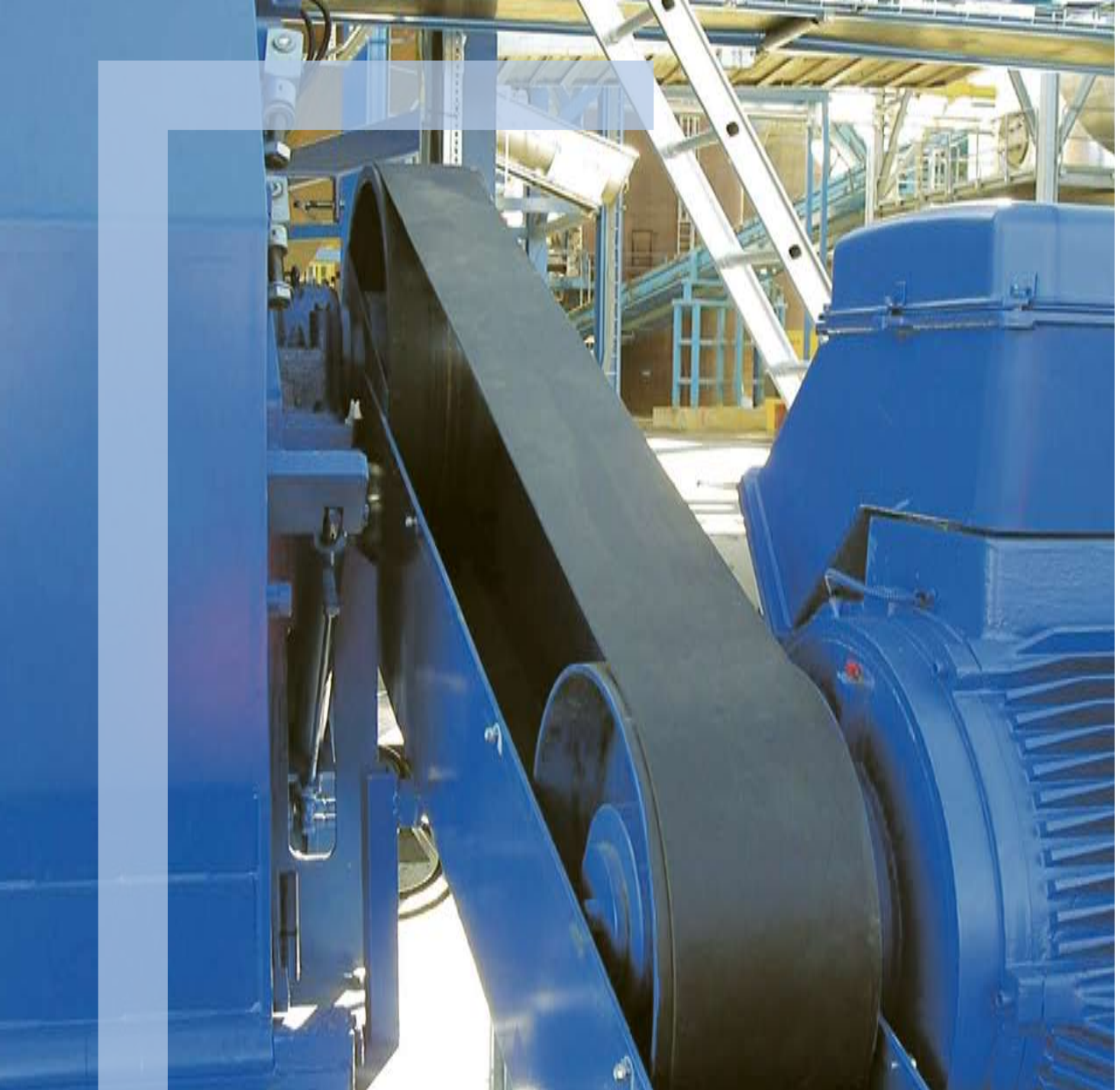


# Product range

## Power transmission belts



**siegling extremultus**  
flat belts



# Siegling Extremultus – exceptional power transmission

**We have developed the Siegling Extremultus power transmission belt range in close co-operation with users and OEMs. As a result, it can offer a market-driven range of types that can handle all sorts of power transmission in every industry.**

Different materials for the friction and top coating are combined with one of the three tension member materials

- A (aramide)
- E (polyester – also helically-wound endless) or
- P (polyamide)

Producing a varied range with ideal properties for each and every application.

