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Belting And Chain

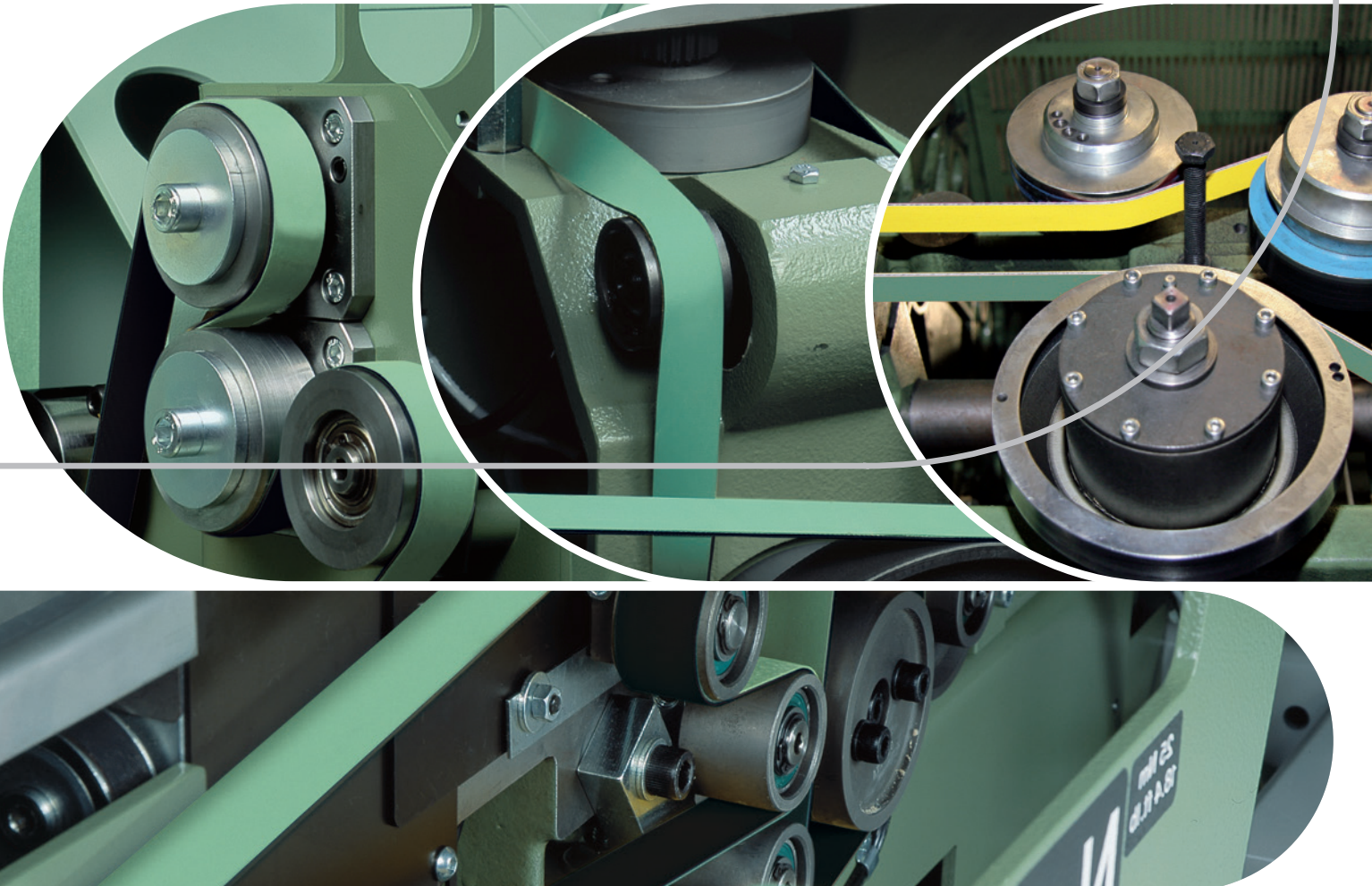
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Products
Media No. 4132

HabaDRIVE[®] Power Transmission Belts

Habasit – Solutions in motion



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SAFETY WARNINGS SHOULD BE READ CAREFULLY AND ANY RECOMMENDED SAFETY PRECAUTIONS BE FOLLOWED STRICTLY! Please refer to the Safety Warnings herein, in the Habasit catalogue as well as installation and operating manuals.

