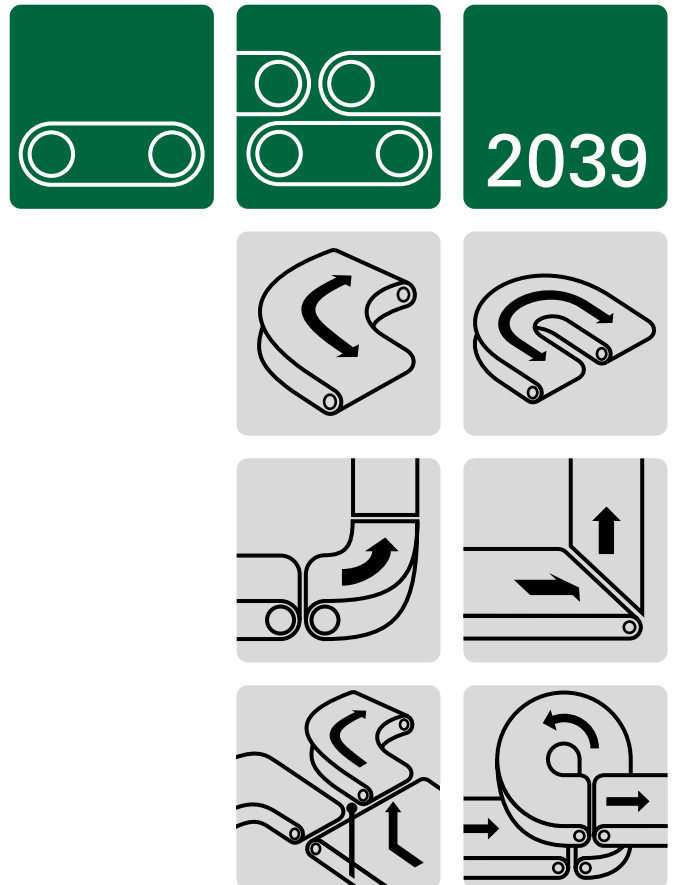


Edition: April 2002
Replaces edition: –



Application
brochure

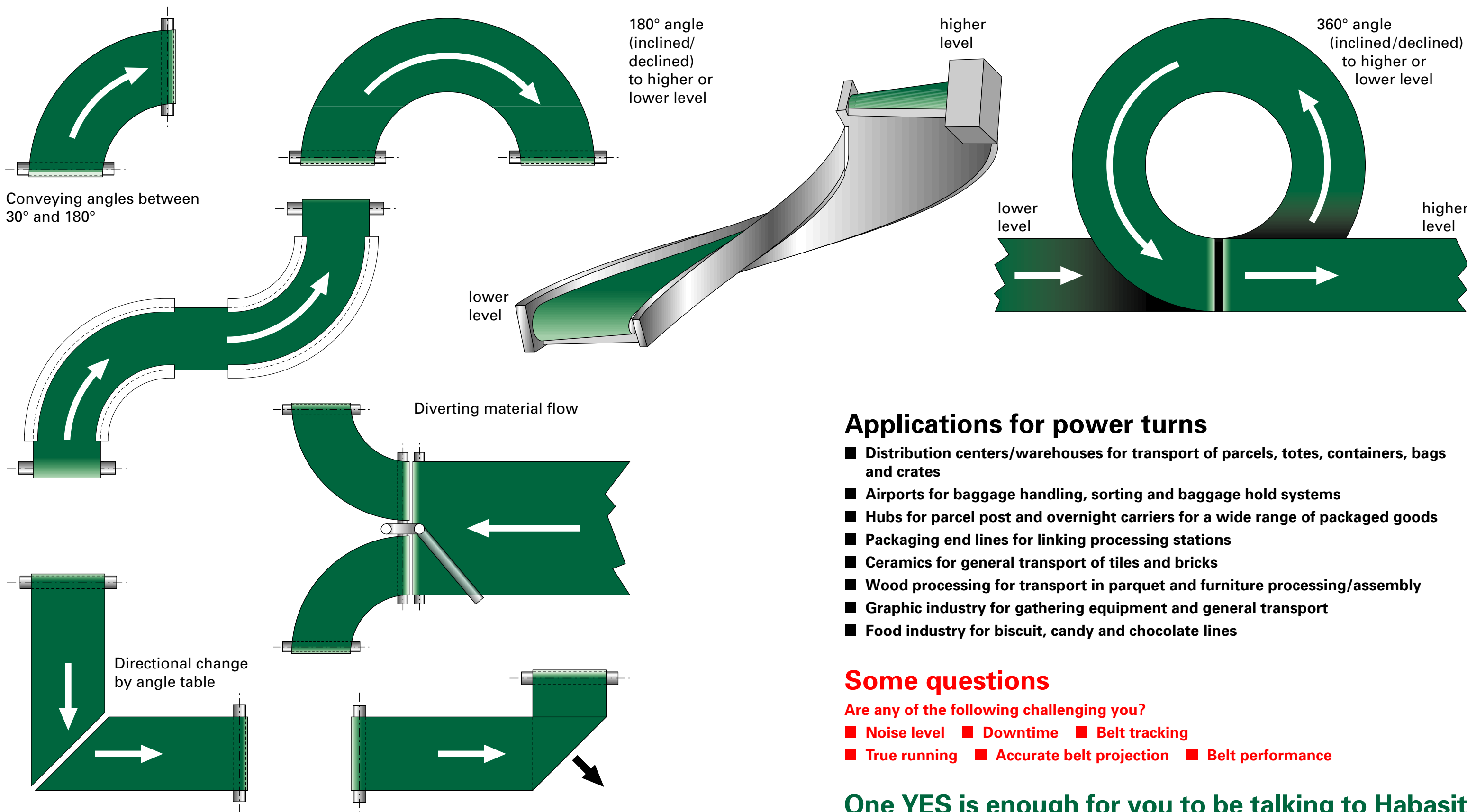
Habasit conveyor belts for power turns



Conveying configurations for directional changes of material flow

2

3



Applications for power turns

- Distribution centers/warehouses for transport of parcels, totes, containers, bags and crates
- Airports for baggage handling, sorting and baggage hold systems
- Hubs for parcel post and overnight carriers for a wide range of packaged goods
- Packaging end lines for linking processing stations
- Ceramics for general transport of tiles and bricks
- Wood processing for transport in parquet and furniture processing/assembly
- Graphic industry for gathering equipment and general transport
- Food industry for biscuit, candy and chocolate lines

Some questions

Are any of the following challenging you?

- Noise level
- Downtime
- Belt tracking
- True running
