

KELCH

精度和效能的先锋

Safecontrol 4.0 机床主轴测力装置



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Usage of Safecontrol 4.0



- What is Safecontrol 4.0 meant for?
- 主轴测力装置Safecontrol4.0 意味着什么

- **Safecontrol 4.0** is a measuring equipment system for checking the pull-back force of a spindle:

- Safecontrol4.0 是测量机床主轴后拉力的检测装置

- Machine tool spindle 机床主轴

- Extensions 接长装置

- Reduction sleeves 变径套

- Zero point clamping systems 零点拉紧系统

Why check the pull-back force?为什么要检测拉力

- Recognition of defective spindle, extensions etc. 检查出损坏的主轴
- Ensure the workpiece quality 保证加工工件的质量
- Minimize the rejects 减少停机时间

Product presentation 产品展示



➤ Composition 组件

- Measuring adaptor in all versions (SK, HSK, PSC, KM, etc.)
转换套，适合所有刀柄类型（SK，HSK，PSC，KM 等等）
- One base unit for all measuring adaptors for clamping forces up to 100 kN
- 一个基础测量装置适合所有的转换套，最大到100kN
- TFT-Display with LED backlight for displaying the value, the battery and connection status TFT液晶显示屏幕，显示数值，电池和连接状态
- Soft-Touch Buttons for Power ON / OFF and Value SAVE / DELETE
- 薄膜键盘，开关机，保存删除数据的功能

Product presentation 产品演示



Samsung Galaxy Tab S2 9.7 LTE (SM-T819)

➤ System-Components Safecontrol 4.0 系统铸件

- Protection class IP 64 防护等级IP64
- Integrated 3D position sensor rotates the display content for optimal ergonomics, 显示屏支持重力感应, 更加人性化
- Measuring range 1-100kN, 测量范围1-100KM
- Different measuring adaptors available (SK, HSK, PSC, KM, etc.)
- 支持不同类型的转换套 (SK, HSK, PSC, KM等)
- Integrated Bluetooth module for connection and data transfer
- 集成蓝牙模块用于连接和数据传输
- Additional KELCH App (only Android) for management of machines and spindles 支持KELCH APP (仅仅安卓系统) 管理不同的机床和主轴
- 100 % process reliable through scanning of QR code. Kelch APP saves the measured value automatically to the right machine
- 二维码扫描100%可靠性, KELCH APP 自动保存数据到正确的机床
- Measured values can be displayed as a CSV file, as a diagram or as a non-editable pdf document
- 测量值可以保存成CSV文件和一个不可以编辑的PDF图表

Product presentation

➤ 附件

- Case for complete set 全套装置
- Available measuring adaptor 支持的转换套



Size	Measuring range	Pull stud thread
SK30	Bis 22 kN	M 18
SK 40	Bis 37 kN	M 16
SK 45	Bis 45 kN	M 20
SK 50	Bis 75 kN	M 24
SK 60	Bis 100 kN	M 30
HSK 32 HSK 40	Bis 22 kN	-
HSK 50	Bis 37 kN	-
HSK 63	Bis 75 kN	-
HSK 80 HSK 100	Bis 100 kN	-
PSC 32	Bis 20 kN	-
PSC 40	Bis 50 kN	-
PSC 50	Bis 50 kN	-
PSC 63	Bis 75 kN	-
PSC 80/80X	Bis 100 kN	-

- Additional pull studs for JIS MAS-BT tool holder types available
- 外加BT40的拉钉

USP's独特的卖点



- Only **one** Base unit for all tool holder types (**HSK, PSC, SK etc.**)
- 只有一个基础测量棒，并可以适配多种类型的主轴（
 - Easy to use base unit 基础测量棒操作简单
- Display has **3D Sensor** for rotating the display content 显示器带有重力感应
- Big measuring range (**1-100kN**) 测量范围比较大 (**0-100 KN**)
- High accuracy (Base unit < 1 % from measuring range end value)
- 高精度（基础测量装置小于1%）
- Protection class **IP 64** ,**IP 64** 级别的防护装置
- Ready for **Industrie 4.0** , 适配于工业4.0
- Displaying the value in the Kelch APP on a Tablet or smartphone via **Bluetooth**
- 可以将数据显示在**Kelch APP** 上，通过蓝牙进行数据通信
- App can be used for managing the machines and spindles and in combination with scanning a QR code it is **100%** process reliable , 可以通过扫描 二维码的方式将数据和**APP**进行连接，非常简单
- **Automatic** storage of the measured values according to the right machine
- 可以自动储存数据

Technical information 技术参数



- 尺寸: 65 x 200 x 65 mm (Base unit)
- 重量: 1.6kg (Base unit)
- 测量范围: 1-100kN
- 测量精度: $\leq 1\%$
- 保护等级: IP 64
- 电池信息: 4,75 - 5,25 V DC, 500 mA Litium-Ionen
- 操作时间: > 24 Std.
- 显示: LCD TFT-Display with LED backlight and position sensor
- Internal memory for up to 1000 measurements with date and time stamp 内置的存储器可以存储1000组数据,

Thank you for your attention