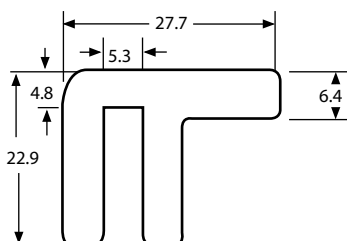
**PIE 221 •**  
 $\frac{1}{4}$ " or 6.4mm Snap On



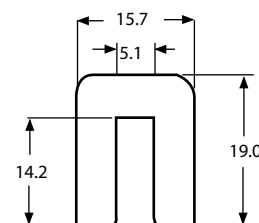
**PIE 227 •**  
1" x 1" Bar



**PIE 223 •**  
 $\frac{1}{2}$ " or 12.7mm Snap On



**PIE 232 •**  
5mm Snap On



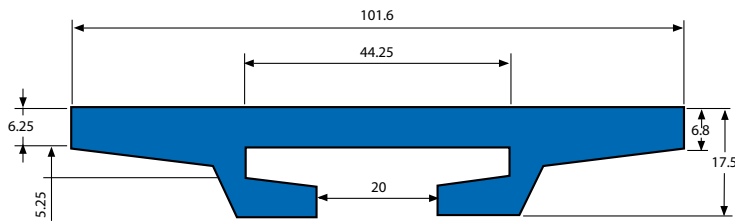
**PIE 233 •**  
5mm Snap On

• 10 FT Lengths

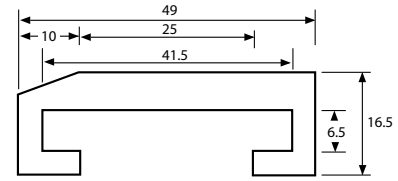
• 20 FT Lengths

• 500 FT Coils

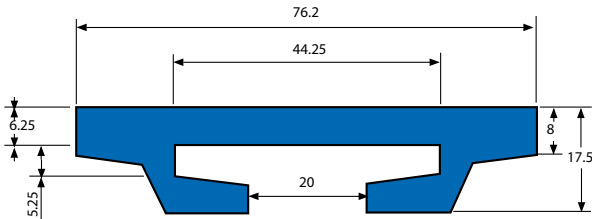
# UHMW-PE Extruded Wear Strips



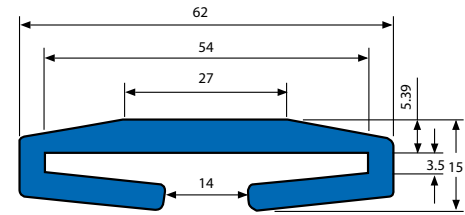
PIE 253 •



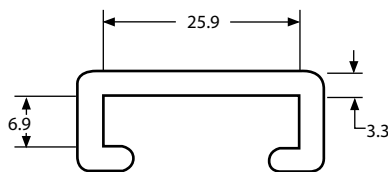
PIE 256 •  
40 x 6mm Bar



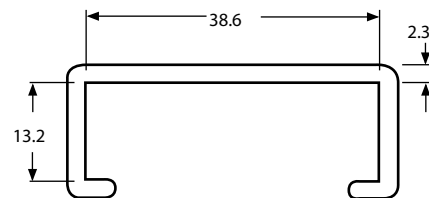
PIE 252 •



PIE 251 • •  
50 x 3mm Bar



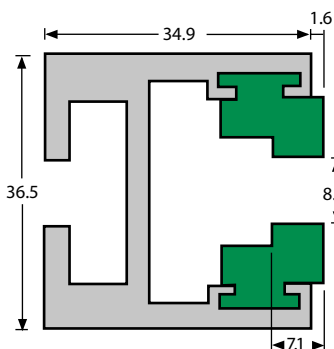
PIE 226 •



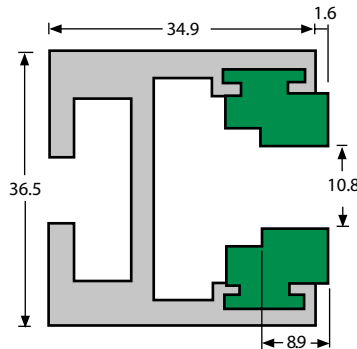
PIE 228 •

- 10 FT Lengths
- 20 FT Lengths
- 39 FT Lengths
- 165 FT Coils

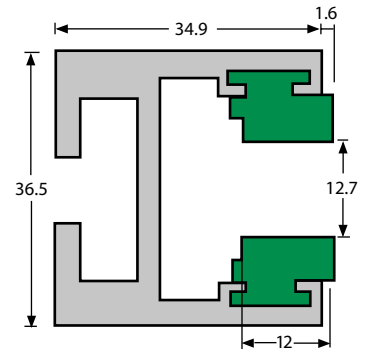
## Aluminium Guide Rails and Wear Strips



PIE 640 - 08B-1 •  
for 1/2" Pitch Chain



PIE 640 - 10B-1 •  
for 5/8" Pitch Chain



PIE 640 - 12B-1 •  
for 3/4" Pitch Chain

Also available for ANSI standard chains

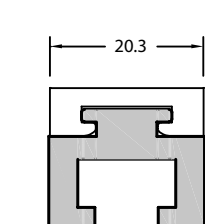
- 10 FT Lengths



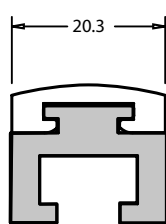