Siegling Extremultus power transmission belts are extremely tough, elastic, absorb vibrations and shocks and can be used at belt velocities of up to 100 m/s.

Compared with other power transmission belts, they are easy to handle, extremely efficient and have a high level of synchronisation accuracy.

Apart from traditional pulleys, they can easily handle bevel and cone drives and drive several shafts, even in different rotational directions.

## Contents

Multi-purpose, highly-efficient belts	5
Overview of the lines	6
A, E, P line product range	8
<b>Product range</b>	
Helically-wound endless belts	10

## The properties

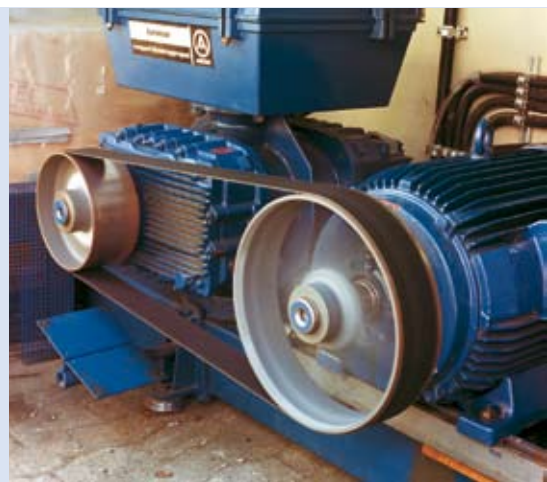
## The advantages

thin/flexible	▶	low power requirement, small pulley diameter
constant friction coefficient, high wear-resistance	▶	constant RPM, long belt life
high elastic modulus	▶	short take-up ranges, low creep
laterally stiff	▶	good edge stability
good damping properties	▶	treats bearings gently, vibration-free operation



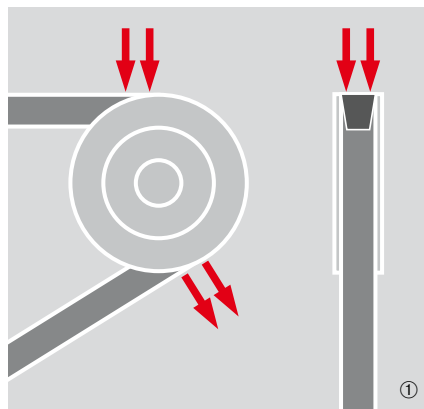
MOVEMENT SYSTEMS



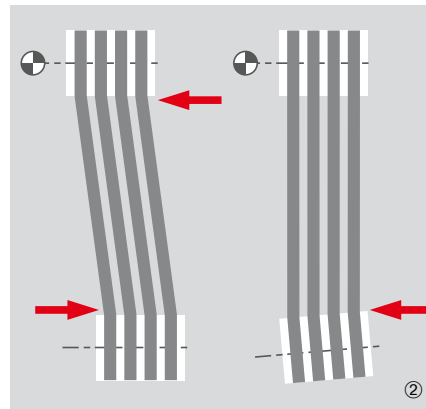


# Multi-purpose, highly-efficient belts

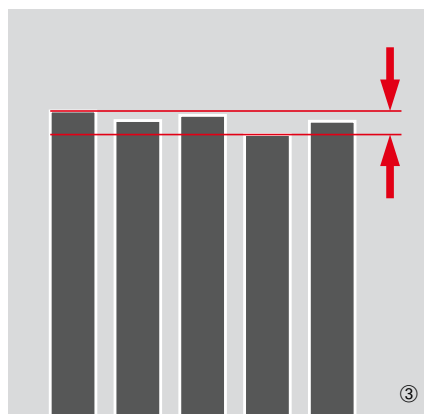
In addition to other advantages, **flat belts are much more efficient than V-belts**. In V-belts, energy losses occur, not just due to flexing in the material, but also due to friction at the sides and other aspects associated with the belt design.



