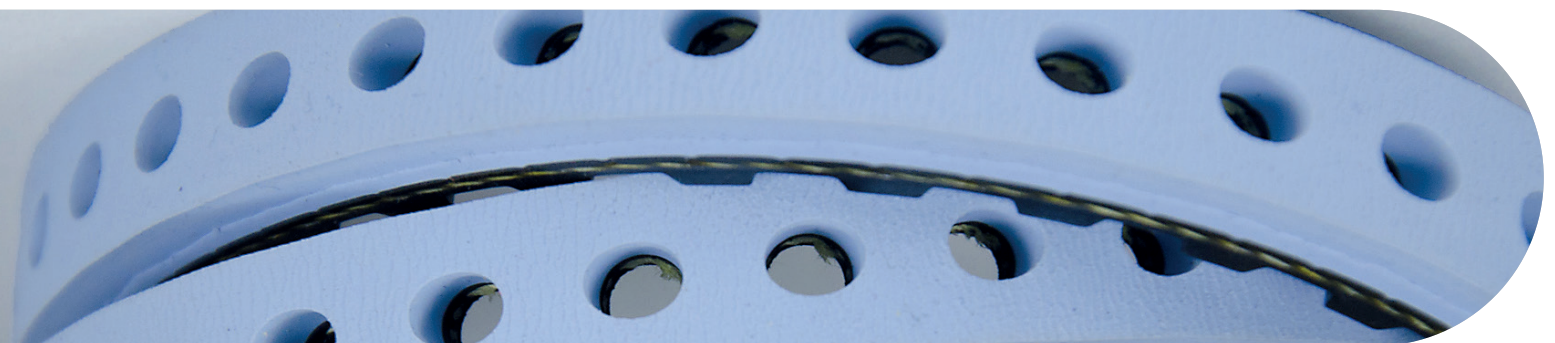
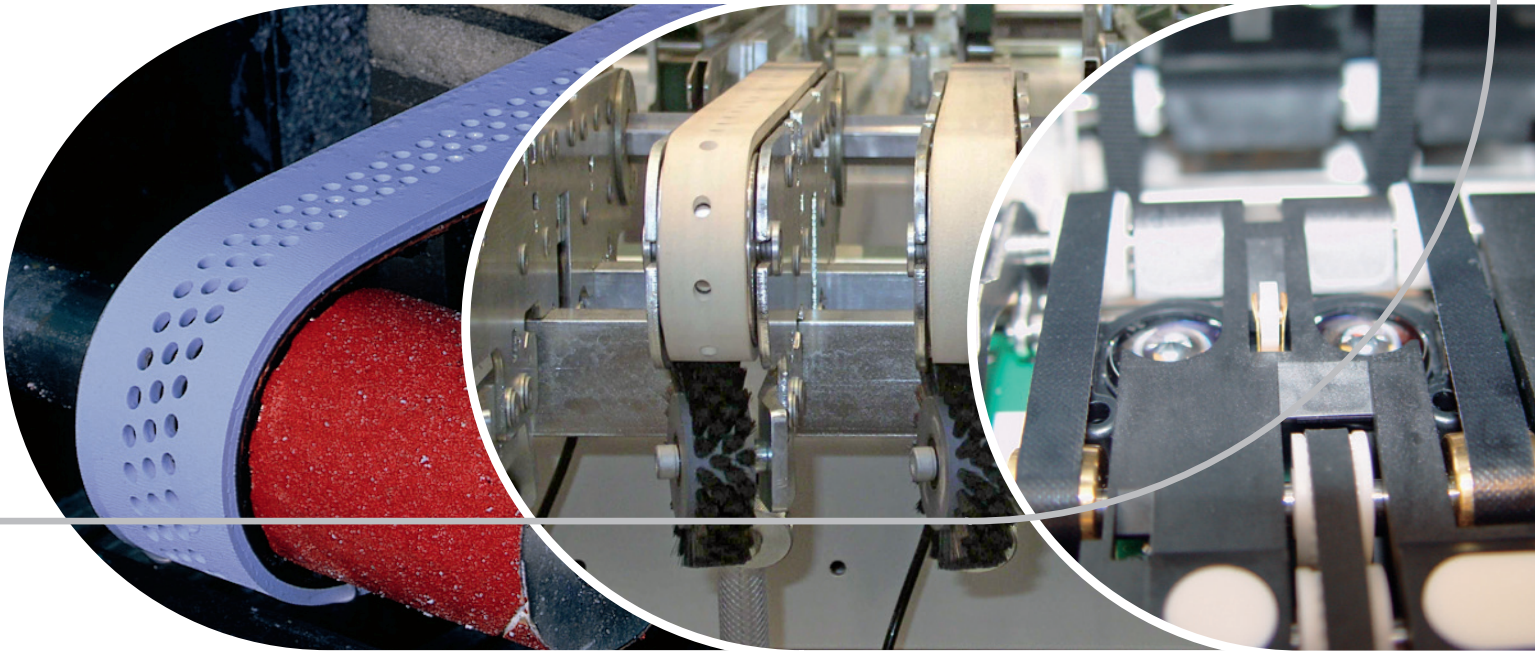


