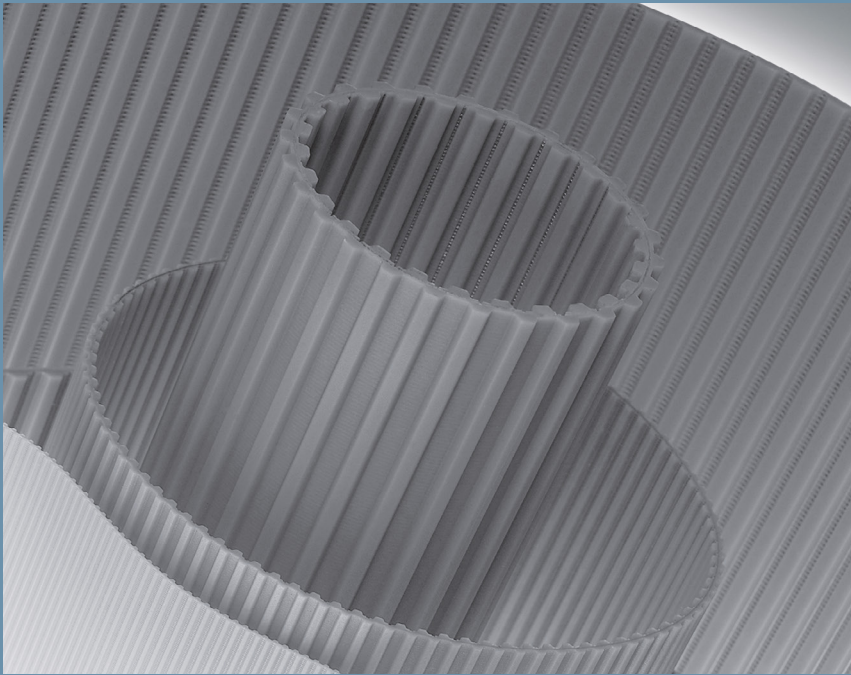




MEGADYNE



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.

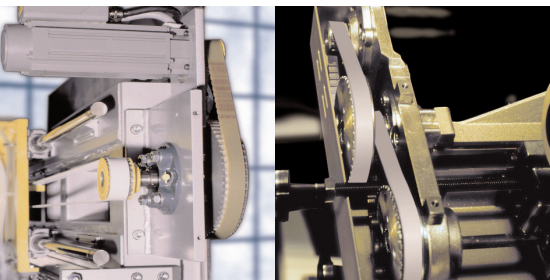
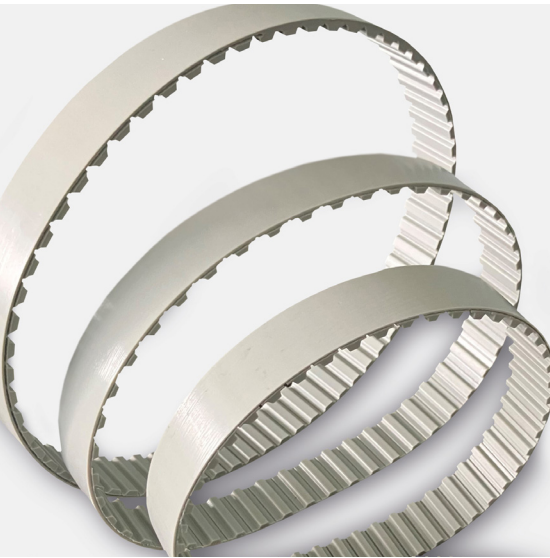
MEGAPOWER drives allow:

- 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.

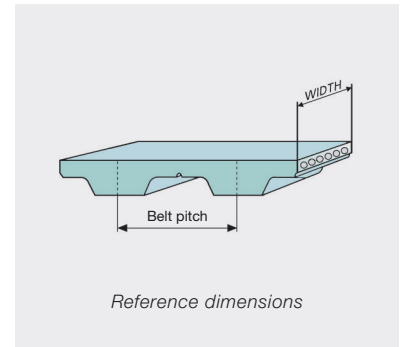
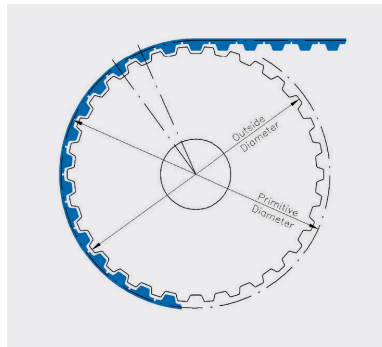
- 2. Length** is the total length (circumference) in millimetres, as measured along the pitch line.

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.

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

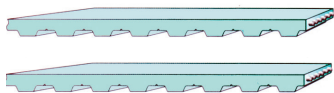
- 3. Width** can vary depending on the driving system needs.



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®.

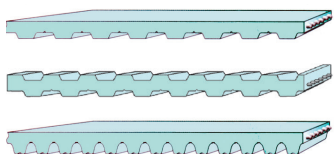
MEGAPOWER



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.

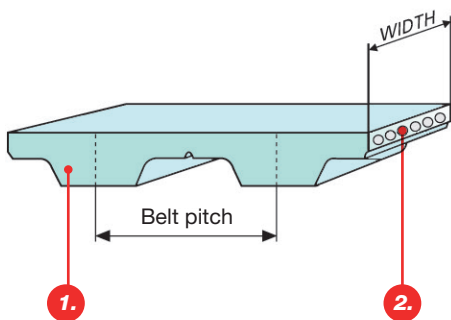
1. The **body** of the belts is in a grey/green thermoset polyurethane 88 ShA, characterized by high levels of wear-resistance, even in the presence of shock and surge loading. The thermoset polyurethane is obtained by mixing a prepolymer with a bonding compound, and heating the mixture. After cooling 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.

