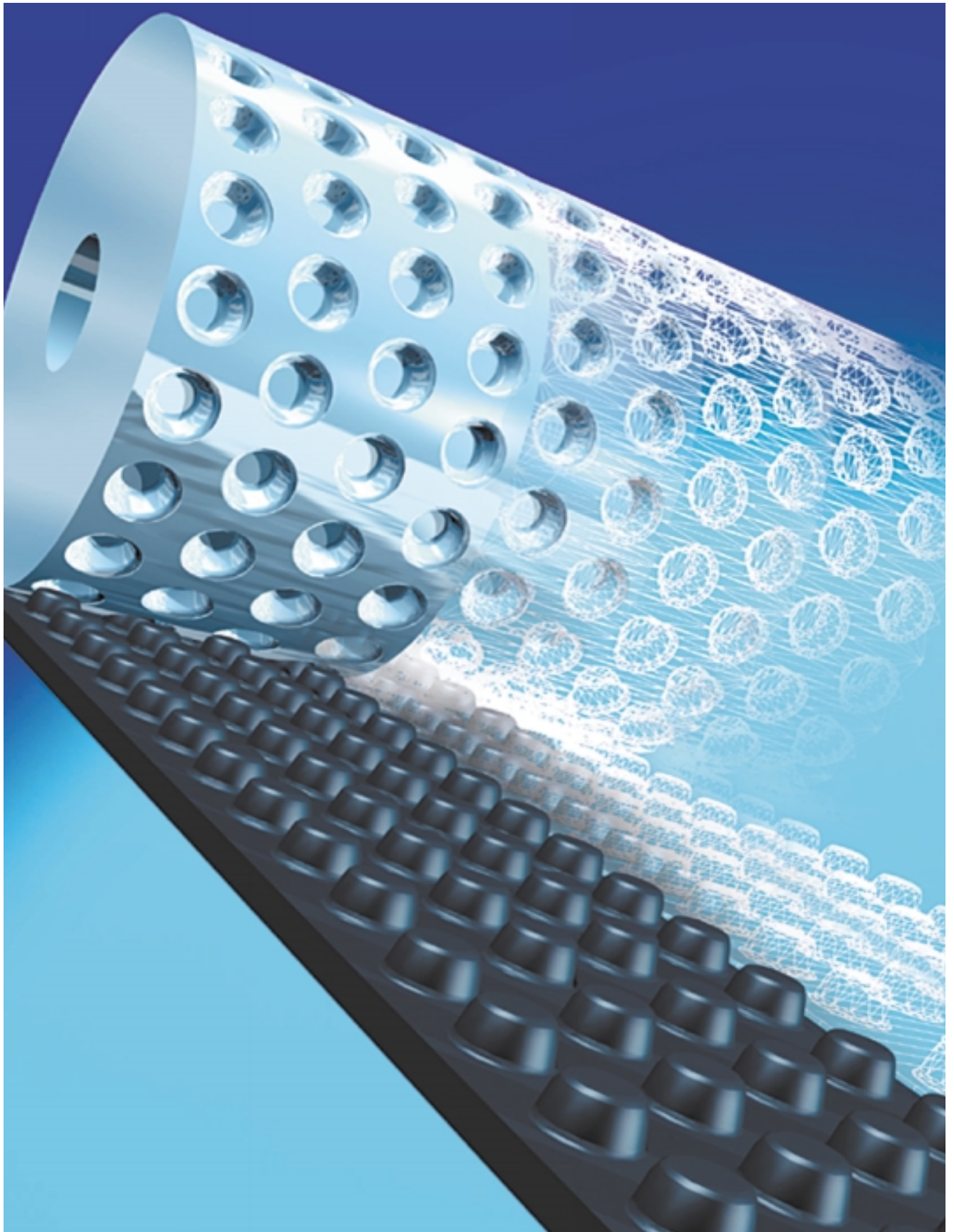


Complete System for Transport and Linear Drives with a CONTI[®] SYNCHRODRIVE N10 Nubbed Belt

