



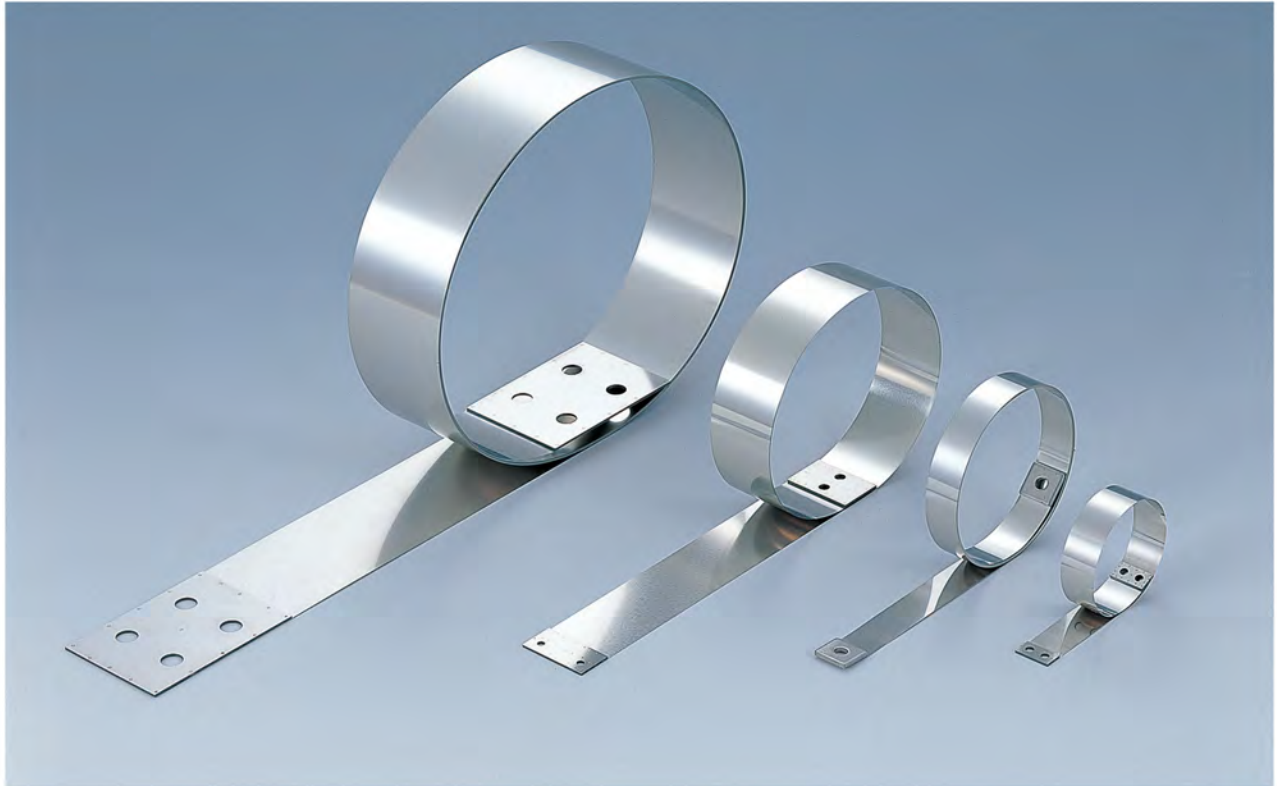
DYMCO

STEEL BELT

PRODUCT INTRODUCTION

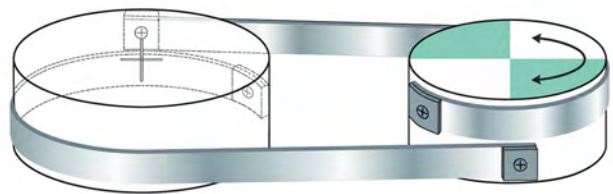


OPEN-END BELT DO TYPE



Features

- Quick response in drive applications
- High rigidity and high tensile strength
- Very small elongation
- Excellent heat and corrosion resistance
- Low backlash
- Thin, compact, and lightweight

