

Conveyor and folder belts for paper and printing

Chiorino products cover all applications in the paper and printing industry:

- Printing, graphic and publishing industry (magazines, newspaper, books, catalogues)
- Paper converting machines: cutters, tube winders, tissue
- Folder-gluer machines for plain and corrugated cartons
- Production lines for corrugated boxes and cartons.

Food compliance

The **DU**[™] polyurethane and the **DG HS** Food Grade belts are ideal for aseptic packagings for food and pharmaceutical use.

They 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)



Fast **Joint**

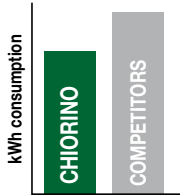
With the Chiorino **FAST JOINT KIT** the **PT**[®] machine tapes can be made endless on site in a few minutes, reducing the maintenance time.



PT[®] thermoplastic belts with CHIO-TPE[™] intermediate layer

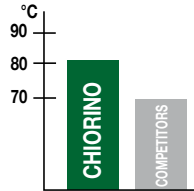
Reduced energy consumption

Chiorino PT[®] machine tapes consume less energy compared with competitor thermoplastic belts, thanks to the highly flexible CHIO-TPE[™] intermediate layer.



High temperature resistance

Chiorino PT[®] machine tapes provide a higher temperature resistance compared with competitor thermoplastic belts, thanks to the unique CHIO-TPE[™] intermediate layer.



Reliable FASTJOINT

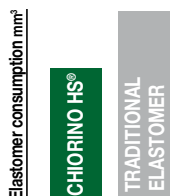
The FAST JOINT technology in combination with the new CHIO-TPE[™] intermediate layer, enables easy on-site joining, high reliability and long service life.



Conveyor and folder belts with HS[®] elastomer cover

High abrasion resistance

The unique HS[®] friction covers provide an excellent abrasion resistance and a uniform coefficient of friction over time.



Excellent resilience

The unique HS[®] elastomer offers outstanding resilience, high elasticity and crack resistance.



Long service life

Chiorino belts provide a long service life, thanks to the low aging property of the HS[®] covers.



MF[™] Seamless elastomer belts

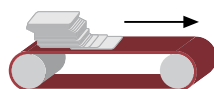
Seamless

Total surface uniformity due to the endless MF[®] technology (no joint). They track perfectly and can run in both directions.



High production precision

The special MF[®] elastomer offers high production precision thanks to the consistently high coefficient of friction during their whole working life.



Long service life

The MF[®] elastomer offers excellent resistance to abrasion, oils, inks and chemicals.

The MF[®] seamless belts do not mark the paper.



Paper converting



CHIORINO offers a range of specialized products for paper converting:

> CUTTERS

- Thermoplastic polyurethane Fast Joint belts.
- Low friction traditional belts with polyamide traction core providing high capability of accumulation.

> TUBE WINDERS

- **DG-E HS Fast Joint** series: belts with polyester traction core and thermoplastic elastomer covering.
- **DG HS** series: belts with polyamide traction core and very high resistance to abrasion.

> TISSUE

Low friction polyurethane and PVC belts with non marking surface for tissue production (handkerchief, napkins, toilet paper etc.)

Benefits

- **Superb resistance to abrasion**
- **Excellent traction and highest feed precision with any type of paper**
- **High flexibility**
- **They do not mark the paper**
- **Permanent antistatic**
- **Punched holes on demand**
- **Long service life**

Printing industry

CHIORINO manufactures a wide range of machine tapes designed to provide excellent performances for any application in the graphic, publishing and printing industry:

- > **NEWSPAPERS AND MAGAZINES PRINTING AND PAGE FOLDING**
- > **INSERTION CASSETTES WINDING/UNWINDING**
- > **CATALOGUES OFFSET PRINTING**
- > **BOOKBINDING**

With the **FAST JOINT** presses the CHIORINO thermoplastic machine belts can be made endless on site in a few minutes without use of adhesives, reducing the machine downtime.



