

寻边器 SENSORS

测量仪器
Measuring Instruments



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刀具刀柄技术
Tooling Technology



热缩机技术
Shrinking Technology



动平衡机技术
Balancing Technology

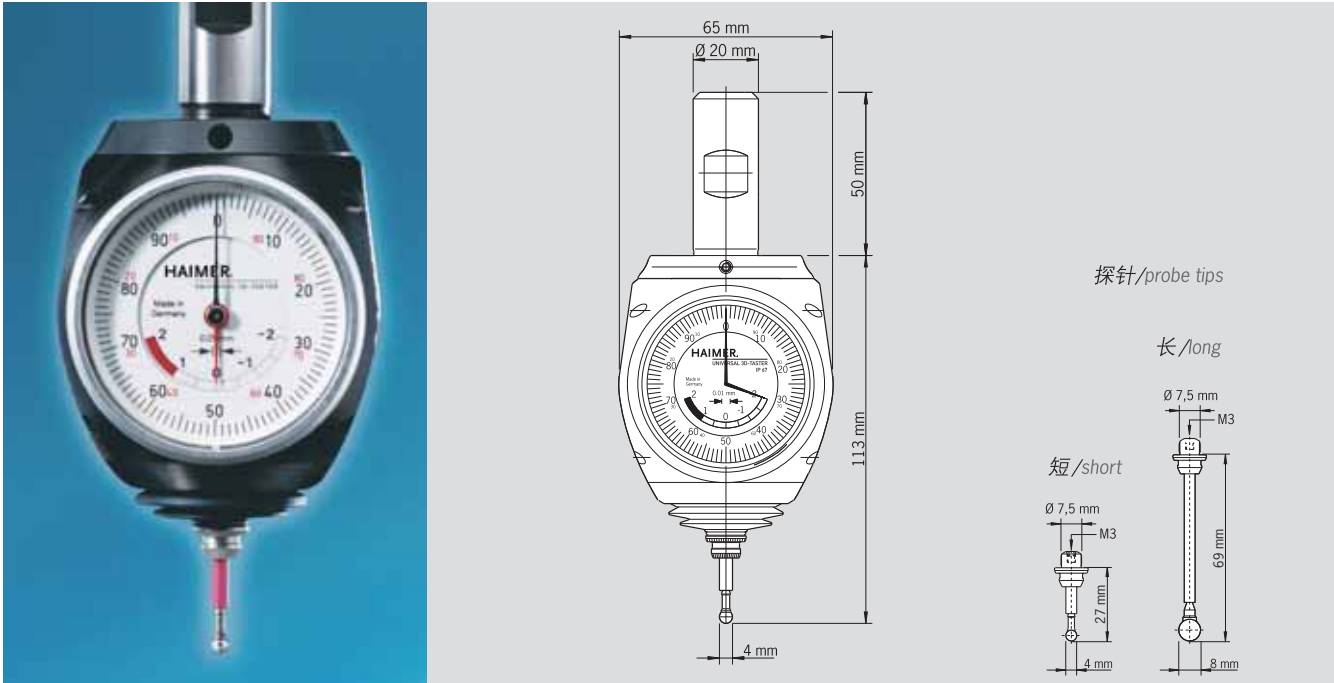


测量仪器
Measuring Instruments



刀具管理系统
Tool Management





通用型3D寻边器

对于铣削和EDM (绝缘探针) 的加工设备而言, 通用型3D寻边器属于高精度和万能的测量仪器。当安装到机器主轴上, 跳动度 (T.I.R) 完全指向零度, 此时机床主轴的坐标定位在工件的边缘。可以快速简单的设置零位和测量。无论从任何方向 (X-Y-Z轴) 靠近工件, 当刻度盘指向零时, 机床主轴坐标和工件表面坐标是重合的。

无需计算探针触球的直径, 只需归零, 减少了数学和计算的问题。有效提高了生产率和操作的准确性。

可选用长探针和短探针, 探针更换非常方便, 无需专用工具即可更换。

使用更加安全, 在到达预设的测量临界点之前它有很大的行程, 可保证寻边器寿命更长。为了达到最佳精度, 在组装生产时每一只通用型3D寻边器都进行了独立检测和预调。

- 防水等级: IP67

Universal 3D-Sensor

The Universal 3D-Sensor is a very precise and versatile measuring instrument for milling and EDM machines (insulated probe). Once clamped into the machine spindle, the run-out (T.I.R) is fully adjustable to Zero. Then, it can be used to bring the spindle axis on the edges of the workpiece. This allows to set zeros and to measure quickly and easily, approachability in any direction (X-, Y-, Z- axis). When the dial gage shows zero, the spindle axis is exactly on the edge of the workpiece.

No calculating of the probe's ball diameter is necessary – just Zero it out! Problems with mathematics or calculations are eliminated. It helps increasing the productivity and accuracy of the operator.

Short and long probes are available. The sensor probes may be changed without any tool, no re-calibration of the unit is needed.

Additional safety, the unit has a large overrun distance in connection with the fully tested preset breaking points giving the sensor long life. All Universal 3D-Sensors are individually tested and adjusted when being assembled in order to achieve a maximum of measuring precision.

- IP 67 waterproof

技术参数/Technical details

通用型3D寻边器 夹持杆Ø20mm, 含Ø4mm球头短探针
Universal 3D-Sensor with clamping shank Ø 20 mm including short probe tip Ø 4 mm

精度/Accuracy	0,01 mm
不含夹持杆的长度/Length without clamping shank	113 mm
订货号/Order No. 80.360.00.FHN	

