MK-TB SERIES • TAPER-LOCK BUSHINGS

MISHKIN

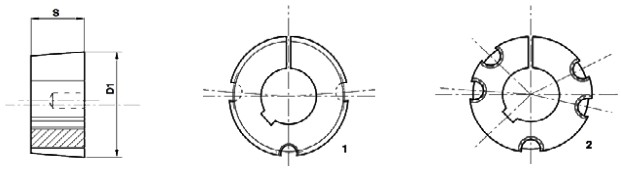
# Taper Bushes — Standard Metric Bore Series • 锥套 / 锥形锁紧套（标准公制孔系列）

Self-Centering 8° Conical Clamping Bushings for Pulleys, Sprockets & Couplings • ISO 286-2 E8 & DIN 6885-1 JS9

**EUROPEAN STANDARD • 欧洲标准体系**
ISO 286-2 E8 • DIN 6885-1 JS9 • EN-GJL-250 / C45E

## PRODUCT & CAD STRUCTURAL DRAWINGS • 锥套实物与 Type 1 / Type 2 结构尺寸图






**D1:** Large-End Taper OD • 锥面大端外径 **S:** Bush Length • 锥套总厚
**Type 1 (1008–3030):** 2 Set Screws **Type 2 (3525–5050):** 3 Cap Screws

## EUROPEAN TECHNICAL SPECIFICATIONS • 产品技术特点与欧洲标准

**1. RAPID TOOL-FREE SELF-CENTERING LOCKING • 快速自定心免改孔锁紧**
**MISHKIN MK-TB taper bushes provide the most convenient and economical method to concentrically lock V-belt pulleys, timing pulleys, roller chain sprockets, and shaft couplings onto mating drive shafts without special tools—saving machining time and cost.**
米什金 **MK-TB** 系列锥套是连接带轮、链轮及联轴器最便捷经济的锁紧元件；出厂已预加工标准内孔、平键槽及安装/拆卸螺纹孔，无需二次机加工，拆装可重复使用。

**2. EUROPEAN MATERIAL GRADES & SURFACE FINISH • 欧标材质与表面处理**
**• Standard Material: Grey Cast Iron EN-GJL-250 (GG25) / Ductile Iron EN-GJS-400-15 (GGG40), Carbon Steel C45E (EN 1.1191), or Stainless Steel EN 1.4301 (AISI 304).**
**• Surface Treatment: Black Manganese Phosphate (EN ISO 9717) or precision-turned natural finish.**
材质可选：灰铸铁 EN-GJL-250、球墨铸铁 GGG40、优质碳素钢 C45E 或 304 不锈钢；表面经黑色磷化防锈处理或本色精车。

**3. BORE & KEYWAY TOLERANCES & ORDERING EXAMPLE • 公差标准与订货示例**
**Bore tolerance ISO 286-2 E8; metric keyway acc. to DIN 6885-1 / ISO R773 (UNI 6604) JS9 (bores marked * feature shallow keyways acc. to DIN 6885-3). Ordering Example (Bore Ø12 mm): MK-TB 1008-12**
内孔公差 ISO E8，平键槽公差 DIN 6885-1 JS9（带 * 号最大孔径采用 DIN 6885-3 薄型平键槽）。订货示例（内孔 Ø12mm）：**MK-TB 1008-12**。

