



**MEGADYNE**



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## **MEGAFLAT**

TECHNICAL  
HANDBOOK

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# INTRODUCTION

## TO MEGAFLAT

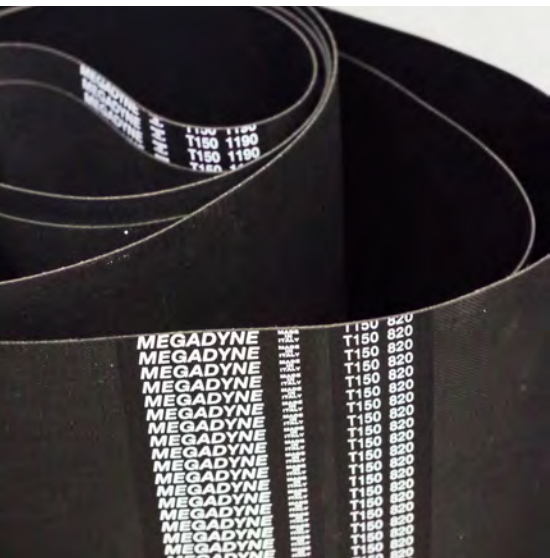
MEGAFLAT belts are truly endless mandrel moulded without a single seam or splice. Special fabrics of Polyester, Polyamid, Aramide, Cotton yarn or Elastic yarn are manufactured in endless form on the most modern CNC knitting machines. The available coatings Polyurethane, Silicone and Natural Rubber are applied as an endless cover.

This wide variety of basic materials and surface treatments guarantee the perfect belt for transmission and for conveying even at extreme speeds and in special environments.

### MAIN FEATURES

- High flexibility
- Small pulley diameters
- Dimensional accuracy
- High speed
- Energy efficient
- Low noise and vibration
- Low maintenance
- Good chemical and ozone resistance
- High friction surface
- Uniform elongation values

MEGAFLAT is always a belt made exactly to customer requirements in endless form.



## MAIN COMPONENTS OF MEGAFLAT BELTS

### TENSILE REINFORCEMENT:

special fabrics are available with:

**Elastic yarn**, high elastic elongation from 4-10% for fixed shaft centre distances.

**Polyamide**, medium elastic from 0,5-1,5% for fixed shaft centre distances.

**Polyester**, low elastic elongation.

**Cotton yarn**, low elongation and low coefficient of friction.

**Aramide**, extremely low elongation and temperature resistance up to 280°.

### COATINGS:

Endless covers are available:

**Foamed Polyurethane**, in colours yellow, grey, red and white, different hardness and thickness up to 10 mm, good coefficient of friction to paper

**Neoprene Rubber**, black with hardness approx. 75 Shore A, high resistance to abrasion, high coefficient of friction, rough on transport side and smooth on the reverse side

**Silicones**, in colours white, grey, red, blue, hardness approx. 30-35 ShA. High temperature resistant, FDA approved.



# POLYURETHANE

## FLAT BELTS

### PRODUCT RANGE

TYPE	P0	P102
		
Fabric	No fabric	Elastic fabric
Coating for drive or transport side	Standard: 50 ShA ( $\pm 7$ ) Special: 30-40 ShA (soft foam), 60-75 ShA (hard)	Standard: 50 ShA ( $\pm 7$ ) Special: 30-40 ShA (soft foam), 60-75 ShA (hard)
Coating revers side	No	Polyurethane/Silicone
Colour <sup>(1)</sup>	Yellow & Grey	Yellow & Grey
Antistatic	No	Possible

### COEFFICIENT OF FRICTION ( $\mu$ )

Coated side smooth	0,4	0,4
Fabric side rough	-	0,2

Breaking strength (N) per cm width in endless form	140	250
Pretension (N) recommended per cm width in endless form	-	10
Elongation (%) at pretension recommended per cm	-	4
Minimum recommended pulley diameter (mm)	8	25

### SIZE (MM) <sup>(2)</sup>

Length	245 - 2500	210 - 2500
Width (length $\leq$ 460 mm)	6 - 330	6 - 330
Width (length > 460 - 600 mm)	6 - 330	6 - 330
Width (length > 600 - 750 mm)	6 - 550	6 - 550
Width (length > 750 mm)	6 - 550	6 - 550
Thickness	0,9	1,8 <sup>(3)</sup>