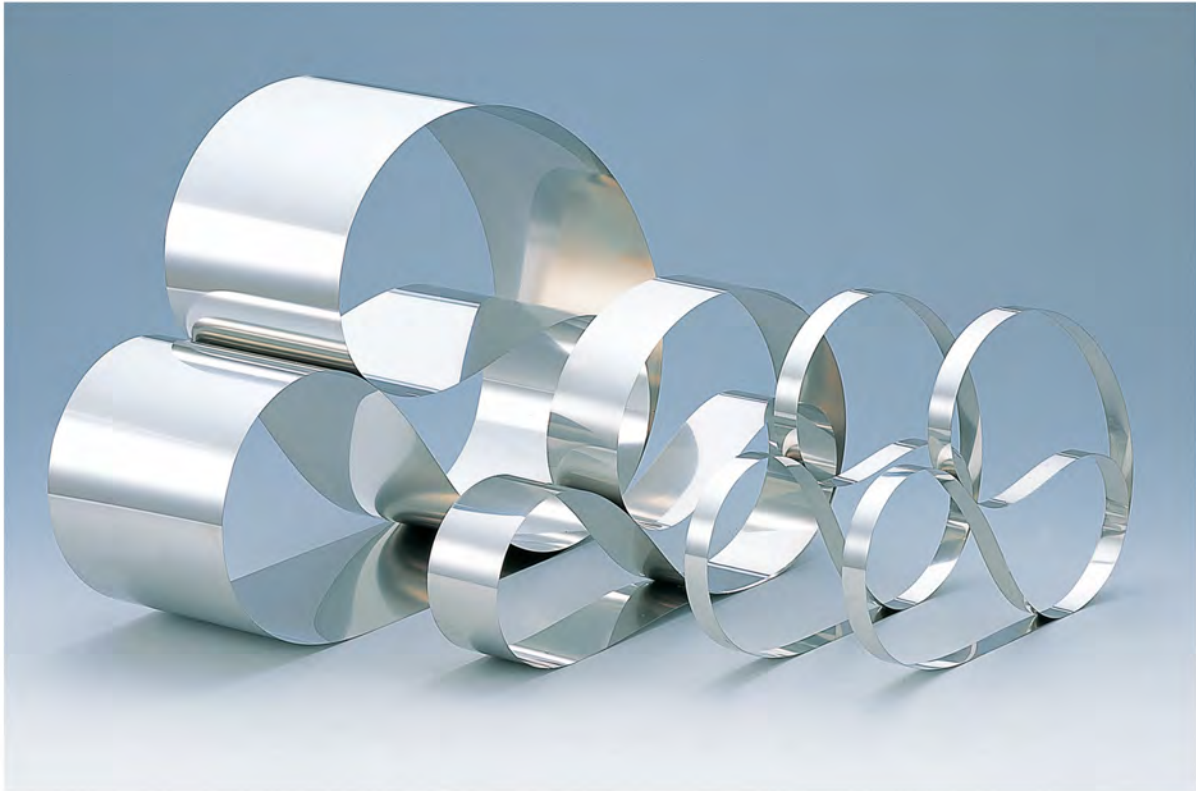


Applications

- Robot arm drive
- Lifting machines in warehouse
- Linear actuator drive
- Dust cover in machine tools
- Printhead carriage drive



WELDED ENDLESS BELT DW TYPE



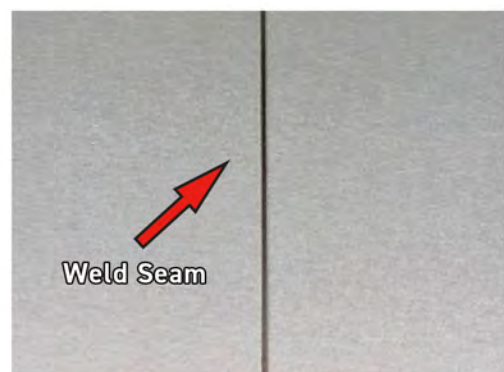
Features

- Excellent surface smoothness
- The weld seam ridge is minimal, on the order of 10 micrometers.
- Chemical and heat resistant
- Low dust generation, ideal in clean rooms
- High electrical conductivity with antistatic properties



Applications

- Antistatic transportation of semiconductors and electronic components
- Transportation in clean rooms
- Food transportation
- Film forming
- Accumulation conveyor



