



siegling transilon round belts

PRODUCT RANGE



SIEGLING TRANSILON ROUND BELTS

With their round shape and highly elastic properties, Siegling Transilon round belts bend well towards small drum diameters and almost any kind of curvature in their path. They are used for conveying in the textiles, wood, ceramics, packaging and chemicals industries. They are also used as power transmission belts in precision mechanics, in constructing machinery and equipment and as live roller drives.



Resistances

Chemical resistances:
see Transilon resistance details on the internet
(www.forbo-siegling.com > Download > Brochures > Technical Information) or on request.

Supplied as:

- Roll material
- Cut to length
- Endless

Product range

Material	Color	Surface	Hardness [Shore]	Recommended elongation at fitting [%]	Operating temperature permitted [°C]	Antistatic/ highly conductive	FDA/EC/BFR-compliant	USDA compliant (smooth surface)	Friction coefficient approx.			Diameters in stock [mm]														
									Steel	PE	HDPE	2	3	4	4.8	5	6	7	8	9	10	12	15			
U	green	rough	87 A	6-8	-20/+60	-	-	-	0.45	0.30	0.25	●	●	●		●	●	●	●	●	●	●	●	●	●	●
U	ultramarine blue	rough	84 A	6-8	-20/+60	-	yes	-	0.65	0.35	0.30		●	●		●	●		●		●		●	●	●	●
E	cream white	smooth	40 D	2-4	-30/+60	-	yes	yes	0.50	0.30	0.25		●	●		●	●		●		●		●	●	●	●
U	ultramarine blue	smooth	84 A	6-8	-20/+60	-	yes	yes	0.65	0.35	0.30		●	●		●	●		●		●		●	●	●	●
U	colorless, clear	smooth	84 A	6-8	-20/+60	-	yes	yes	0.65	0.35	0.30		●	●	●	●	●		●		○		●	●	○	○
U	red	smooth	80 A	6-8	-20/+60	-	-	-	0.70	0.40	0.35		○	○		○	○		○		○		○	○	○	○
U	black	smooth	85 A	6-8	-15/+60	yes	-	-	0.50	0.30	0.25		●	○		○	○		○		●					
U	black	smooth	90 A	6-8	-20/+60	yes	-	-	0.50	0.30	0.25		○													

U Polyurethane elastomer
E Polyester elastomer

Co-extruded: Surface and core are made of different materials
Other materials, colors and properties

● Standard range
○ Supplementary range

on request
on request

TECHNICAL DATA

for round belts made of polyurethane elastomer, Shore A hardness 87

Figures depending on diameters

Round belt diameter	[mm]	3	4	5	6	7	8	9	10	12	15
Diameter tolerance	[mm]	0/+0.2	0/+0.2	±0.2	±0.2	±0.3	±0.3	±0.3	±0.3	±0.4	±0.4
Weight	approx. [g/m]	8	15	23	34	46	60	76	95	135	210
Shaft load factor C_W at 20–30° C and 180° arc of contact	approx. [N/%]	3.7	6.5	10	14.7	20	26	33	41	59	92

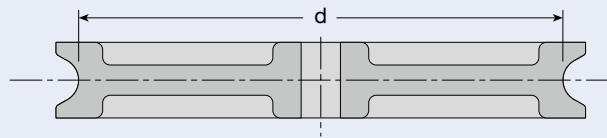
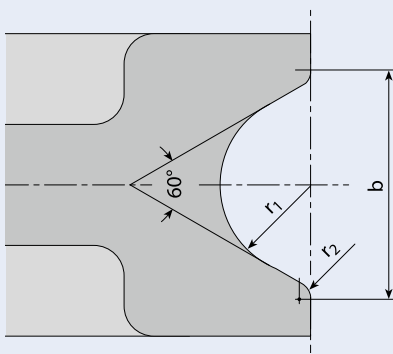
The tensile strength is approx. 40 N/mm²

Shaft load [N]: $F_W = C_W \cdot \epsilon$

ϵ = elongation [%]

