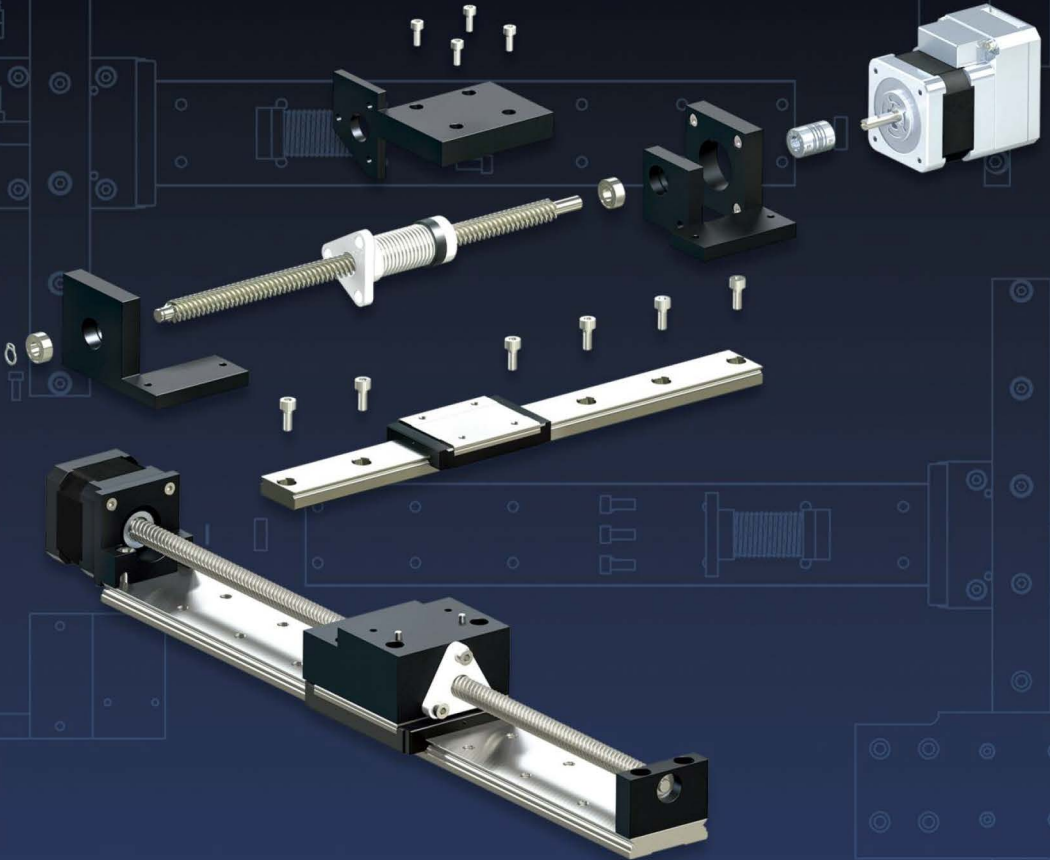




# Reliance<sup>®</sup> Precision Limited



**Precise Motion Control Solutions**  
**Belts and Pulleys**



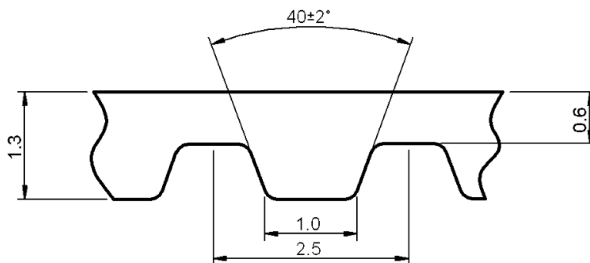
# Section Contents

|                                  |            |
|----------------------------------|------------|
| Timing Belts 2.5mm Pitch .....   | Page 10-2  |
| Timing Pulleys 2.5mm Pitch ..... | Page 10-3  |
| Timing Belts 5mm Pitch .....     | Page 10-4  |
| Timing Pulleys 5mm Pitch .....   | Page 10-5  |
| Technical Information.....       | Page T10-1 |