# Aluminium Guide Rails and Wear Strips

All guide rails are manufactured from high quality aluminium and are available separately or supplied with a choice of 1000 grade UHMW-PE wear strips which have outstanding resistance to impact and wear.

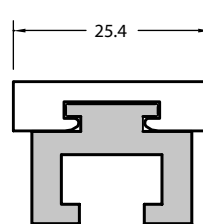
All UHMW-PE wear strips are FDA and USDA approved for direct contact with food. Although these profiles are supplied as standard in white 1000 grade UHMW-PE they are also available in anti-static UHMW-PE, lubricated UHMW-PE and custom colours. Standard lengths 10ft and 20ft, however other lengths are available on request.



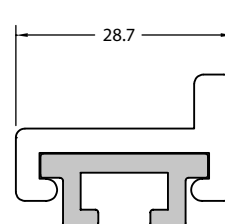
PIE 600 • •  
PIE 200 • • •



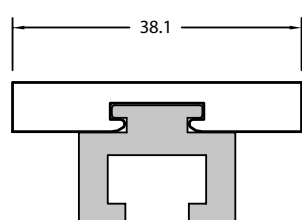
PIE 600 • •  
PIE 201 • • •



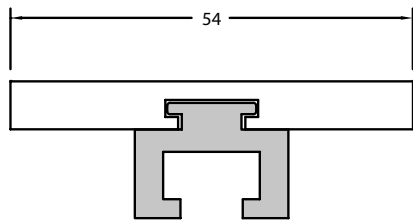
PIE 600 • •  
PIE 202 • • •



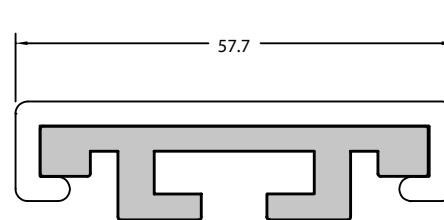
PIE 610 •  
PIE 205 •



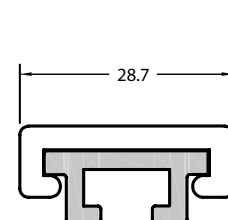
PIE 600 • •  
PIE 247 • •



PIE 600 • •  
PIE 254 •



PIE 630 •  
PIE 207 •



PIE 610 •  
PIE 204 •

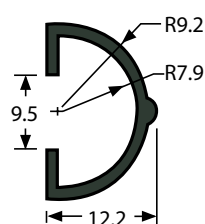
• 10 FT Lengths

• 20 FT Lengths

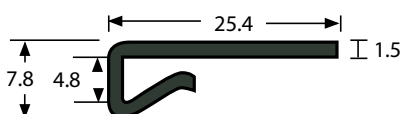
• 100 FT Coils

## Nylon Lubricated MoS2 Extrusions (Brown in colour as standard)

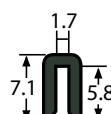
Impact resistant wear strips used in canning applications etc.



