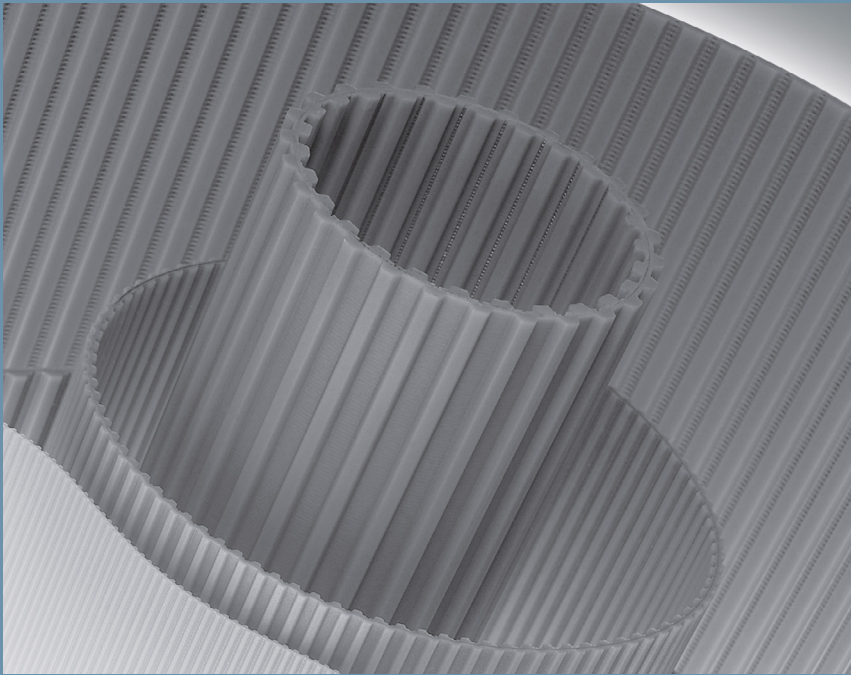




**MEGADYNE**



*EN*

# **MEGAPOWER**

TECHNICAL  
HANDBOOK

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# INTRODUCTION

## MEGAPOWER BELTS

Megadyne began manufacturing transmission belts in 1957 and moulding MEGAPOWER belts in 1975.

MEGAPOWER timing belts are manufactured in thermoset polyurethane by a unique moulding process.

The thermoset polyurethane gives superior wear and abrasion resistance. Several types of cords, helically wound rolled up inside the belts, assure excellent dimensional stability, and offer high performances in terms of flexibility and traction resistance.

MEGAPOWER belts are particularly suitable for power transmission applications.

### MEGAPOWER USE ADVANTAGES

MEGAPOWER timing belt drives represent a modern and efficient system of power transmission. They combine the advantages and properties of geared drives with those of Vee and Flat belts, whilst eliminating the troubles typical of each of these types of transmission.

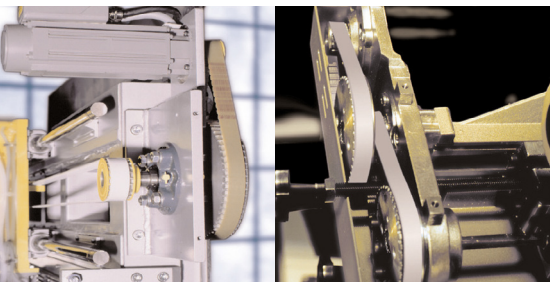
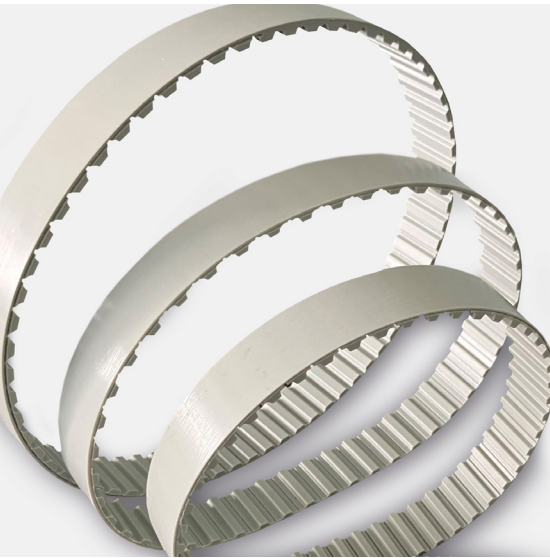
MEGAPOWER drives allow:

- Synchronous transmission
- Constant and high angular speed
- Excellent mechanical performance
- Dimensional stability
- Low noise
- Low installation tension
- Minimum drive dimensions
- Omega drive configuration
- Customised belt engineering

### MEGAPOWER APPLICATION AREAS

Thanks to their features, MEGAPOWER belts can be successfully used in a wide range of applications such as:

- Computer's tape movement
- Office automation equipment
- Medical equipment
- Packaging machinery
- Motor vehicles
- Swimming pool cleaning robots
- Plotters
- Money changers
- Optical instruments
- Robotic arms
- Electric appliances
- Shower manual controls
- Vacuum systems
- Vending machines
- Food machinery
- Textile machinery
- Leisure and do-it-yourself equipment



MEGAPOWER

# MEGAPOWER

## BELT SYSTEM SPECIFICATIONS

To satisfy a wide range of loads, speeds, and applications, MEGAPOWER belts and pulleys are made in a selection of sizes, capacities, and dimensions.

The three most significant dimensions of a belt are:

- 1. Pitch** is the distance in millimetres between two adjacent teeth centers, as measured on the pitch line of the belt. The theoretical pitch line of a MEGAPOWER belt lies within the tensile member.

It is indicated with abbreviations like T5, AT5, T10, AT10, H. The correspondence between abbreviations and pitches is indicated in the product's pages.

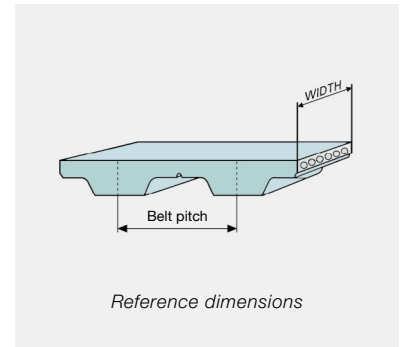
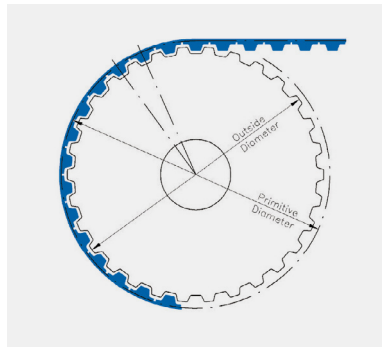
- 2. Length** is the total length (circumference) in millimetres, as measured along the pitch line.

On the pulley, the pitch line identifies the primitive diameter.

The primitive diameters of the driver ( $d_1$ ) and driven ( $d_2$ ) pulleys are the ones to be used for calculating the transmission ratio.

$$i = \frac{d_2}{d_1}$$

- 3. Width** can vary depending on the driving system needs.

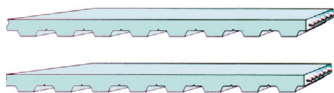


Reference dimensions

The imperial pitch belts tooth profile follows ISO 5296-1 normative.  
The T and AT series tooth profiles follow the normative ISO 17396.

A belt is constituted by two components: the body in polyurethane and a tension member represented by the cords in: steel, fiberglass, polyester, and Kevlar®.

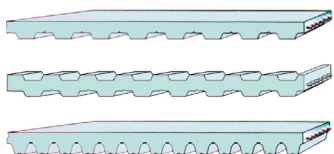
### MEGAPOWER



MXL • XL • L • H

T2,5

### MEGAPOWER2



T5 • T10

T5DL • T10DL

AT5 • AT10

## STANDARD RANGE

# CLASSIFICATIONS

## CLASSIFICATIONS

MEGAPOWER timing belts are manufactured in thermoset polyurethane, with helically wound zinked steel. These types of belts, developed by our Research & Development, offer good running characteristics and high traction loads. They are especially suited for power transmission. An extra thickness of special coating is also possible on the back of the belt, offering extra protection against aggressive or heavy products.

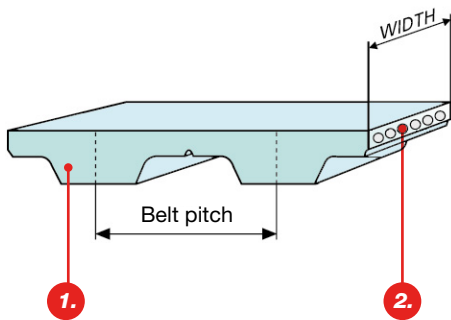
1. The **body** of the belts is in a grey/green thermoset polyurethane 88 ShA, characterized by high levels of wear-resistance, even in the presence of shock and surge loading. The thermoset polyurethane is obtained by mixing a prepolymer with a bonding compound, and heating the mixture. After cooling down to ambient temperature, the result is a polyurethane with good chemical and mechanical characteristics, giving the belt high performances and a long lifetime.
2. High-strength helically wound zinked-steel **tension members** allow high breaking load and extremely low elongation.

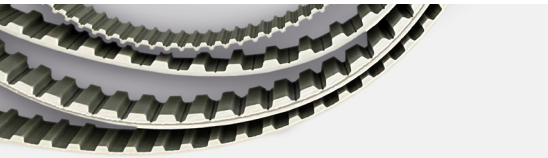
The combination of these high-grade materials improves belt performances, which can be summarised as follows:

- Exceptional resistance to abrasion and tooth shear
- Low coefficient of friction
- High flexibility
- Ozone and temperature resistance (-25 °c / +80 °c)
- Oil, grease, and gasoline resistance

## MECHANICAL AND CHEMICAL CHARACTERISTICS

- Constant dimensions
- Noiseless
- Free maintenance
- High flexibility
- High resistance steel traction cords, with little stretching and top flexibility
- Linear speeds up to 30 m/s
- Low pretension
- Constant length
- High-abrasion resistance
- Ageing, Hydrolysis, and Ozone resistant
- Working temperature -25 °C / +80 °C
- High resistance to Oils, Greases, and Gasoline
- Fairly Acid-proof and Alkali-proof





# CLASSIFICATIONS

## MECHANICAL AND CHEMICAL CHARACTERISTICS

### **BODY**

MEGAPOWER belts are manufactured with grey/green thermoset polyurethane 88 ShA, as standard.

Special compounds (different hardness, special properties) are available on request. Here below are some PU characteristics:

### **WATER**

No problem in normal or sea clean water at room temperature. Over 60 °C, there is a fast decrease of breaking strength.

### **ACIDS**

In acids-diluted proportions at room temperature, this PU is moderately attacked. In high-concentration acid solutions, this PU has a very short lifespan. Over 50 °C, acids are always dangerous for thermoset PU.

### **ALKALIS**

In alkalis-diluted proportions at room temperature, this PU is moderately attacked. In high-concentration alkaline solutions, this PU has a very short lifespan.

### **SOLVENTS**

Thermoset PU is insoluble in the greater part of solvents. Only the very polar solvents (such as tetrahydrofuran, dimethylformamide, and n-methylpyrrolidone) can dissolve or tight damage PU. The esters or the ketones (such as ethyl acetate or methylethylketene) can usually produce a bulge, decreasing mechanical characteristics. The aromatic hydrocarbons and the aliphatic hydrocarbons produce very high bulges.

### **OILS**

PU has a high resistance to mineral pure oils (lubricants, engine oils, combustible oils). Usually, high-performance synthetic oils, due to special additives contained, can be incompatible with thermoset PU, especially at high temperatures.

### **GREASES**

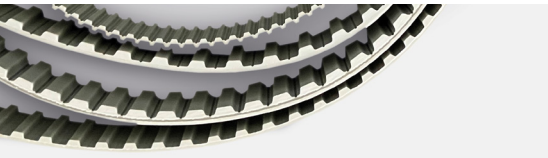
PU has a high resistance to pure mineral greases (lubricants greases). Usually, high-performance synthetic greases, due to special additives contained, can be incompatible with thermoset PU, especially at high temperatures.

### **FUELS**

Good resistance to petrol without alcohol. In the presence of alcohol, thermoset PU can suffer deterioration. Fuels, including aromatic stuff, can produce reversible bulges.

### **MICROORGANISMS**

In the presence of grime containing humidity, microorganisms can develop. In the event that a microbial attack could pose a danger, you must use a special kind of PU.



# CLASSIFICATIONS

## MECHANICAL AND CHEMICAL CHARACTERISTICS

### **CORDS**

#### **STANDARD CORD**

MEGAPOWER is manufactured with helicoidal zinked-steel cords, as standard.

#### **KEVLAR®**

Kevlar® tension cords are suggested for non-magnetic, precisely for the use in drives with metal-detectors. They also are widely used in the food industry.

#### **HP**

High-performance cords have 25% more strength capacity than standard cords. They are recommended for high repeatability applications.

#### **HF**

High-flexibility cords can accept smaller pulley' and idler's diameters than standard cords. They are suitable for multi-shaft drives with severe reverse bending.

#### **HPF**

High-performance and flexibility cords have 25% more strength capacity than standard cords, just like HP cords, but they are more flexible than the HP cords. They are suggested for high-performance and multi-shaft drives.

#### **STAINLESS STEEL**

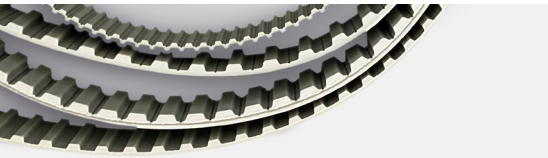
Stainless-steel cords have 25% less strength capacity than standard cords. They are recommended for water applications.

#### **FIBERGLASS AND POLYESTER CORDS**

They combine particular mechanical characteristics, such as high flexibility and resistance to water, and polyester cords for wet and humid environments.

Special compounds and cords must be tested and homologated on the application. Megadyne is not responsible for the wrong functioning of special products.





# CLASSIFICATIONS

## COATING

MEGAPOWER belts can be manufactured with special coatings to fit many applications with different requirements. For feasibility, see Table on page 35 and for properties, see on page 36.

## IDENTIFICATION CODE

Using the information in the Table below, it is possible to identify the right belt for every application.

