thermoweldable BELTS

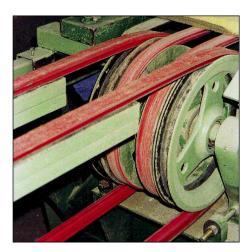




tile factories • brick factories







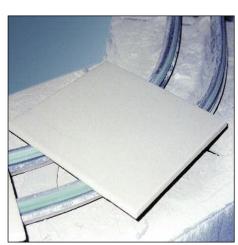




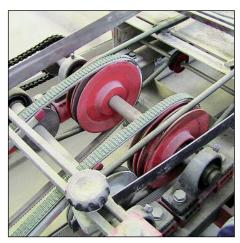
manufacturing ceramics • slabs concrete products







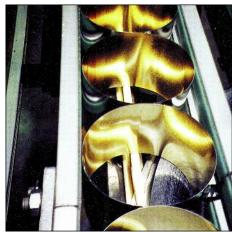


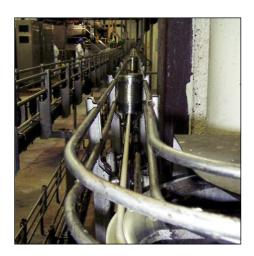




metal packaging manufacturers







cardboards • wood industry

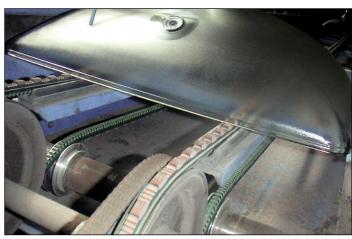




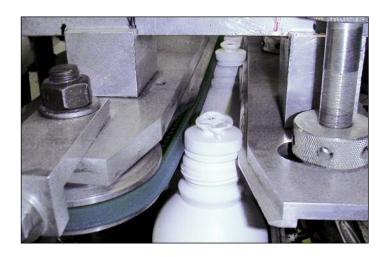


glass industry





food industry

















farming equipment







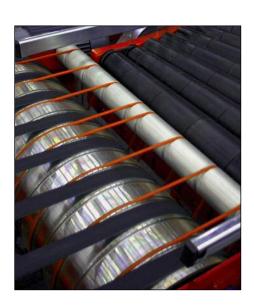




roller conveyors

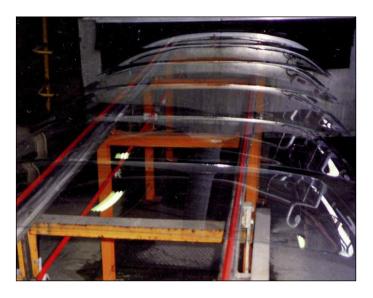






others sectors











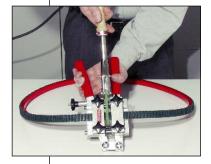




contents

	introduction
	Examples Advantages 6 Applications 7
	round belts
	Our range of round belts 8 DEL/ROC 10 DEL/FLEX and DEL/SAN 11 POLY/FLEX 12 SOUPLEX 13 TUBULAR FASTENING BELTS 13 Driving rollers 14 Runners for round belts 15
	V belts
	Our range of V belts 16 DEL/ROC 18 DEL/SAN reinforced 19 H15/H16 reinforced 20 DEL/FLEX 22 SOUPLEX reinforced 24 SOUPLEX 26 Ridge-top V belts 28 Runners for V belts 29
	special belts
	Brush belts 30 V belts with flights 30 Special profiles 31 Multiple V belts 31 Special belts 32
	welding tools
	Standard tools
	technical notes
mafdel	Advice - Recommendations 40 Belt selection 41 Conveying / Simplified calculation 42 Examples 43

Our weldable belts provides many advantages in a wide range of applications :



easiness of use

- Easy on-site welding without previous dismantling.
- Fast repairing with minimum down-time.
- Convenient length adjustments by lengthening or shortening.
- Easy repairing of damaged belts.
- All off-cuts are useable.
- Great freedom in designing conveyors and selecting spacings.
- Reduced and simplified stocks.



main characteristics

- High resistance to tear and wear.
- High resistance to oil, fat and solvents.
- Various qualities allowing a wide choice with outstanding belting solution of highest quality, tailored to your specific needs.
- Wide choice of coatings on V belts.





food quality range

- Mono-material products, waterproof, rot-resistant.
- Smooth surface for reduced bacteria development.
- Excellent water, oil, animal and vegetable fat resistance.
- Support of cleaning and sanitation measures.
- Easy cleaning, reduced water consumption.



advantages

Comparison of advantages of different conveying solutions:

	MAFDEL belts	Rubber belts	Conveying chains
easiness of installation	+	_	_
Chemicals & hydrocarbons resistance	+	_	+
Abrasion resistance	+	_	_
Easiness of maintenance	+	_	_
Coatings / surfaces	+	+	
Easy cleaning	+	_	
Simplicity of stock control	+	_	+
Low noise working	+	+	_
Food quality	+	_	_



Our belts are suitable to a wide range of applications in many industries, such as:

material manufacturing :

- Tiles
- Bricks
- Ceramics
- Concrete products
- Plaster products
- Wood
- Glass

food industry:

- Meat
- Poultry
- Cheese
- Canning industry
- Fruits and vegetables
- Fish
- Industrial Bakeries
- Biscuit factory

packaging:

- Metal packaging
- Cardboard
- Plastic industry
- Printing works
- paper mill

others sectors:

- Automotive
- Mechanics
- Logistic
- Pharmaceutical
- Cosmetic
- Farming equipment
- etc



round belts





round belts

ø (mm)

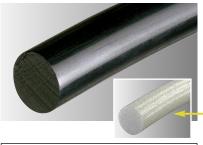
				ø (mm)													
L		mafdel		2	3	4	5	6	7	8	9	9.5	10	12	12.5	15	18
	Rough	POLY/FLEX Rough	85 ShA														
	Rou	POLY/FLEX Rough	85 ShA														
		SOUPLEX	85 ShA														
		SOUPLEX	85 ShA														
Standard	Smooth	DEL/FLEX	90 ShA														
Stan		DEL/FLEX	90 ShA														
		DEL/ROC	100 ShA 55 ShD														
		SOUPLEX Frosted	85 ShA														
	Frosted	DEL/FLEX Frosted	90 ShA														
		DEL/FLEX Frosted	90 ShA														
		POLY/FLEX Aramid Reinforced	85 ShA					•		•			•	•		•	•
	Smooth	DEL/SAN Aramid Reinforced	95 ShA										•		•	•	•
Reinforced	Smo	DEL/ROC Polyester Reinforced	100 ShA 55 ShD									0	0		0	•	0
Reinf		DEL/ROC "DRW" Polyester Reinforced	63 ShD									•		0			
	Frosted	POLY/FLEX Aramid Reinforced - Frosted	85 ShA					•		•			•	•		•	•
	Fro	DEL/SAN Aramid Reinforced - Frosted	95 ShA										•		•	•	•
<u> </u>	Iubular	SOUPLEX Tubular	85 ShA										0				
4	<u> </u>	DEL/FLEX Tubular	90 ShA				0	0		0			0	0		0	





DEL/ROC round belts

DEL/ROC black



	Diameter	Traction force		Pulley diameter (mm)		
Reference	(mm)	(daN)	Pretension	Recommended	Mini	
DRRN4	4	6.3	2%	50	40	
DRRN5	5	9	2%	60	50	
DRRN6	6	13	2%	80	70	
DRRN8	8	25	2%	100	90	
DRRW9.5	9.5	35	2%	140	120	
DRRN10	10	39	2%	160	140	

Hardness 100 ShA/55 ShD
Pretension 1 - 2%
Temperature range -30°C/+90°C
Friction coefficient
HDPE : 0.15 - 0.2

HDPE: 0.15 - 0.2 Steel: 0.35 - 0.4 Stainless steel: 0.5 Rolllength 30 m

DEL/ROC ivory polyester reinforced



Reference	Diameter (mm)	Traction force (daN)	Pretension	Pulley diame Recommended	eter (mm) Mini
DRRIAP9.5	9.5	54	2%	160	140
DRRIAP10	10	56	2%	180	160
DRRIAP12.5	12.5	98	2%	250	200
DRRIAP15	15	140	2%	300	250
DRRIAP18	18	200	2%	360	300

Hardness 100 ShA/55 ShD Pretension 1 - 2% Temperature range -30°C/+90°C

Friction coefficient HDPE: 0.15 - 0.2 Steel: 0.35 - 0.4 Stainless steel: 0.5 Rolllength 100 m

DEL/ROC DRW ivory polyester reinforced



Reference	Diameter (mm)	Traction force (daN)	Pretension	Pulley diame Recommended	eter (mm) Mini
DRWRIAP9.5	9.5	67	2%	180	160
DRWRIAP12	12	120	2%	260	220

Hardness 63 ShD Pretension 1 - 2% Temperature range -30°C/+90°C Friction coefficient HDPE: 0.15 - 0.2 Steel: 0.35 - 0.4 Stainless steel: 0.5 Rolllength 100 m

DEL/ROC blue steel reinforced*

Reference	Diameter (mm)	Traction force (daN)	Pretension	Pulley diamet	ter (mm) Mini
DRRBST9.5/1.8	9.5	166	-	250	
DRRBST9.5/2.36	9.5	200	-	270	

Pretension 0 %
Temperature range -30°C/+90°C
Friction coefficient
HDPE: 0.15 - 0.2
Steel : 0.35 - 0.4
Stainless steel : 0.5
Rolllenath X m

Hardness 100 ShA/55 ShD





*Stainless steel reinforcement on request.