Benefits

- **Excellent traction and highest feed precision with any type of paper**
- **Highest resistance to chemicals and inks**
- **Superb resistance to abrasion**
- **High flexibility**
- **They do not mark the paper**
- **Smooth surface**
- **Long service life**

Box folding industry



Chiorino studies and manufactures customized belts to satisfy the increasing demand of high speeds in the folder glueing industry for any type of carton, plain or synthetic materials with any type of finish (special inks, varnishing etc.) and corrugated cartons.

FEEDING (pos. 1)

Seamless belts with special **MF**[®] elastomer cover that keeps their high friction capabilities during their whole working life. The drive surface elastomer cover of the **MF-351 G** guarantees a consistent drive to provide efficient feeding even on the fastest machines. These feeder belts are latex-free, therefore they can be used for producing light weight cartons for the food and pharmaceutical industry.

These belts are available with three different versions of the **MF**[®] cover to be selected according to the type of material to be processed:

- **HS W white** (40 Sh.A)
- **L raspberry** (35 Sh.A)
- **R purple red** (45 Sh.A)



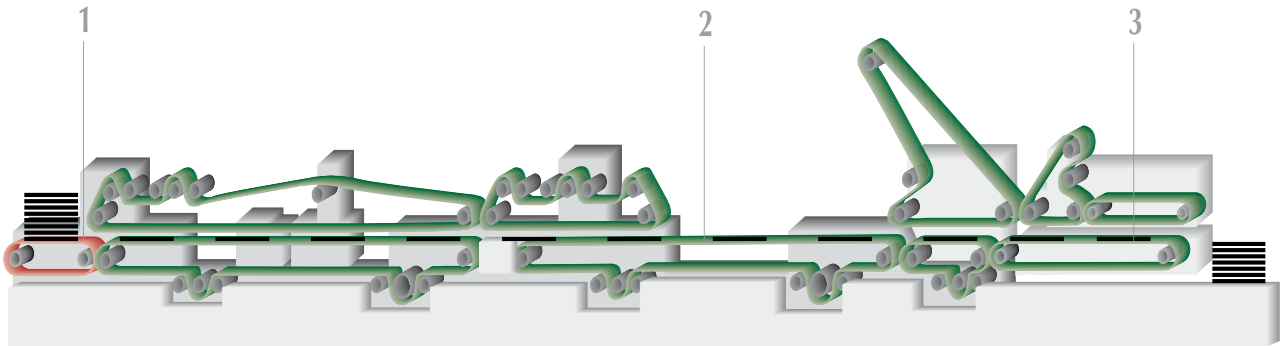
FOLDING-GLUEING (pos. 2)

- **DG-E HS "Fast Joint"** series: thermoplastic folder belts with traction core in polyester and **HS**[®] elastomer covering that can be fitted on site using the FAST JOINT system and equipment, which require only few minutes and no adhesives.
- **DG HS** series: folder belts with traction core in polyamide and the special **HS**[®] elastomer covering which, thanks to its resilience, prevents cuts and surface crackings.



COMPRESSION (pos. 3)

Compression belts in PVC or elastomer, antistatic.



Benefits

- Superb resistance to abrasion
- Excellent resistance to any type of ink
- Highest resistance to chemicals
- Excellent traction properties
- They do not mark the paper
- High flexibility
- Punched holes on demand
- Long service life



Food compliance

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Corrugated carton boxes



CHIORINO offers a complete range of belts for the whole production cycle of carton boxes, from the corrugator to the stacker.

LOADING (pos. 1) **CONVEYING TO PUNCHER AND SLOTTER** (pos. 3)

Belts with PVC or elastomer covering with high coefficient of friction and superior abrasion resistance.



FEEDERS TO PRINTER (pos. 2) **FLEXO-FOLDERS** (pos. 5)

Belts with polyamide traction core with self-regenerating elastomer cover that guarantee very high friction and abrasion resistance.

