

HAIMER®
Quality Wins.



3D SENSORS

2-in-1

3-AXIS EDGE FINDER &
MEASURING INSTRUMENT



www.haimer-usa.com

HAIMER Sensors – Benefits

1.

No math needed

- Zero on the indicator = Zero on the machine control
- The sensor is pre-calibrated to incorporate the probe tip radius offset

2.

3-Axis edge finder

- Tram in your workpiece
- Check surface flatness
- The indicator always faces the operator = No more reaching into the machine

3.

Quickly verify part dimensions

- Part lengths, slot depths, hole diameters and more



HAIMER 3D-Sensor:

Spot on positioning –
Universally simple.



Tooling Technology

Shrinking Technology

Balancing Technology

Measuring Instruments

Applications

Locating work piece edge in X, Y and Z is easy as 1, 2, 3



Measure your work piece dimensions



Tram in your work piece or fixture to your machine

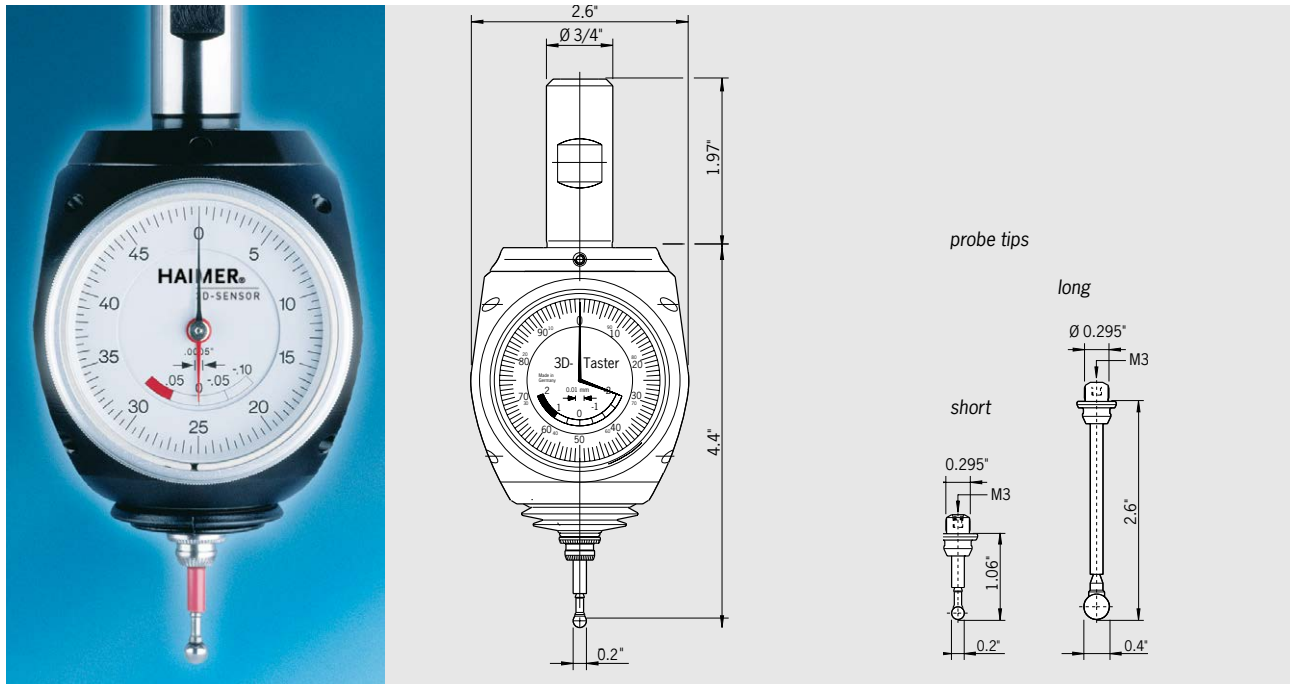


Measure surface flatness



Orientate the machine spindle with the center of a drilled hole or cylindrical O.D.

UNIVERSAL 3D-SENSOR INCH



Universal 3D-Sensor INCH

The Universal 3D-Sensor is a very precise and versatile edge-finding measuring instrument for milling and EDM machines (insulated probe). Made entirely at the HAIMER Germany facility, it is an instrument that no shop can do without.

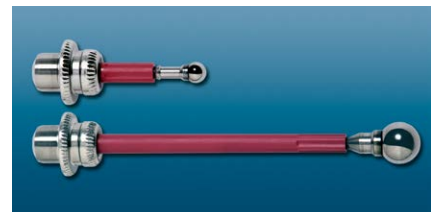
The 3D-Sensor is clamped into a tool holder and inserted into a milling spindle. Once clamped into the machine spindle, the run-out (T.I.R) is fully adjustable to zero. Then, you are able to find exact positioning of the spindle axis on the edges of the workpiece. This allows for zeros to be set and the length to be measured quickly and easily. You may approach from any direction (X-, Y-, Z- axis – hence the name “3D-Sensor”). When the dial gauge shows zero, the spindle axis is exactly on the workpiece edge.

Only the HAIMER 3D-Sensor allows for the edge to be found on the first try. No calculating of the probe's ball diameter is necessary – just zero it out! Problems with mathematics or calculations are eliminated, allowing for fewer operator errors. Our 3D-Sensor is quick and easy, reducing the extra time needed with most edge-finders, thus increasing the productivity and accuracy of the operator.

Short and long probes are available. The sensor probes can be changed without ever needing a tool. No re-calibration of the unit is needed after changing sensor probes.

Simply bring the needle to Zero, and that is your edge with any probe. The accuracy is such that you are able to inspect your parts right on the machine. Tram vises, find the center of your bore, find your edge and inspect parts - it is all possible with the HAIMER 3D-Sensor. The unit has a large overrun distance as well as fully tested preset probe breaking points, giving the sensor long life. All Universal 3D-Sensors are individually tested and adjusted during assembly in order to achieve maximum measuring precision.

