

**Your partner
for food safety**

HACCP conveyor and process belts



Confectionery



HACCP conveyor and process belts for confectionery



Chiorino HACCP conveyor and process belts satisfy all demanding applications in the processing and packaging of chocolate, pastry, sweets, candies, chewing-gum, toffees, marshmallows.



Certified Food Compliance

To protect Consumer's health, CHIORINO process and conveyor belts comply with the latest european and international Food Regulations:

REGULATION EC 1935/2004 and amendments

REGULATION EC 2023/2006 and amendments

REGULATION EU 10/2011 and amendments

FDA (Food and Drug Administration)

The careful selection of raw materials, the constant adjustment by R&D Department to the legislative developments in food safety, the strict controls throughout the production process (Good Manufacturing Practices) guarantee total food compliance of CHIORINO belts.

Declarations of compliance as prescribed by law are available for every CHIORINO food belt.

Thus, the Customers are certain to use materials that fully comply with the HACCP system.



KEY FEATURES

Wide range of coefficients of friction

Superior resistance to abrasion
and to most aggressive fats and oils

No edge fray

Very high flexibility

Resistance to low temperature

BENEFITS

⇒ Perfect product positioning on the belt

⇒ Superior belt's life expectation

⇒ No contamination by fibres

⇒ Knife edge. Energy saving

⇒ Long service life

Dehesive line - Excellent release properties



The Chiorino HP® dehesive belts offer excellent **release** of any kind of **sticky** product.

The high release properties are guaranteed by both **low friction** and **high friction** HP® belts.



Muesli conveying

BENEFITS

⇒ Non marking

⇒ Easy to clean

⇒ Excellent product's transfer

⇒ Perfect product's positioning

**Excellent alternative to silicone belts.
Scrapers can be used.**



Sticky dough release

At the forefront of hygiene and food safety

The Chiorino HP® conveyor and process belts are today the leading products for the food Industry as far as **hygiene**, **performance** and **working life** are concerned. The HP® belts fully support all the **HACCP procedures** through the whole food manufacturing process.

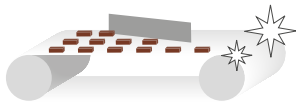


- ⇒ Total respect of the HACCP system
- ⇒ Easy to clean

- ⇒ Excellent release properties
- ⇒ Long working life

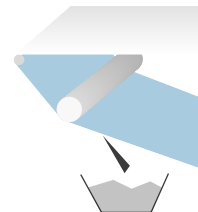
Excellent release

The Chiorino HP® dehesive line offers excellent release of any kind of sticky product, by both low friction and high friction belts. Their non marking surface keeps the belts always clean as if they were new.



Superior flexibility and mechanical resistance

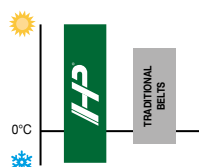
The HP® belts offer a superior flexibility and are extremely resistant to abrasion and mechanical stress caused by knife edges, backflexing and scrapers.



HP PRODUCT SYSTEM

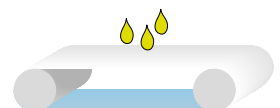
Resistance to high/low temperatures

The HP® belts offer increased resistance to high temperatures when compared to the traditional polyurethane belts and maintain their characteristics even at lowest temperatures.



Resistance to oils and additives

The HP® belts ensure an excellent resistance to aggressive additives, fats and oils, including palm and coconut oil.



Extraordinary resistance to cleaning systems

The HP® belts do not undergo deterioration due to the **Clean-in-Place** and **continuous** washing and sanitization processes with warm water, steam, foam and aggressive detergents.

BENEFITS

- ⇒ Total food safety and hygiene
- ⇒ Significant Time, Water and Energy saving



Frayless

The HP® Product System guarantees total edge fray resistance, offering perfect operation and long belt's service.

BENEFITS

- ⇒ No product contamination with fibres
- ⇒ Superior belt life expectation



PRO CHLEAN™

If required, PROCHLEAN™ sealed edges can be made either on monoplex or multiplex conveyor belts.