Products
Media No. 4378

Habasit Seamless Belts Customized solutions

Habasit – Solutions in motion



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| | |
|---|----|
| Customized quality you can trust | 3 |
| Two main belt ranges: many different applications | 4 |
| Features and benefits | 6 |
| Tailored solutions for optimal performance | 7 |
| Product range and belt types | |
| • Habasit traditional seamless belts | 8 |
| • Habasit GRABBER belts | 9 |
| Specialty belts / Materials / Fabrication | 10 |
| The Habasit solution | 11 |
| Habasit worldwide | 12 |

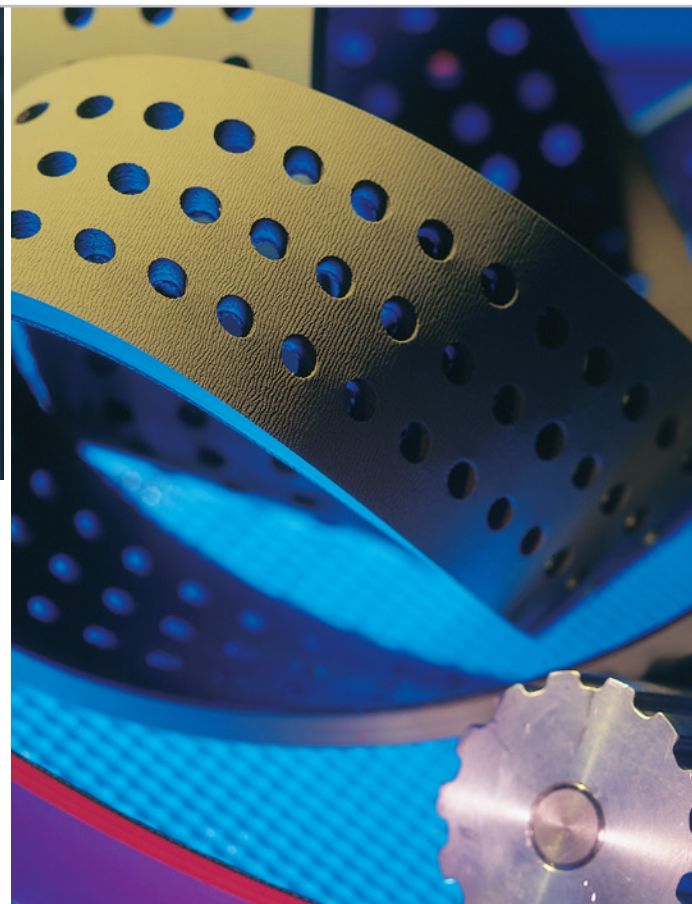
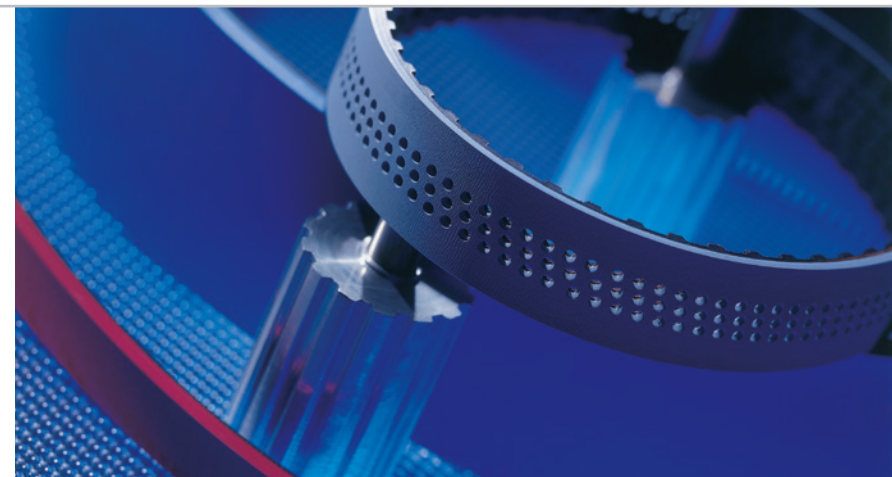