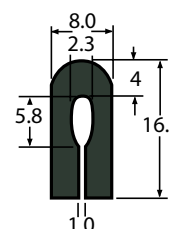
PIE 300 •



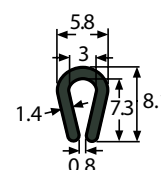
PIE 301 •



PIE 302 •



PIE 303 •



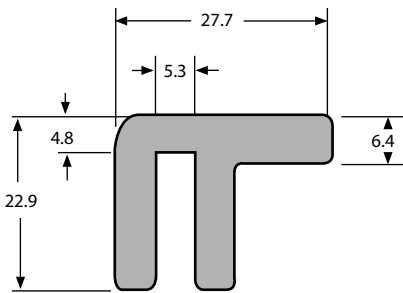
PIE 304 •

• 12 FT Lengths

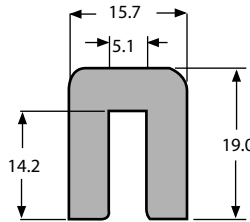
• 100 FT Coils

# Prem-Lube Lubricated UHMW-PE Wear Strips

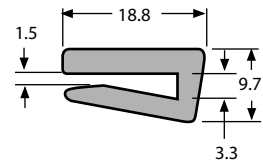
UHMW-PE and a food grade fluid lubricant are blended together to produce a high speed, very low friction, wear resistant material. It is particularly useful in applications where high speeds (up to 152m/min) are involved and the effectiveness of standard UHMW Polyethylene is limited. During operation an oil film is generated on the surface of the material and this can significantly reduce friction by up to 50%. This reduction means that conveyor lengths can be increased and chain wear reduced. This material also reduces noise levels which are generated when using other grades of plastic. The material is also fully FDA and USDA approved for applications where it comes into direct contact with food. Self-lubricated UHMW-PE is grey in colour as standard. The operational temperature range for Prem-Lube material is 1 - 60°C.



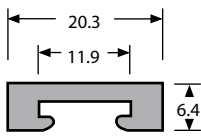
**PIE 700 •  
Lubricated**



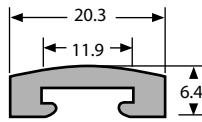
**PIE 701 •  
Lubricated**



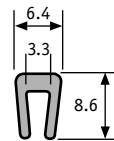
**PIE 702 •  
Lubricated**



**PIE 704 •  
Lubricated**



**PIE 705 •  
Lubricated**

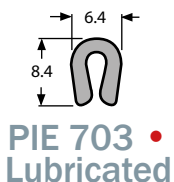


**PIE 706 •  
Lubricated**

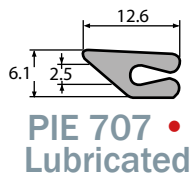
• 10 FT Lengths • 20 FT Lengths • 250 FT Coils • 350 FT Coils • 500 FT Coils

## Neck Guides - Prem-Lube

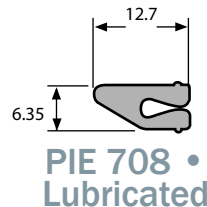
Used in air blown conveyor lines for PET bottles. Prem-Lube reduces friction and is suitable for high speed applications.



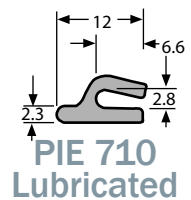
**PIE 703 •  
Lubricated**



**PIE 707 •  
Lubricated**

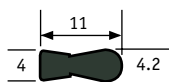


**PIE 708 •  
Lubricated**

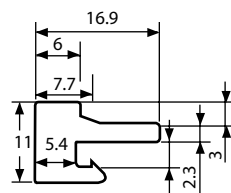


**PIE 710  
Lubricated**

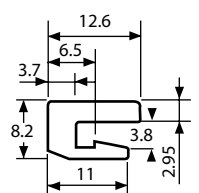
Other UHMW-PE extrusions  
for the canning and bottling  
industries