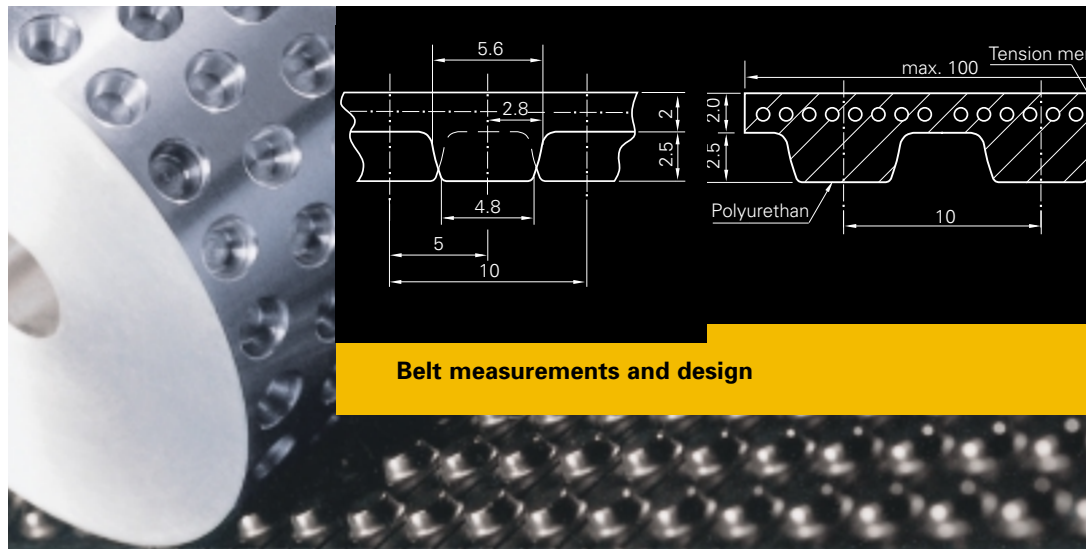


Excellent high precision, synchronous transmission: Self-guiding CONTI® SYNCHRODRIVE N10 nubbed belts with steelcord tension members for innovative designs and new applications

Modern power transmission technology links dynamics, precision and in-service reliability with optimum cost-effectiveness. We manufacture a wide range of drive elements from rubber and 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 pins.