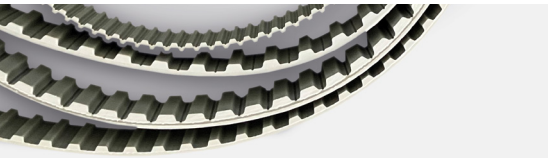
The combination of these high-grade materials improves belt performances, which can be summarised as follows:

- 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

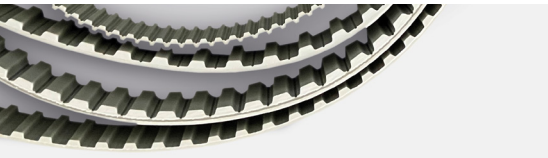
PU has a high resistance to pure mineral greases (lubricants greases). Usually, high-performance synthetic greases, due to special additives contained, can be incompatible with thermoset PU, especially at high temperatures.

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.

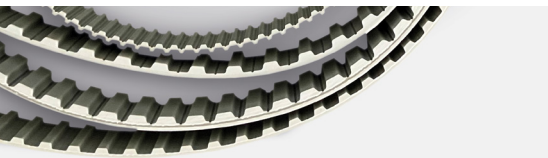
STAINLESS STEEL

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 36 and for properties, see on page 37.

MEGAPOWER Silcoat is now available for specific dimensions with overmolded silicone cover (see on page 35).

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:

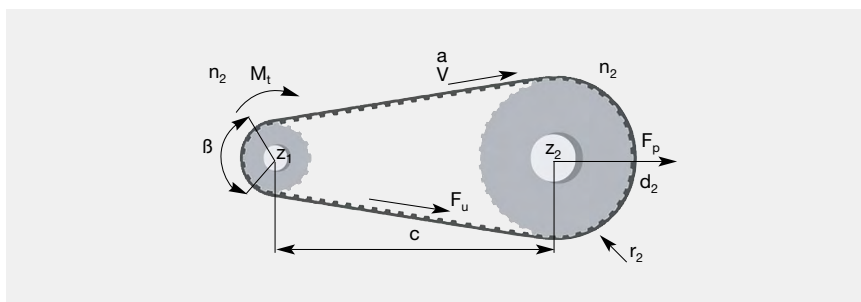
1		2		3		4		5		6
MPW	+	50	+	AT	+	10	+	1500	+	SPECIAL MANUFACTURES

1	MPW	MEGAPOWER timing belt.
2	50	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.
3	AT	This code, composed of letters, indicates the selection of the profile.
4	10	This number indicates the standard pitch of the belt. It is expressed in mm.
5	1500	The last number indicates the length of the belt, always in mm regardless of the pitch.
6	SPECIAL MANUFACTURES:	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



The following pages contain data, formulas and tables that are required to design a new belt. All length tolerances indicated in the catalog are measured under load. For critical and difficult drives, it is recommended that you contact our Application Department for advice.

SYMBOL	UNIT	DEFINITION
t	mm	pitch
b	mm	belt width
L_w	mm	belt length
c	mm	center distance
β		arc of contact
C₁, C₂, C₃, C_{TOT}		safety factors
P	kW	power
P_R	kW/cm	transmittable power for each cm of the tooth in mesh
F_U	N	transmittable force
F_P	N	pretension
i	–	speed ratio
n₁, n₂	RPM	speed of the driver / driven pulley
d₁, d₂	mm	pitch diameter of the driver / driven pulley
z₁, z₂		no. of teeth of the driver/ driven pulley
z_m		no. of the teeth in mesh
M_t	Nm	drive torque
a	m/s ²	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:

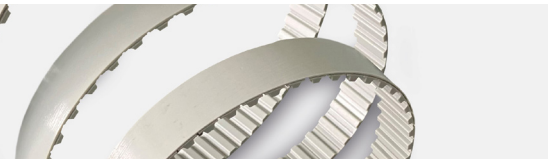
$$z_m = \frac{z_1 \cdot \beta}{360}$$

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

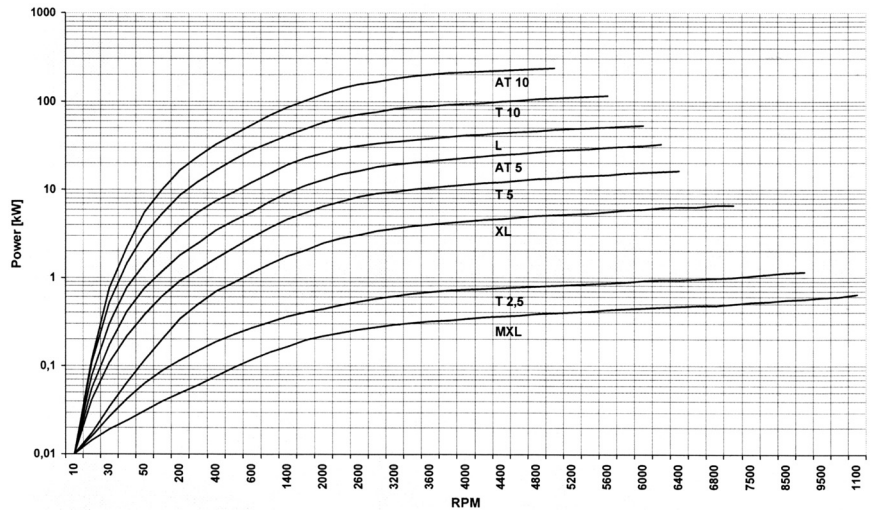


TABLE 1 - LOAD FACTOR C_3

Driven Machine	Driver		
	Type A	Type B	Type C
Office machinery			
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
Domestic machinery			
Centrifuges	1	1,1	1,2
Kitchen appliances, universal slicers	1,1	1,2	1,3
Sewing machines			
Domestic sewing machines	1,1	1,2	1,3
Industrial sewing machines	1,2	1,3	1,4
Laundry machinery			
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
Conveyors			
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
Agitators			
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