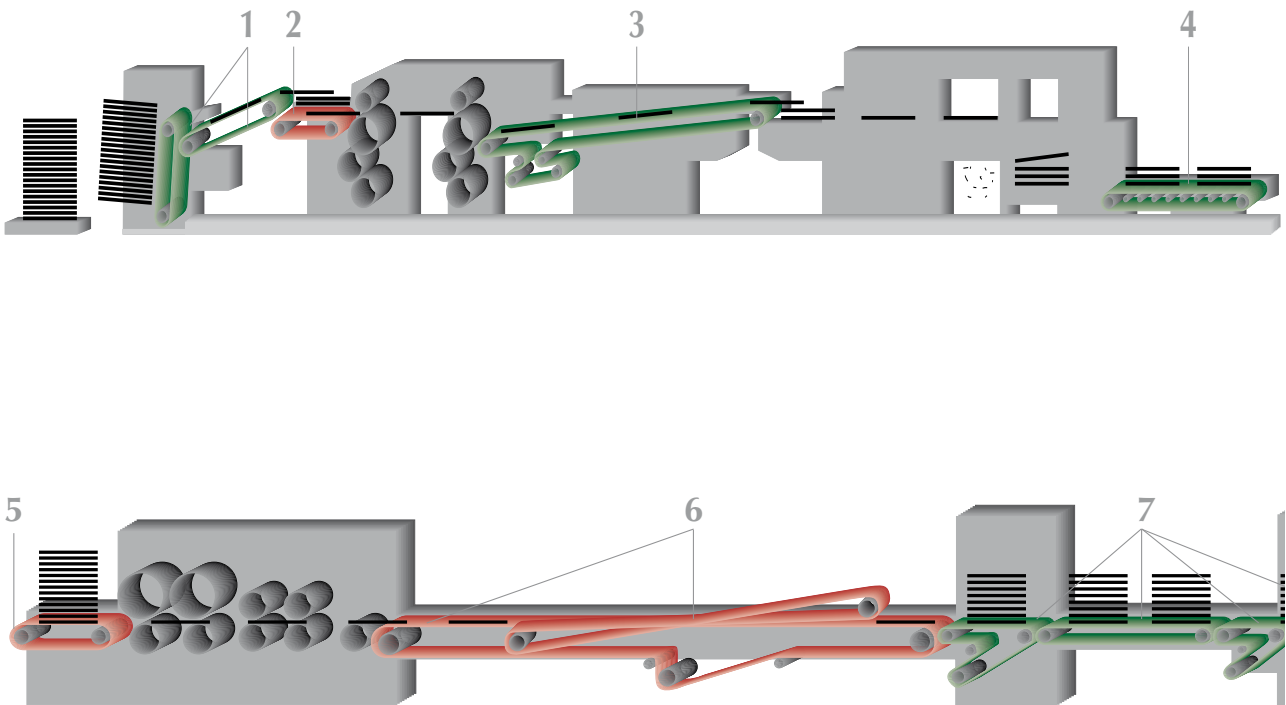
FLEXO-FOLDERS BELTS (pos. 6)

- Belts with elastomer or PVC covering with high resistance to abrasion, excellent traction capability and high flexibility.
- Belts with **MF**[®] self-regenerating elastomer covering that offer a very high coefficient of friction.



STACKERS (pos. 4, 7)

- **DG HS** belts with high resistance to abrasion and excellent traction capability.
- **DG MF** belts where very high friction is required and for an absolute precision feed of corrugated carton boxes.



Benefits

- Superb resistance to abrasion
- Excellent resistance to any type of ink
- Excellent traction properties
- Permanent antistatic
- High flexibility
- Highest resistance to chemicals
- Punched holes on demand
- Long service life

