

Purpose Built Belting

FOR THE PLASTIC EXTRUSION INDUSTRY



RAINBOW
RUBBER AND PLASTICS



ABOUT US

Rainbow Rubber and Plastics, Inc. is a leading supplier of truly endless belting and rubber accessories for the North American market. Specializing in high wear applications, Rainbow supplies a range of products for the plastic extrusion market. Working closely with end users and original equipment manufacturers, we have developed a family of industry specific rubber components proven in durability and reliability. For more than 30 years Rainbow has become the leading supplier of original equipment and replacement belting for downstream Caterpillar, and Haul-Off equipment.



OUR ADVANTAGES

Quality and Reliability
since 1968

Largest Caterpillar
belt inventory in
North America

Outstanding
Customer Service
including in-plant
surveys and training

APPLICATIONS

Rainbow belts are truly endless belts designed for downstream extrusion equipment. Rainbow belts ensure the material does not slip or pull, avoiding damaged product or production loss as a result of belt failure.

Caterpuller equipment monitors conveying speed and tension throughout the manufacturing process used primarily in the production of:

MEDICAL TUBING



EXTRUDED PROFILES



PIPE AND TUBING



BELTING FOR PLASTIC PIPE, PROFILE AND TUBING EXTRUSION

Rainbow supplies a truly endless belt designed for downstream extrusion equipment. Without seam or splice, our belt has become the industry leader.

Our rubber covers have excellent wear, high abrasion, and are tear resistant. For special applications, rubber compounds are used with heat and oil resistance. Due to the superior quality of our rubber compounds, our belts can operate on small pulleys without cracking or separation. Durometer (hardness) can be adjusted between 20 and 80 durometer per the customer's specifications.

COMPOSITE DECKING



VINYL SIDING



WINDOW AND DOOR



RAINBOW BELT ENGINEERING

Machine Type

Manufacture: _____

Speed: _____ ft/min

Minimum Pulley Dia.: _____ inches

Pressure Roller Dia.: _____ inches

Pulling Force: _____ lbs

Pressure Roller/Unit: _____ "n

Total Pressure Units: _____ n"

Force/Unit: _____ pressure

Belt Specifications

Top Cover: Smooth _____

Transversal Grooves _____

Top Grooves _____

Hardness _____ sh/A

Bottom Cover: Smooth _____

Poly-V _____ type

Timing Belt _____ type

Size: Width _____ inch

Length _____ inch

Total Thickness _____ inch

Total Cover _____ inch

PROFILE 1

L _____ Inch

P _____ Inch

PROFILE 2

R _____ Inch

P _____ Inch

PROFILE 3

A _____ Inch

B _____ Inch

C _____ Inch

D _____ Inch

Pulled Material

Covered Cable _____PVC _____Rubber _____Metal

Tube-Pipe Wire _____PVC _____Rubber _____Other

Extruded Profile _____PVC _____Rubber _____Other

Pressure of Oil _____yes _____type _____

Pressure of Solvent _____yes _____type _____

Temperature _____°C /°F

Size/Diameter _____inch

Current Belt

Manufacture: _____

Type: _____

Current Life: _____

Failure: abrasion _____

separation _____

break _____

Other: _____

Customer Name: _____

Contact Name: _____

Telephone: _____

Fax: _____

Address: _____

Email: _____

Haul-Off Units in Plant: _____

Yearly requirement: _____

Force

Diameter

Pulling Force

n.° Pressure Units

N.° Roller

#1

L

P

#2

R

P

#3

A

B

C

D

Diagram 1: Cross-section of a belt with pressure units and rollers.

Diagram 2: Cross-section of a belt with a radius R and pitch P.

Diagram 3: Cross-section of a belt with dimensions A, B, C, and D.

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POLY-V BELTS & TIMING BELTS

Rainbow belts are made as a single piece. The rib sections are machine grooved into the base of the belt after the components have been vulcanized, unlike most belt manufacturers who will glue or vulcanize a rubber cover to a molded base belt.

