# SKF TKBT 10


Instructions for use

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Original instructions

## READ THIS FIRST
## Safety precautions

To ensure safe and proper use of the SKF TKBT 10 Belt tension meter please follow these safety guidelines:

- **Read the manual:**
  Always read and understand the full user manual before operating the device.
- **Qualified personnel only:**
  The device should only be used and serviced by trained and authorized personnel.
- **Use as intended:**
  Operate the TKBT 10 only as described in the manual. Misuse may result in injury or damage.
- **Avoid explosive environments:**
  Do not use the device in areas with a risk of explosion.
- **Protect your eyes:**
  The optical sensor emits a low-power beam. Never look directly into the sensor or point it at other's eyes.
- **Avoid extreme conditions:**
  Do not expose the device to excessive heat, cold, moisture, or direct sunlight.
- **Handle with care:**
  Avoid dropping or subjecting the device to strong impacts or vibrations.
- **Keep dry:**
  Do not use the device with wet hands or in wet environments.
- **No unauthorized modifications:**
  Do not open or modify the device. Repairs should only be performed by SKF-authorized service personnel.
- **Use approved accessories:**
  Only use accessories and components recommended by SKF.
- **Battery safety:**
  Use only the specified battery type. Replace batteries in a safe, dry environment.
- This device comes with alkaline batteries.

- **To ensure safe and environmentally responsible disposal and replacement:**
- Do not dispose of batteries in household - general waste.
- Use designated battery collection points or recycling bins.
- Do not attempt to recharge, dismantle, or incinerate alkaline batteries.
- Remove batteries from the device if it will not be used for an extended period.
- Use only the specified battery type. Replace batteries in a safe, dry environment.
- Proper disposal helps prevent environmental harm and supports material recovery.
- **Calibration:** It is recommended to calibrate the device regularly or as specified in your quality procedures.
- **Secure the machine:**
  Always ensure the machine is turned off and locked out before performing any measurements.
- **Personal protective equipment:**
  Wear appropriate PPE such as safety glasses, safety shoes and gloves when working around machinery.

⚠ **WARNING!:**

- Failure to follow these recommendations may result in personal injury, equipment damage, or voiding of the warranty.

## EU Declaration of Conformity TKBT 10

We, SKF MPT, Meidoornkade 14,
3992 AE Houten, The Netherlands herewith declare under our sole responsibility that the products described in these instructions for use, are in accordance with the conditions of the following legislations:
EMC DIRECTIVE 2014/30/EU
RoHS DIRECTIVE (EU) 2011/65/EU as amended by 2015/863/EU and are in conformity with the following standards:

IEC 62321: 2013/2015/2017 –
Determination of certain substances in electrotechnical products
EN 61000-6-3: 2007+A1: 2011 -
Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments
EN 61000-6-1: 2007 -
Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments

Houten, The Netherlands, December 2025

Jérôme Verrier
Manager Quality and Compliance

## UK Declaration of Conformity TKBT 10

We, SKF MPT, Meidoornkade 14,
3992 AE Houten, The Netherlands herewith declare under our sole responsibility that the products described in these instructions for use, are in accordance with the conditions of the following legislations:
Electromagnetic Compatibility Regulations 2016 (2016 No. 1091)
The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012
(2012 No. 3032) and are in conformity with the following standards:

IEC 62321: 2013/2015/2017 –
Determination of certain substances in electrotechnical products
EN 61000-6-3: 2007+A1: 2011 -
Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments
EN 61000-6-1: 2007 -
Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments

The person authorised to compile the technical documentation on behalf of the manufacturer is SKF (U.K.) Limited, 2 Canada Close, Banbury, Oxfordshire, OX16 2RT, GBR.

Houten, The Netherlands, December 2025

Jérôme Verrier
Manager Quality and Compliance

## 1. Belt tension measurement overview

Belt tension adjustment refers to the process of setting the correct tension of industrial power transmission belts to ensure optimal performance. This involves applying the right amount of force to the belt so that it maintains proper contact with pulleys without slipping or being overly tight. The goal is to achieve a balance where the belt can efficiently transmit power while minimizing wear and energy loss.

Proper belt tensioning is essential for maintaining system efficiency, reducing energy consumption, and extending the lifespan of both the belt and associated components. Correct tension ensures smooth power transmission, prevents slippage, and reduces vibration and noise. It also minimizes the risk of premature belt failure, which can lead to costly downtime and maintenance.