DEL/FLEX and **DEL/SAN** round belts

DEL/FLEX red



Hardness 90 ShA
Pretension 3 - 6%
Temperature range -20°C/+70°C
Friction coefficient HDPE : 0.25 Steel : 0.5 Stainless steel : 0.6
Rolllength 30 m

Reference	Diameter	Traction force	Drotonoion	Pulley diameter (mm)		
Kelelelice	(mm)	(daN)	Pretension	Recommended	Mini	
DFRR2	2	0.77	5%	20	12	
DFRR3	3	1.7	5%	30	20	
DFRR4	4	2.5	5%	40	30	
DFRR5	5	4	5%	50	40	
DFRR6	6	6.5	5%	60	50	
DFRR7	7	9.6	5%	70	55	
DFRR8	8	12	5%	80	65	
DFRR9.5	9.5	17	5%	100	85	
DFRR12.5	12.5	30	5%	140	120	
DFRR15	15	43	5%	170	140	
DFRR18	18	63	5%	220	180	
DFRR20	20	78	5%	280	250	

^{*}Manufactured on request depending on quantities.

DEL/FLEX blue



Hardness 90 ShA	
Pretension 3 - 6%	
Temperature range -20°C/+70°C	
Friction coefficient	
HDPE : 0.25	
Steel : 0.5	
Stainless steel : 0.6	
Rolllength 30 m	

Reference	Diameter (mm)	Traction force (daN)	Pretension	Pulley diame Recommended	eter (mm) Mini
DFRB2	2	0.77	5%	20	12
DFRB3	3	1.7	5%	30	20
DFRB4	4	2.5	5%	40	30
DFRB5	5	4	5%	50	40
DFRB6	6	6.5	5%	60	50
DFRB8	8	12	5%	80	65

DEL/SAN blue Aramid reinforced



Hardness 95 ShA
Pretension see table
Temperature range -20°C/+70°C
Friction coefficient
HDPE : 0.2
Steel : 0.4
Stainless steel : 0.5
Rolllenath 50 m

Reference	Diameter (mm)	Traction force (daN)	Pretension	Pulley diame Recommended	eter (mm) Mini
*DSRBAR6	6	-	-	-	-
*DSRBAR8	8	-	-	-	-
DSRBAR10	10	40	1.5%	140	120
DSRBAR12.5	12.5	65	1.5%	160	140
DSRBAR15	15	93	1.5%	220	180
DSRBAR18	18	125	1.5%	250	210

*Manufactured on request depending on quantities.

All our 6 to 18 mm diameter round belts can be frosted.

Frosting improves belt sliding on its support and makes products accumulation easier:

• reduction of friction coeff on steel and stainless steel: 0.1 • reduction of friction coeff on HDPE: 0.05.

Reference: complete the belt refererence with DE.



Patent nb 9912595



POLY/FLEX round belts

POLY/FLEX green rough



Hardness 85 ShA
Pretension 5 - 8%
Temperature range -20°C/+60°C
Friction coefficient
HDPE : 0.25
Steel : 0.45
Stainless steel : 0.55
Rolllength 30 m
ø 2 to 10 mm : 100 m

ø 12 to 18 mm : **50 m**

Reference	Diameter	Traction force	Pulley diameter (n		ter (mm)
	(mm)	(daN)	Pretension	Recommended	Mini
PFRG2	2	0.47	8%	15	10
PFRG3	3	1	8%	20	15
PFRG4	4	1.9	8%	35	25
PFRG5	5	2.9	8%	40	30
PFRG6	6	4.2	8%	50	40
PFRG7	7	5.7	8%	60	50
PFRG8	8	7.5	8%	70	55
PFRG9	9	9.5	8%	80	65
PFRG10	10	11.8	8%	90	75
PFRG12	12	17	8%	100	90
PFRG15	15	26.5	8%	140	120
PFRG18	18	38.1	8%	190	150

^{*}Manufactured on request depending on quantities.

POLY/FLEX blue rough



Hardness 85 ShA
Pretension 5 - 8 %
Temperature range -20°C/+60°C
Friction coefficient
HDPE : 0.25
Steel : 0.45
Stainless steel : 0.55
Rolllength 100 m

Reference	Diameter (mm)	Traction force (daN)	Pretension	Pulley diame Recommended	eter (mm) Mini
PFRB2	2	0.47	8%	15	10
PFRB3	3	1	8%	20	15
PFRB4	4	1.9	8%	35	25
PFRB5	5	2.9	8%	40	30
PFRB6	6	4.2	8%	50	40
PFRB8	8	7.5	8%	70	55
PFRB10	10	11.8	8%	90	75

POLY/FLEX green Aramid reinforced



Reference	Diameter	Traction force	Pretension	Pulley diame	eter (mm)
Roloforioo	(mm)	(daN)	FIEIGISIOII	Recommended	Mini
PFRGAR6	6	7	0.5%	60	50
*PFRGAR7	7	10	0.5%	70	60
PFRGAR8	8	12	0.5%	90	75
*PFRGAR9	9	17	1%	100	85
PFRGAR10	10	23	1%	110	90
PFRGAR12	12	33	1.5%	130	110
PFRGAR15	15	50	1.5%	150	130
PFRGAR18	18	68	1.5%	220	180

^{*}Manufactured on request depending on quantities.

All our 6 to 18 mm diameter round belts can be frosted.

Frosting improves belt sliding on its support and makes products accumulation easier:

• reduction of friction coeff on steel and stainless steel: 0.1 • reduction of friction coeff on HDPE: 0.05.

Reference: complete the belt reference with **DE**.



Patent nb 9912595



SOUPLEX round belts

SOUPLEX brown



Hardness 85 ShA
Pretension 5 - 8%
Temperature range -20°C/+60°C
Friction coefficient
HDPE : 0.35
Steel : 0.6
Stainless steel : 0.7
Rolllenath 30 m

Reference	Diameter (mm)	Traction force (daN)	Pretension	Pulley diame Recommended	eter (mm) Mini
SXRM3	3	0.9	8%	20	15
SXRM4	4	1.5	8%	35	25
SXRM5	5	2.5	8%	40	30
SXRM6	6	4	8%	50	40
SXRM8	8	7	8%	70	55
SXRM9.5	9.5	10	8%	80	65
SXRM12.5	12.5	18	8%	110	95
SXRM15	15	25	8%	140	120
SXRM18	18	38	8%	200	150
*SXRM20	20	47	8%	240	190

*Manufactured on request depending on quantities.

SOUPLEX translucent

Reference	Diameter (mm)	Traction force (daN)	Pretension	Pulley diame Recommended	eter (mm) Mini
SXRT3	3	0.9	8%	20	15
SXRT4	4	1.5	8%	35	25
SXRT5	5	2.5	8%	40	30
SXRT6	6	4	8%	50	40

All our 6 to 18 mm diameter round belts can be frosted.

Frosting improves belt sliding on its support and makes products accumulation easier:

• reduction of friction coeff on steel and stainless steel: 0.1

• reduction of friction coeff on HDPE : **0.05**.

Reference: complete the belt reference with **DE**.



Patent nb 9912595

tubular fastening belts

Fast on-site fastening without welding tools.

DEL/FLEX red tubular



Hardness 90 ShA
Pretension 3 - 6 %
Temperature range -20°C/+70°C
Friction coefficient
HDPE : 0.25
Steel : 0.5
Stainless steel : 0.6
Rolllength 30 m

Reference	Diameter (mm)	Traction force (daN)	Pretension	Pulley diame	eter (mm) Mini
DETRE	` '	` ,	F0/		
DFTR5	5/2.5	3	5%	60	50
DFTR6	6/2.5	5	5%	70	60
DFTR8	8/3	10	5%	90	70
DFTR10	10/4	16	5%	100	85
DFTR12	12/4	22	5%	140	125
DFTR15	15/5	35	5%	170	140
*DFTR18	18/5	50	5%	220	190

*Manufactured on request depending on quantities.

SOUPLEX brown tubular



Hardness 85 ShA
Pretension 5 - 8%
Temperature range -20°C/+70°C
Friction coefficient
HDPE : 0.35
Steel : 0.6
Stainless steel : 0.7
Rolllength 30 m

Reference	Diameter (mm)			Pulley diameter (mm) Recommended Min	
SXTM10	10/4	9	8%	80	70

Aluminium fasteners

	-	
N°	Belt dia.	
4	5 & 6 mm	
6	8 mm	

\	N°	Belt dia.
$\rfloor \vert$	7	10 & 12 mm
	9	15 & 18 mm

small round belts

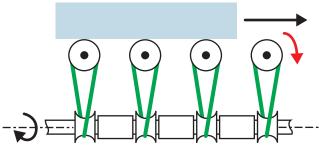
Manufacturing on demand of small round endless belts in small, medium or large series, in qualities

DEL/ROC SOUPLEX POLY/FLEX **DEL/FLEX**

- Wide choice in length.
- Possibility to produce moulded belts for very large series (consult us for moulds quotation).



rollers driven by semi-crossed round belts



- Direct transmission from a perpendicular drive shaft to each roller with SOUPLEX, POLY/FLEX or DEL/FLEX round belts.
- Noiseless and maintenance-free system.

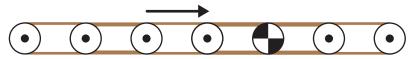


- Accumulation and full-load start possible, due to resistance of tensionned belts. Instant restart of rollers.
- Easy welding of belt on site with J15 clamp.
- We recommend to keep diabolos and rollers set in line.

roller-to-roller driving

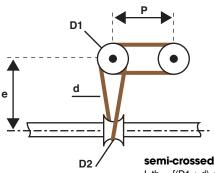


Set of several rollers driven by round belts from a drive roller.