附件/Accessories

Ø 4 mm 球头短探针/Short probe tip Ø 4 mm
订货号/Order No. 80.362.00

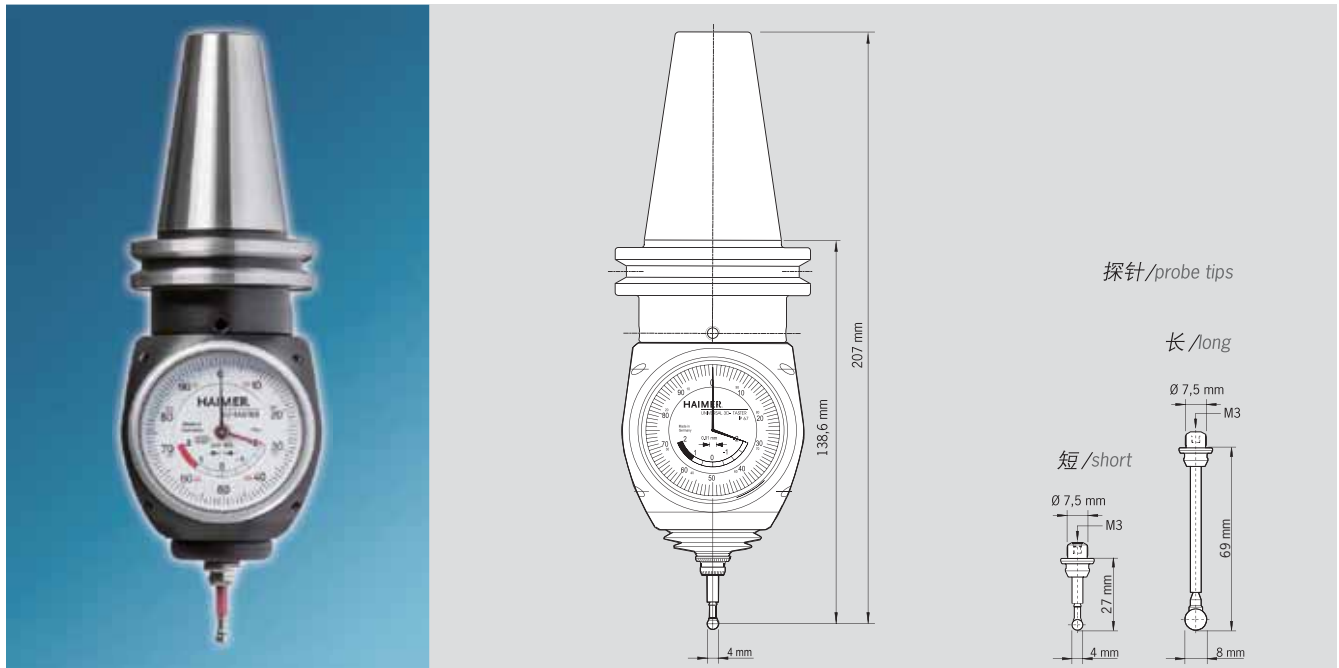
Ø 8 mm 球头长探针/Long probe tip Ø 8 mm
订货号/Order No. 80.363.00

技术数据变更恕不通知/Technical data subject to change without prior notice

**建议使用的 HAIMER 刀柄
Recommended HAIMER tool holders**

	订货号/Order No.
SK 40 短刀柄/short chuck SK 40	40.305.20
SK 50 短刀柄/short chuck SK 50	50.300.20
BT 40 短刀柄/short chuck BT 40	40.500.20
BT 50 短刀柄/short chuck BT 50	50.500.20
HSK-A 50 短刀柄/short chuck HSK-A 50	A50.000.20
HSK-E 50 短刀柄/short chuck HSK-E 50	E50.000.20
HSK-A 63 短刀柄/short chuck HSK-A 63	A63.000.20
HSK-A 80 短刀柄/short chuck HSK-A 80	A80.000.20
HSK-A 100 短刀柄/short chuck HSK-A 100	A10.000.20

一体式通用型3D寻边器 UNIVERSAL 3D-SENSOR WITH INTEGRATED ADAPTER



一体式通用型3D寻边器

含有刀柄 (DIN 69871, SK40 或者 JIS B6339, BT40) 的一体式寻边器使用更加方便和舒适。

对于铣削和EDM (绝缘探针)的加工设备而言,通用型3D寻边器属于高精度和万能的测量仪器。当安装到机器主轴上,跳动度 (T.I.R) 完全指向零度,此时机床主轴的坐标定位在工件的边缘。可以快速简单的设置零位和测量。无论从任何方向 (X-Y,Z轴) 靠近工件,当刻度盘指向零时,机床主轴坐标和工件表面坐标是重合的。

无需计算探针触球的直径,只需归零,减少了数学和计算的问题。有效提高了生产率和操作的准确性。

可选用长探针和短探针,探针更换非常方便,无需专用工具即可更换。

使用更加安全,在到达预设的测量临界点之前它有很大的行程,可保证寻边器寿命更长。为了达到最佳精度,在组装生产时每一只通用型3D寻边器都进行了独立检测和预调。

- 防水等级: IP67

Universal 3D-Sensor with integrated adapter

The integrated taper (DIN 69871, SK40 or JIS B6339, BT40) guarantees easiest handling and a maximum of comfort.

The Universal 3D-Sensor is a very precise and versatile measuring instrument for milling and EDM machines (insulated probe). Once clamped into the machine spindle, the run-out (T.I.R) is fully adjustable to Zero. Then, it can be used to bring the spindle axis on the edges of the workpiece. This allows to set zeros and to measure quickly and easily. approachability in any direction (X-, Y-, Z- axis). When the dial gage shows zero, the spindle axis is exactly on the edge of the workpiece.

No calculating of the probe's ball diameter is necessary – just Zero it out! Problems with mathematics or calculations are eliminated. It helps increasing the productivity and accuracy of the operator.

Short and long probes are available. The sensor probes may be changed without any tool, no re-calibration of the unit is needed.

Additional safety, the unit has a large overrun distance in connection with the fully tested preset breaking points giving the sensor long life. All Universal 3D-Sensors are individually tested and adjusted when being assembled in order to achieve a maximum of measuring precision.

- IP 67 waterproof

技术参数/Technical details

一体式通用型3D寻边器 含Ø4mm球头短探针 Universal 3D-Sensor with integrated adapter including short probe tip Ø 4 mm

精度/Accuracy 0,01 mm
不含夹持杆的长度/Length without clamping shank 113 mm

产品描述/Article

含 SK 30 刀柄/with integrated adapter SK 30	订货号/Order No. 80.364.30.FHN
含 SK 40 刀柄/with integrated adapter SK 40	80.364.40.FHN
含 BT 30 刀柄/with integrated adapter BT 30	80.365.30.FHN
含 BT 40 刀柄/with integrated adapter BT 40	80.365.40.FHN

