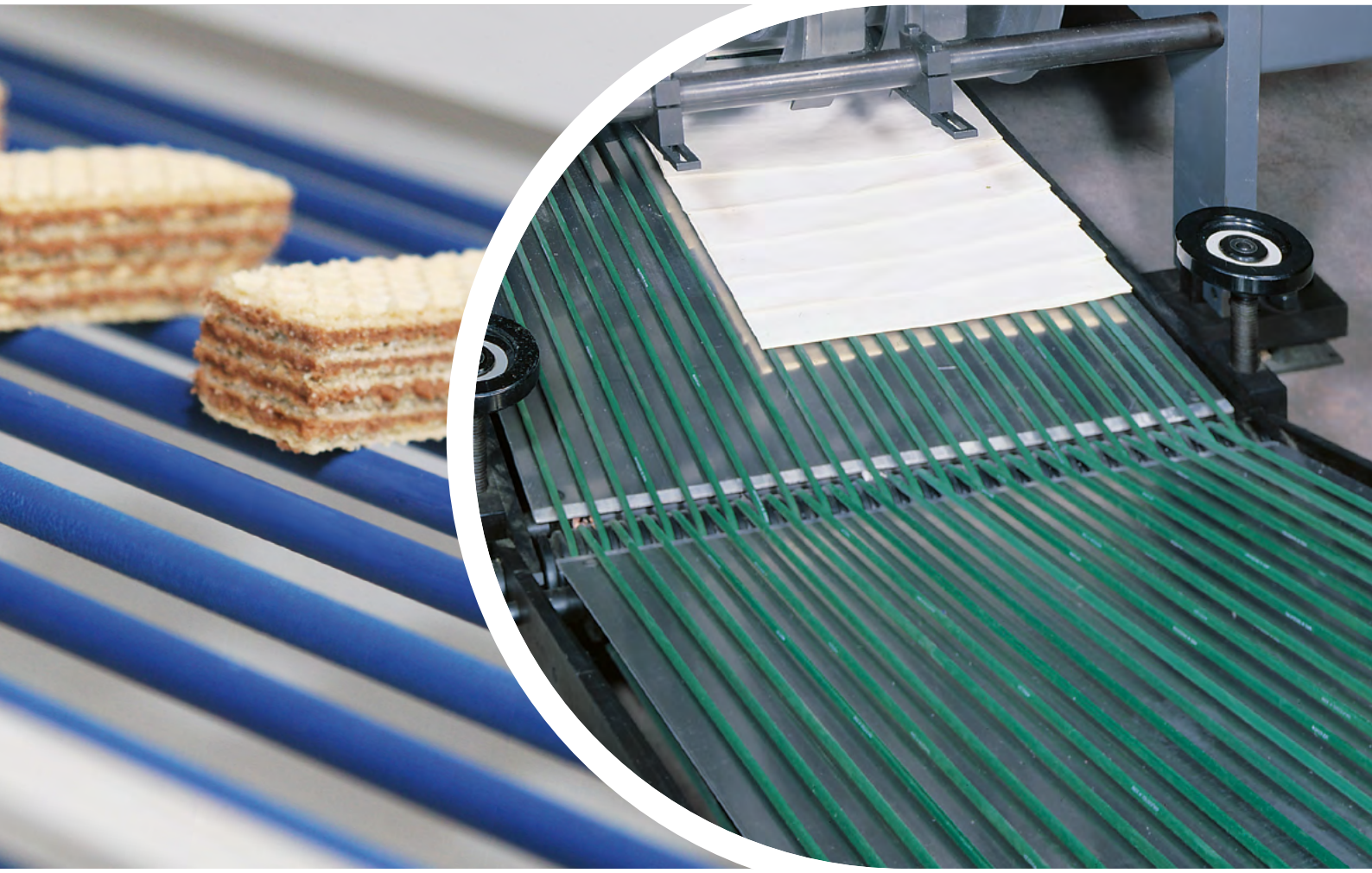
Habasit – Solutions in motion

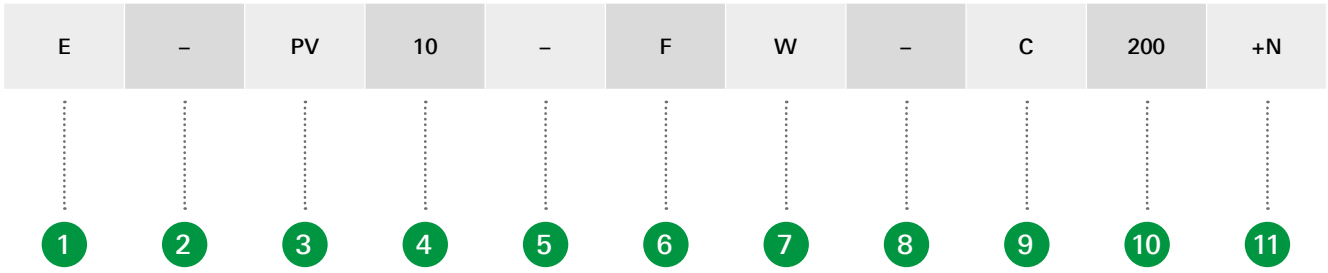
habasit

Round Belts

for Conveying and Power Transmission Applications



Product code



1 Code digit – Manufacturing technology

E	Extruded products
M	Molded products (e.g. Habiring)
P	Polycord range (round belts)
F	Fabric belt-based accessories

2 Interruption (= reading aid)

3 Code digit 2 letters – Profile shape

RB	Round belt – Standard
RR	Round belt – Reinforced
TT	T-shaped belt
VT	V-shaped belt – Standard
VR	V-shaped belt – Reinforced
VC	V-shaped belt – Crested
VS	V-shaped belt – Reinforced and crested
VU	V-shaped belt – Raised
VW	V-Shaped belt – Crested, reduced height
VX	V-shaped belts (special dimensions – see PDS)

4 Code digit – Largest dimension

Version A

The largest dimension is always specified in the code as a 2- or 3-digit number.

02 ... 20	Round belts: Diameter of the round belt in mm
06 ... 30	V-guides and V-belts: Width of the profile in mm

Version B

The main dimensions (width, height) are mentioned in the code as a 7 or 8-digit indication (including the decimal point).

(example) 2.0x118	Habiring. Diameter and belt length in mm

5 Interruption (= reading aid)

6 Code digit 1 letter – Material

A	Polyester TPU 70 ShA (Food)
B	Polyester TPU 40 ShA
C	Thermoplastic polyolefin TPO 85 ShA (Food)
D	Polyester elastomer TPEE 90 ShA (Food)
E	Thermoplastic polyurethane elastomer TPU 55 ShA
F	Polyester TPU 85 ShA (Food)
G	Polyether TPU 83 ShA (Food)
H	Polyether TPU 87 ShA (Food)
