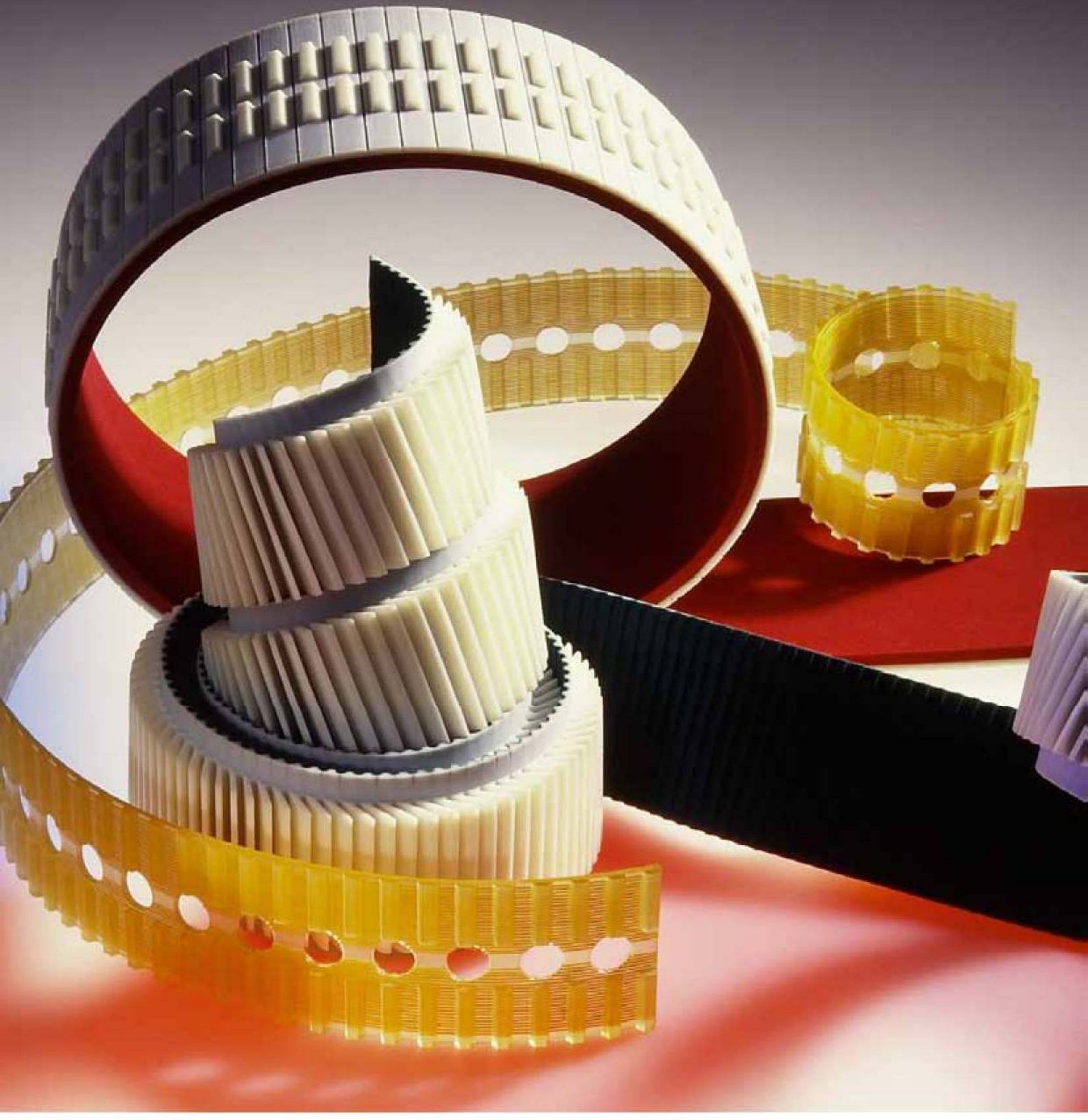
TOOTHED BELTS PROCESSING COATING CAMS COMPONENTS



FEC CONSULTING

Professional consulting and production

FEC **Consulting**

MAKING AS YOU WISH

Day by day it is our most motivating challenge to make sure that our customers will successfully apply our products. We are committed to produce innovative toothed belts and toothed lock washers, to be flexible in implementing customer requests, meticulous in matters of quality – all these with the creativity and competency of our application engineers and chemists.

CNC PRODUCTION

COATING

NON STOP WORKING FOR YOU

To get an impression who you are dealing with at FEC Consulting see some facts:

- leading producer of special toothed belts / refinement of toothed belts
- more than 50 employees are getting active for you
- six branches in Germany alone
- many sales partners abroad
- twenty years of experience in the sector of toothed belts refinement and processing guarantee first-class products.

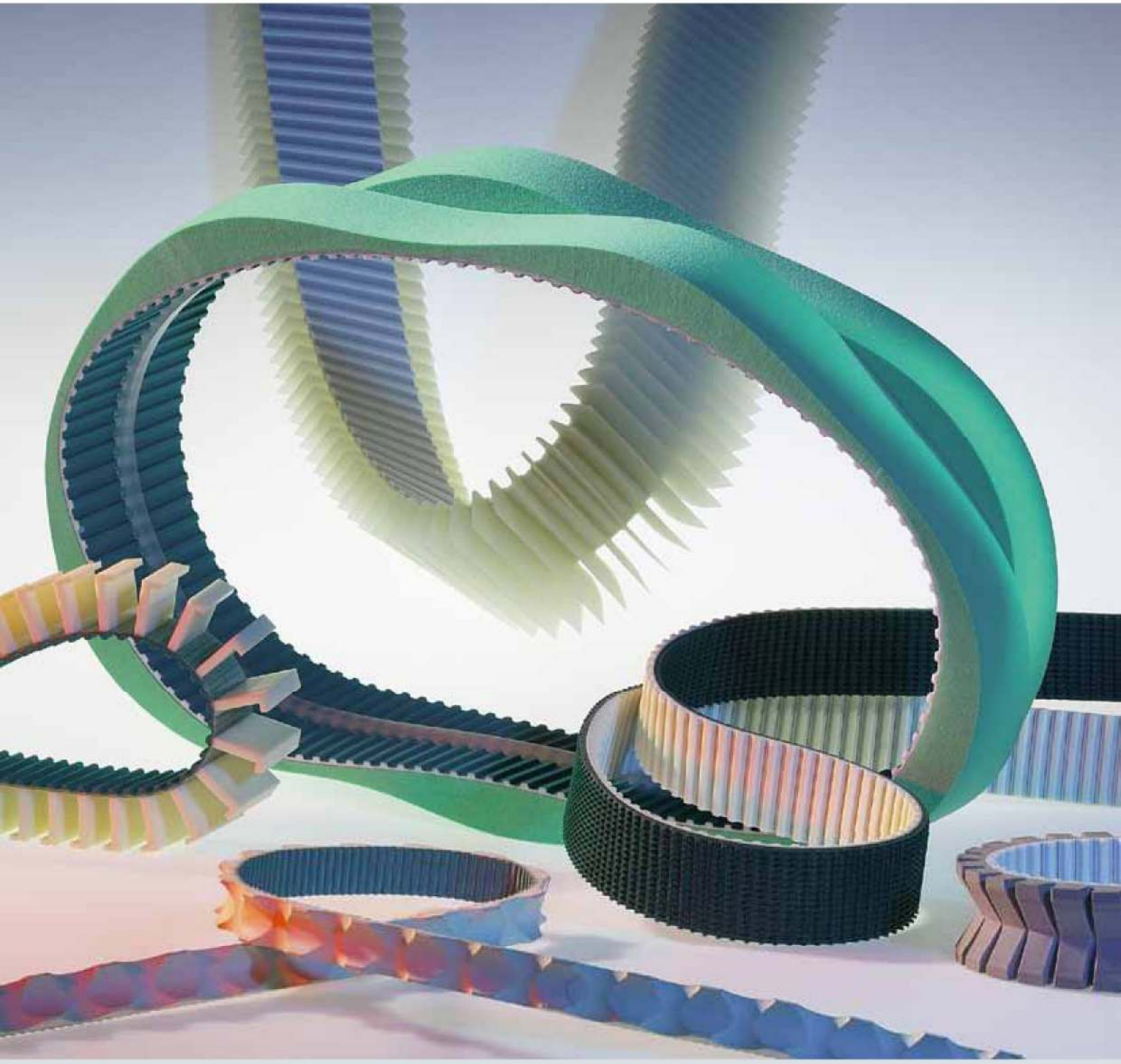
Beside the product quality our main focus is service and counselling. Anyone of high demands should contact us, for we will provide you at once with realistic solutions to your problem.