Incorrect belt tension—either too loose or too tight—can lead to several operational issues. A loose belt may slip, causing loss of power transmission, overheating, and increased wear. On the other hand, an overly tight belt can strain bearings, shafts, and motors, leading to mechanical failures and reduced equipment life. Both scenarios can result in unplanned downtime and increased maintenance costs.

The **SKF TKBT 10** is an electronic belt tension meter designed to provide accurate and consistent tension measurements for power transmission belts.
Compared to manual methods, which can vary depending on user technique and experience, the TKBT 10 offers a more objective and repeatable approach. It uses sensor-based technology to measure the natural frequency of the belt, allowing technicians to quickly determine whether the tension is within the recommended range. This helps improve the reliability of belt installations and maintenance, supports optimal machine performance, and reduces the risk of premature wear or failure. The device is especially useful in environments where precision and consistency are important for operational efficiency.

## 2. Principle of operation

The SKF TKBT 10 is a belt tension measurement device that operates based on vibration analysis. When a belt is gently struck, it begins to oscillate at its natural frequency.
The TKBT 10 uses an optical sensor to detect these vibrations without physical contact. The sensor captures changes in light reflection caused by the belt's movement and converts them into frequency data. This frequency is directly related to the belt's tension.
To calculate the actual tension or belt tension, the device uses the measured frequency along with user-input parameters such as belt mass per meter and span length.
These values are processed internally to provide a precise tension reading, displayed in Hertz (Hz) or converted into Newtons (N) or pound-force (lbf) as needed. The non-contact nature of the optical sensor ensures accurate and repeatable measurements, even in hard-to-reach or narrow machine areas.

## 3. Case content

**The TKBT-10 case contains:**

1. **1 × SKF TKBT 10 Main Unit –**
   Belt tension meter with integrated display and keypad.
2. **1 × Short Gooseneck Optical Sensor –**
   Flexible sensor for easy access to tight spaces.
3. **3 × AA Batteries –**
   Power supply for the main unit.
4. **1 × Instruction for use card –**
   A QR code card for detailed documentation.
5. **1 × Rugged Carrying Case –**
   Protects the device and accessories during transport and storage.

## 4. Pre-measurement

Before performing a belt tension measurement with the TKBT 10, ensure that the machine is safely shut down and the belt is stationary. Lock out and tag out the equipment to prevent accidental startup during the procedure.

**Check the following before starting:**

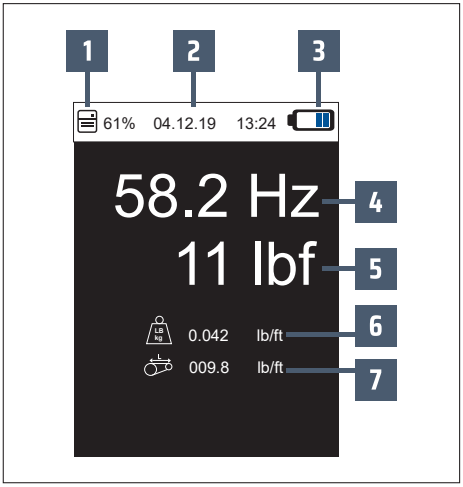
- **Belt accessibility:**
  Ensure the belt span is visible and reachable for sensor placement and tapping.
- **Sensor mounting:**
  Attach the short gooseneck optical sensor securely to the TKBT 10 device and position it above the center of the belt span, maintaining a distance of 10 - 25 mm *(0.4 - 1 in)*.
- **Belt condition:**
  Inspect the belt for visible damage, wear, or contamination that could affect vibration behavior.
- **Environmental conditions:**
  Confirm that ambient temperature and humidity are within the operating range specified in the manual.
- **User inputs:**
  Prepare the belt's technical data, including mass per meter and span length, if belt tension calculation is required.