I	Polyether TPU 70 ShA (Food)
J	Polyether TPU 95 ShA (Food)
K	Polyester TPU 90 ShA
L	Polyester TPU 85 ShA – Extra elasticity
M	Polyester TPU 91 ShA (injection molding only) (Food)
N	Polyester TPU 75 ShA
O	PVC 55 ShA
P	Polyester TPU 80 ShA (Food)
Q	Polyester TPU 88 ShA (Food)
R	PVC 65 ShA (Food)
S	PVC 65 ShA
T	Polyester TPU 92 ShA
U	Polyester TPU 95 ShA (Food)
W	Polyester TPU 63 ShA
X	SPECIAL – See comments on product name
Y	Polyester TPU 92 ShA (Food)

Key to material abbreviations
PVC = Polyvinyl chloride
TPEE = Thermoplastic copolyester
TPO = Thermoplastic polyolefin
TPU = Polyester thermoplastic polyurethane
TPU+ = Polyether thermoplastic polyurethane

7 Code digit 1 letter – Color

A	Anthracite
B	Black
C	Cobalt blue (dark blue)
D	Dark green (bluish dark green)
G	Green (Habasit green)
M	Gray (medium gray)
N	(naturally) Tan (darker than beige)
R	Red
S	Light blue (sky blue)
T	Transparent (clear)
TY	Translucent yellow
W	White
Y	Yellow

8 Interruption (= reading aid)

9 Code digit 1 letter – Packaging type

C	Coil
B	Box
N	Spool

10 Code digit – Packaging quantity → 200 m

nnn	Length of the packaging unit

11 Code digit – Options

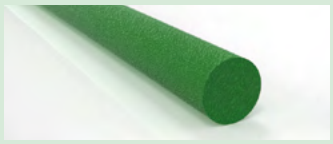
+A	Antistatic
+CP	Customized print
+D	Special angle
+E(.. / ..)	Embossed (Embossing top / Embossing bottom)
+G	GripTop cover
+M	Metal detectable
+MX	Metal and x-ray detectable
+N	Notched
+NN	Special notched
+R	Rough surface finishing
+S	Smooth surface finishing
W	Waffle (Inverted pyramid)
+XNT	No twisting
XR	Special roughness