**Custom ribs can be grooved per the customer's specifications.*

FOR POLY-V BELTS:

Pulley Category	Pitch (p) mm	Minimum Belt Height mm
J	2.34	12.00
L	4.70	14.00
M	9.40	21.50

Pitch and Height rates

FOR TIMING BELTS

Belt Pitch	Pitch	Description
XL	0.200	Extra Light
L	0.375	Light
H	0.500	Heavy
XH	0.875	Extra Heavy

Pitch rates

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TECHNICAL DATA

TOP RUBBER COVER					
Type	Color	Hardness °ShA	Abrasion resistance*	Grip	Features
NA	BLACK	55-65-75	• • • •	• • • • •	Good balance between properties
M	BLACK	65	• • • •	• • • • •	As NA compound with better grip
PA	GREY	40-50-60	• • • • •	• • • • •	Improved tear resistance - no staining
HB	WHITE GREY	55-65	• • • • •	• • • • •	HYPALON rubber: Good oil, chemical and heat resistance - no staining
NC	BLACK	65	• • • • •	• • • • •	NITRILE rubber: Very good oil and good heat resistance
NCB	WHITE	40-60	• • • • •	• • • • •	NITRILE rubber: FDA White non-marking
NCG	GREEN	55	• • • • •	• • • • •	NIRTILE rubber: non-marking
Urethane	GREEN	70	• • • •	• • • • •	PU: excellent abrasion resistance
Sponge	WHITE	**	• • • • •	• • • • •	FDA: non-marking NEO
Sponge	BLACK	**	• • • • •	• • • • •	BLACK: non-marking NEO
Sponge	CREME	**	• • • • •	• • • • •	CREME: non-marking NEO

* Data related to Compounds with comparable Hardness
Upon request: Excellent abrasion resistance, Nitrile low hardness and FDA compounds

TEXTILE CORE						
Type	Material	Tensile strength N/mm	Elongation at break	Safety Factor	Max Elongation at 400 N/Wire	Max Elongation at 1000 N/Wire
SME 400	POLYESTER	400	11 %	10	4.13 %	n.a.

MINIMUM PULLEY DIAMETER					
Core Code	Carcass + bottom cover*	Top Cover Thickness	Minimum pulley diameter** mm		
	mm	mm	40 °ShA	50 °ShA	60-70 °ShA
SME 400	8	7	100	120	150
		12	120	140	160
		17	140	160	200

* Minimum: 3 mm ** Only typical data for selection purposes. Not to be used for part or tool design.

TOLERANCES			
INNER LENGTH		%	
Up to 5000 mm / 196.85 in		± 0.5	
Over 5000 mm / 196.85 in		± 0.75	
WIDTH		mm	
Up to 200 mm		3 max	
Over 200 mm		4 max	
THICKNESS		mm	
Not Grinded	With Respect to Nominal Value		-0/+2
	With Respect to Uniformity	Top Cover > 60 ° ShA	± 0.8
		Top Cover < 60 ° ShA	± 1.2
Grinded	With Respect to Nominal Value		± 0.5
	With Respect to Uniformity		± 0.1

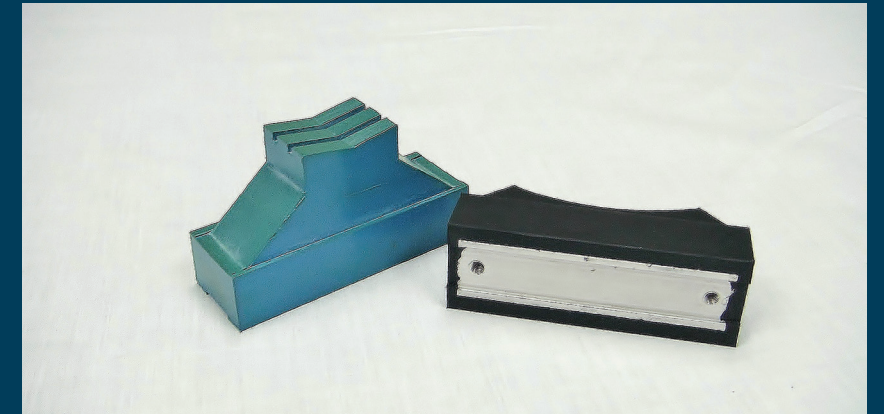
ADDITIONAL SERVICES & ACCESSORIES

Rainbow has a number of products to aid and complement our belting. Drawing on 30 years of experience and industry knowledge, these products have been developed to serve specific applications. Each has been tested and proven in the plastic industry.