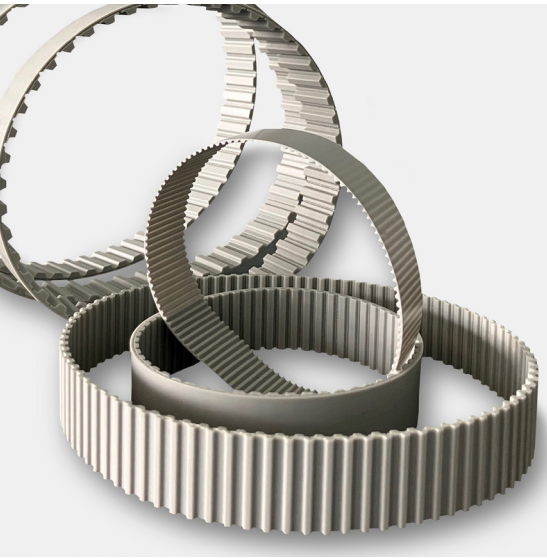
Driven Machine	Driver		
	Type A	Type B	Type C
Machine tools			
Lathes	1,2	1,4	1,6
Drills and grinders	1,3	1,5	1,7
Millers and planers	1,3	1,5	1,7
Woodworking machinery			
Lathes and band saws	1,2	1,3	1,5
Planers and disk saws	1,2	1,4	1,6
Sawmill machinery	1,4	1,6	1,8
Brick machinery			
Mixers	1,4	1,6	1,8
Pug mills	1,6	1,8	2
Textile machinery			
Spoolers and warping machines	1,2	1,4	1,6
Spinning and twisting machines	1,3	1,5	1,7
Paper machinery			
Agitators, calenders, driers	1,2	1,4	1,6
Pumps, beaters, pulpers	1,4	1,6	1,8
Printing machinery			
Linotype machines, cutters, folders	1,2	1,4	1,6
Rotary presses	1,3	1,5	1,7
Screens			
Drum screens	1,2	1,4	1,6
Vibrating screens	1,3	1,5	1,7
Fans, Blowers			
Exhauster, radial blowers	1,4	1,6	1,8
Mine ventilators, axial blowers	1,6	1,8	2
Compressors			
Helical compressors	1,4	1,5	1,6
Piston compressors	1,6	1,8	2
Pumps			
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
Mills			
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:

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

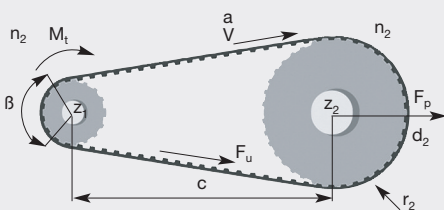
DETERMINATION OF BELT WIDTH

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 50mm

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



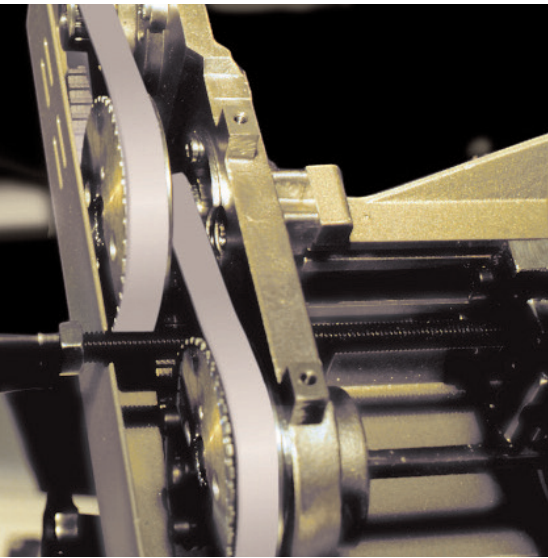
DRIVER DATA

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 110mm
 $c = 300\text{mm}$

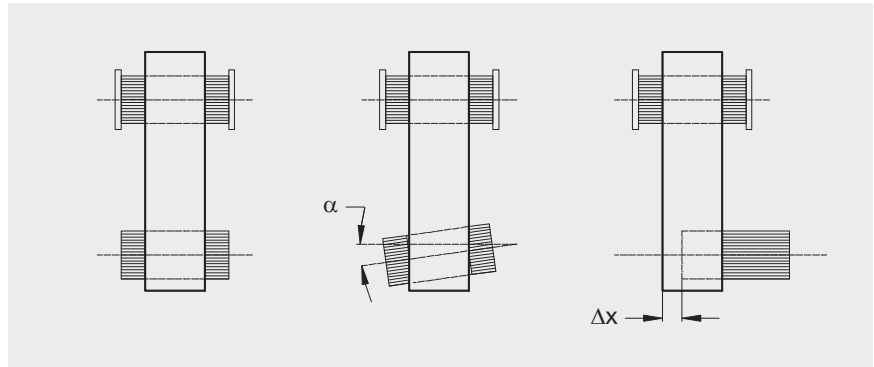
BELT INSTALLATION



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.

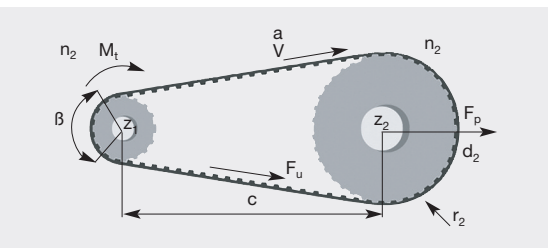
To grant a correct belt running, α and Δx must be as small as possible. For more information, please contact our technical staff.



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:

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

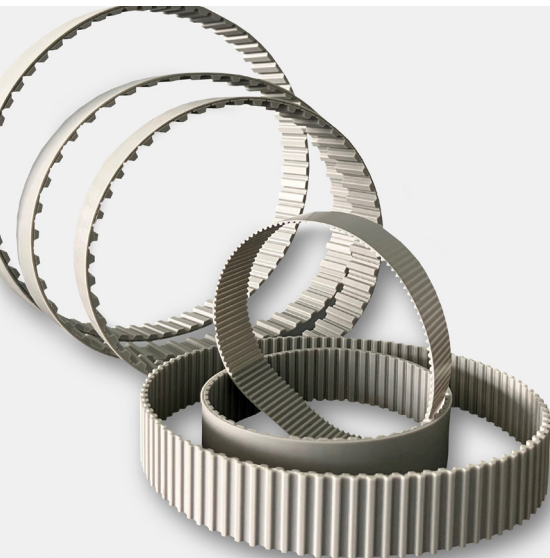
WHERE :