附件/Accessories

Ø 4 mm 球头短探针/Short Probe tip Ø 4 mm

订货号/Order No. 80.362.00

Ø 8 mm 球头长探针/Long Probe tip Ø 8 mm

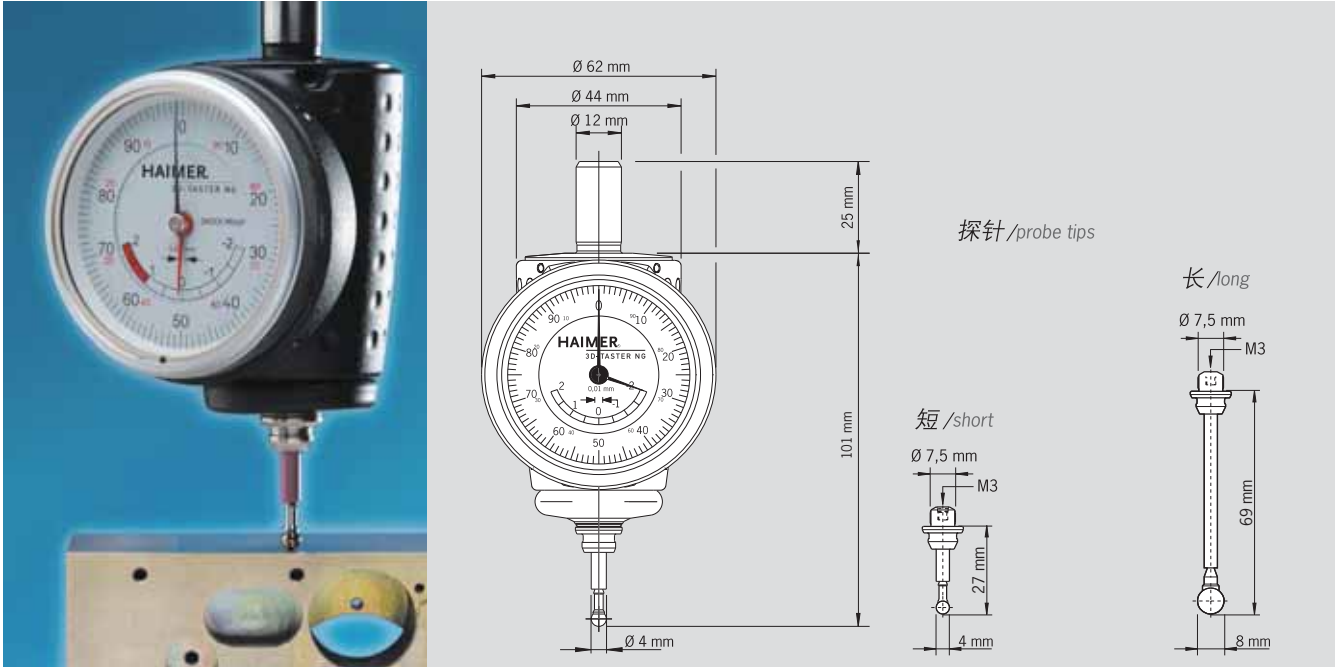
订货号/Order No. 80.363.00

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Ø 4 mm 球头短探针/Short probe tip Ø 4 mm
Ø 8 mm 球头长探针/Long probe tip Ø 8 mm

新一代3D寻边器
3D-SENSOR NEW GENERATION



新一代3D寻边器

德国 HAIMER 公司的新一代3D寻边器是在被世界广泛认可的通用型3D寻边器的基础上进一步研发的产品。其显著特征是改进的机械结构以及新的紧凑设计。

特点:

- 紧凑且便于夹持的壳体, 工作区域不受限制
- 0.01mm分度表盘精确显示主轴位置 (2表针)
- 最高精度0.01mm (使用 HAIMER 原厂探针)
- 标有过行程距离 (安全距离)
- 防水等级: IP67

功能:

- 校准机床主轴到工件边和参照边 (x,y-z轴)
- 设置零点
- 孔和轴的对心
- 测量长度和深度
- 检测直线度和表面水平度
- 工件和虎钳的找正
- 快捷, 无需计算, 无正负号错误

3D-Sensor New Generation

The 3D-Sensor NG is a further development of our worldwide accepted and proven Universal 3D-Sensor. Its distinguishing features are improved mechanics and a new and compact design.

Advantages:

- Compact and easy to grip casing, no restriction to working area
- Precise display of spindle position with large 1/100 mm dial gauge (2 hands)
- Utmost precision of 0.01 mm (when using original HAIMER probe tips)
- Marked overrun distance (safety distance)
- IP 67 waterproof

Functions:

- Aligning machine spindles to work piece edges and reference edges (x-, y-, z-axis)
- Set zeros
- Centre borings and shafts
- Measuring lengths and depths
- Checking straightness and levelness of surfaces
- Aligning work pieces and vices
- Quick, without calculations, no mistakes with algebraic signs

技术参数/Technical details

NG 3D寻边器, 夹持杆Ø12mm, 含Ø4mm球头短探针
3D-Sensor NG with clamping shank Ø 12 mm including short probe tip Ø 4 mm

精度/Accuracy 0,01 mm
不含夹持杆的长度/Length without clamping shank 100 mm

订货号/Order No. 80.360.00NG

附件/Accessories

Ø 4 mm 球头短探针/Short Probe tip Ø 4 mm

订货号/Order No. 80.362.00

Ø 8 mm 球头长探针/Long Probe tip Ø 8 mm

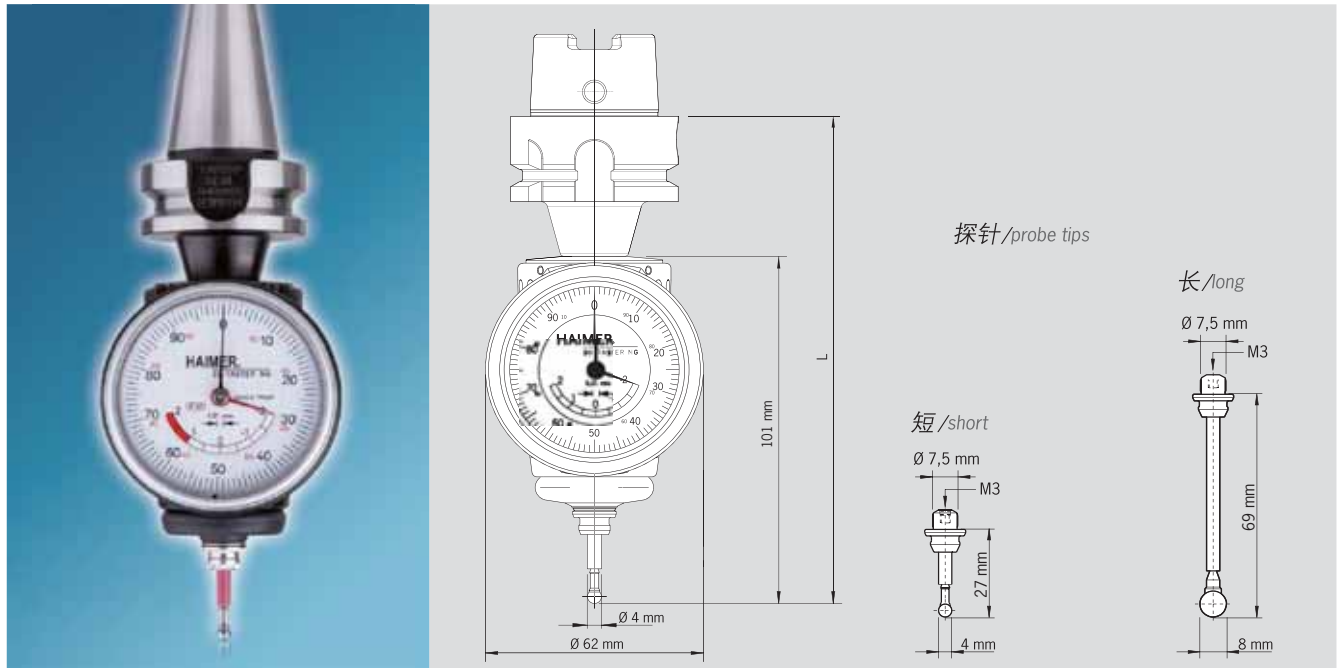
订货号/Order No. 80.363.00



Ø 4 mm 球头短探针/Short probe tip Ø 4 mm
Ø 8 mm 球头长探针/Long probe tip Ø 8 mm

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一体式短型新一代3D寻边器
3D-SENSOR NG WITH INTEGRATED SHORT ADAPTER



为SK30, BT30, HSK-25/32/40/50/63接口设计

节省机床空间的简易工件测量设备

种类:

- 搭配SK30, BT30, HSK-25/32/40/50/63接口的短型刀柄
- 无需手动进一步调整精度, 发货前探针的预调精度为0.01mm
- 测量精度: 0.01mm
- 可选择长探针或短探针, 无需工具即可更换
- 无需再次校准
- 增加临界距离
- 防水等级: IP67

应用:

- 适合小型的加工中心
- 适合工件预设或者长度测量
- 任何方向都可测量 (x-y-z轴)

For interfaces SK30, BT30, HSK-25/32/40/50/63

Simple workpiece measuring with less space in the machine.