## STANDARD METRIC BORE SERIES (MK-TB 1008 – 5050) • 标准公制孔锥套参数表

Material: EN-GJL-250 / C45E Steel | Ordering Example: MK-TB 1008-12

| Bush Model 锥套型号 | Dimensions • 结构尺寸 [mm] | | | Max. Torque • 最大传递扭矩 | | Locking Screws • 锁紧螺钉 (BSW) | | Mass 平均质量 [kg] |
|---|---|---|---|---|---|---|---|---|
| | Standard Metric Finished Bores d [mm] (ISO 286-2 E8 • * = Shallow Keyway DIN 6885-3) 标准公制成品孔径范围 [mm]（带 * 号为薄型键槽孔） | OD D1 大端外径 | Length S 轴向长度 | Design 结构型式 | $T_{max}$ [Nm] 额定最大扭矩 | Size (BSW) 英制螺纹规格 | Torque $T_S$ [Nm] 规定拧紧力矩 | |
| MK-TB 1008 | 9 10 11 12 14 15 16 18 19 20 22 24* 25* | 35.0 | 22.3 | Type 1 | 136 | 1/4" × 1/2" | 5.6 | 0.16 |
| MK-TB 1108 | 9 10 11 12 14 15 16 18 19 20 22 24 25 28* | 38.0 | 22.3 | Type 1 | 147 | 1/4" × 1/2" | 5.6 | 0.16 |
| MK-TB 1210 | 11 12 14 15 16 18 19 20 22 24 25 28 30 32 | 47.5 | 25.4 | Type 1 | 407 | 3/8" × 5/8" | 19.6 | 0.32 |
| MK-TB 1215 | 14 19 20 24 25 28 | 47.5 | 38.1 | Type 1 | 407 | 3/8" × 5/8" | 19.6 | 0.50 |
| MK-TB 1610 | 14 15 16 18 19 20 22 24 25 28 30 32 35 38 40 42* | 57.0 | 25.4 | Type 1 | 486 | 3/8" × 5/8" | 19.6 | 0.41 |
| MK-TB 1615 | 14 16 18 19 20 22 24 25 28 30 32 35 38 40 42* | 57.0 | 38.1 | Type 1 | 486 | 3/8" × 5/8" | 19.6 | 0.60 |
| MK-TB 2012 | 14 16 18 19 20 22 24 25 28 30 32 35 38 40 42 45 48 50 | 70.0 | 31.8 | Type 1 | 808 | 7/16" × 7/8" | 30.4 | 0.75 |
| MK-TB 2517 | 16 18 19 20 22 24 25 28 30 32 35 38 40 42 45 48 50 55 60 65* | 85.5 | 44.5 | Type 1 | 1310 | 1/2" × 1" | 48.0 | 1.06 |
| MK-TB 3020 | 25 28 30 32 35 38 40 42 45 48 50 55 60 65 70 75 | 108.0 | 50.8 | Type 1 | 2710 | 5/8" × 1"1/4 | 90.0 | 2.50 |
| MK-TB 3030 | 35 38 40 42 45 48 50 55 60 65 70 75 | 108.0 | 76.2 | Type 1 | 2710 | 5/8" × 1"1/4 | 90.0 | 3.75 |
| MK-TB 3525 | 35 38 40 42 45 48 50 55 60 65 70 75 80 85 90 | 127.0 | 64.9 | Type 2 | 5060 | 1/2" × 1"1/2 | 112.0 | 4.20 |
| MK-TB 3535 | 35 38 40 42 45 48 50 55 60 65 70 75 80 85 90 | 127.0 | 88.9 | Type 2 | 5060 | 1/2" × 1"1/2 | 112.0 | 5.13 |
| MK-TB 4030 | 40 42 45 48 50 55 60 65 70 75 80 85 90 100 | 146.0 | 76.2 | Type 2 | 8740 | 5/8" × 1"3/4 | 169.0 | 6.75 |
| MK-TB 4040 | 40 42 45 48 50 55 60 65 70 75 80 85 90 95 100 | 146.0 | 101.6 | Type 2 | 8740 | 5/8" × 1"3/4 | 169.0 | 7.68 |
| MK-TB 4545 | 55 60 65 70 75 80 85 90 95 100 | 162.0 | 115.0 | Type 2 | 12400 | 3/4" × 2" | 192.0 | 10.56 |
| MK-TB 5040 | 55 60 65 70 75 80 85 90 95 100 | 177.6 | 101.6 | Type 2 | 14200 | 7/8" × 2"1/4 | 271.0 | 14.20 |
| MK-TB 5050 | 70 75 80 85 90 95 100 105 110 115 120 125 | 177.6 | 127.0 | Type 2 | 14200 | 7/8" × 2"1/4 | 271.0 | 15.17 |

### TYPE 1 VS. TYPE 2 FASTENER CONFIGURATION • Type 1 与 Type 2 螺钉配置说明

- **Type 1 (MK-TB 1008 – 3030):** Equipped with **2 × BSW socket set screws** for installation and **1 × threaded jacking hole** for removal.
- **Type 2 (MK-TB 3525 – 5050):** Equipped with **3 × BSW socket head cap screws** for installation and **2 × threaded jacking holes** for removal.