- Accurate belt projection
- Belt performance

One YES is enough for you to be talking to Habasit

Benefits of power turns offered by Habasit or our **VALUE PROPOSITION**



Features and benefits of power turns

Ultimate exploitation of space	Excellent transfer of goods
Freedom of systems design	Transfer at adapted speed
Carrying of high loads possible	Low maintenance, long/maintenance-free running
Narrow transfer points for small goods possible	Transfer of goods without change of relative position

Know-how, experience and products of Habasit

Belt assortment covering wide range of applications. Quality products

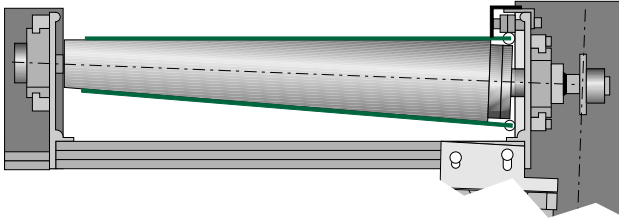
Belts suitably adapted for any equipment technology

Perfected belt geometry assured by use of automated belt fabrication technology

Technical support by our application specialists

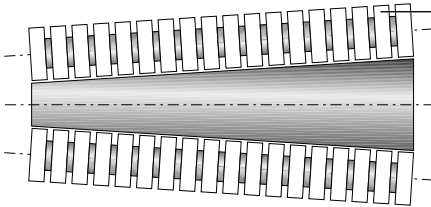
Equipment design technology available for our customers