- It is recommended to drive a maximum of 6 rollers: 4 pulled and 2 pushed by the drive roller.
- Recommended minimum pretension: SOUPLEX or POLY/FLEX: 8%, DEL/FLEX: 6%.

belt length calculation



D1: roller bottom groove diameter

D2: diabolo bottom groove diameter

d: belt diameter

: center distance

p : rollers step

roller-to-roller driving

 $L th. = (D1 + d) \times pi + 2 \times p$ L belt = L th. - pretension

semi-crossed belt driving

L th. = $[(D1 + d) + (D2 + d)] \times pi / 2 + 2 \times \sqrt{[(D1+d)^2/4 + e^2]}$ L belt = L th. - pretension

EXAMPLE:

SOUPLEX round belt dia. 5 mm

D1 = 38 mm

D2 = 28 mm

d = 5 mme = 120 mm

 $p = 100 \, \text{mm}$

L th. = $(38 + 5) \times 3.14 + 2 \times 100 = 335 \text{ mm}$

L belt = 335 - 8% = 308 mm

L th. = $[(38+5)+(28+5)]\times 3.14/2+2\sqrt{[(38+5)^2/4+120^2]} = 363 \text{ mm}$ L belt = 363 - 8% = **334 mm**

VIT/GLISS runner for round belts

Manufactured out of High Density Polyethylene (H.D.P.E), our VIT/GLISS runners will both perfectly guide your belts and improve the load capacity of each belt by reducing its friction on its runner.

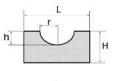
Advantages:

- Perfect guiding of the belts.
- Low friction coefficient.
- Excellent resistance against abrasion.
- Shock-proof.
- Good resistance against corrosion and many chemical agents.
- Maximum continuous working temperature: +70°C.
- Extreme temperature limits: -40°C to +100°C.



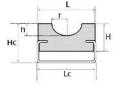


With steel rail. (stainless steel on demand and according to quantities). Delivered in bars of 3 m.



Ref.	Belt diam.	L	Н	r	h
R 6	Ø 6	20	10	4	4
R 8	Ø 8	20	12	5	5
R 10	Ø 9.5 - 10	25	15	6	6
R 12	Ø 12 - 12.5	30	20	7	8
R 15	Ø 15	35	25	8.5	10
R 18	Ø 18	40	25	10	12

Ref.	Belt diam.	L	Н	r	h	Нс	Lc
RC 6	Ø 6	20	15	4	4	18	20
RC 8	Ø 8	20	15	5	5	18	20
RC 10	Ø 9.5 - 10	20	15	6	6	20	20
RC 12	Ø 12 - 12.5	28	15	7	8	20	28
RC 15	Ø 15	33	20	8.5	10	25	38
RC 18	Ø 18	38	20	10	12	25	38





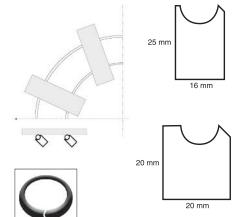
- White HDPE runners for food industry.
- C-shape stainless steel rail.
- Special runners following our customers schemes.

Consult us.

Attention:

Take care of the HDPE longitudinal dilatation: 2 mm per metre for a 10°C increase in temperature.

runners for curved conveyors



These runners can be bent without any special tool to be fixed on curved conveyors, thanks to their flexibility.

2 standard sizes for Ø 12 mm round belts :

25 x 16 mm and 20 x 20 mm.

Recommended belts: **POLY/FLEX** or any other frosted belt.



mafdel

V belts





Cross section (mm)

Cross section (mm)												
L		mafde		8 x 5	10 x 6	13 x 8	17 x 11	22 x 14	32 x 19	13 x 15	17 x 20	22 x 25
	70	DEL/ROC	100 ShA 55 ShD									
	nforce	DEL/FLEX	90 ShA									
_ و	Non-reinforced	DEL/FLEX	90 ShA									
Standard		SOUPLEX	85 ShA									
8	þ	DEL/SAN Aramid reinforced	95 ShA									
	Reinforced	H15 / H16 Aramid reinforced	92 ShA					•				
		SOUPLEX Aramid reinforced	85 ShA		•	•	•	•	•			
	Standard	SOUPLEX Aramid reinforced	85 ShA								•	\bigcirc
		DEL/SAN Aramid reinforced	95 ShA									
Ridge-Top		H15 / H16 Aramid reinforced	92 ShA									
Ridge	TOPGRIP	SOUPLEX Aramid reinforced	85 ShA							•	•	
		DEL/FLEX	90 ShA									
		SOUPLEX	85 ShA									



All V belts from 10 x 6 mm (Z) section can be cogged.

Cogging reduces minimum pulley diameter.



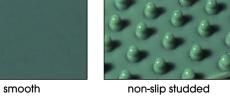
Coatings : from 10 x 6mm (Z) section

Wide range of smooth or textured coatings made of PU, PVC, felt,

standard surfaces

PU surfaces 85 ShA or 70 ShA



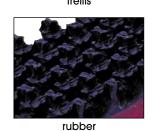








SG3 - fish bone





SUPERGRIP coatings

DEL/ROC V belts

Hardness 100 ShA - 55 ShD

Pretension 0.5 - 2%

Temperature range -30°C/+90°C

Friction coefficient HDPE: 0.15 - 0.2 Steel: 0.35 - 0.4 Stainless steel: 0.5 Roll length 30 m



solid

Reference	Traction force (daN)	Primitive pulley recommended	ø (mm) mini
DRVN10	22	120	100
DRVN13	40	160	140
DRVN17	74	220	200
DRVN22	122	280	250

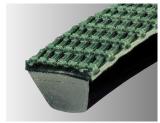
DEL/ROC black

Dimension (mm)	Pretension
10x6 Z	2%
13x8 A	2%
17x11 B	2%
22x14 C	2%



cogged

			- 009900
Reference	Traction force (daN)	Primitive puller recommended	y ø (mm) mini
DRVNCR10	15	100	80
DRVNCR13	28	120	100
DRVNCR17	51	160	140
DRVNCR22	85	240	190



solid

30110			
Reference	Traction force (daN)	Primitive puller recommended	y ø (mm) mini
DRVN10NA	22	120	100
DRVN13NA	40	160	140
DRVN17NA	74	220	200
DRVN22NA	122	280	250

SUPERGRIP coating

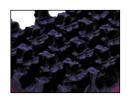
Dimension (mm)	Pretension
10x6 Z	2%
13x8 A	2%
17x11 B	2%
22x14 C	2%



coaae

Reference	Traction force (daN)	Primitive pulle recommended	y ø (mm) mini
DRVNCR10NA	15	100	80
DRVNCR13NA	28	120	100
DRVNCR17NA	51	160	140
DRVNCR22NA	85	240	190

other coatings*



RUBBER SUPERGRIP (code NC)

- Good grip.
- Resistance to abrasion.
- Resistance to temperature.



POLYESTER FELT (code FP)

- Conveying with accumulation of fragile products.
- Low friction coefficient.



ARAMID FELT (code FA)

• High resistance to temperature.



FOAM (code MS)

- Low Hardness.
- Different thicknesses available.



LINATECH (code LI)

- High resistance to abrasion.
- High grip.
- Rough surface, thickness 2 to 10 mm.



*Reference: complete the belt reference with the coating reference.

DEL/SAN reinforced V belts



Hardness 95 ShA Pretension see table

Temperature range -20°C/+70°C

Friction coefficient HDPE: 0.20 Steel : **0.4** Stainless steel: 0.5 Roll length 30 m



DEL/SAN blue Aramid reinforced

cogged

Reference	Traction force (daN)	Primitive puller recommended	y ø (mm) mini
DSVBAR13	35	150	130
DSVBAR17	60	180	160
DSVBAR22	95	260	240

Dimension (mm)	Pretension
13x8 A	1%
17x11 B	1.5%
22x14 C	1.5%

Reference	Traction force (daN)	Primitive pulley recommended	ø (mm) mini
DSVBAC13	35	120	100
DSVBAC17	60	150	130
DSVBAC22	95	210	180



solid

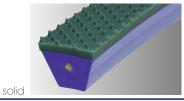
SUPERGRIP coating



Reference	Traction force (daN)	Primitive pulley recommended	ø (mm) mini
DSVBAR13NA	35	150	130
DSVBAR17NA	60	180	160
DSVBAR22NA	95	260	240

Dimension (mm)	Pretension
13x8 A	1%
17x11 B	1.5%
22x14 C	1.5%

Traction force Primitive pulley ø (mm) Reference (daN) recommended mini DSVBAC13NA 35 120 100 DSVBAC17NA 60 150 130 DSVBAC22NA 95 210 180



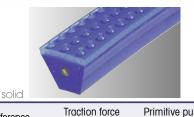
SOUPLEX 85 ShA surface

cogged

Reference	Traction force (daN)	Primitive pulley recommended	y ø (mm) mini
DSVBAR13SPI	35	170	150
DSVBAR17SPI	60	200	180
DSVBAR22SPI	95	280	260

Dimension (mm)	Pretension
13x8 A	1%
17x11 B	1.5%
22x14 C	1.5%

Reference	Traction force (daN)	Primitive pulley recommended	/ ø (mm) mini
DSVBAC13SPI	35	140	120
DSVBAC17SPI	60	170	150
DSVBAC22SPI	95	230	200



(daN)

35

60

95

TOTALGRIP 70 ShA surface

lley ø (mm) mini		Dimension (mm)	Pretension
140	_	13x8 A	1%
170		17x11 B	1.5%
250		22x14 C	1.5%