**PIE 246 •  
Grey Bottle Guide**



**PIE 249 •  
White 1000 Grade**

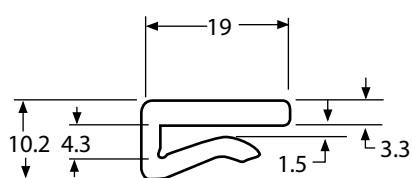


**PIE 250 •  
White 1000 Grade**

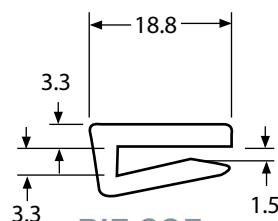


# Standard UHMW-PE Extruded Wear Strips

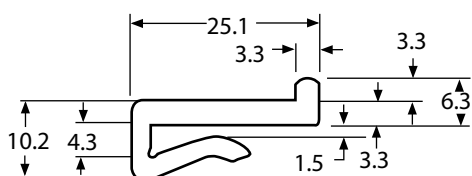
1000 Grade UHMW-PE wear strips with outstanding resistance to impact and wear. All UHMW-PE Wear Strips are FDA and USDA approved for direct contact with food. Although these profiles are supplied as standard in white 1000 grade UHMW-PE they are also available in anti-static UHMW-PE, lubricated UHMW-PE and custom colours. Standard lengths are 10ft, 20ft or coils up to 500ft, which can be cut into multiples of 100ft.