– IP 67 waterproof



Short probe tip Ø 0.2"
Long probe tip Ø 0.4"

Technical details

Universal 3D-Sensor with clamping shank Ø 20 mm including short probe tip Ø 3/4"

Accuracy	0.0004"
Length without clamping shank	4.4"

Order No. 80.360.00.IN

Accessories

Short probe tip Ø 0.2"
Order No. 80.365.20

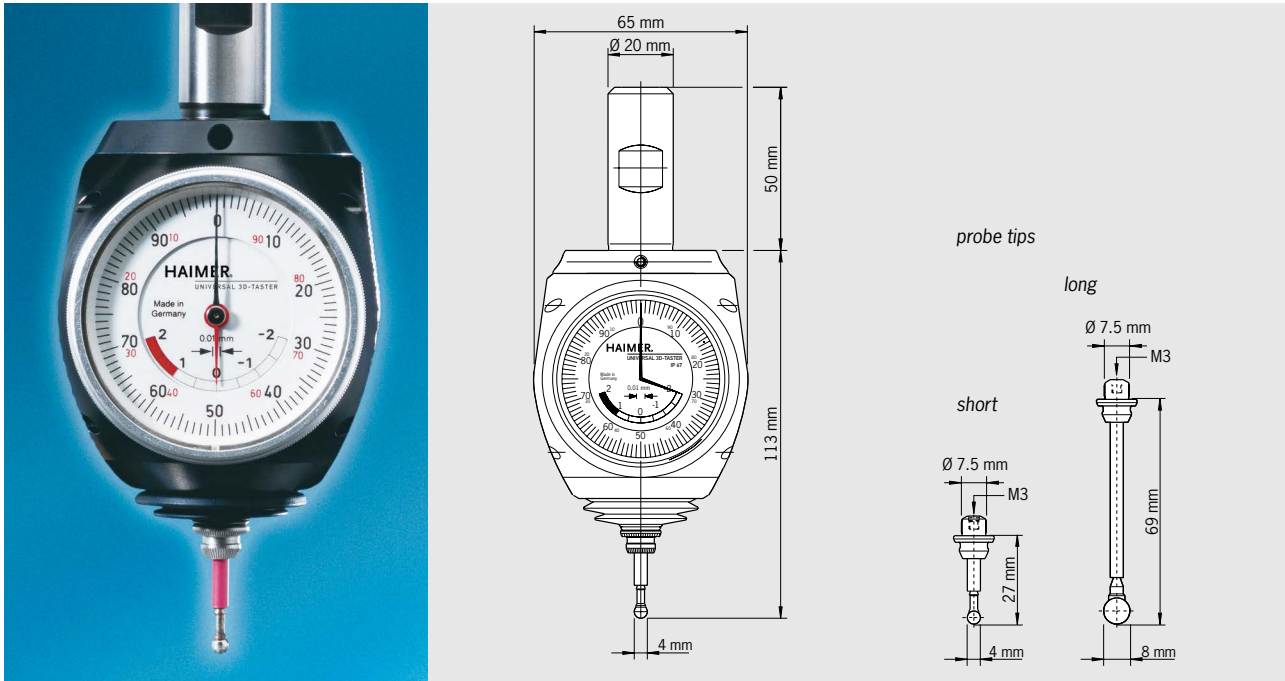
Long probe tip Ø 0.4"
Order No. 80.365.30

Recommended HAIMER tool holders

	Order No.
Short chuck CAT 40	40.720.32
Short chuck CAT 50	50.720.32
Short chuck HSK-A63	A63.020.32
Short chuck HSK-A100	A10.020.32
Please order ER collet along with above holders: ER32 3/4" collet	81.320.20
(additional taper styles please see ER or HG collet chuck section)	

Technical data subject to change without prior notice

UNIVERSAL 3D-SENSOR METRIC



Universal 3D-Sensor METRIC

The Universal 3D-Sensor is a very precise and versatile measuring instrument for milling and EDM machines (insulated probe).

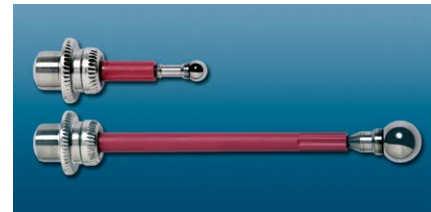
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Only the HAIMER 3D-Sensor allows for the edge to be found on the first try. No calculating of the probe’s ball diameter is necessary – just zero it out! Problems with mathematics or calculations are eliminated, allowing for fewer operator errors. Our 3D-Sensor is quick and easy, reducing the extra time needed with most edge-finders, increasing the productivity and accuracy of the operator.

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Simply bring the needle to Zero, and that is your edge with any probe. The accuracy is such that you are able to inspect your parts right on the machine. Tram vises, find the center of your bore, find your edge and inspect parts - it is all possible with the HAIMER 3D-Sensor. The unit has a large overrun distance as well as fully tested preset probe breaking points, giving the sensor long life. All Universal 3D-Sensors are individually tested and adjusted during assembly in order to achieve maximum measuring precision.