### DEGREASING & TORQUE WRENCH INSTALLATION • 安装脱脂与扭矩扳手锁紧要点

Thoroughly degrease the tapered cone surface, hub bore, and shaft before assembly (do **not** use $MoS_2$ or grease on the taper cone). Tighten locking screws alternately to the specified torque $T_S$ [Nm].

MISHKIN

# Keyway Dimensions & Standard Inch Bore Series • 公英制平键槽标准尺寸表与标准英制孔锥套系列

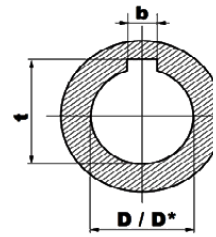
Metric Keyways acc. to DIN 6885-1 / UNI 6604 (JS9) • Imperial Bores & Keyways acc. to BS 4235-1 / BS 46-1

**EUROPEAN STANDARD • 欧洲标准体系**
ISO 286-2 E8 • DIN 6885-1 JS9 • EN-GJL-250 / C45E

## METRIC BORE KEYWAYS (DIN 6885-1 / UNI 6604) • 公制孔标准平键槽尺寸 [mm]

| Bore D 孔径 [mm] | b 键宽 | JS9 公差 | Depth t 槽深 | Bore D 孔径 [mm] | b 键宽 | JS9 公差 | Depth t 槽深 |
|---|---|---|---|---|---|---|---|
| > 10 – 12 | 4 | ±0.015 | D + 1.8 | > 44 – 50 | 14 | ±0.021 | D + 3.8 |
| > 12 – 17 | 5 | | D + 2.3 | > 50 – 58 | 16 | | D + 4.3 |
| > 17 – 22 | 6 | ±0.015 | D + 2.8 | > 58 – 65 | 18 | ±0.021 | D + 4.4 |
| > 22 – 30 | 8 | ±0.018 | D + 3.3 | > 65 – 75 | 20 | | D + 4.9 |
| > 30 – 38 | 10 | ±0.018 | D + 3.3 | > 75 – 85 | 22 | ±0.026 | D + 5.4 |
| > 38 – 44 | 12 | ±0.021 | D + 3.3 | > 85 – 95 | 25 | | D + 5.4 |
| > 95 – 110 | 28 | ±0.026 | D + 6.4 | > 110 – 130 | 32 | ±0.031 | D + 7.4 |

## KEYWAY CAD • 键槽尺寸图




## SHALLOW KEYWAYS (DIN 6885-3) • 薄型键槽 (*)

| Bore D* [mm] 带 * 特殊孔径 | Width b [JS9] 键槽宽 [mm] | Depth t [mm] 薄型槽深 |
|---|---|---|
| 24* (MK-TB 1008) | 8 | D + 1.3 |
| 25* (MK-TB 1008) | 8 | D + 1.3 |
| 28* (MK-TB 1108) | 8 | D + 1.3 |
| 42* (1610 / 1615) | 12 | D + 1.3 |
| 65* (MK-TB 2517) | 18 | D + 2.8 |