BENEFITS

- ⇒ Knife edge running
- ⇒ Total food safety and hygiene



Chocolate

KEY FEATURES

Wide range of coefficients of friction

Superior resistance to abrasion
and to most aggressive fats and oils

No edge fray

Very high flexibility

Resistance to low temperature

BENEFITS

⇒ Perfect product positioning on the belt

⇒ Superior belt's life expectation

⇒ No contamination by fibres

⇒ Knife edge. Energy saving

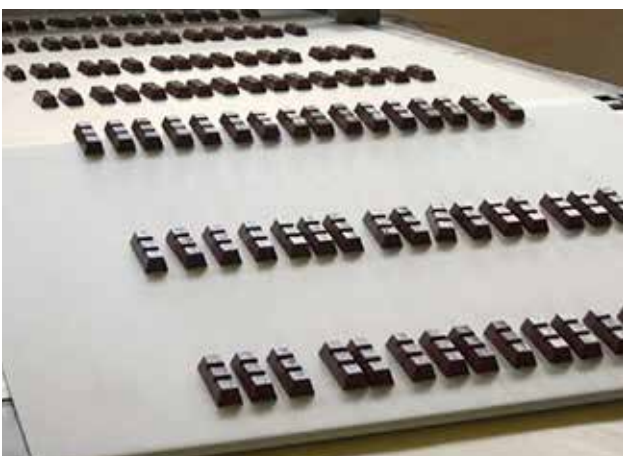
⇒ Long service life



Chocolate-covered ice creams processing



High speed conveying of white chocolate bars



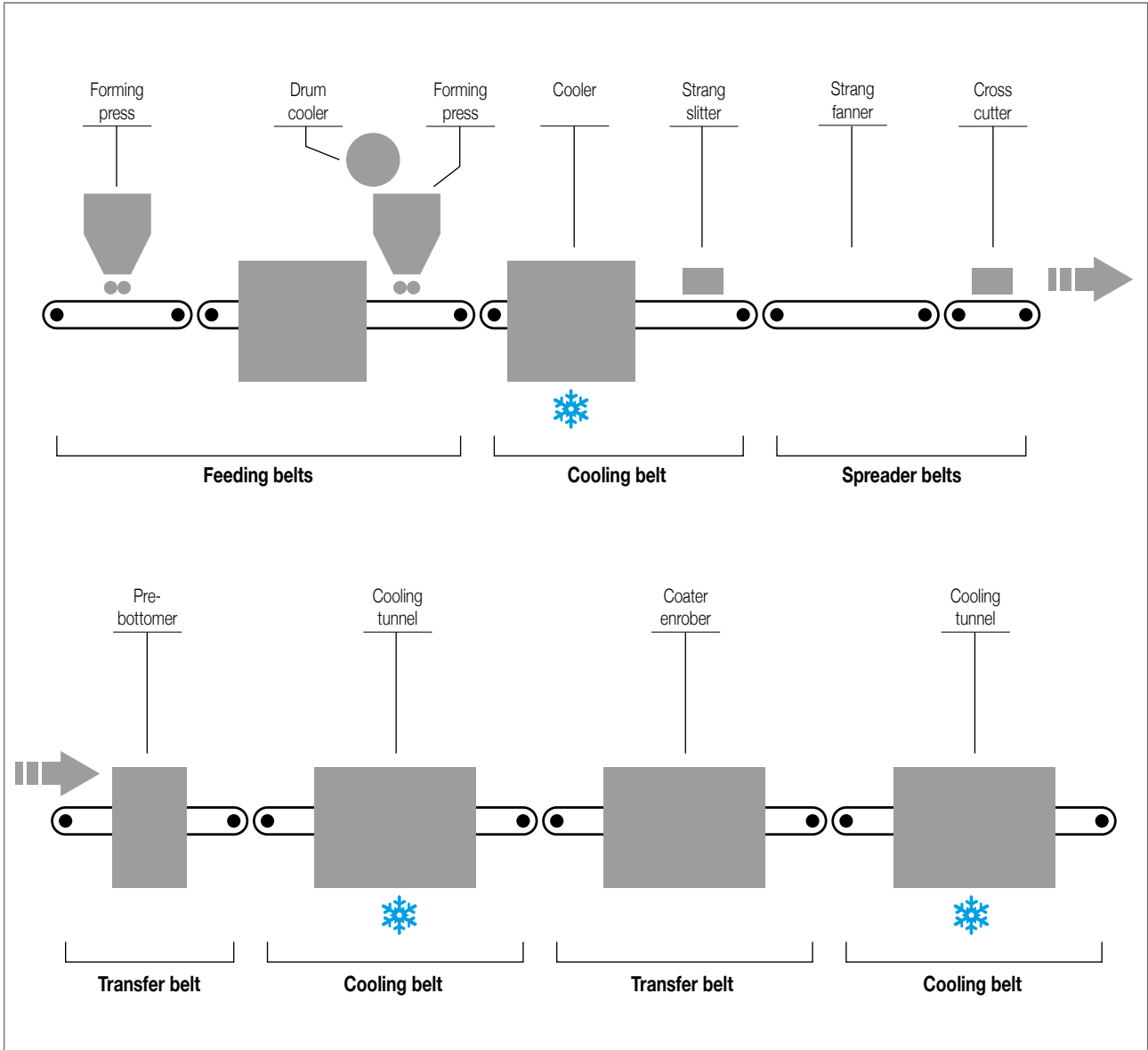
Chocolate bars running on knife edges



Chocolate sticks conveying

Industrial line for chocolate production

ILLUSTRATIVE SCHEMES



Confectionery

KEY FEATURES

Wide range of coefficients of friction

Superior resistance to abrasion and to most aggressive fats and oils

No edge fray

Very high flexibility

Resistance to low temperature

BENEFITS

⇒ Perfect product positioning on the belt

⇒ Superior belt's life expectation

⇒ No contamination by fibres

⇒ Knife edge. Energy saving

⇒ Long service life



Sticky caramel extrusion and conveying



Gum candies conveying



Cooling tunnel infeed



Candied fruit processing

Packaging

HP elastic belts

The Chiorino HP® **elastic belts** can be easily fitted on spreaders or electronic check-weighers, assuring the following benefits:

- ⇒ Total feeding precision
- ⇒ No load relaxation
- ⇒ Quick and easy to fit and replace without take-up
- ⇒ Fully HACCP compliant thanks to their extraordinary resistance to cleaning systems
- ⇒ White and blue surface and a wide range of patterns

MF flat or timing belts for vertical form-fill-sealers

CHIORINO manufactures **truly endless belts** for vertical form-fill seal machines, with different coverings according to the type of packaging used:

- ⇒ **L raspberry 35 sh.A**
- ⇒ **HS W white 40 sh.A**
- ⇒ **R purple red 45 sh.A**
- ⇒ **B beige 55 sh.A**

Also available with **special executions** such as cuntersunks, punched holes, diagonal slots, groovings.



Chocolate packaging



Cakes check-weighing



Candies vertical form-fill-sealing

Technical data

| Code | Type | Conveying surface coating | | Perm. artist. | Total thickn. | Minimum diameter ¹ | Pull for 1% elong. ² | Max. admiss. pull | Temperature resistance | | Coeff. of friction ³ | Applications ⁴ | | |
|------|------|---------------------------|--------|---------------|---------------|-------------------------------|---------------------------------|-------------------|------------------------|----|---------------------------------|---------------------------|------|---------|
| | | material | colour | | | | | | mm | mm | | N/mm | N/mm | min. °C |