Production program

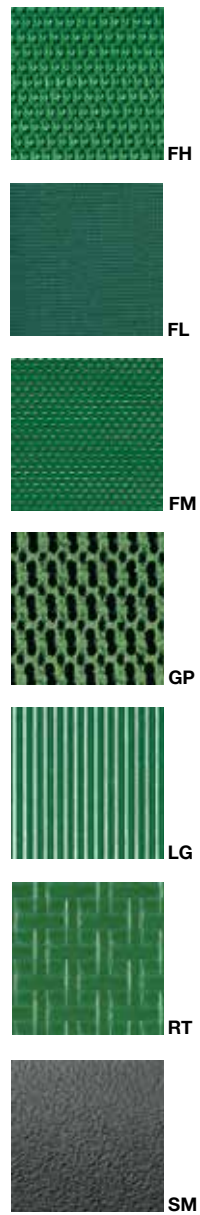
	Code	Type	Traction core (1)	Top cover	Bottom cover	Permanent antistatic (UNI EN ISO 21179)	Total thickness	Weight	Min. diameter (2)	Pull for 1% elongation	Min. temperature resistance	Max. temperature resistance	Comparative coef. of friction (3)	
							mm	kg/m ²	mm	N/mm	[°C]	[°C]		
Fast Joint	CG187	PT0.9 0-0	PET-PA	-	●	●	0.90	0.90	10	5	-20	+100	LF	
	CG197	PT0.9 0-0 N	PET-PA	-	●	●	0.90	0.90	10	5	-20	+100	LF	
	NA1034	PT1.0 0-U4	PET	TPU	●	●	1.00	1.00	10	5	-20	+100	HF	
	NA1111	PT1.0 U1-U3	PET	TPU	●	●	1.00	1.10	10	5	-20	+100	HF	
	NA1029	PT1.2 U2-U5	PET	TPU	●	●	1.20	1.30	20	5	-20	+100	HF	
	NA1110	PT1.2 0-U2	PET	TPU	●	○	1.20	1.30	20	6	-20	+100	HF	
	NA1176	PT1.4 G3-G3	PET	synthetic elastomer	●	●	1.40	1.60	15	6	-20	+100	HF	
	NA1120	PT1.5 0-G3 FL	PET	synthetic elastomer	●	●	1.50	1.80	25	6	-20	+100	MF	
	NA1151	PT1.8 0-0	PA	-	●	●	1.80	1.80	20	9	-20	+100	LF	
	NA1024	PT1.8 G1-0	PA	-	○	●	1.80	1.80	20	9	-20	+100	LF	
	NA1177	PT1.4 EL G3-G3 FL	TPU	synthetic elastomer	●	●	1.40	1.50	15	2.5 ⁽⁴⁾	-10	+60	HF	
	NA1176	PT1.4 EL G3-G3 SK	TPU	synthetic elastomer	●	●	1.40	1.50	15	2.5 ⁽⁴⁾	-10	+60	HF	
	NA96	EL2-U10 FL	-	TPU	●	●	1.00	1.20	10	2 ⁽⁴⁾	-20	+60	MF	
	NA97	EL3-U15 FL	-	TPU	●	●	1.50	1.60	10	3 ⁽⁴⁾	-20	+60	MF	
	NA405	EL4-U20 FH	-	TPU	●	●	2.30	2.10	10	4 ⁽⁴⁾	-20	+60	MF	
	NA99	1M6 U0-U5 FL	PET	TPU	●	●	1.00	1.00	10	6	-20	+100	MF	
	NA100	1M6 U3-U3 FL	PET	TPU	●	●	1.20	1.30	10	6	-20	+100	MF	
	NA101	1M6 U5-U5 FL	PET	TPU	●	●	1.60	1.90	20	6	-20	+100	MF	
	CG277	DU-E 10/30 W	PET	TPU	○	○	3.00	3.00	30	15	-20	+80	MF	
	CG278	DU-E 10/40 W	PET	TPU	○	○	4.00	4.20	40	15	-20	+80	MF	
	CG296	DG-E 10/30 HS	PET	synthetic elastomer	●	●	3.00	3.50	30	10	-20	+80	MF	
	CG297	DG-E 10/40 HS	PET	synthetic elastomer	●	●	4.00	5.00	40	10	-20	+80	MF	
	CG298	DG-E 10/50 HS	PET	synthetic elastomer	●	●	5.00	6.00	60	10	-20	+80	MF	
	CG299	DG-E 10/60 HS	PET	synthetic elastomer	●	●	6.00	7.00	60	10	-20	+80	MF	
	LOW FRICTION	NA509	1M6 U0-V3 A N	PET	PVC	●	●	0.85	0.85	20	6	-10	+60	LF
		NA716	2M5 U0-U0 HP A	PET	-	○	○	1.00	1.00	7	6	-30	+110	LF
		NA49	2MT5 U0-V3 N	PET	PVC	●	○	1.80	2.00	20	6	-10	+60	LF
		NA606	2MT5 U0-V3 SM N	PET	PVC	●	○	1.90	2.00	20	6	-10	+60	LF
		NA1233	2M12 U0-U2 SP	PET	TPU	●	○	1.50	1.50	7	8	-20	+100	LF
NA1255		2M10 U0-U2 N HC	PET	TPU	●	○	1.20	1.40	7	10	-20	+100	LF	
NA218		2M12 U0-V3	PET	PVC	●	○	1.90	2.10	40	12	-10	+60	LF	
NA222		SILON 60 HC	PET	non woven	●	●	5.50	3.40	100	10	-20	+120	LF	
NA133		N	PA	-	●	●	0.60	0.60	15	2	-20	+100	LF	
NA135		N8	PA	-	●	●	1.00	0.90	15	3	-20	+100	LF	
CG3		P0	PA	TPU	●	●	0.90	1.00	15	2	0	+100	LF	
CG1		PR0	PA	TPU	●	●	1.00	1.10	20	3	0	+100	LF	
CG217		P1	PA	TPU	●	●	1.40	1.50	25	5	0	+100	LF	
CG219		P2	PA	TPU	●	●	2.10	2.30	50	7.5	0	+100	LF	
MEDIUM FRICTION		NA31	2M8 U0-V5 FM	PET	PVC	●	○	2.10	2.30	30	8	-10	+60	MF
		NA36	2M12 V5-V10	PET	PVC	●	●	3.00	3.50	80	12	-10	+60	MF
		NA76	3M18 U0-V15 A	PET	PVC	●	○	4.20	4.90	100	18	-10	+60	MF
		NA42	3T18 U0-V15	PET	PVC	●	○	4.20	4.90	100	18	-10	+60	MF