Habasit seamless belts are used in numerous industries where precision is essential to achieving optimum performance.

Our seamless belt portfolio consists of woven endless and knitted endless flat belts, as well as synchronous and non-synchronous endless substrates with a choice of covers.

Drawing on our industry-leading manufacturing processes and a broad range of materials, textiles and elastomers, we select the correct combination of materials to guarantee the best performance and results for your application. Our unique capabilities ensure optimal design and reduced lifecycle costs, as well as smooth and vibration-free operation, especially at high speeds.

Please contact us to discuss your needs. Our application engineers will be pleased to discuss all the options with you.



Habasit seamless belts consist of a fabric belt substrate that is manufactured endless as a tube on looms or knitting machines. The threads are wound spirally in the intended belt running direction. The circumference of each belt is determined by the diameter of the spirals, while the required width is obtained by slitting the tube. To achieve the required properties and dimensional stability, a specific elastomer is added to the substrate and treated in a special thermal process to make the belt.

For friction-feed applications, seamless belts or other belts are coated with additional cover compounds in a truly seamless manner, with no splice or seam. This ensures uniform physical properties during the entire belt service life.

In order to meet every customer requirement, Habasit offers two main seamless belt ranges:

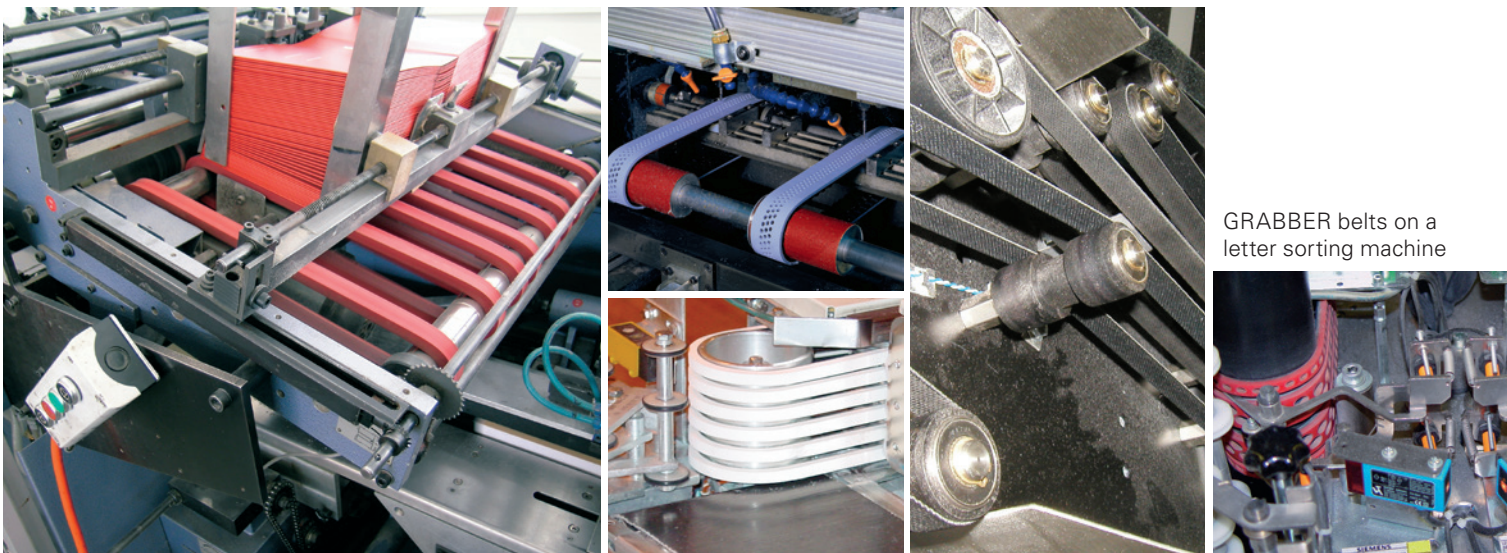
- Traditional seamless (flat) belts
- GRABBER feeder belts

Traditional seamless belts

Habasit's traditional Panther and Apache series are mainly used as light power transmission or light conveyor belts.