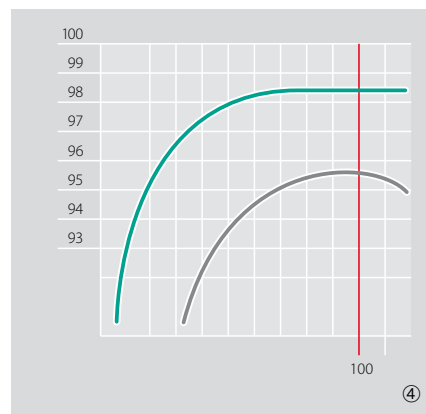
Friction on the sides at the top and bottom, internal friction losses due to hysteresis.



Higher friction losses where pulleys are misaligned.

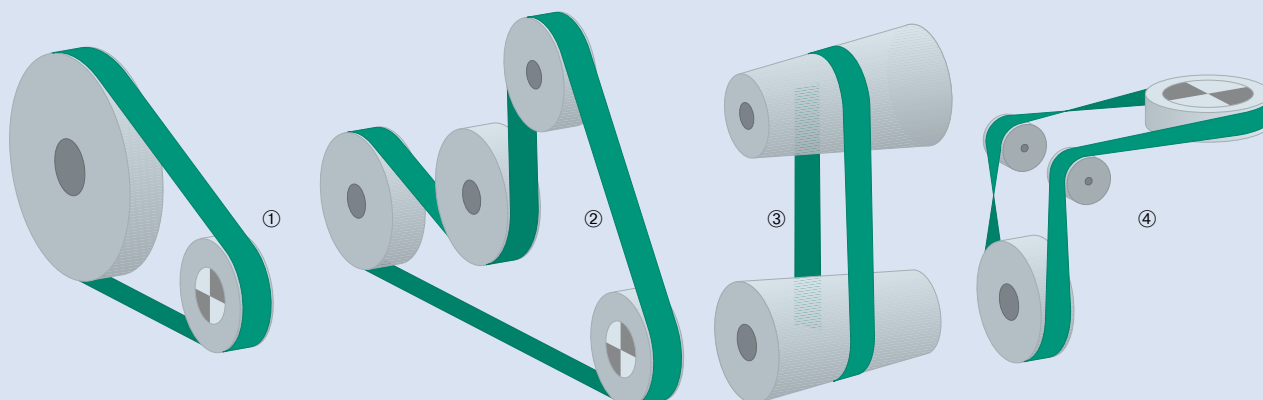


Deviation in length and rotational vibrations when load is not uniform.



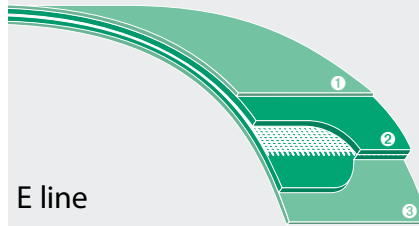
Efficiency of a flat belt (top), efficiency of a V-belt (bottom). Siegling Extremultus flat belts have an efficiency of 98.6 %.

Source:  
①②③ Tests carried out by the  
University of Göteborg  
④ German Institute for Materials Testing, Berlin

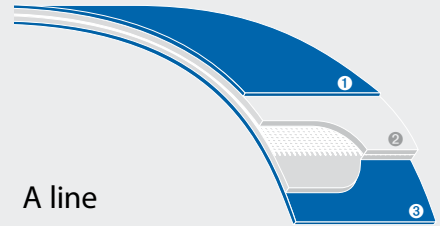


- ① "Classical" two pulley drive
- ② Multiple pulley drive
- ③ Taper-cone drive
- ④ Mule drive

