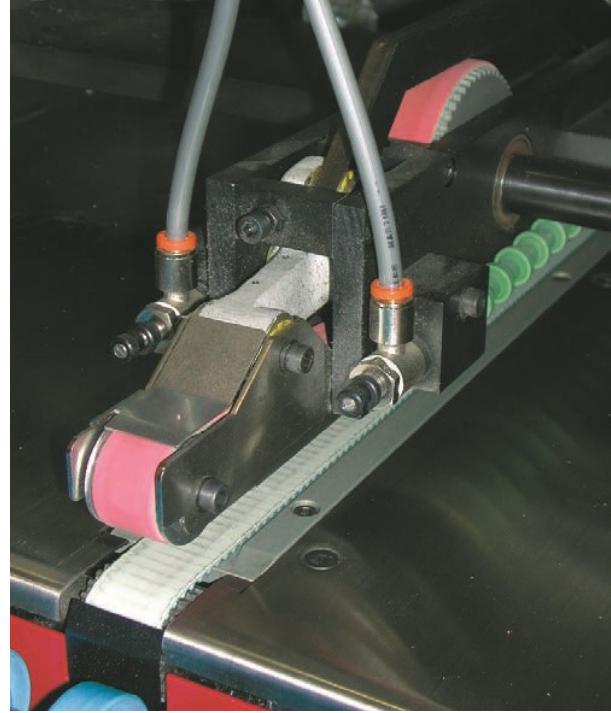
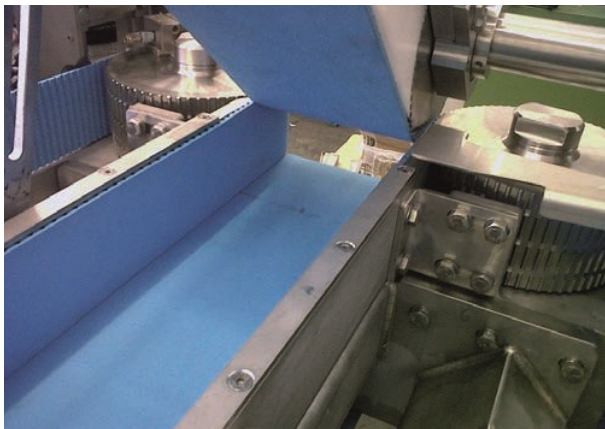
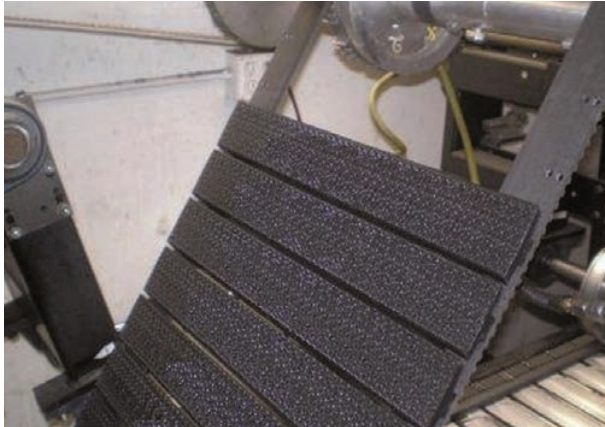