Tapered pulleys and end drive systems

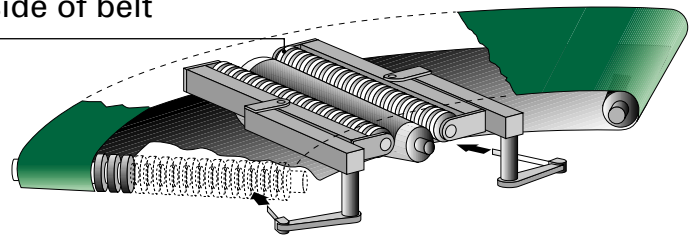


Belt drive via tapered end pulley

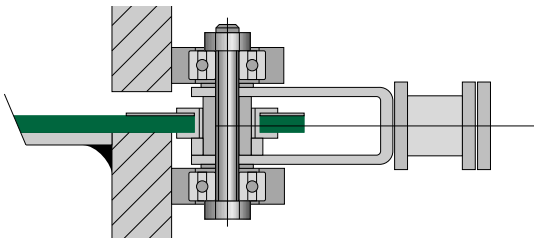
Cylindrical end pulleys and central drive systems



Friction drive acting on slack side of belt



Chain drive acting on belt periphery

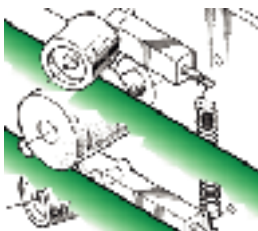


Alternative belt concept/system

Modular belt systems

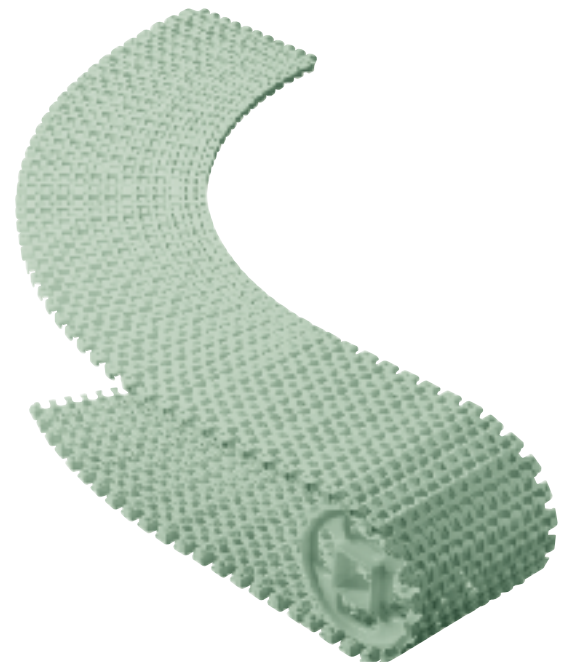
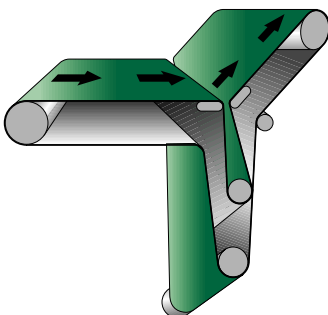
The smart modular belt range: HabasitLINK®