# Overview of the lines



E line



A line

1 Top coating	highly wear-resistant elastomer G (green) or highly wear-resistant urethane (green)	highly wear-resistant elastomer G (blue) or highly wear-resistant urethane (green)
2 Tension member	thermoplastic tension member with polyester fabric in warp and weft	thermoplastic tension member with highly-modular mixed fabric and aramide warp
3 Friction coating	highly wear-resistant elastomer G (green) or highly wear-resistant urethane (green)	highly wear-resistant elastomer G (blue) or highly wear-resistant urethane (green)
Traction layer properties	transmission of significant effective pull at low elongation	transmission of significant effective pull at low elongation
Elongation at fitting	1.0 % – 2.0 %	0.3 % – 0.8 %
Flexibility	high flexibility	high flexibility
Damping properties	good	low
Type of splice	Z-splice 70 x 11.5 mm without adhesives	Z-splice 110 x 11.5 mm without adhesives
Other factors	Power transmission belts with polyester tension members made can transmit significant effective pull and are excellent value. They are a perfect solution for almost any application.	Power transmission belts with aramide tension members are designed for high levels of specific effective pull. Aramide line belts require careful handling to ensure perfect operation.

## Friction/top layer properties

### Urethane (U)

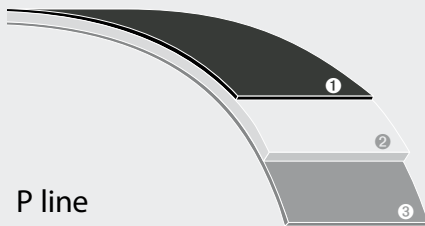
The urethane friction layer U is mainly used for drives. Thanks to its low thickness, it is especially well-suited for extreme flexing stress.

### Elastomer G (G)

The friction coating elastomer G is used for all standard drives, also wherever dust and moisture are a factor. Not recommended when oil and grease are present (e.g. oil vapour).

### Chrome-leather (L)

The chrome-leather friction coating is used wherever oil and grease are present.



## P line

chrome-leather, highly wear-resistant elastomer G (black) or polyamide fabric

highly-orientated polyamide sheet

chrome-leather or highly wear-resistant elastomer G (black or grey)

transmission of large effective pull

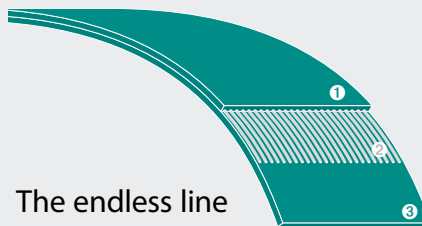
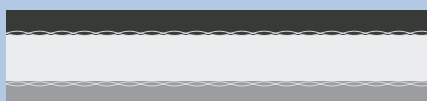
1.5 % – 3.0 %

low flexibility

very good

wedge splice with adhesives

Power transmission belts with tension member made of polyamide sheet are laterally stiff and have very good damping properties.



## The endless line

chrome-leather, highly wear-resistant elastomer G/Urethane (green) or polyamide fabric

helically-wound endless polyester cord

chrome-leather or highly wear-resistant elastomer G/Urethane or polyamide fabric

transmits high levels of effective pull with little elongation

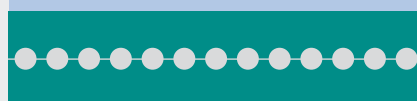
0.5 % – 1.8 %

high flexibility

very good

no splice, as helically-wound endless

Power transmission belts with helically-wound endless tension members, made of polyester cord, require short take-up ranges, can transmit high specific levels of effective pull and are not sensitive to fluctuations in ambient conditions. Because they are very flexible and track very steadily and evenly, they are an excellent choice for high levels of power transmission (> 60 m/s) and multiple rotations.



**GG** = elastomer friction layer on both sides (normal pattern) for power transmission on both sides

**UU** = green urethane friction coating on both sides, power taken from both sides of belt.

**GT** = elastomer friction coating on one side, for power transmission on one side, top coating made of polyamide fabric.

**LT** = chrome-leather friction coating on one side, for power transmission on one side, top coating made of polyamide fabric.