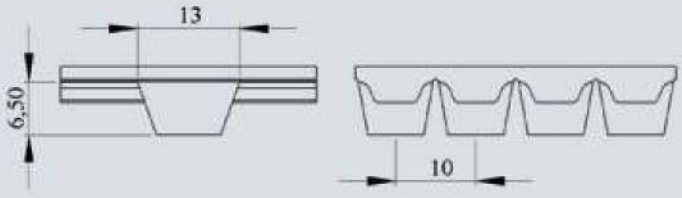
WE HELP AT ONCE IN ANY CASE OF NEED

When it matters, for you we move up a gear immediately: In case of an emergency our express service comes into action and helps you to avoid a bottleneck.

TOOTHED BELTS

HERE EVERYTHING TAKES SHAPE





Sound us out – NK toothed belt systems are certainly up to the task.
We produce complete toothed belts in widths that were known before only from conveyor belts

- High performance belts for drive technology
- Conveyor toothed belts with width up to 500 mm
- Coated belts with width up to 500 mm
- Cam toothed belts with width up to 500 mm
- Toothed lock washers and shafts of up to 1,500 mm in width

TOOTHED BELTS - A STRONG COMPOSITE PRODUCT

We manufacture in particular polyurethane elastomer toothed belts with embedded steel or Kevlar cords. Due to the thermoplastic properties, this design makes it possible to weld on tappets and back supports. Furthermore, it also permits the precise grinding of profiles with close tolerance dimensions.

THE STRENGTH IN UNOBTRUSIVE ELEMENTS

We can supply the embedded cords that determine the tension and expansion behavior of the toothed belt in various designs:

Steel cord galvanized (standard)
Steel cord „Niro“ (non-corroding)
Steel cord „E“ (high bending cycles)
Kevlar cords (aramid fiber - high bending cycles, chemically stable)

Furthermore, we can also deploy reinforced cords to fulfill occurring load cases.

COMPATIBLE TOOTH BY TOOTH

Our toothed belts can be adapted optimally to the respective requirements.

Here are the design/ basic properties:

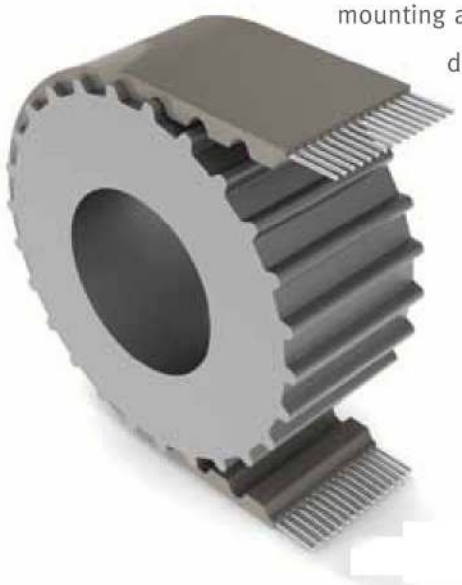
- Diverse cord variants (see above)
- PA fiber on tooth side (coefficient of friction)
- Additional back coatings and profiling
- Precise cycling of products
- Synchronous rotational angle transmission
- Low bearing load / initial load
- Thermal stability -15°C to +80°C
- Oil and grease resistance as compared with primitive oils

Just ask for our advice!

TWO WHICH COMPLEMENT EACHOTHER

Accurate meshing of toothed belts and toothed belt pulleys is decisive for desired functionality. We are able to optimise the tooth meshing clearance according to demand

Beside the extensive range of standard pulleys we offer you individual products, which we manufacture ready for mounting according to your drawing.



TOOTHED BELT TECHNICAL DATA

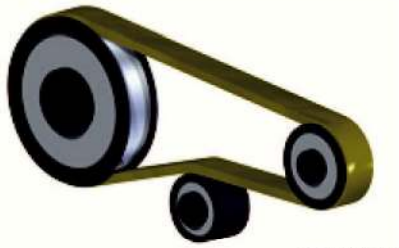
OUR STOCK FOR YOU

Metric toothed belts: profile T and AT
Inch toothed belts: profiles XI, L, H and XH
Metric toothed belts: profiles HTD 5M, 8M and 14M

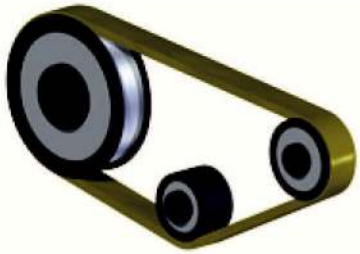
optionally with load-bearing element made of steel cord or kevlar

optionally with PA fabric in tooth flanks and back

Here follow some data on profiles and corresponding pulleys:

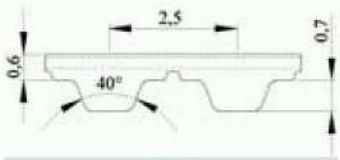


TENSION PULLY OUTSIDE

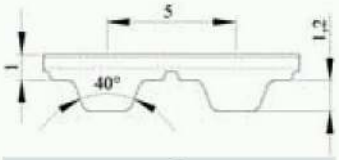


TENSION PULLY INSIDE

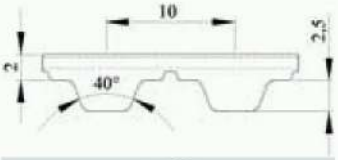
METRIC TOOTHED BELTS



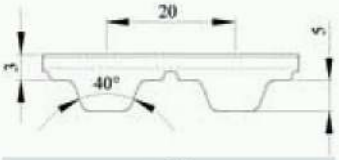
T 2,5



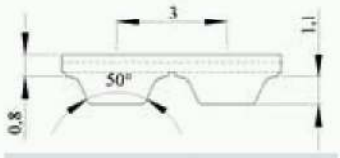
T 5



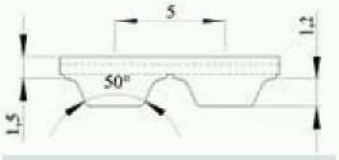
T 10



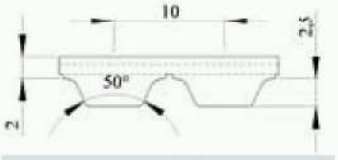
T 20



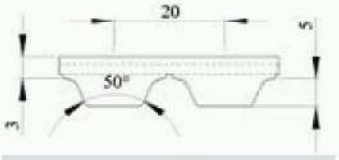
AT 3



AT 5

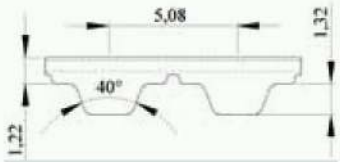


AT 10

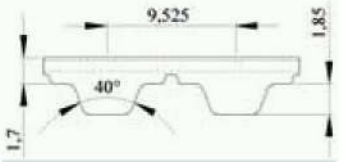


AT 20

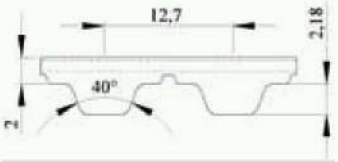
INCH TOOTHED BELTS



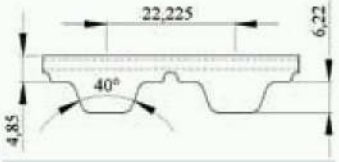
XL



L

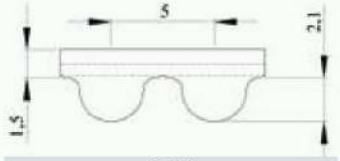


H

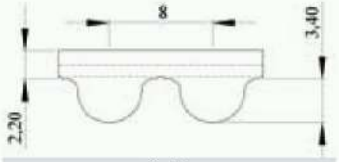


XH

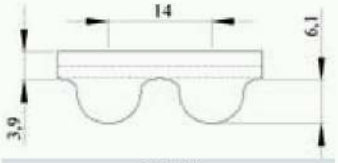
HTD TOOTHED BELTS



5 M



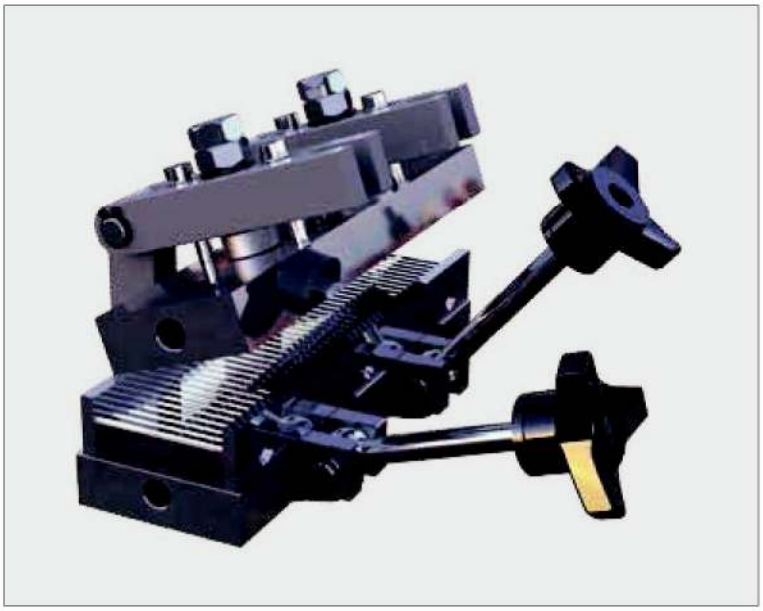
8 M



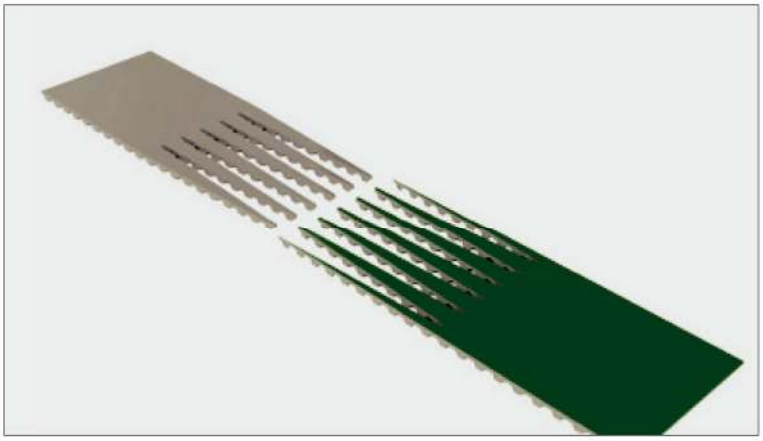
14 M

PROFILE / RATIO OF DIAMETER

	TENSION PULLY INSIDE		TENSION PULLY OUTSIDE	
	Z min	D min	Z min	D min
T 2,5	15	15	18	18
T 5	10	30	15	30
T 10	12	60	20	60
T 20	15	120	25	120
AT 3	15	20	20	20
AT 5	12	18	20	50
AT 10	15	50	25	120
AT 20	18	120	25	180
XL	25	60	25	60
L	20	60	25	80
H	14	60	20	80
XH	18	150	25	180
5 M	16	50	20	60
8 M	20	60	22	120
14 M	26	120	28	180