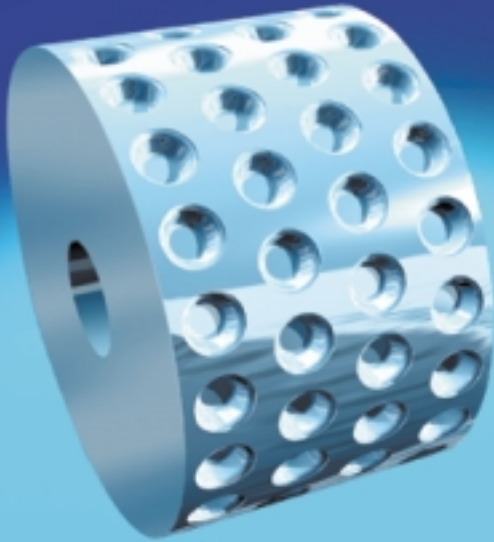
Belt measurements and design

- 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

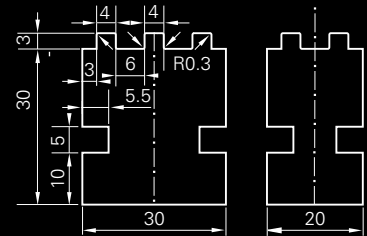
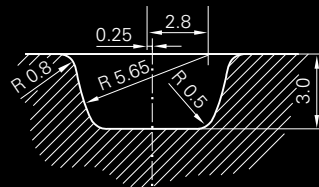
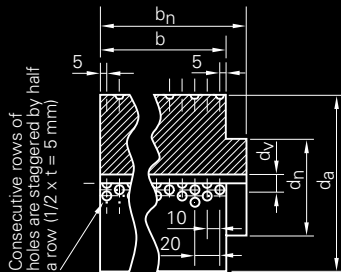
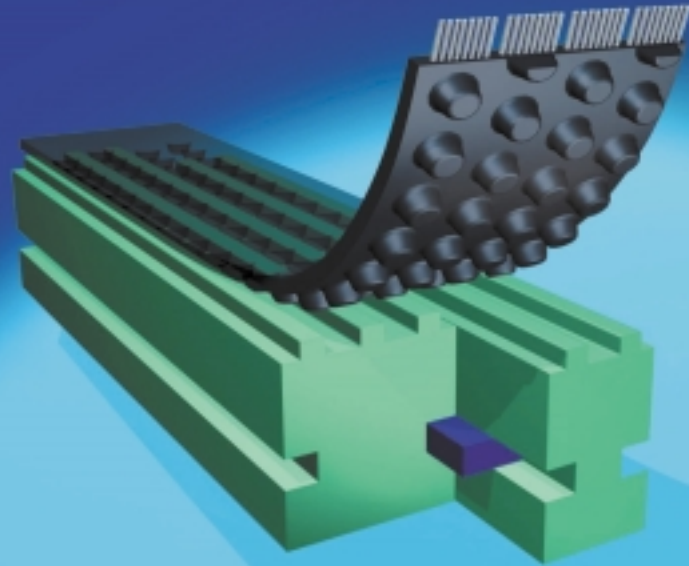
Special types:

- 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

Recessed pulley N10



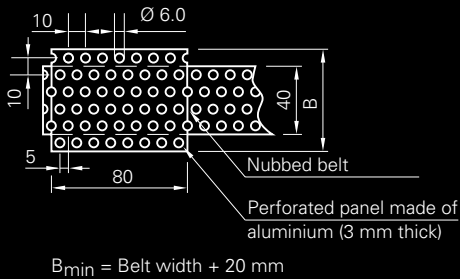
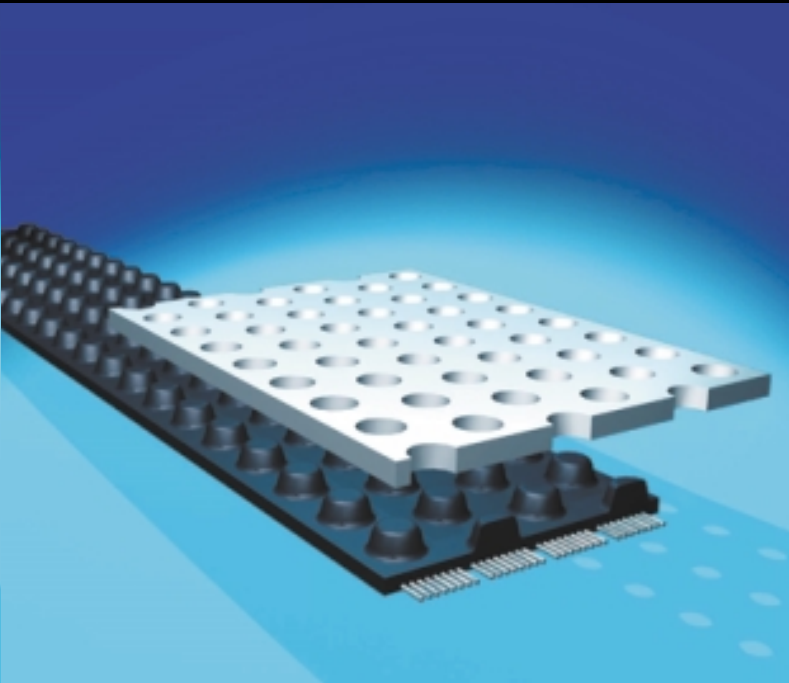
Supporting/guiding rail N10



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

- 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



- To fasten one or both belt ends
- Positive joint that abuts with the nub surface
- Easy to fit with available machine tools (a reinforcement plate may be added)
- Variable end fastening due to hole spacing of 10 mm