### TOLERANCES

Length (%)	$\pm 2,00$	$\pm 2,00$
Width (mm)	$\pm 0,50$	$\pm 0,50$
Thickness (mm)	$\pm 0,05$	$\pm 0,05$

Working temperature (intermittent)	-10°C / +60°C (+80)	-10°C / +60°C (+80)
Applications	Suitable for fixed center distance drive system like copying machines. Highly elastic.	Suitable for fixed center distance drive systems like machinery for paper transport. Elastic.

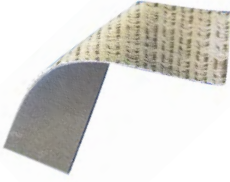

(1) Additional colours on request - (2) Additional dimensions on request  
 (3) Increase of thickness by about 0,3/0,5 mm for belts coated both sides.  
 MEGAFLAT S and P 'series' are unbranded



# POLYURETHANE

## FLAT BELTS

### PRODUCT RANGE

TYPE	P108	P110
		
Fabric	Polyester/Cotton	Polyester
Coating for drive or transport side	Standard: 50 ShA ( $\pm 7$ ) Special: 30-40 ShA (soft foam), 60-75 ShA (hard)	Standard: 50 ShA ( $\pm 7$ ) Special: 30-40 ShA (soft foam), 60-75 ShA (hard)
Coating revers side	Polyurethane/Silicone	Polyurethane/Silicone
Colour <sup>(1)</sup>	Yellow & Grey	Yellow & Grey
Antistatic	Possible	Possible

### COEFFICIENT OF FRICTION ( $\mu$ )

	0,4	0,4
Fabric side rough	0,1	0,3
Breaking strength (N) per cm width in endless form	900	1250
Pretension (N) recommended per cm width in endless form	200	150
Elongation (%) at pretension recommended per cm	1,2	0,8
Minimum recommended pulley diameter (mm)	8	12

### SIZE (MM) <sup>(2)</sup>

Length	210 - 3850	210 - 3850
Width (length $\leq$ 460 mm)	6 - 330	6 - 330
Width (length > 460 - 600 mm)	6 - 330	6 - 330
Width (length > 600 - 750 mm)	6 - 550	6 - 550
Width (length > 750 mm)	6 - 550	6 - 550
Thickness	0,8 <sup>(3)</sup>	1,0 <sup>(3)</sup>

### TOLERANCES

Length (%)	$\pm 0,50$	$\pm 0,50$
Width (mm)	$\pm 0,50$	$\pm 0,50$
Thickness (mm)	$\pm 0,05$	$\pm 0,05$

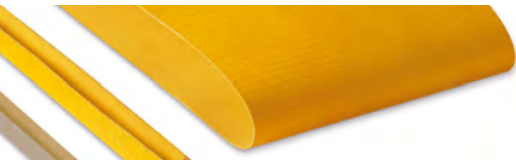
Working temperature (intermittent)	-10°C / +60°C (+80)	-10°C / +60°C (+80)
Applications	Suitable for knife edge transport. Low coefficient of friction on textile side. Thin, highly flexible band.	Suitable for flexible drive and transport systems like grinding machines. Very good running performance. Universal applications.

(1) Additional colours on request - (2) Additional dimensions on request

(3) Increase of thickness by about 0,3/0,5 mm for belts coated both sides

MEGAFLAT S and P 'series' are unbranded

MEGAFLAT



# POLYURETHANE

## FLAT BELTS

### PRODUCT RANGE

TYPE	P120	P155
		
Fabric	Polyester	Aramid/ Polyester
Coating for drive or transport side	Standard: 50 ShA ( $\pm 7$ ) Special: 30-40 ShA (soft foam), 60-75 ShA (hard)	Standard: 50 ShA ( $\pm 7$ ) Special: 30-40 ShA (soft foam), 60-75 ShA (hard)
Coating revers side	Polyurethane/Silicone	Polyurethane/Silicone
Colour <sup>(1)</sup>	Yellow & Grey	Yellow & Grey
Antistatic	Possible	Possible