GRABBER feeder belts

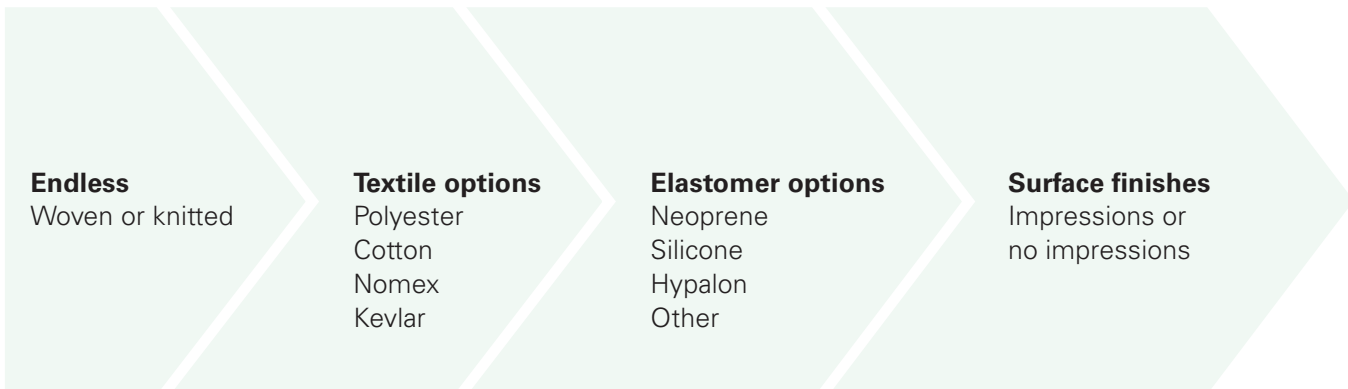
The Habasit GRABBER series offers special frictional benefits on synchronous (timing) belts or non-synchronous (flat and poly-v) belts, such as high-friction feeder belts. GRABBER high-friction feeder belts are available with numerous substrates and tailor-made durable covers.



Corrugated converting with an infeed station

GRABBER belts on a letter sorting machine

Seamless flat belts

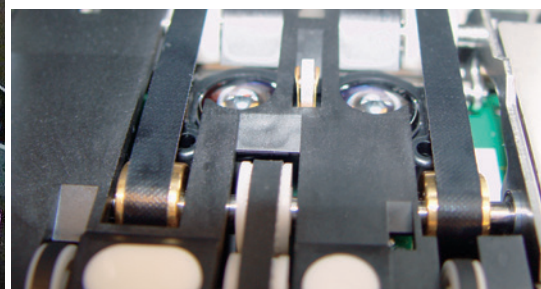


GRABBER feeder belts



Selection of belts with holes, slots, and grooves

Seamless belts on an automated teller machine



Based on a thorough understanding of your application, we will engineer the right belt for your specific needs, taking advantage of our multitude of cover options.

Habasit also provides many custom-made specialty belt types, such as our Habasit silicone belts. These truly endless belts are not only FDA-approved, but are also particularly suitable for applications where high temperature-resistance or excellent release properties are required.

Traditional seamless belts

| Features | Benefits |
|--|--|
| Various combinations of fabrics and elastomers possible | <ul style="list-style-type: none"> No marking, no ink smearing Optimal adaptation of properties to application needs Gentle handling of goods Bi-directional running |
| No seam | <ul style="list-style-type: none"> Vibration-free running Infinite flex life |
| Uniform thickness | <ul style="list-style-type: none"> Smooth, quiet operation |
| Longitudinal flexibility | <ul style="list-style-type: none"> Suitable for small pulley diameters Long belt lifetime Low running costs |
| Stable modulus of elasticity | <ul style="list-style-type: none"> Minimal belt elongation No retensioning No downtime |
| Constant coefficient of friction and excellent abrasion resistance | <ul style="list-style-type: none"> Reliable conveying properties Long belt life |
| Elastic | <ul style="list-style-type: none"> Quickly installed No need for tensioning devices Low costs |
| Antistatic belt design available | <ul style="list-style-type: none"> Less dust and dirt attraction Increased process reliability Low maintenance costs |
| Low sensitivity to humidity | <ul style="list-style-type: none"> High dimensional stability No retensioning |