Version:

- With integrated short adapter in version SK30, BT30, HSK-A32/40/50/63, HSK-E25/32/40/50
- No further manual runout adjustment necessary! Delivery with preset runout accuracy at the probe tip of 0.01 mm
- Measuring accuracy: 0.01 mm
- Short and long probe tips available, no tool change necessary
- No re-calibration of the sensor is needed
- Enhanced overrun distance
- IP 67 waterproof

Application:

- For small Milling and EDM machines (isolated probe)
- For workpiece-reset and length measuring
- Any direction approach (X, Y, Z-axis)

技术参数/Technical details

一体式短型NG 3D寻边器 含Ø4mm球头短探针
3D-Sensor NG with integrated short adapter including short probe tip Ø 4 mm

精度/Accuracy	0,01 mm	
产品描述/Article	订货号/Order No.	L [mm]
含 HSK - E25 短刀柄/with short adapter HSK-E25	80.363.E25NG	126.5
含 HSK - E32 短刀柄/with short adapter HSK-E32	80.363.E32NG	136.5
含 HSK - E40 短刀柄/with short adapter HSK-E40	80.363.E40NG	136.5
含 HSK - E50 短刀柄/with short adapter HSK-E50	80.363.E50NG	143.5
含 HSK - A32 短刀柄/with short adapter HSK-A32	80.363.A32NG	136.5
含 HSK - A40 短刀柄/with short adapter HSK-A40	80.363.A40NG	136.5
含 HSK - A50 短刀柄/with short adapter HSK-A50	80.363.A50NG	143.5
含 HSK - A63 短刀柄/with short adapter HSK-A63	80.363.A63NG	147
含 SK30 短刀柄/with short adapter SK30	80.364.30NG	136.1
含 BT30 短刀柄/with short adapter BT30	80.365.30NG	135.5

附件/Accessories

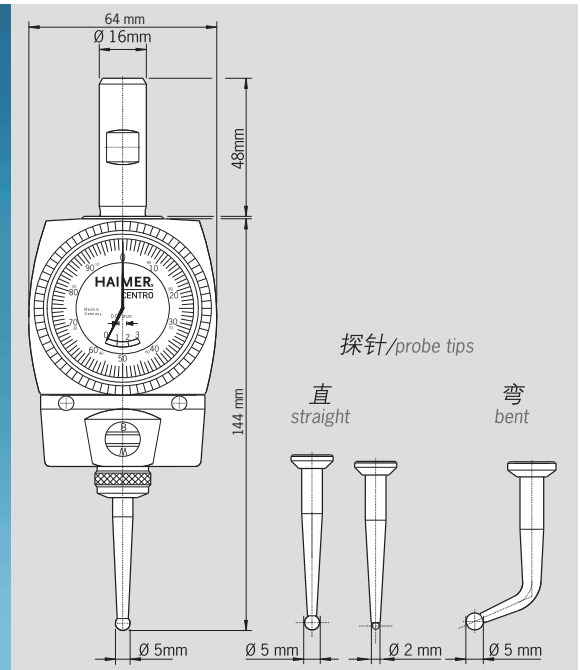
Ø 4 mm 球头短探针/Short probe tip Ø 4 mm

订货号/Order No. 80.362.00

Ø 8 mm 球头长探针/Long probe tip Ø 8 mm

订货号/Order No. 80.363.00

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对中仪

内孔和外圆的快速精密对中

对中仪装夹于刀柄上，定位于测量轴线的附近。调整探头，使探头接触需要测量的内孔表面或外圆表面。

表盘总位于可视范围

探针在内孔或者轴的外圆低速滑动时，他的运动反映在表盘上。通过使用天线，对中仪不会旋转，表盘始终在操作者的视野内。

对中仪可以很可靠地寻找轴或者内孔的轴线

当表盘上的指针停止运动时，主轴和被测内孔或者轴的中心重合。通过调整机床x-y轴，可达到工件和主轴轴线重合。

更多功能：

- 测量工件轴线相对于主轴的跳动
- 补偿主轴和刀柄的同心误差 >> 不必测量
- 超大表盘可以让远距离的测量变得简单
- 探针可更换

Centro

Center bores and arbors quick and precise

The Centro is clamped in a tool holder and positioned close the sought axis. The probe tip is adjusted and touches the bore or arbor all the way around.

Dial gauge always in field of vision

With low rpm the probe slides along the bore or arbor. Its movement is transferred to the dial gauge. By using an antenna the Centro does not spin around and stays in field of vision.

By using the Centro you find the axis of bores or arbors - reliably

As long as the spindle is out of the center of the bore or arbor the hands of the dial gauge stay in movement. By changing the position of x- and y- axis at the machine you can jibe the axis of the spindle and the work piece.

Further advantages:

- Check the axial run-out of the work piece to the spindle
- Compensation of the run-out errors of the spindle and tool holder >> No adjustment necessary
- Even in bigger distance the unusual size of the dial gauge is helpful to finish the job
- Replaceable probes

技术参数/Technical details

对中仪 夹持杆Ø16mm, 含Ø5mm球头直探针
Centro with clamping shank Ø 16 mm incl. straight probe tip Ø 5 mm

对中精度/Centering accuracy	0,003 mm
最大转速/Max. rotation speed	150 1/min
内径测量范围 (孔)/Measuring range interior diameter (drill hole)	3-125 mm
外径测量范围 (轴, 使用弯探针)	
Measuring range exterior diameter (shaft, with probe tip bent)	0-125 mm
订货号/Order No. 80.300.00.FHN	