MOBILE WELDING TOOL

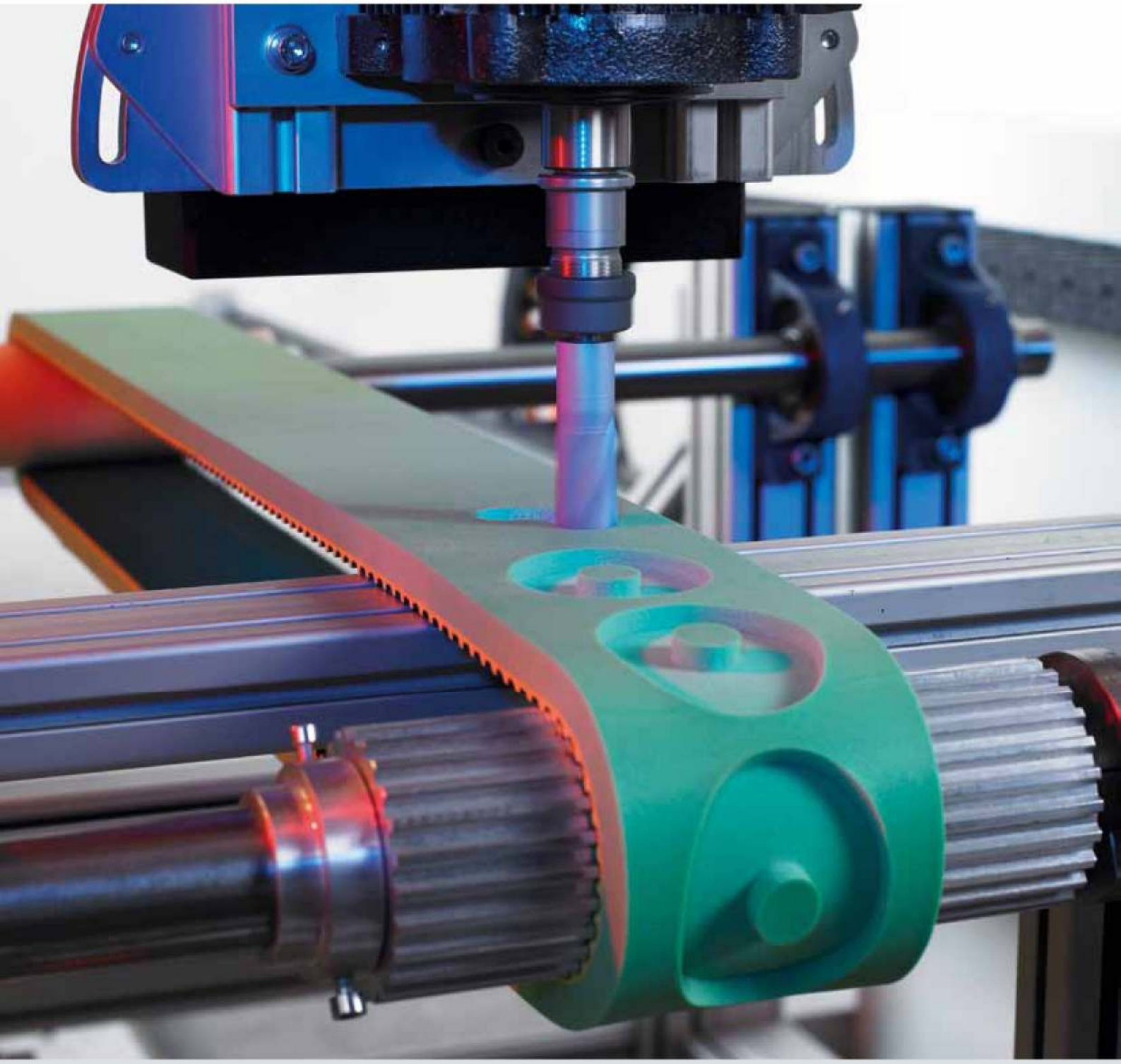


STANDARD CONNECTION

PIN-JOIN-CONNECTOR

PROCESSING

EXACTLY AS IT SHOULD BE



- CNC milling
- CNC drilling
- NC coating
- Aquajet cutting
- NC cam mounting

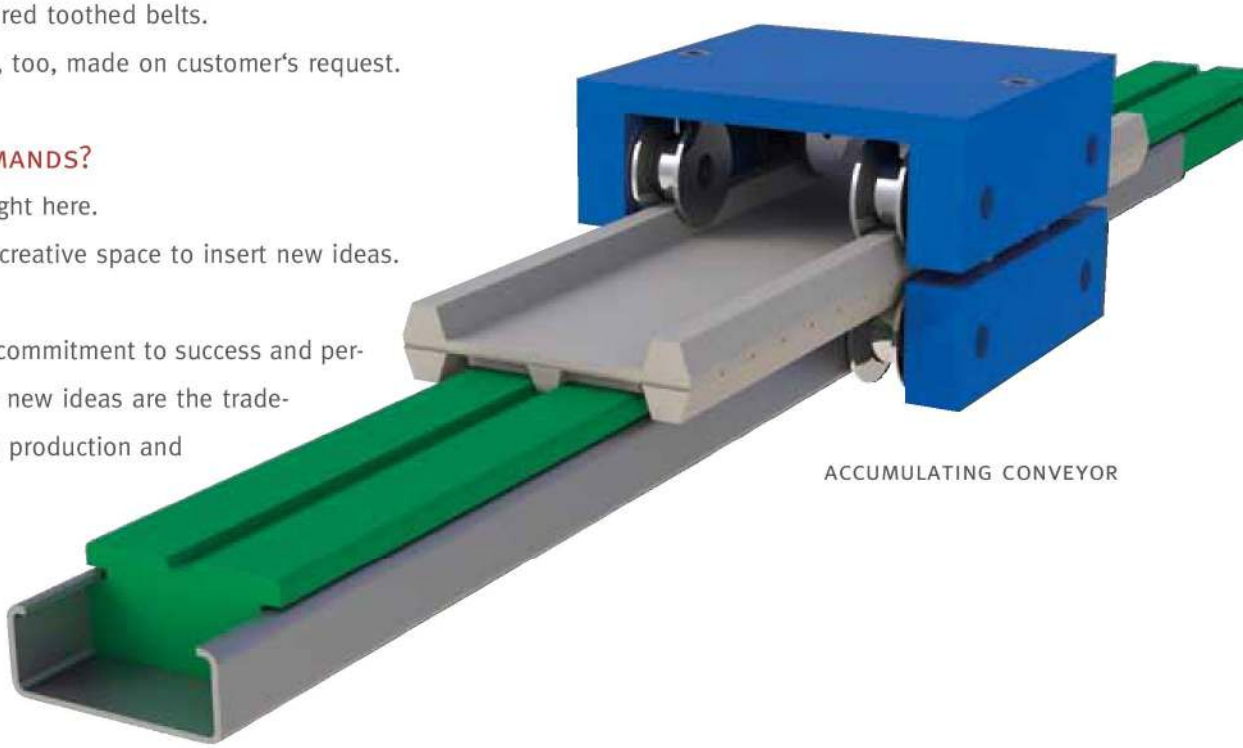
Modern machinery is operating with utmost precision.
We supply the required toothed belts.
Of utmost precision, too, made on customer's request.

ANY SPECIAL DEMANDS?

Then you are just right here.
We provide for you creative space to insert new ideas.

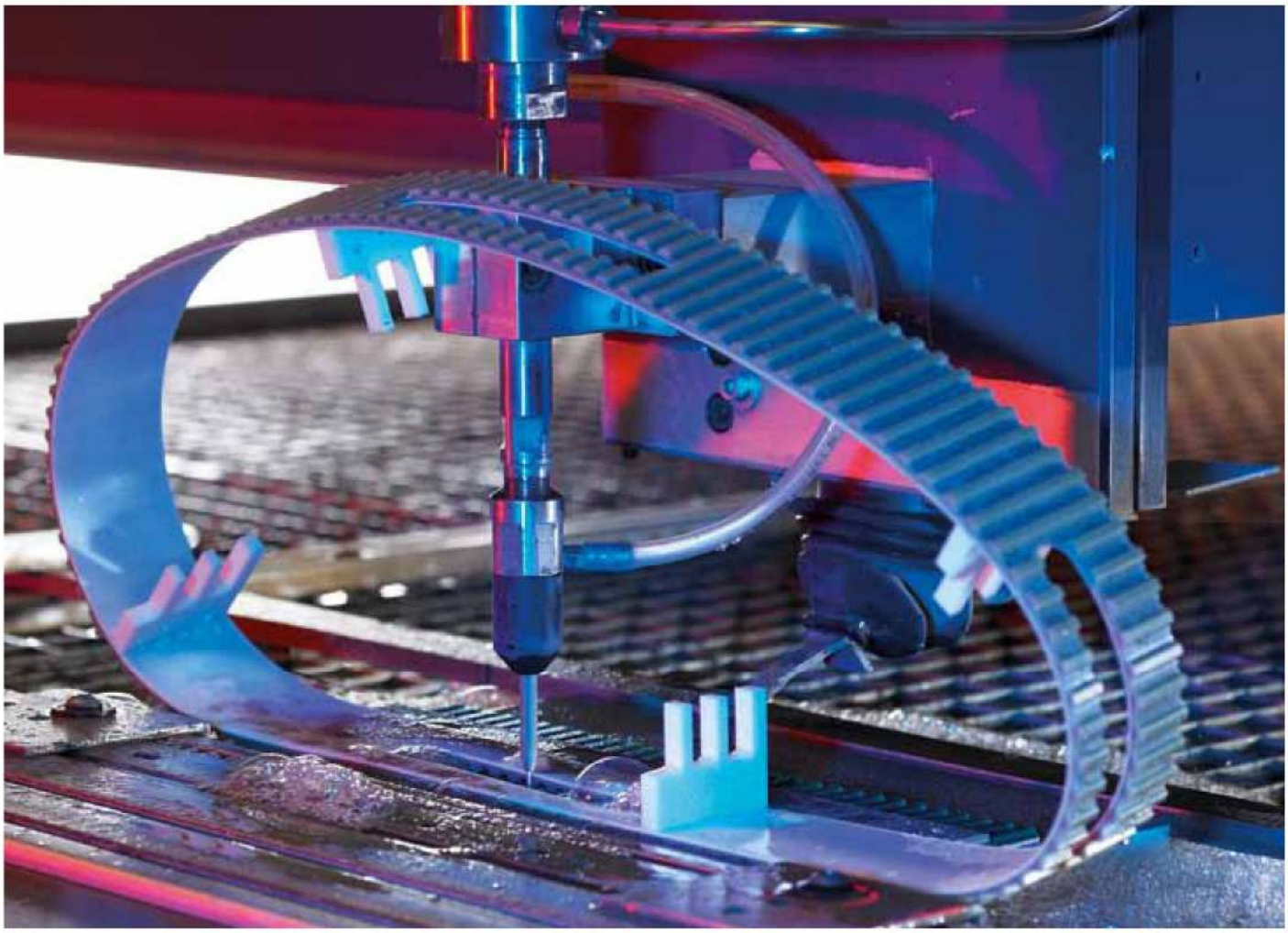
Creativity, absolute commitment to success and persistence in realising new ideas are the trademarks of our staff in production and sales.