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

MEGAPOWER

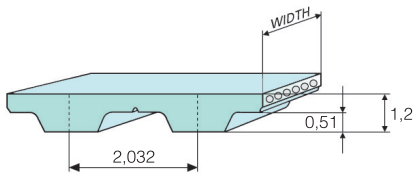
MXL



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

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

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



MEGAPOWER

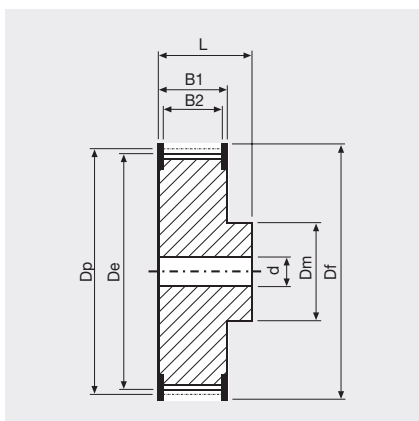
MXL

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

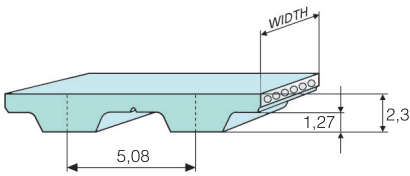
XL



Belt width (mm)	6,4 (025")	7,9 (031")	9,4 (037")	12,7 (050")
Pulley width B2 (mm)	8,9	10,4	12,2	19,0
Belt weight (gr/cm)	0,121	0,153	0,182	0,242

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

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



MEGAPOWER

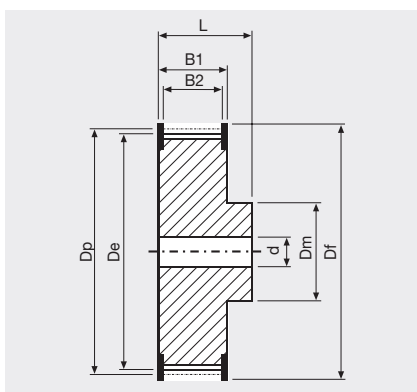
XL

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

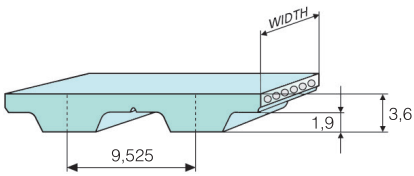
L



Belt width (mm)	12,7 (050")	19,1 (075")	25,4 (100")	38,1 (150")
Pulley width B2 (mm)	19	25,4	29,7	46,0
Belt weight (gr/cm)	0,437	0,661	0,878	1,315

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

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

MEGAPOWER

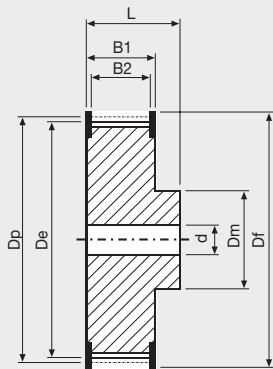
L

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

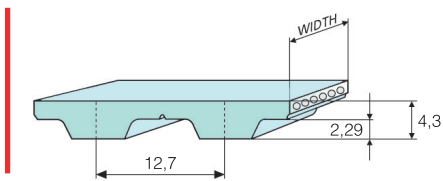
H



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

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

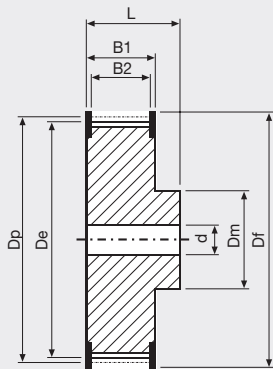
H

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

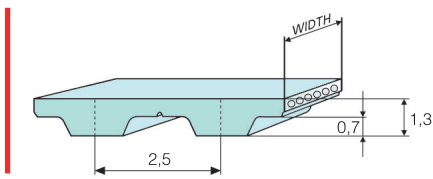
T2,5



Belt width (mm)	4	6	8	10	12
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	Thermoset PU 88 ShA grey/green
Standard cords	Twisted Zinked Steel
Standard belt width tolerance	+/- 0,30 mm
Standard sleeve width tolerance	+/- 10 mm
Standard thickness tolerance	+/- 0,15 mm

Special version belts on request, see page on 37



BELT LENGTHS AND TOLERANCES

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

MEGAPOWER

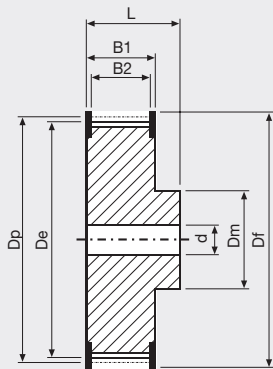
T2,5

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

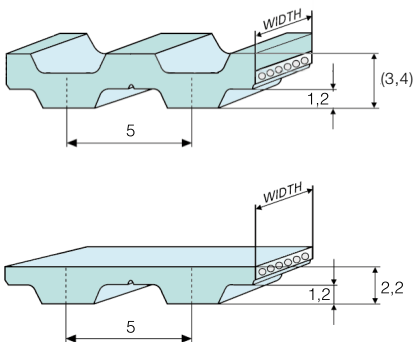
T5 - T5DL



Belt width (mm)	6	8	10	12	16	20	25
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	Thermoset PU 88 ShA grey/green
Standard cords	Twisted Zinked Steel
Standard belt width tolerance	+/- 0,50 mm
Standard sleeve width tolerance	+/- 10 mm
Standard thickness tolerance	+/- 0,15 mm (for single layer only)

Special version belts on request, see page on 37



BELT LENGTHS AND TOLERANCES

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

*Available also without GAP

DOUBLE TOOTHED BELT LENGTHS

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



MEGAPOWER 2

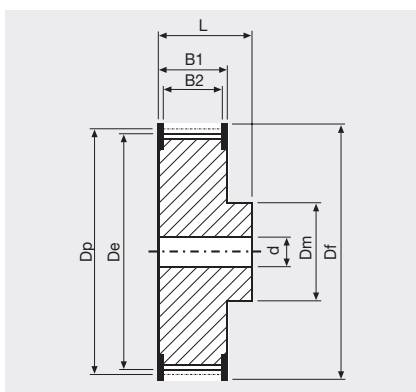
T5 - T5DL

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

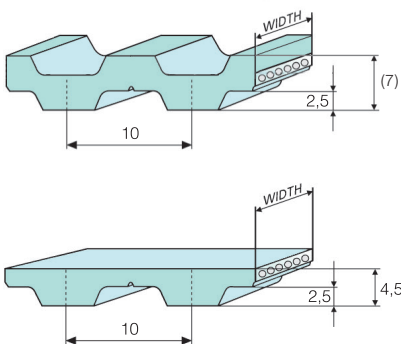
T10 - T10DL



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

DOUBLE TOOTHED BELT LENGTHS

Length (mm)	260	530	660	700	720	800	840	900	920	980	1010	
No. of teeth	26	53	66	70	72	80	84	90	92	98	101	
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