– IP 67 waterproof



Short probe tip Ø 4 mm
Long probe tip Ø 8 mm

Technical details

Universal 3D-Sensor with clamping shank Ø 20 mm including short probe tip Ø 4 mm

Accuracy	0.01 mm
Length without clamping shank	113 mm

Order No. 80.360.00.FHN

Accessories

Short probe tip Ø 4 mm

Order No. 80.362.00

Long probe tip Ø 8 mm

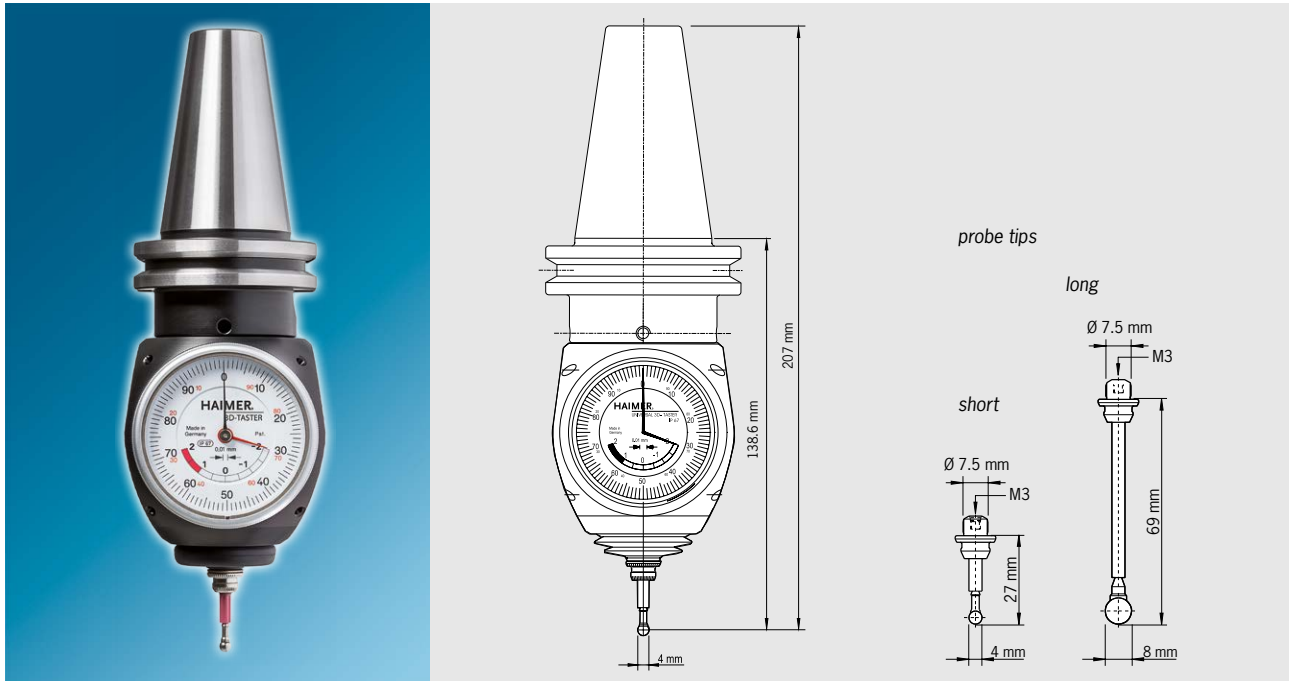
Order No. 80.363.00

Recommended HAIMER tool holders

	Order No.
Short chuck SK 40	40.305.20
Short chuck SK 50	50.300.20
Short chuck BT 40	40.500.20
Short chuck BT 50	50.500.20
Short chuck HSK-A 50	A50.000.20
Short chuck HSK-E 50	E50.000.20
Short chuck HSK-A 63	A63.000.20
Short chuck HSK-A 80	A80.000.20
Short chuck HSK-A 100	A100.000.20

Technical data subject to change without prior notice

UNIVERSAL 3D-SENSOR WITH INTEGRATED ADAPTER



Universal 3D-Sensor with integrated adapter

The integrated taper (ASME B5.50, CAT40, DIN 69871, SK40 or JIS B6339, BT40) guarantees the easiest handling and maximum comfort.

The Universal 3D-Sensor is a very precise and versatile measuring instrument for milling and EDM machines (insulated probe). The 3D-Sensor is clamped into a tool holder and inserted into a milling spindle. Once clamped into the machine spindle, the run-out (T.I.R) is fully adjustable to zero. Then, you are able to find exact positioning of the spindle axis on the edges of the workpiece. This allows for zeros to be set and the length to be measured quickly and easily. You may approach from any direction (X-, Y-, Z- axis – hence the name “3D-Sensor”). When the dial gauge shows zero, the spindle axis is exactly on the workpiece edge.

Only the HAIMER 3D-Sensor allows for the edge to be found on the first try.

No calculating of the probe's ball diameter is necessary – just zero it out! Problems with mathematics or calculations are eliminated, allowing for fewer operator errors.

Our 3D-Sensor is quick and easy, reducing the extra time needed with most edge-finders, increasing the productivity and accuracy of the operator.

Short and long probes are available. The sensor probes can be changed without ever needing a tool. No re-calibration of the unit is needed.

For safety, the unit has a large overrun distance as well as fully tested preset probe breaking points, giving the sensor a longer life. Universal 3D-Sensors are individually tested and adjusted when being assembled in order to achieve maximum measuring precision.

– IP 67 waterproof

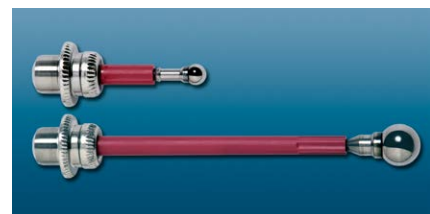
Technical details

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

Accuracy	0.01 mm
Length without clamping shank	113 mm
Article	Order No.
With integrated adapter CAT 40	80.367.40.FHN
With integrated adapter SK 30	80.364.30.FHN
With integrated adapter SK 40	80.364.40.FHN
With integrated adapter BT 30	80.365.30.FHN
With integrated adapter BT 40	80.365.40.FHN

Accessories

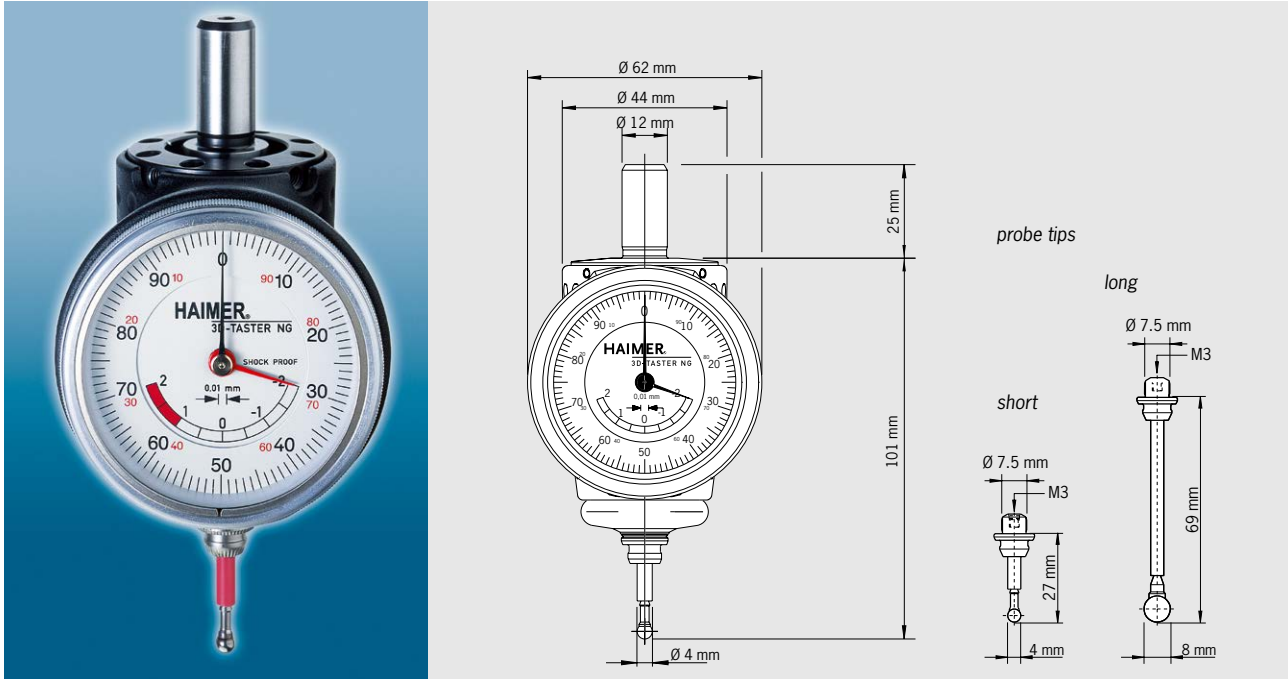
Short probe tip Ø 4 mm
Order No. 80.362.00
Long probe tip Ø 8 mm
Order No. 80.363.00