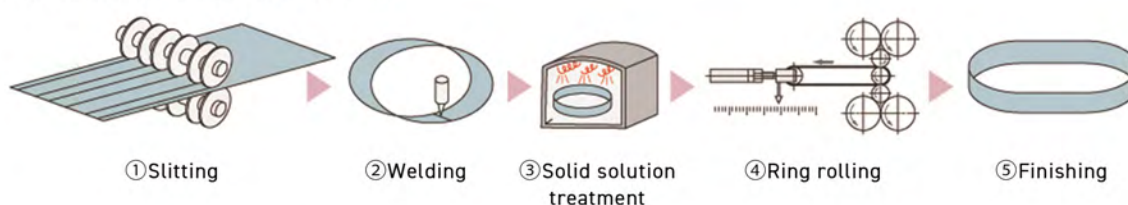
RING-ROLLED ENDLESS BELT DR TYPE



Features

- Ultra-thin belt (minimum thickness: 0.04 mm) enables compact drive units and use with small pulleys
- Highly precise power transmission
- Uniform thickness in the entire belt
- Uniform mechanical properties throughout the belt length
- High speed and quiet operation
- Applicable for conveyor applications

Process Flow of RING-ROLLED ENDLESS BELT

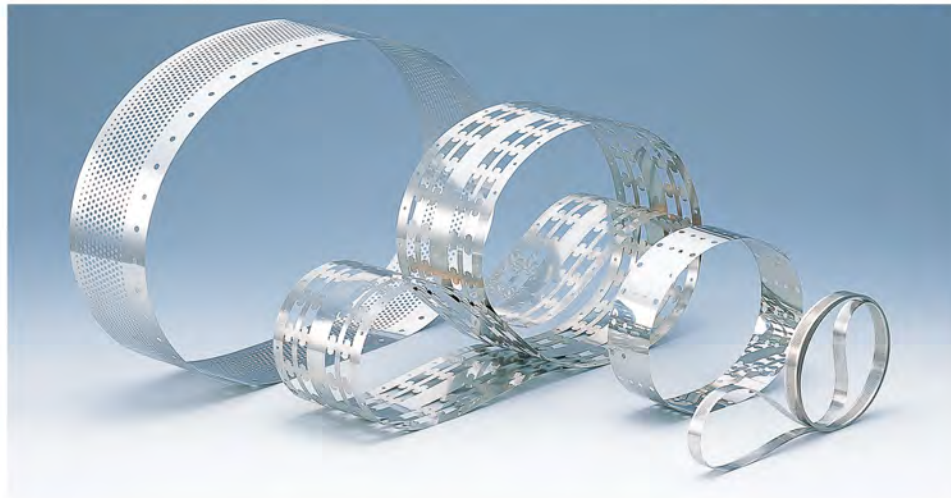


Applications

- Paper feed drive in printing machines
- X-Y table drive
- Precision actuator in optical, inspection and measuring devices

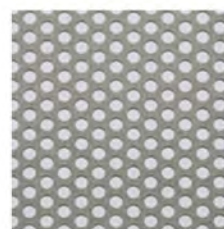


PERFORATED BELT DP TYPE



Features

- Suction holes for vacuum operation
- Positioning holes for intermittent feed and mechanical attachments
- Various hole options
- Excellent surface flatness after welding



Applications

- Intermittent operation
- Precise carriage positioning during intermittent operation
- Vacuum transport of thin materials such as films, metal foils, paper and solar wafers
- Assembly and inspection of electronic parts
- Drying operation

Suction /
vacuum conveyor



SLEEVE

THIN-WALL STAINLESS STEEL WELDED SLEEVE



ELECTRO-FORMED NICKEL SLEEVE



Comparison table

Products	Welded sleeve	Electro-formed sleeve
Characteristics		
Material	Stainless steel, nickel, titanium and others	nickel
Seam	Weld line	Seamless
Surface polishing and plating	○	○
Diameter* ¹	Available in diameters of 100 mm and above Manufacturable in 10 μm increments	20-500 mm
Thickness* ¹	0.05-0.5 mm	0.1-0.3 mm
Sleeve length* ¹	200-1500 mm	100-1800 mm
Tooling	Not required* ²	Required
Applications	• Printing rollers • Resin molding and extrusion • Casing and covers in machines to protect the part against dust, foreign substances and corrosion	

*1 Please contact us for details. The final specifications depend on the combination of diameter, thickness and length.