The code is composed of letters and numbers as in the following example:

1		2		3		4		5		6
MPW	+	50	+	AT	+	10	+	1500	+	SPECIAL MANUFACTURES

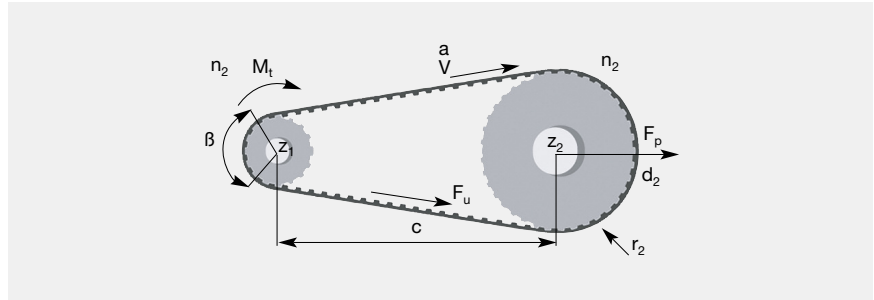
<b>1</b>	<b>MPW</b>	MEGAPOWER timing belt.
<b>2</b>	<b>50</b>	This number indicates the width of the requested belt. The value is in mm for a belt with pitch in mm, and inches for a belt with pitch in inches.
<b>3</b>	<b>AT</b>	This code, composed of letters, indicates the selection of the profile.
<b>4</b>	<b>10</b>	This number indicates the standard pitch of the belt. It is expressed in mm.
<b>5</b>	<b>1500</b>	The last number indicates the length of the belt, always in mm regardless of the pitch.
<b>6</b>	<b>SPECIAL MANUFACTURES:</b>	Special cords such as Kevlar®, HP, HF, HPF, stainless-steel, fiberglass, or polyester Special compounds with different hardness or colours Extra coating





# TECHNICAL CALCULATION

## POWER TRANSMISSION CALCULATION PROCEDURE



SYMBOL	UNIT	DEFINITION
<b>t</b>	mm	pitch
<b>b</b>	mm	belt width
<b>L<sub>w</sub></b>	mm	belt length
<b>c</b>	mm	center distance
<b>B</b>		arc of contact
<b>C<sub>1</sub>, C<sub>2</sub>, C<sub>3</sub>, C<sub>TOT</sub></b>		safety factors
<b>P</b>	kW	power
<b>P<sub>R</sub></b>	kW/cm	transmittable power for each cm of the tooth in mesh
<b>F<sub>U</sub></b>	N	transmittable force
<b>F<sub>P</sub></b>	N	pretension
<b>i</b>	-	speed ratio
<b>n<sub>1</sub>, n<sub>2</sub></b>	RPM	speed of the driver / driven pulley
<b>d<sub>1</sub>, d<sub>2</sub></b>	mm	pitch diameter of the driver / driven pulley
<b>z<sub>1</sub>, z<sub>2</sub></b>		no. of teeth of the driver/ driven pulley
<b>z<sub>m</sub></b>		no. of the teeth in mesh
<b>M<sub>t</sub></b>	Nm	drive torque
<b>a</b>	m/s <sup>2</sup>	acceleration

### DETERMINATION OF BELT PITCH

The belt pitch can be determined with the belt selection chart on page 11 (for new applications, we suggest AT profiles), referring to the speed of the small pulley.

### DETERMINATION OF SPEED RATIO

The speed ratio represents the ratio of the pulley' speed  $n_1$  to  $n_2$ , or pulley pitch diameter  $d_2$  to  $d_1$  or of number of teeth  $z_2$  to  $z_1$ .

$$i = \frac{n_1}{n_2} = \frac{d_2}{d_1} = \frac{z_2}{z_1}$$

### SELECTION OF REQUIRED TIMING PULLEYS

For the selection of the needed timing pulleys, see belt data pages and pulleys catalogue.



# TECHNICAL CALCULATION

## POWER TRANSMISSION CALCULATION PROCEDURE

### CALCULATION OF REQUIRED BELT LENGTH

The belt length can be determined by replacing your values in the following formula:

$$L_w[\text{mm}] = 2 \cdot c \cdot \sin \frac{\beta}{2} + \frac{t}{2} \cdot \left[ z_1 + z_2 + \left( 1 - \frac{\beta}{180} \right) \cdot (z_2 - z_1) \right]$$

where:

$$\beta = \arccos \left[ \frac{t \cdot (z_2 - z_1)}{2 \cdot \pi \cdot c} \right]$$

The actual belt length is to be taken from those available in the Table (see belt page), the closest to the calculated  $L_w$ .

### CALCULATION OF CENTER DISTANCE

The approximate center distance can be determined by replacing your values in the following formula:

$$c = \frac{1}{4} \left[ L_w - \frac{t}{2} (z_1 + z_2) + \sqrt{\left[ L_w - \frac{t}{2} (z_1 + z_2) \right]^2 - \left[ \frac{t}{\pi} (z_1 - z_2) \right]^2} \right]$$

### CHOICE OF SAFETY FACTOR

The total safety factor  $C_{TOT}$  is the correction coefficient for the power (to be transmitted) to obtain the design power.

$$C_{TOT} = C_1 + C_2 + C_3$$

$C_1$  is the Acceleration Factor, used when the inverse of speed ratio  $i$  is  $> 1,24$

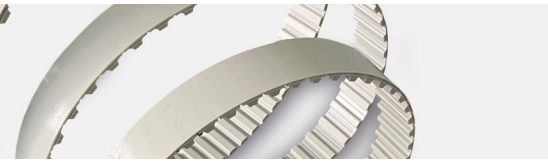
1/i	1,00÷1,24	1,25÷1,74	1,75÷2,49	2,50÷3,49	>3,50
$C_1$	0	0,1	0,2	0,3	0,4

$C_2$  is the Service Factor depending on the number of operational hours per day (operation time).

h/day	8÷10	10÷16	16÷24	Intermittent	Seasonal
$C_2$	0	+0,1	+0,2	-0,1	-0,1

$C_3$  is the Load Factor depending on the type of driver used by the internal transmission of the driven machine.

For  $C_3$  values, see Table 1 on page 11.



# TECHNICAL CALCULATION

## POWER TRANSMISSION CALCULATION PROCEDURE

### **DETERMINATION OF THE NUMBER OF TEETH IN THE MESH**

The number of the teeth in the mesh can be determined by replacing your values in the following formula:

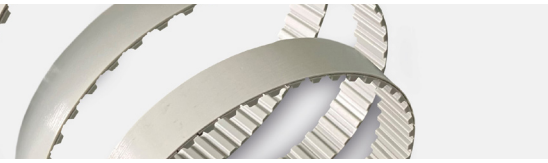
$$z_m = \frac{z_1 \cdot \beta}{360}$$

If calculated  $z_m$  is above 12, consider  $z_m = 12$  (maximum number of teeth in mesh)

### **DETERMINATION OF BELT WIDTH**

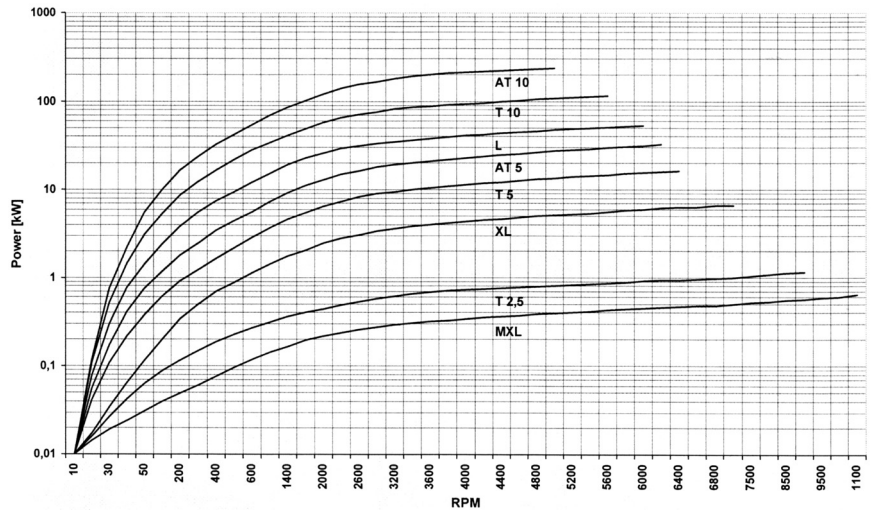
The belt width is calculated using the transmittable power  $P_R$  per tooth in mesh and per cm belt width (see table on belt page).

$$b[\text{mm}] = \frac{P \cdot C_{\text{TOT}} \cdot 10}{P_R \cdot z_m}$$



# CALCULATION PARAMETERS

## BELT SELECTION CHART



**TABLE 1 - LOAD FACTOR  $C_3$**

Driven Machine	Driver		
	Type A	Type B	Type C
<b>Office machinery</b>			
Typewriters	1	1,1	1,2
Computers, printers	1,1	1,2	1,3
Teleprinters, photocopiers	1,1	1,2	1,3
Motion-picture projectors and cameras	1	1,2	1,2
<b>Domestic machinery</b>			
Centrifuges	1	1,1	1,2
Kitchen appliances, universal slicers	1,1	1,2	1,3
<b>Sewing machines</b>			
Domestic sewing machines	1,1	1,2	1,3
Industrial sewing machines	1,2	1,3	1,4
<b>Laundry machinery</b>			
Driers	1,2	1,4	1,6
Washing machines	1,4	1,6	1,8
Bakery machinery and dough mixers	1,2	1,4	1,6
<b>Conveyors</b>			
Light-duty belt conveyors	1,1	1,2	1,3
Belt conveyor for ore, coal, sand	1,2	1,4	1,6
Heavy duty conveyors	1,4	1,6	1,8
Elevators, screw conveyors	1,4	1,6	1,8
Bucket elevators	1,4	1,6	1,8
<b>Agitators</b>			
Mixers for liquids	1,2	1,4	1,6
Mixers for semi-liquids	1,3	1,5	1,7

# CALCULATION PARAMETERS

**TABLE 1 - LOAD FACTOR  $C_3$**

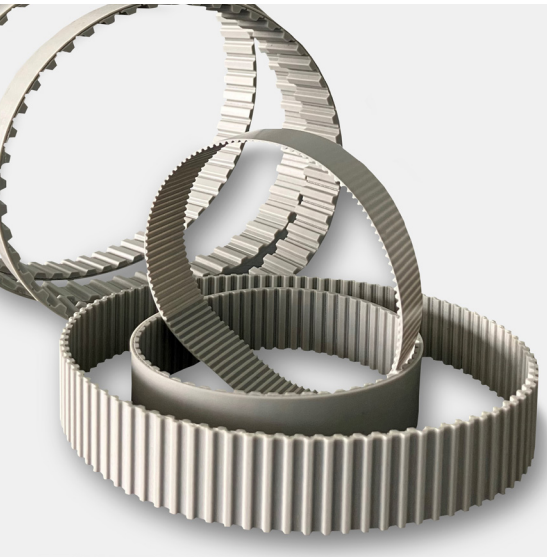
Driven Machine	Driver		
	Type A	Type B	Type C
<b>Machine tools</b>			
Lathes	1,2	1,4	1,6
Drills and grinders	1,3	1,5	1,7
Millers and planers	1,3	1,5	1,7
<b>Woodworking machinery</b>			
Lathes and band saws	1,2	1,3	1,5
Planers and disk saws	1,2	1,4	1,6
Sawmill machinery	1,4	1,6	1,8
<b>Brick machinery</b>			
Mixers	1,4	1,6	1,8
Pug mills	1,6	1,8	2
<b>Textile machinery</b>			
Spoolers and warping machines	1,2	1,4	1,6
Spinning and twisting machines	1,3	1,5	1,7
<b>Paper machinery</b>			
Agitators, calenders, driers	1,2	1,4	1,6
Pumps, beaters, pulpers	1,4	1,6	1,8
<b>Printing machinery</b>			
Linotype machines, cutters, folders	1,2	1,4	1,6
Rotary presses	1,3	1,5	1,7
<b>Screens</b>			
Drum screens	1,2	1,4	1,6
Vibrating screens	1,3	1,5	1,7
<b>Fans, Blowers</b>			
Exhauster, radial blowers	1,4	1,6	1,8
Mine ventilators, axial blowers	1,6	1,8	2
<b>Compressors</b>			
Helical compressors	1,4	1,5	1,6
Piston compressors	1,6	1,8	2
<b>Pumps</b>			
Centrifugal and gear pumps	1,2	1,4	1,6
Reciprocating pumps	1,7	1,9	2,1
Generators and exciters	1,4	1,6	1,8
Elevators and hoists	1,4	1,6	1,8
Centrifuges	1,5	1,7	1,9
Rubber machinery	1,5	1,7	1,9
<b>Mills</b>			
Hammer mills	1,5	1,7	1,9
Ball, roller and gravel mills	1,7	1,9	2,1

Type A: electric motors with low starting torque (up to 1,5 times the rated torque).

Type B: electric motors with normal starting torque (1,5 to 2,5 times the rated torque).

Type C: electric motors with high starting and breaking torque (over 2,5 times the related torque).

# CALCULATION EXAMPLE



## DETERMINATION OF BELT PITCH

According to the "Belt selection" chart on page 11, considering values of  $P = 2\text{kW}$  and  $n = 3000\text{RPM}$ , it is possible to choose between: T5, AT5 L, T10, or AT10. We chose T10.

$$i = \frac{n_1}{n_2} = \frac{3000}{900} = 3.33$$

## DETERMINATION OF SPEED RATIO

$$d_1 = \frac{d_2}{i} = \frac{108.36}{3.33} = 32.54\text{mm}$$

## SELECTION OF REQUIRED TIMING PULLEYS

According to page 28 we choose  $z_2 = 36$   $d_2 = 108.36\text{mm}$

$$i = \frac{z_2}{z_1} = \frac{36}{12} = 3$$

and from page 28 we choose pulley diameter is for  $z_1 = 12$

$$\beta = 166^\circ$$

$$L = 845\text{mm}$$

Actual speed ratio:

## CALCULATION OF REQUIRED BELT LENGTH

From page 28, the closest length to calculate is  $L_w = 850\text{mm}$ .

## CALCULATION OF CENTER DISTANCE

The approximate center distance:  $c = 302,6\text{mm}$

## CHOICE OF SAFETY FACTOR

From Table on page 9, we select  $C_1 = 0,3$  and  $C_2 = 0$ .

From Table on page 11, we select  $C_3 = 1,2$

So  $C_{TOT} = 1,5$

## DETERMINATION OF NUMBER OF TEETH IN THE MESH

The number of the teeth in the mesh can be determined by replacing your values in the following formula:

$$z_m = \frac{z \cdot \beta}{360} = 5$$

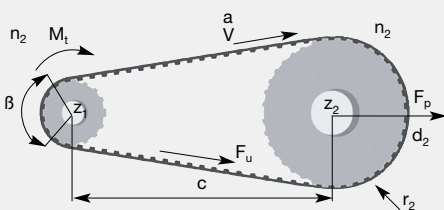
## DETERMINATION OF BELT WIDTH

From page 28, for  $z = 12$  and  $n = 3000$   $PR = 0.133\text{kW}$  so:

$$b = \frac{P \cdot C_{TOT} \cdot 10}{P_R \cdot z_m} = 47.24\text{mm}$$

From page 28, the closest width is  $50\text{mm}$

The choice for transmission is belt 50 T10 850, driver pulley 56T10 12, and driven pulley 56 T10 36.