## STANDARD IMPERIAL (INCH) BORE SERIES (MK-TB 1008 – 5050) • 标准英制孔锥套参数表

Material: EN-GJL-250 / C45E Steel | Ordering Example: MK-TB 1008-1"1/8

| Bush Model 锥套型号 | Dimensions • 结构尺寸 | | | Max. Torque • 最大传递扭矩 | | Locking Screws • 锁紧螺钉 (BSW) | | Mass 平均质量 [kg] |
|---|---|---|---|---|---|---|---|---|
| | Standard Imperial (Inch) Finished Bores d [inches] (ISO E8 • * = Low-Profile Keyway) 标准英制成品孔径范围 [英寸]（带 * 号为薄型键槽孔） | OD D1 外径 [mm] | Length S 长度 [mm] | Design 结构型式 | $T_{max}$ [Nm] 额定最大扭矩 | Size (BSW) 英制螺纹规格 | Torque $T_s$ [Nm] 规定拧紧力矩 | |
| MK-TB 1008 | 3/8" \| 1/2" \| 5/8" \| 3/4" \| 7/8" \| 1"* | 35.0 | 22.3 | Type 1 | 136 | 1/4" × 1/2" | 5.6 | 0.16 |
| MK-TB 1108 | 3/8" \| 1/2" \| 5/8" \| 3/4" \| 7/8" \| 1" \| 1"1/8* | 38.0 | 22.3 | Type 1 | 147 | 1/4" × 1/2" | 5.6 | 0.16 |
| MK-TB 1210 | 1/2" \| 5/8" \| 3/4" \| 7/8" \| 1" \| 1"1/8 \| 1"1/4 | 47.5 | 25.4 | Type 1 | 407 | 3/8" × 5/8" | 19.6 | 0.32 |
| MK-TB 1215 | 1/2" \| 5/8" \| 3/4" \| 7/8" \| 1" \| 1"1/8 \| 1"1/4 | 47.5 | 38.1 | Type 1 | 407 | 3/8" × 5/8" | 19.6 | 0.50 |
| MK-TB 1610 | 1/2" \| 5/8" \| 3/4" \| 7/8" \| 1" \| 1"1/8 \| 1"1/4 | 57.0 | 25.4 | Type 1 | 486 | 3/8" × 5/8" | 19.6 | 0.41 |
| MK-TB 1615 | 1/2" \| 5/8" \| 3/4" \| 7/8" \| 1" \| 1"1/8 \| 1"1/4 \| 1"3/8 \| 1"1/2 \| 1"5/8* | 57.0 | 38.1 | Type 1 | 486 | 3/8" × 5/8" | 19.6 | 0.60 |
| MK-TB 2012 | 3/4" \| 7/8" \| 1" \| 1"1/8 \| 1"1/4 \| 1"3/8 \| 1"1/2 \| 1"5/8 \| 1"3/4 \| 1"7/8 \| 2" | 70.0 | 31.8 | Type 1 | 808 | 7/16" × 7/8" | 30.4 | 0.75 |
| MK-TB 2517 | 3/4" \| 7/8" \| 1" \| 1"1/8 \| 1"1/4 \| 1"3/8 \| 1"1/2 \| 1"5/8 \| 1"3/4 \| 1"7/8 \| 2" \| 2"1/8 \| 2"1/4 \| 2"3/8 \| 2"1/2 | 85.5 | 44.5 | Type 1 | 1310 | 1/2" × 1" | 48.0 | 1.06 |
| MK-TB 3020 | 1"1/4 \| 1"3/8 \| 1"1/2 \| 1"5/8 \| 1"3/4 \| 1"7/8 \| 2" \| 2"1/8 \| 2"1/4 \| 2"3/8 \| 2"1/2 \| 2"5/8 \| 2"3/4 \| 2"7/8 \| 3" | 108.0 | 50.8 | Type 1 | 2710 | 5/8" × 1"1/4 | 90.0 | 2.50 |
| MK-TB 3030 | 1"1/4 \| 1"3/8 \| 1"1/2 \| 1"5/8 \| 1"3/4 \| 1"7/8 \| 2" \| 2"1/8 \| 2"1/4 \| 2"3/8 \| 2"1/2 \| 2"5/8 \| 2"3/4 \| 2"7/8 \| 3" | 108.0 | 76.2 | Type 1 | 2710 | 5/8" × 1"1/4 | 90.0 | 3.75 |
| MK-TB 3525 | 1"1/2 \| 1"5/8 \| 1"3/4 \| 1"7/8 \| 2" \| 2"1/8 \| 2"1/4 \| 2"3/8 \| 2"1/2 \| 2"5/8 \| 2"3/4 \| 2"7/8 \| 3" \| 3"1/8 \| 3"1/4 \| 3"3/8 \| 3"1/2 | 127.0 | 64.9 | Type 2 | 5060 | 1/2" × 1"1/2 | 112.0 | 4.20 |
| MK-TB 3535 | 1"1/2 \| 1"5/8 \| 1"3/4 \| 1"7/8 \| 2" \| 2"1/8 \| 2"1/4 \| 2"3/8 \| 2"1/2 \| 2"5/8 \| 2"3/4 \| 2"7/8 \| 3" \| 3"1/8 \| 3"1/4 \| 3"3/8 \| 3"1/2 | 127.0 | 88.9 | Type 2 | 5060 | 1/2" × 1"1/2 | 112.0 | 5.13 |
| MK-TB 4030 | 1"3/4 \| 1"7/8 \| 2" \| 2"1/8 \| 2"1/4 \| 2"3/8 \| 2"1/2 \| 2"5/8 \| 2"3/4 \| 2"7/8 \| 3" \| 3"1/8 \| 3"1/4 \| 3"3/8 \| 3"1/2 \| 3"3/4 \| 4" | 146.0 | 76.2 | Type 2 | 8740 | 5/8" × 1"3/4 | 169.0 | 6.75 |
| MK-TB 4040 | 1"3/4 \| 1"7/8 \| 2" \| 2"1/8 \| 2"1/4 \| 2"3/8 \| 2"1/2 \| 2"5/8 \| 2"3/4 \| 2"7/8 \| 3" \| 3"1/8 \| 3"1/4 \| 3"3/8 \| 3"1/2 \| 3"3/4 \| 4" | 146.0 | 101.6 | Type 2 | 8740 | 5/8" × 1"3/4 | 169.0 | 7.68 |
| MK-TB 4545 | 2"1/4 \| 2"3/8 \| 2"1/2 \| 2"5/8 \| 2"3/4 \| 2"7/8 \| 3" \| 3"1/8 \| 3"1/4 \| 3"3/8 \| 3"1/2 \| 3"3/4 \| 4" \| 4"1/4 \| 4"1/2 | 162.0 | 115.0 | Type 2 | 12400 | 3/4" × 2" | 192.0 | 10.56 |
| MK-TB 5040 | 2"3/4 \| 2"7/8 \| 3" \| 3"1/8 \| 3"1/4 \| 3"3/8 \| 3"1/2 \| 3"3/4 \| 4" \| 4"1/4 \| 4"1/2 \| 4"3/4 \| 5" | 177.6 | 101.6 | Type 2 | 14200 | 7/8" × 2"1/4 | 271.0 | 14.20 |
| MK-TB 5050 | 2"3/4 \| 2"7/8 \| 3" \| 3"1/8 \| 3"1/4 \| 3"3/8 \| 3"1/2 \| 3"3/4 \| 4" \| 4"1/4 \| 4"1/2 \| 4"3/4 \| 5" | 177.6 | 127.0 | Type 2 | 14200 | 7/8" × 2"1/4 | 271.0 | 15.17 |