All indications / information as to the application, use and performance of the Products are recommendations provided with due diligence and care, but no representations or warranties of any kind are made as to their completeness, accuracy or suitability for a particular purpose. The data provided herein are based on laboratory application with small-scale test equipment, running at standard conditions, and do not necessarily match product performance in industrial use. New knowledge and experience may lead to re-assessments and modifications within a short period of time and without prior notice.

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HabaDRIVE® power transmission belts

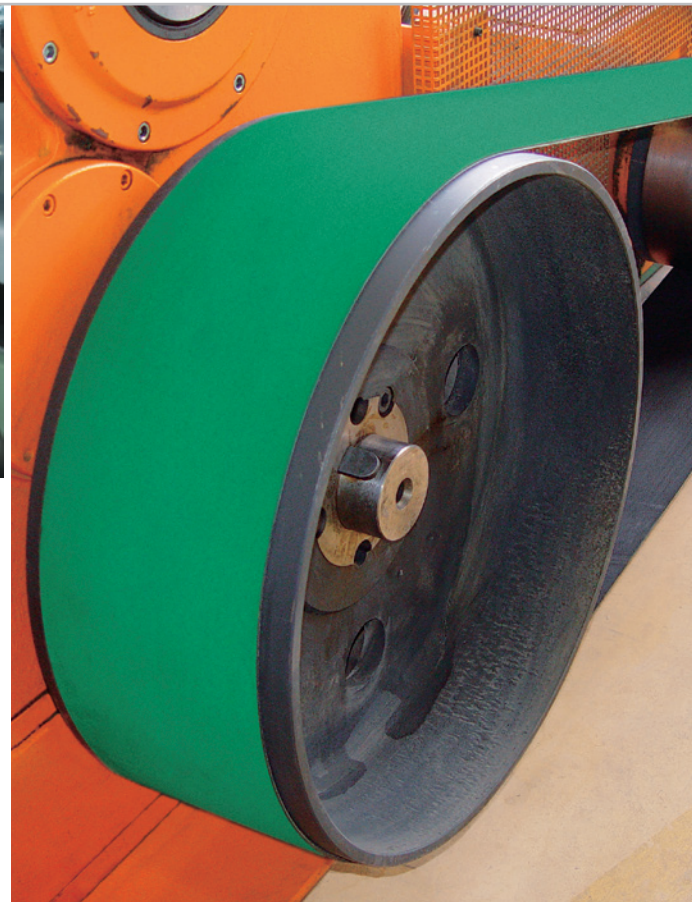
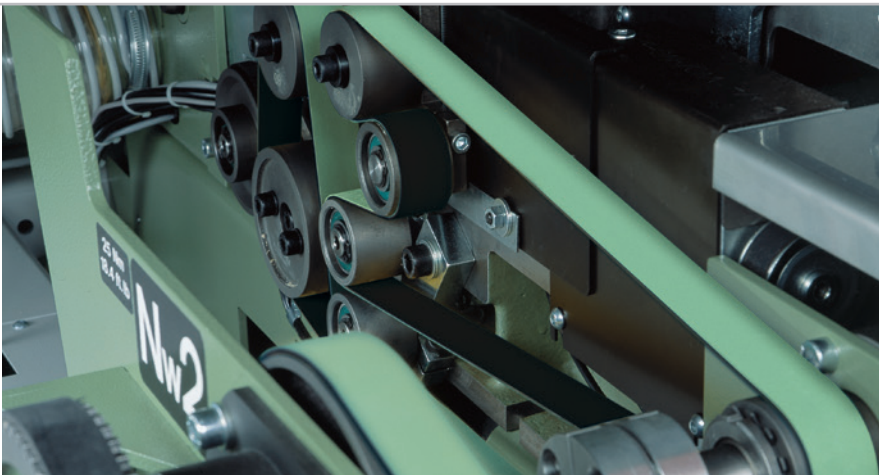
Habasit gets things moving with an extensive variety of high-quality belt solutions. HabaDRIVE® power transmission belts are ideal for reliable and economical power transmission.