All dimensions in mm  
Material: High tensile steel  
reinforced polyurethane

Associated Products  
Timing pulleys: page 10-3



### Part number selection table

| Example Part No:- <b>TXM25 F6- 168</b> |            |                   |           |                   |           |
|--|------------|-------------------|-----------|-------------------|-----------|
| Basic Part Number                      | Belt Width | Standard Lengths  |           |                   |           |
|  |            | Number of Pitches | Length mm | Number of Pitches | Length mm |
| TXM25                                  | 6 mm F6-   | 48                | 120.0     | 127               | 317.5     |
|  |            | 58                | 145.0     | 132               | 330.0     |
|  |            | 64                | 160.0     | 152               | 380.0     |
|  |            | 71                | 177.5     | 168               | 420.0     |
|  |            | 72                | 180.0     | 192               | 480.0     |
|  |            | 73                | 182.5     | 200               | 500.0     |
|  |            | 80                | 200.0     | 240               | 600.0     |
|  |            | 92                | 230.0     | 248               | 620.0     |
|  |            | 98                | 245.0     | 260               | 650.0     |
|  |            | 106               | 265.0     | 312               | 780.0     |
|  |            | 114               | 285.0     | 380               | 950.0     |
|  |            | 116               | 290.0     |                   |           |

Belts and Pulleys

#### **i** Features and options

- Temperature range: -10°C to +80°C
- Maximum allowable peripheral load:  
6 mm wide = 65 N
- Maximum peripheral speed: 80 m/s
- Special polyurethanes available
- Double-sided belt available
- Alternative lengths available
- Alternative colours available
- Kevlar tension members available
- Anti-static belts available

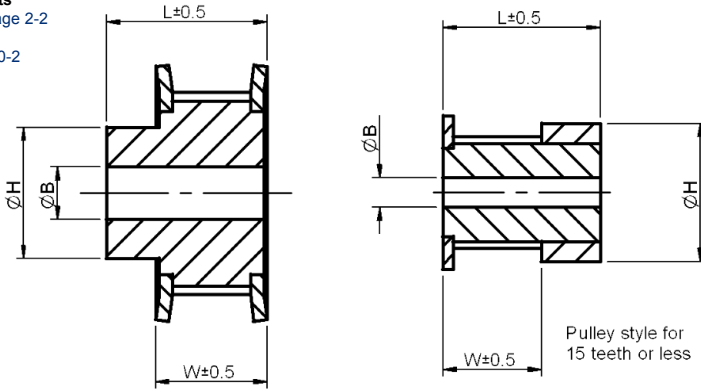
#### **?** Technical support

- Technical information - see page T10-1
- Design guidelines - see page T10-2



**Associated Products**  
 Intelligent motors: page 2-2  
 Shafts: page 11-2  
 Timing belts: page 10-2

All dimensions in mm  
 Materials: Aluminium alloy pulley, zinc plated steel flanges



### Part number selection table

When belt width = 6, W=10 & L=16

| Example Part No:- <b>TPMP25 F6- 60</b> |                 |              |                |              |                      |
|--|-----------------|--------------|----------------|--------------|----------------------|
| Basic Part Number                      | Belt Width      | No. of Teeth | Pitch Diameter | Bore ØB (H7) | Hub Diameter ØH ±1.0 |
| <b>TPMP25</b>                          | <b>6 mm F6-</b> | <b>12</b>    | 9.55           | <b>3</b>     | 13                   |
|  |                 | <b>14</b>    | 11.14          |              | 15                   |
|  |                 | <b>15</b>    | 11.94          |              | 15                   |
|  |                 | <b>18</b>    | 14.32          | <b>4</b>     | 10                   |
|  |                 | <b>19</b>    | 15.12          |              | 10                   |
|  |                 | <b>20</b>    | 15.92          |              | 11                   |
|  |                 | <b>24</b>    | 19.10          |              | 12                   |
|  |                 | <b>25</b>    | 19.89          | <b>6</b>     | 13                   |
|  |                 | <b>30</b>    | 23.87          |              | 16                   |
|  |                 | <b>32</b>    | 25.46          |              | 16                   |
|  |                 | <b>36</b>    | 28.65          |              | 20                   |
|  |                 | <b>40</b>    | 31.83          | <b>8</b>     | 22                   |
|  |                 | <b>48*</b>   | 38.20          |              | 26                   |
|  |                 | <b>60*</b>   | 47.75          |              | 34                   |

\*Pulleys with 48 and 60 teeth are unflanged

### **i** Features and options

- Zero-backlash pulleys
- Other numbers of teeth available
- 0, 1 or 2 flanges available
- Tapped holes in hubs available
- Alternative bore diameters available
- Alternative mountings available
- Keyed bores available

### **?** Technical support

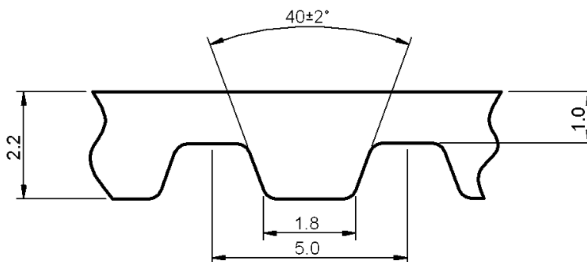
- Technical information - see page T10-1
- Design guidelines - see page T10-2

