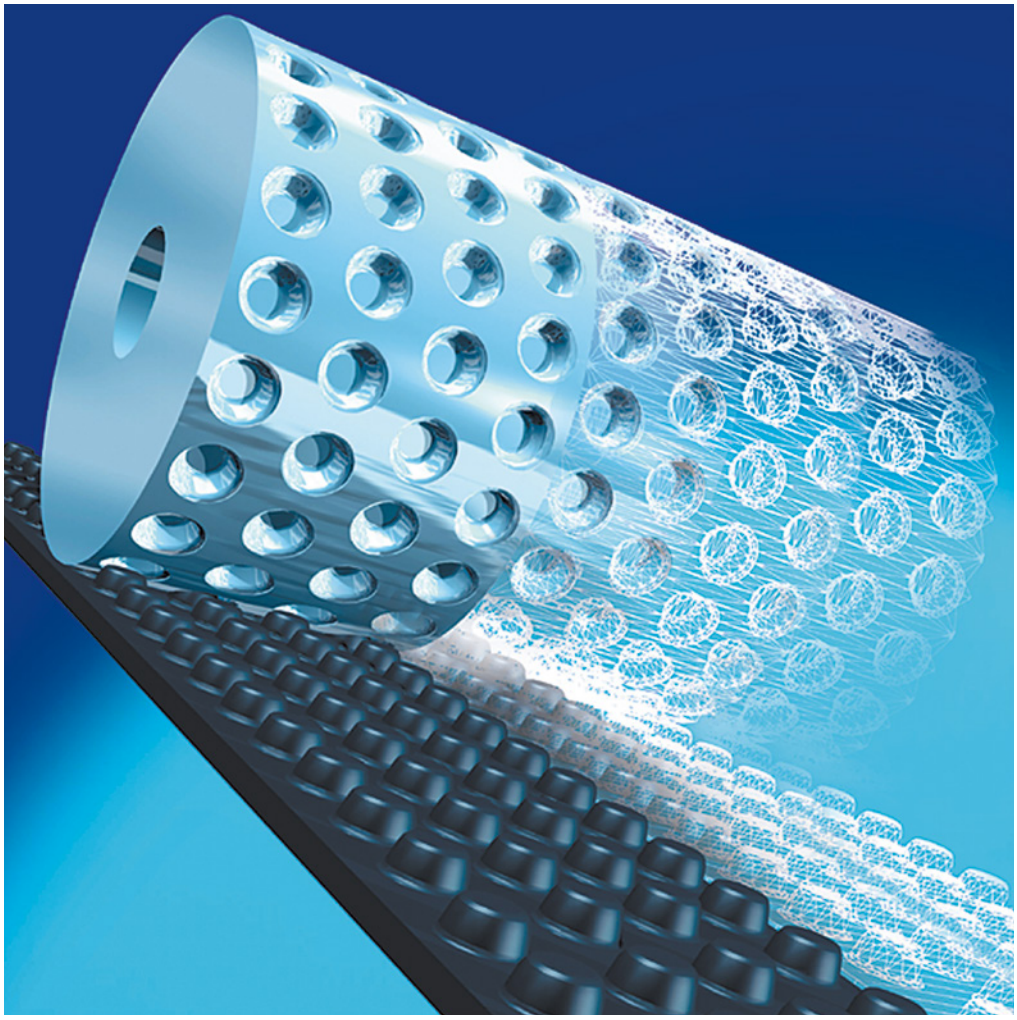
CONTI® SYNCHRODRIVE N10 Nubbed Belt



Continental

MULCO®
The timing belt specialists!

CONTI® SYNCHRODRIVE N10

Excellent high precision, synchronous transmission: Self-guiding CONTI® SYNCHRODRIVE N10 nubbed belts with steelcord tension members for innovative designs and new applications.

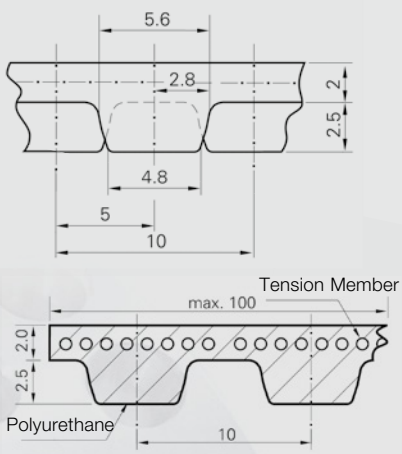
Modern power transmission technology links dynamics, precision and in-service reliability with optimum cost-effectiveness. Mulco offer a wide range of drive elements from polyurethane as well as complete drive solutions. As a development partner and original equipment manufacturer for various industries we know the requirements of the markets. Our products give a wide range of opportunities to users and designers. So, in combination with matched components, the CONTI® SYNCHRODRIVE N10 nubbed belt forms a versatile complete system that paves the way for new drive designs and entirely new applications.