Available types

Nubbed belt N10

M – Cut to length as required (meters)
 V – Endless bonded type from 1000 mm length
 PAN – PA fabric on the nub side
 PAR – PA fabric on the reverse side
 HF – Flexible type
 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 deflecting 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

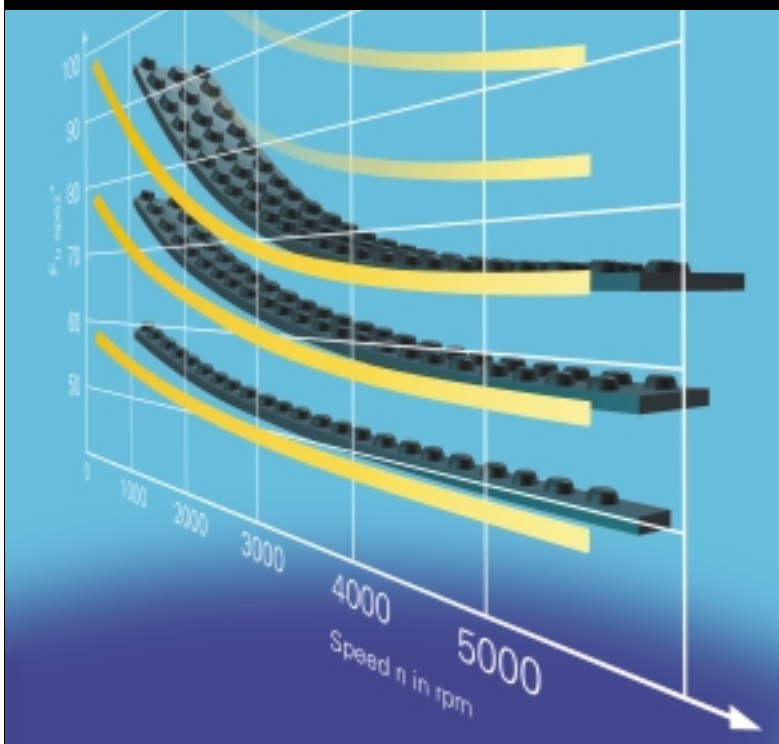
Clamping plate N10

Max clamping length 80 mm
 Recommendation: Belt width + 20 mm

K60 - 80

K60 ____ Width 60 mm
 80 ____ Length 80 mm

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 10mm belt width

Belt width

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

Allowable tension member load F_{zul} in N

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 bonded type

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_a min [mm]	40
Tensioning idler running on the reverse side	d_a min [mm]	50



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)

The ContiTech Division is a development partner and original equipment manufacturer for numerous branches of industry; with high-grade functional parts, components and systems. It is part of Continental AG with 8 business units specialising in rubber and plastics technology and utilising their common know-how.

That's what the ContiTech brand is all about.

Power transmission technology worldwide

ContiTech Antriebssysteme GmbH
D-30004 Hannover

ContiTech Power Transmission
Systems Ltd.

GB - Wigan, WN2 4WZ

ContiTech-INA GmbH & Co. KG
Belt Drive Systems
D-91072 Herzogenaurach

ContiTech Mexicana S.A. de C.V.
ContiTech Power Transmission Products
MEX-C.P. 78090 San Luis Potosi, S.L.P.

Continental do Brasil
Produtos Automotivos Ltda.
BRA-84043-450 Ponta Grossa-Pr

**Certification in ContiTech
Power Transmission Systems
Business Unit**



Umweltmanagement



DQS-zertifiziert nach
DIN EN ISO 14001
Reg. No.: 2286-03/248

ContiTech Antriebssysteme GmbH
Continentalstraße 1, D-29451 Dannenberg
Phone +49 (0) 58 61 / 806-0
Fax +49 (0) 58 61 / 806-302
E-Mail dannenberg@antriebssysteme.contitech.de

ContiTech Antriebssysteme GmbH
Postfach 445, D-30004 Hannover
Philipsbornstraße 1, D-30165 Hannover
Phone +49 (0) 511 / 9 38-71
Fax +49 (0) 511 / 9 38-52 37
E-Mail industrie.as@antriebssysteme.contitech.de
www.contitech.de/antriebssysteme