Premium line

| | | | | | | | | | | | | | | |
|---------|--------------------------------|--------|---------|---|-----|----|----|----|-----|-----|----|---|---|---|
| NA-790 | EL2-U10 HP W | TPU | white | | 1.0 | 10 | 2 | 2 | -30 | 60 | MF | | | • |
| NA-785 | EL2-U10 HP blue | TPU | blue | | 1.0 | 10 | 2 | 2 | -30 | 60 | MF | | | • |
| NA-1089 | EL3-U15 HP PN blue | TPU | blue | | 1.5 | 10 | 3 | 3 | -30 | 60 | MF | | | • |
| NA-899 | EL4-U20 HP blue | TPU | blue | | 2.0 | 10 | 4 | 4 | -30 | 60 | MF | | | • |
| NA-948 | 1M5 U0-U2 HP W A | TPU | white | • | 0.7 | ↗ | 5 | 5 | -30 | 110 | MF | • | • | |
| NA-946 | 1M5 U0-U2 HP W S A | TPU | white | • | 0.7 | ↗ | 5 | 5 | -30 | 110 | HF | • | • | • |
| NA-1052 | 1M5 U0-U2 HP blue S A | TPU | blue | • | 0.7 | ↗ | 5 | 5 | -30 | 110 | HF | • | • | |
| NA-947 | 1M5 U0-U2 HP VL blue A | TPU | blue | • | 0.7 | ↗ | 5 | 5 | -30 | 110 | MF | • | | • |
| NA-983 | 1T6 U0-U2 HP W A | TPU | white | • | 0.8 | ↗ | 6 | 6 | -30 | 110 | MF | | • | |
| NA-716 | 2M5 U0-U0 HP A | TPU | white | • | 1.0 | ↗ | 6 | 12 | -30 | 110 | LF | • | • | • |
| NA-913 | 2M5 U0-U2 HP W S A | TPU | white | • | 1.3 | ↗ | 6 | 12 | -30 | 110 | HF | • | • | • |
| NA-1054 | 2M5 U0-U2 HP blue S A | TPU | blue | • | 1.3 | ↗ | 6 | 12 | -30 | 110 | HF | • | • | |
| NA-789 | 2M5 U0-U2 HP W A | TPU | white | • | 1.3 | ↗ | 6 | 12 | -30 | 110 | MF | • | | • |
| NA-1067 | 2M5 U0-U2 HP blue A | TPU | blue | • | 1.3 | ↗ | 6 | 12 | -30 | 110 | MF | • | • | |
| NA-786 | 2M5 U0-U2 HP VL blue A | TPU | blue | • | 1.3 | ↗ | 6 | 12 | -30 | 110 | MF | • | • | |
| NA-842 | 2M5 U0-U2 HP PN W A | TPU | white | • | 1.6 | ↗ | 6 | 12 | -30 | 110 | MF | • | • | • |
| NA-811 | 2M5 U0-U2 HP PN blue A | TPU | blue | • | 1.6 | ↗ | 6 | 12 | -30 | 110 | MF | • | • | • |
| NA-851 | 2M5 U2-U2 HP VL blue A | TPU | blue | • | 1.5 | 10 | 6 | 12 | -30 | 110 | MF | | • | |
| NA-1041 | 2MT6 U0-0 HP | cotton | natural | | 1.5 | ↗ | 6 | 12 | -30 | 100 | LF | | • | |
| NA-992 | 2T12 U0-U2 HP VL W A | TPU | white | • | 1.6 | ↗ | 12 | 24 | -30 | 110 | MF | • | • | |
| NA-1208 | 2T12 U3-U3 HP VL blue A | TPU | blue | • | 1.9 | 40 | 12 | 24 | -30 | 110 | MF | | • | |

Dehesive

| | | | | | | | | | | | | | | |
|---------|------------------------------|-----|-------|---|-----|---|---|----|-----|-----|----|---|---|---|
| NA-1235 | 1M5 U0-U2 HP D LF W A | TPU | white | • | 0.9 | ↗ | 5 | 5 | -20 | 100 | LF | • | • | • |
| NA-1234 | 2M5 U0-U2 HP D LF W A | TPU | white | • | 1.3 | ↗ | 6 | 12 | -20 | 100 | LF | • | • | • |
| NA-949 | 1M5 U0-U2 HP D W A | TPU | white | • | 0.7 | ↗ | 5 | 5 | -20 | 100 | HF | • | • | • |
| NA-1160 | 2M5 U0-U2 HP D W A | TPU | white | • | 1.3 | ↗ | 6 | 12 | -20 | 100 | HF | • | • | • |