Combined drive/guiding systems



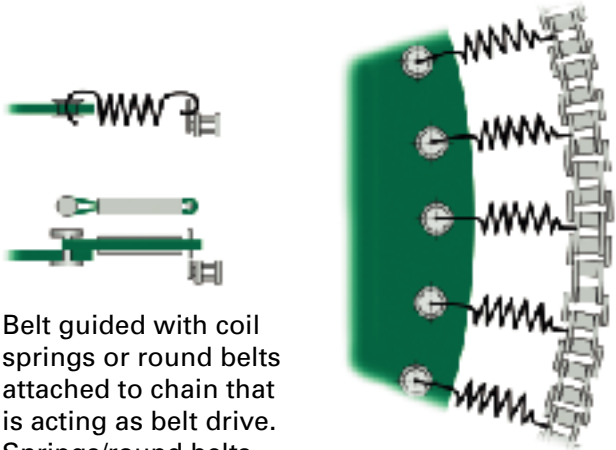
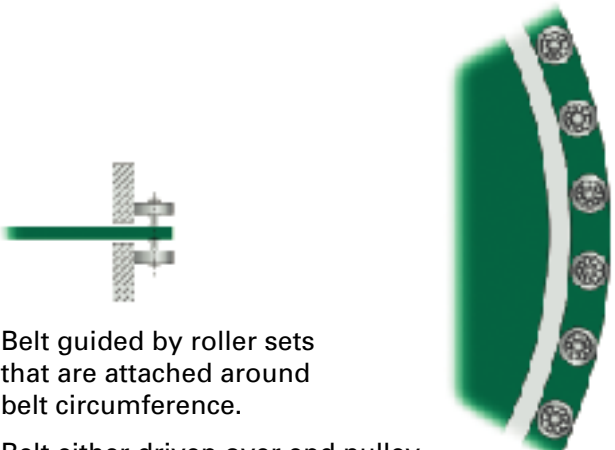
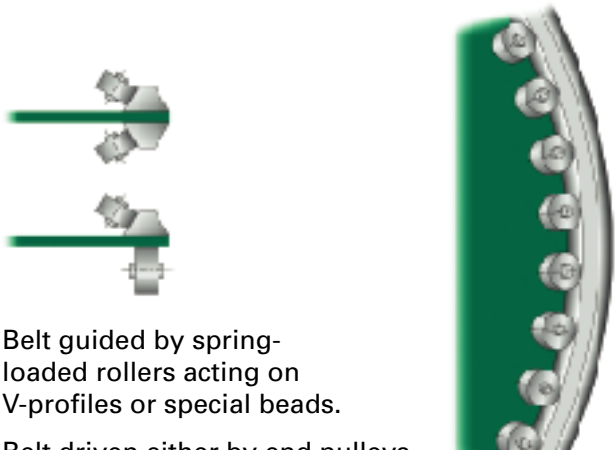
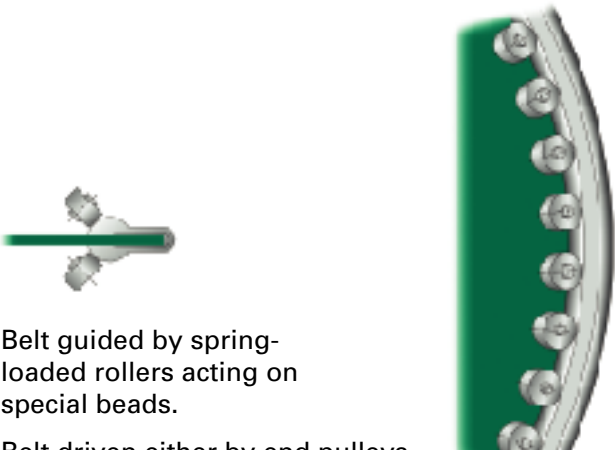
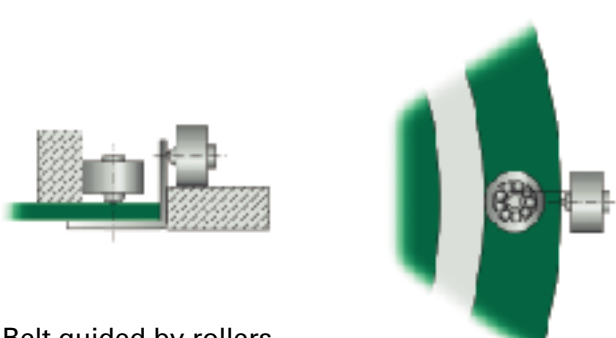

Source: Maruyasu

Oblique nosebar systems



Power turn guiding system (principle) (commonly used systems)

6

 <p>Belt guided with coil springs or round belts attached to chain that is acting as belt drive. Springs/round belts located in grommets.</p>	 <p>Belt guided by roller sets that are attached around belt circumference. Belt either driven over end pulley or by tangential drive.</p>
 <p>Belt guided by spring-loaded rollers acting on V-profiles or special beads. Belt driven either by end pulleys or by tangential drive.</p>	 <p>Belt guided by spring-loaded rollers acting on special beads. Belt driven either by end pulleys or by tangential drive.</p>
 <p>Belt guided by rollers that are acting on outer race of power turn. Belt either driven over end pulley or by tangential drive.</p>	 <p>Belt guided by rollers acting on outer race of power turn. Belt either driven over end pulley or by tangential drive.</p>