Key to symbols



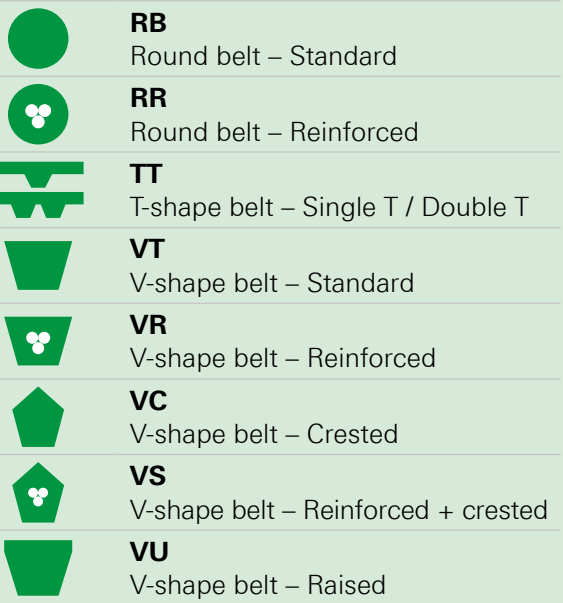
Surface finishings


Smooth


Regular (Sand-finish)


Rough

Profile shape – Symbols



Round Belts

The Habasit round belts range offers a wide selection of standard, Food-grade and hydrolysis resistant sand-finish TPU belts, with a choice of different surface finishes and textile yarn reinforcement configurations.



Open end – standard
- Polycord® – Top-quality TPU polyester round belts
- Habicord – Optionally in rough, smooth and reinforced versions

Open end – Food-grade
- Polywhite – Food-grade and high wear resistance
- Habiblue – Polyether TPU, hydrolysis-resistant round belts

Molded – standard
- Habiring – Endless molded round belts

Applications:
Standard: textile, packaging, paper, ceramics and wood industries; live roller drives and linear conveyors.
Hydrolysis resistant: bakery, meat and cheese processing.

Scan the QR code to learn more

Standard round belts

Brand	Polycord®	Habicord	Black	Red	Translucent Yellow
	●	●	●	●	S
Material	TPU	TPU	TPU	TPU	TPU
Hardness	90ShA	90ShA	90ShA	90ShA	90ShA
Color	Green	Green	Black	Red	Translucent Yellow
Surface	Sand-finish	Sand-finish	Sand-finish	Sand-finish	Smooth
Ø [mm]	**Product name**				
2	P-RB02-KG	E-RB02-KG	E-RB02-KB		
3	P-RB03-KG	E-RB03-KG	E-RB03-KB	E-RB03-KR	
4	P-RB04-KG	E-RB04-KG	E-RB04-KB	E-RB04-KR	E-RB04-FTY
5	P-RB05-KG	E-RB05-KG	E-RB05-KB	E-RB05-KR	E-RB05-FTY
6	P-RB06-KG	E-RB06-KG	E-RB06-KB	E-RB06-KR	E-RB06-FTY
7	P-RB07-KG	E-RB07-KG	E-RB07-KB	E-RB07-KR	
8	P-RB08-KG	E-RB08-KG	E-RB08-KB	E-RB08-KR	E-RB08-FTY
9	P-RB09-KG	E-RB09-KG	E-RB09-KB	E-RB09-KR	
10	P-RB10-KG	E-RB10-KG	E-RB10-KB	E-RB10-KR	E-RB10-FTY
12	P-RB12-KG	E-RB12-KG	E-RB12-KB	E-RB12-KR	E-RB12-FTY
15	P-RB15-KG	E-RB15-KG	E-RB15-KB	E-RB15-KR	E-RB15-FTY
18		E-RB18-KG		E-RB18-KR	
20		E-RB20-KG (Hollow)			

Food approved round belts

Brand	Habiblue	Polywhite	Transparent
			
Material	TPU+	TPU	TPU
Hardness	87ShA	85ShA	85ShA
Color	Cobalt blue	White	Transparent
Surface	Sand-finish	Sand-finish	Smooth
Food-grade	•	•	•
Hydrol. Resist.	•		
Ø [mm]	**Product name**		
2		E-RB02-FW	
3	E-RB03-HC	E-RB03-FW	
4	E-RB04-HC	E-RB04-FW	
5	E-RB05-HC	E-RB05-FW	E-RB04-FT
6	E-RB06-HC	E-RB06-FW	E-RB05-FT
7	E-RB07-HC	E-RB07-FW	E-RB06-FT
8	E-RB08-HC	E-RB08-FW	E-RB08-FT
9	E-RB09-HC	E-RB09-FW	
10	E-RB10-HC	E-RB10-FW	E-RB10-FT
12	E-RB12-HC	E-RB12-FW	E-RB12-FT
15	E-RB15-HC	E-RB15-FW	E-RB15-FT
18			