# 5. Measurement

## 5.1 Key pad explanation:

| Key | Description | Function |
|---|---|---|
|  | Power button | Turns the device on or off |
|  | Menu button | Opens the main menu for configuration |
|  | Back/Cancel button | Cancels the current action or returns to previous screen |
|  | Confirm button | Confirms selections or saves a measurement |
|  | Measuring mode | Activates the vibration detection mode |
|  | Navigation up | Scrolls up through menu options or memory entries |
|  | Navigation down | Scrolls down through menu options or memory entries |
|  | Navigation right | Moves right in menus or views additional data |
|  | Navigation left | Moves left in menus or views previous data |

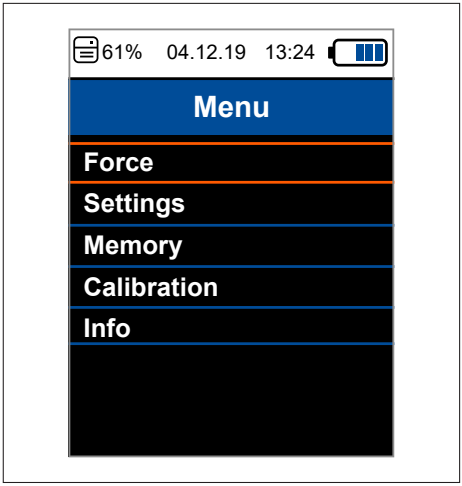
## 5.2 Device screen explanation




| Key Display Elements | | |
|---|---|---|
| 1. | Memory Capacity: | Shows current and total saved measurements (e.g., 15/750) |
| 2. | Date & Time: | Timestamp for traceability |
| 3. | Battery Level: | Indicates remaining power |
| 4. | Belt Tension (Hz): | Real-time frequency reading |
| 5. | Belt tension (N or lbf): | Calculated belt tension in force units |
| 6. | Set Belt Weight (kg/m or lb/ft): | User-defined belt mass per meter or feet |
| 7. | Set Belt span length (m or in): | User-defined span length |

## 5.3 Menu explanation

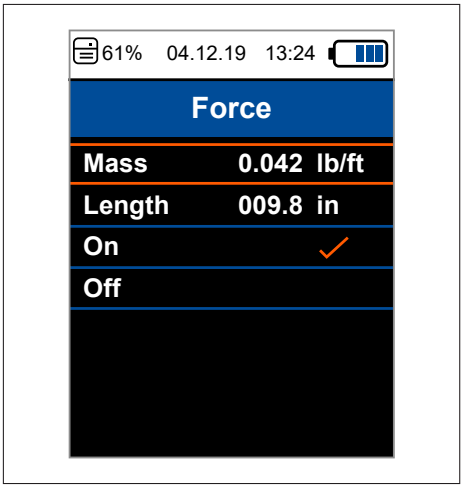
**Menu Navigation – SKF TKBT 10**
The TKBT 10 features a structured menu system accessible via the Menu key.
Use the arrow keys to navigate and the OK key to confirm selections.
The Back key returns to the previous screen.




1. **Force**

This submenu allows you to enter the parameters required to calculate the belt tension.

- **Mass per meter (kg/m or lb/ft):**
  Enter the linear mass of the belt.
  Refer to the appendix for standard values.
- **Belt span length (m or in):**
  Enter the span length between the two pulleys. This can be measured directly or calculated (see Appendix).
- **Display toggle:**
  Choose whether the belt tension should be shown during measurement.




2. **Units**

Select the preferred unit system:

- **SI (International System):**
  Displays force in Newtons (N), mass in kg/m, and length in meters.
- **US (Imperial System):**
  Displays force in pound-force (lbf), mass in lb/ft, and length in inches or feet.

3. **Date & Time**

- **Date & Time:**
  Set the current date and time for accurate timestamping of measurements.
- **Format:**
  Choose between different date formats (e.g., DD-MM-YY, MM-DD-YY or YY-MM-DD).

4. Sound

Control audio feedback:

- **Key sound:**
  Enable or disable beeps when pressing buttons.
- **Measurement sound:**
  Enable or disable sound when a measurement is recorded.

5. Brightness

Adjust the display brightness from 10% to 100% to suit ambient lighting conditions.

6. Language

Choose the display language.

**Available options include:**

- English
- German
- Spanish
- French
- Italian
- Dutch

7. Auto Power Off

Set the automatic shutdown timer to conserve battery life:

- **Options:**
  1 to 5 minutes, or disable the feature entirely.

8. Memory

Manage stored measurements:

- **Select Folder:**
  Choose one of 15 folders for saving new measurements.
- **View Memory:**
  Browse saved data.
- **Single Delete:**
  Remove individual entries.
- **Delete Folder:**
  Clear all entries in a selected folder.
- **Delete All Data:**
  Erase all stored measurements across all folders.


9. Calibration

Perform a zero-point calibration:

- Place the device and sensor on a flat, bright surface.
- Select **Calibration** and wait for the process to complete.

10. Info

Displays firmware version and device information for support or troubleshooting.