附件/Accessories

Ø5mm球头直探针/Probe tip straight with diameter of ball 5 mm
订货号/Order No. 80.301.00

Ø5mm球头弯探针/Probe tip bent with diameter of ball 5 mm
订货号/Order No. 80.302.00

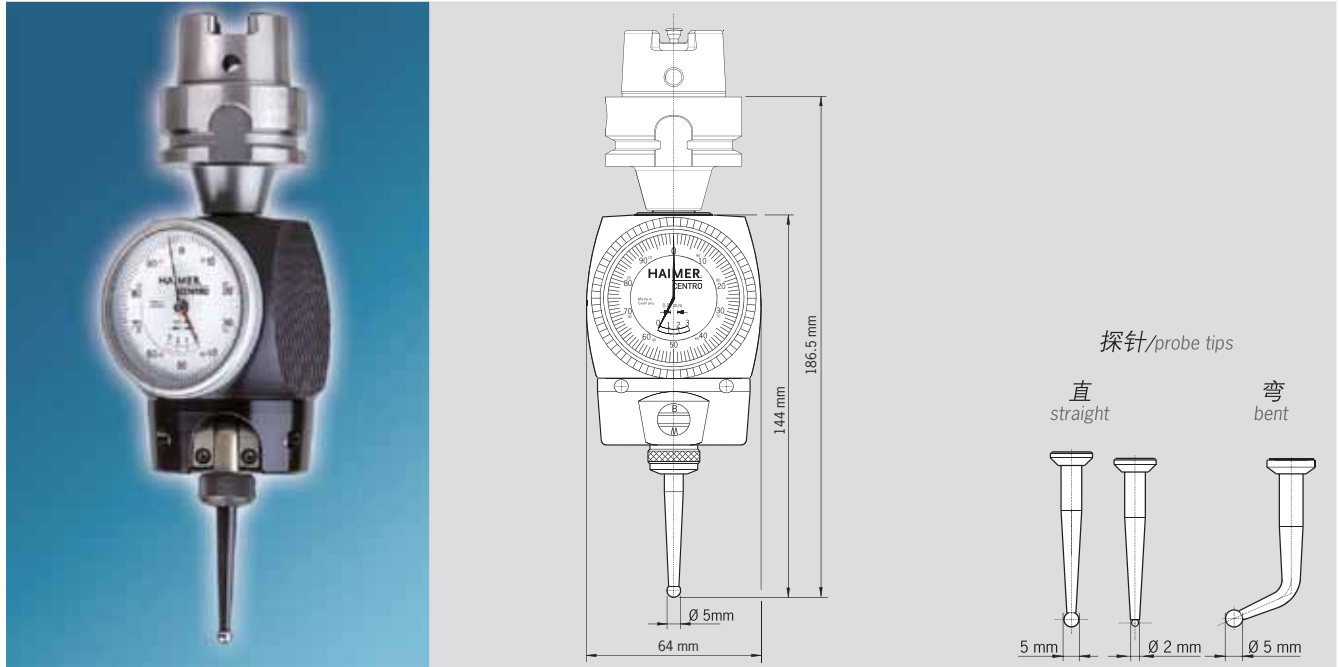
Ø2mm球头直探针, 用于小孔/
Probe tip straight with diameter of ball 2 mm, for small bores
订货号/Order No. 80.303.00

**建议使用的HAIMER刀柄
Recommended HAIMER tool holders**

	订货号/Order No.
SK 40 短刀柄/short chuck SK 40	40.300.16
SK 50 短刀柄/short chuck SK 50	50.300.16
BT 40 短刀柄/short chuck BT 40	40.500.16
BT 50 短刀柄/short chuck BT 50	50.500.16
HSK-A 40 短刀柄/short chuck HSK-A 40	A40.000.16
HSK-A 50 短刀柄/short chuck HSK-A 50	A50.000.16
HSK-E 50 短刀柄/short chuck HSK-E 50	E50.000.16
HSK-A 63 短刀柄/short chuck HSK-A 63	A63.000.16
HSK-A 100 短刀柄/short chuck HSK-A 100	A10.000.16

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带HSK-A50刀柄一体式对中仪 CENTRO WITH INTEGRATED ADAPTER HSK-A50



一体式对中仪

一体式对中仪为客户提供更简单和人性化的操作方法。

内孔和外圆的快速精密对中

对中仪装夹于刀柄上，定位于测量轴线的附近。调整探头，使探头接触需要测量的内孔表面或外圆表面。

表盘总位于可视范围

探针在内孔或者轴的外圆低速滑动时，他的运动反映在表盘上。通过使用天线，对中仪不会旋转，表盘始终在操作者的视野内。

对中仪可以很可靠地寻找轴或者内孔的轴线

当表盘上的指针停止运动时，主轴和被测内孔或者轴的中心重合。通过调整机床x-y轴，可达到工件和主轴轴线重合。

更多功能：

- 测量工件轴线相对于主轴的跳动
- 补偿主轴和刀柄的同心误差>>不必测量
- 超大表盘可以让远距离的测量变得简单
- 探针可更换

Centro with integrated adapter

The integrated adapter guarantees easiest handling and a maximum of comfort.

Center bores and arbors quick and precise

The Centro is clamped in a tool holder and positioned close the sought axis. The probe tip is adjusted and touches the bore or arbor all the way around.

Dial gauge always in field of vision

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By using the Centro you find the axis of bores or arbors - reliably

As long as the spindle is out of the center of the bore or arbor the hands of the dial gauge stay in movement. By changing the position of x- and y- axis at the machine you can jibe the axis of the spindle and the work piece.

Further advantages:

- Check the axial run-out of the work piece to the spindle
- Compensation of the run-out errors of the spindle and tool holder >> No adjustment necessary
- Even in bigger distance the unusual size of the dial gauge is helpful to finish the job
- Replaceable probes

技术参数/Technical details

带 HSK A50刀柄一体式对中仪, 含Ø5mm球头直探针 Centro with integrated adapter HSK-A50 and straight probe tip Ø 5 mm

对中精度/Centering accuracy	0,003 mm
最大转速/Max. rotation speed	150 1/min
内径测量范围 (孔) /Measuring range interior diameter (drill hole)	3-125 mm
外径测量范围 (轴, 使用弯探针) Measuring range exterior diameter (shaft, with probe tip bent)	0-125 mm
订货号/Order No. 80.303.A50	

附件/Accessories

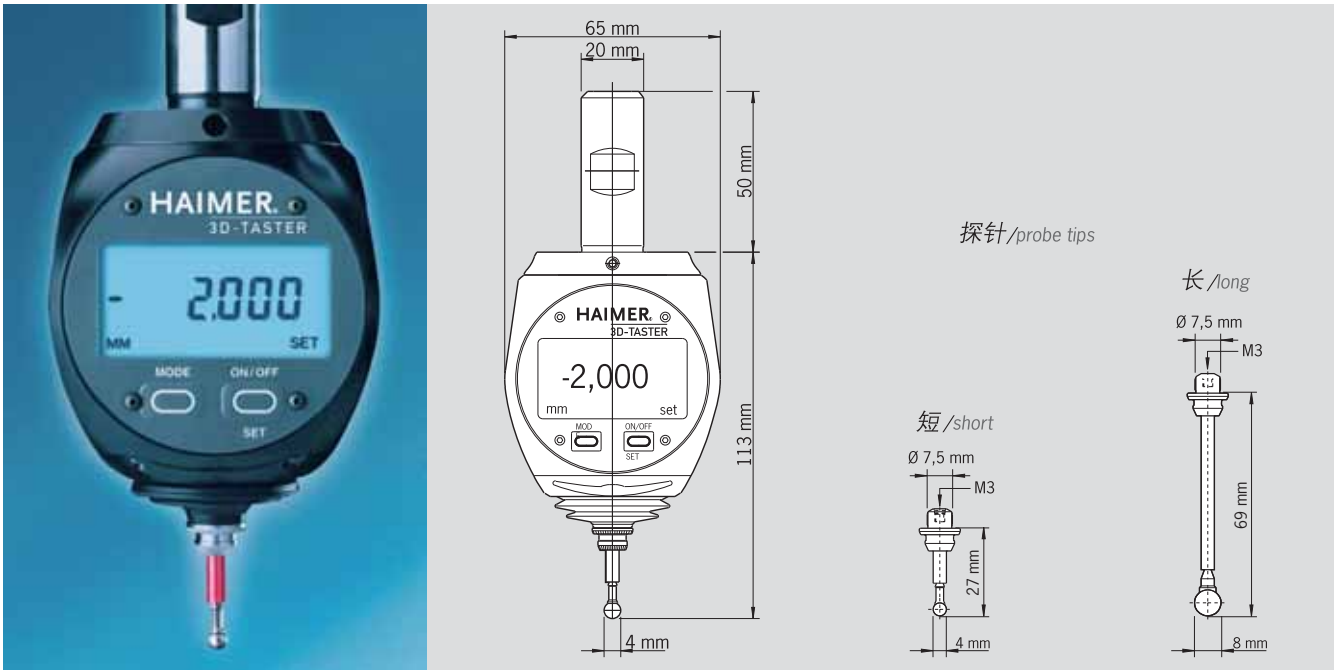
Ø5mm球头直探针/Probe tip straight with diameter of ball 5 mm
订货号/Order No. 80.301.00