Traction force Primitive pulley ø (mm) Reference (daN) recommended mini DSVBAC13TPI 35 130 110 DSVBAC17TPI 60 160 140 DSVBAC22TPI 95 220 190

other surfaces*



Reference

DSVBAR13TPI

DSVBAR17TPI

DSVBAR22TPI



recommended

160

190

270









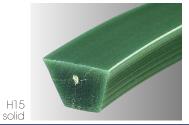
Reference	SMOOTH	STUDDED	SAW-TOOTH	SG3	TRELLIS
Souplex 85 ShA	SLI	SPI	SUS	SSG	SLO
Totalgrip 70 ShA	TLI	TPI	TUS	TSG	TLO

H15/H16 reinforced V belts

Hardness **92 ShA**Pretension **see table**

Temperature range -20°C/+70°C

Friction coefficient HDPE: 0.25 Steel: 0.45 Stainless steel: 0.55 Roll length 30 m



green Aramid reinforced

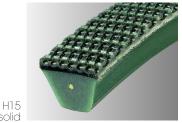


H16 cogged

Reference	Traction force (daN)	Primitive pulley ø (mm recommended mini	
H15GAR10	15	110	90
H15GAR13	30	140	110
H15GAR17	50	170	140
H15GAR22	75	250	230
H15GAR32	140	350	300

Dimension (mm)	Pretension
10x6 Z	1%
13x8 A	1%
17x11 B	1.5%
22x14 C	1.5%
32x19 D	1.5%

Reference	Traction force (daN)	Primitive pulley ø (mn recommended min	
H16GAC10	15	80	65
H16GAC13	30	100	70
H16GAC17	50	130	110
H16GAC22	75	180	150
H16GAC32	140	300	250



solid Traction force Primitive pulley ø (mm) Reference (daN) recommended mini H15GAR10NA 90 15 110 H15GAR13NA 30 140 110 H15GAR17NA 140 50 170

250

350

230

300

75

140

SUPERGRIP coating

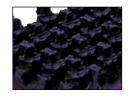
Dimension (mm)	Pretension
10x6 Z	1%
13x8 A	1%
17x11 B	1.5%
22x14 C	1.5%
32x19 D	1.5%



H16 cogged

Reference	Traction force (daN)	Primitive pulle recommended	ey ø (mm) mini
H16GAC10NA	15	80	65
H16GAC13NA	30	100	70
H16GAC17NA	50	130	110
H16GAC22NA	75	180	150
H16GAC32NA	140	300	250

other coatings*



RUBBER SUPERGRIP (code NC)



POLYESTER FELT (code FP)



ARAMID FELT (code FA)



FOAM (code MS)



LINATECH (code LI)





H15GAR22NA

H15GAR32NA

H15/H16 reinforced V belts



SOUPLEX 85 ShA surface

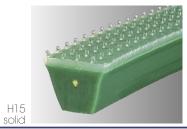


H16 cogged

Reference	Traction force (daN)	Primitive pulley ø (mm recommended mini	
H15GAR10SPI	15	130	110
H15GAR13SPI	30	160	130
H15GAR17SPI	50	190	170
H15GAR22SPI	75	270	250
H15GAR32SPI	140	370	320

Dimension (mm)	Pretension
10x6 Z	1%
13x8 A	1%
17x11 B	1.5%
22x14 C	1.5%
32x19 D	1.5%

Reference	Traction force (daN)	Primitive pulley ø (mm recommended mini	
H16GAC10SPI	15	100	80
H16GAC13SPI	30	120	100
H16GAC17SPI	50	150	130
H16GAC22SPI	75	200	170
H16GAC32SPI	140	320	270



TOTALGRIP	70	ShA
surfac	e	



H16

Reference	Traction force (daN)	Primitive pulle recommended	y ø (mm) mini
H15GAR10TPI	15	120	100
H15GAR13TPI	30	150	120
H15GAR17TPI	50	180	160
H15GAR22TPI	75	260	240
H15GAR32TPI	140	360	310

Dimension (mm)	Pretension
10x6 Z	1%
13x8 A	1%
17x11 B	1.5%
22x14 C	1.5%
32x19 D	1.5%

Traction force Primitive pulley ø (mm) Reference (daN) recommended mini H16GAC10TPI 90 75 15 H16GAC13TPI 30 110 80 H16GAC17TPI 50 140 120 H16GAC22TPI 75 190 160 H16GAC32TPI 140 310 260

other surfaces*













Reference	SMOOTH	STUDDED	SAW-TOOTH	SG3	TRELLIS
Souplex 85 ShA	SLI	SPI	SUS	SSG	SLO
Totalgrip 70 ShA	TLI	TPI	TUS	TSG	TLO

DEL/FLEX V belts



Hardness 90 ShA	
Pretension 3 - 6%	
Temperature range -20°C/+70°C	
Friction coefficient	
HDPE : 0.25	
Steel : 0.5	

Stainless steel: 0.6 Roll length 30 m

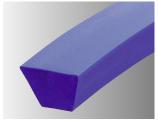
DEL/FLEX red



Reference	Traction force (daN)	Primitive pulley recommended	ø (mm) mini
DFVR8	7	55	50
DFVR10	11	80	65
DFVR13	20	100	80
DFVR17	36	150	130
DFVR22	60	220	180
DFVR32	118	300	250

Dimension (mm)	Pretension
8x5	5%
10x6 Z	5%
13x8 A	5%
17x11 B	5%
22x14 C	5%
32x19 D	5%

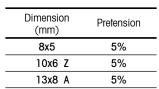
Reference	Traction force (daN)	Primitive pulle recommended	y ø (mm) mini
-	-	-	-
DFVRCR10	7	60	50
DFVRCR13	14	80	60
DFVRCR17	25	110	90
DFVRCR22	42	150	120
DFVRCR32	82	220	180



solid

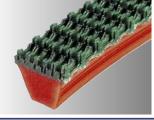
Reference	Traction force (daN)	Primitive pulley recommended	ø (mm) mini
DFVB8	7	55	50
DFVB10	11	80	65
DFVB13	20	100	80







Reference	Traction force (daN)	Primitive pulley recommended	ø (mm) mini
-	-	-	-
DFVBCR10	7	60	50
DFVBCR13	14	80	60



SOIIG			
Reference	Traction force (daN)	Primitive pulle recommended	y ø (mm) mini
DFVR10NA	11	80	65
DFVR13NA	20	100	80
DFVR17NA	36	150	130
DFVR22NA	60	220	180
DFVR32NA	118	300	250

SUPERGRIP coating

Dimension (mm)	Pretension
10x6 Z	5%
13x8 A	5%
17x11 B	5%
22x14 C	5%
32x19 D	5%



cogged

Reference	Traction force (daN)	Primitive pulle recommended	ey ø (mm) mini
DFVRCR10NA	7	60	50
DFVRCR13NA	14	80	60
DFVRCR17NA	25	110	90
DFVRCR22NA	42	150	120
DFVRCR32NA	82	220	180

other coatings*



RUBBER SUPERGRIP (code NC)



POLYESTER FELT (code FP)



ARAMID FELT (code FA)



FOAM (code MS)



LINATECH (code LI)



*Reference: complete the belt reference with the coating reference.

DEL/FLEX V belts



solid

SOUPLEX 85 ShA surface

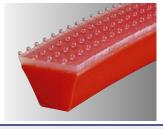


coaaec

Reference	Traction force (daN)	Primitive puller recommended	y ø (mm) mini
DFVR10SPI	15	90	80
DFVR13SPI	25	120	100
DFVR17SPI	43	170	150
DFVR22SPI	69	240	210
DFVR32SPI	132	340	260

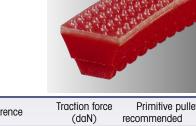
Pretension
5%
5%
5%
5%
5%

Reference	Traction force (daN)	Primitive pulle recommended	ey ø (mm) mini
DFVRCR10SPI	11	80	70
DFVRCR13SPI	19	100	80
DFVRCR17SPI	32	130	110
DFVRCR22SPI	51	170	140
DFVRCR32SPI	96	240	200



30110			
Reference	Traction force (daN)	Primitive pulle recommended	y ø (mm) mini
DFVR10TPI	11	85	75
DFVR13TPI	20	110	90
DFVR17TPI	36	160	140
DFVR22TPI	60	230	200
DFVR32TPI	118	310	260

TOTALGRIP 70 ShA surface



coage

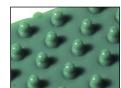
Dimension (mm)	Pretension
10x6 Z	5%
13x8 A	5%
17x11 B	5%
22x14 C	5%
32x19 D	5%
22x14 C	5%

Reference	Traction force (daN)	Primitive pulle recommended	y ø (mm) mini
DFVRCR10TPI	7	70	60
DFVRCR13TPI	14	90	75
DFVRCR17TPI	25	120	100
DFVRCR22TPI	42	160	130
DFVRCR32TPI	82	230	190

other surfaces*













Reference	SMOOTH	STUDDED	SAW-TOOTH	SG3	TRELLIS
Souplex 85 ShA	SLI	SPI	SUS	SSG	SLO
Totalgrip 70 ShA	TLI	TPI	TUS	TSG	TLO

SOUPLEX reinforced V belts

Hardness 85 ShA

Pretension see table

Temperature range -20°C/+60°C

Friction coefficient HDPE: 0.35 Steel: 0.6 Stainless steel: 0.7 Roll length 30 m



SOUPLEX white Aramid reinforced

cogged

Reference	Traction force (daN)	Primitive pulley recommended	y ø (mm) mini
SXVWAR10	10	90	75
SXVWAR13	25	100	80
SXVWAR17	40	150	130
SXVWAR22	60	220	200
SXVWAR32	120	280	250