Small belt width and reliable alignment – the CONTI® SYNCHRODRIVE N10 nubbed belt ideally meets both these requirements. Its surface with the nubs in a staggered pattern allows positive-engaging and self-guiding drives. Furthermore, the nubs lead to smooth meshing in both directions of belt travel, thereby ensuring high-precision and synchronous transmission, also for linear drive applications. The belts – manufactured from hard-wearing polyurethane and reinforced with steelcord tension members – guarantee excellent efficiency and constant belt tension.

For use with nubbed belts, ContiTech Antriebssysteme has developed matching components – pulleys, supporting/ guiding rails with recesses and clamping plates. So a complete system is available whose versatility enables entirely new designs and completely new applications of transport and linear drives, e.g. for positioning plotter pens.

Please request technical support from your Mulco sales partner.

Belt measurements and design

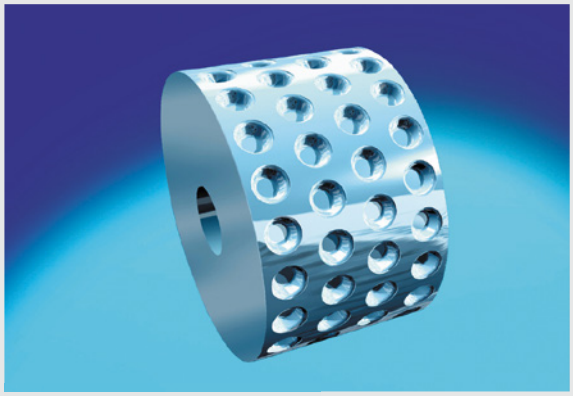


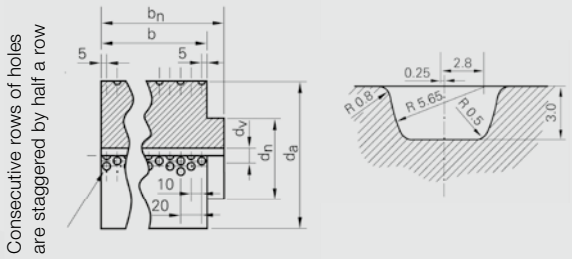
- Nub pitch length in direction of belt travel 10 mm
- Axial distance between rows of nubs 10 mm
- Max. belt width 100 mm
- Belt body made of hard-wearing polyurethane resistant to various agents

Special types:

- Coated Types to reduce friction wear, e.g. fabric coating on both sides
- Special reverse side design, e.g. to transport hot or sensitive materials
- Subsequent additions to nubbed belts, e.g. cleats or brushes
- Mechanical processing, e.g. punching of holes in belts for vacuum conveyors
- antistatic fabric on either side of the belt

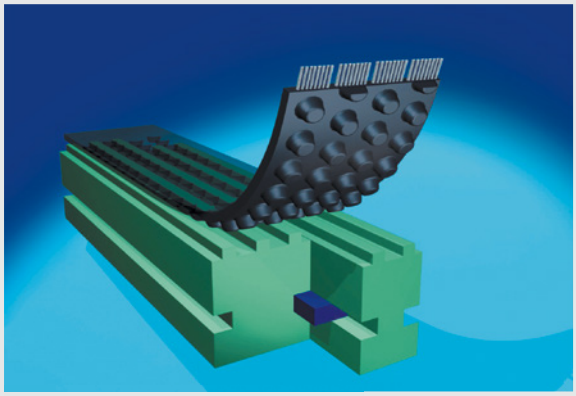
Recessed pulley N10

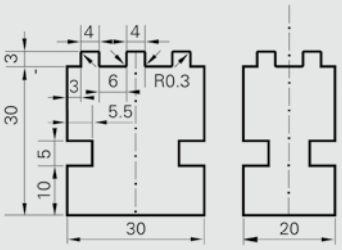




- Standard rib: perfect contact around pulley
- No side flanges on pulley: Belt width is same as pulley width
- Grooved pulleys as idler pulleys – but smooth idler pulleys are also available
- Made of steel or aluminium