## 5.4 Steps for measurement

**⚠ ATTTENTION!:**

- Tool should be parallel to the belt for better results.

**Step 1: Preparation**

- Ensure the machine is turned off and secured against accidental startup.
- Mount the short gooseneck optical sensor onto the TKBT 10 device.
- Insert fresh AA batteries if needed and power on the device using the On/Off key.

**Step 2: Initial Setup**

- After startup, set the date and time via the menu.
- Navigate to the Force menu and input:
  - Belt mass per meter (kg/m or lb/ft) – Refer to the appendix.
  - Belt span length (m or in) – Measure directly or calculate using pulley diameters (see Appendix).
- Confirm each entry with the OK key.

**Step 3: Calibration (Recommended)**

- Place the device on a flat surface.
- Hold the sensor above a bright, flat surface.
- In the Calibration menu, select Zero-point calibration and wait for confirmation.

**Step 4: Entering Measurement Mode**

- Press the Measuring Mode key twice to activate vibration detection.
- The device will now wait for belt movement.

**Step 5: Initiating Vibration**

- Position the sensor 10 - 25 mm *(0.4 - 1 in)* above the center of the belt span.
- Gently tap the top of the belt span with your finger to initiate vibration.
- Ensure the sensor is aligned parallel to the belt and remains stable during measurement.

**Step 6: Reading the Result**

- The display will show:
  - Belt tension in Hertz (Hz)
  - Belt tension in Newtons (N)
  - Set values for belt weight and belt span length
- If only frequency is needed, belt tension input is optional.

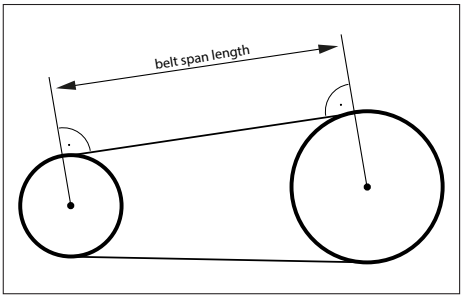
**Step 7: Saving the Measurement**

- Press the OK key to save the result.
- The device will display the folder and entry number.
- Wait 4 seconds before taking the next measurement.

## 5.5 Calculation of belt span length, belt weight and belt tension force

Accurate calculation of trum force requires correct input of the belt's physical parameters. These values can be entered in the Force menu of the TKBT 10.

### 1. Belt span length ($l_{beltspan}$)




The belt span length is the free span of the belt between two pulleys. It can be measured directly using a tape measure, or calculated using the following formula if direct measurement is not possible:

$$l_{beltspan} = ½ \times \sqrt{(l\_belt^2 - [\pi \times (d_1 + d_2) / 2]^2)}$$

Where:
- **l_belt** = total belt length
- **$d_1$, $d_2$** = diameters of the two pulleys

### 2. Belt Weight ($m_{meter}$)

If the belt's mass per meter is not provided by the manufacturer, it can be calculated manually using the formula:

$$m_{meter} = m\_belt / l\_belt$$

Where:
- **m_belt** = total mass of the belt (kg)
- **l_belt** = total length of the belt (m)
- **$m_{meter}$** of SKF belts are provided in the appendix

### 3. Belt tension ($F_{trum}$)

Once the belt's frequency is measured by the TKBT 10, the belt tension is calculated using the following formula:

$$F_{belttension} = 4 \times m_{meter} \times l_{beltspan}^{\ 2} \times f^2$$

Where:
- **$F_{trum}$** = belt tension (N)
- **$m_{meter}$** = belt mass per meter (kg/m)
- **$l_{beltspan}$** = belt span length (m)
- **f** = measured frequency (Hz)

## 6. Technical specifications

| Designation | SKF TKBT 10 |
|---|---|
| Description | Belt tension meter |
| Measurement Range | 10 to 900 Hz |
| Resolution | < 100 Hz: 0.1 Hz<br>> 100 Hz: 1 Hz |
| Accuracy | ±(1% of reading + 4 digits) |
| Sensor Type | Belt tension meter probe - short (TKBT 10-PS) (Optical sensor with gooseneck) |
| Display | LCD with backlight, shows frequency (Hz), Belt tension (N or lbf), and input parameters |
| Memory | 15 folders, 50 measurements per folder (750 total) |
| Power Supply | 3 × 1.5V AA batteries (LR6) |
| Battery Life | Approx. 20 hours of operation |
| Operating Temperature | 0 °C to +50 °C *(32 °F to 122 °F)* |
| Storage Conditions | –20 °C to +65 °C *(-4 °F to 149 °F)*, 10–95% RH (non-condensing) |
| Dimensions (H × W × D) | 150 × 80 × 38 mm *(5.9 × 3.2 × 1.5 in)* |
| Weight | 300 g *(0.66 lb)* (including batteries) |
| Languages | English, German, Spanish, French, Italian, Dutch |
| Optional Accessories | Belt tension meter probe - long (TKBT 10-PL) |