PULLER CLEATS

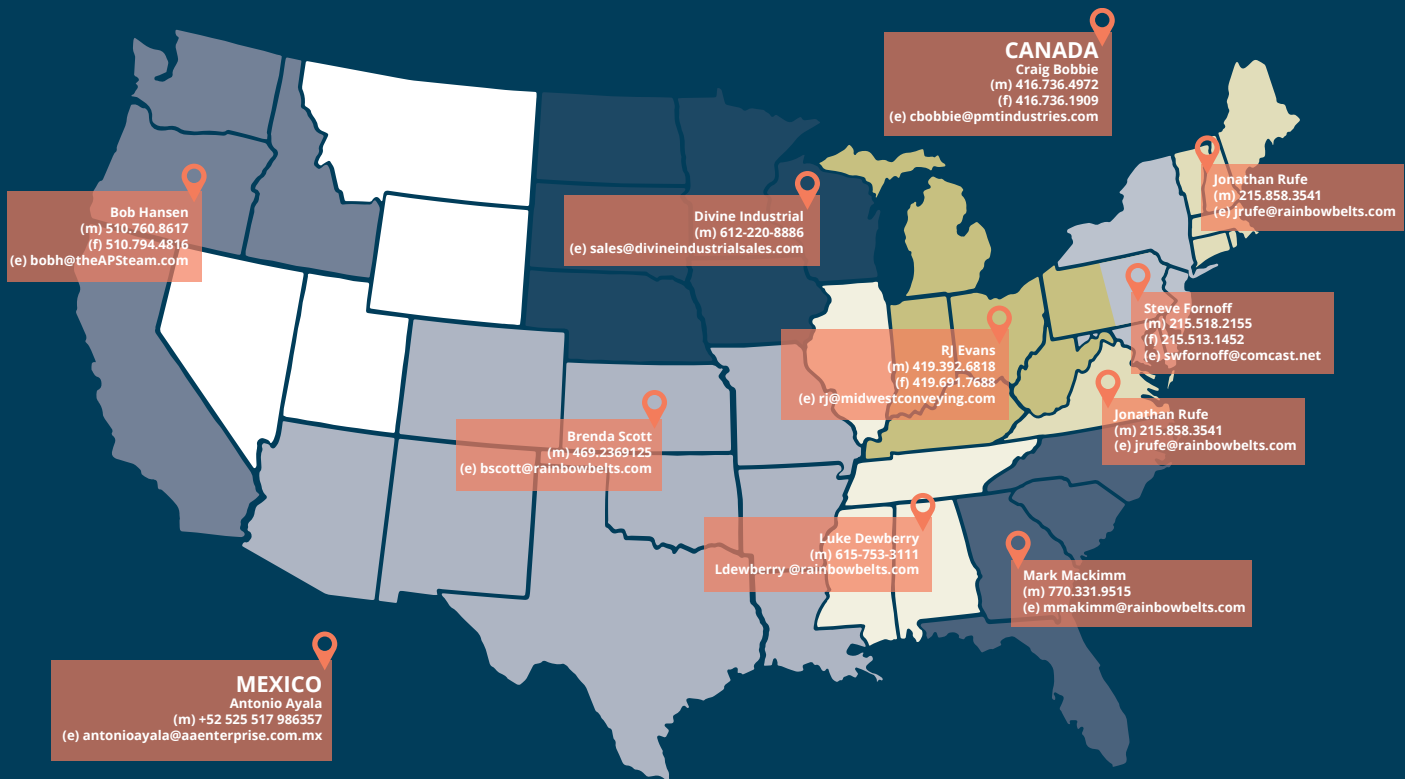
- Rubber and polyurethane cleats with and without metal plates
- Quick change / quick release
- Fixed / bolt-on
- Durometer: 40-80
- Molded for an exact fit with extruded profile



GASKETS

- Standard and custom sizes available
- Durometer: 40-70
- Silicone and rubber available





GET IN TOUCH

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