*2 Jig cost may be required depending on size.

NICKEL TILING ROLL



Precise cut



Tiling Weld



Welded Sleeve



fitted over a solid roll

Features

- Sleeve type pattern mold
- Flat nickel stampers are precisely cut and welded together to form a thin metal sleeve
- The sleeve-type mold enables continuous pattern transfer, outperforming flat molds

Applications

- UV /thermal imprint mold
- Drum surface of Gravure and Screen printing
- Microstructure mold

STAINLESS STEEL BELT CONVEYOR

RSC 015-50 and RSC 020-90



Features

- High tensile stainless steel belt
- Smooth belt surface
- Lightweight with aluminum frame
- Easy-to-install and maintenance-friendly
- Positioning-free insertion nuts offer easy installation of custom-made jigs
- Heat resistance, corrosion resistance and antibacterial properties

Applications

- In-line image inspection
- Accumulation conveyor
- Conveying high- or low-temperature workpieces

FLUOROPOLYMER COATING



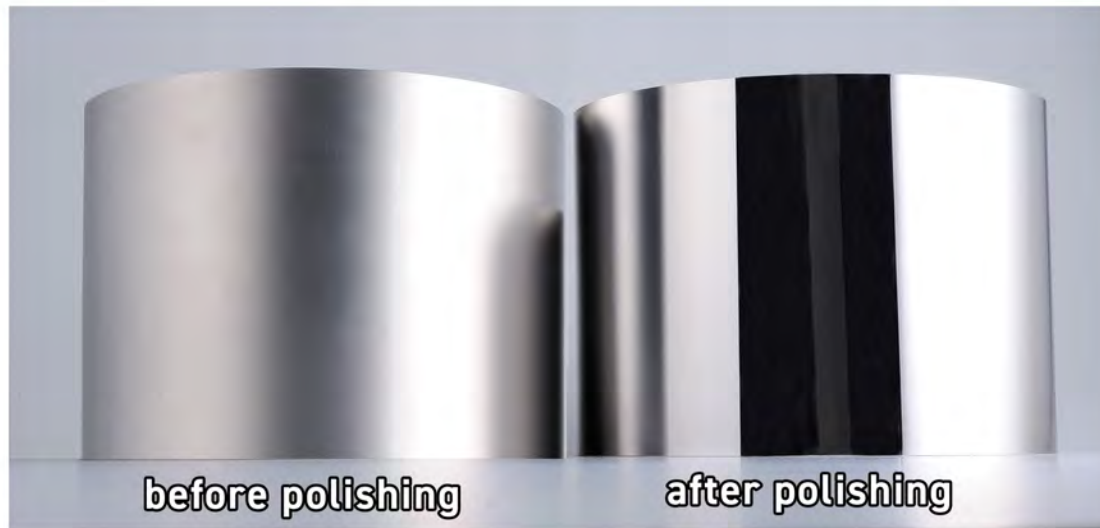
- Non-stick properties for molten plastics, solder and flux
- Abrasion resistance
- Heat resistance
- Anti-reflection by colored coating