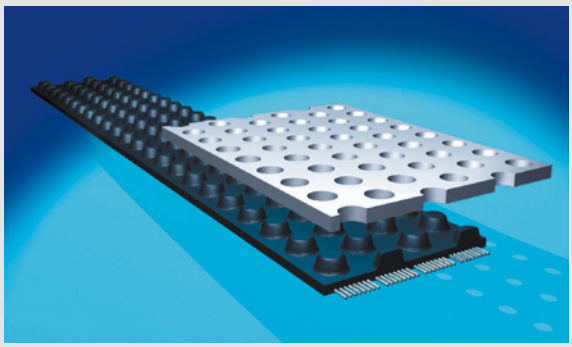
Supporting/guiding rail N10

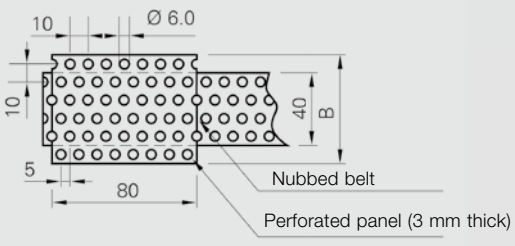




- Friction-reduced and wear-resistant NDPE rails for transport functions
- Support and guide the belt over long centre distances
- Modular design of supporting rail for width variety
- Gap between rows of nubs acts as a guide

Clamping plate N10





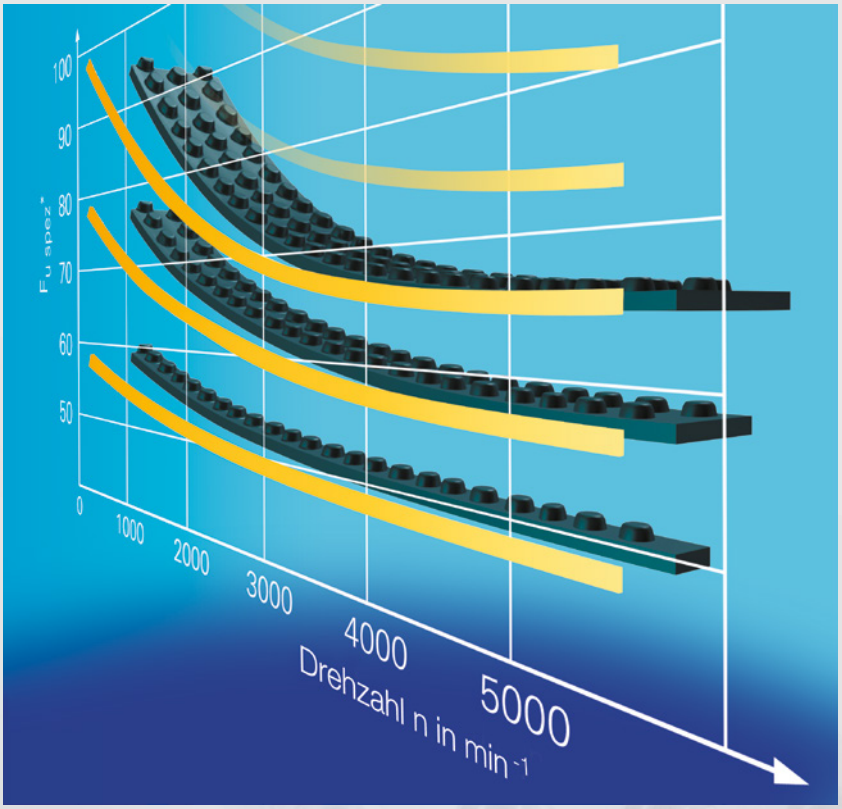
B_{min} = Belt width + 20 mm

- To fasten one or both belt ends
- Positive joint that interlocks with nubs

- Easy to fit with available tooling (a reinforcement plate may be added)
- Variable end fastening due to hole spacing of 10 mm

CONTI® SYNCHRODRIVE N10

Load on nub flank of the CONTI® SYNCHRODRIVE N10



Speed n rpm	$F_{u\ spez}$* N (1 nub · 10 mm)
0	35,5
100	33,5
500	29,0
1000	25,7
1500	23,5
2000	21,9
3000	19,4
4000	17,6
5000	16,2

*for each meshing nub in direction of belt travel (max. 12) and for each 10 mm belt width