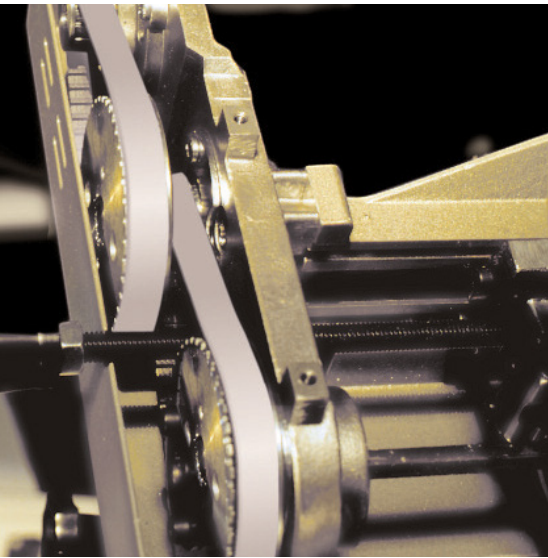
### DRIVER DATA

electric motor  $P = 2\text{kW}$   
 $n = 3000\text{RPM}$   
 Low starting torque

### MACHINE DATA

Woodworking machine  
 $N = 900\text{RPM}$   
 Max diameter driven pulley  $110\text{mm}$   
 $c = 300\text{mm}$

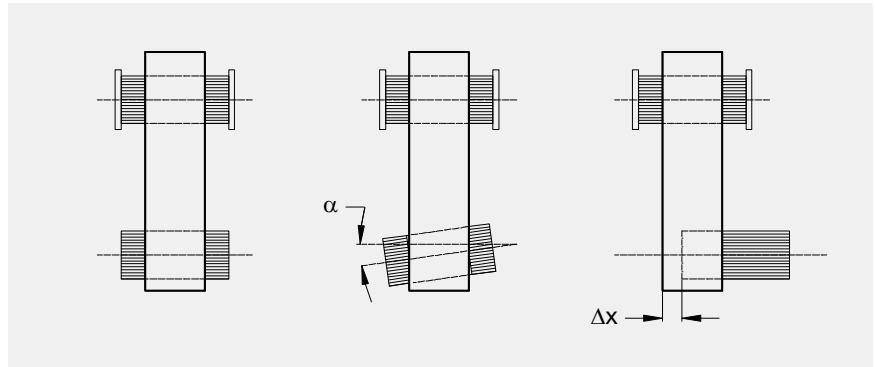
# BELT INSTALLATION



For a proper functioning of the system and to increase belt life, a correct pulley's installation is essential: pulleys must be parallel and aligned, as shown in drawing 1 (correct configuration).

If pulleys are not parallel, as in drawing 2, the belt could fall during functioning. This could provoke damage to your complete equipment.

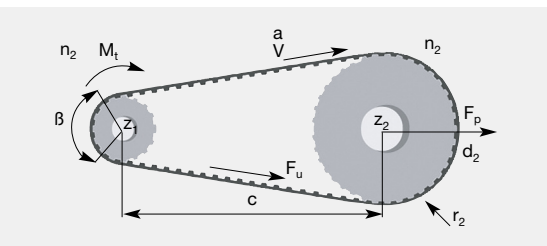
To grant a correct belt running,  $\alpha$  and  $\Delta x$  must be as small as possible. For more information, please contact our technical staff.



Drawing 1

Drawing 2

Drawing 3



## CALCULATION OF PRETENSION FORCE $F_p$

The pretension force is the load that has to be applied in the center of one of the driving system's pulleys in static conditions to avoid the derailing of the belt.

for:

$$F_p = 2 \cdot F_v \cdot \sin \frac{\beta}{2}$$

$$z < 60 \quad F_v = \frac{1}{3} \cdot F_u$$

$$60 < z < 150 \quad F_v = \frac{1}{2} \cdot F_u$$

$$z > 150 \quad F_v = \frac{2}{3} \cdot F_u$$

where:

$$F_u = \frac{60 \cdot 10^6 \cdot P \cdot \sin \frac{\beta}{2}}{t \cdot n_1 \cdot z_1}$$

## PROCEDURE TO MEASURE

The procedure to measure the tension of the belt is to use the Belt Tensioning Gauging Equipment. This device consists of a small sensing head, which is held across the belt to be measured. The belt is then tapped to induce its vibration at its natural frequency. The vibrations are detected by the sensing head and the frequency of vibration is displayed on the measuring unit. The relation between the belt static tension ( $T_s$ ) and the frequency of vibration ( $f$ ) may be calculated using the following formula:

$$f = \frac{1}{2t} \cdot \sqrt{\frac{T_s}{m}} \quad \text{or} \quad T_s = 4 \cdot m \cdot t^2 \cdot f^2$$

WHERE :

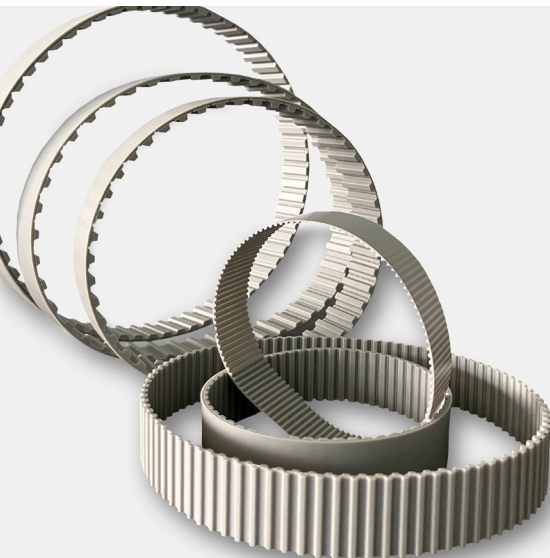
$T_s$  = Static tension (N)

$f$  = Frequency of vibration in Hertz (Hz)

$m$  = Belt mass per unit length (kg/m)

$t$  = Free belt span length in meters (m)





# CAUSES

## OF BELT FAILURE

To ensure that the performance and durability of a toothed belt drive fully meet the requirements of a particular application, first, it is crucial to precisely choose the drive, and then ensure that it is properly installed.

If this procedure is not followed, the drive's life and efficiency may be considerably reduced. The most frequent problems encountered, and their probable causes, are listed in the Table below.

PROBLEMS	CAUSES	CORRECTIVE ACTION
Abnormal wear of the belt 1. On the side of the tooth	<ul style="list-style-type: none"> <li>Belt excessively taut</li> <li>Excessive overloading</li> <li>Incorrect contour or diameter of the pulley</li> </ul>	<ul style="list-style-type: none"> <li>Reduce center distance</li> <li>Use a wider belt</li> <li>Replace pulley after checking the contour or diameter</li> </ul>
2. On the bottom of the tooth	<ul style="list-style-type: none"> <li>Excessive installation tension</li> </ul>	<ul style="list-style-type: none"> <li>Reduce center distance</li> </ul>
3. At the tooth root	<ul style="list-style-type: none"> <li>Incorrect diameter of the pulley</li> </ul>	<ul style="list-style-type: none"> <li>Replace the pulley after checking the diameter</li> </ul>
4. On the side of the belt	<ul style="list-style-type: none"> <li>Incorrect contour or diameter of the pulley</li> <li>Misalignment or wrong setting of the pulley</li> <li>Oscillation of axes and/or bearing</li> <li>Flanges bent</li> </ul>	<ul style="list-style-type: none"> <li>Replace the pulley after checking the contour or diameter</li> <li>Correct the position of the pulley and reinforce the bearing</li> <li>Straighten the flanges</li> </ul>
Failure through traction or laceration of teeth, indicating corrosion of the tension member	<ul style="list-style-type: none"> <li>Diameter of the small pulley, i.e. below the minimum</li> <li>Excessive moisture</li> </ul>	<ul style="list-style-type: none"> <li>Increase the diameter of the pulley, or use the belt and the pulleys with smaller pitch</li> <li>Eliminate the moisture</li> </ul>
Laceration of the belt	<ul style="list-style-type: none"> <li>Number of teeth in the mesh less than six</li> <li>Excessive load</li> </ul>	<ul style="list-style-type: none"> <li>Increase the number of teeth in the mesh or use the belts and the pulley of smaller pitch</li> <li>Use a wider belt</li> </ul>
Rupture of tensile member	<ul style="list-style-type: none"> <li>Excessive load</li> <li>Diameter of the pulley below minimum</li> </ul>	<ul style="list-style-type: none"> <li>Use a wider belt</li> <li>Increase the diameter of the pulleys</li> </ul>
Breaks or cracks in the top surface of the belt	<ul style="list-style-type: none"> <li>Exposure to excessive low temperatures (below -25°C)</li> </ul>	<ul style="list-style-type: none"> <li>Eliminate the low temperature</li> </ul>
Softening of the surface of the belt	<ul style="list-style-type: none"> <li>Exposure to excessive temperatures (over +85°C) or operation with an excessive amount of oil present</li> </ul>	<ul style="list-style-type: none"> <li>Eliminate the high temperature or reduce the amount of oil present</li> </ul>
Apparent elongation of the belt	<ul style="list-style-type: none"> <li>Reduction of center distance due to the bearings not being firmly fixed</li> </ul>	<ul style="list-style-type: none"> <li>Restore the initial center distance and strengthen the bearings</li> </ul>
Belt overriding the flanges	<ul style="list-style-type: none"> <li>Faulty installation of the flanges</li> <li>Misalignment of the pulley</li> </ul>	<ul style="list-style-type: none"> <li>Reinstall the flanges properly</li> <li>Align the pulley</li> </ul>
Excessive wear of the pulley teeth	<ul style="list-style-type: none"> <li>Excessive overloading</li> <li>Belt excessively taut</li> <li>Pulley's material is insufficiently hard</li> </ul>	<ul style="list-style-type: none"> <li>Use a wider belt</li> <li>Reduce the center distance</li> <li>Harden the pulley surface</li> </ul>
Drive excessively noisy	<ul style="list-style-type: none"> <li>Pulley out of line</li> <li>Excessive installation tension</li> <li>Excessive load</li> <li>Diameter of the pulley below minimum</li> </ul>	<ul style="list-style-type: none"> <li>Align the pulley</li> <li>Reduce the center distance</li> <li>Harden the pulley surface</li> <li>Increase the diameter of the pulleys</li> </ul>

# MEGAPOWER

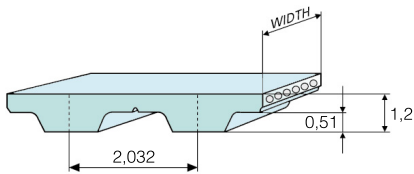
## MXL



<b>Belt width (mm)</b>	<b>3,2 (012")</b>	<b>4,8 (019")</b>	<b>6,4 (025")</b>
Pulley width B2 (mm)	5,6	7,1	8,9
Belt weight (gr/cm)	0,035	0,053	0,073

Standard compound	<b>Thermoset PU 88 ShA grey/green</b>
Standard cords	<b>Twisted Zinked Steel</b>
Standard belt width tolerance	<b>+ 0,50 / - 0,80 mm</b>
Standard sleeve width tolerance	<b>+/- 10 mm</b>
Standard thickness tolerance	<b>+/- 0,20 mm</b>

Special version belts on request, see on page 37



### BELT LENGTHS AND TOLERANCES

Code	45,6	48	57,6	60	60,8	63,2	64	65,6	70,4	72,8	73,6	76,8
<b>Length (mm)</b>	115,8	121,9	146,3	152,4	154,4	160,5	162,5	166,6	178,8	184,9	186,9	195,1
<b>No. of teeth</b>	57	60	72	75	76	79	80	82	88	91	92	96
<b>Length tolerance (mm)</b>	± 0,42											
Code	80,8	81,6	82,4	84	88	91,2	94,4	96	104	105,6	108	112
<b>Length (mm)</b>	205,2	207,2	209,2	213,4	223,5	231,6	239,8	243,8	264,1	268,2	274,3	284,4
<b>No. of teeth</b>	101	102	103	105	110	114	118	120	130	132	135	140
<b>Length tolerance (mm)</b>	± 0,42						± 0,46					
Code	116	120	124	140	152	160	176,8	204,8	224	228	246,4	252
<b>Length (mm)</b>	294,6	304,8	314,9	355,6	386,1	406,4	449,1	520,1	568,9	579,1	625,8	640
<b>No. of teeth</b>	145	150	155	175	190	200	221	256	280	285	308	315
<b>Length tolerance (mm)</b>	± 0,46			± 0,51				± 0,61				
Code	260	265,6	281,6	288	316	329,6	345,6	363,2	388			
<b>Length (mm)</b>	660,4	674,6	715,2	731,5	802,6	837,1	877,8	922,5	985,5			
<b>No. of teeth</b>	325	332	352	360	395	412	432	454	485			
<b>Length tolerance (mm)</b>	± 0,61				± 0,66							



# MEGAPOWER

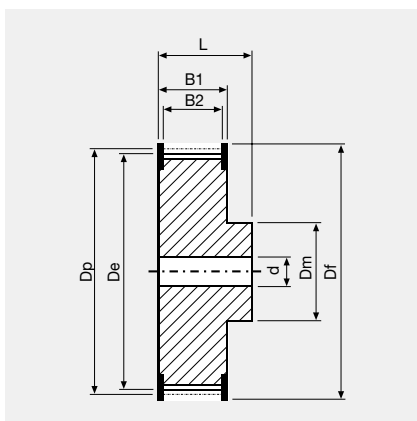
## MXL

### TRANSMITTABLE POWER (kW/cm of tooth in mesh)

NVZ	10	12	14	16	18	20	24	26	28	30	32	36	40
600	0,00137	0,00164	0,00191	0,00218	0,00246	0,00273	0,00328	0,00355	0,00382	0,00410	0,00437	0,00491	0,00546
800	0,00172	0,00206	0,00240	0,00275	0,00309	0,00343	0,00412	0,00446	0,00481	0,00515	0,00549	0,00618	0,00686
1000	0,00204	0,00245	0,00286	0,00327	0,00368	0,00409	0,00491	0,00532	0,00573	0,00613	0,00654	0,00736	0,00818
1400	0,00265	0,00318	0,00371	0,00424	0,00477	0,00530	0,00636	0,00689	0,00742	0,00795	0,00848	0,00954	0,01060
1800	0,00320	0,00384	0,00448	0,00513	0,00577	0,00641	0,00769	0,00833	0,00897	0,00961	0,01025	0,01153	0,01281
2000	0,00346	0,00416	0,00485	0,00554	0,00624	0,00693	0,00831	0,00901	0,00970	0,01039	0,01109	0,01247	0,01386
3000	0,00465	0,00558	0,00651	0,00744	0,00837	0,00930	0,01115	0,01208	0,01301	0,01394	0,01487	0,01673	0,01859
4000	0,00568	0,00681	0,00795	0,00908	0,01022	0,01136	0,01363	0,01476	0,01590	0,01703	0,01817	0,02044	0,02271
5000	0,00659	0,00791	0,00923	0,01055	0,01187	0,01319	0,01583	0,01715	0,01846	0,01978	0,02110	0,02374	0,02638
8000	0,00886	0,01063	0,01240	0,01417	0,01594	0,01771	0,02125	0,02302	0,02480	0,02657	0,02834	0,03188	0,03542

### PULLEYS

(FOR MORE DETAILS, PLEASE SEE OUR PULLEYS CATALOGUE)