SILICONE COATING



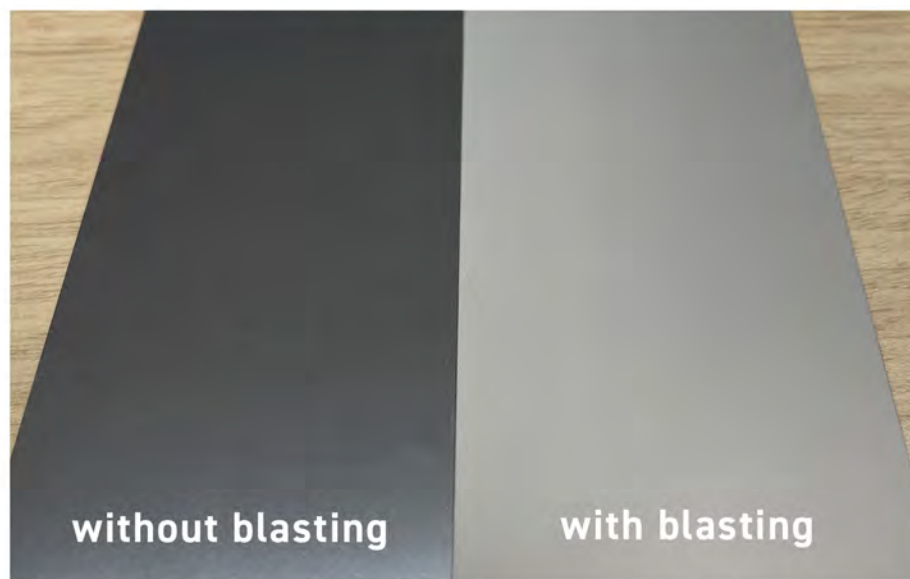
- Non-stick and release properties for hot-melt adhesives, adhesives and food products
- Excellent heat and cold resistance
- Shock absorption and protection of conveyed products through elastic properties
- Customizable grip and sliding properties depending on the application

MIRROR POLISHING



Polishing can be applied to the weld seam area or the entire surface and is often used for film and resin forming.

SHOT BLASTING



- Matte finish
- increased surface roughness
- Hardened surface
- Reduced surface reflection

DLC (DIAMOND-LIKE CARBON COATING)

- Hard and smooth surface
- Wear resistance
- Non-stick properties

HIGH FRICTION TREATMENT

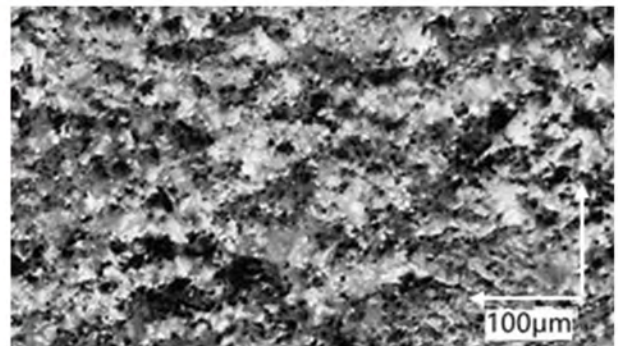


Features

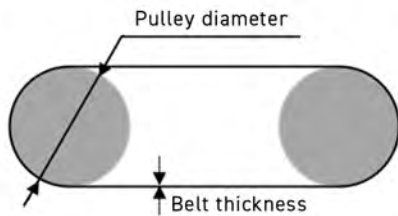
- Thin, high-tensile-strength stainless steel substrate
- Substrate thickness from 0.1 to 1.0mm
- Surface hardness HV800 and above
- High coefficient of static friction
- Enables compact design of fastening parts
- Customizable shape
- Applicable to surface of roller, shaft, and other conventional parts

Applications

Enhanced fastening strength for wind turbine applications and robot arm joint components



Guidelines for belt thickness and pulley diameter



Driving

Pulley diameter $\geq$ Belt thickness $\times$ 400 (**DR**, **DO**)

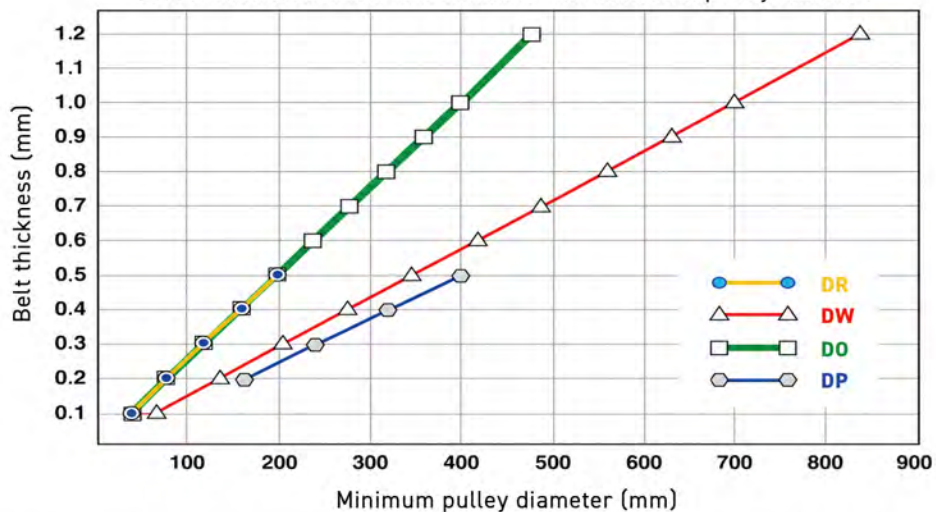
Transportation

Pulley diameter $\geq$ Belt thickness $\times$ 400 (**DR**)