		NA1133	2M8 U0-U-G5 HS FL	PET	synthetic elastomer	●	●	2.00	2.40	25	8	-20	+100	MF
	NA1134	2M8 U0-U-G15 HS FL	PET	synthetic elastomer	●	●	3.00	3.40	50	8	-20	+100	MF	
	NA1432	3M8 U0-U-G10 HS FL	PET	synthetic elastomer	●	●	3.50	3.70	60	10	-20	+100	MF	
	NA1138	NT1 HS	PA	synthetic elastomer	●	●	1.20	1.20	15	3	-20	+100	MF	
	NA1139	NT2 HS	PA	synthetic elastomer	●	●	2.00	2.10	20	3.5	-20	+100	MF	
	NA1140	NT3 HS	PA	synthetic elastomer	●	●	3.00	3.20	40	6	-20	+100	MF	
	NA1141	NT4 HS	PA	synthetic elastomer	●	●	4.00	4.30	60	6	-20	+100	MF	
	CG276	DU1/30 W	PA	TPU	○	○	3.00	3.00	30	5	-20	+100	MF	
	CG269	DU1/40 W	PA	TPU	○	○	4.00	4.20	40	5	-20	+100	MF	
	CG289	DG1/15 HS	PA	synthetic elastomer	●	●	1.60	1.80	20	5	0	+100	MF	
	CG290	DG1/30 HS	PA	synthetic elastomer	●	●	3.00	3.40	30	5	0	+100	MF	
	CG291	DG1/40 HS	PA	synthetic elastomer	●	●	4.00	4.60	40	5	0	+100	MF	
	CG292	DG2/20 HS	PA	synthetic elastomer	●	●	2.40	2.80	40	7.5	0	+100	MF	
	CG293	DG2/30 HS	PA	synthetic elastomer	●	●	3.20	3.70	40	7.5	0	+100	MF	
	CG294	DG2/40 HS	PA	synthetic elastomer	●	●	4.00	4.80	50	7.5	0	+100	MF	
	CG295	DG2/60 HS	PA	synthetic elastomer	●	●	5.50	6.30	60	7.5	0	+100	MF	
CG327	DG1/30 HS Food Grade	PA	synthetic elastomer	●	●	3.00	3.40	30	5	-20	+100	MF		
CG326	DG1/40 HS Food Grade	PA	synthetic elastomer	●	●	4.00	4.60	40	5	-20	+100	MF		
HIGH FRICTION	NA32	2M8 U0-V17 GP	PET	PVC	●	○	5.20	3.70	50	8	-10	+60	HF	
	NA401	2M12 U0-V7 LG	PET	PVC	●	○	2.40	2.40	40	12	-10	+60	HF	
	NA33	2M12 U0-V8 RT	PET	PVC	●	○	2.30	2.40	40	12	-10	+60	HF	
	NA258	2M12 U0-V10 RT	PET	PVC	●	○	2.60	2.60	50	12	-10	+60	HF	
	NA35	2M12 U0-V20 GP	PET	PVC	●	○	5.50	3.90	50	12	-10	+60	HF	
	NA118	2M8 U0-U-G10 FH	PET	natural elastomer	●	●	2.30	2.40	50	8	-20	+100	HF	
	NA1135	2T12 U0-U-G10 HS FH	PET	synthetic elastomer	●	○	2.20	2.20	50	12	-20	+100	HF	
	NA121	2M12 U0-G25 GP	PET	natural elastomer	●	○	5.50	4.50	60	12	-40	+100	HF	
	NA1136	2T12 U0-G25 HS GP	PET	synthetic elastomer	●	○	5.50	4.50	80	12	-40	+100	HF	
	NA1137	2T12 U0-G35 HS GP	PET	synthetic elastomer	●	○	6.50	6.50	80	12	-40	+100	HF	
	CG181	DG2/70 HS GP blue	PA	synthetic elastomer	●	●	6.40	6.00	100	7.5	0	+100	HF	
	NA163	2T12 U0-U-G15 MF	PET	natural elastomer	●	○	2.80	3.40	50	12	-20	+100	HF	
	NA1418	3M18 U0-U-G40 R MF	PET	natural elastomer	●	○	5.70	5.90	100	18	-20	+100	HF	
	NA966	3M18 U0-U-G60 MF	PET	natural elastomer	●	○	7.30	8.30	100	18	-20	+100	HF	
	NA245	NT5 MF	PA	natural elastomer	●	○	5.00	5.50	50	6	-20	+100	HF	
	CG215	DG1/45 MF	PA	natural elastomer	●	●	4.50	5.10	50	5	0	+100	HF	
	CG216	DG2/60 MF	PA	natural elastomer	●	●	6.50	7.10	75	7.5	0	+100	HF	
	ENDLESS	MF HS W-300	PET	natural elastomer	○	-	●	6÷12	(5)	(5)	10	-20	+100	HF
		MF L-300	PET	natural elastomer	○	-	●	6÷12	(5)	(5)	10	-20	+70	HF
MF R-300		PET	natural elastomer	○	-	●	6÷12	(5)	(5)	10	-20	+100	HF	
MF HS W-351 G		PET	natural elastomer	○	synthetic elastomer	●	6÷12	(5)	(5)	10	-20	+100	HF	
MF L-351 G		PET	natural elastomer	○	synthetic elastomer	●	6÷12	(5)	(5)	10	-20	+70	HF	
MF R-351 G		PET	natural elastomer	○	synthetic elastomer	●	6÷12	(5)	(5)	10	-20	+100	HF	