Dimension (mm)	Pretension
10x6 Z	0.5%
13x8 A	0.5%
17x11 B	1%
22x14 C	1.5%
32x19 D	1.5%

Reference	Traction force (daN)	Primitive pulle recommended	ey ø (mm) mini
SXVWAC10	10	60	50
SXVWAC13	25	80	60
SXVWAC17	40	110	90
SXVWAC22	60	160	130
SXVWAC32	120	220	180



solid

001101			
Reference	Traction force (daN)	Primitive pulle recommended	y ø (mm) mini
SXVWAR10NA	10	90	75
SXVWAR13NA	25	100	80
SXVWAR17NA	40	150	130
SXVWAR22NA	60	220	200
SXVWAR32NA	120	280	250

SUPERGRIP coating

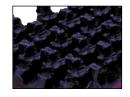
Dimension (mm)	Pretension
10x6 Z	0.5%
13x8 A	0.5%
17x11 B	1%
22x14 C	1.5%
32x19 D	1.5%



cogged

Reference	Traction force (daN)	Primitive pulle recommended	y ø (mm) mini
SXVWAC10NA	10	60	50
SXVWAC13NA	25	80	60
SXVWAC17NA	40	110	90
SXVWAC22NA	60	160	130
SXVWAC32NA	120	220	180

other coatings*



RUBBER SUPERGRIP (code NC)



POLYESTER FELT (code FP)



ARAMID FELT (code FA)



FOAM (code MS)



LINATECH (code LI)





SOUPLEX reinforced V belts



SOUPLEX 85 ShA surface



cogged

Reference	Traction force (daN)	Primitive puller recommended	y ø (mm) mini
-	-	-	-
SXVWAR13SPI	25	120	100
SXVWAR17SPI	40	170	150
SXVWAR22SPI	60	240	210
SXVWAR32SPI	120	330	280

Dimension (mm)	Pretension
10x6 Z	0.5%
13x8 A	0.5%
17x11 B	1%
22x14 C	1.5%
32x19 D	1.5%

Reference	Traction force (daN)	Primitive pulle recommended	ey ø (mm) mini
SXVWAC10SPI	10	90	75
SXVWAC13SPI	25	100	80
SXVWAC17SPI	40	130	110
SXVWAC22SPI	60	180	150
SXVWAC32SPI	120	240	200



SOIIG			
Reference	Traction force (daN)	Primitive pulley recommended	ø (mm) mini
-	-	-	-
SXVWAR13TPI	25	110	90
SXVWAR17TPI	40	160	140
SXVWAR22TPI	60	230	200

300

250

120

TOTALGRIP 70 ShA surface



coage

Dimension (mm)	Pretension
10x6 Z	0.5%
13x8 A	0.5%
17x11 B	1%
22x14 C	1.5%
32x19 D	1.5%

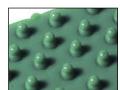
Reference	Traction force (daN)	Primitive pull- recommended	ey ø (mm) mini
SXVWAC10TPI	10	80	70
SXVWAC13TPI	25	90	75
SXVWAC17TPI	40	120	100
SXVWAC22TPI	60	170	140
SXVWAC32TPI	120	230	190

other surfaces*



SXVWAR32TPI











Reference	SMOOTH	STUDDED	SAW-TOOTH	SG3	TRELLIS
Souplex 85 ShA	SLI	SPI	SUS	SSG	SLO
Totalgrip 70 ShA	TLI	TPI	TUS	TSG	TLO

SOUPLEX V belts

Hardness **85 ShA**Pretension **5 - 8%**

Temperature range -20°C/+60°C

Friction coefficient HDPE: 0.35 Steel: 0.6 Stainless steel: 0.7 Roll length 30 m



Traction force

(daN)

4

6

12

22

36

71

Reference

SXVM8

SXVM10

SXVM13

SXVM17

SXVM22

SXVM32

Primitive pulley ø (mm)

40

55

70

110

130

220

recommended

50

70

80

130

170

250

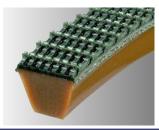
SOUPLEX brown

Dimension (mm)	Pretension
8x5	8%
10x6 Z	8%
13x8 A	8%
17x11 B	8%
22x14 C	8%
32x19 D	8%



cogged

Reference	Traction force (daN)	Primitive pulle recommended	y ø (mm) mini
-	-	-	-
SXVMCR10	4	50	40
SXVMCR13	8	60	50
SXVMCR17	15	90	70
SXVMCR22	25	130	110
SXVMCR32	50	180	150



solid			
Reference	Traction force (daN)	Primitive pulley recommended	y ø (mm) mini
SXVM8NA	4	50	40
SXVM10NA	6	70	55
SXVM13NA	12	80	70
SXVM17NA	22	130	110
SXVM22NA	36	170	130
SXVM32NA	71	250	220

SUPERGRIP coating

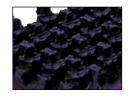
Dimension (mm)	Pretension
8x5	8%
10x6 Z	8%
13x8 A	8%
17x11 B	8%
22x14 C	8%
32x19 D	8%



cogged

Reference	Traction force (daN)	Primitive pulle recommended	ey ø (mm) mini
-	-	-	-
SXVMCR10NA	4	50	40
SXVMCR13NA	8	60	50
SXVMCR17NA	15	90	70
SXVMCR22NA	25	130	110
SXVMCR32NA	50	180	150

other coatings*



RUBBER SUPERGRIP (code NC)



POLYESTER FELT (code FP)



ARAMID FELT (code FA)



FOAM (code MS)

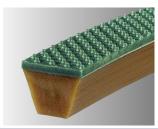


LINATECH (code LI)





SOUPLEX V belts



SOUPLEX 85 ShA surface

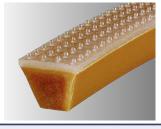


cogged

solid			
Reference	Traction force (daN)	Primitive pulle recommended	y ø (mm) mini
SXVM10SPI	10	80	70
SXVM1S3PI	17	100	90
SXVM17SPI	29	150	130
SXVM22SPI	45	190	150
SXVM32SPI	85	280	240

Dimension (mm)	Pretension		
10x6 Z	8%		
13x8 A	8%		
17x11 B	8%		
22x14 C	8%		
32x19 D	8%		

Reference	Traction force (daN)	Primitive pulle recommended	ey ø (mm) mini
SXVMCR10SPI	8	70	60
SXVMCR13SPI	13	80	70
SXVMCR17SPI	22	110	90
SXVMCR22SPI	34	150	130
SXVMCR32SPI	64	200	170



TOTALGRIP 70 ShA surface



coage

30110			
Reference	Traction force (daN)	Primitive pulle recommended	y ø (mm) mini
SXVM10TPI	6	75	65
SXVM13TPI	12	90	80
SXVM17TPI	22	140	120
SXVM22TPI	36	180	140
SXVM32TPI	71	260	230

Dimension (mm)	Pretension
10x6 Z	8%
13x8 A	8%
17x11 B	8%
22x14 C	8%
32x19 D	8%

Primitive pulley ø (mm) recommended mini Traction force Reference (daN) SXVMCR10TPI 4 60 50 SXVMCR13TPI 8 70 60 SXVMCR17TPI 15 100 80 SXVMCR22TPI 25 140 120 50 SXVMCR32TPI 190 160

other surfaces*













Reference	SMOOTH	STUDDED	SAW-TOOTH	SG3	TRELLIS
Souplex 85 ShA	SLI	SPI	SUS	SSG	SLO
Totalgrip 70 ShA	TLI	TPI	TUS	TSG	TLO

ridge-top V belts



Hardness **85 ShA**Pretension **see table**

Temperature range -20°C/+60°C

Friction coefficient HDPE: 0.35 Steel: 0.6 Stainless steel: 0.7 Roll length 50 m

SOUPLEX white Aramid reinforced



coage

Reference	Traction force (daN)	Primitive pulley recommended	ø (mm) mini
SXVWAR13F2	-	-	-
SXVWAR17F2	50	200	170
SXVWAR22F2	64	250	220

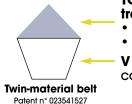
Dimension (mm)	Pretension
13x15 A	-
17x20 B	1.5%
22x25 C	1.5%

Reference	Traction force (daN)	Primitive pulley ø (mr recommended mir			
SXVWAC13F2	-	-	-		
SXVWAC17F2	50	160	130		
SXVWAC22F2	64	200	170		

TOPGRIP ridge-top V belts

The TOPGRIP ridge can be welded on top of all our V belts, except DEL/ROC quality, resulting in a wide range of ridge-top V belts adapted to various conveying problems.

The technical characteristics (Traction force, elongation, friction coefficient...) of our TOPGRIP belts are similar to the characteristics of the base belts. Only the pulley diameter changes:



TOPGRIP 70 ShA translucent ridge

- grip flexibility
- abrasion resistant

V belt cogged or not

DEL/SAN reinforced









solid

Reference :	DSVBAR	RTO	H15GARTO		SXVWARTO		DFVRTO		SXVMTO		
Section (mm)	Primitive pulley recommended	ø (mm) mini			Primitive pulley recommended	1 / /		Primitive pulley ø (mm) recommended mini		Primitive pulley ø (mm) recommended mini	
13x15 A	180	160	170	150	150	130	150	130	130	110	
17x20 B	210	190	200	180	180	160	180	160	160	140	
22x25 C	290	270	280	260	260	230	260	230	240	220	











cogged

Reference :	DSVBACTO H16GACTO		SXVWACTO		DFVRCRTO		SXVMCRTO			
Section (mm)			Primitive pulley ø (mm) recommended mini		Primitive pulley ø (mm) recommended mini		Primitive pulley ø (mm) recommended mini			
13x15 A	150	130	130	110	120	100	120	100	100	90
17x20 B	180	160	160	140	140	120	140	120	120	100
22x25 C	240	210	220	200	190	170	190	170	180	160



Roll length 30 m

VIT/GLISS for V belts

Manufactured out of High Density Polyethylene (H.D.P.E), our VIT/GLISS runners will both perfectly guide your belts and improve the load capacity of each belt by reducing its friction on its runner.