Short probe tip Ø 4 mm
Long probe tip Ø 8 mm

Technical data subject to change without prior notice

3D-SENSOR NEW GENERATION METRIC



3D-Sensor New Generation

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

Advantages:

- Compact and easy to grip casing will not restrict 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)
- Overrun distance indicated on display (safety distance)
- IP 67 waterproof

Functions:

- Aligns machine spindle to work piece and reference edges (x-, y-, z-axis)
- Sets zeros
- Centers bores and shafts
- Measures lengths and depths
- Checks straightness and levelness of surfaces
- Aligns work pieces and vices
- Quick, without calculations, eliminating mathematical errors

Technical details

3D-Sensor NG with clamping shank Ø 12 mm including short probe tip Ø 4 mm

Accuracy 0.01 mm
 Length without clamping shank 100 mm

Order No. 80.360.00NG

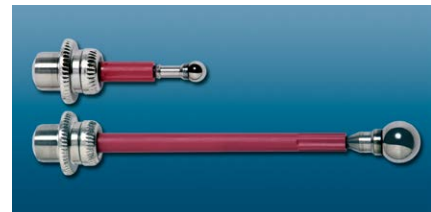
Accessories

Short Probe tip Ø 4 mm

Order No. 80.362.00

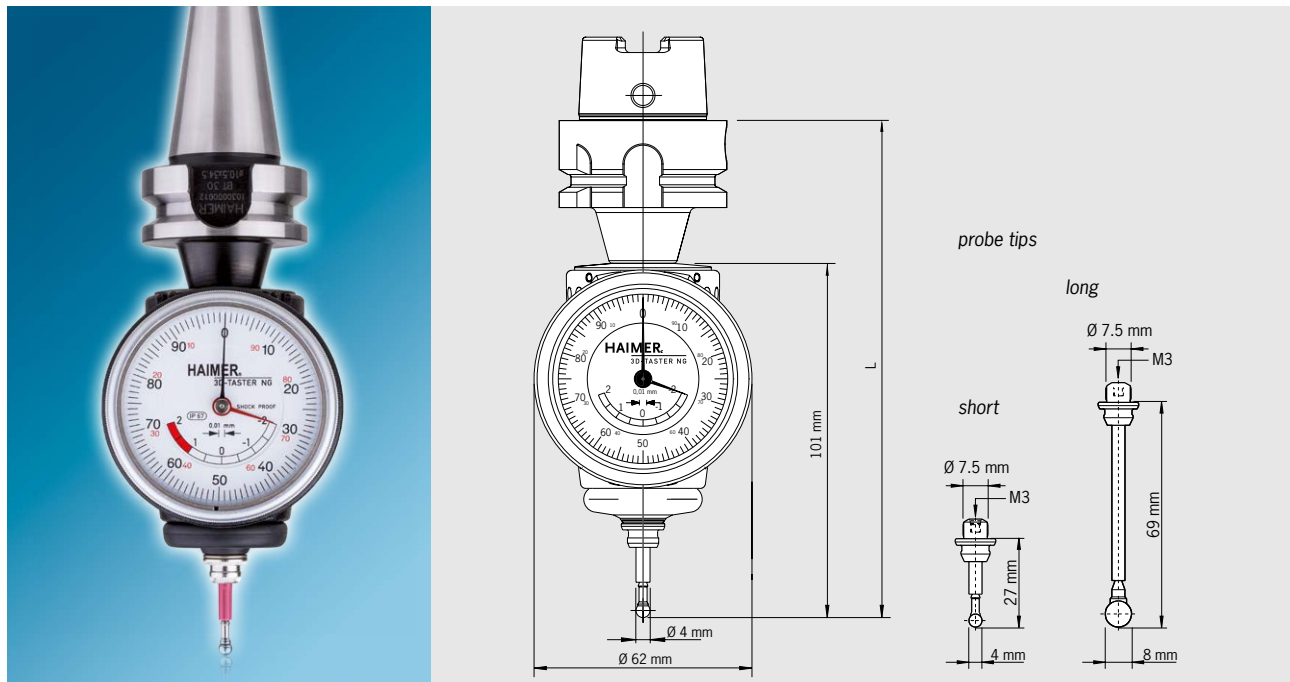
Long Probe tip Ø 8 mm

Order No. 80.363.00



Short probe tip Ø 4 mm
 Long probe tip Ø 8 mm

3D-SENSOR NG WITH INTEGRATED SHORT ADAPTER



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

Easily measures the workpiece while taking up less space.

Version:

- With integrated short adapter available in taper sizes SK30, BT30, HSK-A32/40/50/63, HSK-E25/32/40/50
- Manual runout adjustment no longer necessary! Preset runout accuracy at the probe tip of 0.01 mm
- Measuring accuracy: 0.01 mm
- Short and long probe tips available
- No re-calibration of the sensor is needed
- Increased overrun distance
- IP 67 waterproof

Application:

- For small Milling and EDM machines (insulated probe)
- For workpiece-reset and length measuring
- Approach from any direction (X-, Y-, Z-axis)

Technical details

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

Accuracy	0.01 mm	
Article	Order No.	L [mm]
3D-Sensor NG with short adapter HSK-E25	80.363.E25NG	126.5
3D-Sensor NG with short adapter HSK-E32	80.363.E32NG	136.5
3D-Sensor NG with short adapter HSK-E40	80.363.E40NG	136.5
3D-Sensor NG with short adapter HSK-E50	80.363.E50NG	143.5
3D-Sensor NG with short adapter HSK-A32	80.363.A32NG	136.5
3D-Sensor NG with short adapter HSK-A40	80.363.A40NG	136.5
3D-Sensor NG with short adapter HSK-A50	80.363.A50NG	143.5
3D-Sensor NG with short adapter HSK-A63	80.363.A63NG	147
3D-Sensor NG with short adapter SK30	80.364.30NG	136.1
3D-Sensor NG with short adapter BT30	80.365.30NG	135.5