*For hard to reach areas, optional accessory TKBT 10-PL can be purchased seperately.*

## 7. Weights and tension values

The values listed in the tables on following pages provide a guideline for belt tensioning. More accurate values for your specific belt drive can be obtained from belt drive calculations on beltcalculator.skf.com.

| Timing Belts | | | | |
|---|---|---|---|---|
| Family | Belt Type | Belt Tension (N) | | Mass (kg/m) |
| | | New belt | Run in belt | |
| HiTD | 5M 9 | 99 | 71 | 0.037 |
| | 5M 15 | 174 | 124 | 0.061 |
| | 5M 25 | 311 | 222 | 0.102 |
| | 8M 20 | 372 | 266 | 0.128 |
| | 8M 30 | 593 | 424 | 0.192 |
| | 8M 50 | 1037 | 741 | 0.320 |
| | 8M 85 | 2044 | 1460 | 0.545 |
| | 14M 40 | 1297 | 926 | 0.429 |
| | 14M 55 | 1912 | 1366 | 0.590 |
| | 14M 85 | 3142 | 2244 | 0.911 |
| | 14M 115 | 4480 | 3200 | 1.233 |
| | 14M 170 | 7139 | 5099 | 1.823 |
| STPD | S8M20 | 390 | 279 | 0.111 |
| | S8M30 | 620 | 443 | 0.167 |
| | S8M50 | 1110 | 793 | 0.278 |
| | S8M85 | 2030 | 1450 | 0.473 |
| | S14M40 | 1340 | 957 | 0.462 |
| | S14M55 | 1925 | 1375 | 0.634 |
| | S14M85 | 3165 | 2261 | 0.981 |
| | S14M115 | 4465 | 3189 | 1.327 |
| | S14M170 | 6975 | 4982 | 1.962 |
| Timing Belts | XL 025 | 13 | 11 | 0.014 |
| | XL 037 | 24 | 20 | 0.02 |
| | LO50 | 51 | 41 | 0.043 |
| | LO75 | 87 | 70 | 0.065 |
| | L100 | 122 | 98 | 0.087 |
| | H075 | 220 | 176 | 0.084 |
| | H100 | 311 | 249 | 0.112 |
| | H150 | 485 | 388 | 0.168 |
| | H200 | 667 | 534 | 0.223 |
| | H300 | 1045 | 836 | 0.335 |
| | XH 200 | 907 | 726 | 0.572 |
| | XH 300 | 1428 | 1142 | 0.858 |
| | XH 400 | 2019 | 1615 | 1.144 |
| | XXH 200 | 1130 | 904 | 0.809 |
| | XXH 300 | 1748 | 1398 | 1.213 |
| | XXH 400 | 2478 | 1982 | 1.617 |
| | XXH 500 | 3198 | 2558 | 2.022 |