Ø5mm球头弯探针/Probe tip bent with diameter of ball 5 mm
订货号/Order No. 80.302.00

Ø2mm球头直探针, 用于小孔/
Probe tip straight with diameter of ball 2 mm, for small bores
订货号/Order No. 80.303.00

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数显3D寻边器
3D-SENSOR DIGITAL



数显3D寻边器

更加准确安全的测量设备

数显3D寻边器是机械式寻边器的进一步发展，用于铣削和EDM加工设备。机床主轴能快速安全的定位于参照边。细微的靠近过程都能准确地显示于数字屏幕上。因为主轴能准确定位在接触边上，不需要计算就能设置零位。

特殊配置：

分辨率为0.001mm的大数字屏幕显示。从远距离也会容易的读取数字。（例如：大型的加工中心上）屏幕是防水和防尘设计（IP64），能够储存在刀具库内。

3D-Sensor Digital

Highly accurate – safe handling

The Digital 3D-Sensor is a further development of the time proven mechanical 3D-Sensor. It serves for approaching workpiece edges on milling and EDM machines. The spindle may be positioned quickly and safely on the references edge. The approaching operation can be exactly monitored on the digital display. The zero points can be set without any calculations because the spindle axis is positioned exactly on the approached edge.

Especially practical

The digital display has large numbers that measure in increments of 0.001 mm. It can be easily read from a long distance (i.e. when mounted on a large machining center). The digital display is water- and dust-proof (IP 64) and can be stored in the tool magazine of the machine.

技术参数/Technical details

数显3D寻边器, 夹持杆Ø20mm, 含Ø4mm球头短探针
3D-Sensor Digital with clamping shank Ø 20 mm incl. short probe tip Ø 4 mm

分辨率/Smallest unit of measure	0,001 mm
重复精度/Repeatability	0,001 mm
测量精度/Measuring accuracy	0,005 mm
显示屏/Display	
显示模式	英制与公制互换
Display mode	May be switched to inch or metric
显示屏尺寸/Display size	45x23 mm
字符高度/Height of numbers	8,5 mm
电池寿命（不间断使用）大约	3000 小时
Service life of battery (continuous operation) approx.	3000 hrs
订货号/Order No. 80.460.00.FHN	

附件/Accessories

Ø 4 mm 球头短探针/Short probe tip Ø 4 mm

订货号/Order No. 80.362.00

Ø 8 mm 球头长探针/Long probe tip Ø 8 mm

订货号/Order No. 80.363.00

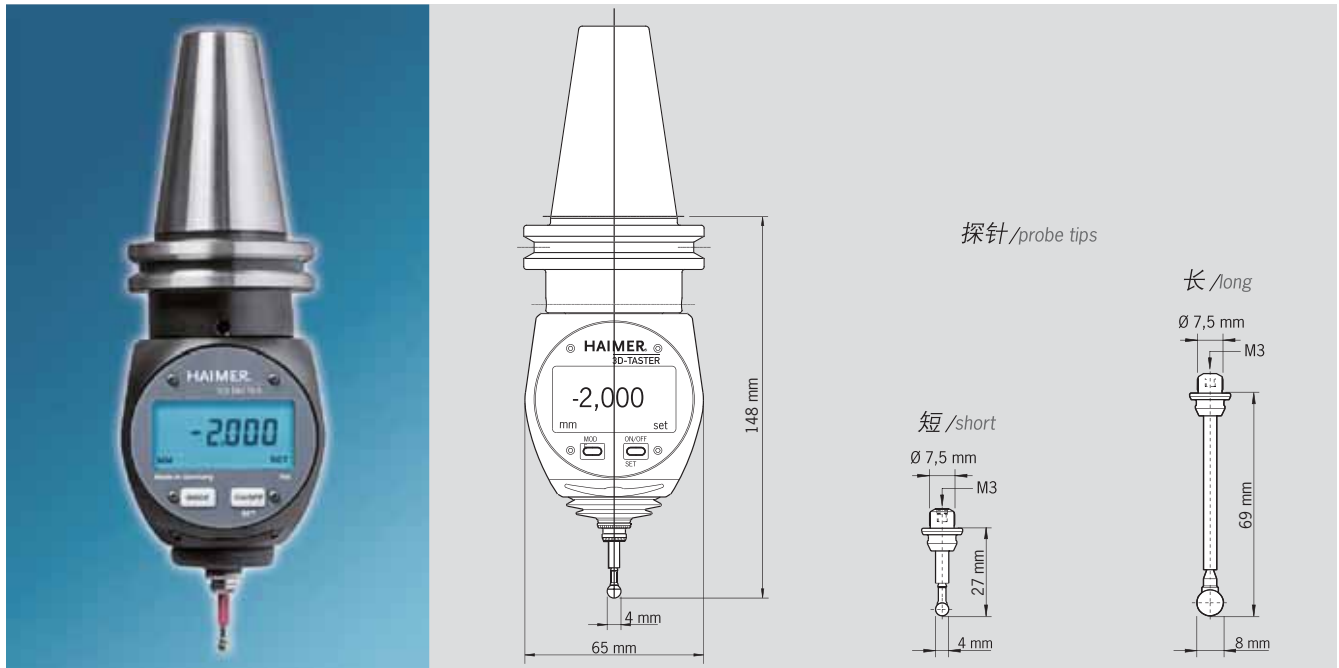
建议使用的HAIMER刀柄

Recommended HAIMER tool holders

	订货号/Order No.
SK 40 短刀柄/short chuck SK 40	40.305.20
SK 50 短刀柄/short chuck SK 50	50.300.20
BT 40 短刀柄/short chuck BT 40	40.500.20
BT 50 短刀柄/short chuck BT 50	50.500.20
HSK-A 50 短刀柄/short chuck HSK-A 50	A50.000.20
HSK-E 50 短刀柄/short chuck HSK-E 50	E50.000.20
HSK-A 63 短刀柄/short chuck HSK-A 63	A63.000.20
HSK-A 80 短刀柄/short chuck HSK-A 80	A80.000.20
HSK-A 100 短刀柄/short chuck HSK-A 100	A10.000.20