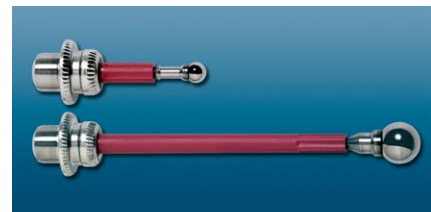
Accessories

Short Probe tip Ø 4 mm

Order No. 80.362.00

Long Probe tip Ø 8 mm

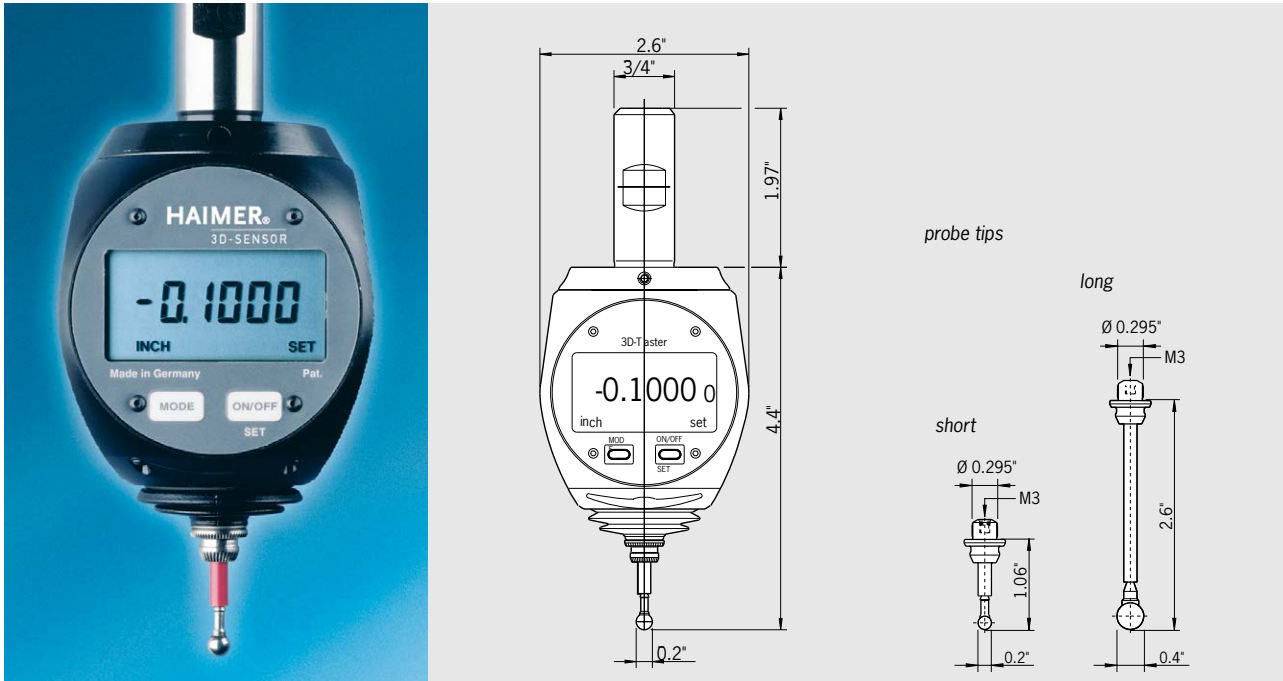
Order No. 80.363.00



Short probe tip Ø 4 mm
Long probe tip Ø 8 mm

Technical data subject to change without prior notice

3D-SENSOR DIGITAL INCH



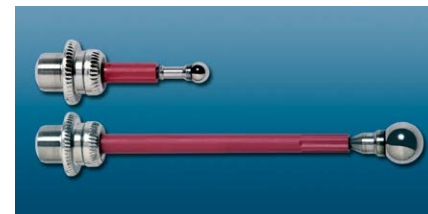
Digital 3D-Sensor

Highly accurate – safe handling

The Digital 3D-Sensor is a further development of the time proven Mechanical 3D-Sensor. It serves for setting workpiece edges on milling and EDM machines. The spindle may be positioned quickly and safely on the reference edge. The setting operation can be precisely monitored on the digital display and the zero position is found on the first try. The machine coordinate system can be set without any calculations because the spindle axis is positioned exactly on the approached edge.

The digital display has large, easy-to-read numbers with measurements in increments of 0.0002". It can be easily read from a long distance (i.e. when mounted on a large machining center).

The digital display is splash-proof and dust-proof (IP64) and can be stored in the tool magazine of the machine.



Short probe tip Ø 0.2"
Long probe tip Ø 0.4"

Technical details

3D-Sensor Digital with clamping shank, diam. 3/4" including short probe tip Ø 0.2"

Smallest unit of measure	0.00005"
Repeatability	0.00005"
Measuring accuracy	0.0002"
Display	
Display mode	May be switched to inch or metric
Display size	1.8" x 0.9"
Height of numbers	0.3"
Service life of battery (continuous operation) approx.	3000 hrs
Order No. 80.460.00.IN	

Accessories

Short probe tip Length 1" – ball tip Ø 0.2"

Order No. 80.365.20

Long probe tip Length 2.6" – ball tip Ø 0.4"