| Wrapped V, wedge and banded belts | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Belt Type | Smaller pulley diameter (mm) | | Speed range (rpm) | | Belt tension per single belt* (N) | | Mass (kg/m) | |
| | from | including | from | including | New belt | Run in belt | Single belt | Belt in a band** |
| **Z** | 40 | 60 | 1000 | 2500 | 104 | 69 | 0.051 | n/a |
| | | | 2501 | 4000 | 121 | 81 | | |
| | 61 over | | 1000 | 2500 | 174 | 116 | | |
| | | | 2501 | 4000 | 174 | 116 | | |
| **A** | 75 | 90 | 1000 | 2500 | 332 | 222 | 0.115 | 0.150 |
| | | | 2501 | 4000 | 254 | 169 | | |
| | 91 | 120 | 1000 | 2500 | 391 | 261 | | |
| | | | 2501 | 4000 | 332 | 222 | | |
| | 121 | 175 | 1000 | 2500 | 469 | 313 | | |
| | | | 2501 | 4000 | 411 | 274 | | |
| **B** | 105 | 140 | 860 | 2500 | 469 | 313 | 0.193 | 0.26 |
| | | | 2501 | 400 | 391 | 261 | | |
| | 141 | 220 | 860 | 2500 | 567 | 378 | | |
| | | | 2501 | 400 | 528 | 352 | | |
| **C** | 175 | 230 | 500 | 1740 | 1017 | 678 | 0.320 | 0.417 |
| | | | 1741 | 3000 | 841 | 561 | | |
| | 231 | 400 | 500 | 1740 | 1251 | 834 | | |
| | | | 1741 | 3000 | 1115 | 743 | | |
| **D** | 305 | 400 | 200 | 850 | 2210 | 1473 | 0.669 | 0.870 |
| | | | 851 | 1500 | 1877 | 1251 | | |
| | 401 | 510 | 200 | 850 | 2698 | 1799 | | |
| | | | 851 | 1500 | 2268 | 1512 | | |
| **SPZ** | 56 | 79 | 1000 | 2500 | 338 | 226 | 0.076 | n/a |
| | | | 2501 | 4000 | 262 | 175 | | |
| | 80 | 95 | 1000 | 2500 | 383 | 255 | | |
| | | | 2501 | 4000 | 415 | 276 | | |
| | 96 over | | 1000 | 2500 | 477 | 318 | | |
| | | | 2501 | 4000 | 438 | 292 | | |
| **SPA** | 71 | 105 | 1000 | 2500 | 575 | 383 | 0.134 | 0.155 |
| | | | 2501 | 4000 | 524 | 349 | | |
| | 106 | 140 | 1000 | 2500 | 696 | 464 | | |
| | | | 2501 | 4000 | 628 | 418 | | |
| | 141 over | | 1000 | 2500 | 872 | 581 | | |
| | | | 2501 | 4000 | 876 | 584 | | |
| **SPB** | 107 | 159 | 860 | 2500 | 978 | 652 | 0.223 | 0.272 |
| | | | 2501 | 4000 | 941 | 627 | | |
| | 160 | 250 | 860 | 2500 | 1255 | 837 | | |
| | | | 2501 | 4000 | 1116 | 744 | | |
| | 251 over | | 860 | 2500 | 1496 | 997 | | |
| | | | 2501 | 4000 | 1275 | 850 | | |

| Wrapped V, wedge and banded belts | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Belt Type | Smaller pulley diameter (mm) | | Speed range (rpm) | | Belt tension per single belt* (N) | | Mass (kg/m) | |
| | from | including | from | including | New belt | Run in belt | Single belt | Belt in a band** |
| SPC | 200 | 355 | 500 | 1740 | 2026 | 1350 | 0.354 | 0.394 |
| | | | 1741 | 3000 | 2043 | 1362 | | |
| | 356 over | | 500 | 1740 | 2305 | 1537 | | |
| | | | 1741 | 3000 | 2671 | 1781 | | |
| | | | | | | | | |
| 3V | 61 | 90 | 1000 | 2500 | 313 | 209 | 0.076 | 0.099 |
| | | | 2501 | 4000 | 274 | 182 | | |
| | 91 | 175 | 1000 | 2500 | 430 | 287 | | |
| | | | 2501 | 4000 | 391 | 261 | | |
| | | | | | | | | |
| 5V | 171 | 275 | 500 | 1740 | 1134 | 756 | 0.223 | 0.272 |
| | | | 1741 | 3000 | 997 | 665 | | |
| | 276 | 500 | 500 | 1740 | 1369 | 912 | | |
| | | | 1741 | 3000 | 1291 | 860 | | |
| | | | | | | | | |
| 8V | 315 | 430 | 200 | 850 | 2933 | 1955 | 0.504 | 0.654 |
| | | | 851 | 1500 | 2386 | 1590 | | |
| | 431 | 570 | 200 | 850 | 3520 | 2346 | | |
| | | | 851 | 1500 | 3129 | 2086 | | |

* Multiply the belt tension required for a single belt by the number of the belts in the banded belt unit to get total tension to apply.