Belt width

$$b = \frac{\text{Peripheral force}}{\text{Meshing nubs} \cdot F_{u\ spez}}$$

Allowable tension member load F_{zul} in N for CONTI® SYNCHRODRIVE N10

Belt width in mm	20	40	60	80	100
N 10 HF for linear drives	1300	2600	3900	5200	6500
N10 HF-V for transport drives*	650	1300	1950	2600	3250

* Endless joined type, belt lengths 1,000 mm or longer, shorter belts upon request

Minimum number of teeth, min. diameter

Recessed pulley	z min	16
	d_a min [mm]	49,49
Tensioning idler running on the nub side	d min [mm]	40
Tensioning idler running on the reverse side	d min [mm]	50

calculation outside diameter $d_a = \frac{z \cdot t}{\pi} - 1{,}44$

Available types

Nubbed belt N10

M – Cut to length as required (meters)

V – Endless joined type from 1000 mm length

PAN – PA fabric on the nub side, antistatic execution

PAR – PA fabric on the reverse side, antistatic execution

HF – High Flexibility

Standard length: 30 m

M15 - N10 - 40 HF	
M15	Open ended length in m
N10	Nub pitch length
40	Width 40 mm
HF	Flexible type

Nubbed pulley N10

Nubbed pulley for positive transmission of power

Grooved pulley for return and guiding

Tensioning idler for inner and outer arrangement

P24 - N10 - 40	
P24	Pulley with 24 nubs / row of nubs
N10	Nub pitch length 10 mm
40	Width 40 mm

Supporting/guiding rail N10

Modular design in various widths up to 2 m long

Recommendation: Belt width + 10 mm

FS40 - 2000	
FS40	Rail width 40 mm
2000	Length of rail

Clamping plate N10

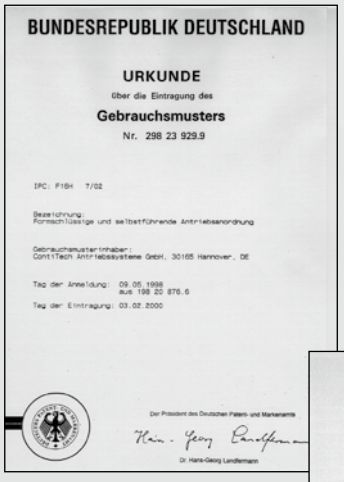
Max clamping length 80 mm

Recommendation: Belt width + 20 mm

K60 - 80	
K60	Width 60 mm
80	Length 80 mm

Benefits of the complete system:

- **self-guiding system:** no side flanges needed on pulleys
- **non-directional:** same meshing performance in both directions of belt travel
- **polygon-free:** smooth rolling around pulleys thanks to contact with flat belt area
- **noise-minimised and low-vibration:** continuous rolling, smooth meshing of nubs into recesses
- **narrow width graduation:** available in steps of 10 mm
- **homogenous distribution of forces in the belt:** no force components acting laterally thanks to symmetrical nub geometry and balanced tension member arrangement (S/Z winding)



BUNDESREPUBLIK DEUTSCHLAND

URKUNDE

über die Eintragung des

Gebrauchsmusters

Nr. 298 23 929.9

TÜV CERT

ZERTIFIKAT

Die TÜV CERT-Zertifizierungsstelle des Rheinisch-Westfälischen TÜV e.V.

bescheinigt gemäß TÜV CERT-Verfahren, daß das Unternehmen

ContiTech Antriebssysteme GmbH
Werk Dannenberg
D-29451 Dannenberg

für den Geltungsbereich

Entwicklung, Herstellung und Vertrieb von PU-Zahnriemen

ein Qualitätsmanagementsystem eingeführt hat und anwendet.

Durch ein Audit, Bericht-Nr. 20083925 wurde der Nachweis erbracht, daß die Forderungen der DIN EN ISO 9001 : 1994 erfüllt sind. Dieses Zertifikat ist gültig bis Juni 2001