## INTRODUCTION TO TRULY ENDLESS BELT

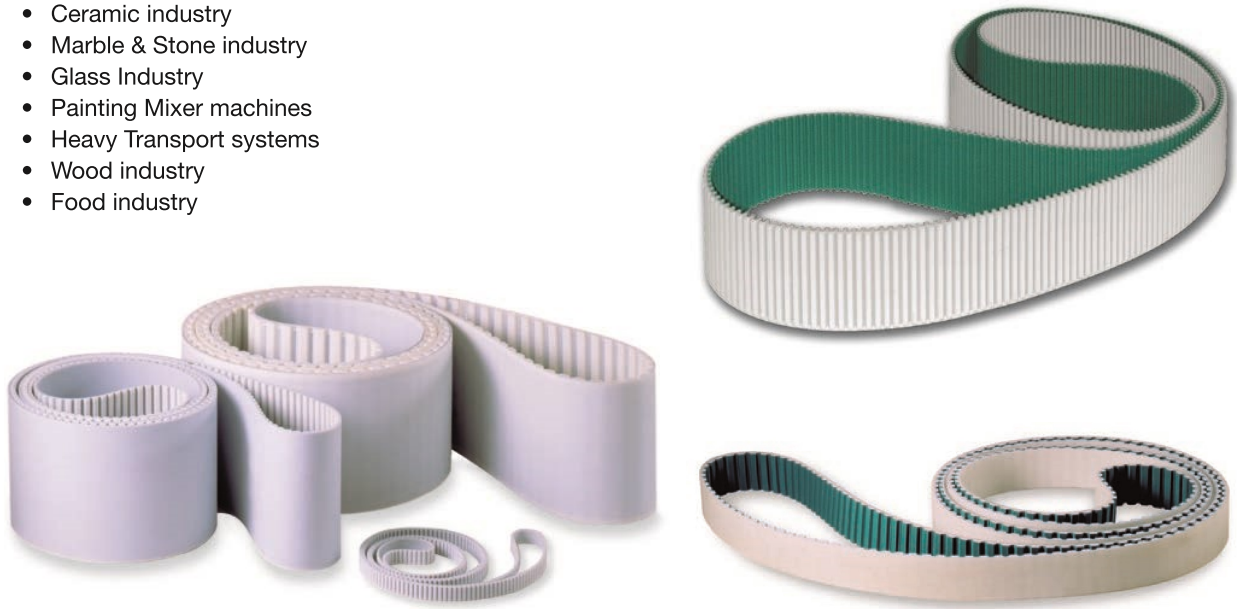
MEGADYNE commenced manufacturing transmission belts in 1957 and extruding polyurethane endless belts in 1990. Megaflex belts are manufactured in thermoplastic polyurethane, that gives superior wear and abrasion resistance. Various grade of steel cords offer good running characteristics even with high tractive load. Great production flexibility grant to designers possibility to match any technical requirement and solution. By selecting different components and material, Megaflex belts can be manufactured to meet every customer requirement.



## PRODUCT RANGE

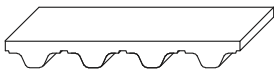

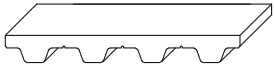

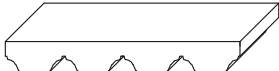

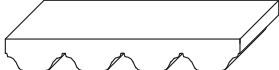
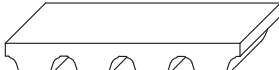

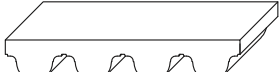
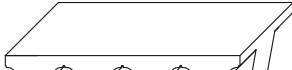
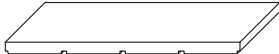
Thanks to their features, Megaflex belts can be successfully used in a wide range of application such as:

- High Power Transmissions
- Ceramic industry
- Marble & Stone industry
- Glass Industry
- Painting Mixer machines
- Heavy Transport systems
- Wood industry
- Food industry



Megadyne has developed a very wide range of solutions with numerous tooth designs, tensile members and compound, suitable for all the applications.

## STANDARD RANGE

| STANDARD  |                            | DOUBLE SIDED  |
|---|----------------------------|---|
|  | <b>XL - L - H - XH</b>     |  |
|  | <b>T5 - T10 - T20</b>      |  |
|  | <b>AT5 - AT10 - AT20</b>   |  |
|  | <b>AT15</b>                |   |
|  | <b>RPP5 - RPP8 - RPP14</b> |  |
|  | <b>MTD8</b>                |   |
|  | <b>ATG10</b>               |   |
|  | <b>P2</b>                  |   |

## CLASSIFICATIONS

### CLASSIFICATIONS

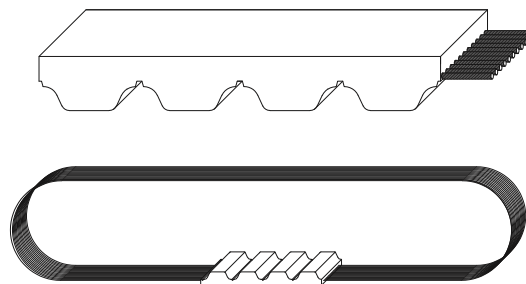
Megaflex Timing Belts are manufactured in thermoplastic polyurethane, with single helicoidal steel cords. This type of belts, developed by our Research & Development, offers good running characteristics and high traction loads. They are especially suited for power transmissions and conveying with high loads and speeds. The addition of a nylon coating on the teeth during production enhances the running properties for specific applications and reduces the noise due to a lower frictional coefficient. On the back of the belt an extra thickness of special coating is also possible, offering extra protection against aggressive or heavy products.

1) The body of the belts is white thermoplastic polyurethane 92 ShA, characterized by high levels of wear resistance even in the presence of shock and surge loading.