N° TEETH	DP	DE
10	6,47	5,96
12	7,76	7,25
13	8,41	7,90
14	9,06	8,55
15	9,70	9,19
16	10,35	9,84
17	11,00	10,49
18	11,64	11,13
19	12,29	11,78
20	12,94	12,43
21	13,58	13,07
22	14,23	13,72
24	15,52	15,01

N° TEETH	DP	DE
26	16,81	16,30
28	18,11	17,60
30	19,40	18,89
32	20,70	20,19
34	21,99	21,48
36	23,29	22,78
40	25,87	25,36
42	27,17	26,66
44	28,46	27,95
48	31,05	30,54
60	38,81	38,30
65	42,04	41,53
72	46,57	46,06

# MEGAPOWER

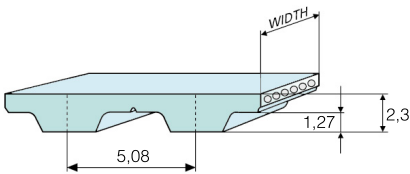
## XL



<b>Belt width (mm)</b>	<b>6,4 (025")</b>	<b>7,9 (031")</b>	<b>9,4 (037")</b>
Pulley width B2 (mm)	8,9	10,4	12,2
Belt weight (gr/cm)	0,121	0,153	0,182

Standard compound	<b>Thermoset PU 88 ShA grey/green</b>
Standard cords	<b>Twisted Zinked Steel</b>
Standard belt width tolerance	<b>+ 0,50 / - 0,80 mm</b>
Standard sleeve width tolerance	<b>+/- 10 mm</b>
Standard thickness tolerance	<b>+/- 0,25 mm</b>

Special version belts on request, see on page 37



### BELT LENGTHS AND TOLERANCES

Code	60	70	76	80	90	100	110	120	130	134	140
<b>Length (mm)</b>	152,4	177,8	193	203,2	228,6	254	279,4	304,8	330,2	340,3	355,6
<b>No. of teeth</b>	30	35	38	40	45	50	55	60	65	67	70
<b>Length tolerance (mm)</b>	± 0,41						± 0,46				
Code	150	160	170	180	190	194	200	210	220	230	240
<b>Length (mm)</b>	381	406,4	431,8	457,2	482,6	492,7	508	533,4	558,8	584,2	609,6
<b>No. of teeth</b>	75	80	85	90	95	97	100	105	110	115	120
<b>Length tolerance (mm)</b>	± 0,46	± 0,51					± 0,61				
Code	250	260	270	288	290	300	356	414	450	566	
<b>Length (mm)</b>	635	660,4	685,8	731,5	736,6	762	904,2	1051,5	1143	1437,6	
<b>No. of teeth</b>	125	130	135	144	145	150	178	207	225	283	
<b>Length tolerance (mm)</b>	± 0,61						± 0,66	± 0,76	± 0,81		



# MEGAPOWER

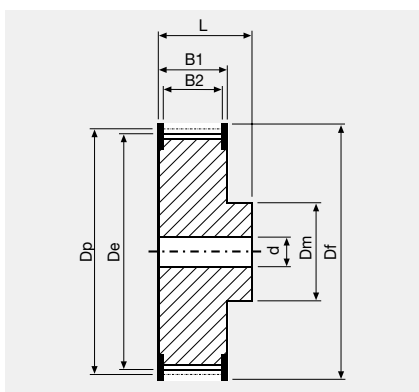
XL

## TRANSMITTABLE POWER (kW/cm of tooth in mesh)

N\Z	10	12	14	16	18	20	24	28	32	40	48	60	72
100	0,0016	0,0019	0,0022	0,0026	0,0029	0,0032	0,0038	0,0045	0,0051	0,0064	0,0077	0,0096	0,0115
200	0,0029	0,0035	0,0041	0,0047	0,0053	0,0059	0,0070	0,0082	0,0094	0,0117	0,0141	0,0176	0,0211
600	0,0075	0,0091	0,0106	0,0121	0,0136	0,0151	0,0181	0,0211	0,0241	0,0302	0,0362	0,0453	0,0543
1000	0,0116	0,0139	0,0162	0,0186	0,0209	0,0232	0,0278	0,0325	0,0371	0,0464	0,0557	0,0696	0,0835
1500	0,0162	0,0195	0,0227	0,0260	0,0292	0,0325	0,0390	0,0455	0,0520	0,0650	0,0780	0,0975	0,1170
2000	0,0206	0,0247	0,0288	0,0329	0,0370	0,0411	0,0494	0,0576	0,0658	0,0823	0,0988	0,1234	0,1481
3000	0,0286	0,0343	0,0400	0,0457	0,0514	0,0571	0,0685	0,0799	0,0914	0,1142	0,1370	0,1713	0,2056
4000	0,0359	0,0431	0,0502	0,0574	0,0646	0,0718	0,0861	0,1005	0,1148	0,1435	0,1722	0,2153	0,2584
5000	0,0427	0,0513	0,0598	0,0684	0,0769	0,0855	0,1026	0,1197	0,1368	0,1710	0,2051	0,2564	0,3077
8000	0,0612	0,0735	0,0857	0,0980	0,1102	0,1225	0,1470	0,1715	0,1960	0,2450	0,2940	0,3675	0,4410

## PULLEYS

(FOR MORE DETAILS, PLEASE SEE OUR PULLEYS CATALOGUE)



N° TEETH	DP	DE
10	16,17	15,66
11	17,79	17,28
12	19,40	18,89
13	21,02	20,51
14	22,64	22,13
15	24,26	23,75
16	25,87	25,36
17	27,49	26,98
18	29,11	28,60
20	32,34	31,83
22	35,57	35,07
24	38,81	38,30

N° TEETH	DP	DE
26	42,04	41,53
28	45,28	44,77
30	48,51	48,00
32	51,74	51,23
36	58,21	57,70
40	64,68	64,17
42	67,91	67,40
44	71,15	70,64
48	77,62	77,11
56	90,55	90,04
60	97,02	96,51
72	116,43	115,92

# MEGAPOWER

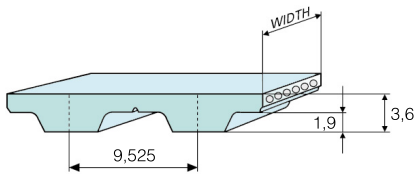
L



<b>Belt width (mm)</b>	<b>12,7 (050")</b>	<b>19,1 (075")</b>	<b>25,4 (100")</b>
Pulley width B2 (mm)	19	25,4	29,7
Belt weight (gr/cm)	0,437	0,661	0,878

Standard compound	<b>Thermoset PU 88 ShA grey/green</b>
Standard cords	<b>Twisted Zinked Steel</b>
Standard belt width tolerance	<b>+/- 0,80 mm</b>
Standard sleeve width tolerance	<b>+/- 10 mm</b>
Standard thickness tolerance	<b>+/- 0,30 mm</b>

Special version belts on request, see on page 37



## BELT LENGTHS AND TOLERANCES

Code	86	124	150	173	187	202	210	225	240	255	270	285	300
<b>Length (mm)</b>	218,6	314,3	381	438,2	476,2	514,4	533,4	571,5	609,6	647,7	685,8	723,9	762
<b>No. of teeth</b>	23	33	40	46	50	54	56	60	64	68	72	76	80
<b>Length tolerance (mm)</b>	± 0,41	± 0,46		± 0,51			± 0,61						
Code	322	345	367	390	420	450	480	510	540	570	600		
<b>Length (mm)</b>	819,2	876,3	933,4	990,6	1066,8	1143	1219,2	1295,4	1371,6	1447,8	1524		
<b>No. of teeth</b>	86	92	98	104	112	120	128	136	144	152	160		
<b>Length tolerance (mm)</b>	± 0,66				± 0,76			± 0,81					

# MEGAPOWER

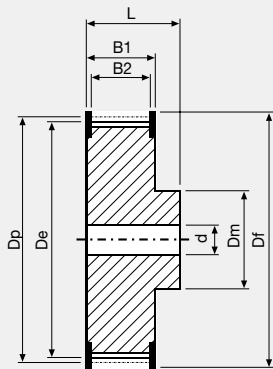
L

## TRANSMITTABLE POWER (kW/cm of tooth in mesh)

N\Z	10	12	14	16	18	20	22	24	28	30	32	36	40
100	0,0050	0,0060	0,0070	0,0079	0,0089	0,0099	0,0109	0,0119	0,0139	0,0149	0,0159	0,0179	0,0199
200	0,0089	0,0107	0,0125	0,0143	0,0161	0,0178	0,0196	0,0214	0,0250	0,0268	0,0285	0,0321	0,0357
600	0,0219	0,0263	0,0307	0,0351	0,0394	0,0438	0,0454	0,0482	0,0530	0,0568	0,0606	0,0681	0,0757
1000	0,0328	0,0393	0,0459	0,0524	0,0590	0,0655	0,0721	0,0786	0,0917	0,0983	0,1048	0,1179	0,1311
1500	0,0447	0,0536	0,0625	0,0715	0,0804	0,0894	0,0983	0,1072	0,1251	0,1340	0,1430	0,1608	0,1787
2000	0,0553	0,0664	0,0775	0,0885	0,0996	0,1107	0,1218	0,1328	0,1550	0,1660	0,1771	0,1992	0,2214
3000	0,0741	0,0889	0,1037	0,1185	0,1333	0,1482	0,1630	0,1778	0,2074	0,2222	0,2370	0,2667	0,2963
4000	0,0903	0,1084	0,1264	0,1445	0,1626	0,1806	0,1987	0,2168	0,2529	0,2709	0,2890	0,3251	0,3613
5000	0,1047	0,1256	0,1466	0,1675	0,1885	0,2094	0,2303	0,2513	0,2932	0,3141	0,3350	0,3769	0,4188
8000	0,1399	0,1679	0,1958	0,2238	0,2518	0,2798	0,3078	0,3357	0,3917	0,4197	0,4477	0,5036	0,5596

## PULLEYS

(FOR MORE DETAILS, PLEASE SEE OUR PULLEYS CATALOGUE)



N° TEETH	DP	DE
10	30,32	29,56
11	33,35	32,59
12	36,38	35,62
13	39,41	38,65
14	42,45	41,69
16	48,51	47,75
18	54,57	53,81
20	60,64	59,88
22	66,70	65,94
24	72,77	72,01
26	78,83	78,07
28	84,89	84,13

N° TEETH	DP	DE
30	90,96	90,20
32	97,02	96,26
34	103,08	102,32
36	109,15	108,39
40	121,28	120,52
42	127,34	126,58
44	133,40	132,64
48	145,53	144,76
52	157,66	156,90
56	169,79	169,03
60	181,91	181,15
72	218,30	217,54



# MEGAPOWER

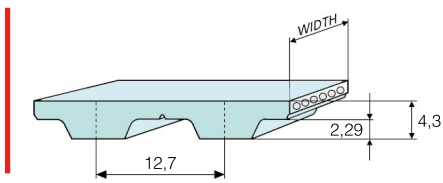
## H



Belt width (mm)	19,1 (075")	25,4 (100")	38,1 (150")	50,8 (200")	76,2 (300")
Pulley width B2 (mm)	25,4	29,7	46	59	85
Belt weight (gr/cm)	0,745	1,059	1,594	2,121	3,194

Standard compound	<b>Thermoset PU 88 ShA grey/green</b>
Standard cords	<b>Twisted Zinked Steel</b>
Standard belt width tolerance	<b>+/- 0,80 mm</b>
Standard sleeve width tolerance	<b>+/- 10 mm</b>
Standard thickness tolerance	<b>+/- 0,30 mm</b>

Special version belts on request, see page 37



### BELT LENGTHS AND TOLERANCES

Code	230	240	270	300	330	360	390	420	450	480	510
Length (mm)	584,2	609,6	685,8	762	838,2	914,4	990,6	1066,8	1143	1219,2	1295,4
No. of teeth	46	48	54	60	66	72	78	84	90	96	102
Length tolerance (mm)	± 0,61			± 0,66			± 0,76				

# MEGAPOWER

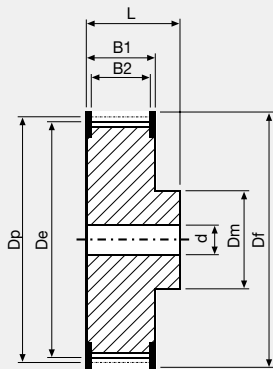
H

## TRANSMITTABLE POWER (kW/cm of tooth in mesh)

N\Z	14	16	18	20	22	24	26	28	30	32	36	40	44
100	0,0128	0,0142	0,0163	0,0185	0,0199	0,0213	0,0234	0,0255	0,0277	0,0293	0,0341	0,0362	0,0394
200	0,0229	0,0255	0,0293	0,0331	0,0357	0,0382	0,0421	0,0459	0,0497	0,0526	0,0611	0,0650	0,0709
600	0,0563	0,0626	0,0720	0,0814	0,0876	0,0939	0,1033	0,1127	0,1221	0,1291	0,1502	0,1596	0,1741
1000	0,0842	0,0936	0,1077	0,1217	0,1311	0,1404	0,1545	0,1685	0,1826	0,1931	0,2247	0,2387	0,2603
1500	0,1149	0,1276	0,1468	0,1659	0,1787	0,1915	0,2107	0,2298	0,2490	0,2633	0,3064	0,3256	0,3550
2000	0,1423	0,1581	0,1818	0,2056	0,2214	0,2372	0,2609	0,2846	0,3084	0,3262	0,3795	0,4032	0,4397
3000	0,1905	0,2116	0,2434	0,2751	0,2963	0,3175	0,3493	0,3810	0,4128	0,4366	0,5080	0,5398	0,5886
4000	0,2322	0,2580	0,2968	0,3355	0,3613	0,3871	0,4258	0,4645	0,5032	0,5322	0,6193	0,6580	0,7176
5000	0,2692	0,2991	0,3440	0,3889	0,4188	0,4487	0,4936	0,5384	0,5833	0,6170	0,7179	0,7628	0,8319
8000	0,3597	0,3997	0,4597	0,5196	0,5596	0,5995	0,6595	0,7194	0,7794				

## PULLEYS

(FOR MORE DETAILS, PLEASE SEE OUR PULLEYS CATALOGUE)



N° TEETH	DP	DE
14	56,60	55,23
15	60,64	59,27
16	64,68	63,31
18	72,77	71,40
20	80,85	79,48
21	84,89	83,52
22	88,94	87,57
23	92,98	91,61
24	97,02	95,65
25	101,06	99,69
26	105,11	103,74
28	113,19	111,82

N° TEETH	DP	DE
30	121,28	119,91
32	129,36	127,99
34	137,45	136,08
36	145,53	144,16
38	153,62	152,25
40	161,70	160,33
44	177,87	176,50
48	194,04	192,67
52	210,21	208,84
58	234,47	233,10
60	242,55	241,18
72	291,06	289,69

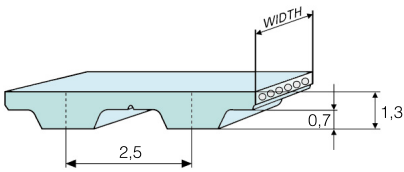
# MEGAPOWER

## T2,5

<b>Belt width (mm)</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>12</b>
Pulley width B2 (mm)	8	10	12	14	16
Belt weight (gr/cm)	0,046	0,070	0,093	0,120	0,143