But of course we also operate the most current CNC equipment.
These are essentially developed by us in-house.



ACCUMULATING CONVEYOR

WATER JET TECHNOLOGY



PROCESSING

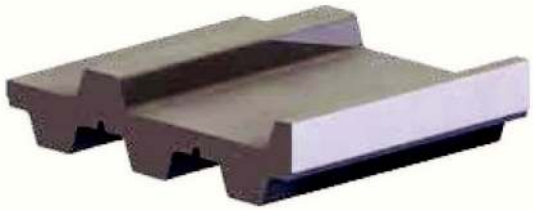
MECHANICAL PROCESSING

Among our range of processing technologies are

- Perforation – Vacuum ZR
- Profiling – Haul-off belt
- Sand – Finish of surface
- Water jet technology
- CNC milling
- CNC drilling
- Processing to width of up to 500 mm

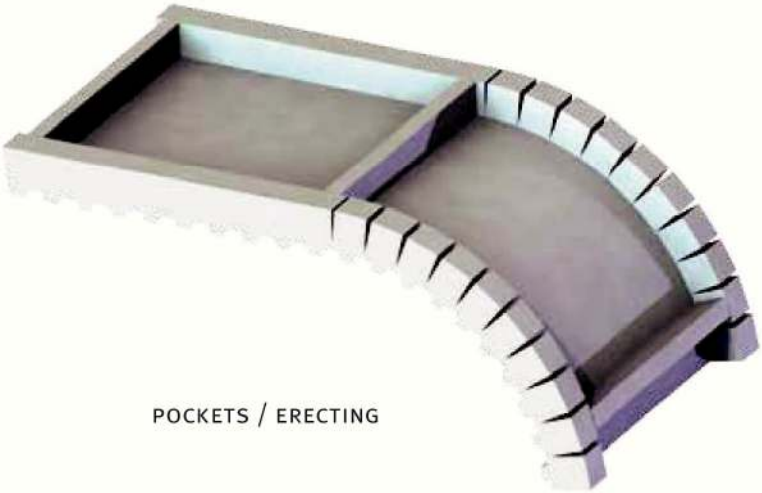
Our centrepiece is the CNC production, which we specially designed for additional treatment of toothed belts, coatings and transport cams. These include DL toothing, elaborate hole patterns, longitudinal and transverse profiling..