Key benefits

- Long belt service life
- Low energy consumption
- Maintenance free
- No unexpected machine downtime
- Smooth and quiet running
- Unlimited pulley service life

Your solutions partner

Habasit is totally committed to understanding your design parameters and application needs. After reviewing your requirements, our specialists will suggest the best belt solution for each application.



Global expertise

With decades of experience, the most comprehensive and innovative product range, and an extensive global network, Habasit is the clear No. 1 in belting worldwide.

We put every effort into meeting your needs for high quality belting solutions tailored to your specific requirements.

HabaDRIVE® power transmission belts are customized to suit specific industry needs and a wide variety of machine designs. This overview shows just some of the industries and applications Habasit is currently serving.



Textile industry

- Cards
- Draw frames
- Roving frames
- Ring spinning frames
- OE machines
- Twisting machines
- Texturing machines
- Winders
- Overhead cleaners

Paper and postal industry

- Calenders
- Paper mills
- Pulpers
- Slitters
- Web feeders
- Folders
- Finishing machines
- Converting lines
- Letter sorters

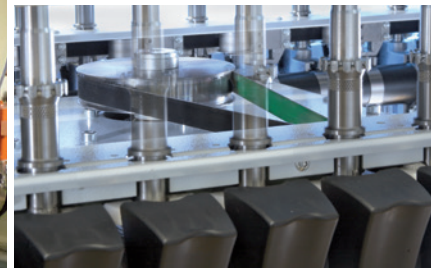
Various industries

- Air conditioning
- Blowers
- Centrifuges
- Compressors
- Extruders
- Fans
- Feeding devices
- Frame saws
- Mills
- Presses
- Pumps
- Stone crushers