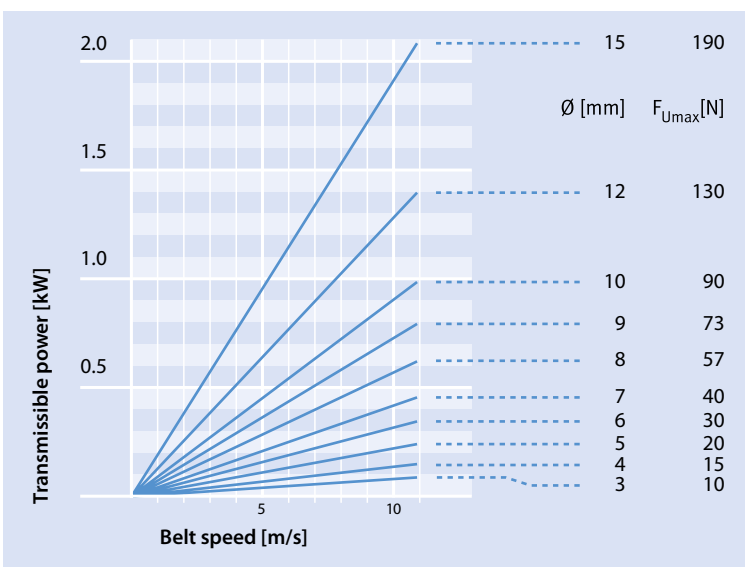
Recommended pulley dimensions

Round belt diameter*	[mm]	3	4	5	6	7	8	9	10	12	15
Pulleys $\varnothing d_{min}$	[mm]	30	40	50	60	70	80	90	100	120	150
r_1	[mm]	1.7	2.2	2.8	3.3	3.8	4.3	4.8	5.4	6.5	8.0
r_2	[mm]	1.0	1.0	1.0	1.5	1.5	1.5	2.0	2.0	2.0	2.0
b	[mm]	5.0	6.2	7.6	9.4	10.5	11.7	13.4	14.8	17.3	20.8



* The d_{min} minimum pulley diameters permitted were established at 22°C. Lower temperatures can require larger pulley diameters.

Power transmission



Power transmission at 180° arc of contact and 8% elongation at fitting.

The values shown on the chart are achieved when the recommended groove design is used and the pulley diameter is not smaller than the minimum allowed.

SPLICING TECHNIQUES

Endless splicing

Any dimensions can be quickly spliced endless using very simple tools.

Our handy round belt press pliers (RPZ) can be obtained separately or in the practical combi set with all accessories necessary for reliable and time-saving endless splicing (for use with diameters from 3 – 15 mm).



Pressure clamps for round belts with rapid tensioning lever (left) and screw clamp (right)

The RPZ can be supplied in two versions:

- with screw clamp: In this case the ends of the round belt are clamped with knurled screws
- with rapid tensioning lever: In this case the ends of the round belt are clamped by moving the tensioning lever. After welding, the belt is released by flipping open the rapid tensioning clamps. The diameter required of round belt is pre-adjusted (converting to another diameter takes approx. 60 secs.).

You can find more details about splicing Siegling Transilon round belts in the instructions at www.bienefeld-gmbh.de/en > Products > Round belts > Truly endless splicing



Combi set TC – here includes pressure clamp for round belts with rapid tensioning lever

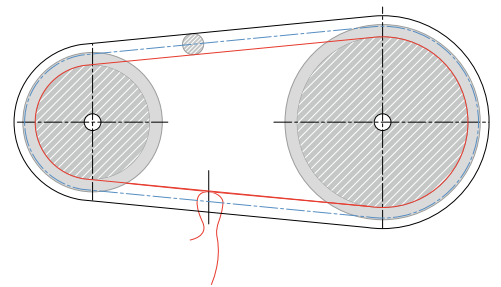
The more affordably-priced standard combi set includes a soldering iron with no temperature control.

The TC combi set includes a soldering iron with adjustable temperature control. The powerful soldering iron heats up in just approx. 90 seconds and maintains the temperature that is adjustable on the control knob.