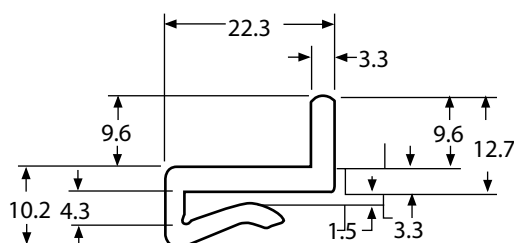
PIE 234 •



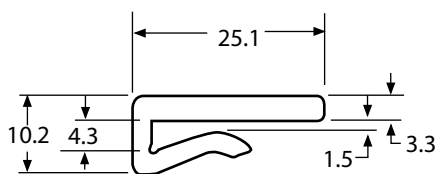
PIE 235 •



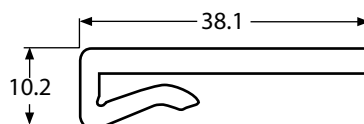
PIE 236 •



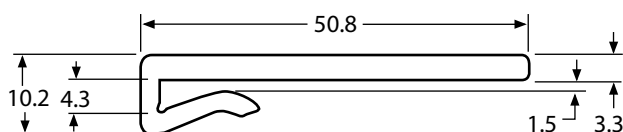
PIE 237 •



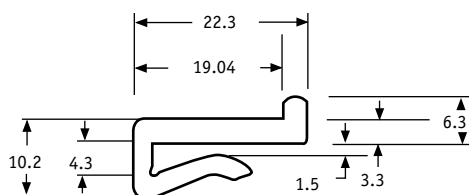
PIE 238 •



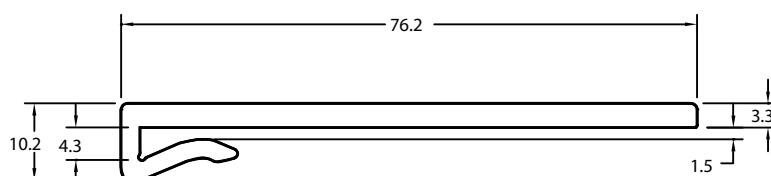
PIE 239 • • •



PIE 240 • •



PIE 244 •



PIE 255 •

All the above J Leg profiles are to suit 3mm or 1/8" Steel Section

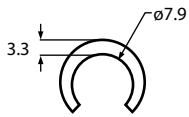
• 10 FT Lengths

• 20 FT Lengths

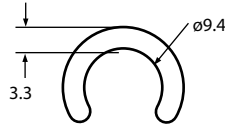
• 500 FT Coils

# Standard UHMW-PE Extruded Wear Strips

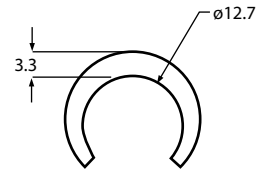
## Round Bar Cover



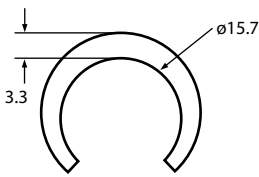
**PIE 208 •**  
5/16" or 8mm Bar



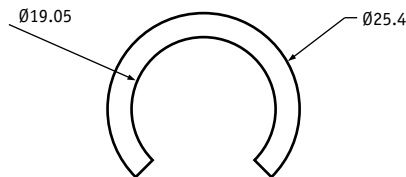
**PIE 209 •**  
3/8" or 10mm Bar



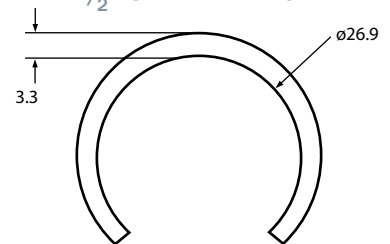
**PIE 210 •**  
1/2" or 12mm Bar



**PIE 211 •**  
5/8" or 16mm Bar



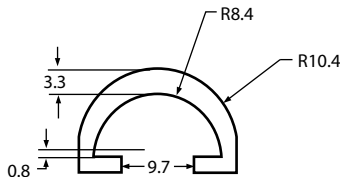
**PIE 245 •**  
3/4" or 19mm Bar



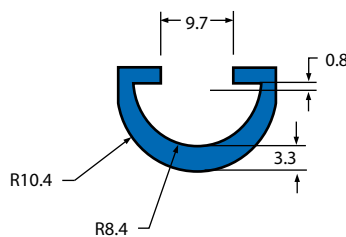
**PIE 212 •**  
1" or 25mm Bar

- 10 FT Lengths
- 20 FT Lengths
- 250 FT Coils
- 500 FT Coils

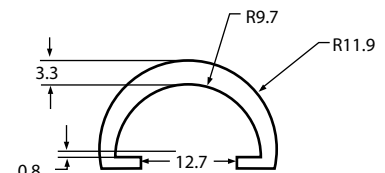
## Half Round Bar Cover



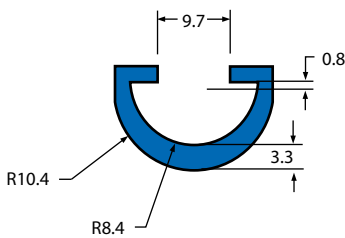
**PIE 213 •**  
5/8" half round  
white 1000 grade  
UHMW-PE



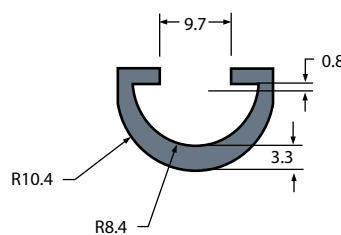
**PIE 213-RC-B •**  
5/8" half round reverse coiled  
blue 1000 grade  
UHMW-PE



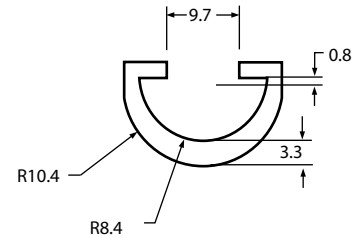
**PIE 214 •**  
3/4" half round  
white 1000 grade  
UHMW-PE



**PIE 213-RC-BGF •**  
5/8" half round reverse coiled  
blue glass filled UHMW-PE abrasion  
resistant for can twists. Reverse coiled  
for ease of installation.