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一体式数显3D寻边器 3D-SENSOR DIGITAL WITH INTEGRATED ADAPTER



一体式数显3D寻边器

含有刀柄 (DIN 69871, SK40 或者 JIS B6339, BT40) 的一体式寻边器使用更加方便和舒适。

更加准确安全的测量设备

数显3D寻边器是机械式寻边器的进一步发展,用于铣削和EDM加工设备上。机床主轴能快速安全的定位于参照边。细微的靠近过程都能准确地显示于数字屏幕上。因为主轴能准确定位在接触边上,不需要计算就能设置零位。

特殊配置:

分辨率为0.001mm的大数字屏幕显示。从远距离也会容易的读取数字。(例如:大型的加工中心上)屏幕是防水和防尘设计(IP64),能够存储在刀具库内。

3D-Sensor Digital with integrated adapter

The integrated taper (DIN 69871, SK40 or JIS B6339, BT40) guarantees easiest handling and a maximum of comfort.

Highly accurate – safe handling

The Digital 3D-Sensor is a further development of the time proven mechanical 3D-Sensor. It serves for approaching workpiece edges on milling and EDM machines. The spindle may be positioned quickly and safely on the references edge. The approaching operation can be exactly monitored on the digital display. The zero points can be set without any calculations because the spindle axis is positioned exactly on the approached edge.

Especially practical

The digital display has large numbers that measure in increments of 0.001 mm. It can be easily read from a long distance (i.e. when mounted on a large machining center). The digital display is water- and dust-protected (IP 64) and can be stored in the tool magazine of the machine.

技术参数/Technical details

一体式数显3D寻边器, 含Ø4mm球头短探针

3D-Sensor Digital with integrated adapter incl. short probe tip Ø 4 mm

分辨率/Smallest unit of measure	0,001 mm
重复精度/ Repeatability	0,001 mm
测量精度/Measuring accuracy	0,005 mm
显示屏/Display	
显示模式	英制与公制互换
Display mode	May be switched to inch or metric
显示屏尺寸/ Display size	45x23 mm
字符高度/ Height of numbers	8,5 mm
电池寿命 (不间断使用) 大约	3000 小时
Service life of battery (continuous operation) approx.	3000 hrs
SK40型/with integrated adapter SK 40	
订货号/Order No. 80.464.40.FHN	
BT40型/with integrated adapter BT 40	
订货号/Order No. 80.465.40.FHN	

附件/Accessories

Ø 4 mm 球头短探针/Short probe tip Ø 4 mm

订货号/Order No. 80.362.00

Ø 8 mm 球头长探针/Long probe tip Ø 8 mm

订货号/Order No. 80.363.00

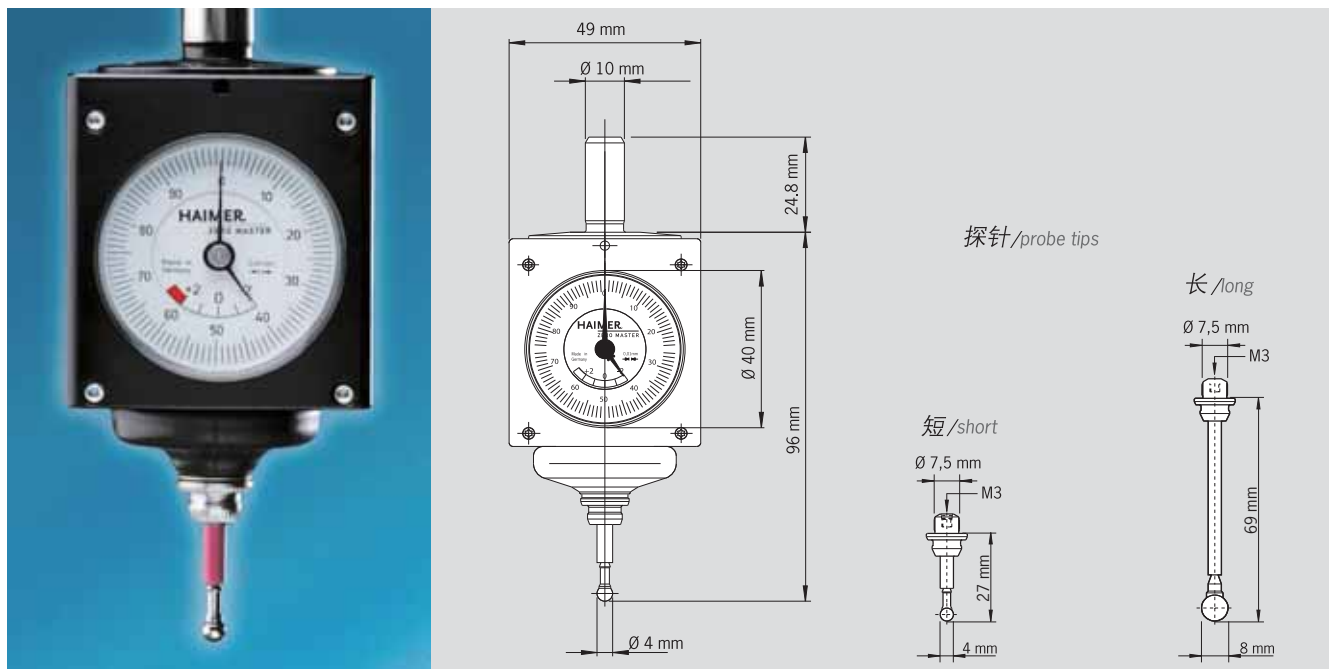


Ø 4 mm 球头短探针/Short probe tip Ø 4 mm
Ø 8 mm 球头长探针/Long probe tip Ø 8 mm

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超小型3D寻边器 ZERO MASTER



超小型3D寻边器

尺寸小巧性能优良

Zero Master是世界上最小的3D寻边器。使用、功能和精度与通用型3D寻边器相同。Zero Master适用于小机床，夹持直径为10mm，因此它能用于ISO30或小型HSK主轴的机床上。本体缩短且不会突出主轴太远因此可用于测量平整的大工件。Zero Master能通过小表盘读取数值。

Zero Master可安装直径 \varnothing 4mm的球头短探针或直径 \varnothing 8mm的球头长探针。这些探针与其它HAIMER 3D寻边器兼容。

请注意：

只有使用HAIMER 原厂探针才能保证测量精度达到0.01mm。

– 防水等级：IP67

Zero Master

Small but nice

The Zero Master is the smallest 3D-Sensor worldwide. Usage, function and accuracy are equal to the Universal 3D-Sensor. The size of the Zero Master is adapted to small machines. The diameter of the clamping shank is 10mm. Thus it can be also used on machines with ISO 30 or small HSK spindles. The housing is shortened and does not protrude far out of the spindle so even big work pieces can be measured. The Zero Master can be read with a small analog dial gauge.