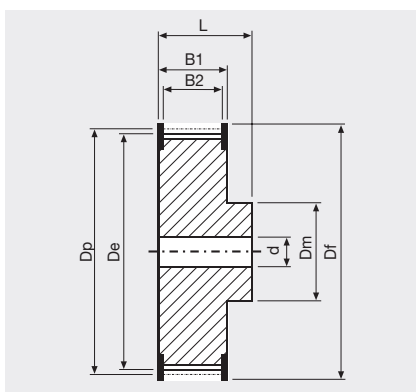
T10 - T10DL

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)

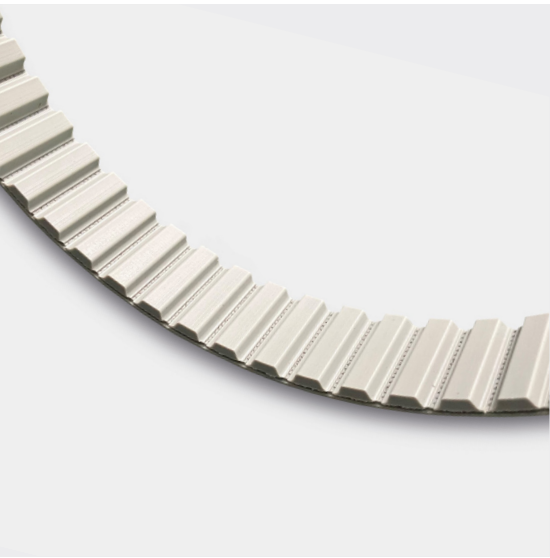


N° TEETH	DP	DE
12	38,20	36,25
14	44,56	42,71
15	47,75	45,90
16	50,93	49,08
18	57,30	55,45
19	60,48	58,63
20	63,66	61,81
22	70,03	68,18
24	76,39	74,55
25	79,58	77,73
26	82,76	80,91
27	85,94	84,10

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

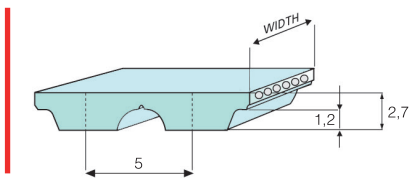
AT5



Belt width (mm)	6	8	10	12	16	20	25
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	Thermoset PU 88 ShA grey/green
Standard cords	Twisted Zinked Steel
Standard belt width tolerance	+/- 0,50 mm
Standard sleeve width tolerance	+/- 10 mm
Standard thickness tolerance	+/- 0,15 mm

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



BELT LENGTHS AND TOLERANCES

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



MEGAPOWER 2

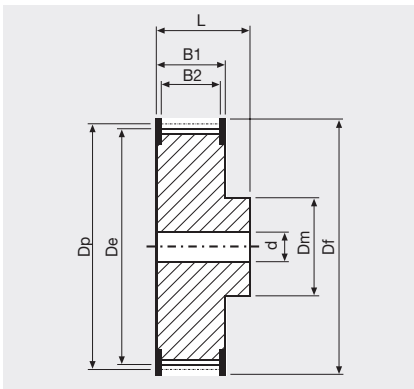
AT5

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)

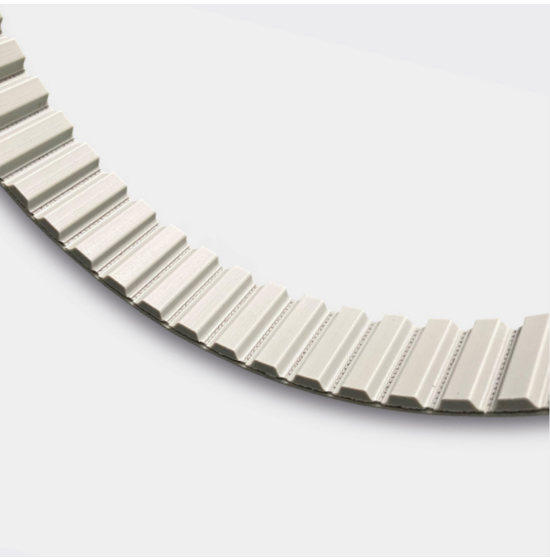


N° TEETH	DP	DE
12	19,10	17,87
14	22,28	21,05
15	23,87	22,64
16	25,46	24,24
18	28,65	27,42
19	30,24	29,01
20	31,83	30,60
22	35,01	33,79
24	38,20	36,97
25	39,79	38,56
26	41,38	40,15
27	42,97	41,74

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

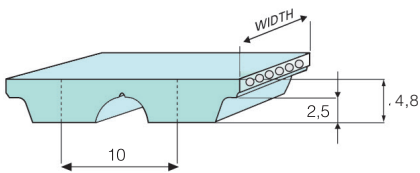
AT10



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)	0,578	0,707	0,952	1,184	1,469	1,905	3,005	4,344

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

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

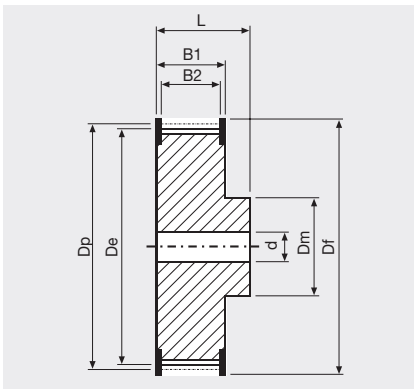
AT10

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	Thermoset PU 81 +- 4 ShA dark blue RAL 5002
Standard cords	Z Twisted stainless Steel AISI 304
Teeth cover (NFT)	Not available
Back cover	Not available
Thermal working range (°C)	- 25 / + 70
Thermal working range tolerance (°C)	+/- 5
Food-contact features (materials components)	Produced and certified according to EU 10/2011, and 174/2015 with food-contact approved components