Source: Rapistan-Dematic

A fine selection of belts
for power turns

	Technical data			Product construction/design				Characteristics			Application				Special features
Belt type	Tensile force for 1% elongation (k1%) per unit of width [N/mm]	Belt thickness [mm]	Pulley diameter minimum [mm] / r = radius [mm]	Conveying side (Surface)	Conveying side (Property)	Conveying side (Color)	Conveying side (Material)	Flame retardant (DIN 22103, ISO 340)	Permanently antistatic	Food suitability: FDA/USDA	General Materials Handling	Food	Mini conveyors	Airport	
NAB-10EBAV	10	2.4	30	mat	adhesive	anthr.	PVC	○	●	○	●	○	○	◐	heavy duty
NVT-229	10	2.5	60	blank/smooth	non-adh.	black	PVC	●	●	○	○	○	○	●	heavy duty
NVT-256	8	2.2	24	structured	adhesive	black	PVC	○	●	○	●	○	○	◐	high grip
NVT-295	8	1.9	30	super mat	non-adh.	black	PVC	○	●	○	●	○	○	◐	
G18/0NNB6E	9	2.5	25	non-woven	non-adh.	black	PES	○	●	○	●	○	○	○	soft top, resilient
G23/0NNB6E	12	4.0	50	non-woven	non-adh.	black	PES	○	●	○	●	○	○	◐	soft top, resilient
G23/0NNB6S	12	4.0	50	non-woven	non-adh.	black	PES	●	●	○	●	○	○	●	soft top, resilient
HSW-5EB	6	1.6	r=4	waffle struct.	super-adh.	black	TPU	○	●	○	○	○	●	○	nosebar suitable, high grip
E-5EBBT	5	1.5	15	blank/smooth	medium-adh.	black	TPU	○	●	○	○	○	●	○	extra wear resistant
FAB-3EB	3	0.8	r=4	blank/smooth	medium-adh.	white	TPU	○	●	●	○	●	●	○	
FAB-5EB	5	1.5	r=4	blank/smooth	medium-adh.	white	TPU	○	●	●	○	●	●	○	
FAB-5ER	5	0.95	r=4	blank/smooth	super-adh.	white	Silicone	○	●	●	○	●	●	○	
FMB-5EQ	10	1.4	r=4	blank/smooth	medium-adh.	white	TPU	○	○	●	○	●	●	○	
HAR-12E	20	1.9	50	rough textile structure	adhesive	green	NBR	○	●	○	◐	○	○	○	highest wear resistance
HNA-12E	20	1.1	60	blank/smooth	non-adh.	green	PUR	○	●	○	◐	○	○	○	highest wear resistance, low friction
F16/0ANW5	8	2.9	50	non-woven	non-adh.	white	PES	○	○	◐ ¹⁾	◐	●	○	○	soft top, resilient
F18/0NNW6	9	2.5	25	non-woven	non-adh.	white	PES	○	○	◐ ¹⁾	◐	●	○	○	soft top, resilient
F24/0ANW5	12	3.6	50	non-woven	non-adh.	white	PES	○	○	◐ ¹⁾	◐	●	○	○	soft top, resilient

Explanation: ● applicable ◐ conditionally applicable ○ not applicable r = radius ¹⁾ FDA only

All data are approximate values under standard climatic conditions: 23°C/73°F, 50% relative humidity (DIN 50005/ISO 554).