** Multiply the mass of one belt in a band by the number of the belts in the banded belt unit to get total mass to apply.

| Wrapped and narrow wedge belts | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Belt Type | Smaller pulley diameter (mm) | | Speed range (rpm) | | Belt tension per single belt* (N) | | Mass (kg/m) | |
| | from | including | from | including | New belt | Run in belt | Single belt | Belt in a band** |
| **SPZ-XP** | 56 | 79 | 1000 | 2500 | 372 | 249 | 0.079 | n/a |
| | | | 2501 | 4000 | 288 | 193 | | |
| | 80 | 95 | 1000 | 2500 | 421 | 281 | | |
| | | | 2501 | 4000 | 457 | 304 | | |
| | 96 over | | 1000 | 2500 | 525 | 350 | | |
| | | | 2501 | 4000 | 482 | 321 | | |
| **SPA-XP** | 71 | 105 | 1000 | 2500 | 633 | 421 | 0.122 | n/a |
| | | | 2501 | 4000 | 576 | 384 | | |
| | 106 | 140 | 1000 | 2500 | 766 | 510 | | |
| | | | 2501 | 4000 | 691 | 460 | | |
| | 141 over | | 1000 | 2500 | 959 | 639 | | |
| | | | 2501 | 4000 | 964 | 642 | | |
| **SPB-XP** | 107 | 159 | 860 | 2500 | 1076 | 717 | 0.202 | n/a |
| | | | 2501 | 4000 | 1035 | 690 | | |
| | 160 | 250 | 860 | 2500 | 1381 | 921 | | |
| | | | 2501 | 4000 | 1228 | 818 | | |
| | 251 over | | 860 | 2500 | 1646 | 1097 | | |
| | | | 2501 | 4000 | 1403 | 935 | | |
| **SPC-XP** | 200 | 355 | 500 | 1740 | 2229 | 1485 | 0.350 | n/a |
| | | | 1741 | 3000 | 2247 | 1498 | | |
| | 356 over | | 500 | 1740 | 2536 | 1691 | | |
| | | | 1741 | 3000 | 2938 | 1959 | | |
| **3V-XP** | 61 | 90 | 1000 | 2500 | 344 | 230 | 0.079 | n/a |
| | | | 2501 | 4000 | 301 | 200 | | |
| | 91 | 175 | 1000 | 2500 | 473 | 316 | | |
| | | | 2501 | 4000 | 430 | 287 | | |
| **5V-XP** | 171 | 275 | 500 | 1740 | 1247 | 832 | 0.202 | n/a |
| | | | 1741 | 3000 | 1097 | 732 | | |
| | 276 | 500 | 500 | 1740 | 1506 | 1003 | | |
| | | | 1741 | 3000 | 1420 | 946 | | |
| **8V-XP** | 315 | 430 | 200 | 850 | 3226 | 2151 | 0.520 | n/a |
| | | | 851 | 1500 | 2625 | 1749 | | |
| | 431 | 570 | 200 | 850 | 3872 | 2581 | | |
| | | | 851 | 1500 | 3442 | 2295 | | |

* Multiply the belt tension required for a single belt by the number of the belts in the banded belt unit to get total tension to apply.

** Multiply the mass of one belt in a band by the number of the belts in the banded belt unit to get total mass to apply.