Materials handling

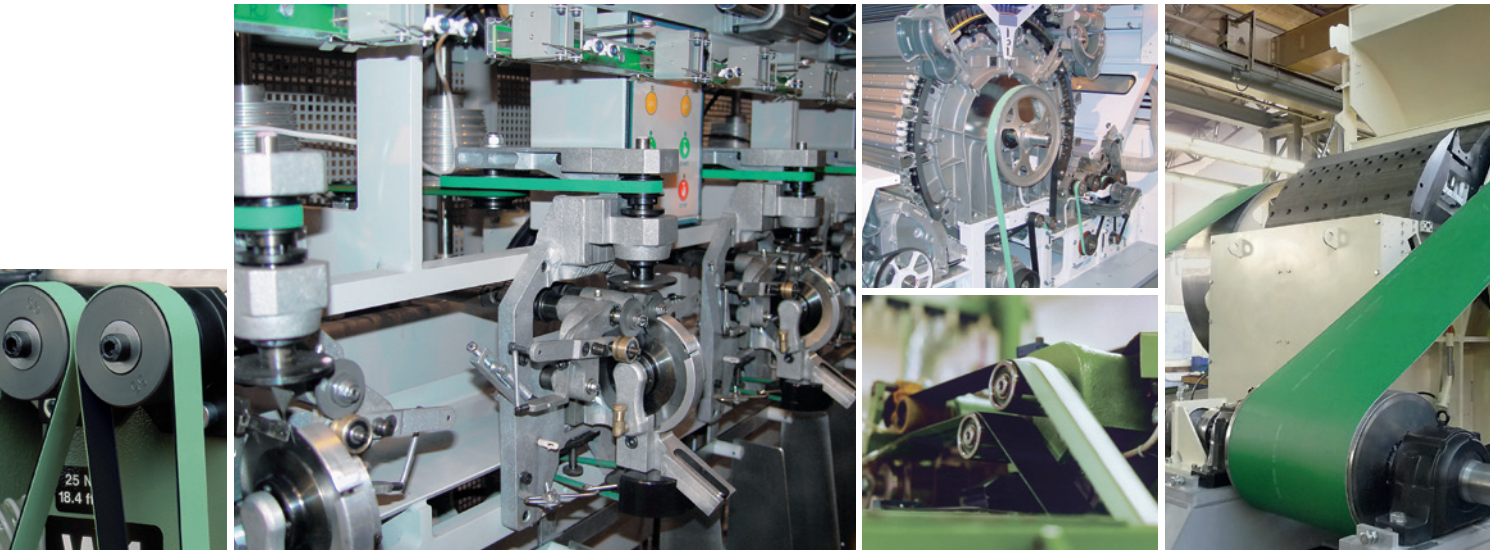
- Live roller drives
- Induction units

Habasit has developed the HabaDRIVE® range of power transmission belts to allow you to choose the most suitable and durable belt for your specific application. Below is an overview of the three traction layer materials used by the different belt concepts:



	The versatile belt			The hard-working belt		The sophisticated belt
Traction layer	Polyester (PET)			Polyamide (PA)		Aramide (AR)
	<ul style="list-style-type: none"> Outstanding price-to-value ratio First choice of machine manufacturers and end users worldwide 			<ul style="list-style-type: none"> Well known for its reliability and long belt life Robust and highly resilient, copes with intermittent overload and high temperatures (100 °C / 212 °F) 		<ul style="list-style-type: none"> Best choice for long belts Short take-up Extremely high rpm accuracy
Applications	TC-	TCF-xxEL	TL-	S-	A-	TF-
	<ul style="list-style-type: none"> Low energy consumption Highly flexible Simple to join Reliable performance 	<ul style="list-style-type: none"> Low energy consumption Grooves enable high grip Highly flexible Simple to join 	<ul style="list-style-type: none"> Low energy consumption Best in class abrasion resistance Consistent grip over lifetime 	<ul style="list-style-type: none"> Resilient Shock resistant 	<ul style="list-style-type: none"> Resilient Shock resistant Grooves enable high grip 	<ul style="list-style-type: none"> Low energy consumption Highly flexible Simple to join High E-modulus
Tangential drive	•		(•)	•		•
Multiple pulley drive	•	•	•	•	•	•
Live roller drive	•		•	•		•
Double-sided PTB	•		•	•		•
Design and materials						
Friction cover	NBR rubber	NBR rubber Hamid for TCF-xxH	Foamed TPU	NBR rubber	NBR rubber	NBR rubber
Traction layer	Polyester			Polyamide		Aramide
Reverse cover	NBR rubber	Hamid	Foamed TPU	NBR rubber	NBR rubber (protection cover)	NBR rubber
Operating temperature admissible (continuous)	-20 °C – 70 °C -4 °F – 158 °F		-20 °C – 60 °C -4 °F – 140 °F	-20 °C – 100 °C -4 °F – 212 °F		-20 °C – 65 °C -4 °F – 149 °F
Joining system	Flexproof (adhesive-free)			Thermofix		Flexproof (adhesive-free)

• = Suitable (•) = Suitable (not for high-performance machines)