Product Liability, Application Consideration

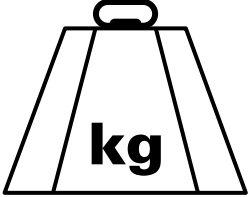

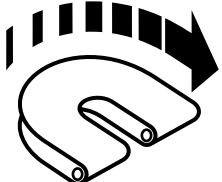
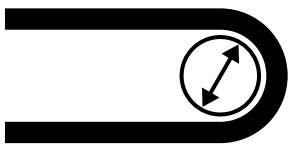
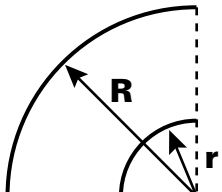
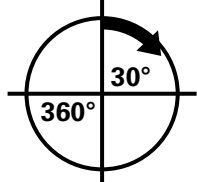
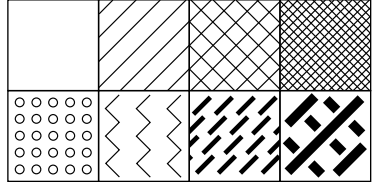

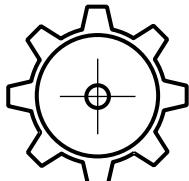

The proper selection and application of Habasit products, including the related area of product safety, is the responsibility of the customer.

All indications / information are recommendations and believed to be reliable, but no representations, guarantees, or warranties of any kind are made as to their accuracy or suitability for particular applications. The data provided herein are based on laboratory work with small-scale test equipment, running at standard conditions, and do not necessarily match product performance in industrial use. New knowledge and experiences can lead to modifications and changes within a short time without prior notice.

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Criteria for power turn belt selection

10

1 Load to be transported 	2 Types of goods to be transported <div>Adhesiv</div> <div>Non-adhesiv</div>
3 Dimensions of goods to be conveyed 	4 Required belt velocity 
5 Pulley diameter to be negotiated 	6 Inner- and outer diameter of belt turn 
7 Angle of belt turn 	8 Requirements on belt surface structure and color 
9 Special requirements: antistatic, food suitable, flame retardant, low noise, etc. <div>No</div> <div>FOOD suitable</div> <div>Flame Retardant</div> <div>Low Noise</div>	10 Type of belt material and total thickness requirements <div> <div>PVC</div> <div>TPU</div> <div>PES</div> <div>SI</div> <div>NBR</div> <div>PUR</div> </div> 
11 Type of drive system (by end pulley or by tangential drive) 	12 Environmental/ operating conditions 

Specific critical issues for power turn belts

- Practically unchanged flexibility of belt material in all directions
- Perfect geometric projection of belt
- True to measure application of belt guiding system in respect to turning point
- Unchanged surface properties in joining area
- Minimal belt distortion in belt joining area

Belt design worksheet for power turn belt

11



To ensure perfected fabrication of power turn belt the following parameters are required

1. Belt data	Belt segment
Habasit belt type	
Inner radius r [mm] =	
Outer radius R [mm] =	
Belt width b_0 [mm] =	
Geometrical peripheral length L_U [mm] =	
Angle of the belt segment γ [°] =	
Pitch circle for holes R_M [mm] =	
Hole diameter D_L [mm] =	
Number of holes N_L	
Others:	