Performance line Polyurethane

| | | | | | | | | | | | | | | |
|---------|----------------------------|-----|------------|---|-----|----|---|----|-----|-----|----|---|---|---|
| NA-945 | 1M5 U0-U2 W A | TPU | white | • | 0.7 | ↗ | 5 | 5 | -20 | 100 | LF | • | • | • |
| NA-738 | 1M5 U0-U2 W A LF VL | TPU | white | • | 0.7 | ↗ | 5 | 5 | -20 | 100 | LF | • | • | • |
| NA-965 | 1M5 U0-U2 PN yellow | TPU | yellow | | 1.1 | ↗ | 5 | 5 | -20 | 100 | HF | | • | |
| NA-549 | 2M5 U0-U1 W S A | TPU | white | • | 1.3 | ↗ | 6 | 12 | -20 | 100 | HF | • | • | • |
| NA-1069 | 2M5 U0-U1 blue S A | TPU | blue | • | 1.3 | ↗ | 6 | 12 | -20 | 100 | HF | • | • | • |
| NA-170 | 2M5 U0-U2 W A | TPU | white | • | 1.3 | ↗ | 6 | 12 | -20 | 100 | MF | • | • | • |
| NA-1264 | 2M5 U0-U2 W A SP | TPU | white | • | 1.3 | ↗ | 6 | 12 | -20 | 100 | MF | • | • | • |
| NA-696 | 2M5 U0-U2 LF W A | TPU | white | • | 1.3 | ↗ | 6 | 12 | -20 | 100 | LF | • | • | • |
| NA-1231 | 2M5 U0-U2 LB A | TPU | light blue | • | 1.3 | ↗ | 6 | 12 | -20 | 100 | MF | • | • | • |
| NA-281 | 2T5 0-V-0 | PET | white | • | 1.6 | 20 | 5 | 10 | -10 | 60 | LF | | • | |
| NA-91 | 2M8 U0-V-U0 | TPU | natural | • | 1.5 | 30 | 8 | 16 | -10 | 60 | LF | | • | • |
| NA-16 | 2T8 U0-V-0 | PET | natural | | 1.4 | 30 | 8 | 16 | -10 | 60 | LF | | • | |

Silicone

| | | | | | | | | | | | | | | |
|---------|-------------------------|----------|---------|---|-----|----|---|----|-----|-----|----|--|---|---|
| NA-1102 | 2M5 U0-U-S2 W | silicone | white | • | 1.3 | ↗ | 6 | 12 | -30 | 100 | HF | | • | |
| NA-1288 | 2M5 U0-U-S2 blue | silicone | blue | • | 1.3 | ↗ | 6 | 12 | -30 | 100 | HF | | • | |
| NA-130 | 2MT8 S0-S2 | silicone | transp. | • | 1.3 | 30 | 8 | 16 | -40 | 160 | HF | | • | • |

¹ Minimum roller diameter is dependent on the joint recommended by Chiorino.

↗ = knife edge

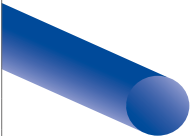
² EL series: pull for 8% elongation.

³ Conveying surface coefficient of friction: **LF** low, **MF** medium, **HF** high

⁴ This chart provides guidance to the belt selection based on Chiorino's field experience, but it is not binding.

The technical data are valid under normal environmental conditions and are subject to change without notice.

HP round belts

| | Code | Type | Material | Surface | Diameter | Pull for 8% elongation | Minimum pulley's diameter |
|---|--------|-----------------------|----------|---------|----------|------------------------|---------------------------|
| | | | | mm | mm | N | mm |
|  | ES-603 | RU-3 HP blue | TPU | smooth | 3 | 15 | 20 |
| | ES-604 | RU-4 HP blue | TPU | smooth | 4 | 26 | 35 |
| | ES-605 | RU-5 HP blue | TPU | smooth | 5 | 42 | 45 |
| | ES-606 | RU-6 HP blue | TPU | smooth | 6 | 60 | 50 |
| | ES-607 | RU-8 HP blue | TPU | smooth | 8 | 110 | 70 |
| | ES-630 | RU-10 HP blue | TPU | smooth | 10 | 170 | 80 |
| | ES-719 | RU-4 R HP blue | TPU | rough | 4 | 26 | 35 |
| | ES-720 | RU-6 R HP blue | TPU | rough | 6 | 60 | 50 |