Belts and Pulleys



All dimensions in mm  
Material: High tensile steel  
reinforced polyurethane

**Associated Products**  
Timing pulleys: page 10-5



## Part number selection table

Example Part No:- **TXM50 F10- 168**

| Basic Part Number | Belt Width    | Standard Lengths  |           |                   |           |                   |           |  |
|-------------------|---------------|-------------------|-----------|-------------------|-----------|-------------------|-----------|--|
|                   |               | Number of Pitches | Length mm | Number of Pitches | Length mm | Number of Pitches | Length mm |  |
| TXM50             | 10 mm<br>F10- | 20                | 100       | 66                | 330       | 126               | 630       |  |
|                   |               | 30                | 150       | 68                | 340       | 138               | 690       |  |
|                   |               | 33                | 165       | 73                | 365       | 140               | 700       |  |
|                   |               | 36                | 180       | 80                | 400       | 145               | 725       |  |
|                   |               | 37                | 185       | 82                | 410       | 150               | 750       |  |
|                   |               | 40                | 200       | 84                | 420       | 156               | 780       |  |
|                   |               | 42                | 210       | 91                | 455       | 163               | 815       |  |
|                   |               | 43                | 215       | 96                | 480       | 168               | 840       |  |
|                   |               | 45                | 225       | 100               | 500       | 180               | 900       |  |
|                   | 49            | 245               | 102       | 510               | 185       | 925               |           |  |
|                   | 50            | 250               | 105       | 525               | 188       | 940               |           |  |
|                   | 52            | 260               | 110       | 550               | 198       | 990               |           |  |
|                   | 54            | 270               | 115       | 575               | 215       | 1,075             |           |  |
|                   | 56            | 280               | 122       | 610               | 243       | 1,215             |           |  |
|                   | 59            | 295               | 124       | 620               | 276       | 1,380             |           |  |
|                   |               | 16 mm<br>F16-     |           |                   |           |                   |           |  |

Belts and Pulleys

### **i** Features and options

- Temperature range: -10°C to +80°C
- Maximum allowable peripheral load:  
10 mm wide = 330 N, 16 mm wide = 570 N
- Maximum peripheral speed: 80 m/s
- Special polyurethanes available
- Double-sided belt available
- Alternative lengths available
- Alternative colours available
- Kevlar tension members available
- Anti-static belts available

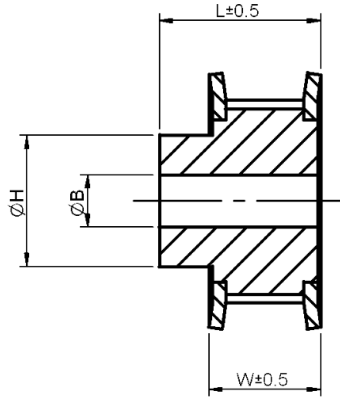
### **?** Technical support

- Technical information - see [page T10-1](#)
- Design guidelines - see [page T10-2](#)



**Associated Products**  
 Intelligent motors: page 2-2  
 Shafts: page 11-2  
 Timing belts: page 10-4

All dimensions in mm  
 Materials: aluminium alloy  
 pulley with zinc plated  
 steel flanges



### Part number selection table

When belt width = 10, W=15 & L=21  
 When belt width = 16, W=21 & L=27

| Example Part No:- <b>TPMP50 F10- 60</b> |                      |              |                |              |                      |
|---|----------------------|--------------|----------------|--------------|----------------------|
| Basic Part Number                       | Belt Width           | No. of Teeth | Pitch Diameter | Bore ØB (H7) | Hub Diameter ØH ±1.0 |
| <b>TPMP50</b>                           | 10 mm<br><b>F10-</b> | <b>10</b>    | 15.92          | 4            | 8                    |
|   |                      | <b>12</b>    | 19.10          |              | 11                   |
|   |                      | <b>14</b>    | 22.28          | 6            | 13                   |
|   |                      | <b>15</b>    | 23.87          |              | 16                   |
|   |                      | <b>16</b>    | 25.46          |              | 18                   |
|   |                      | <b>18</b>    | 28.65          |              | 20                   |
|   |                      | <b>19</b>    | 30.24          |              | 22                   |
|   |                      | <b>20</b>    | 31.83          |              | 23                   |
|   |                      | <b>24</b>    | 38.20          |              | 26                   |
|   |                      | <b>25</b>    | 39.79          |              | 26                   |
|   | <b>27</b>            | 42.97        | 30             |              |                      |
|   | 16 mm<br><b>F16-</b> | <b>30</b>    | 47.75          | 8            | 34                   |
|   |                      | <b>32</b>    | 50.93          |              | 38                   |
|   |                      | <b>36</b>    | 57.30          |              | 38                   |
|   |                      | <b>40</b>    | 63.66          |              | 40                   |
|   |                      | <b>48*</b>   | 76.39          |              | 50                   |
|   |                      | <b>60*</b>   | 95.49          |              | 65                   |