In case belt data is not known, the following data will be required

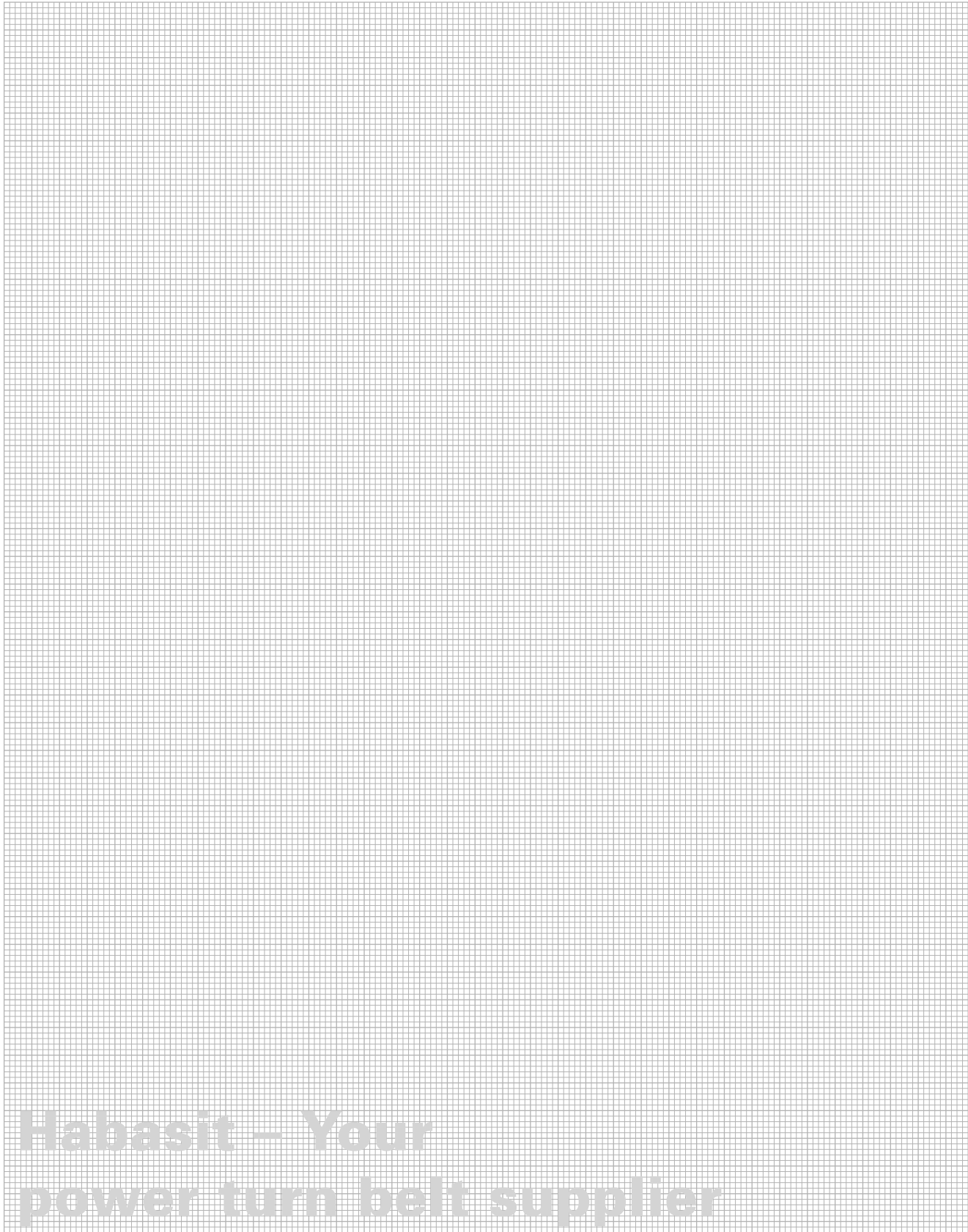
2. Installation data	
Type of conveyor belt system	
<input type="checkbox"/> Lugs – spring elements – chain	Pitch circle of holes R_M [mm] =
<input type="checkbox"/> Roller sets in guiding rails	Hole diameter D_L [mm] =
<input type="checkbox"/> Others:	Number of holes N_L

Power turn with tapered rollers	Power turn with cylindrical rollers
Inner radius r [mm] = Outer radius R [mm] = Belt width b_0 [mm] = Inner pulley diameter d [mm] = Transfer angle α [°] = Distance between pulley and center a [mm] =	Inner radius r [mm] = Outer radius R [mm] = Belt width b_0 [mm] = Pulley diameter d [mm] = Transfer angle α [°] =
<p>Note: For optimal running conditions select $b_0 > a$</p>	<p>Note: For optimal running conditions select $b_0 > a$</p>

Make a copy or tear out page to fill in.

Belt design worksheet for power turn belts

Sketches, comments



**Habasit – Your
power turn belt supplier**

1 Experience

2 One partner – one source

[illegible]

3 Worldwide service

www.habasit.com



4 Quality

**Certified
Quality System**

SQS

**ISO 9001/EN 29001
Reg. No. 10425-03**

Antriebs-, Transportelemente
Eléments de transmission, de transport
Power transmission, conveyor belts
Elementos de transmisión, de transporte
Elementi di trasmissione, di trasporto
Elementos de transmissão, de transporte
Aandrijf-, transportelementen
Transmissions-, transportelement
Voimansiirto-, kuljetuselementit
Kraftoverførings-, transportelementer
動力の伝達及びコンベヤーの原理

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