**LL** = chrome-leather friction coating on both sides, for power transmission on both sides

## Selection from product range

### A, E, P lines

#### Technical data

	Article number	Total thickness, approx. [mm]	d <sub>min</sub> [mm]*	Nominal effective pull, approx. [N/mm belt width]**	Nominal working elongation [%]	Max. transmittable effective pull [N/mm belt width]	Elongation at fitting [%]	Weight, approx. [kg/m <sup>2</sup> ]	Permissible operating temperatures [°C] (long-term tempe- rature)***
<b>A line</b>									
UU 15A-17 FSTR/FSTR green	995473	1.7	30	15	0.5	15	0.3 – 0.8	1.9	-20/+70
<b>E line</b>									
UU 20E-16 FSTR/FSTR green	822055	1.6	30	20	2.0	25	0.3 – 2.0	1.85	-20/+70
GG 20E-20 green	822052	2.0	24	20	2.0	20	1.0 – 2.0	2.3	-20/+70
UU 30E-32 FSTR/FSTR green	822105	3.2	30	20	2.0	25	0.3 – 2.0	3.55	-20/+70
GG 25E- 25 green	822074	2.5	40	25	2.0	25	1.0 – 2.5	2.65	-20/+70
GG 30E-32 green	822051	3.2	40	30	2.0	30	1.0 – 2.0	3.4	-20/+70
GG 30E-32 black	822118	3.2	40	30	2.0	30	1.0 – 2.0	3.3	-20/+70
GU 30E-40*** green	822054	4.0	60	30	2.0	30	1.0 – 2.0	4.3	-20/+70
TG 30E-30 black/green	822058	3.0	40				1.0 – 2.0	3.2	-20/+70
<b>P line</b>									
LL 6P	800015	3.0	35	6	2.0	7.5	1.5 – 3.0	2.95	-20/+80
LL 10P***	800016	3.1	40	10	2.0	12.5	1.5 – 3.0	3.1	-20/+80
LL 14P	800017	3.5	60	14	2.0	17.5	1.5 – 3.0	3.6	-20/+80
LL 20P	800018	4.4	90	20	2.0	25	1.5 – 3.0	4.2	-20/+80
LL 28P	800019	4.9	120	28	2.0	35	1.5 – 3.0	5.0	-20/+80
LL 40P***	800020	5.9	200	40	2.0	48	1.5 – 3.0	5.6	-20/+80
LT 6P	800007	2.0	30	6	2.0	7.5	1.5 – 3.0	1.9	-20/+80
LT 10P***	800008	2.2	30	10	2.0	12.5	1.5 – 3.0	2.5	-20/+80
LT 14P	800009	2.4	60	14	2.0	17.5	1.5 – 3.0	2.6	-20/+80
LT 20P***	800010	2.8	90	20	2.0	25	1.5 – 3.0	2.9	-20/+80
LT 28P	800011	3.7	125	28	2.0	35	1.5 – 3.0	3.7	-20/+80
LT 40P***	800012	4.4	200	40	2.0	48	1.5 – 3.0	4.3	-20/+80
LT 54P	800013	5.5	300	54	2.0	67.5	1.5 – 3.0	5.5	-20/+80
LT 65P***	998059	5.8	400	65	2.0	84.5	1.5 – 3.0	5.7	-20/+80
LT 80P***	800014	7.2	400	80	2.0	110	1.5 – 3.0	7.1	-20/+80
GG 10P-20 NSTR/FSTR grey/black	855604	2.0	40	10	2.0	10	1.5 – 3.0	2.15	-20/+80
GG 15P-22 NSTR/FSTR grey/black	855605	2.2	40	15	2.0	15	1.5 – 3.0	2.3	-20/+80
GG 20P-25 NSTR/FSTR grey/black	855606	2.5	60	20	2.0	20	1.5 – 3.0	2.8	-20/+80
GG 20P-30 NSTR/FSTR black	855602	3.0	60	20	2.0	20	1.5 – 3.0	3.3	-20/+80
GG 30P-32 NSTR/FSTR grey/black	855607	3.2	125	30	2.0	30	1.5 – 3.0	3.5	-20/+80
GG 30P-37 NSTR/FSTR black	855603	3.7	125	30	2.0	30	1.5 – 3.0	3.9	-20/+80
GT 6P black	850044	1.3	20	6	2.0	9	1.5 – 3.0	1.3	-20/+80
GT 10P black	850045	1.6	30	10	2.0	12.5	1.5 – 3.0	1.6	-20/+80
GT 14P black	850046	1.8	40	14	2.0	17.5	1.5 – 3.0	1.8	-20/+80
GT 20P black	850047	2.5	60	20	2.0	25	1.5 – 3.0	2.65	-20/+80
GT 28P black	850048	3.0	120	28	2.0	35	1.5 – 3.0	3.3	-20/+80
GT 40P black	850049	3.65	200	40	2.0	48	1.5 – 3.0	4.0	-20/+80
GT 54P *** black	850050	4.4	300	54	2.0	67.5	1.5 – 3.0	4.9	-20/+80
GT 80P *** black	850051	6.0	400	80	2.0	110	1.5 – 3.0	6.4	-20/+80