LONGITUDINAL GROOVE

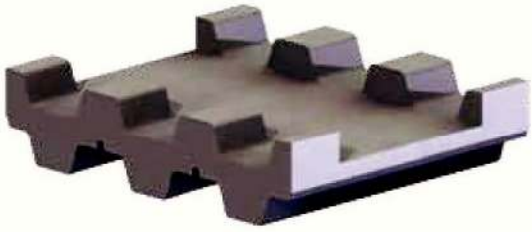


REMOVE TEETH

TRANSVERSAL GROOVE



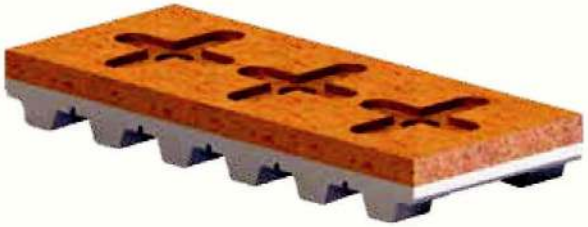
POCKETS / ERECTING



LONGITUDINAL GROOVE

SUCTION BELT

TRANSVERSAL GROOVE

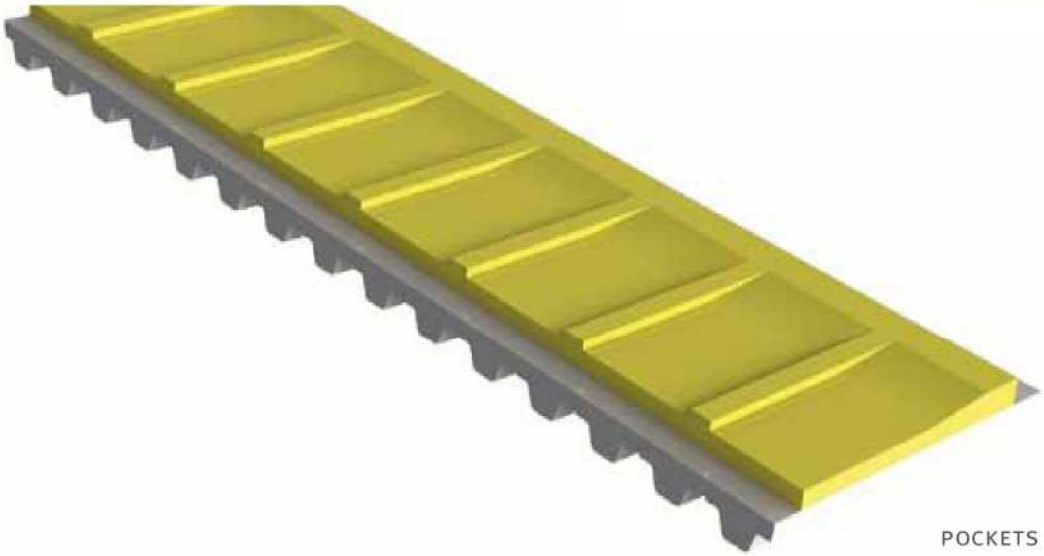


SUCTION BELT

DL TOOTHING

PIERCING

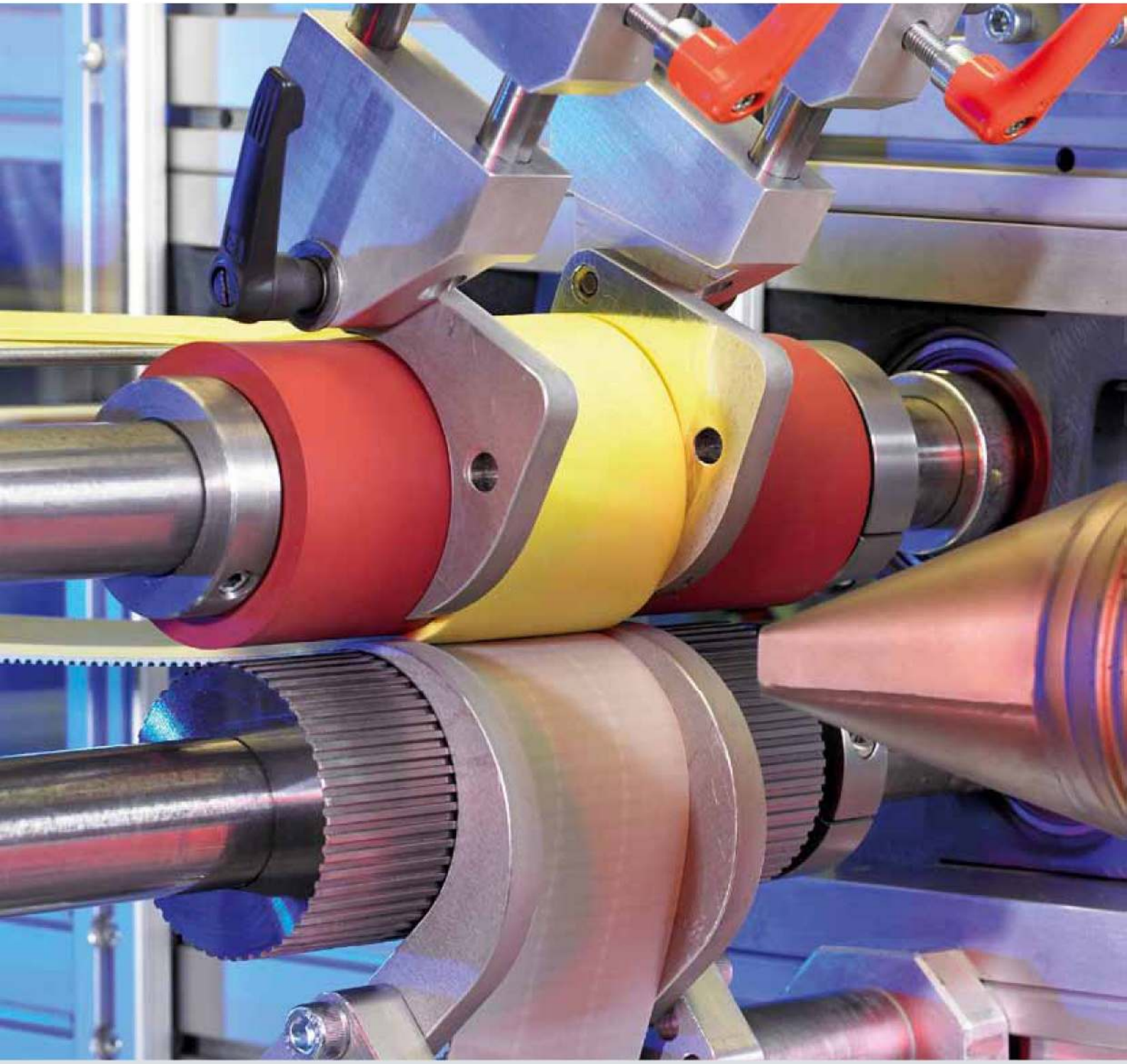
FILLET



POCKETS

COATING

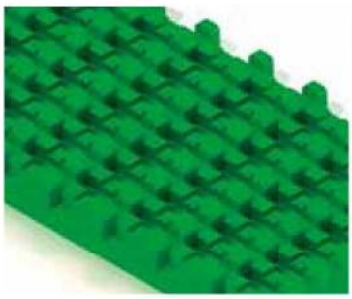
MADE FOR SPECIAL TASKS



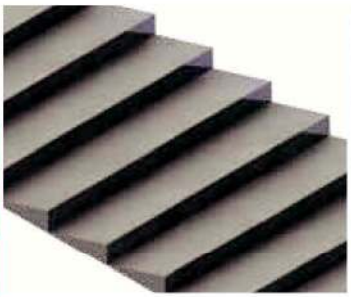
Coating on request:

Several characteristics of the coating

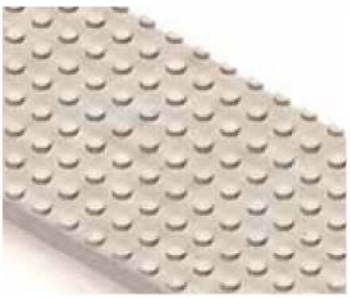
- high friction coefficient
- low friction coefficient
- soft, hard, elastic
- non-adhesive
- heat-resistant
- acid-resistant
- and much more



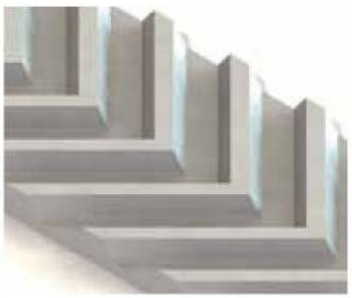
SUPER GRIP



SAW TOOTH PROFILE



KNOBS WHITE



FISHBONE PROFILE

WHY ARE THERE DIFFERENT COATINGS?

That's easy – because our customers' demands are as manifold as the number of different coatings.

Different friction coefficients, grades or robustness are only a few of the parameters that limit the choice.

Utmost precision in coating toothed belts we acquire by using CNC-controlled equipment. Thus special setting parameters can be recalled any time.
For your safety – even with regular demand.

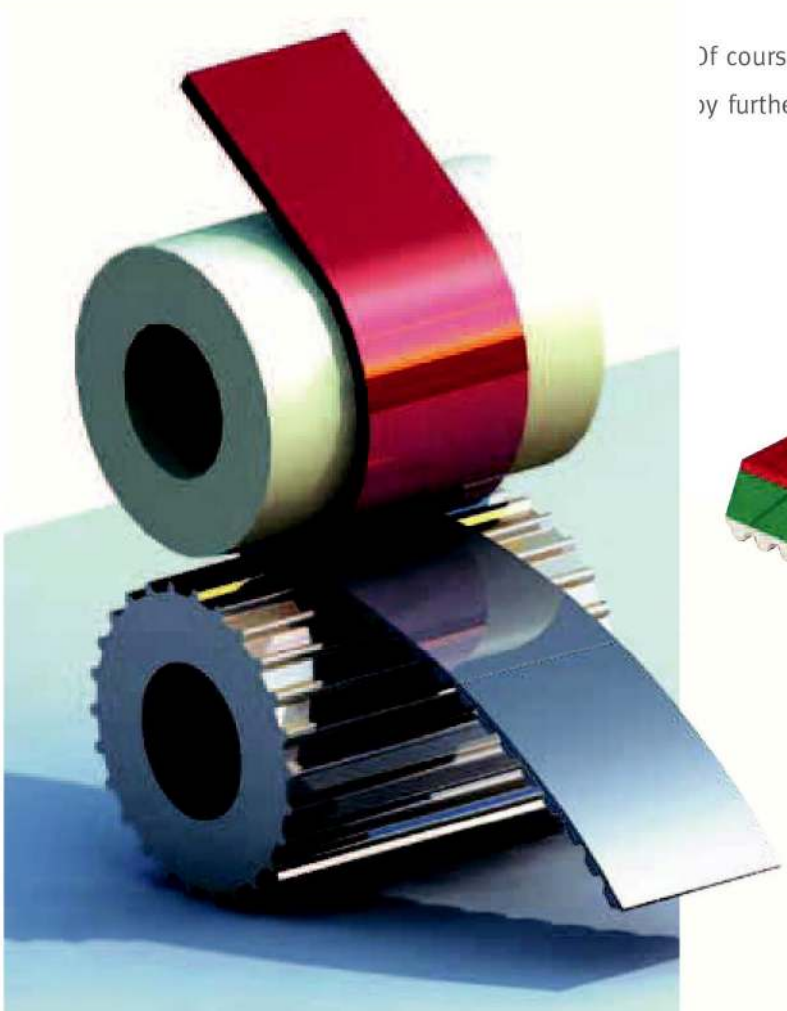
We are also able to coat conveyor belts and v-belts.