| Cogged raw edge V, wedge and banded belts | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Belt Type | Smaller pulley diameter (mm) | | Speed range (rpm) | | Belt tension per single belt* (N) | | Mass (kg/m) | |
| | from | including | from | including | New belt | Run in belt | Single belt | Belt in a band** |
| **ZX** | 40 | 60 | 1000 | 2500 | 119 | 80 | 0.051 | n/a |
| | | | 2501 | 4000 | 139 | 93 | | |
| | 61 over | | 1000 | 2500 | 199 | 133 | | |
| | | | 2501 | 4000 | 199 | 133 | | |
| **AX** | 75 | 90 | 1000 | 2500 | 372 | 248 | 0.115 | 0.153 |
| | | | 2501 | 4000 | 293 | 196 | | |
| | 91 | 120 | 1000 | 2500 | 450 | 300 | | |
| | | | 2501 | 4000 | 391 | 261 | | |
| | 121 | 175 | 1000 | 2500 | 508 | 339 | | |
| | | | 2501 | 4000 | 450 | 300 | | |
| **BX** | 85 | 105 | 860 | 2500 | 430 | 287 | 0.193 | 0.225 |
| | | | 2501 | 4000 | 372 | 248 | | |
| | 106 | 140 | 860 | 2500 | 626 | 417 | | |
| | | | 2501 | 4000 | 547 | 365 | | |
| | 141 | 220 | 860 | 2500 | 763 | 508 | | |
| | | | 2501 | 4000 | 645 | 430 | | |
| **CX** | 175 | 230 | 500 | 1740 | 1310 | 873 | 0.32 | 0.398 |
| | | | 1741 | 3000 | 1056 | 704 | | |
| | 231 | 400 | 500 | 1740 | 1408 | 939 | | |
| | | | 1741 | 3000 | 1291 | 860 | | |
| **XPZ** | 56 | 79 | 1000 | 2500 | 362 | 241 | 0.076 | n/a |
| | | | 2501 | 4000 | 299 | 199 | | |
| | 80 | 95 | 1000 | 2500 | 438 | 292 | | |
| | | | 2501 | 4000 | 418 | 279 | | |
| | 96 over | | 1000 | 2500 | 499 | 332 | | |
| | | | 2501 | 4000 | 469 | 313 | | |
| **XPA** | 71 | 105 | 1000 | 2500 | 657 | 438 | 0.134 | 0.156 |
| | | | 2501 | 4000 | 598 | 399 | | |
| | 106 | 140 | 1000 | 2500 | 796 | 531 | | |
| | | | 2501 | 4000 | 718 | 478 | | |
| | 141 over | | 1000 | 2500 | 997 | 665 | | |
| | | | 2501 | 4000 | 897 | 598 | | |
| **XPB** | 107 | 159 | 860 | 2500 | 1116 | 744 | 0.223 | 0.279 |
| | | | 2501 | 4000 | 1075 | 717 | | |
| | 160 | 250 | 860 | 2500 | 1435 | 957 | | |
| | | | 2501 | 4000 | 1330 | 886 | | |
| | 251 over | | 860 | 2500 | 1596 | 1064 | | |
| | | | 2501 | 4000 | 1455 | 970 | | |

| Cogged raw edge V, wedge and banded belts | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Belt Type | Smaller pulley diameter (mm) | | Speed range (rpm) | | Belt tension per single belt* (N) | | Mass (kg/m) | |
| | from | including | from | including | New belt | Run in belt | Single belt | Belt in a band** |
| **XPC** | 200 | 355 | 500 | 1740 | 2313 | 1542 | 0.354 | 0.548 |
| | | | 1741 | 3000 | 2333 | 1555 | | |
| | 356 over | | 500 | 1740 | 2632 | 1755 | | |
| | | | 1741 | 3000 | 3050 | 2034 | | |
| | | | | | | | | |
| **3VX** | 55 | 60 | 1000 | 2500 | 293 | 196 | 0.076 | 0.102 |
| | | | 2501 | 4000 | 254 | 169 | | |
| | 61 | 90 | 1000 | 2500 | 372 | 248 | | |
| | | | 2501 | 4000 | 332 | 222 | | |
| | 91 | 175 | 1000 | 2500 | 469 | 313 | | |
| | | | 2501 | 4000 | 430 | 287 | | |
| | | | | | | | | |
| **5VX** | 110 | 170 | 1000 | 2500 | 899 | 600 | 0.223 | 0.252 |
| | | | 2501 | 4000 | 489 | 326 | | |
| | 171 | 275 | 500 | 1740 | 1310 | 873 | | |
| | | | 1741 | 3000 | 1212 | 808 | | |
| | 276 | 400 | 500 | 1740 | 1525 | 1017 | | |
| | | | 1741 | 3000 | 1486 | 991 | | |

* Multiply the belt tension required for a single belt by the number of the belts in the banded belt unit to get total tension to apply.

** Multiply the mass of one belt in a band by the number of the belts in the banded belt unit to get total mass to apply.

| Ribbed Belts | | | | |
|---|---|---|---|---|
| Belt Type | Smaller pulley diameter (mm) | Speed range (rpm) | Belt tension per one rib* (N) | Mass (kg/m)** |
| | from | from including | New belt / Run in belt | Single belt |
| PJ | <80 | n/a | 67 / 45 | 0.010 |
| | >80 | 90 | 60 | |
| PK | <95 | n/a | 139 / 93 | 0.018 |
| | >95 | 178 | 119 | |
| PL | <150 | n/a | 216 / 144 | 0.057 |
| | >150 | 312 | 208 | |
| PM | <250 | n/a | 672 / 448 | 0.120 |
| | >250 | 912 | 608 | |

* Multiply the belt tension required for one rib by the number of the ribs in the ribbed belt unit to get total tension to apply.

** Multiply the mass of one rib by the number of the ribs in the ribbed belt to get total mass to apply.

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