Features	Benefits	PET	PA	AR
High flexibility	<ul style="list-style-type: none"> Low energy consumption Small pulley diameters Compact machine design 	•••	•	•••
High modulus of elasticity	<ul style="list-style-type: none"> Very short take-up Accurate belt speed 	••	•	•••
Resilient traction layer	<ul style="list-style-type: none"> Shock resistant Forgiving belt design 	••	•••	•
Adhesive-free joining method	<ul style="list-style-type: none"> Short downtime 	•••	n/a	•••
Homogeneous joining area	<ul style="list-style-type: none"> Smooth and quiet running 	•••	•	•••
Low vibration	<ul style="list-style-type: none"> Long bearing life 	•••	••	•••
Good temperature resistance	<ul style="list-style-type: none"> Long belt service life 	••	•••	••

- = excellent
- = good
- = fair
- n/a = not applicable



Energy savings with Habasit TC belts compared with competitors' polyamide belts

Compare the energy cost-saving potential of Habasit polyester TC and TF tangential belts with competitors' polyamide tangential belts.

Your savings

Average energy-saving potential as a percentage of power to be transmitted	4% to 6%
Average energy cost-saving potential per spindle/year	~ USD 1
Average energy cost-saving potential per year in a spinning mill with around 200,000 spindles	~ USD 200,000

Energy consumption comparisons – showing savings

Examples from India

Energy consumption comparison between competitor polyamide tangential belts and Habasit polyester TC tangential belts. Made on Leewha TFO (two-for-one) twisters at Rajasthan Spinning & Weaving Mills Ltd. in India:

	Competitor polyamide belt	Habasit TC-35ER belt	Competitor polyamide belt	Habasit TC-35/30ER belt
Spindle speed (rpm)	9,100 rpm		10,100 rpm	
Consumed energy	24.32 kWh	22.82 kWh	23.3 kWh	22.3 kWh
Energy savings with Habasit TC belts	6.2%		4.3%	

Examples from China

Energy consumption comparison between competitor polyamide tangential belts and Habasit polyester TC tangential belts. Made on Zhejiang Weifeng WF-168 covering machines (840 spindles) in China:

	Yiwu Hangfei Covering Yarn Co. Ltd.		Shantou Covering Yarn Factory	
Energy savings per machine and day	24 kWh		21 kWh	
Average working days per year	300		360	
Energy costs per kWh	CNY 0.7	USD 0.11	CNY 0.7	USD 0.11
Energy cost-savings per machine and year	CNY 5,040	USD 792	CNY 5,292	USD 832
Number of machines installed	275		250	
Number of spindles per machine	840		840	
Total energy cost savings per year	CNY 1,386,000	USD 217,800	CNY 1,323,000	USD 207,900
Energy savings per year and spindle	CNY 6.00	USD 0.94	CNY 6.3	USD 0.99

Belt code	Double-sided and tangential drives	One-sided power transmission	Thickness [mm]	Pulley diameter ₁₎ [mm]	Tensile force ₂₎ [N/mm]	Nominal peripheral force [N/mm]
Polyester						
TC-10EF	•	•	1.8	25	5.0	10
TC-20EF	•	•	2.0	25	10.0	21
TC-20/25EF	•	•	2.5	50	11.0	23
TC-35ER	•	•	2.5	50	18.0	38
TC-35/30ER	•	•	3.0	50	18.0	38
TC-35/35ER	•	•	3.5	70	18.0	38
TC-55ER	•	•	3.0	70	25.0	53
TCF-20EL	◦	•	2.6	80	10.0	21
TCF-35EL	◦	•	3.0	100	18.0	38
TCF-55EL	◦	•	3.5	150	25.0	53
TCF-20H	•	•	1.5	25	10.0	20
TCF-50H	•	•	2.0	60	24.0	48
TCF-50HT	•	•	2.0	60	24.0	48
TL-15/15	•	•	1.5	25	8.0	15
TL-20/20	•	•	2.0	25	10.0	20
TL-35/22	•	•	2.2	50	16.0	35
Polyamide						
S-10/15	•	•	1.5	40	4.4	12
S-18/20	•	•	2.0	60	8.0	22
S-18/30	•	•	3.0	60	8.0	22
S-33/40	•	•	4.0	125	13.0	37
S-33/50	•	•	5.0	125	13.0	37
S-140H	•	•	1.7	40	4.8	13
S-141H	•	•	2.3	40	4.8	13
S-200HRN	•	•	2.0	80	10.0	23
S-250H	•	•	2.3	100	11.0	29
S-250HR	•	•	2.6	100	11.0	29
S-251H	•	•	3.0	100	11.0	29
S-321H	•	•	3.2	125	13.0	35
S-390H	•	•	3.2	150	14.0	38
S-391H	•	•	4.0	150	14.0	38
A-2	◦	•	2.7	60	7.5	22
A-3	◦	•	3.4	125	12.0	36
A-4	◦	•	5.0	300	21.0	63
A-5	◦	•	6.8	450	30.0	92
Aramide						
TF-10	•	•	1.7	25	10.0	10
TF-15	•	•	2.0	30	15.0	15
TF-15H	•	•	1.5	30	15.0	15
TF-22	•	•	2.4	60	22.0	22
TF-33	•	•	3.0	100	33.0	33
TF-50	•	•	3.9	125	50.0	50
TF-75TE	◦	•	4.4	200	75.0	75