Brand	Metal Detectable		Special Shore			
						
Material	TPU	TPU	TPU	TPU	TPU	TPU
Hardness	85ShA	95ShA	70ShA	80ShA	88ShA	95ShA
Color	Cobalt blue	Cobalt blue	Green	Green	Cobalt blue	Green
Surface	Sand-finish	Sand-finish	Sand-finish	Sand-finish	Sand-finish	Sand-finish
Food-grade	•	•	•	•	•	•
Ø [mm]	**Product name**					
4	E-RB04-FC	E-RB04-JC				
5	E-RB05-FC*	E-RB05-JC				
6	E-RB06-FC	E-RB06-JC				
8	E-RB08-FC	E-RB08-JC	E-RB08-IC	E-RB08-PC	E-RB08-QC	E-RB08-UC
10	E-RB10-FC	E-RB10-JC				

*Available with smooth surface finishing

Special round belts

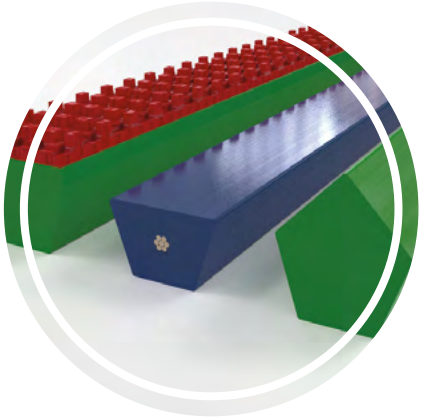
Brand	Polycord®		Habicord				
	R	S	R	S			
Material	TPU	TPU	TPU	TPU	TPU	TPU	TPU
Hardness	90ShA	90ShA	90ShA	90ShA	90ShA	95ShA	85ShA
Color	Green	Green	Green	Green	Cobalt blue	Transparent	Yellow
Surface	Rough	Smooth	Rough	Smooth	Sand-finish	Smooth	Sand-finish
Ø [mm]	**Product name**						
3			E-RB03-KG				
4		P-RB04-KG	E-RB04-KG		E-RR04-KC		
5	P-RB05-KG		E-RB05-KG	E-RB05-KG			
6	P-RB06-KG		E-RB06-KG	E-RB06-KG	E-RR06-KC		
6.35				E-RB1/4-KG			
7	P-RB07-KG						
8	P-RB08-KG		E-RB08-KG	E-RB08-KG			
10				E-RB10-KG	E-RR10-KC	E-RR10-JT	
12			E-RB12-KG	E-RB12-KG	E-RR12-KC		E-RR12-LY
12.7					E-RR1/2-KC	E-RR1/2-JT	
15			E-RB15-KG		E-RR15-KC		

Molded round belts

Brand		Habiring			
Material		TPU	TPU	TPU	TPU
Hardness		87ShA	87ShA	87ShA	87ShA
Color		Cobalt blue	Green	Natural	Yellow
Ø [mm]	**L** [mm]	**Product name**			
2.5	**78**		M-RB2.5x078-KG		M-RB2.5x078-KY
2.7	**268**	M-RB2.7x268-KC			M-RB2.7x268-KY
	307	M-RB2.7x307-KC			M-RB2.7x307-KY
3.0	**140**		M-RB3.0x140-KG		
	155				
	175		M-RB3.0x175-KG	M-RB3.0x175-KN	
4.0	**112**		M-RB4.0x112-KG		
	122		M-RB4.0x122-KG		
	258	M-RB4.0x258-KC			
5.0	**123**		M-RB5.0x123-KG		
	182		M-RB5.0x182-KG		
	196		M-RB5.0x196-KG		
6.0	**95**				
	119		M-RB6.0x119-KG		
	130		M-RB6.0x130-KG		
	142		M-RB6.0x142-KG		
	200		M-RB6.0x200-KG		
6.5	**445**		M-RB6.5x455-KG		

V-belts

V-belts are highly flexible V-shaped smooth TPU belts designed to run over grooved pulleys.
They are used in linear conveyors, especially in the ceramics and materials handling industries.