Order No. 80.365.30

Recommended HAIMER tool holders

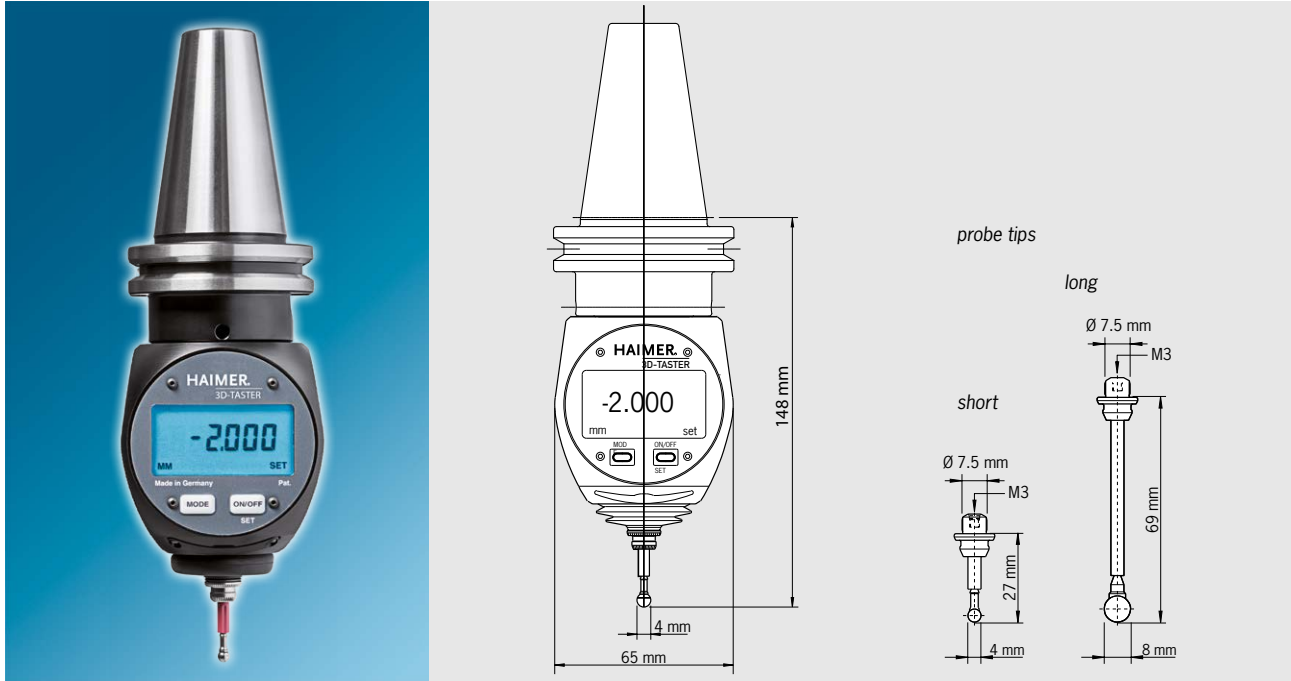
	Order No.
Short chuck CAT 40	40.720.32
Short chuck CAT 50	50.720.32
Short chuck HSK-A63	A63.020.32
Short chuck HSK-A100	A10.020.32

Please order ER collet along with above holders:

ER 32 - 3/4" collet	81.320.20
(additional taper styles please see ER or HG collet chuck section)	

Technical data subject to change without prior notice

3D-SENSOR DIGITAL WITH INTEGRATED ADAPTER METRIC



Digital 3D-Sensor with integrated adapter

The integrated taper (DIN 69871, SK40 or JIS B6339, BT40) guarantees the 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 setting workpiece edges on milling and EDM machines. The spindle may be positioned quickly and safely on the reference edges and the setting operation can be precisely 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 easy-to-read 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.

Technical details

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

Smallest unit of measure	0.001 mm
Repeatability	0.001 mm
Measuring accuracy	0.005 mm
Display	
Display mode	May be switched to inch or metric
Display size	45x23 mm
Height of numbers	8.5 mm
Service life of battery (continuous operation) approx.	3000 hrs

With integrated adapter SK 40

Order No. 80.464.40.FHN

With integrated adapter BT 40

Order No. 80.465.40.FHN

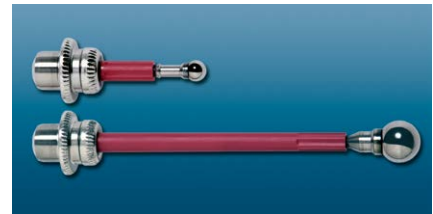
Accessories

Short probe tip Ø 4 mm

Order No. 80.362.00

Long probe tip Ø 8 mm

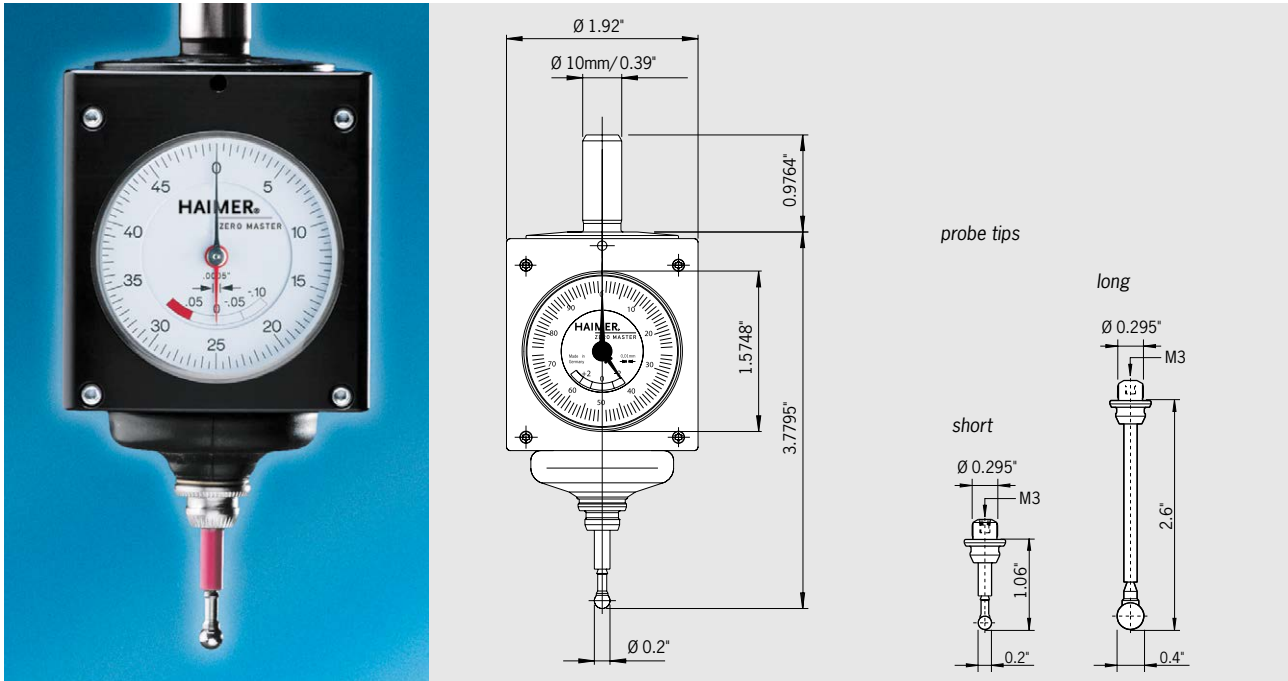
Order No. 80.363.00



Short probe tip Ø 4 mm
Long probe tip Ø 8 mm

Technical data subject to change without prior notice

ZERO MASTER – UNIVERSAL MINI 3D-SENSOR INCH



Zero Master INCH

Small but powerful

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/0.3937 inch.

Accordingly, it can be also used on machines with ISO 30 or small HSK spindles.

The housing is shortened and does not protrude far from the spindle so even large work pieces can be measured. The Zero Master can be read on its small analog dial gauge.