### COEFFICIENT OF FRICTION ( $\mu$ )

Coated side smooth	0,4	0,4
Fabric side rough	0,2	0,2
Breaking strength (N) per cm width in endless form	3500	6500
Pretension (N) recommended per cm width in endless form	300	350
Elongation (%) at pretension recommended per cm	0,8	0,5
Minimum recommended pulley diameter (mm)	20	30

### SIZE (MM) <sup>(2)</sup>

Length	210 - 4300	210 - 4300
Width (length $\leq$ 460 mm)	6 - 330	6 - 330
Width (length > 460 - 600 mm)	6 - 330	6 - 330
Width (length > 600 - 750 mm)	6 - 550	6 - 400
Width (length > 750 mm)	6 - 550	6 - 400
Thickness	1,5 <sup>(3)</sup>	2,0 <sup>(3)</sup>

### TOLERANCES

Length (%)	$\pm 0,50$	$\pm 1,00$
Width (mm)	$\pm 0,50$	$\pm 0,50$
Thickness (mm)	$\pm 0,05$	$\pm 0,05$
Working temperature (intermittent)	-10°C / +60°C (+80)	-10°C / +60°C (+80)
Applications	Suitable for heavy drive conditions. Universal applications. Medium-duty drives.	Suitable for conveyor system. Extremely low elongation. Heavy-duty drives.

(1) Additional colours on request - (2) Additional dimensions on request

(3) Increase of thickness by about 0,3/0,5 mm for belts coated both sides

MEGAFLAT S and P 'series' are unbranded



# SILICONE

## FLAT BELTS

### PRODUCT RANGE

S108	S110	S120	S155
			
Polyester/Cotton	Polyester	Polyester	Aramid/Polyester
Silicone 30-35 ShA	Silicone 30-35 ShA	Silicone 30-35 ShA	Silicone 30-35 ShA
Polyurethane/Silicone	Polyurethane/Silicone	Polyurethane/Silicone	Polyurethane/Silicone
White & Grey	White & Grey	White & Grey	White & Grey
Possible	Possible	Possible	Possible

COEFFICIENT OF FRICTION ( $\mu$ )			
0,6	0,6	0,6	0,6
0,1	0,2	0,4	0,2
800	1000	3400	5900
180	125	350	400
0,8	0,8	0,8	0,5
8	12	20	25

SIZE (MM) <sup>(2)</sup>			
210 - 3850	210 - 3850	210 - 4300	210 - 3800
6 - 330	6 - 330	6 - 330	6 - 330
6 - 330	6 - 330	6 - 330	6 - 330
6 - 550	6 - 550	6 - 550	6 - 400
6 - 550	6 - 550	6 - 550	6 - 400
0,8 <sup>(3)</sup>	1,0 <sup>(3)</sup>	1,5 <sup>(3)</sup>	2,0 <sup>(3)</sup>

TOLERANCES			
±0,50	±0,50	±0,50	±1,00
±0,50	±0,50	±0,50	±0,50
±0,05	±0,05	±0,05	±0,05
-50°C / +120°C (+160)	-50°C / +150°C (+180)	-50°C / +150°C (+180)	-60°C / +280°C (+300)
Transport belt, heat and cold resistant. Knife edge transport. Food contact.	Transport belt, heat and cold resistant. Suitable for food transport.	Universal transport belt, also for drive applications. Suitable for food transport.	Transport belt, high strength and high temperature extremes.

(1) Additional colours on request - (2) Additional dimensions on request -  
 (3) Increase of thickness by about 0,3/0,5 mm for belts coated both sides  
 MEGAFLAT S and P 'series' are unbranded





# RUBBER

## FLAT BELTS

### PRODUCT RANGE

TYPE	T75	T108
Fabric	Polyester	Polyester/Cotton
Coating for drive or transport side	Neoprene rough	Neoprene rough
Coating revers side	Neoprene smooth	Neoprene smooth
Colour <sup>(1)</sup>	Black	Black
Antistatic	Yes	Yes