Features
- High abrasion and chemical resistance
- Easy to weld

Options
- Reinforced
- Grip top (with grip cover)
- Crested top
- Raised top

Standard V-belts

Type	Standard		Grip top	Raised	Crested
					
Material	TPU	TPU	TPU	TPU	TPU
Hardness	90ShA	90ShA	90ShA	90ShA	90ShA
Color	Green	Red	Green	Green	Green
Surface	Smooth	Smooth	Smooth	Smooth	Smooth
B [mm]	**Product name**				
10	E-VT10-KG		E-VT10-KG		
13	E-VT13-KG	E-VR13-KR	E-VT13-KG	E-VU13-KG	
17	E-VT17-KG	E-VR17-KR	E-VT17-KG	E-VU17-KG	E-VC17-KG
22	E-VT22-KG		E-VT22-KG		E-VC22-KG

Reinforced V-belts

Type	Reinforced	Reinforced + grip top	Crested
			
Material	TPU	TPU	TPU
Hardness	90ShA	90ShA	90ShA
Color	Cobalt blue	Cobalt blue	Cobalt blue
Surface	Smooth	Smooth	Smooth
B [mm]	**Product name**		
13	E-VR13-KC	E-VR13-KC	
17	E-VR17-KC	E-VR17-KC	E-VS17-KC
22	E-VR22-KC	E-VR22-KC	E-VS22-KC

Type	Reinforced		Reinforced + grip top
			
Material	TPU	TPU	TPU
Hardness	90ShA	85ShA	90ShA
Color	Red	Red	Red
Surface	Smooth	Smooth	Smooth
B [mm]	**Product name**		
17	E-VR17-KR	E-VR17-LR	E-VS17-KR
22		E-VR22-LR	E-VS22-KR

Type	Reinforced + crested	Reinforced + grip top	Reinforced + crested
			
Material	TPU	TPU	TPU
Hardness	90ShA	85ShA	85ShA
Color	Red	Yellow	Yellow
Surface	Smooth	Smooth	Smooth
B [mm]	**Product name**		
13		E-VR13-LY	
17		E-VR17-LY	
22	E-VS22-KR	E-VR22-LY	E-VS22-LY

T-belts

Habasit offers narrow flat belts with one or two tracking guides integrated on the running side, available in standard and Food-grade smooth TPU.

Applications: linear conveyors and diverters



Type	Single T				
					
Material	TPU+	TPU+	TPO	TPU	TPU
Hardness	87ShA	87ShA	85ShA	90ShA	90ShA
Color	Cobalt blue	White	Natural	Green	White
Surface	Smooth	Smooth	Smooth	Smooth	Smooth
Food-grade	•	•	•		
Hydrol. Resist.	•	•	•		
B [mm]	**Product name**				
12	E-TT12-HC	E-TT12-HW			E-TT12-KW
18			E-TT18-CN		
25	E-TT25-HC	E-TT25-HW		E-TT25-KG	E-TT25-KW

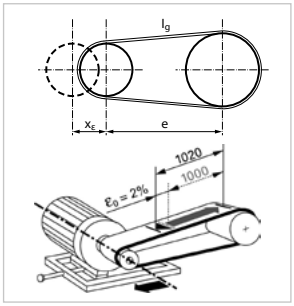
Type	Double T
	
Material	TPU+
Hardness	87ShA
Color	Cobalt blue
Surface	Smooth
Food-grade	•
Hydrol. Resist.	•
B [mm]	**Product name**
28	E-TT28-HC

Engineering Guides

Tolerances
The general tolerance to be considered for the extruded products range is ±3% or ±0.20 mm – whichever is greatest.

Shelf life
Due to the wide variety of product designs and storage conditions, no general recommendations on shelf life can be given. After two years in storage, a visual check of surface color and aspect (migration of plasticizers, fillers, uniformity, etc.) should be made.

Belt tension
In order to ensure proper operation of the installed belt, pre-tensioning is required. The recommended elongation factor is from 1% to 8% depending on the belt shape and material (hardness). The initial tension is checked by making two reference marks on the untensioned belt at a certain distance apart x (x = 100 %). The marks should ideally be at both edges of the belt, but not where it is joined. The belt is then tensioned until the measuring marks have reached the required elongation (x + ε_0).



Example: Required initial tension ε_0 = 0.5%, distance between marks before tensioning x = 1000 mm, distance between marks after tensioning x + ε_0 = 1000 mm + 5 mm = 1005 mm. Once the belt has completed at least one circuit of the installation, the distance (x + ε_0) must be measured again and corrected where necessary.