MF seamless belts

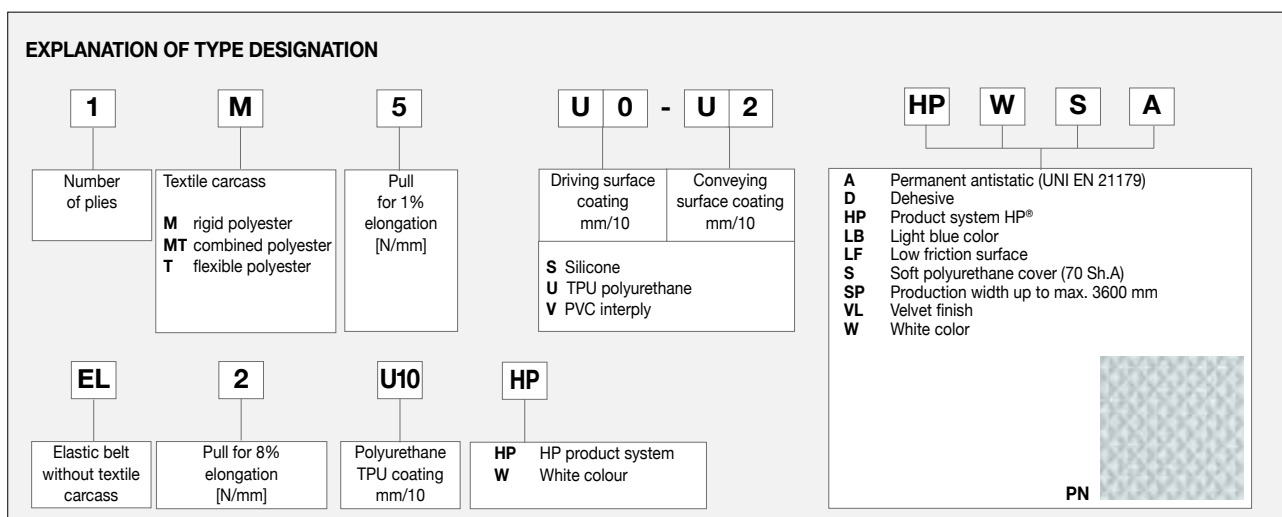
| Type | Traction core | Outer cover | | | Inner cover | | | Total thickness | Pull for 1% elongation | Temperature resistance | |
|--------------------|---------------|-------------|------------|------|-------------|------------|------|-----------------|------------------------|------------------------|------|
| | | material | colour | Sh.A | material | colour | Sh.A | | | mm | N/mm |
| MF R-052 | --- | elastomer | purple red | 45 | elastomer | purple red | 45 | 5±15 | 0.1 ⁵ | -20 | +100 |
| MF R-053 | --- | elastomer | purple red | 45 | elastomer | black | 65 | 5±15 | 0.1 ⁵ | -20 | +100 |
| MF L-300 | PET | elastomer | raspberry | 35 | --- | black | --- | 6±12 | 10.0 | -20 | +100 |
| MF HS W-300 | PET | elastomer | white | 40 | --- | black | --- | 6±12 | 10.0 | -20 | +100 |
| MF R-300 | PET | elastomer | purple red | 45 | --- | black | --- | 6±12 | 10.0 | -20 | +100 |
| MF B-300 | PET | elastomer | beige | 55 | --- | black | --- | 6±12 | 10.0 | -20 | +100 |

MF timing belts

| Type | Traction core | Outer cover | | | Inner cover | | | Max. pull for 1% elongation | Temperature resistance | |
|--------------------|---------------|-------------|------------|------|--------------------------|-----------------------------|------|-----------------------------|------------------------|---------|
| | | material | colour | Sh.A | material | colour | Sh.A | | N/mm | min. °C |
| MF D-G L | PET | elastomer | raspberry | 35 | rubber timing belt | black | 90 | 0,4 | -20 | +100 |
| MF D-G HS W | PET | elastomer | white | 40 | " | " | 90 | 0,4 | -20 | +100 |
| MF D-G R | PET | elastomer | purple red | 45 | " | " | 90 | 0,4 | -20 | +100 |
| MF D-G B | PET | elastomer | beige | 50 | " | " | 90 | 0,4 | -20 | +100 |
| MF D-U L | PET | elastomer | raspberry | 35 | polyurethane timing belt | white/transparent or yellow | 90 | 0,4 | -20 | +100 |
| MF D-U HS W | PET | elastomer | white | 40 | " | " | 90 | 0,4 | -20 | +100 |
| MF D-U R | PET | elastomer | purple red | 45 | " | " | 90 | 0,4 | -20 | +100 |
| MF D-U B | PET | elastomer | beige | 50 | " | " | 90 | 0,4 | -20 | +100 |