Zertifikat-Registrier-Nr. 04100352

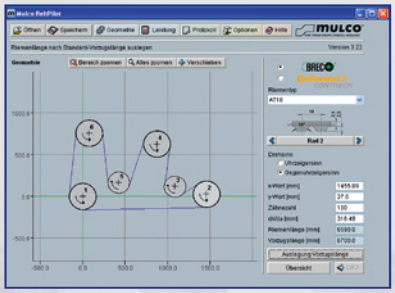
RWTÜV

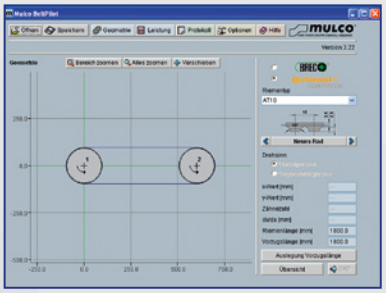
Mulco b@lt-pilot

Your direct road to perfect design solutions

Mulco belt-pilot – online support at www.mulco.net

Let others talk about being close to the customer, we as the market leading provider of polyurethane timing belts actually live by the idea. Mulco-Europe EWIV‘s secret of success has always been largely due to advising our customers before they enter the design stage. Mulco belt-pilot is taking our customer dedication a critical step further ahead. Our interactive Internet service offering enables you to calculate your personal design solutions online. Whatever field of technology you are interested in - power transmission, linear, transport or components - start Mulco belt-pilot at www.mulco.net for 24/7 access to the actual product information, CAD downloads and calculations you need.





Mulco b@lt-pilot

Many benefits.

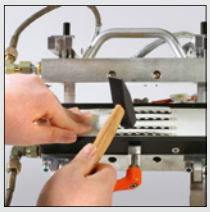
- Interactive service offering with video-based e-learning option
- Extensive product databases
- Free use of CAD downloads
- Import the CAD drawings into your CAD system
- Calculate timing belts, pulleys and components
- Email inquiries supported

Polyurethane timing belt welder

Welds what belongs together

The portable TSG 5 welder – ready for a quick change

Even top-quality products will eventually wear out. The same applies to polyurethane timing belts which, from time to time, need to be replaced. We designed the portable TSG 5 welder to assist you in replacing drive units that take a lot of mounting effort and are difficult to access due to upstream machine components. The portable TSG 5 welder is easy to operate and allows you to weld polyurethane timing belts onsite, immediately in or at the machine. The TSG 5 welding unit is available in two versions: for belt widths up to 50 mm and for belt widths up to 100 mm.



One welder, many benefits

- Suitable for all timing belt profiles
- Short machine downtimes
- Easy to operate
- Flexible through long power cords
- Air-cooled, no water supply required
- Powerful heater output

Standard package

- Welder with belt-specific, replaceable weld face
- Control unit for automatic welding and cooling down
- Control unit and welder connect by metal-reinforced cable
- Transport case with tools

Technical data TSG 5 - 50
Operating voltage: 230 V/50 Hz
Power consumption: 1.2 kW
Welder dimensions: W 240 mm x H 220 mm x D 170 mm
Welder weight: approx. 7.5 kg*
Control unit dimensions: Typ IV / PPuls W 100 mm x H 190 mm x D 45 mm
Control unit weight: approx. 1.0 kg
Carrying case weight: approx. 6.0 kg

Technical data TSG 5 - 100
Operating voltage: 230 V/50 Hz
Power consumption: 2 kW
Welder dimensions: W 240 mm x H 220 mm x D 220 mm
Welder weight: approx. 9.5 kg*
Control unit dimensions: Typ IV / PPuls W 100 mm x H 190 mm x D 45 mm
Control unit weight: approx. 1.0 kg
Carrying case weight: approx. 6.0 kg

* including connecting leads

Special accessories

- Hydraulic punch
- Weld jigs for all standard belt profiles
- Punch box
- All units available separately

List of Catalogues

All our information at a glance

Polyurethane Timing Belts

BRECO®, BRECOFLEX® timing belts
BRECO®, BRECOFLEX® – Processing of timing belts
BRECO®, BRECOFLEX® flat belts
BRECO® ATN-system
BRECO*protect*® – Timing Belts
BRECO*basic*® – Timing Belts
BRECO*move*, BRECOFLEX*move* – Timing Belts

CONTI® SYNCHROFLEX Polyurethane Timing Belts. Overall catalog
CONTI® SYNCHROCHAIN CARBON Heavy-Duty Timing Belts
CONTI® SYNCHRODRIVE Polyurethane Synchronous Drive Belts
CONTI® SYNCHRODRIVE N10 Nubbed Belt

Pulleys and Accessories

PULLEYS & COMPONENTS for polyurethane timing belt drives
Portable TSG 5 welder for polyurethane timing belts

All product information can be requested from your Mulco Partner.

New information material available for download at www.mulco.net

Notes

Notes

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WILHELM HERM. MÜLLER

Development. Service. Partnership.

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