GRABBER feeder belts

| Features | Benefits |
|---|---|
| Wide range of surface types and traction layers | <ul style="list-style-type: none"> Optimal adaptation of properties to application needs Appropriate belt strength for every requirement Tight belt length tolerances possible |
| Stable modulus of elasticity after running-in | <ul style="list-style-type: none"> Minimal belt elongation No retensioning No downtime |
| Constant coefficient of friction | <ul style="list-style-type: none"> Reliable process Long belt life Uniform feed |
| Permanently antistatic | <ul style="list-style-type: none"> Less dust and dirt attraction High process reliability Low maintenance costs |
| Tailor-made holes, slots and grooves available | <ul style="list-style-type: none"> Optimized process functions Applicable as vacuum feeder belts |

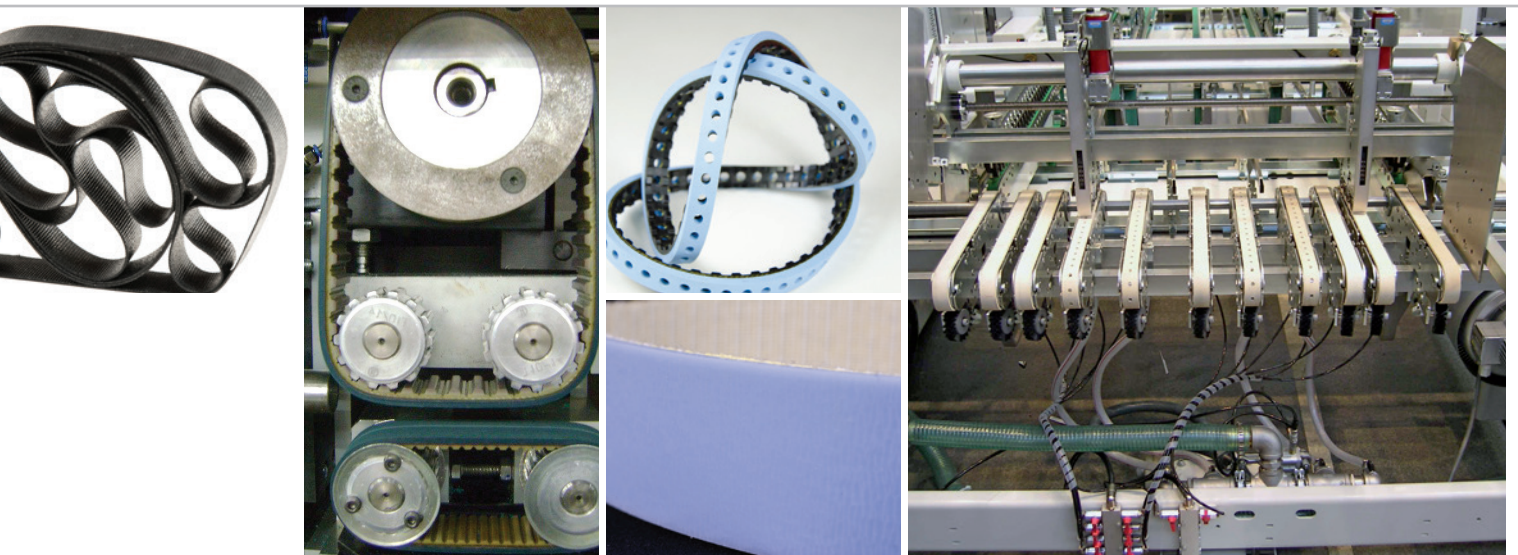


Habasit has years of experience of working closely with OEMs and major customers to design tailor-made belts that draw on our vast range of options to combine the right fabric design, material, and cover features to provide an optimized solution. For example, the best conveying side cover should be soft and slip-proof for careful product handling in filling lines, and hard with additional wear resistance for abrasive environments.