Standard compound	<b>Thermoset PU 88 ShA grey/green</b>
Standard cords	<b>Twisted Zinked Steel</b>
Standard belt width tolerance	<b>+/- 0,30 mm</b>
Standard sleeve width tolerance	<b>+/- 10 mm</b>
Standard thickness tolerance	<b>+/- 0,15 mm</b>

Special version belts on request, see page on 37



### BELT LENGTHS AND TOLERANCES

<b>Length (mm)</b>	<b>120</b>	<b>145</b>	<b>160</b>	<b>177,5</b>	<b>180</b>	<b>182,5</b>	<b>200</b>	<b>210</b>	<b>230</b>	<b>245</b>	<b>265</b>	<b>277,5</b>
<b>No. of teeth</b>	48	58	64	71	72	73	80	84	92	98	106	111
<b>Length tolerance (mm)</b>	± 0,28											
<b>Length (mm)</b>	<b>285</b>	<b>290</b>	<b>305</b>	<b>317,5</b>	<b>330</b>	<b>342,5</b>	<b>380</b>	<b>395</b>	<b>420</b>	<b>480</b>	<b>500</b>	
<b>No. of teeth</b>	114	116	122	127	132	137	152	158	168	192	200	
<b>Length tolerance (mm)</b>	± 0,28			± 0,32				± 0,36				
<b>Length (mm)</b>	<b>540</b>	<b>600</b>	<b>620</b>	<b>650</b>	<b>680</b>	<b>700</b>	<b>780</b>	<b>880</b>	<b>915</b>	<b>950</b>	<b>1185</b>	
<b>No. of teeth</b>	216	240	248	260	272	280	312	352	366	380	474	
<b>Length tolerance (mm)</b>	± 0,42		± 0,48				± 0,56				± 0,64	

# MEGAPOWER

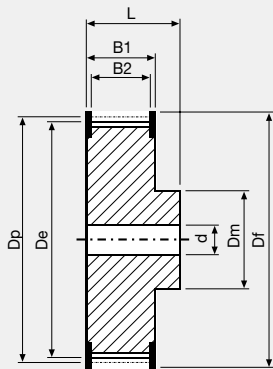
T2,5

## TRANSMITTABLE POWER (kW/cm of tooth in mesh)

N\Z	10	12	14	16	18	20	22	24	26	28	30	36	40
800	0,00195	0,00234	0,00273	0,00312	0,00351	0,00390	0,00429	0,00468	0,00507	0,00546	0,00585	0,00702	0,0078
600	0,00245	0,00294	0,00343	0,00392	0,00441	0,00490	0,00539	0,00588	0,00637	0,00686	0,00736	0,00883	0,00981
1000	0,00292	0,00351	0,00409	0,00467	0,00526	0,00580	0,00642	0,00700	0,00759	0,00817	0,00877	0,01052	0,01169
1400	0,00379	0,00454	0,00530	0,00606	0,00681	0,00757	0,00833	0,00909	0,00984	0,01060	0,01136	0,01363	0,01514
1500	0,00419	0,00503	0,00586	0,00670	0,00754	0,00838	0,00922	0,01005	0,01089	0,01173	0,01257	0,01508	0,01676
2000	0,00495	0,00594	0,00693	0,00792	0,00891	0,00990	0,01089	0,01188	0,01287	0,01386	0,01485	0,01782	0,01980
3000	0,00664	0,00797	0,00930	0,01062	0,01195	0,01328	0,01461	0,01594	0,01726	0,01859	0,01992	0,02390	0,02656
4000	0,00811	0,00973	0,01136	0,01298	0,01460	0,01622	0,01785	0,01947	0,02109	0,02271	0,02433	0,02920	0,03245
5000	0,00942	0,01130	0,01319	0,01507	0,01696	0,01884	0,02073	0,02261	0,02449	0,02638	0,02826	0,03391	0,03768
8000	0,01265	0,01518	0,01771	0,02024	0,02277	0,02530	0,02783	0,03036	0,03289	0,03542	0,03795	0,04554	0,05060

## PULLEYS

(FOR MORE DETAILS, PLEASE SEE OUR PULLEYS CATALOGUE)



N° TEETH	DP	DE
10	7,96	7,45
11	8,75	8,25
12	9,55	9,00
13	10,34	9,80
14	11,14	10,60
15	11,94	11,40
16	12,73	12,20
17	13,53	13,00
18	14,32	13,80
19	15,12	14,60
20	15,92	15,40
21	16,71	16,20

N° TEETH	DP	DE
22	17,51	17,00
24	19,10	18,55
26	20,69	20,15
28	22,28	21,75
30	23,87	23,35
32	25,46	24,95
36	28,65	28,10
40	31,83	31,30
44	35,01	34,50
48	38,20	37,70
60	47,75	47,25
72	57,30	55,20

# MEGAPOWER 2

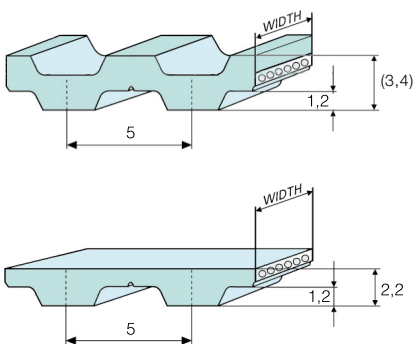
## T5 - T5DL



<b>Belt width (mm)</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>12</b>	<b>16</b>	<b>20</b>	<b>25</b>
Pulley width B2 (mm)	12	13	15	17	21	25	30
Belt weight (gr/cm)	0,116	0,152	0,194	0,237	0,249	0,390	0,497

Standard compound	<b>Thermoset PU 88 ShA grey/green</b>
Standard cords	<b>Twisted Zinked Steel</b>
Standard belt width tolerance	<b>+/- 0,50 mm</b>
Standard sleeve width tolerance	<b>+/- 10 mm</b>
Standard thickness tolerance	<b>+/- 0,15 mm</b> (for single layer only)

Special version belts on request, see page on 37



### BELT LENGTHS AND TOLERANCES

<b>Length (mm)</b>	<b>120</b>	<b>150</b>	<b>165</b>	<b>180</b>	<b>185</b>	<b>200</b>	<b>210</b>	<b>215</b>	<b>220</b>	<b>225</b>	<b>245</b>	<b>250</b>	<b>255</b>	<b>260</b>	<b>270</b>	<b>275</b>	<b>280</b>	<b>295</b>	<b>300</b>	<b>305</b>			
<b>No. of teeth</b>	24	30	33	36	37	40	42	43	44	45	49	50	51	52	54	55	56	59	60	61			
<b>Length tolerance (mm)</b>	± 0,28																						
<b>Length (mm)</b>	<b>330</b>	<b>340</b>	<b>350</b>	<b>355</b>	<b>365</b>	<b>375</b>	<b>390</b>	<b>395</b>	<b>400</b>	<b>410</b>	<b>420</b>	<b>425</b>	<b>440</b>	<b>445</b>	<b>450</b>	<b>455</b>	<b>460</b>	<b>475</b>	<b>480</b>	<b>500</b>	<b>510</b>	<b>515*</b>	<b>525*</b>
<b>No. of teeth</b>	66	68	70	71	73	75	78	79	80	82	84	85	88	89	90	91	92	95	96	100	102	103	105
<b>Length tolerance (mm)</b>	± 0,32											± 0,36											
<b>Length (mm)</b>	<b>545</b>	<b>550</b>	<b>560*</b>	<b>575</b>	<b>590</b>	<b>600</b>	<b>610</b>	<b>620</b>	<b>630</b>	<b>640</b>	<b>650</b>	<b>660</b>	<b>675</b>	<b>690</b>	<b>700</b>	<b>720</b>	<b>725</b>	<b>750</b>	<b>765</b>	<b>780</b>	<b>800</b>	<b>815</b>	
<b>No. of teeth</b>	109	110	112	115	118	120	122	124	126	128	130	132	135	138	140	144	145	150	153	156	160	163	
<b>Length tolerance (mm)</b>	± 0,42											± 0,48											
<b>Length (mm)</b>	<b>830</b>	<b>840</b>	<b>850</b>	<b>860</b>	<b>885</b>	<b>900</b>	<b>920</b>	<b>940</b>	<b>990</b>	<b>1000</b>	<b>1075</b>	<b>1100</b>	<b>1130</b>	<b>1160</b>									
<b>No. of teeth</b>	166	168	170	172	177	180	184	188	198	200	215	220	226	232									
<b>Length tolerance (mm)</b>	± 0,56											± 0,64											
<b>Length (mm)</b>	<b>1200</b>	<b>1215</b>	<b>1275</b>	<b>1280</b>	<b>1315</b>	<b>1355</b>	<b>1380</b>	<b>1440</b>	<b>1470</b>	<b>1500</b>	<b>1580</b>	<b>1955</b>											
<b>No. of teeth</b>	240	243	255	256	263	271	276	288	294	300	316	391											
<b>Length tolerance (mm)</b>	± 0,76											± 0,88											

\*Available also without GAP

### DOUBLETOOTHED BELT LENGTHS

<b>Length (mm)</b>	<b>410</b>	<b>460</b>	<b>515</b>	<b>525</b>	<b>550</b>	<b>590</b>	<b>620</b>	<b>650</b>	<b>685</b>	<b>700</b>	<b>750</b>	<b>815</b>	<b>840</b>	<b>860</b>	<b>940</b>	<b>1075</b>	<b>1100</b>
<b>No. of teeth</b>	82	92	103	105	110	118	124	130	137	140	150	163	168	172	188	215	220
<b>Length tolerance (mm)</b>	± 0,36			± 0,42				± 0,48				± 0,56			± 0,64		



# MEGAPOWER 2

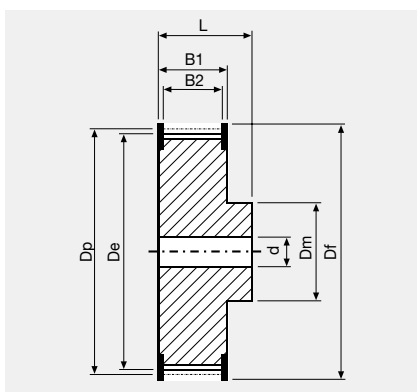
## T5 - T5DL

### TRANSMITTABLE POWER (kW/cm of tooth in mesh)

N\Z	10	12	14	16	18	20	24	28	36	42	48	54	60
100	0,0018	0,0022	0,0025	0,0029	0,0032	0,0036	0,0043	0,0050	0,0065	0,0076	0,0086	0,0097	0,0108
200	0,0034	0,0041	0,0047	0,0054	0,0061	0,0068	0,0081	0,0095	0,0122	0,0142	0,0162	0,0183	0,0203
600	0,0087	0,0104	0,0122	0,0139	0,0157	0,0174	0,0209	0,0244	0,0313	0,0365	0,0418	0,0470	0,0522
1000	0,0132	0,0159	0,0185	0,0212	0,0238	0,0265	0,0318	0,0370	0,0476	0,0556	0,0635	0,0714	0,0794
1500	0,0183	0,0219	0,0256	0,0292	0,0329	0,0365	0,0438	0,0511	0,0657	0,0767	0,0876	0,0986	0,1096
2000	0,0228	0,0274	0,0319	0,0365	0,0410	0,0456	0,0547	0,0638	0,0821	0,0958	0,1094	0,1231	0,1368
3000	0,0309	0,0371	0,0433	0,0494	0,0556	0,0618	0,0742	0,0865	0,1112	0,1298	0,1483	0,1669	0,1854
4000	0,0381	0,0457	0,0533	0,0610	0,0686	0,0762	0,0914	0,1067	0,1372	0,1600	0,1829	0,2057	0,2286
5000	0,0450	0,0540	0,0630	0,0720	0,0810	0,0900	0,1080	0,1260	0,1620	0,1889	0,2159	0,2429	0,2699
8000	0,0645	0,0774	0,0903	0,1032	0,1160	0,1289	0,1547	0,1805	0,2321	0,2708	0,3095	0,3481	0,3868

### PULLEYS

(FOR MORE DETAILS, PLEASE SEE OUR PULLEYS CATALOGUE)



N° TEETH	DP	DE
10	15,92	15,09
12	19,10	18,27
14	22,28	21,45
15	23,87	23,04
16	25,46	24,64
18	28,65	27,82
19	30,24	29,41
20	31,83	31,00
22	35,01	34,19
24	38,20	37,37
25	39,79	38,96
26	41,38	40,55

N° TEETH	DP	DE
27	42,97	42,14
28	44,56	43,73
30	47,75	46,92
32	50,93	50,10
36	57,30	56,47
40	63,66	62,93
42	66,85	66,02
44	70,03	69,20
48	76,39	75,57
54	85,94	85,09
60	95,49	94,67



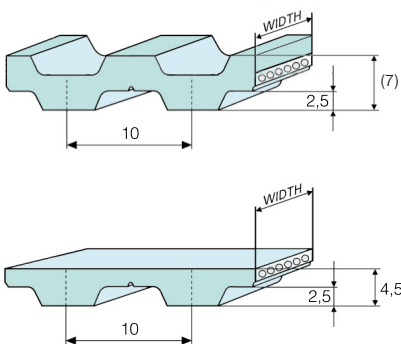
# MEGAPOWER 2

## T10 - T10DL

Belt width (mm)	10	12	16	20	25	32	50	75
Pulley width B2 (mm)	15	17	21	25	30	37	56	80
Belt weight (gr/cm)	0,494	0,504	0,683	0,861	1,082	1,386	2,174	3,276

Standard compound	<b>Thermoset PU 88 ShA grey/green</b>
Standard cords	<b>Twisted Zinked Steel</b>
Standard belt width tolerance	<b>+/- 0,50 mm</b>
Standard sleeve width tolerance	<b>+/- 10 mm</b>
Standard thickness tolerance	<b>+/- 0,30 mm</b> (for single layer only)

Special version belts on request, see page on 37



### BELT LENGTHS AND TOLERANCES

Length (mm)	260	320	340	370	390	400	410	440	450	480	500	530	550	560	600*	610	630*	650	660	680	690
No. of teeth	26	32	34	37	39	40	41	44	45	48	50	53	55	56	60	61	63	65	66	68	69
Length tolerance (mm)	± 0,28	± 0,32			± 0,36						± 0,42					± 0,48					
Length (mm)	700	720*	730	750	780	800*	810	840	850	880	890	900	910	920*	950	960	970	980	1000	1010	1050
No. of teeth	70	72	73	75	78	80	81	84	85	88	89	90	91	92	95	96	97	98	100	101	105
Length tolerance (mm)	± 0,48				± 0,56											± 0,64					
Length (mm)	1080	1100	1110	1140	1150	1200	1210	1240	1250	1300	1320	1350	1390	1400	1420	1440	1450	1460	1500	1560	
No. of teeth	108	110	111	114	115	120	121	124	125	130	132	135	139	140	142	144	145	146	150	156	
Length tolerance (mm)	± 0,64									± 0,76											
Length (mm)	1600	1610	1700	1750	1780	1800	1880	1960	2250												
No. of teeth	160	161	170	175	178	188	196	225													
Length tolerance (mm)	± 0,88							± 1,04													