The Zero Master can be equipped with a short (ball diam. 0.2 inch) and a long (ball diam. 0.4 inch) probe tip. Naturally, the probe tips are compatible with all other HAIMER 3D-Sensors.

Please take note:

The given measuring precision of 0.0004" only applies if the original HAIMER probe tips are used.

– IP67 waterproof

Technical details

Zero Master with clamping shank Ø 0.39" including short probe tip Ø 0.2"

Accuracy	0.0004"
Length without clamping shank	3.7795"

Order No. 80.960.00.IN

Accessories

Short probe tip Length 1" – ball tip Ø 0.2"

Order No. 80.365.20

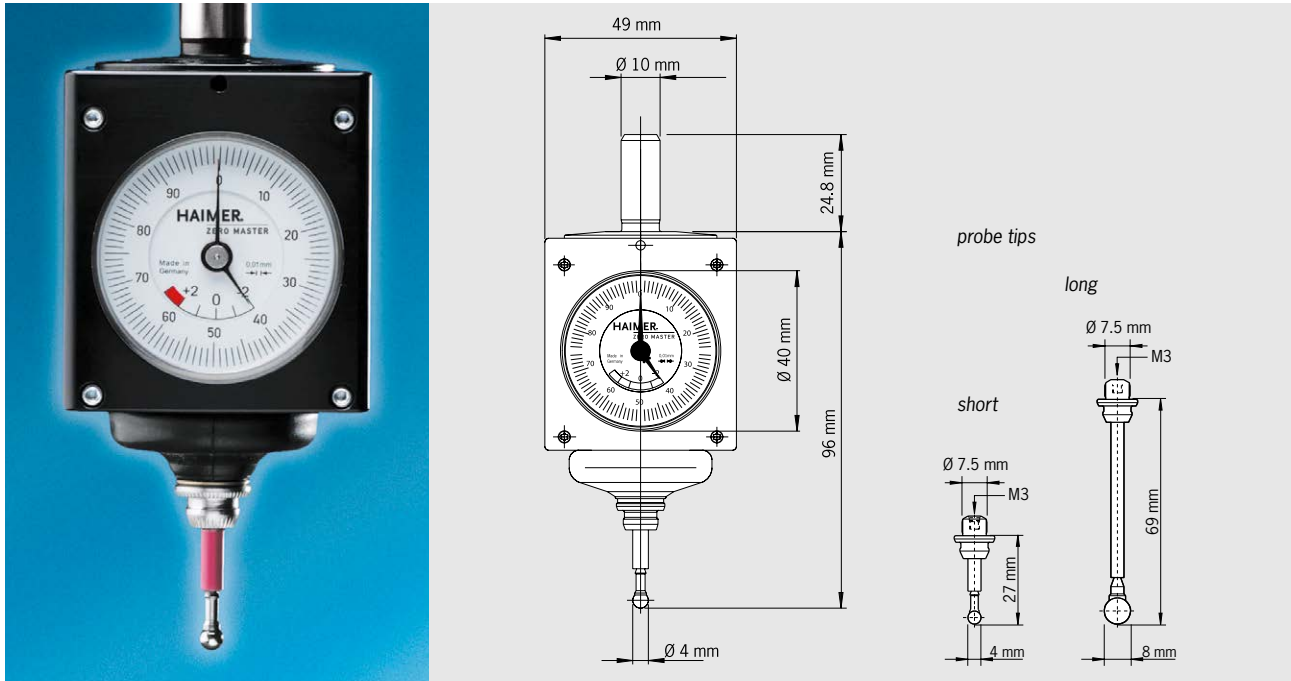
Long probe tip length Length 2.6" – ball tip Ø 0.4"

Order No. 80.365.30



Short probe tip Ø 0.2"
Long probe tip Ø 0.4"

ZERO MASTER – UNIVERSAL MINI 3D-SENSOR METRIC



Zero Master METRIC

Small but powerful

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 10 mm. Accordingly, it can be also used on machines with ISO 30 or small HSK spindles.

The housing is shortened and does not protrude far from the spindle so even large work pieces can be measured. The Zero Master can be read on its 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. Naturally, the probe tips are compatible with 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.