While there are many established fabric structures used as substrates, our textile specialists will be glad to develop novel designs for new applications if required.

Belt covers in a variety of sizes and material characteristics offer a wide range of performance features to help move your products. Special machining of the belt cover can further ensure the most efficient means of moving your product.

Common machining steps include: holes for vacuum draw, pockets for product reading and deposit recognition, slots for handling, and lateral grooves for venturing.



Seamless belts on a paper handling machine

Habasit traditional seamless belts are divided into four main groups:

- Stable Panther belts
- Semi-stable belts
- Semi-elastic belts
- Elastic belts

| | Stable Panther | | | | Semi-stable | Semi-elastic | Elastic |
|--|--|---------------------------------|------------------------------------|------------------------------------|--|--|--|
| | 400 | H | L | VL | | | |
| Lengths | 177 – 5080 / 6.97 – 200 (circumference) [mm / in] | | | | | | |
| Widths | 6 – 305 / 0.24 – 12 [mm / in] | | | | | | |
| Tensile force for 1% elongation [N/mm / lb/in] | 28 160 | 28 160 | 14 80 | 8.8 50.2 | 8 45.7 | 1.8 – 4.5 10.3 – 25.7 | 0.2 – 1.0 1.14 – 5.7 |
| Thickness | 0.85 – 0.90 0.03 – 0.04 | 1.25 – 1.40 0.05 – 0.06 | 0.56 0.02 | 0.46 0.02 | | 0.5 – 1.6 0.02 – 0.06 | |
| Primarily application | <ul style="list-style-type: none"> • Capstan drives • Currency handling • Power transmission, such as grinders • Spindle drives • Lathes • Vacuum cleaners, etc. | | | | <ul style="list-style-type: none"> • High torque fixed center drives • Serpentine roller shaft drives • Common take-up applications | <ul style="list-style-type: none"> • Copiers, scanners • Fiber optics • Fixed centers – no take-up • Common shaft applications with no take-up | <ul style="list-style-type: none"> • Copiers, scanners • Fiber optics • Fixed centers – no take-up • Supported and unsupported constructions |
| Remarks | Wide range of elastomer covers available | Best choice for flanged pulleys | High strength to flexibility ratio | High strength to flexibility ratio | Allows for use of multiple belts on one conveying application | Low tension requirements – good with small pulleys | Good for small pulleys with no take-up or tensioning device |

Because of the broad scope of endless belt applications, the need for specific application details cannot be overemphasized. By filling out the Belt Design Worksheet www.habasit.com/en/belt-design-worksheet.htm, our application engineers can recommend the most appropriate belt for your specific application requirements. Please contact Habasit for any further clarification.

Habasit GRABBER belts are mainly used for feeding or pulling where high friction is a key requirement.

- Feed belts in folder-glue: our GRABBER belts offer a uniform wear surface and precise tolerances. The high-friction material combined with the truly endless belt permits high-speed feeding.
- Our PLR series (puller) is used in the manufacture of wires, cables, hose and tubing, but may also be employed for extrusion of many products, such as plastic profiles and moldings.
- GRABBER belts are found in vertical form fill seal applications (VFFS), mainly in the food industry, for breakfast cereals, cookies, crackers, lettuce and frozen chicken, etc.
- Capper belts in the bottling industry use our high-friction Habasit GRABBER belts to guarantee a positive grip and proper sealing by the processed caps.
- GRABBER belts perform as pick-off belts in the postal industry, where envelopes are fed into the sorting process.

Habasit GRABBER belts are available in the following dimensions:

| | |
|-------------------------|------------------------------|
| Length (circumference): | 75 – 4140 mm / 2.95 – 163 in |
| Width: | 6 – 406 mm / 0.24 – 15 in |
| Thickness: | 1.5 – 20 mm / 0.06 – 0.79 in |

GRABBER belts and their primary applications:

| | |
|--------------------------------|--|
| Folder-gluer feed belts | <ul style="list-style-type: none"> • Corrugated board or paper box board |
| Puller | <ul style="list-style-type: none"> • Pulling extruded product (e.g. wire) through the process |
| Vertical form fill seal (VFFS) | <ul style="list-style-type: none"> • Packaging application found in food and other industries |
| Capper belts | <ul style="list-style-type: none"> • Applies caps to bottles after filling and closes the bottles |
| Postal “pick-off” belts | <ul style="list-style-type: none"> • To feed envelopes into the sorting process |