\*Available also without GAP

### DOUBLETOOTHED BELT LENGTHS

Length (mm)	260	530	660	700	720	800	840	900	920	980	1010	1080
No. of teeth	26	53	66	70	72	80	84	90	92	98	101	108
Length tolerance (mm)	± 0,28	± 0,42	± 0,48			± 0,56			± 0,64			
Length (mm)	1100	1150	1210	1240	1250	1320	1350	1420	1500	1610	1800	1880
No. of teeth	110	115	121	124	125	132	135	142	150	161	180	188
Length tolerance (mm)	± 0,64					± 0,76			± 0,88			





# MEGAPOWER 2

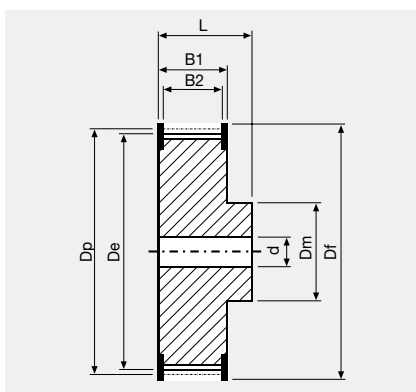
## T10 - T10DL

### TRANSMITTABLE POWER (kW/cm of tooth in mesh)

N\Z	12	14	16	18	20	22	24	26	28	30	36	48	54
100	0,0090	0,0104	0,0119	0,0134	0,0149	0,0164	0,0179	0,0194	0,0209	0,0224	0,0269	0,0358	0,0403
200	0,0166	0,0193	0,0221	0,0249	0,0276	0,0304	0,0331	0,0359	0,0387	0,0414	0,0497	0,0663	0,0746
600	0,0413	0,0482	0,0550	0,0619	0,0688	0,0757	0,0826	0,0894	0,0963	0,1032	0,1238	0,1651	0,1858
1000	0,0614	0,0717	0,0819	0,0922	0,1024	0,1126	0,1229	0,1331	0,1434	0,1536	0,1843	0,2458	0,2765
1500	0,0829	0,0967	0,1106	0,1244	0,1382	0,1520	0,1658	0,1797	0,1935	0,2073	0,2488	0,3317	0,3731
2000	0,1015	0,1184	0,1354	0,1523	0,1692	0,1861	0,2030	0,2200	0,2369	0,2538	0,3046	0,4061	0,4568
3000	0,1330	0,1551	0,1773	0,1994	0,2216	0,2438	0,2659	0,2881	0,3102	0,3324	0,3989	0,5318	0,5983
4000	0,1589	0,1854	0,2118	0,2383	0,2648	0,2913	0,3178	0,3442	0,3707	0,3972	0,4766	0,6355	0,7150
5000	0,1806	0,2107	0,2408	0,2709	0,3010	0,3311	0,3612	0,3913	0,4214	0,4515	0,5418	0,7224	0,8127
8000	0,2398	0,2798	0,3198	0,3597	0,3997	0,4397	0,4796	0,5196	0,5596	0,5995	0,7194		

### PULLEYS

(FOR MORE DETAILS, PLEASE SEE OUR PULLEYS CATALOGUE)



N° TEETH	DP	DE
12	38,20	36,25
14	44,56	42,71
15	47,75	45,90
16	50,93	49,08
18	57,30	55,45
19	60,48	58,63
20	63,66	61,81
22	70,03	68,18
24	76,39	74,55
25	79,58	77,73
26	82,76	80,91
27	85,94	84,10

N° TEETH	DP	DE
28	89,13	87,28
30	95,49	93,65
32	101,86	100,01
36	114,59	112,74
40	127,32	125,48
44	140,06	138,21
48	152,79	150,94
54	171,89	170,03
60	190,99	189,14

# MEGAPOWER 2

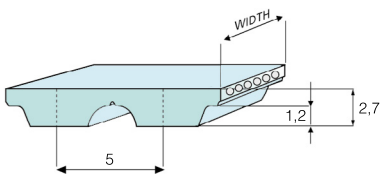
## AT5



<b>Belt width (mm)</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>12</b>	<b>16</b>	<b>20</b>	<b>25</b>
Pulley width B2 (mm)	12	13	15	17	21	25	30
Belt weight (gr/cm)	0,185	0,253	0,316	0,378	0,508	0,640	0,800

Standard compound	<b>Thermoset PU 88 ShA grey/green</b>
Standard cords	<b>Twisted Zinked Steel</b>
Standard belt width tolerance	<b>+/- 0,50 mm</b>
Standard sleeve width tolerance	<b>+/- 10 mm</b>
Standard thickness tolerance	<b>+/- 0,15 mm</b>

Special version belts on request, see page on 37  
S and Z torsion zinked steel on request



### BELT LENGTHS AND TOLERANCES

<b>Length (mm)</b>	<b>225</b>	<b>255</b>	<b>275</b>	<b>280</b>	<b>300</b>	<b>330</b>	<b>340</b>	<b>375</b>	<b>390</b>	<b>420</b>	<b>450</b>	<b>455</b>	<b>480</b>	<b>500</b>	<b>525</b>	<b>545</b>	<b>600</b>	<b>610</b>	<b>620</b>	<b>630</b>
<b>No. of teeth</b>	45	51	55	56	60	66	68	75	78	84	90	91	96	100	105	109	120	122	124	126
<b>Length tolerance (mm)</b>	± 0,28			± 0,32			± 0,36			± 0,42										
<b>Length (mm)</b>	<b>660</b>	<b>670</b>	<b>710</b>	<b>720</b>	<b>750</b>	<b>780</b>	<b>825</b>	<b>860</b>	<b>975</b>	<b>1050</b>	<b>1125</b>	<b>1500</b>	<b>2000</b>							
<b>No. of teeth</b>	132	134	142	144	150	156	165	172	195	210	225	300	400							
<b>Length tolerance (mm)</b>	± 0,48			± 0,56			± 0,64		± 0,76		± 1,04									



# MEGAPOWER 2

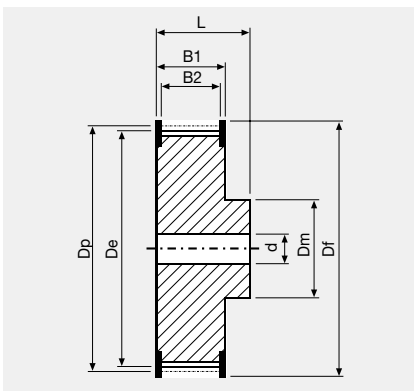
AT5

## TRANSMITTABLE POWER (kW/cm of tooth in mesh)

N\Z	12	14	16	18	20	22	24	26	28	32	44	60	68
100	0,0042	0,0049	0,0056	0,0063	0,0070	0,0077	0,0084	0,0091	0,0098	0,0112	0,0154	0,0210	0,0238
200	0,0080	0,0094	0,0107	0,0121	0,0134	0,0147	0,0161	0,0174	0,0188	0,0214	0,0295	0,0322	0,0456
600	0,0211	0,0246	0,0282	0,0317	0,0352	0,0387	0,0422	0,0458	0,0493	0,0563	0,0774	0,0845	0,1197
1000	0,0322	0,0375	0,0429	0,0482	0,0536	0,0590	0,0643	0,0697	0,0750	0,0858	0,1179	0,1286	0,1822
1500	0,0442	0,0515	0,0589	0,0662	0,0736	0,0810	0,0883	0,0957	0,1030	0,1178	0,1619	0,1766	0,2502
2000	0,0547	0,0638	0,0730	0,0821	0,0912	0,1003	0,1094	0,1186	0,1277	0,1459	0,2006	0,2189	0,3101
3000	0,0727	0,0848	0,0970	0,1091	0,1212	0,1333	0,1454	0,1576	0,1697	0,1939	0,2666	0,2909	0,4121
4000	0,0881	0,1028	0,1174	0,1321	0,1468	0,1615	0,1762	0,1908	0,2055	0,2349	0,3230	0,3523	0,4991
5000	0,1012	0,1180	0,1349	0,1517	0,1686	0,1855	0,2023	0,2192	0,2360	0,2698	0,3709	0,4046	0,5732
8000	0,1312	0,1530	0,1749	0,1967	0,2186	0,2405	0,2623	0,2842	0,3060	0,3498	0,4809	0,5246	0,7432

## PULLEYS

(FOR MORE DETAILS, PLEASE SEE OUR PULLEYS CATALOGUE)



N° TEETH	DP	DE
12	19,10	17,87
14	22,28	21,05
15	23,87	22,64
16	25,46	24,24
18	28,65	27,42
19	30,24	29,01
20	31,83	30,60
22	35,01	33,79
24	38,20	36,97
25	39,79	38,56
26	41,38	40,15
27	42,97	41,74

N° TEETH	DP	DE
28	44,56	43,33
30	47,75	46,52
32	50,93	49,70
36	57,30	56,07
40	63,66	62,43
42	66,85	65,62
44	70,03	68,80
48	76,39	75,17
60	95,49	94,27
68	108,23	107,01

# MEGAPOWER 2

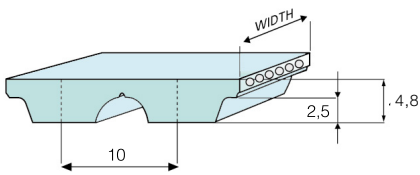
## AT10



<b>Belt width (mm)</b>	<b>10</b>	<b>12</b>	<b>16</b>	<b>20</b>	<b>25</b>	<b>32</b>	<b>50</b>	<b>75</b>
Pulley width B2 (mm)	15	17	21	25	30	37	56	80
Belt weight (gr/cm)	0,578	0,707	0,952	1,184	1,469	1,905	3,005	4,344

Standard compound	<b>Thermoset PU 88 ShA grey/green</b>
Standard cords	<b>Twisted Zinked Steel</b>
Standard belt width tolerance	<b>+/- 0,50 mm</b>
Standard sleeve width tolerance	<b>+/- 10 mm</b>
Standard thickness tolerance	<b>+/- 0,30 mm</b>

Special version belts on request, see page on 37  
S and Z torsion zinked steel on request



### BELT LENGTHS AND TOLERANCES

Length (mm)	370	500	560	580	600	610	630	660	700	730	780	800	810	840	880	890	920	960	980
No. of teeth	37	50	56	58	60	61	63	66	67	73	78	80	81	84	88	89	92	96	98
Length tolerance (mm)	± 0,32 ± 0,36		± 0,42						± 0,48				± 0,56						
Length (mm)	1000	1010	1050	1080	1100	1150	1190	1200	1210	1220	1230	1240	1250	1280	1300	1320	1350		
No. of teeth	100	101	105	108	110	115	119	120	121	122	123	124	125	128	130	132	135		
Length tolerance (mm)	± 0,64													± 0,76					
Length (mm)	1360	1400	1420	1480	1500	1600	1630	1700	1720	1800	1860	1940							
No. of teeth	136	140	142	148	150	160	163	170	172	180	186	194							
Length tolerance (mm)	± 0,76						± 0,88												



# MEGAPOWER 2

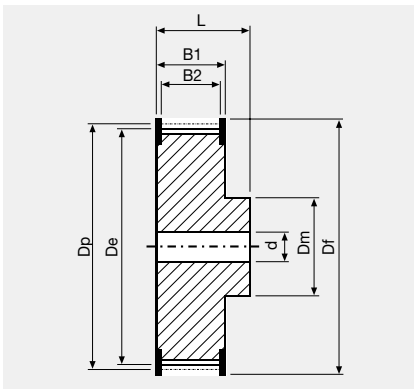
## AT10

### TRANSMITTABLE POWER (kW/cm of tooth in mesh)

N\Z	15	18	20	22	24	26	28	30	38	42	48	54	60
100	0,0215	0,0257	0,0286	0,0315	0,0343	0,0372	0,0400	0,0429	0,0543	0,0601	0,0686	0,0772	0,0858
200	0,0407	0,0488	0,0542	0,0596	0,0650	0,0705	0,0759	0,0813	0,1030	0,1138	0,1301	0,1463	0,1626
600	0,1041	0,1249	0,1388	0,1527	0,1666	0,1804	0,1943	0,2082	0,2637	0,2915	0,3331	0,3748	0,4164
1000	0,1547	0,1856	0,2062	0,2268	0,2474	0,2681	0,2887	0,3093	0,3918	0,4330	0,4949	0,5567	0,6186
1500	0,2076	0,2491	0,2768	0,3045	0,3322	0,3598	0,3875	0,4152	0,5259	0,5813	0,6643	0,7474	0,8304
2000	0,2520	0,3024	0,3360	0,3696	0,4032	0,4368	0,4704	0,5040	0,6384	0,7056	0,8064	0,9072	1,0080
3000	0,3239	0,3886	0,4318	0,4750	0,5182	0,5613	0,6045	0,6477	0,8204	0,9068	1,0363	1,1659	1,2954
4000	0,3788	0,4545	0,5050	0,5555	0,6060	0,6565	0,7070	0,7575	0,9595	1,0605	1,2120	1,3635	1,5150
5000	0,4220	0,5063	0,5626	0,6189	0,6751	0,7314	0,7876	0,8439	1,0689				
8000	0,4950	0,5940	0,6600	0,7260	0,7920	0,8580	0,9240	0,9900					

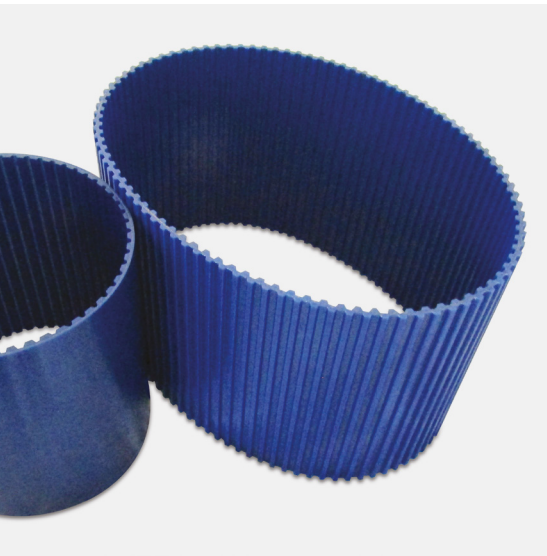
### PULLEYS

(FOR MORE DETAILS, PLEASE SEE OUR PULLEYS CATALOGUE)



N° TEETH	DP	DE
15	47,75	45,90
16	50,93	49,08
18	57,30	55,45
19	60,48	58,63
20	63,66	61,81
22	70,03	68,18
24	76,39	74,55
25	79,58	77,73
26	82,76	80,91
27	85,94	84,10
28	89,13	87,28
30	95,49	93,65

N° TEETH	DP	DE
32	101,86	100,01
36	114,59	112,74
38	120,96	119,14
40	127,32	125,48
42	133,69	131,87
44	140,06	138,21
48	152,79	150,94
54	171,89	170,07
60	190,99	189,14