#### Legend

\* Minimum drum diameter was determined at room temperature. Lower temperatures require larger drum diameters. For the P line, this also applies in the case of low humidity.

\*\* Nominal effective pull specifies the power transmission in N per mm belt width possible for the belt type (standard operating environment).

\*\*\* Temperature can be briefly exceeded to a max. of + 20°C.

\*\*\*\* Depending on application, splice length given in brackets also possible.

**Explanation of the abbreviations used, the type key and resistances on page 11.**



[illegible]

- Roll material for customers to finish themselves
- Prepared belts for on-site heating of splices. Please state the type of splice you require, sizes and any pre-tension required. Please contact us about belts lengths <500 mm and >125 m
- Special types with perforation or sawn edges (in the P line) on request

PG-GM-V/230-T

Diagram illustrating the PP-ZP-V/40-3 device, which is a robotic arm assembly. The device consists of a base, a vertical support structure, and a gripper mechanism. The gripper is shown in a closed position, ready to grasp a component. The device is labeled "PP-ZP-V/40-3" at the bottom left.

PG-GM-V/400

Diagram illustrating the PP-ZP-V/80-3 device, which is a mechanical assembly consisting of a vertical rod and a base plate. The base plate is rectangular and features a central slot. The vertical rod is positioned vertically, passing through the base plate. The device is shown in a perspective view, highlighting its mechanical components and the base plate's structure.

SB-HP-160/150

SMX-HC-140/40

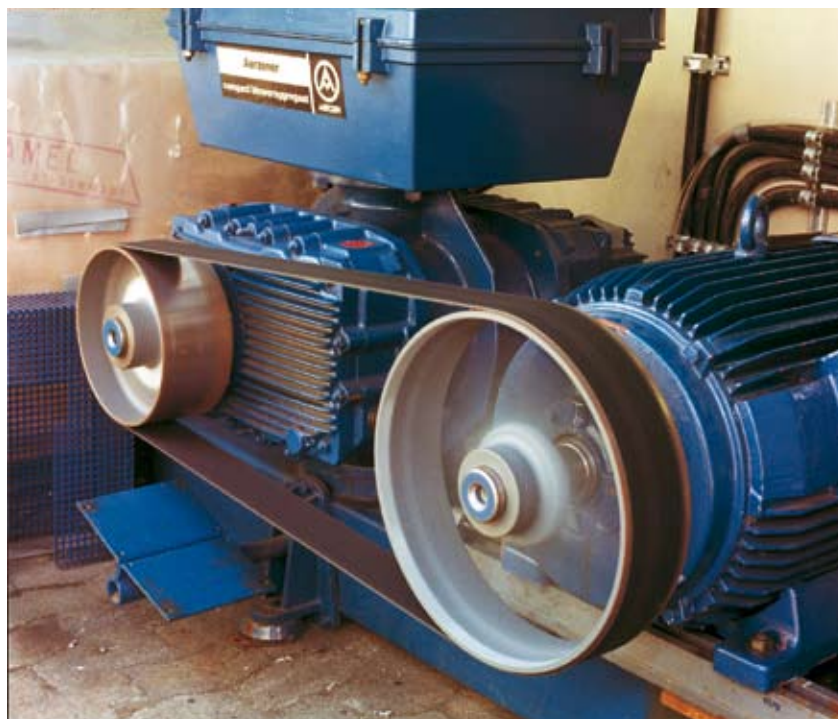
- extremely fast preparation and finishing of the splice in the workshop or on the machine
- very flexible and durable splices
- detailed instructions for all tools and equipment and power transmission belt types