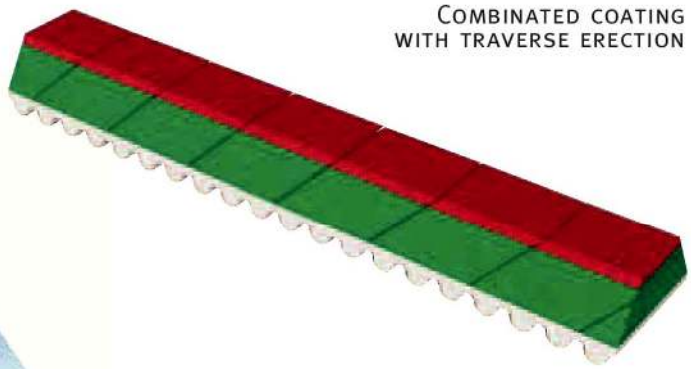
MATERIALS FOR ANY REASON

We will be glad to assist you in selecting the ideal coating. Whether horizontal or vertical transport, whether accumulating operation or haul-off belts: Together we will find the right solution.

For this we rely on our long-term experience. Our own experiments with the materials we use and the results thereof give us – and you – best safety, too.
The desired effect is often gained not by a single material but by a combination of various materials. A huge selection of combinations is available for such a kind of sandwich coating.

Of course, the characteristics can be altered and refined by further mechanical processing.





COMBINATED COATING
WITH TRAVERSE ERECTION

COATING MATERIALS

1
CHROME LEATHER

Basically we can coat all kinds of toothed belts with all flexible materials. With our standard materials more than 90% of the special applications can be realized.
For precise regulations please ask for our counselling. Our expert representatives take pleasure in advising you locally.

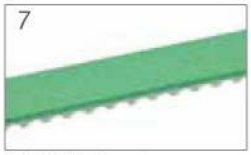
2
NOVOVLIES

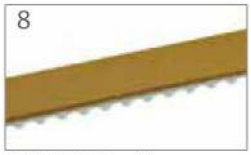
3
POLYAMIDE FABRIC

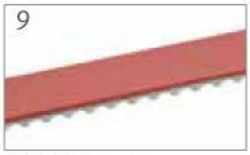
4
CELLOFLEX

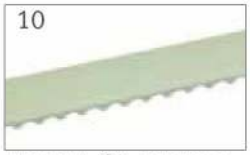
5
SYLOMER - G

6
SYLOMER - R


7
SYLOMER - L

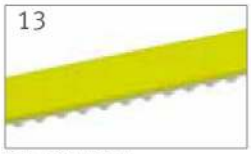

8
SYLOMER - M

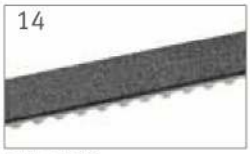

9
SYLOMER - P

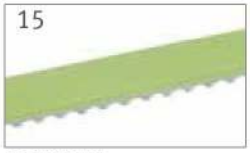

10
PU FOIL 85 DEGREE

11
PU FOIL 60 DEGREE

12
PU LONGITUDINAL GROOVE


13
PU-YELLOW


14
PU-GREY


15
POLYTAN

16
PVC-BLUE

17
PVC-WHITE

18
KNOBS WHITE

19
FISHBONE PROFILE

20
SAW TOOTH PROFILE

21
SUPERGRIP-GREEN

22
SUPERGRIP-WHITE

23
SUPERGRIP-PETROL

24
SUPERGRIP-BLACK

25
POROLEN

26
EPDM

27
RUBBER-WHITE

28
CORREX

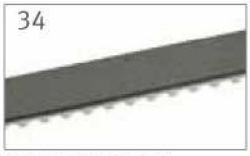
29
LINATEX

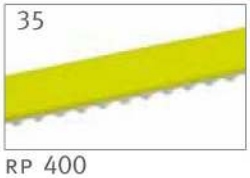
30
LINATRILE

31
ELASTOMER-GREEN

32
RUBBER SPONGE

33
TEFLON


34
MAGNETIC FOIL


35
RP 400

36
VITON

MATERIAL-LISTE

No	Description	Material	Code	Colour	Shore/A Density/RG	M-factor Deflection*	M-strength mm
1	Chrome leather	Natural leather	LED	grey	n.a.	25	app. 3
2	Novovlies	Polyester fibre	NOVO	anthrazite	n.a.	25	app. 1,5/2,5
3	Polyamide fabric	Polyamide	PAR	green	n.a.	60	app. 0,5
4	Celloflex	Polyurethane	CELL	beige	RG 400	20	2,0 - 10,0
5	Sylomer - G	Polyurethane	SYG	yellow	RG 160	10	12,0
6	Sylomer - R	Polyurethane	SYR	blue	RG 220	15	6,0/12,0
7	Sylomer - L	Polyurethane	SYL	green	RG 300	15	6,0/12,0
8	Sylomer - M	Polyurethane	SYM	brown	RG 400	20	6,0/12,0
9	Sylomer - P	Polyurethane	SYP	red	RG 500	25	12,0
10	PU foil 85 degree	Polyurethane	HV	transparent	85°A	30	1,0-4,0
11	PU foil 60 degree	Polyurethane	PU60	transparent	60°A	25	2
12	PU longitudinal groove	Polyurethane	PU-LR	transparent	60°A	30	2,0
13	PU - yellow	Polyurethane	PU-GE	yellow	55°A	20	2,0-10,0
14	PU - grey	Polyurethane	PU-GR	grey	55°A	20	2,0/3,0
15	Polytan	Polyurethane	POLY	natural	70°A	25	2,0-5,0
16	PVC - blue	Polyvinyl chloride	PVC-B	blue	40°A	20	1,0-3,0
17	PVC - white	Polyvinyl chloride	PVC-WEISS	white	65°A	25	app. 1,5
18	Knobs white	Polyvinyl chloride	NW	white	65°A	20	app. 1,8
19	Fishbone profile	Polyvinyl chloride	FG	white	65°A	30	app. 3,0
20	Saw tooth profile	Polyvinyl chloride	SZ	white	65°A	25	app. 3,0
21	Supergrip - green	Polyvinyl chloride	SG-G	green	40°A	20	app. 3,5
22	Supergrip - white	Polyvinyl chloride	SG-W	white	50°A	25	app. 3,5
23	Supergrip - petrol	Polyvinyl chloride	SG-P	petrol	40°A	20	app. 3,5
24	Supergrip - black	Rubber	SG-S	black	70°A	25	app. 3,5
25	Porol	Rubber	PO	black	RG 165	10	2,0-15,0
26	EPDM	Rubber	EPDM	black	70°A	25	2,0-10,0
27	Rubber - white	Rubber	GU-W	white	50°A	20	2,0-10,0
28	Correx	Natural rubber	CO	beige	40°A	20	4,0-10,0
29	Linatex	Natural rubber	LIN	red	40°A	20	1,6-12,0
30	Linatrile	Polymer - NBR	LNL	orange	50°A	25	2,4-5,0
31	Elastomer - green	Rubber	ELAST	green	60°A	25	1,0/2,0
32	Rubber sponge	Rubber	SCH	orange	RG 250	10	10,0/15,0
33	Teflon	PTFE	TEF	grey	k.A.	300	0,3
34	Magnetic foil	Rubber Ferrit	MAG	brown	k.A.	100	1
35	RP400	Rubber	RP400G	yellow	38°A	20	2 - 6
36	Viton	Rubber	VIT	black	75°A	25	3 / 5