Rotary printer page folding	Insertion cassettes wind./unwinding	Stacking	Gathering	Wrapping / Binding	Cutters	Tube winders	Tissue	Feeding	Folding-glueing	Compression	Corrugator	Loading and conveying	Feeding	Flexo-folding	Stacking	MULTIPURPOSE CONVEYING	Type
PRINTING				PAPER			BOX FOLDING		CORRUGATED CARTON								
✓																	PT0.9 0-0
✓																	PT0.9 0-0 N
																	PT1.0 0-U4
																	PT1.0 U1-U3
																	PT1.2 U2-U5
																	PT1.2 0-U2
																	PT1.4 G3-G3
																	PT1.5 0-G3 FL
																	PT1.8 0-0
																	PT1.8 G1-0
																	PT1.4 EL G3-G3 FL
																	PT1.4 EL G3-G3 SK
																	EL2-U10 FL
																	EL3-U15 FL
																	EL4-U20 FH
																	1M6 U0-U5 FL
																	1M6 U3-U3 FL
																	1M6 U5-U5 FL
																	DU-E 10/30 W
																	DU-E 10/40 W
																	DG-E 10/30 HS
																	DG-E 10/40 HS
																	DG-E 10/30 HS
																	DG-E 10/40 HS
																	1M6 U0-V3 A N
																	2M5 U0-U0 HP A
																	2MT5 U0-V3 N
																	2MT5 U0-V3 SM N
																	2M12 U0-U2 SP
																	2M10 U0-U2 N HC
																	2M12 U0-V3
																	SILON 60 HC
																	N
																	N8
																	P0
																	PR0
																	P1
																	P2
																	2M8 U0-V5 FM
																	2M12 V5-V10
																	3M18 U0-V15 A
																	3T18 U0-V15
																	2M8 U0-U-G5 HS FL
																	2M8 U0-U-G15 HS FL
																	3M8 U0-U-G10 HS FL
																	NT1 HS
																	NT2 HS
																	NT3 HS
																	NT4 HS
																	DU 1/30 W
																	DU 1/40 W
																	DG1/15 HS
																	DG1/30 HS
																	DG1/40 HS
																	DG2/20 HS
																	DG2/30 HS
																	DG2/40 HS
																	DG2/60 HS
																	DG1/30 Food Grade
																	DG1/40 Food Grade
																	2M8 U0-V17 GP
																	2M12 U0-V7 LG
																	2M12 U0-V8 RT
																	2M12 U0-V10 RT
																	2M12 U0-V20 GP
																	2M8 U0-U-G10 FH
																	2T12 U0-U-G10 HS FH
																	2M12 U0-G25 GP
																	2T12 U0-G25 HS GP
																	2T12 U0-G35 HS GP
																	DG2/70 HS GP blue
																	2T12 U0-U-G15 MF
																	3M18 U0-U-G40 R MF
																	3M18 U0-U-G60 MF
																	NT5 MF
																	DG1/45 MF
																	DG2/60 MF
																	MF HS W-300
																	MF L-300
																	MF R-300
																	MF HS W-351 G
																	MF L-351 G
																	MF R-351 G