Belt type	Suggested initial elongation [%]
Round belts (not reinforced)	6-8%*
Round belts (reinforced)	1%
V-shaped belts (not reinforced)	3%
V-shaped belts (reinforced)	1%
TT belts	3-4%

* For round belts and applications with a high load, it is possible to apply a higher elongation, in this case it is advisable to perform a calculation. Install the slack belt and tension until running perfectly under the full round belt load, without exceeding the chosen initial elongation.

Quickmelt joining system for Polycord® round belts

Thanks to handy Habasit joining tools, customers can join Polycord® round belts themselves.

Belt fabrication length

The fabrication length of extruded belts is shorter than the installation length. Depending on the load to be conveyed, the belt tension must be considered accordingly.

Fabrication length = 'calculated' length / (1 + x%)

The 'calculated' length is determined by the conveyor design.





Belt length calculation for fixed shaft distances				
Tension	Belt length		Fabrication length	
	mm	*inch*	mm	*inch*
2%	1000	*40*	980	*38,6*
3%	1000	*40*	971	*38,2*
5%	1000	*40*	952	*37,5*

Joining

See the operating instructions of the respective joining device for the exact procedure. Joining Polycord round belts is very simple (illustration: welding device PQ-01):

- Clamp the belt ends into the welding device
- Allow them to melt against the heating blade (do not inhale the vapor; join only in well-ventilated areas)





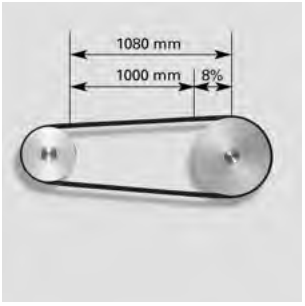
- Then put the belt ends together and let the joint cool off
- Trim any swelling with pliers, a file, or a grinding wheel





Installing

- If take-up x is available and sufficient for the required take-up x_ε, trace two measuring marks at a distance of 1000 mm (or 500 mm) on the belt. Tension it using the generally applicable initial tensioning value ε = 8% by increasing the center distance. The distance between the two measuring marks should now be 1080 mm (or 540 mm).
- If no take-up x is available, install the belt first on the small pulley, then "force" it onto the larger pulley by carefully turning the drive by hand.





Tools



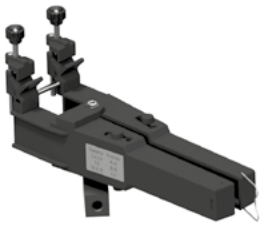
S-16
Manual scissors for cutting round belts, up to 15 mm in diameter. Ideal for Polycord, Habicord, and small section extruded profiles.



PQ-01
Quickmelt welding tool, designed for joining round belts. It consists of a W-01 welder and CQ-01 table stand for belt ends positioning.



PQ-02
Quickmelt welding tool, designed for joining round belts. It consists of a W-01 welder and CQ-02 clamping device.



CQ-01
Table stand for accurate positioning of round belt ends during welding. Designed for use with the W-01 heating welder.



CQ-02
Clamping device for positioning round belt ends during welding. Designed for use with the W-01 heating welder.



W-01
The W-01 heating welder has been specifically designed for rapid and safe welding of thermoplastic round belts up to a diameter of 15 mm.

Details			Power supply						Product type							Method			Dimensions			
Ordering code	Article name	Max. belt diameter	Power [W]	Manual	1 x 120 V	1 x 230 V	3 x 230 V	3 x 400 V	Timing belts	Conveyor belts	Habasit Cleandrive	Round belts	Power transmission	Machine tapes	Joining plate required	Flexproof	Quickmelt	Thermofix	Length [mm]	Width [mm]	Height [mm]	Weight [kg]
H080690010	S-16/0	15		•								•					•		220	80	55	0.2
H088000526	PQ-01/8	15	80			•						•					•		420	140	120	0.5
H088000525	PQ-01/6	15	80		•							•					•		420	140	120	0.5
H088000541	PQ-02/8	15	80			•						•					•		420	140	120	0.3
H088000540	PQ-02/6	15	80		•							•					•		420	140	120	0.3
H080690240	CQ-01	15		•								•					•		250	120	120	0.4
H088000476	CQ-02	15		•								•					•		160	40	90	0.2
H08N060965	W-01/8	15	80			•						•					•		250	50	50	0.1
H088000540	W-01/6	15	80		•							•					•		250	50	50	0.1

Notes



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