# MEGAPOWER 2

## FC

Pitch	H	L	T5	T5DD	T10	T10DD	AT5	AT10
For profile shape and dimensions tolerances see previous pitches profile pages								

Standard compound	<b>Thermoset PU 81 +- 4 ShA dark blue RAL 5002</b>
Standard cords	<b>Z Twisted stainless Steel AISI 304</b>
Teeth cover (NFT)	<b>Not available</b>
Back cover	<b>Not available</b>
Thermal working range (°C)	<b>- 25 / + 80</b>
Thermal working range tolerance (°C)	<b>+/- 5</b>
Food-contact features (materials components)	<b>Produced and certified according to EU 10/2011, and 174/2015 with food-contact approved components</b>

*Tooth shear resistance is 25% less than the values declared on previous pitches pages  
Transmittable power is 25% less than the values declared on previous pitches pages*

CHEMICAL RESISTANCE								
*Chemical agent	Tap water	Sea water	Mineral oil/grease	Synthetic oil/grease	Strong acids	Strong alkali	Solvent/fuels	Outdoor ageing
Concentration %	pure	pure	pure	pure	max 3%	max 30%	pure	n.a.
Temperature (C°)	max 60°	max 60°	max 60°	max 60°	max 40°	max 40°	r.t.	-25°/+80°
Belt body resistance	very good	good	good	medium	good	good	medium	very good
Cord insert resistance	very good	good	very good	very good	medium good	medium good	good	good

*\*The chemical's range is too wide, hence, general rules are not always valid. In case of any doubts, please contact our technical team.*

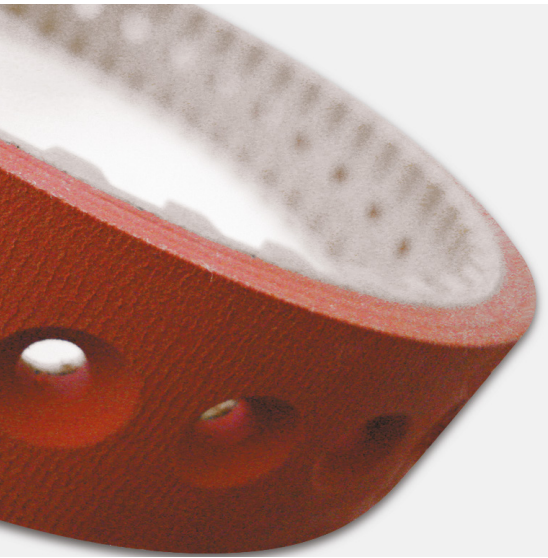
### KEY FEATURES AND BENEFITS

- Good chemical resistance
- Good corrosion resistance
- Good humidity and hydrolysis resistance
- Inox cords
- Food-contact approved components
- Special designs for food conveyance on request
- Additional backing profiles to evaluate on request

# MEGAPOWER FEASIBILITY TABLE

	MXL	XL	L	H	T2	T2,5	T5	T10	T5DL	T10DL	AT5	AT10
<b>Min no. teeth pulley st. cords</b>	10	10	15	14	10	10	10	12	10	12	15	15
<b>Min outside idler dia</b>	18	30	60	80	18	18	30	60	30	60	60	120
<b>Min inside idler dia</b>	20	30	60	60	20	20	30	60	30	60	25	50
<b>Min no. teeth pulley HF cords</b>	-	-	-	-	-	-	10	12	10	12	12	15
<b>Min outside idler dia</b>	-	-	-	-	-	-	30	50	30	50	40	80
<b>Min inside idler dia</b>	-	-	-	-	-	-	30	50	30	50	25	50
<b>Min no. teeth pulley HP cords</b>	-	-	-	-	-	15	15	15	-	-	25	25
<b>Min outside idler dia</b>	-	-	-	-	-	30	40	100	-	-	60	150
<b>Min inside idler dia</b>	-	-	-	-	-	30	60	100	-	-	40	80
<b>Min no. teeth pulley HPF cords</b>	-	-	-	-	-	-	12	14	-	-	20	16
<b>Min outside idler dia</b>	-	-	-	-	-	-	30	80	-	-	40	100
<b>Min inside idler dia</b>	-	-	-	-	-	-	30	80	-	-	40	60
<b>Min no. teeth pulley kevlar cords</b>	12	10	15	14	12	12	12	15	12	15	15	15
<b>Min outside idler dia</b>	20	30	60	80	20	20	30	60	30	60	60	120
<b>Min inside idler dia</b>	20	20	60	60	20	20	30	60	30	60	25	50
<b>Min no. teeth pulley fiberglass cords</b>	-	13	18	18	-	-	15	15	-	-	-	-
<b>Min outside idler dia</b>	-	35	65	90	-	-	40	70	-	-	-	-
<b>Min inside idler dia</b>	-	35	65	65	-	-	40	70	-	-	-	-
<b>Min no. teeth pulley polyester cords</b>	12	-	-	-	-	12	-	-	-	-	-	-
<b>Min outside idler dia</b>	20	-	-	-	-	20	-	-	-	-	-	-
<b>Min inside idler dia</b>	20	-	-	-	-	20	-	-	-	-	-	-
<b>Min no. teeth pulley stainless steel cords</b>	-	13	18	18	-	-	15	15	15	15	15	19
<b>Min outside idler dia</b>	-	35	65	80	-	-	40	70	40	70	65	110
<b>Min inside idler dia</b>	-	35	65	65	-	-	40	70	40	70	60	110
<b>Steel cords</b>	O	O	O	O	O	O	O	O	O	O	O	O
<b>High Flexibility cords</b>	X	X	X	X	X	X	M	M	M	M	M	M
<b>High Performance cords</b>	X	X	X	X	X	M	M	M	X	X	M	M
<b>High Performance Flexibility</b>	X	X	X	X	X	X	M	M	X	X	M	M
<b>Kevlar cords</b>	M	M	M	M	M	M	M	M	M	M	M	M
<b>Fiberglass cords</b>	X	M	M	M	X	X	M	M	X	X	X	X
<b>Polyester cords</b>	M	X	X	X	X	M	X	X	X	X	X	X
<b>Stainless steel cords</b>	X	M	M	M	X	X	M	M	M	M	M	M
<b>Pu Yellow, Grey, Red cover</b>	M	M	M	M	M	M	M	M	X	X	M	M
<b>Porol Black cover</b>	R	R	R	R	R	R	R	R	X	X	R	R
<b>Linatex cover</b>	R	R	R	R	R	R	R	R	X	X	R	R
<b>Tenax standard cover</b>	M	M	M	M	M	M	M	M	X	X	M	M
<b>Red Natural rubber 40 cover</b>	M	M	M	M	M	M	M	M	X	X	M	M
<b>Black Neoprene cover</b>	M	M	M	M	M	M	M	M	X	X	M	M
<b>Gummy Correx Ambra Parablond cover</b>	M	M	M	M	M	M	M	M	X	X	M	M
<b>NBR cover</b>	M	M	M	M	M	M	M	M	X	X	M	M
<b>Linaplus FG</b>	R	R	R	R	R	R	R	R	X	X	R	R
<b>Honeycomb cover</b>	M	M	M	M	M	M	M	M	X	X	M	M
<b>Durataq® cover</b>	M	M	M	M	M	M	M	M	X	X	M	M
<b>FDA compound</b>	M	M	M	M	M	M	M	M	M	M	M	M

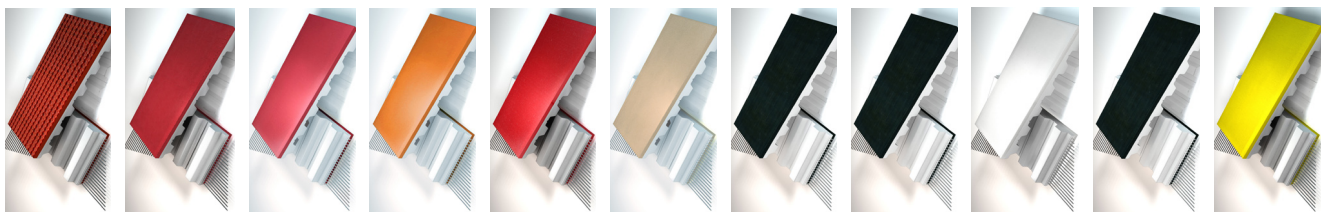
O: Ex stock | R: On request without minimum quantity | M: On request with Minimum Quantity | X: Not available



# COVER PROPERTIES

MEGAPOWER timing belts can be coated with several materials on the back side to obtain the specific properties required (higher friction coefficient, higher abrasion resistance, higher oil resistance, etc.).

COVER TYPE											
COVER TYPE	HONEYCOMB	LINATEX TM	RED NATURAL RUBBER 40	DURATAQ®	TENAX STANDARD	GUMMY CORREX AMBRA PARABLOND	BLACK NEOPRENE	NBR	LINAPLUS FG	POROL BLACK	PU YELLOW, GREY, RED
<b>Raw material</b>	natural rubber	natural rubber	natural rubber	natural rubber	natural rubber	natural rubber	neoprene	nitrile caoutchouc	natural rubber	natural cellular rubber foam	foamed polyurethane
<b>Hardness (ShA)</b>	50	38   40	40	45	45	48	50 70 (VUC)	50 65-70 (VUC)	38	290 kg/m <sup>3</sup>	35-40 50 60-70
<b>Colour</b>	red	red	red	orange	red	beige	black	black/white	white	black	yellow/ grey/red
<b>Coating and belt cohesion method</b>	lamination	lamination; vulcanization	vulcanization	vulcanization	vulcanization	vulcanization	vulcanization; lamination	lamination; vulcanization	lamination	lamination	spraying
<b>Thickness range (mm)</b>	4,5 to 15	1 to 10 3 to 12,7 (VUC)	2,4 to 14	2,4 to 14	0,8 to 15	0,8 to 15	3 to 12; 0,8 to 15	2 to 6; 0,8 to 15	1 to 3	2 to 20	1 to 10
<b>Tolerance on coating thickness</b>	+/- 0,5	+/- 1 (*)	+/- 0,3	+/- 0,3	+/- 0,3	+/- 0,3	+/- 0,3	+/- 0,5+/- 0,3	+/- 1 (*)	+/- 0,5	+/- 0,3
<b>Working temperature range (°C)</b>	-20 +60	-40 +70	-20 +80	-20 +100	-20 +60	-20 +60	-20 +60; -10 +100	-35 +70; 0 +120	-40 +70	-40 +70	-10 +60
<b>Friction coefficient <sup>(1)</sup></b>	0,60	0,9	0,50	1,1	0,70	0,60	0,60	0,70 0,60	0,75	1,2	0,4
<b>Water resistance</b>	very good	good	good	good	very good	very good	good	very good; good	good	very good	fair
<b>Abrasion resistance</b>	very good	good	fair	very good	very good	very good	good	poor; good	fair	fair	very good
<b>Oil resistance</b>	poor	poor	poor	poor	poor	poor	good	good	poor	fair	good
<b>FDA approved</b>	no	no	no	no	no	no	no	no	yes	no	no
<b>Min. pulley dia 5 coating thickness fl ... <sup>(2)</sup></b>	x 30	x 20	x 20	x 20	x 30	x 30	x 30	x 30 x 35	x 25	x 15	x 25



(1) Static Average values for steel guides

(2) The suggested diameter is a bigger value between this calculated value and the minimum pulley diameter on the belt data page



# SPECIAL EXECUTION



## **COLOUR**

On customer request, and with a minimum quantity, is possible to produce MEGAPOWER in several colours.

A different colour doesn't influence the technical properties of the belt, so the mechanical features are the same as the ones of the standard grey/green belt.

## **MECHANICAL REWORK**

Megadyne has been producing specialized belts for many years. Our in-house facilities enable us to produce belts with special holes for vacuum applications, and belts with special backings/ground finishes for high-tolerance applications. We can remove individual teeth and perforate the timing belt as required.

## **BACK GRINDING**

A belt's back can be ground to achieve a precise belt thickness as an adjunct to precision drives. When belt back grinding to a tolerance is required, the total thickness, including the tooth, must be specified. A grinding tolerance of  $\pm 0,2$  mm is achievable with a finish level (i.e. thickness will not vary greatly around the belt).

## **LONGITUDINAL REWORK**

Longitudinal rework along the belt back is possible on covered and uncovered belts. The profile can be machined precisely for required function. The measurement is given by the depth on the belt back. Several widths and lengths are available.

## **REWORK ON BELT TEETH**

The rework of the tooth profile can be very useful, i.e. improving the steering effect with guide rails. The rework's dimension is given by the top of the tooth.

## **HOLES IN TIMING BELTS**

Holes in timing belts can be for vacuum, air film conveying, or as clearance for assembly mechanisms. Stops and cams can be attached through the holes. Customized tooling may be requested depending on the layout and dimensions of the required holes.

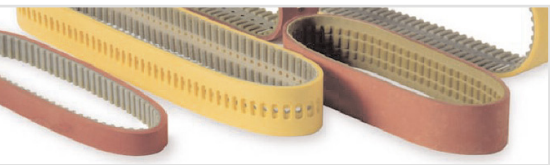
## **ANTISTATIC/ELECTRICAL CONDUCTIVE BELTS (MEGAPOWER EC)**

On customer request and with minimum quantity, it is possible to produce antistatic\electrical conductive MEGAPOWER belts that comply with ISO 9563 standards, and limited to the following configuration with respect to standard belts:

- 89 +- 4 ShA special grade polyurethane, black colour (RAL 9011 reference).
- The transmittable power and the tooth resistance are 25% less than the values declared for the standard version.

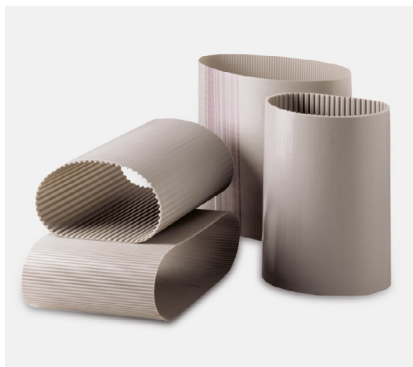
## **SINGLE TOOTH REMOVAL**

Single and multiple tooth removal are available to your requirement for applications in handling and conveying technology.



# SPECIAL EXECUTION

## PHOTOS



### **BELTS AND SLEEVES**

Customers can choose the right MEGAPOWER depending on their business features: belts are finished and ready to use, while sleeves can be stored and cut at the specific width requested by the end-users.



### **SPECIAL PROFILES**

MEGAPOWER belts can be manufactured on customer's request also with pitch T2, RPP3, RPP8, STD3, MTD5.



### **DIRECTLY MOULDED SPECIAL CLEATS**

Special cleats and flat profiles can be directly moulded with the belt, being a part of it and giving higher mechanical characteristics.

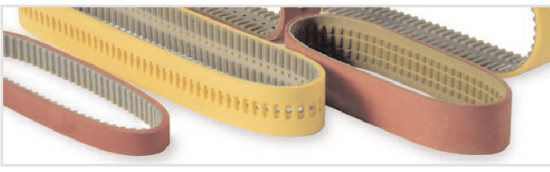


### **TRACKING BELTS FOR LIFTS**

Custom-design moulded belt with: high-strength capacity, helical special teeth, high-coefficient of friction, and very low noise level. They are used as tracking belts in lift applications.