*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

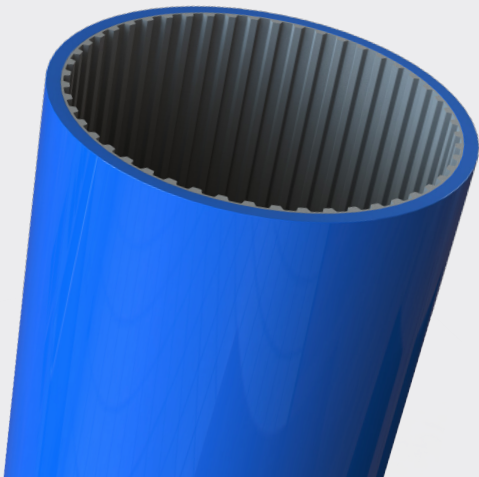
**The chemical's range is too wide, hence, general rules are not always valid. In case of any doubts, please contact our technical team.*

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 SILCOAT

T10 NO GAP

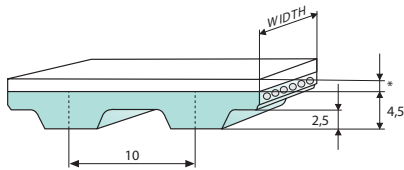


Belt width (mm)	10	12	16	20	25	32	50	75
Pulley width B2 (mm)	15	17	21	25	30	37	56	80
Weight belt for length 630 mm and cover thickness 6 mm* (g)	65	78	103	129	162	207	323	485
Weight belt for length 720 mm and cover thickness 3,2 mm* (g)	51	61	81	102	127	162	254	381
Weight belt for length 920 mm and cover thickness 4,1 mm* (g)	73	88	117	147	183	235	366	550

(*) max cover thickness available for this belt length

BELT LENGTHS AND TOLERANCES

Length (mm)	630	720	920
No. of teeth	63	72	92
Length tolerance (mm)	± 0,42	± 0,48	± 0,56



(*) various thickness based on belt length (see table "Cover Thickness and finishing surface")

Standard compound for toothed belt body	Thermoset PU 88 ShA grey
Standard cords	Twisted Aramide
Standard belt width tolerance	+/- 0,50 mm
Standard sleeve width	360 +/- 20 mm
Standard thickness tolerance	+/- 0,30 mm (for base belt only)
Working temperature standard belt (°C)	-25 / +80
Standard cover	Blue silicone (colour = RAL 5002)

Power transmission and tooth resistance properties are the same of Megapower base belt

BLUE SILICONE COVER PROPERTIES

Length (mm)	630	720	920
Max. Thickness (mm)	6,0 +/- 0,3	3,2 +/- 0,3	4,1 +/- 0,3
Hardness (ShA)	40 +/- 5 ShA		
Working temperature range (°C)	-40 / + 220		
Friction**	Good		
Water resistance	Very Good		
Abrasion resistance	Good		
Oil resistance	Good		
Min. pulley dia (mm)***	x 12 cover thickness		

(**) high grip on most of plastic foil; friction coefficient on request based on type of plastic film in contact with the cover; (***) The suggested diameter is a bigger value between this calculated value and the minimum pulley diameter on the belt data page.

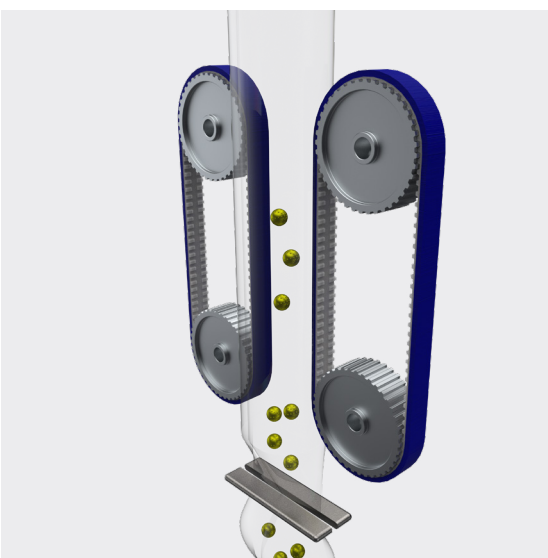
COVER THICKNESS AND FINISHING SURFACE

Belt Length	Cover Thickness (mm)	Glossy	Grinded
630	= 6,0	yes	yes
	< 6,0****	no	yes
720	= 3,2	yes	yes
	< 3,2****	no	yes
920	= 4,1	yes	yes
	< 4,1****	no	yes

(****) minimum thickness for grinded surface: 1 mm

KEY FEATURES AND BENEFITS

- Excelled grip or string adhesion vs packaging foil
- Good resistance to high and low temperature
- Easy to clean
- Typical applications:
 - packaging
 - vertical form fill seal (VFFS)
 - vacuum conveying



VFFS machine

MEGAPOWER

FEASIBILITY TABLE

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

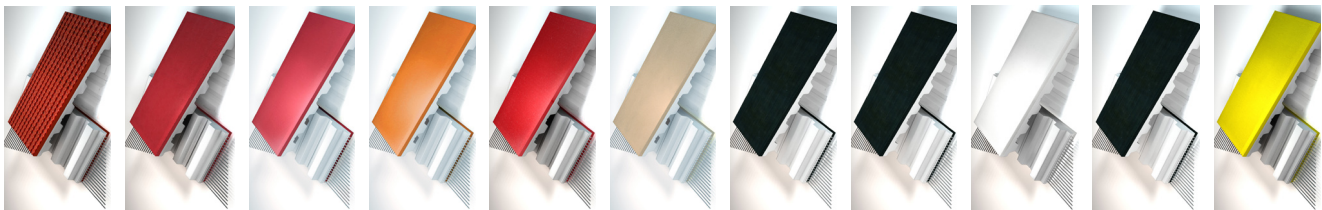
O: Ex stock | R: On request without minimum quantity | M: On request with Minimum Quantity | X: Not available

COVER PROPERTIES



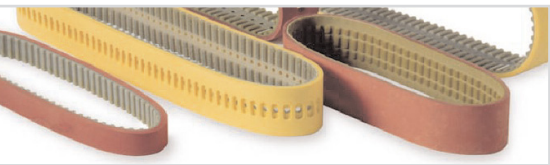
MEGAPOWER timing belts can be coated with several materials on the back side to obtain the specific properties required (higher friction coefficient, higher abrasion resistance, higher oil resistance, etc.).