SM-HP-120/150 ... SM-HP-180/1000-P

Selection from  
product range

Endless line

	Article number	Total thickness approx. [mm]	Nominal effective pull approx. at 1% elongation [N/mm belt width]*	Tensile strength approx. [N/mm width]	Elongation at break approx. [%]	Elongation at fitting [% of belt length]	Weight approx. [kg/m <sup>2</sup> ]**	Permitted operating temperature Td [°C] (constant temperature)
UU 10 E green	810011	0.75	–	130	15	0.5 – 1.5	0.7	-20/+60
UU 14 E green	810012	0.8	–	175	15	0.5 – 1.5	0.8	-20/+60
UU 20 E green	810013	1.2	–	300	15	0.5 – 1.5	1.1	-20/+60
GT 10 E black	810028	1.2	10	130	15	0.5 – 1.5	1.2	-20/+60
GT 14 E black	810027	1.3	14	175	15	0.5 – 1.5	1.3	-20/+60
GT 20 E black	810026	1.9	20	300	15	0.5 – 1.5	1.9	-20/+60
GT 28 E black	810029	2.1	28	540	15	0.5 – 1.5	2.2	-20/+60
GT 40 E black	810032	2.4	40	600	15	0.5 – 1.5	2.5	-20/+60
GG 10 E black	810033	1.8	10	130	15	0.5 – 1.5	1.9	-20/+60
GG 14 E black	810035	1.9	14	175	15	0.5 – 1.5	2.0	-20/+60
GG 20 E black	810031	2.8	20	300	15	0.5 – 1.5	2.9	-20/+60
GG 28 E black	810036	3.1	28	540	15	0.5 – 1.5	3.2	-20/+60
GG 40 E black	810030	3.4	40	600	15	0.5 – 1.5	3.5	-20/+60
LT 10 E	810001	2.0	10	130	15	0.5 – 1.5	1.9	-20/+60
LT 14 E	810002	2.1	14	175	15	0.5 – 1.5	2.2	-20/+60
LT 20 E	810003	2.3	20	300	15	0.5 – 1.5	2.5	-20/+60
LT 28 E	810004	2.9	28	540	15	0.5 – 1.5	3.2	-20/+60
LT 40 E	810005	3.2	40	600	15	0.5 – 1.5	3.3	-20/+60
LL 10 E	810006	3.4	10	130	15	0.5 – 1.5	3.4	-20/+60
LL 14 E	810007	3.6	14	175	15	0.5 – 1.5	3.6	-20/+60
LL 20 E	810008	3.8	20	300	15	0.5 – 1.5	3.9	-20/+60
LL 28 E	810009	4.2	28	540	15	0.5 – 1.5	4.2	-20/+60
LL 40 E	810010	4.8	40	600	15	0.5 – 1.5	4.8	-20/+60



Available lengths and widths [mm]

Minimum length	Maximum length	Minimum width	Maximum width
620	10100	60 <sup>1)</sup>	320
620	10100	60 <sup>1)</sup>	320
620	10100	60 <sup>1)</sup>	320
420	13700	10	480
420	13700	10	480
420	13700	10	480
420	13700	10	480
420	13700	10	480
420	13700	10	480
420	13700	10	480
420	13700	10	480
420	13700	10	480
420	13700	10	480
420	13700	10	480
420	13700	10	480
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420	13700	10	480
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420	13700	10	480
420	13700	10	480
420	13700	10	480