\*Pulleys with 48 and 60 teeth are unflanged













### **i** Features and options

- Zero-backlash pulleys
- Other numbers of teeth available
- 0, 1 or 2 flanges available
- Tapped holes in hubs available
- Alternative bore diameters available
- Alternative mountings available
- Keyed bores available

### **?** Technical support

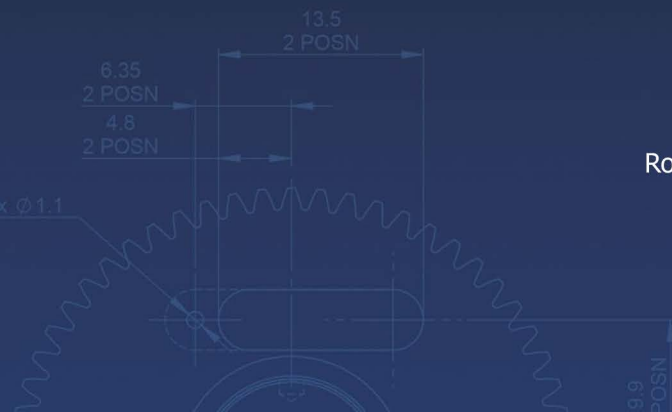
- Technical information - see [page T10-1](#)
- Design guidelines - see [page T10-2](#)

Belts and Pulleys

|   |   |           |
|---|---|-----------|
|   | <i>Introduction to Reliance</i>                       | <i>i</i>  |
|   | <i>Systems Overview</i>                               | <i>1</i>  |
|    | <b>Intelligent Motors and Motorised Actuators</b>     | <b>2</b>  |
|    | <b>Planetary and Right Angle Gearboxes</b>            | <b>3</b>  |
|    | <b>Brass, Ground and Precision Spur Gears</b>         | <b>4</b>  |
|    | <b>Worms and Wheels, Bevels and Internal Gears</b>    | <b>5</b>  |
|    | <b>Round and Rectangular Racks and Pinions</b>        | <b>6</b>  |
|    | <b>Leadscrews and Leadscrew Assemblies</b>            | <b>7</b>  |
|    | <b>Flexible Shaft Couplings, Clutches and Collars</b> | <b>8</b>  |
|    | <b>Linear Guides and Slides</b>                       | <b>9</b>  |
|   | <b>Belts and Pulleys</b>                              | <b>10</b> |
|  | <b>Gear Clamps and Accessories</b>                    | <b>11</b> |
|  | <b>Bearings and Spacers</b>                           | <b>12</b> |
|  | <b>Machine Screws, Dowel Pins and Hardware</b>        | <b>13</b> |
|   | <i>Technical Information</i>                          | <i>14</i> |
|   | <i>Appendices and Index</i>                           | <i>15</i> |



|  |    |
|--|----|
| Systems Overview                               | 1  |
| Intelligent Motors and Motorised Actuators     | 2  |
| Planetary and Right Angle Gearboxes            | 3  |
| Brass, Ground and Precision Spur Gears         | 4  |
| Worms and Wheels, Bevels and Internal Gears    | 5  |
| Round and Rectangular Racks and Pinions        | 6  |
| Leadscrews and Leadscrew Assemblies            | 7  |
| Flexible Shaft Couplings, Clutches and Collars | 8  |
| Linear Guides and Slides                       | 9  |
| Belts and Pulleys                              | 10 |
| Gear Clamps and Accessories                    | 11 |
| Bearings and Spacers                           | 12 |
| Machine Screws, Dowel Pins and Hardware        | 13 |
| Technical Information                          | 14 |



Rowley Mills, Penistone Road, Lepton  
Huddersfield, HD8 0LE, England

+44 (0) 1484 601002  
[www.reliance.co.uk](http://www.reliance.co.uk)  
[sales@reliance.co.uk](mailto:sales@reliance.co.uk)

RG36 issue A1