⁵ Strength in N/mm² at 10% elongation

The technical data are valid under normal environmental conditions and are subject to change without notice.



CHIORINO AFFILIATED COMPANIES

Australia

CHIORINO AUSTRALIA PTY. LTD. - Brisbane
Tel. +61-7-3274 1900
sales@chiorino.com.au
www.chiorino.com.au

Benelux

CHIORINO BENELUX B.V. - Utrecht,
The Netherlands
Tel. +31-30-2413060
chiorino@chiorino.nl
www.chiorino.nl

Byelorussia

CHIORINO-K - Minsk
Tel. +375-17-2804578
general@chiorino.ru
www.chiorino.ru

China

CHIORINO ASIA Ltd.
Hong Kong
Tel. +852-397-10818
info@chiorino.asia
www.chiorino.asia

CHIORINO LIAISON OFFICE, Shanghai

Tel. +86-21-37831019
info@chiorino.cn
www.chiorino.cn

France

CHIORINO SAS - Lagny, Paris
Tel. +33-1-64304075
chiorino.paris@chiorino.fr
www.chiorino.fr

Germany

CHIORINO GmbH - Mainz
Tel. +49-(0)6131-55449-0
info@chiorino.de
www.chiorino.de

Hungary

CHIORINO Kft. - Szigetszentmiklós,
Budapest
Tel. +36-24-525930
mail@chiorino.hu
www.chiorino.hu

India

CHIORINO INDIA - Salcete Goa
Tel. +918-322-782454
info@chiorino.in
www.chiorino.in

Italy

CHIORINO PARMA s.r.l. - Parma
Tel. +39-0521-292236
chiorinoparma@chiorino.com

CHIORINO VENETO s.r.l. - Colle Umberto

Tel. +39-0438-430460
chiorinoveneto@chiorino.com

Poland

CHIORINO Sp. z o.o. - Bydgoszcz
Tel. +48-52-3487708
chiorino@chiorino.com.pl
www.chiorino.com.pl

Portugal

CHIORINO PORTUGAL, LDA
Alfena Valongo, Porto
Tel. +35-122-9684442
geral@chiorino.pt

Romania

CHIORINO srl - Cluj Napoca
Tel. +40-264-432977
chiorino@chiorino.ro
www.chiorino.ro

South Africa

CHIORINO SOUTH AFRICA (PTY) LTD.
Johannesburg
Tel. +27-11-3971268
sales@chiorino.co.za
www.chiorino.com

Spain

CHIORINO IBERICA S.A. - Rubí, Barcelona
Tel. +34-93-5860480
chiorino@chiorino.es
www.chiorino.es

Switzerland

CHIORINO SCHWEIZ GmbH - Wetzikon
Tel. +41-(0)43-3116001
info@chiorino.ch
www.chiorino.ch

United Kingdom

CHIORINO U.K. Ltd. - Featherstone
Tel. +44-1977-691880
sales@chiorino.co.uk
www.chiorino.co.uk

U.S.A.

CHIORINO INC. - Newark, DE
Tel. +1-302-292-1906
info@chiorino.us
www.chiorino.us

CHIORINO DISTRIBUTORS

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Turkmenistan
Ukraine
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HEADQUARTERS AND PRODUCTION PLANTS

CHIORINO S.p.A.

Via S. Agata, 9
I-13900 Biella, Italy
Tel. +39 015 8489 1
Fax +39 015 849 61 61
chiorino@chiorino.com
www.chiorino.com

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EMAS



ENGINEERING ADVICE
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AFTER SALES SUPPORT