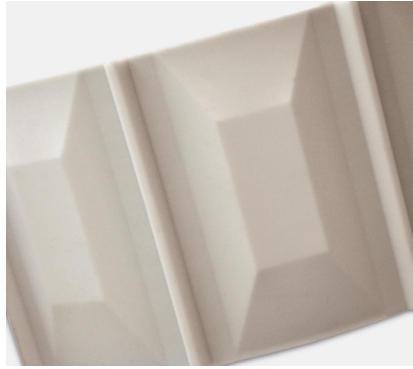
# SPECIAL EXECUTION

## PHOTOS



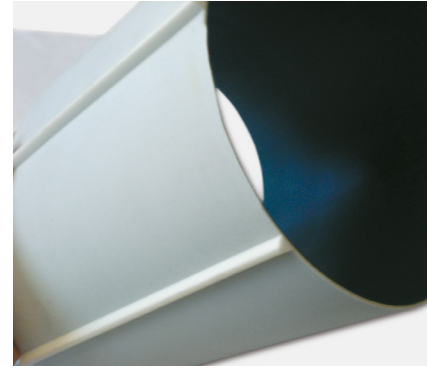
### VACUUM APPLICATIONS

MEGAPOWER belts for vacuum applications, coated with Tenax or other coatings; with ground teeth, holes, and slots (perpendicular or sloping) for vacuum transmission.



### PACKING INDUSTRY

Particular MEGAPOWER with directly moulded carriers and pushers. Engineered to meet very special customer requests.



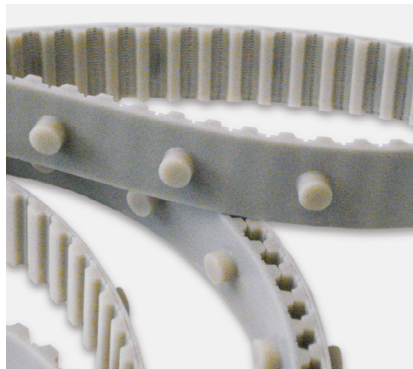
### SPECIAL CARRIERS

MEGAPOWER's customized belt with directly moulded carriers, developed following customer's design.



### AT20 FOR HIGH POWER

MEGAPOWER belts are also available in AT20 pitch, with standard or special cords, to work in very high-power transmission applications.



### CARDING MACHINES

Special moulded belt with cylindrical cleats, used in the textile industry.

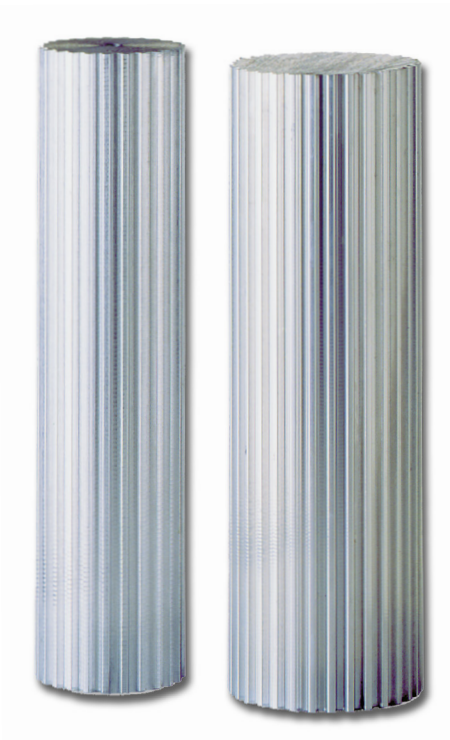
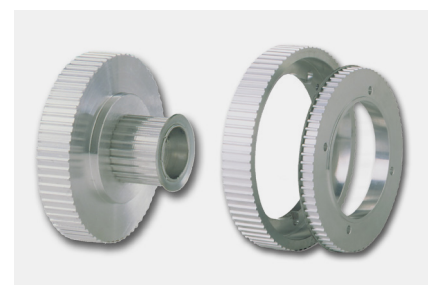
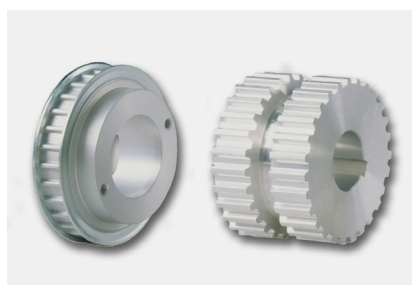
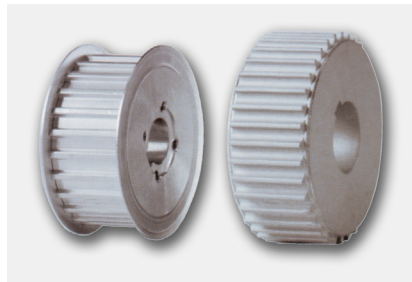
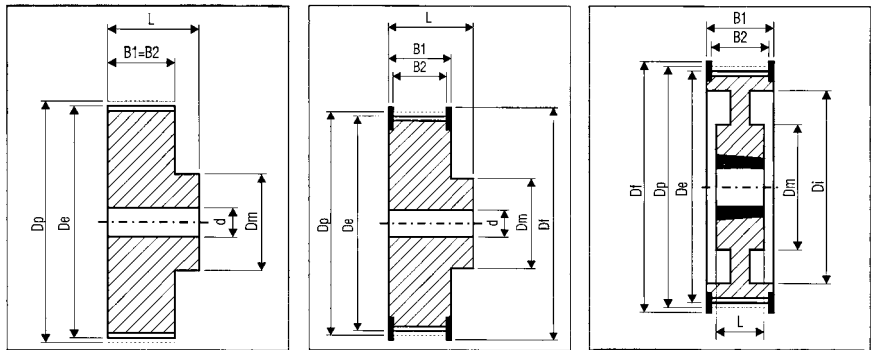
# PULLEYS AND TIMING BARS



Pulleys can be provided both in standard, according to ISO specifications, and engineered design on customer requests.

Manufactured in aluminium, steel, and cast iron, Megadyne's pulleys are available with or without steel flanges, and with a surface treatment.

<b>Imperial</b>	MXL - XL - L - H - XH - XXH - HG
<b>HTD profile</b>	3M - 5M - 8M - 14M
<b>Metric</b>	T2,5 - T5 - T10 - T20 - AT3 - AT5 - AT10 - AT20 - TG5 - TG10 - TG20 - ATG10
<b>RPP</b>	RPP5 - RPP8 - RPP14



MEGAPOWER



# USEFUL FORMULAS

## AND CONVERSION TABLE

SPEED		
$V = \frac{d_1 \cdot n_1}{19100}$	$n_1 = \frac{V \cdot 19100}{d_1}$	$d_1 = \frac{V \cdot 19100}{n_1}$

**V:** peripheral speed [m/s] | **n1:** rotation speed [RPM] | **d1:** pulley diameter [mm]

FORCES AND TORQUE		
$F_u = \frac{19,1 \cdot 10^6 \cdot P}{d_1 \cdot n_1}$	$F_u = \frac{2000 \cdot M}{d_1}$	$F_u = \frac{P \cdot 10^3}{d_1}$
$M_t = \frac{P \cdot 9550}{n_1}$	$M_t = \frac{F_u \cdot d_1}{2000}$	$M_t = \frac{P \cdot d_1}{2 \cdot V}$

**Fu:** peripheral force [N] | **Mt:** drive torque [Nm] | **P:** power [kW]  
**n1:** rotation speed [RPM] | **d1:** pulley diameter [mm] | **V:** peripheral speed [m/s]

SPEED		
$P = \frac{F_u \cdot d_1 \cdot n_1}{19,1 \cdot 10^6}$	$P = \frac{M_t \cdot n_1}{9550}$	$P = \frac{F_u \cdot V}{1000}$

**P:** power [kW] | **Fu:** peripheral force [N] | **Mt:** drive torque [Nm]  
**n1:** rotation speed [RPM] | **d1:** pulley diameter [mm]

TO CONVERT FROM	TO	MULTIPLY BY
CV	HP	0,9863201
CV	kcal/h	63,24151
CV	W	735,4988
CV	kW	0,7354988
CV	kgf • m/s	75
CV	lbf • ft/s	542,476
HP	CV	1,01387
HP	kcal/h	641,1865
HP	W	745,6999
HP	kW	0,7456999
HP	kgf • m/s	76,04022
HP	lbf • ft/s	550
in	m	0,0254
in	cm	2,54
in	mm	25,4
in	ft	0,083
in <sup>2</sup>	m <sup>2</sup>	0,00064516
in <sup>2</sup>	cm <sup>2</sup>	6,4516
in <sup>2</sup>	mm <sup>2</sup>	645,16
in <sup>2</sup>	ft <sup>2</sup>	0,006944444
in <sup>3</sup>	m <sup>3</sup>	1,63871•10 <sup>-5</sup>
in <sup>3</sup>	cm <sup>3</sup>	16,38706
in <sup>3</sup>	mm <sup>3</sup>	16387,06
in <sup>3</sup>	ft <sup>3</sup>	0,000578704
J	CV • h	3,77673•10 <sup>-7</sup>

TO CONVERT FROM	TO	MULTIPLY BY
J	HP • h	3,72506•10 <sup>-7</sup>
J	kWh	2,77778•10 <sup>-7</sup>
kg	lb	2,204623
kgf	N	9,80665
kgf	lbf	2,204623
kgf • m/s	CV	0,01333333
kgf • m/s	W	9,80665
kgf • m/s	kW	0,00980665
kW	CV	1,359622
kW	kcal/h	859,8452
kW	W	1000
kW	kgf • m/s	101,9716
kW	lbf • ft/s	737,5621
lb	kg	0,4535924
lb	kgf	0,4535924
lb	N	4,448222
N	kgf	0,1019716
N	lbf	0,2248089
W	CV	0,001359622
W	HP	0,001341022
W	kcal/h	0,8598452
W	kW	0,001
W	kgf • m/s	0,1019716
W	lbf • ft/s	0,7375621



# DATA SHEET

## CUSTOMER DATA

Company Name \_\_\_\_\_ Date \_\_\_\_\_

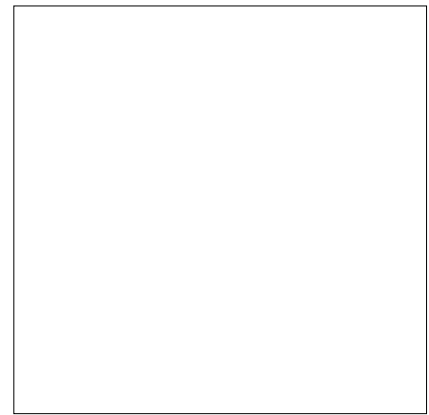
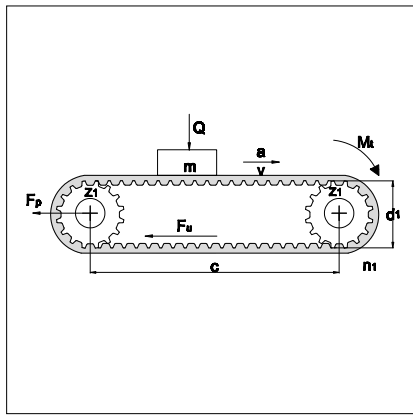
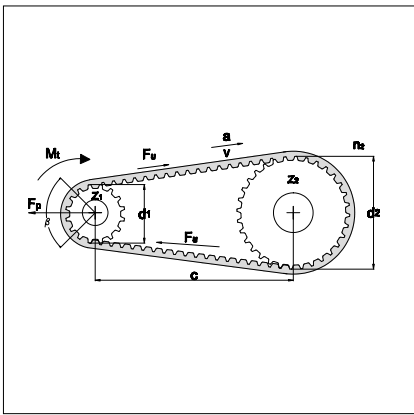
Address \_\_\_\_\_ Zip Code \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Country \_\_\_\_\_

Customer Name/Surname \_\_\_\_\_

Office \_\_\_\_\_ Tel. \_\_\_\_\_ e-mail \_\_\_\_\_

## DRIVE INFORMATION TRANSMISSION LAYOUT



- Power transmission       Conveyor       Other (If layout is different please sketch it above)

## DRIVE INFORMATION (FOR POWER TRANSMISSION)

AC       DC       Soft Start       Inverter

Power \_\_\_\_\_ Speed \_\_\_\_\_

Torque \_\_\_\_\_ Acceleration \_\_\_\_\_

Working time  < 8h     From 8h up to 16h     24h

Driver pulley's diameter \_\_\_\_\_ Driven pulley's diameter \_\_\_\_\_

Center distance \_\_\_\_\_ Minimum safety factor needed \_\_\_\_\_

Are there any size limitations?  Yes     No

(if yes, please indicate *Max diameter*, *Max width* and *Max center distance*):

Max diameter \_\_\_\_\_ Max width \_\_\_\_\_ Max center distance \_\_\_\_\_

Linear speed \_\_\_\_\_ Acceleration \_\_\_\_\_ Mass \_\_\_\_\_

# DATA SHEET

## DRIVE INFORMATION (FOR CONVEYOR)

Driver pulley's diameter \_\_\_\_\_ Driven pulley's diameter \_\_\_\_\_

Center distance \_\_\_\_\_ Minimum safety factor needed \_\_\_\_\_

Are there any size limitation?  Yes  No

(if yes, please indicate *Max diameter*, *Max width*, and *Max center distance*):

Max diameter \_\_\_\_\_ Max width \_\_\_\_\_ Max center distance \_\_\_\_\_

Linear speed \_\_\_\_\_ Acceleration \_\_\_\_\_ Mass \_\_\_\_\_

Is there any sliding surface?  Yes  No (if yes please indicate friction coefficient): \_\_\_\_\_

Is there any cover on the back?  Yes  No (if yes please indicate the type) \_\_\_\_\_

Are cleats required?  Yes  No (if yes please indicate cleats code, otherwise attach drawings) \_\_\_\_\_

Working time  < 8h  From 8h up to 16h  24h

## WORK'S ENVIRONMENT INFORMATION (FOR ALL LAYOUT TRANSMISSION SYSTEMS)

Work Temperature ( please indicate constant temperature and in case peaks) \_\_\_\_\_

Humidity  Standard  No standard  Other \_\_\_\_\_

Chemical agents: (oils, grass, aggressive compounds)  Yes  No

In case please indicate type and percentage \_\_\_\_\_

The data and information contained in the present catalogue are updated to the date of the catalogue's printing. Ammega Italia S.p.A. reserves the right to modify the specifications, performances and other information relating to the belts described in the present catalogue, at any time at its own discretion, without any prior notice.

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

Technical specifications, performances and other information provided in the present catalogue are indicative and do not bound Ammega Italia S.p.A. unless such specifications, performances or other information are expressly agreed in the agreement with the customer.

We also recommend carefully reading 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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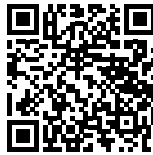


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ITALY - MATHI



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Italy

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contact