1) With counter flexion

2) Tensile force for 1% elongation per unit of width ($k_{1\%}$ after running-in)

• = Suitable


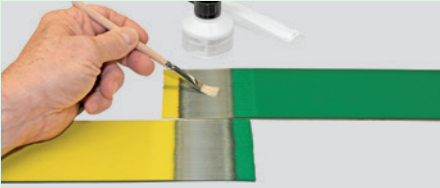

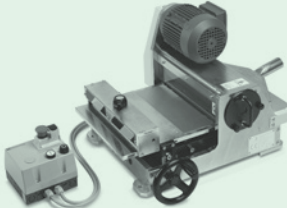


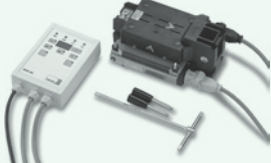
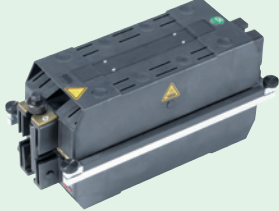
◦ = Not suitable

Please note: All data are approximate values under standard climatic conditions: 23 °C / 73 °F, 50% relative humidity (DIN 50005/ISO 554), and are based on the Habasit master joining method.

Two joining methods

Both joining methods, the adhesive-free Flexproof method for Polyester and Aramide belts, and the Thermofix (skived and with adhesive) method for Polyamide belts, are safe and absolutely reliable. Both are suitable for on-site installation.

We provide a selection of cost-effective, high-quality preparing and hot-pressing devices to support the joining process.

Method	Flexproof	Thermofix
Suitable for	<ul style="list-style-type: none"> • Polyester and Aramide (TC-, TCF-, TL-, TF-) 	<ul style="list-style-type: none"> • Polyamide (S-, A-)
Principle		
Key features	<ul style="list-style-type: none"> • Adhesive-free method • Easy handling, fast process • Homogeneous joining area • Short machine downtimes 	<ul style="list-style-type: none"> • Adhesive-based method • High temperature resistance
Fabrication tools		
Preparing devices	 <p>AF-61</p>	 <p>AT-305</p>
Hot-pressing devices (hand tools)	 <p>PF-62</p>	 <p>PT-100</p>
Hot-pressing devices (large-size tools)	 <p>PF-101</p>	 <p>PT-300</p>

Fabrication, tools and services

The provision of superior fabrication capabilities is a key element of Habasit's service concept. Fabrication can take place either at one of our facilities, on-site at the machine manufacturer (OEM), or at the end user.

Joining can be done either by the customer, or by Habasit's on-site service. Habasit has solutions for both cases, supported by our specially adapted range of joining tools and systems, and our extensive service network.