COEFFICIENT OF FRICTION ( $\mu$ )		
Coated side smooth	0,6	0,6
Fabric side rough	0,5	0,5

Breaking strength (N) per cm width in endless form	1500	950
Pretension (N) recommended per cm width in endless form	150	260
Elongation (%) at pretension recommended per cm	0,8	0,8
Minimum recommended pulley diameter (mm)	6	10

SIZE (MM) <sup>(2)</sup>		
Length	200 - 3850	220 - 3850
Width (length $\leq$ 470 mm)	6 - 330	6 - 330
Width (length > 470 - 600 mm)	6 - 430	6 - 430
Width (length > 600 - 750 mm)	6 - 430	6 - 430
Width (length > 750 mm)	6 - 430	6 - 430
Thickness	0,5	0,65

TOLERANCES		
Length (%) *(<math>\leq 600\text{ mm}</math>: $\pm 5\text{ mm}$ )	$\pm 0,50$	$\pm 0,50$
Width (mm) for cut belt	$\pm 0,50$	$\pm 0,50$
Thickness (mm)	$\pm 0,15$	$\pm 0,15$

Working temperature (intermittent)	-30°C / +110°C	-25°C / +100°C
Applications	Suitable for light-load transmission or conveying. Drivers for office equipments.	Particularly suitable for applications in office equipment. Very flexible.

(1) Additional colours on request - (2) Additional dimensions on request

(3) Increase of thickness by about 0,3/0,5 mm for belts coated both sides



# RUBBER

## FLAT BELTS

### PRODUCT RANGE

T110	T120	T150	T155	T200
				
Polyester	Polyester	Polyester	Aramid/ Polyester	Polyester
Neoprene rough	Neoprene rough	Neoprene rough	Neoprene rough	Neoprene rough
Neoprene smooth	Neoprene smooth	Neoprene smooth	Neoprene smooth	Neoprene smooth
Black	Black	Black	Black	Black
Yes	Yes	Yes	Yes	Yes

COEFFICIENT OF FRICTION ( $\mu$ )				
0,6	0,6	0,6	0,6	0,6
0,5	0,5	0,5	0,5	0,5
1750	3450	3000	8000	4000
270	350	300	500	400
0,8	0,8	0,7	0,3	0,8
15	20	15	30	20

SIZE (MM) <sup>(2)</sup>				
200 - 3850	520 - 3850	200 - 3850	520 - 3850	200 - 3850
6 - 300	n.a.	6 - 330	n.a.	6 - 330
6 - 430	6 - 430	6 - 430	6 - 430	6 - 430
6 - 430	6 - 430	6 - 430	6 - 430	6 - 430
6 - 430	6 - 430	6 - 430	6 - 430	6 - 430
0,9	1,4	0,9	1,6	1,1

TOLERANCES				
$\pm 0,50$	$\pm 0,50$	$\pm 0,5$	$\pm 1,00$	$\pm 0,50$
$\pm 0,50$	$\pm 0,50$	$\pm 0,50$	$\pm 0,50$	$\pm 0,50$
$\pm 0,15$	$\pm 0,15$	$\pm 0,15$	$\pm 0,15$	$\pm 0,15$
-25°C / +100°C	-25°C / +100°C	-25°C / +100°C	-25°C / +100°C	-30°C / +110°C
Suitable for universal applications and textile machines. High belt running speed.	Suitable for medium-duty drives for wood or metal working.	Suitable for textile machinery. High belt running speed and medium torque drive	Suitable for low stretch demanding drive conditions. Heavy-duty drives.	Suitable for high torque, high speed drives such as machine tools.

(1) Additional colours on request - (2) Additional dimensions on request - (3) Increase of thickness by about 0,3/0,5 mm for belts coated both sides





# MEGAFLAT

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For updating refer to our website [www.megadynegroup.com](http://www.megadynegroup.com).

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We also recommend to read carefully the following documents on our web site [www.megadynegroup.com](http://www.megadynegroup.com):

- Ammega Italia S.p.A. General Conditions of Sale (comprising the warranty)
- Theoretical Belt Life
- Drive Components: Storage, Installation, Maintenance and Troubleshooting Handbook
- Belts standard use condition and temperature.

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