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
Raw material	natural rubber	natural rubber	natural rubber	natural rubber	natural rubber	natural rubber	neoprene	nitrile caoutchouc	natural rubber	natural cellular rubber foam	foamed polyurethane
Hardness (ShA)	50	38 40	40	45	45	48	50 70 (VUC)	50 65-70 (VUC)	38	290 kg/m ³	35-40 50 60-70
Colour	red	red	red	orange	red	beige	black	black/white	white	black	yellow/ grey/red
Coating and belt cohesion method	lamination	lamination; vulcanization	vulcanization	vulcanization	vulcanization	vulcanization	vulcanization; lamination	lamination; vulcanization	lamination	lamination	spraying
Thickness range (mm)	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
Tolerance on coating thickness	+/- 0,5	+/- 1 (*)	+/- 0,3	+/- 0,3	+/- 0,3	+/- 0,3	+/- 0,3	+/- 0,5+/- 0,3	+/- 1 (*)	+/- 0,5	+/- 0,3
Working temperature range (°C)	-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
Friction coefficient ⁽¹⁾	0,60	0,9	0,50	1,1	0,70	0,60	0,60	0,70 0,60	0,75	1,2	0,4
Water resistance	very good	good	good	good	very good	very good	good	very good; good	good	very good	fair
Abrasion resistance	very good	good	fair	very good	very good	very good	good	poor; good	fair	fair	very good
Oil resistance	poor	poor	poor	poor	poor	poor	good	good	poor	fair	good
FDA approved	no	no	no	no	no	no	no	no	yes	no	no
Min. pulley dia 5 coating thickness fl ... ⁽²⁾	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:

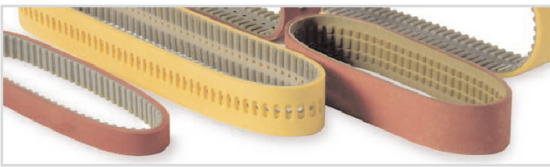
- 89 +- 4 ShA special grade polyurethane, black colour (RAL 9011 reference).
- The transmittable power and the tooth resistance are 25% less than the values declared for the standard version.

SINGLE TOOTH REMOVAL

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

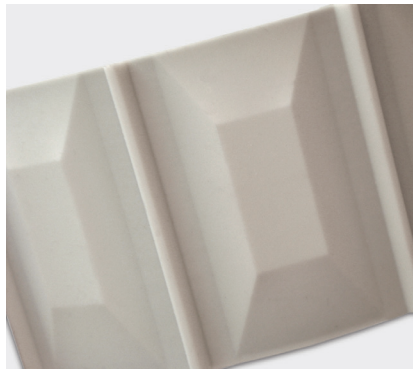
SPECIAL EXECUTION

PHOTOS



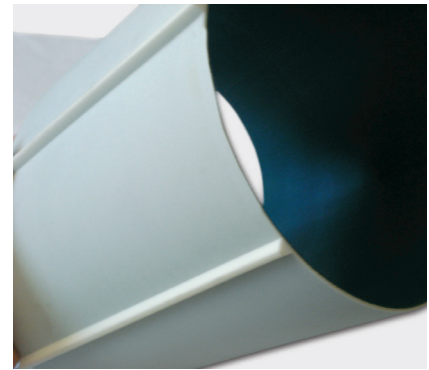
VACUUM APPLICATIONS

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.



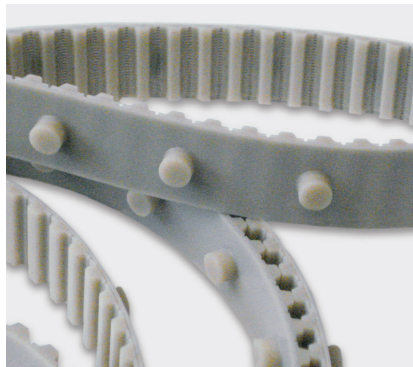
SPECIAL CARRIERS

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.



SPECIAL PROFILES

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



DIRECTLY MOULDED SPECIAL CLEATS

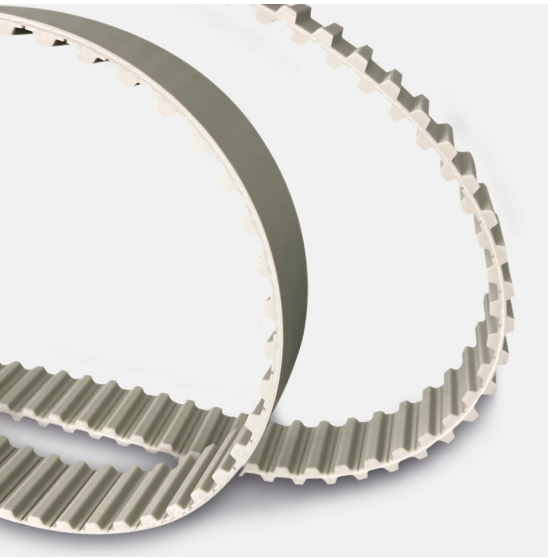
Special cleats and flat profiles can be directly moulded with the belt, being a part of it and giving higher mechanical characteristics.



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.