* Minimal diameter = material strength x material factor

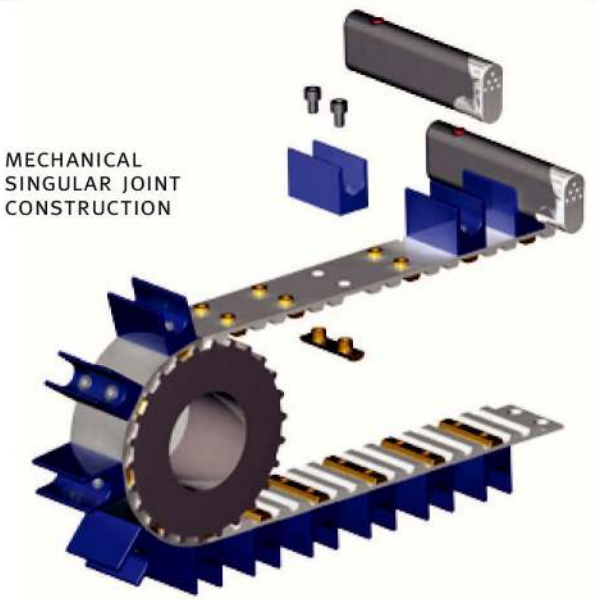
This diameter is an approximate value, please ask for our counselling.

CAMS

CONVEYING HIGH PROFILE

Our offers:

- Injection moulding cams made of PUR
- Cams made of PUR elongated material 92° Shore-A
- Cams with insert nuts and bolts
- Pluggable cams, interchangeable
- Cam connections, welded or bolted together
- Welded without weld bead



MECHANICAL
SINGULAR JOINT
CONSTRUCTION

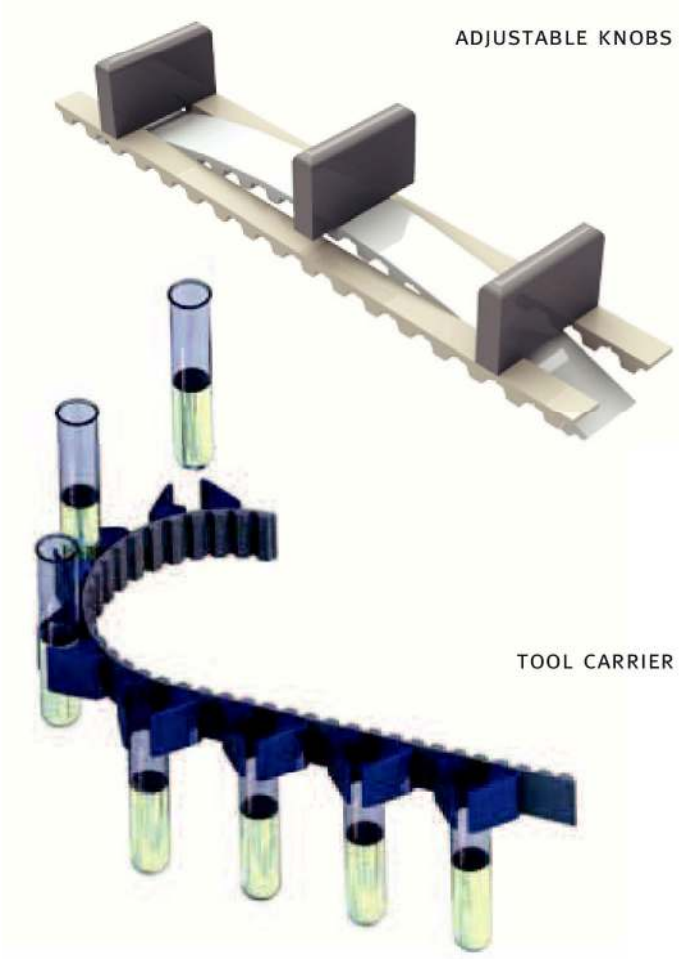
Always where there is mining, feeding or positioning toothed belts with profiling in the shape of carriers or cams prove their need. From transport to protection of precise processes in production transport cams play an outstanding role.

THEY TAKE ALONG WHAT IS IN REACH

Optimum shear strength we achieve by optimum welding technology and corresponding equipment, avoiding welding beads.

VARIOUS PRODUCTS – VARIOUS CAM SHAPES

Other than a variety of standard cams, we are able to design and produce special cams. The desired shapes we produce in our tools manufacturing department, the final production is made by our own injection moulding.



ADJUSTABLE KNOBS

TOOL CARRIER

COMPONENTS

THE PERFECT ADDITION

Our offers:

- toothed lock washer / synchronous pulleys
- self tracking pulleys
- Synchronizing shafts
- Clamping sets
- Clamping connector
- Tension rollers
- Support railings

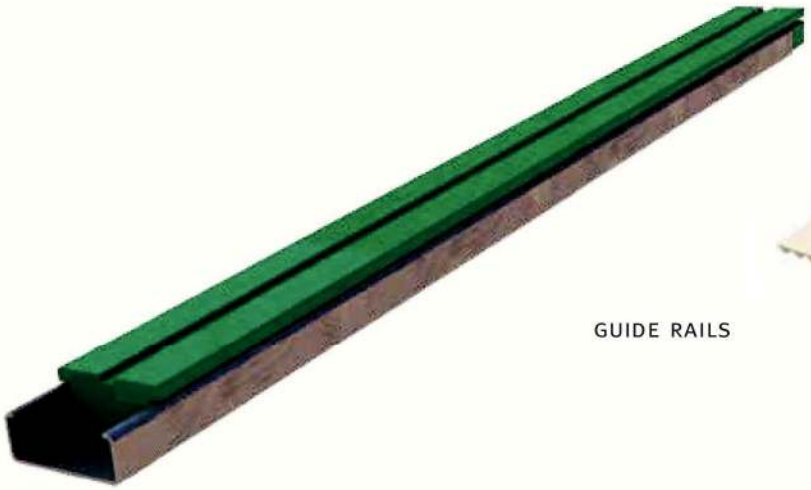
Beside the toothed belt systems we offer you an extensive program of associated components for all driving and conveyor belts.

TOOTHED PULLEYS

CLAMPING SETS

CLAMP CONNECTORS

TENSION ROLLERS



GUIDE RAILS

CLAMPING PLATES

FEC **Consulting**

FEC CONSULTING - DENMARK

Industrivænget 10 - DK3320 Skævinge
Tel. +45 48248545
Fax. +45 48261161
E-mail: Info@fecconsult.dk
www.fecconsult.dk

© www.klocke-agentur.de fotografie: www.studio3-fotodesign.de