Measuring and cutting to length

In real world conditions, the length of the round belt is often established by using a thin piece of cord (red line) and then subtracting the desired elongation. This method means the wrong length is ordered and can cause excessive elongation later on.

The correct round belt length for the order is calculated from the length of the pitch line (the middle of the round belt, blue line) minus the intended elongation.



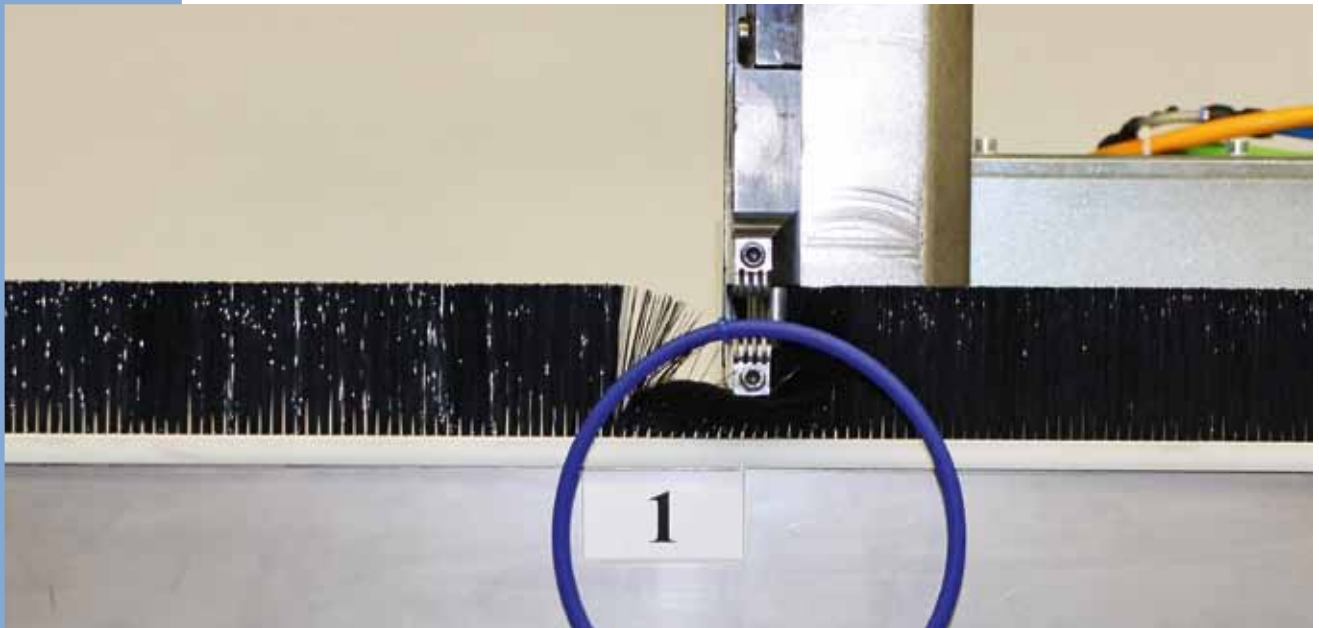
To identify the required length, use our calculation program, which can be opened by clicking on the QR code in the margin or at www.forbo-siegling.com > Products > Supplementary Products > Round Belts



Siegling – total belting solutions

Committed staff, quality oriented organization and production processes ensure the constantly high standards of our products and services. The Forbo Siegling Quality Management System is certified in accordance with ISO 9001.

In addition to product quality, environmental protection is an important corporate goal. Early on we also introduced an environmental management system, certified in accordance with ISO 14001.



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Forbo Siegling service – anytime, anywhere

The Forbo Siegling Group employs more than 2,500 people. Our products are manufactured in ten production facilities across the world. You can find companies and agencies with warehouses and workshops in over 80 countries. Forbo Siegling service points are located in more than 300 places worldwide.

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MOVEMENT SYSTEMS