

Technical data

RONDLAST® High-performance round belts endless welded

Round belts for industrial conveyor systems, e.g. food, papers, packaging

Type	Rondlast PU clear 83 ShA	Rondlast PU orange 83 ShA	Rondlast PU clear blue 85 ShA	Rondlast PU clear red 85 ShA clear green 85 ShA
Quality	TPU Ester	TPU Ester	TPU Ester	TPU Ester
Surface	smooth	smooth	smooth	smooth
Properties	FDA wear resistant oil/grease resistant very durable and reliable	FDA wear resistant oil/grease resistant very durable and reliable	FDA wear resistant oil/grease resistant increased strength	FDA wear resistant oil/grease resistant increased strength
Coefficient of friction [steel / aluminium]	0.55 / 0.60	0.55 / 0.60	0.50 / 0.60	0.50 / 0.60
Temperature resistance	0 °C to +55 °C	0 °C to +55 °C	0 °C to +55 °C	0 °C to +55 °C
Shaft load newly installed* at 4 / 6 / 8 %	1.9 / 2.7 / 3.5 N/mm ²	1.9 / 2.7 / 3.5 N/mm ²	2.2 / 3.1 / 4.0 N/mm ²	2.2 / 3.1 / 4.0 N/mm ²
after 1 week* at 4 / 6 / 8 %	1.0 / 1.5 / 1.9 N/mm ²	1.0 / 1.5 / 1.9 N/mm ²	1.2 / 1.7 / 2.2 N/mm ²	1.2 / 1.7 / 2.2 N/mm ²
Pretension/ Initial tension	max. 15 %	max. 15 %	max. 22 %	max. 22 %
Endless welded...super strong and reliable!				
Dimensions				
length	from 75 mm	+/- 3 mm	L0 = original length without tension	
cross-section	1.6 - 18 mm	+/- 3 %°	° minimum tolerance +/- 0.15 mm	

* We would be pleased to calculate the best fitting RONDLAST® round belt for your specific application!

Applications:

Belt conveyors and transport systems for continuous operation.

Outstanding performances:

- + endless welded
 - + highest reliability
 - + longer running time
 - + technical expertise
- proven quality
 - higher productivity
 - reduced costs
 - customer satisfaction

Technical data

RONDLAST® High-performance round belts endless welded

Round belts «Conveyor» for transport systems of advanced requirements

Type	Rondlast PU clear 85 ShA	Rondlast PU clear water blue 90 ShA	Rondlast HT pearl white 92 ShA	Rondlast PU green 88 ShA blue 88 ShA
Quality	TPU Ether	TPU Ether	TPE Hytrel	TPU Ester
Surface	smooth	smooth	smooth	rough
Properties	FDA wear resistant oil/grease resistant UV-/ waterproof	- wear resistant oil/grease resistant UV-/ waterproof antistatic	FDA wear resistant oil/grease resistant cold & chemical resistant	- wear resistant oil/grease resistant low friction for accumulation op.
Temperature resistance	-20 °C to +55 °C	-20 °C to +55 °C	-40 °C to +80 °C	0 °C to +55 °C
Shaft load newly installed* at 4 / 6 / 8 %	2.2 / 3.1 / 4.0 N/mm2	2.5 / 3.5 / 4.6 N/mm2	5.0 / 7.1 / 8.9 N/mm2	2.5 / 3.5 / 4.6 N/mm2
after 1 week* at 4 / 6 / 8 %	1.2 / 1.7 / 2.2 N/mm2	1.3 / 2.0 / 2.5 N/mm2	2.8 / 3.9 / 4.9 N/mm2	1.3 / 2.0 / 2.5 N/mm2
Pretension/ Initial tension	max. 15 %	max. 10 %	max. 8 %	max. 16 %
<i>Endless welded...super strong and reliable!</i>				
Dimensions				
length	from 75 mm	+/- 3 mm	L0 = original length without tension	
cross-section	1.6 - 18 mm	+/- 3 %°	° minimum tolerance +/- 0.15 mm	

* We would be pleased to calculate the best fitting RONDLAST® round belt for your specific application!

Special types:

(see also next page)

- **Rondlast W** – twisted round belts with hook, for simple and quick repairing
- **Rondlast S** – reinforced length-stable round belts for increased power transmission
- **Rondlast H** – hollow round belts; for a simple mounting – with metal connectors
- **Rondlast SL** – round belt slings / hold down clips for elastic drive of e.g. belt curves
- **Rondlast** – round belts **detectable** by metal detectors for food application

Rondlast round belts consist of guaranteed 100 % virgin material and convince due to the homogeneous and perfectly welded joints!

Technical data

RONDLAST® High-performance round belts endless welded

Special types made of polyurethane (PU)

Rondlast W - twisted

Twisted round belts **RONDLAST W** made of PU are used for a quick and cost-efficient repair. They are fully adequate drive components and prevent extended downtimes!