Pulley diameter $\geq$ Belt thickness $\times$ 700 (**DW**)

Pulley diameter $\geq$ Belt thickness $\times$ 800 (**DP**)

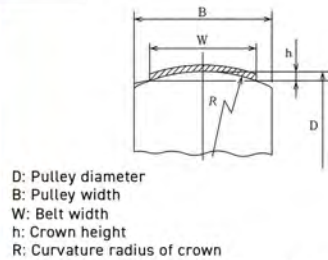
■ Correlation between belt thickness and minimum pulley diameter



BELT TRACKING METHOD

1 Crown Pulley

Belt tracking with a crowned pulley



D: Pulley diameter
B: Pulley width
W: Belt width
h: Crown height
R: Curvature radius of crown

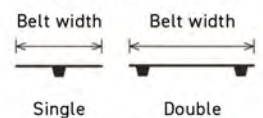
Pulley Diameter (D)	16~20	30	40	50	60	70	80~
Crown Height (H)	0.025	0.03	0.04	0.05	0.06	0.07	0.08~

2 V-Guide

Belt tracking by one V-guide in the center or two V-guides on both sides



Cross section of belt

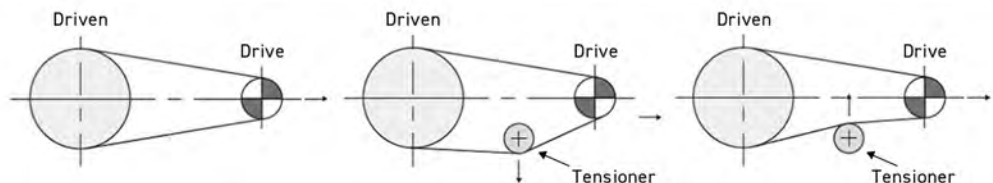


Pulley shape matches V-guide

TENSION MECHANISM



Tension bolt mechanism on both left and right sides



No tensioner

Inside tensioner

*Outside tensioner

*Not recommended for long-term operation

ABBREVIATIONS

DO = DYMC Open-end **DR** = DYMC Ring-Rolled **RSC 015-50** = Regular Stainless steel Conveyor (Belt thickness: 0.15 mm Pulley Diameter: 50 mm)
DW = DYMC Welded **DP** = DYMC Perforated **RSC 020-90** = Regular Stainless steel Conveyor (Belt thickness: 0.20 mm Pulley Diameter: 90 mm)

WORKFLOW



COMPANY PROFILE

About Us

Since its establishment in 1986, DYMCO, LTD. has earned an excellent reputation for delivering high-quality steel belts to customers around the world. With nearly four decades of experience in the industry, our staff provide the best solutions and techniques to ensure that our products meet the highest standards. We are constantly exploring new technologies and manufacturing techniques to improve the quality and performance of our products.

Group Companies

- TENRYU PRECISION INDUSTRY, LTD.
- DYMCO MP, LTD.

Business Operations

- Design, manufacture, and sale of steel belts, related equipment (steel belt conveyors, etc.), and precision machine parts
- Manufacture and sale of ultra-thin metal sleeves
- Sale of silica-based pumice. DYMCO is the sole agent of HESS PUMICE PRODUCTS, Inc. in Asia

Customers

130 customers - Global sales covering America, Asia Pacific, Europe, Middle East, etc.
2,820 customers - Domestic sales

Industries

Printing / Semiconductor, Electronics / Film / Energy / Automotive
Logistics / Robotics / Chemicals / Packaging / Food / Pharmaceuticals / Others

Certifications

- ISO 14001:2015
- Yokohama Chizai Mirai Enterprise
- Kanagawa GANBARU Enterprise

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Contact Us!



DYMCO Website