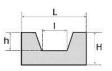
Advantages:

- Perfect guiding of the belts.
- · Low friction coefficient.
- Excellent resistance against abrasion.
- Shock-proof.
- Good resistance against corrosion and many chemical agents.
- Maximum continuous working temperature: +70°C.
- Extreme temperature limits: -40°C to +100°C.



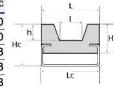


With steel rail. (Stainless steel on demand and according to quantities). Delivered in bars of 3 m.



Ref.	Belt dimensions	L	Н	ı	h
T 10	10 x 6	20	10	7	4
T 13	13 x 8	20	12	9	5
T 17	17 x 11	30	15	12	8
T 22	22 x 14	35	20	15	10
T 32	32 x 19	50	30	21	13

Ref.	Belt dimensions	L	Н	ı	h	Нс	Lc
TC 10	10 x 6	20	15	7	4	18	20
TC 13	13 x 8	20	18	9	5	22	20
TC 17	17 x 11	30	18	12	8	24	28
TC 22	22 x 14	35	25	15	10	30	38
TC 32	32 x 19	50	30	21	13	38	38





- White HDPE runners for food industry.
- C-shape stainless steel rail.
- Special runners following our customers schemes.

Consult us.

Attention:

Take care of the HDPE longitudinal dilatation, which is of 2 mm per metre for a 10°C increase in temperature.

special runners for V belts



Out-of-center grooves and chamfer.



Thin edges.



Double grooves - multi grooves.



SPECIAL PROFILES ON DEMAND.

brush belts



CONTINUOUS DYNAMIC BRUSHING



SOUPLEX or DEL/FLEX brush belts



Quality	Reference	Dimension (mm)	Mini pulley ø (mm)	Height of bristles	Number of rows	Pitch of bristles (mm)	Cross section of bristle (mm)	
DEL/FLEX	DFVR13BR	13 x 8 A	120	27	1	8	40/100	Nylon
SOUPLEX	SXVM17BR	17 x 11 B	180	60	2	8	40/100	bristles
SOUPLEX	SXVM22BR	22 x 14 C	240	60	3	8	40/100	

Special brush belts:

- Height
- cross section
 - pitch
- special brushing

On demand.





V belts with flights



High flights.



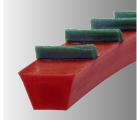
Flexible flights.



Flat welded triangles, for a minimum contact with the transported products.



Tough welded flights (several heights possible).



SF7 flights.



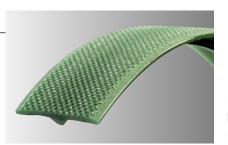
special profiles

ATC 63

For film-packaging machine

Cross section 25 x 2 mm with 4 x 2.5 mm guide

Rough or smooth surface, also available in thinner widths.



Hardness: 92 ShA

Recommended pulley diameter: 60 mm

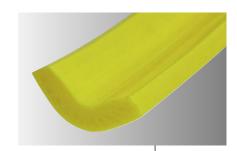
Minimum pulley diameter: 40 mm



E 238 corn belt

Hardness: 90 ShA

Dimensions: 32 x 28 x 8 mm U-shaped to convey corn.



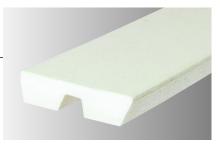
U Profile

Hardness: 80 ShA Dimensions: 40 x 10 mm Cable-saw pulley covering.



in quality SOUPLEX or DEL/FLEX Hardness: 85 ou 90 ShA

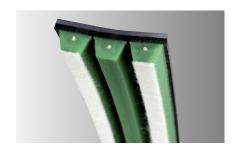
> Also available with flights and coatings.



multiples V belts

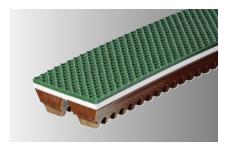


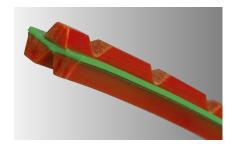




Cross section, width, thickness, lengths and hardness on demand.





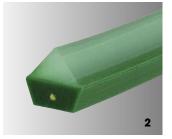


Other coatings.

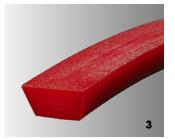
special belts



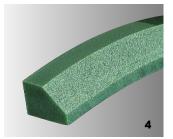
Asymetric ridge-top V belt.



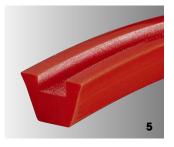
Machined ridge-top V belt.



Machined V belt, to make it thinner and more flexible.



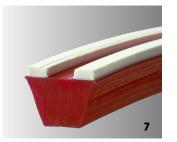
Special machined profiles on demand.



V belt with rectangular groove.



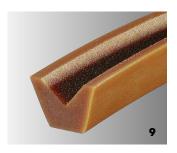
Rectangular belt with V groove.



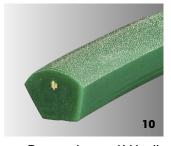
V belt with machined surface.



DEL/FLEX flat belt with two opposite V guides for alternate operation.



V belt with machined V groove (several depth possible).



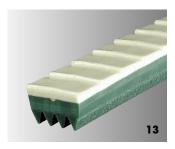
Dome-shaped V belt.



V belt with round groove (several depth possible).

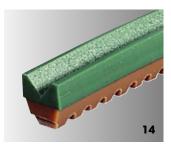


V belt machined on demand.

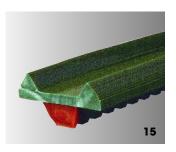


Special belt with sawtooth surface and machined POLY-V bottom

grooves.



V belt with V shape machine surface.



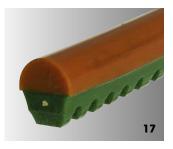
V belt with welded surface and V hold-in edges.



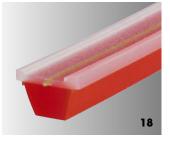
V belt with welded surface and round hold-in edges.

mafdel

special belts



V belt with welded half round belt.



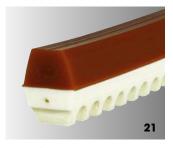
V belt with machined surface and aramid reinforcement.



Asymetric triangle belt.



Hexagonal asymetric SOUPLEX belt.



Cogged hexagonal belt.



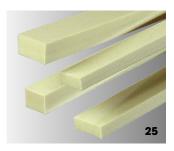
Flat belt with SR5 guide welded apex down.



V belt with welded SF7 ridge.



Round belt welded on top of a V belt.



Rectified belt for mobile moulding.



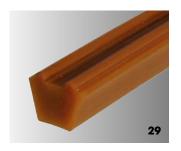
V belt with surface and machined hold-in edges.



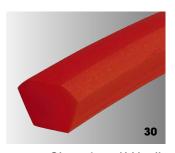
Hexagonal asymetric belt with special cogging.



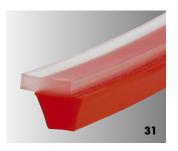
Round belt welded on the small base of a V belt.



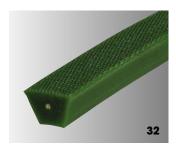
V belt with round edges.



Chamfered V belt.



V belt with out-of-center surface.



Embossed V belt.



standard welding tools



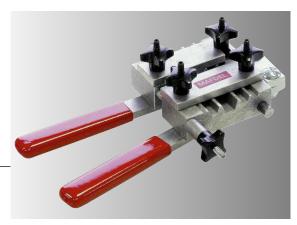
M50 welding iron

Thermostated, for round, V and flat belts up to 50 mm wide. 200 W.



Available with plastic handle.

standard weld



J60 welding clamp

For round and V belts up to 22 x 14 mm.





J25 welding clamp

For V belts up to 25 x 16 mm.





Tensioning tools

For round and V belts. Includes 2 clamping dies and 1 winch with lever.



welding tools

standard welding tools



M 51 welding iron with teflon-covered blade

Thermostated, for round and V belts up to 22 x 14 mm. 200 W.



tool case i n g





For round and flat belts up to 50 mm wide.



J15 welding clamp

Small clamp for round belts up to diam. 10 mm.



Includes:

- 1 M51 welding iron
- 1 J50 or J60 welding clamp
- 1 **\$135** cutter
- 1 P10 cutting clamp
- 1 knife



P10 cutting clamp

To clean weldings.

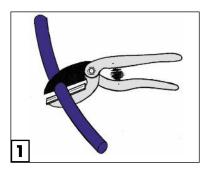


S135 cutter

For 90° and 45° cuttings.

welding tools

welding process

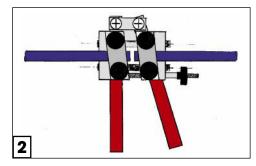


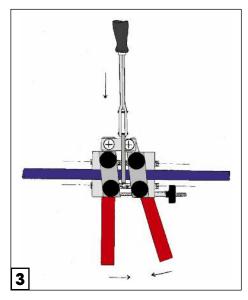
Plug the M50 or M51 welding iron in.

As our welding iron includes a thermostat, you should plug the iron in at least 8 minutes before welding.