## IMPERIAL (INCH) BORE KEYWAY DIMENSIONS (BS 4235-1 / BS 46-1) • 英制孔标准平键槽尺寸表 [inches]

| Bore D (Over – To) 英制孔径范围 [in] | Width b 键槽宽 [in] | Depth t 连轴槽深 [in] | Bore D (Over – To) 英制孔径范围 [in] | Width b 键槽宽 [in] | Depth t 连轴槽深 [in] |
|---|---|---|---|---|---|
| 1/4" – 1/2" | 1/8" | D + 1/16" | 2" – 2"1/2 | 5/8" | D + 7/32" |
| 1/2" – 3/4" | 3/16" | D + 3/32" | 2"1/2 – 3" | 3/4" | D + 1/4" |
| 3/4" – 1" | 1/4" | D + 1/8" | 3" – 3"1/2 | 7/8" | D + 5/16" |
| 1" – 1"1/4 | 5/16" | D + 1/8" | 3"1/2 – 4" | 1" | D + 3/8" |
| 1"1/4 – 1"1/2 | 3/8" | D + 1/8" | 4" – 5" | 1"1/4 | D + 7/16" |
| 1"1/2 – 1"3/4 | 7/16" | D + 5/32" | 5" – 6" | 1"1/2 | D + 1/2" |
| 1"3/4 – 2" | 1/2" | D + 5/32" | 6" – 7" | 1"3/4 | D + 5/8" |

## LOW-PROFILE INCH KEYWAYS (*) • 英制薄型键槽

| Bore D* [in] 带 * 英制孔径 | Width b [in] 键槽宽 [in] | Depth t [in] 薄型槽深 [in] |
|---|---|---|
| 1"* (MK-TB 1008) | 1/4" | D + 1/16" |
| 1"1/8* (MK-TB 1108) | 5/16" | D + 5/64" |
| 1"5/8* (MK-TB 1615) | 7/16" | D + 1/8" |

**Custom Bore & OEM Service:** MISHKIN supplies custom metric/inch bores, stainless steel (**EN 1.4301**) taper bushes, and matched taper-bore pulleys & sprockets.