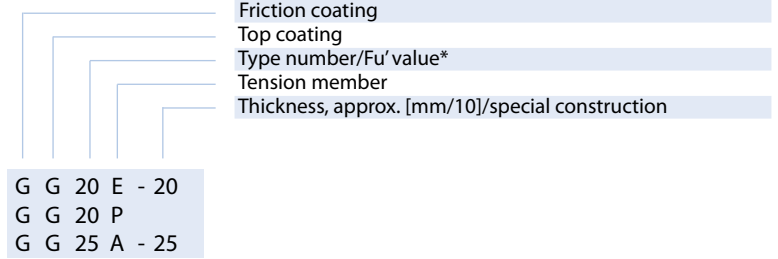
### Legend

- \* The nominal effective pull states the possible power transmission in N/mm belt width (in standard ambient conditions) that the belt type can produce at nominal elongation.
  - \*\* In leather-coated belts, differences to the averages stated here for overall thickness and weight are possible.
  - \*\*\* Temperature can be briefly exceeded to a max. of +20°C.
- 1) For technical reasons, minimum amount available that can be divided up into 10 mm widths.

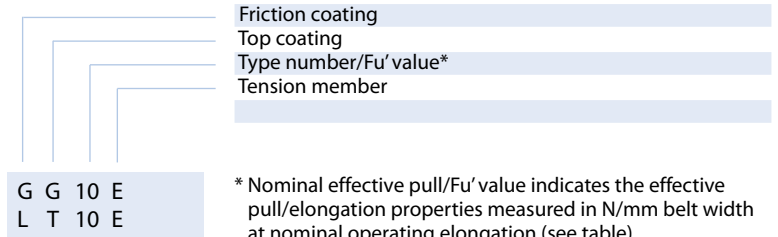
### Abbreviations used (all lines)

- A** = Aramide  
**E** = Polyester  
**G** = Elastomer G  
**L** = Chrome-leather  
**P** = Polyamide  
**T** = Mixed or polyamide fabric  
**U** = Urethane

## Type code (A, E, P line)



## Type code (endless line)



\* Nominal effective pull/Fu' value indicates the effective pull/elongation properties measured in N/mm belt width at nominal operating elongation (see table).

### Special properties/resistances (all lines)

Siegling Extremultus is antistatic.

Helically-wound endless types cannot be lengthened, shortened or repaired.

The Siegling Extremultus **GT** and **GG** types are not sensitive to oils and greases, as well as commonly-available solvents. However using in oily or greasy conditions (e.g. oil vapour) is not to be recommended (risk of the belt slipping – if possible use LT or LL types).

The Siegling Extremultus sub-types **LL**, **LT** and **UU** are impervious to machine oils, diesel fuels, petrol, benzene, commercially available solvents such as ethyl acetate, acetone, etc.; chlorinated hydrocarbons such as perchloroethylene, etc.

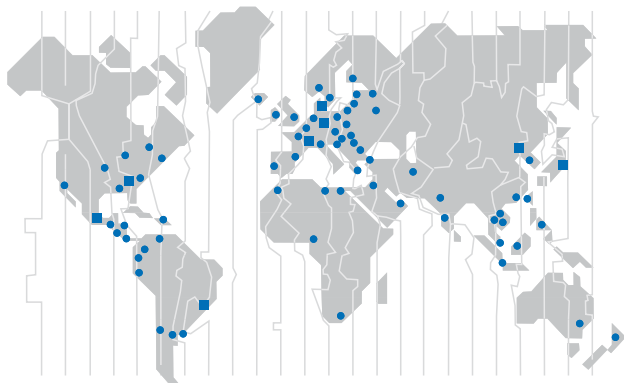
Siegling Extremultus is not resistant to organic and inorganic acids.

For further details, see the Siegling Extremultus – Technical information brochure (ref. no. 316).

## Siegling – total belting solutions

Committed staff, quality-orientated organisation and production processes ensure the constantly high standards of our products and services. The Forbo Siegling Quality Management System is certified in accordance with DIN EN 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.



### Forbo Siegling Service – anytime, anywhere

In the company group, Forbo Siegling employs more than 1800 people worldwide. Our production facilities are located in eight countries; you can find companies and agencies with stock and workshops in more than 50 countries. Forbo Siegling service centres provide qualified assistance at more than 300 locations throughout the world.