Cut both ends of the belt, in a sharp 90° angle, with **\$135** graduated cutter.

Insert the ends of the belt into the appropriate clamp (**J50** or **J60**), allowing 5 mm of each end to protrude into the inside (If the belt to weld is a DEL/ROC, strongly tighten the top screws of the clamp).





Slide the blade in between both ends of the belt and make sure that the blade bears on the whole surface to weld.

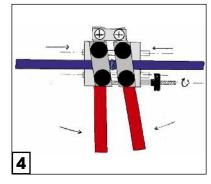
Tighten slightly and leave the ends melt.

Wait until you get a good bead of melted material on each side.

Open the clamp, quickly remove the welding iron and re-close at once, tightening accordingly to the cross section of the belt (the bigger the belt, the more tightened the clamp).

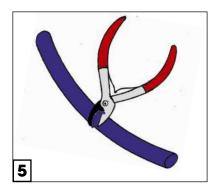
Maintain the clamp close using the side screw and let the belt cool (which should take between 2 and 5 minutes, depending on the size of the belt).

If you do weld a DEL/ROC belt, this step will have to be handled even faster.





and V belts



Clean the welding point.

Check the alignment of the welding point out, as well as its homogeneity (no bubble of air) and solidity (by bending it). Fit the belt on the machine.

NB: Always use a clean and very hot welding iron. Both ends of the belt to weld should be perfectly clean as well.

CLEAN THE BLADE OF THE WELDING IRON IMMEDIATELY.

M51 welding iron:

Wipe the blade with a clean 100% cotton cloth.

Fer M50

Remove most of the melted material with the blade of a knife (without scraping the iron), and wipe the rest out with a clean 100% cotton cloth.

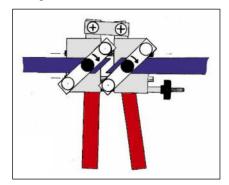
Do not use any cloth that may contain synthetic materials, which would melt in contact with the blade of the welding iron, and then contaminate the welding iron.

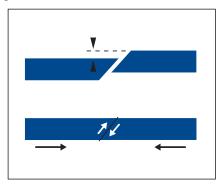
For V belts only:

If you use a **J25** welding clamp, cut both ends of the belt with a 45° angle, using our **\$135** cutter.

Insert the ends of the belt into the ${\bf J25}$ clamp, allowing 5 mm of each end to protrude into the inside .

The two dies of our **J25** welding are not in the same horizontal line (1 mm difference for small belts, 2 mm for bigger belts), to compensate for the slippage of the belts' ends due to melting when brought together for welding. The exerted pressure on the handles during the melting will bring both ends back in the same alignment.



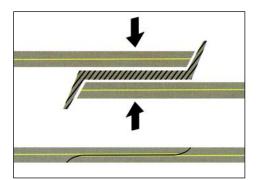




OVERLAP welding

Welding that overlaps both ends of the belt. Can be adapted to any MAFDEL belt :

- ROUND belts.
- V belts, cogged or not, with or without a coating, ridge-top and above all reinforced.



- Stronger joining
- Overlapping of both ends of the reinforcement
- Simple and fast
- No previous special cutting
- Higher traction resistance
- Increased load capacity
- Homogeneity of the welding
- Safe process
- Welding on site without dismantling the conveyor

OVERLAP welding tools



+ pairs of dies for round and V belts



With teflon-covered blade



OVERLAP tool case

For OVERLAP welding

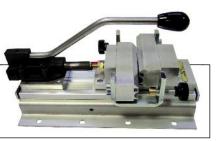
Includes:

- 1 M150 welding iron
- 1 J150 welding clamp
- 1 pair of dies of your choice
- 1 \$135 cutter
- 1 double-side adhesive tape



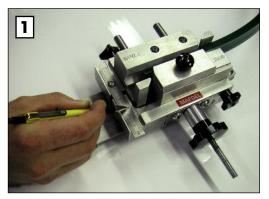
JM150 WELDING CLAMP WITH LEVER FOR ROUND BELTS

Recommended for round and reinforced DEL/ROC d. 9.5 - 10 mm et d.12 - 12.5 mm

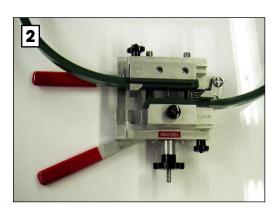


welding tools

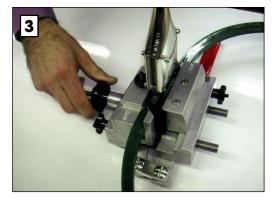
OVERLAP welding process



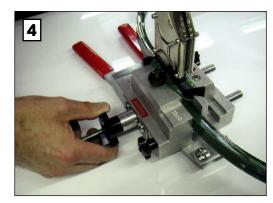
Cut the belt 70 mm longer than its theorical length. Put the top end of the belt into the corresponding die of the clamp and close it. Read the X measure at the right of the reference pin, on the small side ruler.



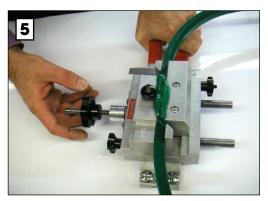
Open the clamp and place the second end in.



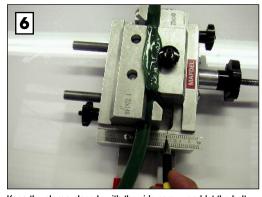
When the $\mbox{\bf M150}$ iron is warm enough, insert it between both ends of the belt.



Tighten little by little the side screw, until the previously noted X measure gets to the left of the reference pin .



Loosen the side screw with your right hand, keeping the clamp closed with your left hand. Then, quickly, open the clamp, remove the welding iron, and close the clamp again. Both fused ends will get in contact and weld.



Keep the clamp closed with the side screw, and let the belt cool 5 to 10 mn. The right side of the reference pin should then show the X measure on the small ruler.



Remove the belt and clean the welding point.

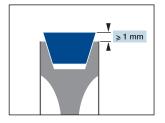


The belt is ready to work.

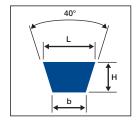


advice / recommendations

advice / recommendations

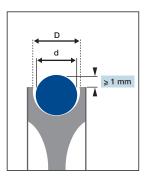


Belt section	Z	A	В	С	D
L x H (mm)	10 x 6	13 x 8	17 x 11	22 x 14	32 x 19
b (mm)	6	7.5	9	12	18



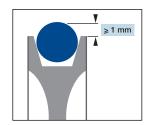
A V belt is driven by its sides. The belt must come off its pulley by 1mm, so that the product conveyed may not touch the pulley.

driving round belts



A round belt is driven by a round-groove pulley. The diameter of this round groove should be 1mm greater than the diameter of the belt for smaller round belts, and 2mm greater for round belts from diam. 12 mm on.

If the belt runs in wet or greasy conditions, we recommend that the round belt be driven by a V-groove pulley. It will substantially improve the efficiency of the driving and will prevent the belt from slipping.



d < 12 mm D = d + 1 mm $d \ge 12 \text{ mm}$ D = d + 2 mm

Diameter of the round belt d (mm)	3 à 6	8	10	12	15	18
V groove of the driving pulley L x H (mm)	-	10 x 6 (Z)	13 x 8 (A)	17 x 11 (B)	17 x 11 (B)	22 x 14 (C)

guiding round and V belts

We recommend the using of HDPE runners. They will improve the load capacity of your belts, thanks to a very low friction coefficient. For exemple, the friction coefficient on a HDPE runner is twice as low as on a steel runner. The belt would thus bear twice as much weight on a HDPE runner than on a steel runner.



The diameter of the round groove should be 1 to 2 mm greater than the diameter of the belt.

V belts slip on their small base. The V groove of the runner should be 1 mm wider than the belt. This will prevent the V belt from being blocked into its runner.



We recommend that the extremities of the runner be chamfered. This avoids any risk of fits and starts as the belt arrives on its runner. This recommendation is even more important if your belt is cogged.

parallel belts

For belts mounted in parallel, it is strongly recommended that the return pulleys run independently. This compensates for differences in linear speed between the belts, thus avoiding abnormal tension which might cause jerky operation.

welding reinforced belts



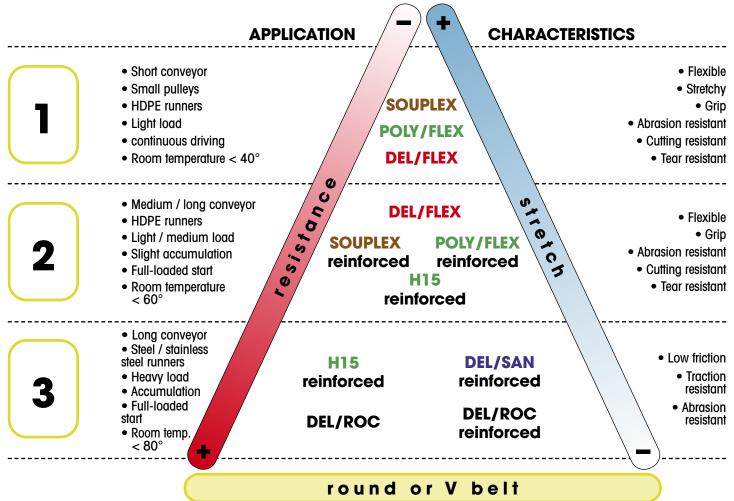
Our reinforced belts are welded in the same way as the other non-reinforced belts, **WITHOUT REMOVING THE REINFORCEMENT**. This avoids all the problems associated with drilling. Our special reinforcement does not fuse at the welding temperature of our thermostated irons (260°C). There is therefore no danger of contaminating the weld.