The Zero Master can be equipped with a short (ball diam. 4 mm) and a long (ball diam. 8 mm) probe tip. The probe tips of course are compatible to all other HAIMER 3D-Sensors.

Please take note:

The given measuring precision of 0.01 mm only applies if the original HAIMER probe tips are used.

– IP 67 waterproof

技术参数/Technical details

超小型3D寻边器, 夹持杆 \varnothing 10mm, 含 \varnothing 4mm球头短探针

Zero Master with clamping shank \varnothing 10 mm including short probe tip \varnothing 4 mm

精度/Accuracy 0,01 mm

不含夹持杆的长度/Length without clamping shank 96 mm

订货号/Order No. **80.960.00**

附件/Accessories

\varnothing 4 mm 球头短探针/Short probe tip \varnothing 4 mm

订货号/Order No. **80.362.00**

\varnothing 8 mm 球头长探针/Long probe tip \varnothing 8 mm

订货号/Order No. **80.363.00**

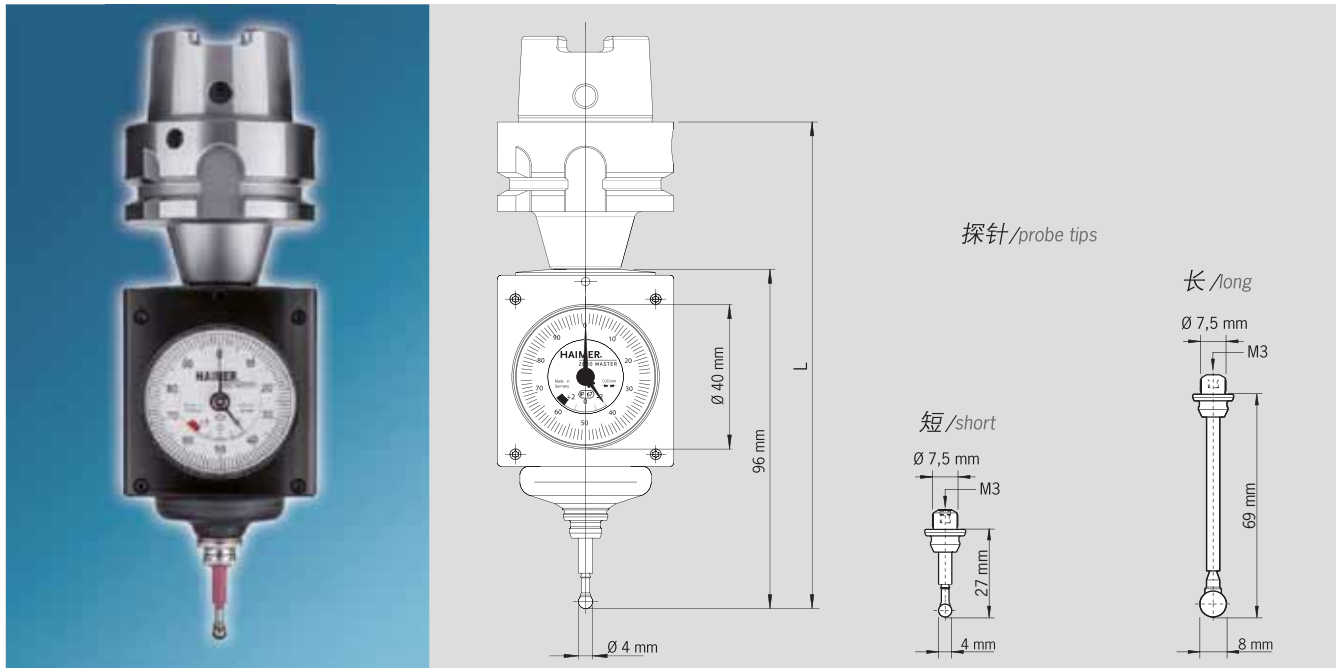


\varnothing 4 mm 球头短探针/Short probe tip \varnothing 4 mm

\varnothing 8 mm 球头长探针/Long probe tip \varnothing 8 mm

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一体式超小型3D寻边器
3D-SENSOR ZERO MASTER WITH INTEGRATED SHORT ADAPTER



为SK30, BT30, HSK-25/32/40/50/63接口设计

节省机床空间的简易工件测量设备

种类:

- 搭配SK30, BT30, HSK-25/32/40/50/63接口的短型刀柄
- 无需手动进一步调整精度, 发货前探针的预调精度为0.01mm
- 测量精度: 0.01mm
- 可选择长探针或短探针, 无需工具即可更换
- 无需再次校准
- 增加临界距离
- 防水等级: IP67

应用:

- 适合小型的加工中心
- 适合工件预设或者长度测量
- 任何方向都可测量 (x-y-z轴)

For interfaces SK30, BT30, HSK-25/32/40/50/63

Simple workpiece measuring with less space in the machine.

Version:

- With integrated short adapter in version SK30, BT30, HSK-25/32/40/50/63
- No further manual runout adjustment necessary! Delivery with preset runout accuracy at the probe tip of 0.01 mm
- Measuring accuracy: 0.01 mm
- Short and long probe tips available, no tool change necessary
- No re-calibration of the sensor is needed
- Enhanced overrun distance
- IP 67 waterproof

Application:

- For small Milling and EDM machines (isolated probe)
- For workpiece-reset and length measuring
- Any direction approach (X-, Y-, Z-axis)

技术参数/Technical details

一体式超小型3D寻边器 含Ø4mm球头短探针

3D-Sensor Zero Master with integrated short adapter including short probe tip Ø 4 mm

精度/Accuracy	0,01 mm	
产品描述/Article	订货号/Order No.	L [mm]
含HSK - E25短型刀柄/with short adapter HSK-E25	80.963.E25	121,6
含HSK - E32短型刀柄/with short adapter HSK-E32	80.963.E32	131,6
含HSK - E40短型刀柄/with short adapter HSK-E40	80.963.E40	131,6
含HSK - E50短型刀柄/with short adapter HSK-E50	80.963.E50	138,6
含HSK - A32短型刀柄/with short adapter HSK-A32	80.963.A32	131,6
含HSK - A40短型刀柄/with short adapter HSK-A40	80.963.A40	131,6
含HSK - A50短型刀柄/with short adapter HSK-A50	80.963.A50	138,6
含HSK - A63短型刀柄/with short adapter HSK-A63	80.963.A63	142,1
含SK30短型刀柄/with short adapter SK30	80.964.30	131,2
含BT30短型刀柄/with short adapter BT30	80.965.30	130,7

附件/Accessories

Ø 4 mm 球头短探针/Short probe tip Ø 4 mm

订货号/Order No. 80.362.00

Ø 8 mm 球头长探针/Long probe tip Ø 8 mm

订货号/Order No. 80.363.00

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