2) High strength helicoidal 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 20 m/s
- Low pretension
- Constant length
- High abrasion resistance
- Ageing, Hydrolysis, Ozone resistant
- Working temperature -25 °C / +80 °C
- High resistance to Oils, Greases and Gasoline
- Fairly Acid-proof and Alkali-proof

#### BODY

Megaflex belts are manufactured with white thermoplastic Polyurethane 92 ShA as standard.

Special compounds (different hardnesses, special properties) are available on request. Special compound and cords have to be tested and homologated on the application. Megadyne is not responsible for wrong functioning of special product. Here under some PU characteristics:

|                 |  |
|-----------------|--|
| <b>Water</b>    | No problem in normal or sea clean water, at room temperature.<br>Over 60 °C there is a fast decrement of breaking strength.  |
| <b>Acids</b>    | In acid diluted proportions, at room temperature, this PU is moderately attacked.<br>In high concentration acid solutions, this PU has a very short lifespan.<br>Over 50 °C, acids are always dangerous for Thermoplastic PU.  |
| <b>Alkalis</b>  | In alkalis diluted proportions, at room temperature, this PU is moderately attacked.<br>In high concentration alkaline solutions, this PU has a very short lifespan.<br>Over 50 °C, alkalis are always dangerous for Thermoplastic PU.   |
| <b>Solvents</b> | Thermoplastic PU is insoluble in the greater part of solvents. Only the very polar solvents (like tetrahydrofuran, dimethylformamide, n-methylpyrrolidone) can dissolve or tight damage PU.<br>The Esters or the Ketons (same as ethyl acetate or methylethylketene) can usually produce a bulge, decreasing mechanical characteristics. Aromatic Hydrocarbons and aliphatic Hydrocarbons produce very high bulge. |
| <b>Oils</b>     | All the effects increase by increasing temperature.<br>PU has a high resistance to mineral pure oils (lubricants, engine oils, combustible oils).<br>Usually, high performance syntetic oils, due to special addictives contained, can be incompatible with Thermoplastic PU, especially at high temperature.  |



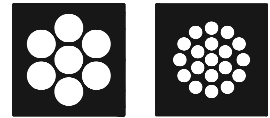
- Greases** PU has a high resistance to mineral pure greases (lubricating greases). Usually, high performance syntetic greases, due to special additives contained, can be incompatible with Thermoplastic PU, especially at high temperature.
- Fuels** Good resistance to petrols without Alcohols. In presence of Alcohols, Thermoplastic PU can suffer deterioration. Fuels including Aromatic stuffs can produce reversible bulges.
- Microorganisms** In presence of grime, containing humidity, microorganisms can develop. In case that microbial attack can produce danger, you have to use a special kind of PU.
- Weather agents** Good resistance to atmospheric agents. White colour can change into light yellow under long UV exposure. In any case this hasn't influence on mechanical properties.

## CORDS

**Standard cord** Megaflex is manufactured with helicoidal zinked steel cords as standard.

**Kevlar** Kevlar tension cords are suggested in:

- Non magnetic, for use in drives with metal detectors
- Food industry.



- HP** High performance cords have 25% strength capacity more than standard cords. They are recommended for high repeatability applications.
- HF** High flexibility cords can accept smaller pulley and idler diameters than standard cords. They are suitable for multi-shaft drives with severe reverse bending.
- HPF** High Performance and Flexibility cords have 25% strength capacity more like the 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% strength capacity less than standard cords. They are recommended for water applications.

## COATING

Megaflex can be manufactured with special coating on the teeth or on the back. Please check on pages 40 and 41. Other covers on request.

## IDENTIFICATION CODE

Using the information in the table below, it is possible to identify the correct belt for every application. The code is composed of letters and numbers as the following example:

| 1   | 2 | 3  | 4 | 5  | 6 |    |   |       |   |                      |
|-----|---|----|---|----|---|----|---|-------|---|----------------------|
| MFX | + | 50 | + | AT | + | 10 | + | 10000 | + | SPECIAL MANUFACTURES |

- 1) MFX** Megaflex.
- 2) 50** This number indicates the requested belt width. The value is in mm for a belt with pitch in mm, and in inches for a belt with pitch in inches.
- 3) AT** This code composed by letters indicates the profile.
- 4) 10** This number indicates the standard pitch of the belt. It is expressed in mm.
- 5) 10000** The last number indicates the length of the belt always in mm regardless of pitch.
- 6) SPECIAL MANUFACTURES:**
  - special cords as Kevlar or HP or HF or HPF or stainless steel;
  - special compound as different hardness (85 ShA) or different colours (black - red - yellow - blue);
  - extra coating (NFT or AVAFC or Tenax or Linatex or Honey comb or PU black cellulose or PU yellow or Neoprene rubber). Please see page 40 and 41.