Length	7-8 % shorter than the round belt to be replaced (length will be measured without the hook)
Cross-section	suitable for 2.5, 3, 4, 5, 6, 8, 9.5, 11, 12, 14 mm
Quality	available in almost any colour and quality
Connectors	steel hooks, self-crimping steel hooks (black) or plastic hooks (green)

Rondlast S – stable in length

Length-stable round belts **RONDLAST S** made of PU are designed for special applications and able to bridge longer distances with thinner cross section.

Length	customized welded
Cross-section	4 to 19 mm
Quality	PU orange 85 ShA, PU green rough 88 ShA or PU blue rough 88 ShA

Rondlast H - hollow

Hollow round belts **RONDLAST H** made of PU are also designed for special applications and are used for easy and light conveying units.

Length	material sold by the meter
Cross-section	5, 6, 8, 9.5, 12 mm
Quality	PU clear 83 ShA, PU orange 85 ShA
Connectors	Aluminium with single (max. 7 % elongation) or with dual barbed hook (max. 14 % elongation)

Rondlast SL - Slings

Round belt slings **RONDLAST SL** made of PU are used as dynamic springs. For example, curved belts in food transportation units are driven and tracked via chain drive with slings. They have an extreme lifespan and do not fatigue. Delivered slings with lubricated tubes extend the lifespan once more

Length	from 40 mm centre-to-centre distance; quality and colour will be customised.
--------	------------------------------------------------------------------------------

Rondlast - detectable

Detectable round belts **Rondlast PU dark blue 85 ShA** made of PU for industrial conveying systems, i.e. food and packaging. Usable for most metal detectors and X-ray devices.

Length	customized welded
Cross-section	3 to 18 mm

The detectability of parts with a minimum volume of 75 mm³ has to be verified by the operator itself in each application.

We would be pleased to help you with your specific application.

Technical data

RONDLAST® High-performance round belts endless welded

Special types made of textile (T)

Rondlast WT – twisted round belt made of textile

Twisted round belts **RONDLAST WT** made of high-quality synthetic yarns are used for high-speed power transmission and conveying units for speed up to 30 m/s (max. 60 m/s). I.e. for textile, grinding, engraving or folding machines.

Length	500 mm to 5000 mm
Cross-section	2.5 mm to 12 mm
Quality	Nylon (PA) 120 °C, Polyester (PE) 160°C, Kevlar (K) 240 °C
Finish	fixation for low stretch, impregnated for abrasion resistance (red, yellow or white)

Rondlast GT – braided round belt made of textile

Braided round belts **RONDLAST WT** made of high-quality synthetic yarns are used for medium-speed power transmission and conveying units for speed up to 10 m/s (max. 20 m/s). I.e. for textile, grinding, engraving or folding machines.

Length	500 mm to 5000 mm
Cross-section	4 mm to 10 mm
Quality	Nylon (PA) 120 °C, Polyester (PE) 160°C, Kevlar (K) 240 °C
Finish	fixation for low stretch, impregnated for abrasion resistance (red, yellow or white)

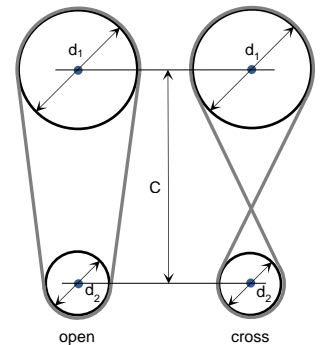
Technical data

RONDLAST® High-performance round belts endless welded

Calculation of round belts

Legend

Diameter of first pulley [mm]	=	d_1
Diameter of second pulley [mm]	=	d_2
Centre to centre distance [mm]	=	C
Rotation speed of first pulley [rpm]	=	n_1



Length of the stretched belt L1 [mm]

Open drive: $L1 = 2 C + \pi/2 \cdot (d_1 + d_2) + ((d_1 - d_2)^2 / 4 C)$

Cross drive: $L1 = 2 C + \pi/2 \cdot (d_1 + d_2) + ((d_1 + d_2)^2 / 4 C)$

Half-cross belt drive: please measure with a steel tape measure

Length of the unstretched belt L0 [mm]

$L0 = L1 - \text{Pretension}$

In the case of round belts, the «cut belt length» is sometimes specified as well. This relates to the so-called neutral length and therefore should be considered for shorter belts (< 750 mm) for the tension.

Peripheral speed v [m/s]

Speed of the belt $v = d_1 \cdot \pi \cdot n_1 / 60 / 1000$

Pulley specification

Radius of the groove = 1/2 x belt cross-section +10%

Depth of the groove = 2/3 x belt section t

Chamfer = 30° on both sides

Minimal pulley diameter

Hardness PU <90 ShA = 8x belt cross-section

Hardness PU 90 ShA = 10x belt cross-section

Hardness PU >90 ShA = 12x belt cross-section

Textile round belt = 3-4x belt cross-section