Product range

V-Belts:

CONTI FO® -Z
Heavy-Duty Cogged
Raw Edge V-Belts

CONTI ULTRAFLEX®
Narrow-Section
Wrapped V-Belt

CONTI MULTIFLEX®
Classical-Section
Wrapped V-Belt

CONTI MULTIBELT
Banded V-Belt

CONTI VARIDUR®-Z
Variable Speed Cogged
Raw Edge V-Belts

CONTI VARIFLEX®-Z
Variable Speed Cogged
Raw Edge V-Belts

CONTI AGRIDUR®
Variable Speed Cogged
Raw Edge V-Belts

CONTI® SCOOTER XT
Broad-Section V-Belt

Multiple V-Ribbed Belts:

CONTI-V MULTIRIB®
Multiple V-Ribbed Belts

Synchronous Drive Belts:

CONTI
SYNCHROFORCE® CXP/CXA
Heavy Duty
Synchronous Drive Belts

CONTI
SYNCHROBELT® HTD
High Torque
Synchronous Drive Belts

CONTI
SYNCHROBELT® STD
Super Torque
Synchronous Drive Belts

CONTI
SYNCHROBELT®
Synchronous Drive Belts

CONTI
SYNCHROBELT® and
CONTI SYNCHROFORCE®
Double-sided Timing Belt

CONTI® SYNCHRODRIVE
Open-ended Timing Belt

CONTI® SYNCHROCOLOR
Paint-resistant Timing Belt

ContiTech service worldwide

Belgium

ContiTech Belux
Industriepark
Molenberglei 24
B-2627 Schelle
TEL (03) 8 80 71 40
FAX (03) 8 80 71 41

China

ContiTech Holding GmbH
Shanghai Office
Rm. 906B Block C
Orient International Place
No. 85 Lou Shan Guan Lu
PRC-200335 Shanghai
TEL (0 21) 62 78 77 38
FAX (0 21) 62 78 77 40

France

ContiTech France SNC
3, rue Fulgence Bienvenue
CE 147
F-92631 Gennevilliers
TEL (1) 41.47.92.92
FAX (1) 47.92.08.22
Z.I. de la Silardière
F-42500 Le Chambon
Feugerolles
TEL (4) 77.10.19.40
FAX (4) 77.10.19.77

Singapore

Continental
Tyre and Rubber (S) Ltd.
298 Tiong Bahru Road
#02-01 Tower Block
Tiong Bahru Road
SGP-Singapore 168730
TEL 377 1223
FAX 377 2202

Spain

Continental Industrias
del Caucho S.A.
ContiTech
Cityparc-Ronda de Dalt
Ctra. de Hospitalet 147
E-08940 Cornellà (Barcelona)
TEL (93) 480 04 00
FAX (93) 480 04 01

Switzerland

ContiTech
Continental Suisse S.A.
Vogelsangstrasse 28
CH-8307 Effretikon
TEL (0 52) 343 70 21
FAX (0 52) 343 28 19

USA

ContiTech
North America, Inc.
136, Summit Avenue
Montvale, NJ 07645
TEL (201) 9 30-06 00
FAX (201) 9 30-00 50
Michigan Office
TEL (248) 553 5292
FAX (248) 553 6498

The contents of this publication are the result of many years of research and experience gained in application technology. All information is given in good faith; it does not represent a guarantee with respect to characteristics and does not exempt the user from testing the suitability of products and from ascertaining that the industrial property rights of third parties are not violated. No liability whatsoever will be accepted for damage – regardless of its nature and its legal basis – arising from advice given in this publication. This does not apply in the event that we or our legal representatives or management are found guilty of having acted with intent or gross negligence. No liability is borne for damage due to ordinary negligence. This exclusion of liability applies also to the personal liability of our legal representatives and employees and other persons employed in performing our obligations.
©2001 by Contitech Holding GmbH, Hannover.
All rights reserved.