**CONVEYOR AND PROCESS BELTS
EXPLANATION OF TYPE DESIGNATION**

- 2** Number of plies
 - M** Textile carcass:
M Rigid polyester
MT Combined polyester
T Flexible polyester
 - 8** Pull for 1% elongation (N/mm)
 - U** Bottom cover
 - 0** Thickness (mm/10)
 - U** Possible interply
 - G** Top cover
 - 15** Thickness (mm/10)
 - FL** Surface pattern (see photos)
Other characteristics
-
- SILON** Non woven
- 60** Thickness (mm/10)
 - HC** Static conductivity (ISO 284)
 - EL** Elastic belt without textile carcass
 - 2** Pull for 8% elongation (N/mm)
 - U** Material
 - 10** Thickness (mm/10)
 - FL** Surface pattern (see photos)
-
- P** Paper & Printing
- T** Thermoplastic
 - 1.2** Total thickness (mm/10)
 - U** Bottom cover
 - 2** Thickness (mm/10)
 - U** Top cover
 - 5** Thickness (mm/10)
 - N** Other characteristics

TEXTURES



COATING AND INTERPLY MATERIALS

- G** Elastomer
- U** Polyurethane
- V** Polyvinyl chloride (PVC)

OTHER CHARACTERISTICS

- HP** High performance polyurethane
- HS** High performance synthetic elastomer
- MF** Self-regenerating elastomer
- N** Black colour top cover
- R** High transversal stability
- SK** Silk surface texture
- SP** Production width up to 3500/3600 mm

**ENDLESS BELTS
EXPLANATION OF TYPE DESIGNATION**

- MF** Endless belt (mandrel made)
- L** Outer cover
HS-W white (40 Sh.A)
L raspberry (35 Sh.A)
R purple red (45 Sh.A)
- 351** 3 ply polyester fabric and elastomer inner cover
- 300** 3 ply polyester fabric
- G** Synthetic rubber, green colour 65 Sh.A inner cover

(1) PA = polyamide PET = polyester
(2) Minimum roller diameter is dependent on the joint recommended by CHIORINO
(3) Top cover coefficient of friction: low LF, medium MF, high HF
(4) Pull for 8% elongation
(5) Weight and minimum diameter for MF belts according to total thickness
—/—: knife edge

The technical data of this table has been formulated under normal environment conditions. They are subject to alteration without notice.