**PIE 213-RC-PL •**  
5/8" half round reverse coiled  
grey oil filled 1000 grade  
UHMW-PE

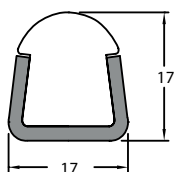


**PIE 213-RC •**  
5/8" half round reverse coiled  
white 1000 grade UHMW-PE.  
Reverse coiled for ease of installation.

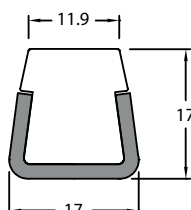


# Stainless Steel Backed UHMW-PE Guide Rails

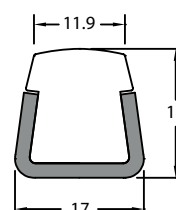
All guide rails are of solid design and are manufactured using 14 gauge 304 stainless steel backing, with a 1000 grade UHMW-PE insert to give outstanding resistance to impact and wear. All guide rails are FDA and USDA approved for direct contact with food. Although these profiles are supplied as standard in white 1000 grade UHMW-PE, they are also available in anti-static UHMW-PE, lubricated UHMW-PE and custom colours. Standard length is 10ft, however other lengths are available on request.



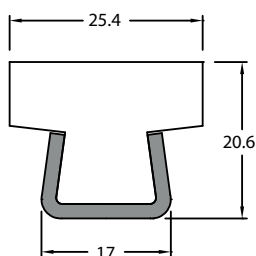
PIE 100 •



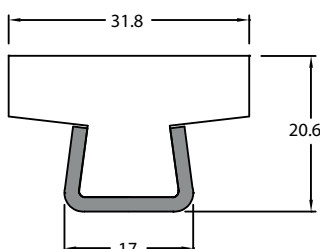
PIE 101 •



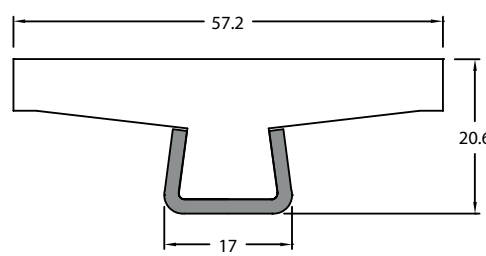
PIE 102 •



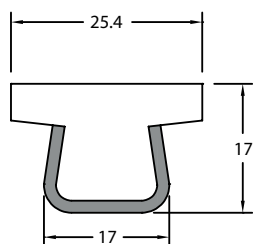
PIE 103 •



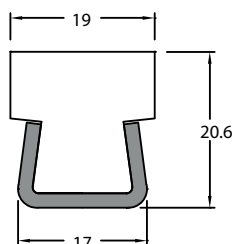
PIE 104 •



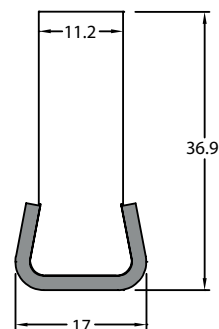
PIE 105 •



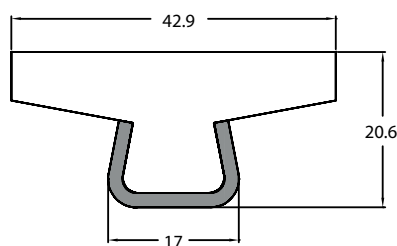
PIE 121 •



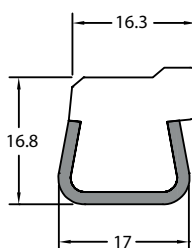
PIE 122 •



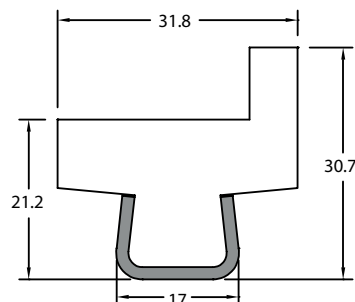
PIE 123 •



PIE 124 •



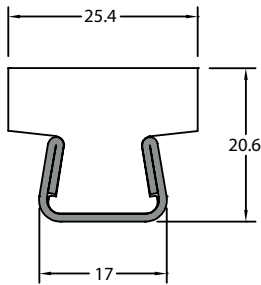
PIE 125 •



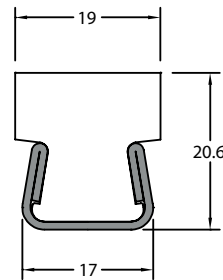
PIE 126 •

• 10 FT Lengths