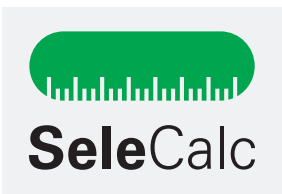
Comprehensive services are central to Habasit’s belting solution approach

As committed partners to our customers, we are dedicated to sharing our knowledge and to providing full support.



Comprehensive consulting and technical support

Habasit offers the best consulting and technical support on the belting market. Everything revolves around our customers and each affiliate has its own belting experts. The Habasit team is proud to provide the highest levels of support together with top-quality products that have been leaders on the global market for decades.



Assistance with belt selection and calculation

We will select and calculate the most suitable belt for your specific application. You can also do this yourself with our state-of-the-art Habasit selection and calculation program “SeleCalc”. To order this program free of charge, simply call your nearest Habasit partner or contact: info@habasit.com.



Fabrication, assembly and local installation services for quick reaction times

We make belts endless or assemble modular belts or chains, either at our own locations or on-site directly on your machine or system. Habasit operates over 30 affiliated companies worldwide, each with its own inventory, fabrication, assembly and service facilities. Together with our representative offices and numerous qualified distributors, we can react quickly, competently and reliably to satisfy all your demands.



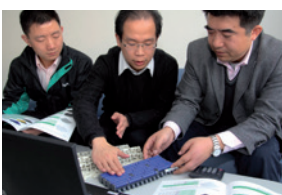
Customer training programs

Habasit offers training programs and provides support tools to ensure optimal use of our products and to prolong their lifetimes. Training on fabrication, installation, assembly, maintenance and belt repair takes place at Habasit sites or at your location.



Belt monitoring, inspections, analyses and process optimization proposals

We organize and handle belt maintenance, inspections, analyses and surveys for your locations. On request we will also work with you to develop optimization proposals, for example, to achieve added value from the machinery or process output.



Design assistance for customized solutions

Habasit believes in partnership. Our engineering team will work closely with your engineers on joint design developments, preferably from a very early stage. We particularly recommend this for projects involving new technologies or large-scale modifications and adaptations.



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.

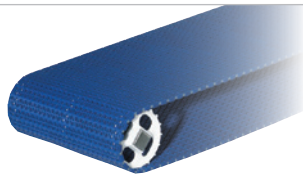
Certified for quality

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.

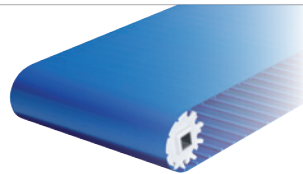


Worldwide leading product range

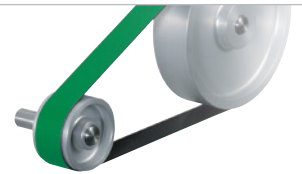
Habasit offers the largest selection of belting, conveying, processing and complementary products in the industry. Our response to any request is nothing less than a specific, tailor-made solution.



Plastic modular belts
HabasitLINK®



Positive drive conveyor and processing belts
Habasit Cleandrive™



Power transmission belts
HabaDRIVE®



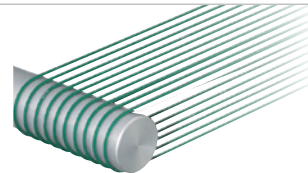
Timing belts
HabaSYNC®



Chains (slat and conveyor chains)
HabaCHAIN®



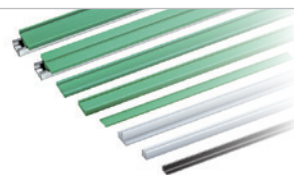
Machine tapes



Round belts



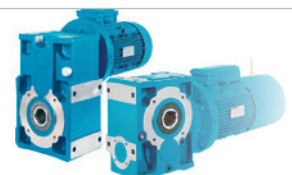
Seamless belts



Profiles, Guides, Wear strips
HabiPLAST®



Fabrication tools (joining tools)



Gearmotors
Electric motors
Motion control

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