Cover options showing the durometer and color of Habasit GRABBER belts

| Natural rubber | Specific natural rubber | Polyurethane |
|---------------------------|---------------------------|--------------------|
| 35 ShA Blue | 35 ShA Red Linatex | 30 ShA Yellow Foam |
| 35 ShA Dark Blue | 40 ShA White Polyisoprene | 55 ShA Green |
| 35 ShA Green | | 55 ShA Black |
| 35 ShA Light Blue | Neoprene | 55 ShA Yellow |
| 35 ShA Light Green | 50 ShA Gray | 60 ShA Black |
| 35 ShA Red | 70 ShA Black | 70 ShA Green |
| 35 ShA White NR-SBR Blend | 60 ShA Black | |
| 37 ShA Tan | 65 ShA Black | EPDM Rubber |
| 40 ShA Orange | 40 ShA White (FDA) | 35 ShA Red |
| 40 ShA Red | | 50 ShA Black |
| 45 ShA Red | Nitrile rubber | 60 ShA Black |
| 55 ShA Green | 40 ShA Red Carboxylated | 60 ShA Red |
| 55 ShA White NR Blend | 60 ShA White (FDA) | 60 ShA White (FDA) |
| 60 ShA Black | 70 ShA Blue Carboxylated | 70 ShA White |
| 60 ShA Red | 80 ShA Brown Carboxylated | |
| 70 ShA Red | | |

Specialty Belts

DuraTherm – the seamless silicone belt

DuraTherm Max belts are manufactured with a truly endless Aramid substrate for high-temperature applications. DuraTherm Blue, with a polyester substrate, provides higher strength and less elongation. The DuraTherm cover material is a RTV silicone (room temperature vulcanization silicone) with a thickness between 2.0 mm (0.08 in) and 3.0 mm (0.12 in).

Typical applications include conveying products in elevated temperatures (cooked food for example), where good release properties are also required. The polyester substrate is rated for a continuous operating temperature of 175 °C (350 °F); the Aramid version can cope with 250 °C (500 °F).

TPU film belts

TPU film belts are used in food processing and on checkweighers where high speeds and accurate weighing are critical.



Materials

Habasit products are almost exclusively made of synthetic materials (polymers). The overview below shows the main basic materials used for seamless belts.

Materials used for traditional seamless belts

Substrate: polyester, nylon, cotton, Kevlar, Nomex
Cover: neoprene, nitrile, EPDM, polyurethane, Hypalon, silicone

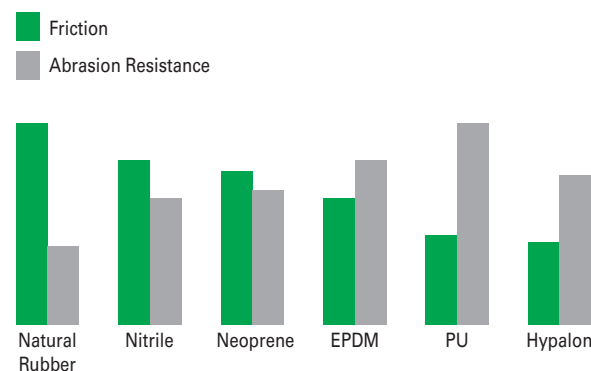
Materials used for GRABBER belts

Substrate: polyester, nylon, cotton, Kevlar, Nomex and special materials
Cover: natural rubber, neoprene, nitrile, EPDM, polyurethane, Hypalon and special compounds

Fabrication

Fabrication is critical to the finished product, with options including punching, routing, milling and slotting, depending on the feeding requirements of the application. Our product specialists will provide recommendations to meet your needs.

Please feel free to contact our specialists with any questions.



Custom-made seamless belts with holes, slots, and grooves



Customers first

At Habasit we understand that our success depends on your success. This is why we offer solutions, not just products; partnership, not just sales.

Since our foundation in 1946, Habasit has brought this understanding of customer needs to life every day and for every application. That's why we're the No. 1 in belting today. Worldwide. Learn more on www.habasit.com

Committed to innovation

Because our customers' belting challenges and needs never cease, we consistently dedicate a substantial percentage of our employees and resources to the research and development of new products and solutions.