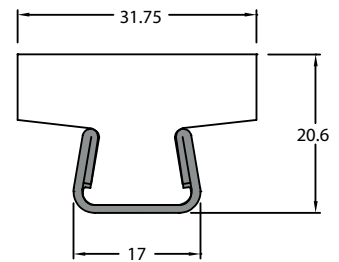
# Stainless Steel Backed UHMW-PE Guide Rails with locking insert for rolling/bending



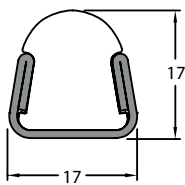
PIE 130 •



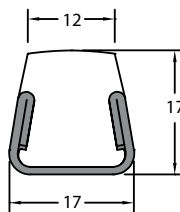
PIE 131 •



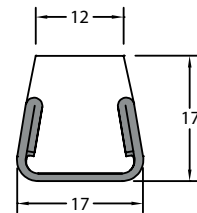
PIE 132 •



PIE 133 •



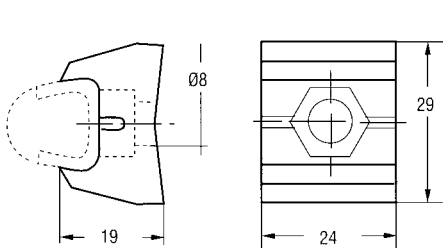
PIE 134 •



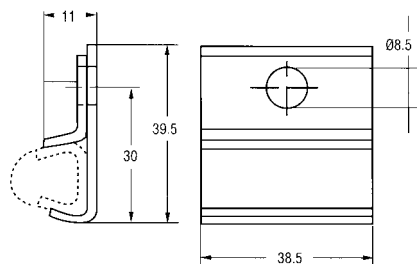
PIE 135 •

• 10 FT Lengths

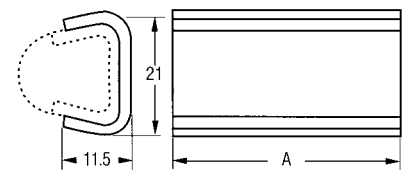
## Clamps and Splicing Sleeves for Stainless Steel Backed Guide Rails



PIE 110



PIE 111



PIE 106 A = 2"/50mm

PIE 108 A = 4"/100mm

To view additional brackets and clamps suitable for stainless steel guide rails please scan the QR code, see the Pennine website or contact us.



# Conveyor Components

Pennine Industrial Equipment offer a vast range of conveyor components to meet the needs of today's material handling industry, conveyor builders and general machine builders. All components are either moulded or machined from quality materials to ensure high quality components which are both strong and reliable.

## Guide Rails and Accessories:

Aluminium and stainless steel guide rails, clamps, clips and adjusting rods.

## Brackets and Positioning Components:

Fixed and adjustable brackets, conveyor support heads, spacers, cross blocks, ratchet handles.

## Adjustable Feet:

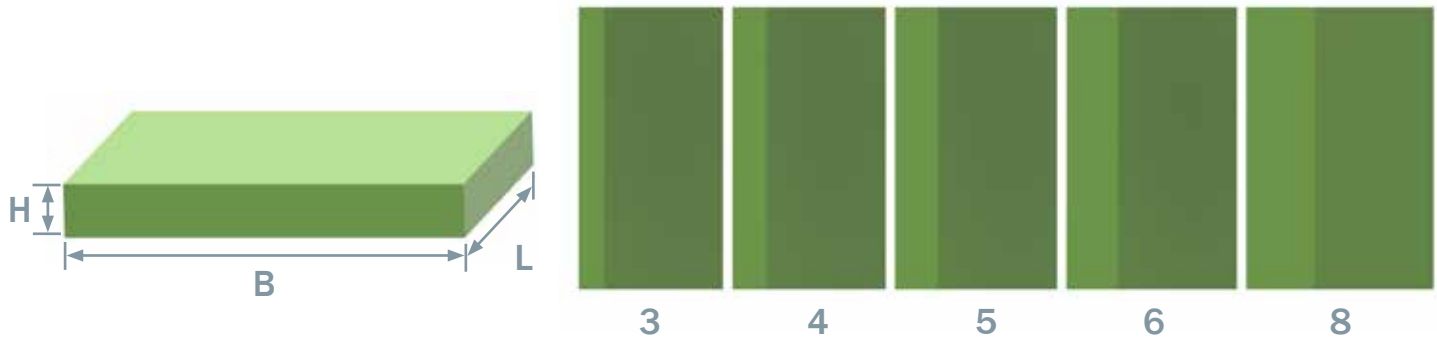
Levellers with stainless steel and zinc plated threads, tripods and bipods, threaded tube ends.