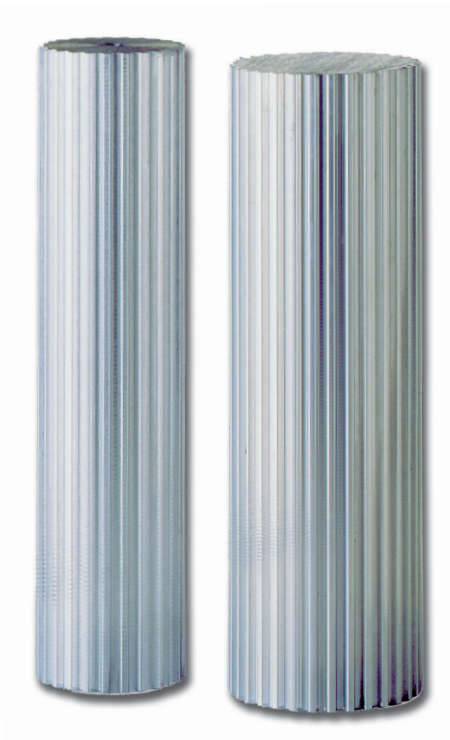
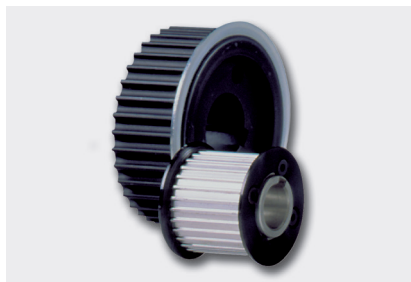
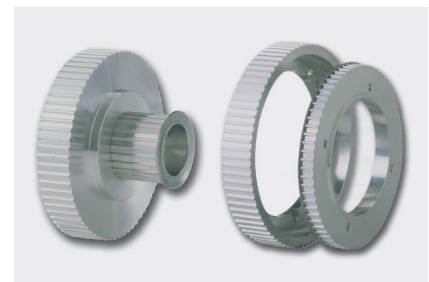
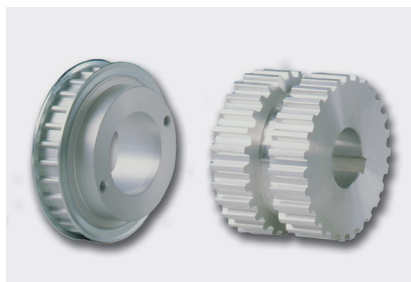
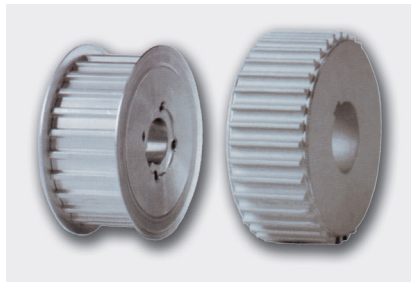
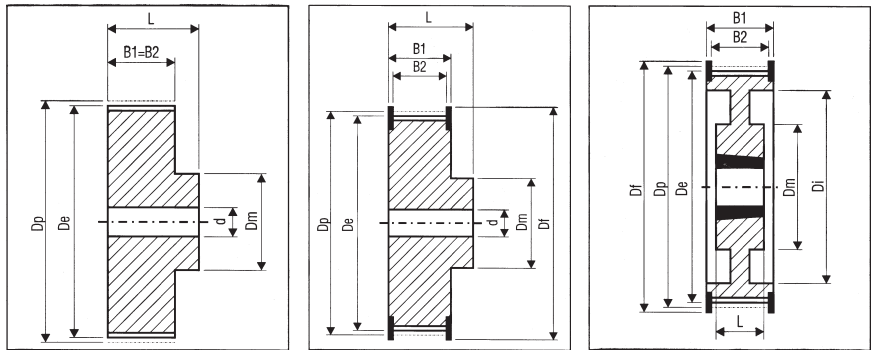
PULLEYS AND TIMING BARS



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.

Imperial	MXL - XL - L - H - XH - XXH - HG
HTD profile	3M - 5M - 8M - 14M
Metric	T2,5 - T5 - T10 - T20 - AT3 - AT5 - AT10 - AT20 - TG5 - TG10 - TG20 - ATG10
RPP	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 ²	m ²	0,00064516
in ²	cm ²	6,4516
in ²	mm ²	645,16
in ²	ft ²	0,006944444
in ³	m ³	1,63871 • 10 ⁻⁵
in ³	cm ³	16,38706
in ³	mm ³	16387,06
in ³	ft ³	0,000578704
J	CV • h	3,77673 • 10 ⁻⁷

TO CONVERT FROM	TO	MULTIPLY BY
J	HP • h	3,72506 • 10 ⁻⁷
J	kWh	2,77778 • 10 ⁻⁷
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 _____

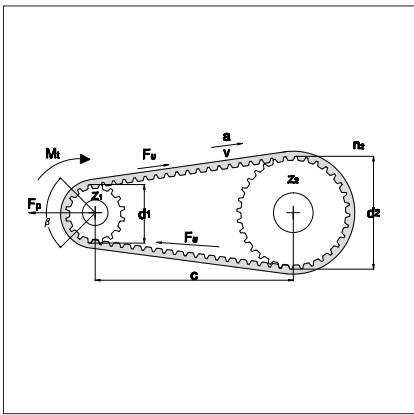
Address _____ Zip Code _____

City _____ State _____ Country _____

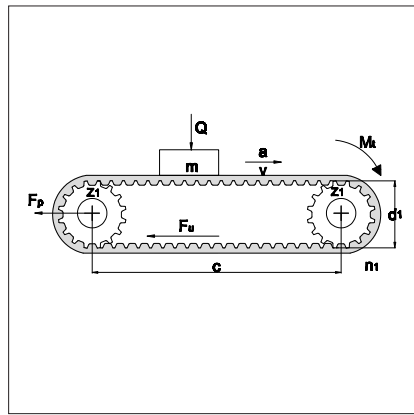
Customer Name/Surname _____

Office _____ Tel. _____ e-mail _____

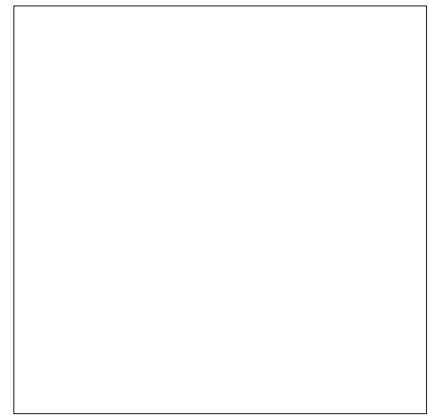
DRIVE INFORMATION TRANSMISSION LAYOUT



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 _____

MEGAPOWER

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We also recommend carefully reading the following documents on our web site 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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