Certified for quality

We deliver the highest quality standards not only in our products and solutions, but also in our employees' daily work processes. Habasit AG is certified according to ISO 9001:2008.



Worldwide leading product range

Habasit offers the largest selection of belting, conveying, processing and complementary products in the industry. Our response to any request is nothing less than a specific, tailor-made solution.

| | | | |
|--|--|--|---|
| | | | |
| Fabric-based conveyor and processing belts HabaFLOW® | Plastic modular belts HabasitLINK® | Positive drive conveyor and processing belts Habasit Cleandrive™ | Power transmission belts HabaDRIVE® |
| | | | |
| Timing belts HabaSYNC® | Chains (slat and conveyor chains) HabaCHAIN® | Machine tapes | Round belts |
| | | | |
| Seamless belts | Profiles, Guides, Wear strips HabiPLAST® | Fabrication tools (joining tools) | Gearmotors Electric motors Motion control |

Australia

Habasit Pty Ltd.
Silverwater
Phone: +61 1300 945 455
www.habasit.com.au

Austria

Habasit GmbH
Wien
Phone: +43 1 690 66
www.habasit.at

Belgium

Habasit Belgium N.V.
Zaventem
Phone: +32 27 250 430
www.habasit.be
www.habasit.lu

Canada

Habasit Canada Ltd.
Oakville
Phone: +1 905 827 41 31
www.habasit.ca

China

Habasit East Asia Ltd.
Hong Kong
Phone: +85 221 450 150
www.habasit.com.hk

Habasit (Shanghai) Co. Ltd.
Shanghai

Phone: +8621 5488 1228
Phone: +8621 5488 1218
www.habasit.com.hk

France

Habasit France S.A.S.
Mulhouse
Phone: +33 389 338 903
www.habasit.fr

Germany

Habasit GmbH
Eppertshausen
Phone: +49 6071 969 0
www.habasit.de

India

Habasit-Iakoka Pvt. Ltd.
Coimbatore
Phone: +91 422 262 78 79
www.habasitiakoka.com

Italy

Habasit Italiana SpA
Customer Care:
Phone: 199 199 333
For int. calls: +39 0438 911 444
www.habasit.it

Japan

Habasit Nippon Co. Ltd.
Yokohama
Phone: +81 45 476 0371
www.habasit.co.jp

Netherlands

Habasit Netherlands BV
Nijkerk
Phone: +31 332 472 030
www.habasit.nl

New Zealand

Habasit Ltd.
Auckland
Phone: 0800 000 070
www.habasit.co.nz

Poland

Habasit Polska Sp. z o.o.
Dabrowa Górnicza
Phone: +48 32639 02 40
www.habasit.pl

Russia

OOO Habasit Ltd.
St. Petersburg
Phone: +7 812 600 40 80
www.habasit.ru

Singapore

Habasit Far East Pte. Ltd.
Singapore
Phone: +65 686 255 66
www.habasit.com.sg

South Africa

Habasit South Africa (Pty) Ltd.
Gauteng
Phone: +27 10 001 6770
www.habasit.co.za

Spain

Habasit Hispanica S.A.
Barberà del Vallès
Phone: +34 937 191 912
www.habasit.es

Sweden

Habasit AB
Hindas
Phone: +46 30 122 600
www.habasit.se

Switzerland

Habasit GmbH
Reinach
Phone: +41 61 577 51 00
www.habasit.ch

Taiwan

Habasit (Taiwan) Ltd.
Taipei Hsien
Phone: +886 2 2267 0538
www.habasit.com.tw

Turkey

Habasit Kayis San. Ve Tic. Ltd. Sti.
Istanbul
Phone: +90 444 70 43
www.habasit.com.tr

Ukraine

Habasit Ukraine LLC.
Vinnitsa
Phone: +38 0432 58 47 35
www.habasit.ua

United Kingdom and Ireland

Habasit (UK) Ltd.
Silsden
Phone: +44 844 835 9555
www.habasit.co.uk

USA

Habasit America
Suwanee, Georgia
Phone: +1 800 458 6431
www.habasitamerica.com

Headquarters

Habasit AG
Römerstrasse 1
CH-4153 Reinach, Switzerland
Phone +41 61 715 15 15
Fax +41 61 715 15 55
E-mail info@habasit.com
www.habasit.com



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