## Chain and Belt Supports:

Conveyor chain and belt tracks, belt supports, return guide systems.



# Peeled Wear Strip ST 1000 Green



Peeled wear strip is available in a range of widths and thicknesses and is supplied in a coil, the length of which is determined by the thickness of the strip required. It is a cost-effective option which reduces waste (off-cuts) and is easy to store and transport. Standard colour is green, however black is also available.

H (mm)	B (mm)												L (m)
3	-	20	25	30	35	40	50	60	70	80	90	100	54
4	-	20	25	30	35	40	50	60	70	80	-	-	40
5	15	20	25	30	35	40	50	60	70	80	-	-	32
6	15	20	25	30	35	40	50	60	70	80	-	-	27
8	-	20	25	30	35	40	50	60	70	80	-	-	22

## Slit Tape (In White UHMW-PE)

Pennine Industrial can supply this unique and universal product. This product has all the excellent wear properties of UHMW-PE in a convenient tape with a pressure sensitive self adhesive backing. Thickness available from 0.010 inch (0.25mm) to 0.080 inch (2mm). Width 0.500 inch (12.7mm) to 6.00 inch (152mm). Standard roll 50ft.

Part Number	Standard Sizes		
	Thickness	Width	
HT-0132PS	0.25mm	x	50.8mm (2")
HT-0196PS	0.25mm	x	152.4mm (6")
HT-0208PS	0.5mm	x	12.7mm (½")
HT-0216PS	0.5mm	x	25.4mm (1")
HT-0232PS	0.5mm	x	50.8mm (2")
HT-0240PS	0.5mm	x	63.5mm (2½")
HT-0416PS	1.0mm	x	25.4mm (1")
HT-0432PS	1.0mm	x	50.8mm (2")
HT-0816PS	2.0mm	x	25.4mm (1")
HT-0822PS	2.0mm	x	34.9mm (1 ⅜")



# Technical Appendix

Properties	Units	1000 Grade UHMW-PE	Self-lubricated UHMW-PE	PTFE	Nylon
Tensile Yield Strength	MN/m <sup>2</sup>	23.44	18.34	31.02	80.00
Ultimate Elongation	%	450	360	300	100
Specific Gravity	@ 23 °C	0.94	0.94	2.16	1.15
Hardness	Shore 'D'	64	64	54	83
Impact Strength	Nm/m of notch	1600	1175	1600	>4000
Water Absorbtion	% by weight Gain/24 hrs	NIL	0.01	0.02	2.5/4.0
Thermal Expansion Rate	10 <sup>-4</sup> m/m/ °C	2.0	2.3	2.1	0.8
Operating Temp. Range	°C	-240/85	1/60	-240/230	-40/100
Ave. Coeff. of Friction	Journal	0.15/0.25	0.05/0.12	0.1	0.2
Static Load Capacity	KN/m <sup>2</sup>	150	87		150
Max. Surface Speed	m/min.	30	152		30

Material	Average Wear Rate mm/min
UHMW-PE	0.13
Prem-Lube (lubricated UHMW-PE)	0.24
Polypropylene	0.28
Nylon 66	0.30
Acetal	0.64
H.D Polyethylene	0.81