To choose the right belt, you need to know the characteristics of the conveyor on which it will run, its working conditions and the product it will convey.

CONVEYOR	PRODUCT TRANSPORTED	WORKING CONDITIONS
length of the conveyor	maximum transported weight	continuous or stop-and-go driving
diameter of the pulleys	nature of the product	accumulation
type of support	spreading of the weight along the conveyor	other efforts, pressure, etc.
length of the tensioning system	temperature of the product	room temperature
number of belts		
inclination		

Choose up, amongst the 3 following categories, which one best matches to your application:



Into the selected category, choose the quality of belt whose general caracteristics, such as **resistance**, **hardness**, **friction coefficient**, **stretch**, **operating temperature**... are the closest to the ones your are looking for.

Exemples:

- In case of accumulation of the products transported on the belt, choose the quality with the lowest friction coefficient.
- To convey heavy loads, choose the strongest and less stretchy quality.

NB: The stretch of low-hardness belts (85 and 90 shA), such as SOUPLEX, POLY/FLEX and DEL/FLEX, allows you to mount them with pretension (shortened of a length that corresponds to the elongation that the belt would need to work properly), and in some cases to avoid the using of a tensioning system.

The mounting of the hardest belts (95 and 100 shA) and/or reinforced belts requires the using of a tensioning system or tensioning tools (page 34).



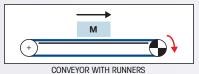
conveying / simplified calculations

SYMBOLE	MEASURES	DESIGNATION	BELT CHARACTERISTIC (in catalogue)
M	Kg	Transported load	
Mmax	Kg	Maximum load limit per belt	
Mtotal	Kg	Maximum load limit on all the belts	
Mr	Kg	Weight of all the tangentially driven rollers	
L	m	Conveyor length	
Н	m	Conveyor height	
F	daN	Minimum traction force for the continuous driving of the load M	
F'	daN	Minimum traction force for full-loaded starts with the load M	
Ft	daN	Traction force of the chosen belt	Х
t	%	Stretch corresponding to the traction force of the belt Ft	Х
Cfp		Friction coefficient on the transported product on the belt	
Cf		Friction coefficient of the belt on its runner	Х
Cr		Rolling coefficient of the belt on its support (0.05 to 0.1 according to the conditions: smooth support, bearings,	.)
Cs		Safety coefficient	

type of conveyor

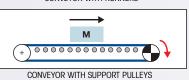
simplified calculation of the needed traction force to drive a specific load

simplified calculation of the maximum load limit per belt



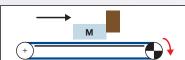
 $F = M \times Cf$

Mmax = Ft / Cf



 $F = M \times Cr$

Mmax = Ft / Cr

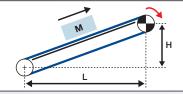


CONVEYOR WITH ACCUMLULATION

In case of accumulation, take into account the friction coefficient of the product to convey on the belt. You will add this data to the friction coefficient of the belt on its runner:



Mmax = Ft / (Cf + Cfp)

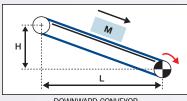


UPWARD CONVEYOR

If your conveyor is inclined, consider the difference in height:

$$F = M \times Cf + M \times (H / L)$$

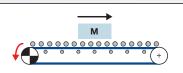
Mmax = Ft / (Cf + H / L)



DOWNWARD CONVEYOR

 $F = M \times Cf - M \times (H / L)$ Mmax = Ft / (Cf - H / L)

Always take into account the weight of all the tangentially driven rollers in your



CONVEYOR WITH TANGENTIALLY DRIVEN ROLLERS

For all type of conveyors, in case of

STOP-AND-GO DRIVING

(full-loaded starts):

The traction force **F** determined above must be multiplicated by 2.

 $F = (M + Mr) \times Cr$

 $F' = F \times 2$

calculations.

As you calculate **Mmax**, only take into account half the traction force

Mmax = (Ft / Cr) - Mr

of the selected belt.

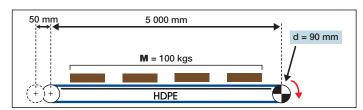
Replace Ft by Ft/2

1/ EXISTING MACHINE

CONSIDER THE CHARACTERISTICS OF THE CONVEYOR, OF THE TRANSPORTED PRODUCT, AS WELL AS THE GENERAL WORKING CONDITIONS.

CHOOSING THE MOST ADEQUATE BELT.

Continuous conveying of wood boards on two parallel 17 x 11 mm V belts sliding on HDPE runners.



Choosing the belt category (page 41)

Medium length Medium Load

Small pulleys compared to the conveyor's length

CATEGORY 2

Choosing the quality of the belt

Long belt > 10 metres

Small pulleys

Short tensioning system: 50 mm maxi

reinforced belt cogged belt SOUPLEX reinforced or H16

Checking the pulley diameter out

d = 90 mm

We strongly recommend to respect the recommended pulley diameter. Too small pulleys would damage the belt and reduce its life time.

	SOUPLEX reinforced & cogged 17 x 11 mm	H16 reinforced & cogged 17 x 11 mm
ø recommended (mm)	110	130
ø mini (mm)	90	110
	A	

Calculating the maximum load limit

Total load on the conveyor (kgs) M = 100 kgs

Traction force of the selected belt
Corresponding elongation
Friction coefficient on HDPE
Maximum load limit per belt
Maximum load limit on 2 belts
Safety factor

	SOUPLEX reinforced & cogged 17 x 11 mm	H16 reinforced & cogged 17 x 11 mm
Ft (daN)	40	50
t (%)	1	1.5
Cf	0.35	0.25
Mmax (Kgs) = Ft / Cf	114	200
Mtotal (Kgs) = 2 x Mmax	228	400
Cs = Mtotal / M	2.3	4
	†	†

mafdel

SOLUTIONS

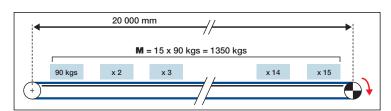
Both selected belts could easily convey this load of 100 kgs. Nevertheless, the H16 17 x 11 mm V belt requires much bigger pulleys than the 90 mm of the described conveyor. On the other hand, the reinforced and cogged 17 x 11 mm SOUPLEX can bend around pulleys down to 85 mm diameter. The most apropriate belt for this application is our **reinforced and cogged 17x11mm SOUPLEX**, **mounted with 1% pretension**.

2/ PROTOTYPE

CHOOSING THE RIGHT BELT ACCORDING TO CONVEYOR DESIGNER'S SPECIFICATIONS.

DESIGNING A CONVEYOR IN ACCORDANCE WITH THE CHARACTERISTICS OF A PARTICULAR BELT.

Conveyor for an industrial cheesedairy conveying 15 round cheeses of 90 kgs each along 20m. Stop-and-go driving.



choosing the belt category (page 41)

Long conveyor
Heavy load
Full-loaded starts

CATEGORY 3

choosing the quality of the belt

High traction force

Low friction coefficient

Easy to clean

Teinforced belt

DEL/ROC or DEL/SAN

round belt

calculating the traction force to drive this load

Total load on the conveyor (kgs) M = 1350 kgs

Friction coefficient of the belt Continuous traction force Traction force for full-loaded start

	reinforc	ed & rou	nd DEL/ROC	reinforced & round DEL/SAN		
	on ru stain.stee		on support pulleys	on ru stain. stee		on support pulleys
Cf	0.5	0.15	0.1	0.55	0.2	0.1
$F (daN) = M \times CF$	675	203	135	743	270	135
$\mathbf{F'}$ (daN) = \mathbf{F} x 2	1350	405	270	1486	540	270

choosing the section and the number of belt(s)

Choosing, among the selected category, how many belts and of which section are necessary to reach the necessary traction force, taking into account safety factor of about 1.5.

traction force for full-loaded starts

Necessary number of belts

Total traction force

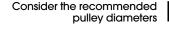
Safety coefficient

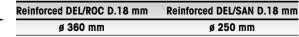
	reinforced & round DEL/ROC ø 18 mm			reinforced & round DEL/SAN ø 18 mm		
	Traction force : Ft = 200 daN			Traction force : $Ft = 125 \text{ daN}$		
F' (daN)	1350	405	270	1486 540 2		
Nbre = F' / Ft	7	3	2	12	5	3
Ftotal (daN) = Nbre x Ft	1400	600	400	1500	625	375
Cs = Ftotal / F'	1.04	1.5	1.5	1.01	1.16	1.4
		A	A			A

SOLUTIONS

Several options are possible

3 reinforced DEL/ROC round belts d.18mm on HDPE runner
2 reinforced DEL/ROC round belts d.18mm on support pulleys
3 reinforced DEL/SAN round belts d.18mm on support pulleys







The traction forces of the belts selected through our example (200 daN for reinforced DEL/ROC diam. 18 mm and 125 daN for reinforced DEL/FLEX diam. 18 mm) are indicated in our catalogue at the following respective elongations: 2% and 1,5%. We strongly recommend to consider these tensions while mounting the belts on the machine, for the conveyor to work properly.







CH. FRÖHLICH AG™

H. FRÖHLICH AG · Industrietechnik Widenholzstrasse 1 · CH-8304 Wallisellen Tel. +41 44 910 16 22 · Fax +41 44 910 63 44 info@h-froehlich-ag.ch · www.h-froehlich-ag.ch



MAFDEL

Z.I. Lafayette F - 38790 Saint Georges d'Espéranche FRANCE Tel +33 (0)4 78 96 21 90 - Fax +33 (0)4 78 96 21 78 www.mafdel-belts.com mafdel@mafdel.fr