– IP67 waterproof

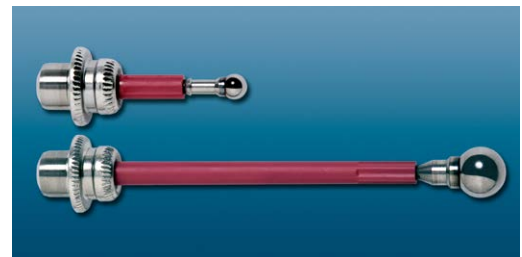
Technical details

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

Accuracy	0.01 mm
Length without clamping shank	96 mm
Order No. 80.960.00	

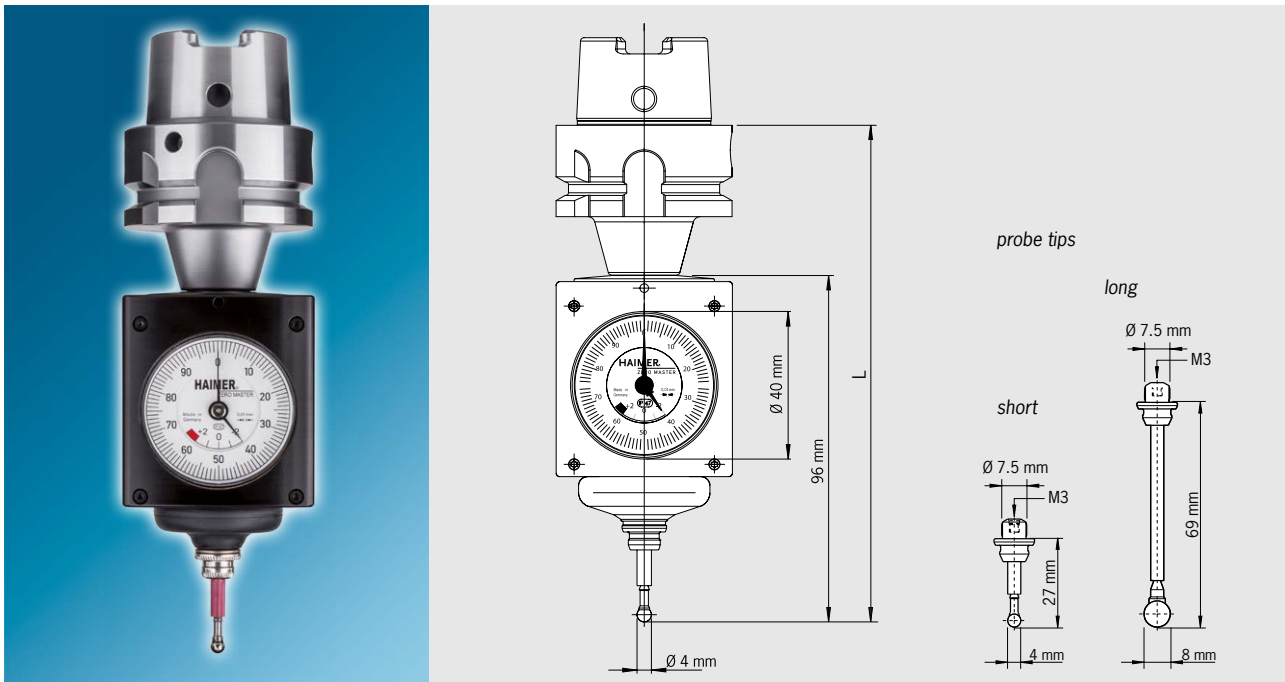
Accessories

Short probe tip Ø 4 mm
Order No. 80.362.00
Long probe tip Ø 8 mm
Order No. 80.363.00



Short probe tip Ø 4 mm
Long probe tip Ø 8 mm

ZERO MASTER – UNIVERSAL MINI 3D-SENSOR WITH INTEGRATED SHORT ADAPTER



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

Easily measures the workpiece while taking up less space.

Version:

- With integrated short adapter available in taper sizes SK30, BT30, HSK-A32/40/50/63, HSK-E25/32/40/50
- Manual runout adjustment no longer necessary! Preset runout accuracy at the probe tip of 0.01 mm
- Measuring accuracy: 0.01 mm
- Short and long probe tips available
- No re-calibration of the sensor is needed
- Increased overrun distance with preset probe tip breaking points to ensure a long life of the sensor
- IP 67 waterproof

Application:

- For small Milling and EDM machines (insulated probe)
- For workpiece-reset and length measuring
- Approach from any direction (X-, Y-, Z-axis)

Technical details

Zero Master with integrated short adapter including short probe tip Ø 4 mm

Accuracy	0.01 mm	
Article	Order No.	L [mm]
3D-Sensor Zero Master with short adapter HSK-E25	80.963.E25	121.6
3D-Sensor Zero Master with short adapter HSK-E32	80.963.E32	131.6
3D-Sensor Zero Master with short adapter HSK-E40	80.963.E40	131.6
3D-Sensor Zero Master with short adapter HSK-E50	80.963.E50	138.6
3D-Sensor Zero Master with short adapter HSK-A32	80.963.A32	131.6
3D-Sensor Zero Master with short adapter HSK-A40	80.963.A40	131.6
3D-Sensor Zero Master with short adapter HSK-A50	80.963.A50	138.6
3D-Sensor Zero Master with short adapter HSK-A63	80.963.A63	142.1
3D-Sensor Zero Master with short adapter SK30	80.964.30	131.2
3D-Sensor Zero Master with short adapter BT30	80.965.30	130.7

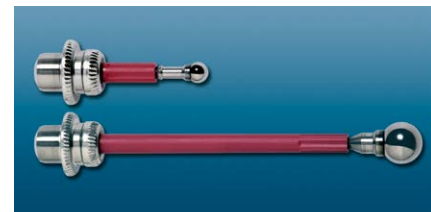
Accessories

Short probe tip Ø 4 mm

Order No. 80.362.00

Long probe tip Ø 8 mm

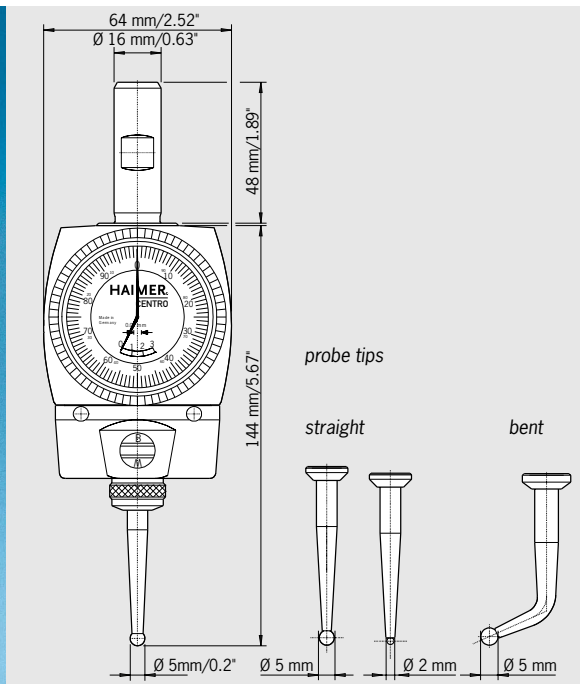
Order No. 80.363.00



Short probe tip Ø 4 mm
Long probe tip Ø 8 mm

Technical data subject to change without prior notice

CENTRO
THE MOST ROBUST COAXIAL INDICATOR AVAILABLE ON THE MARKET



CENTRO quickly locates the centers of bores and shafts.

Center bores and arbors quickly and precisely

The Centro is clamped in a tool holder and positioned close to the desired bore or shaft. Once the probe tip is adjusted, it slides around the circumference of the bore or shaft.

Dial gauge always in field of vision

The Centro rotates along the bore or shaft at 150 rpm. Its movement is transferred to the dial gauge. By using an antenna the Centro remains stationary and always stays in your field of vision.

By using the Centro you find the center of bores or shafts – reliably

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

Further advantages:

- Check the run-out of the work piece to the spindle
- Runout errors of the spindle and tool holder are canceled out
- >> No adjustment necessary
- Even from longer distances, the large size of the dial gauge is easy to see
- Replaceable probes

Technical details

Centro with straight probe tip, Ø 5 mm/0.2", clamping shank Ø 16 mm/0.63"

Centering accuracy	0.003 mm/0.0001"
Max. rotation speed	150 RPM
Measuring range interior diameter (drill hole)	3-125 mm/0.1"-5"
Measuring range exterior diameter (shaft, with probe tip bent)	0-125 mm/0-5"

Order No. 80.300.00.FHN

Accessories

Probe tip straight with diameter of ball 5 mm/0.2"

Order No. 80.301.00

Probe tip bent with diameter of ball 5 mm/0.2"

Order No. 80.302.00

Probe tip straight with diameter of ball 2 mm/0.08", for small bores

Order No. 80.303.00

Recommended HAIMER tool holders

for Centro	Order No.
CAT 40	40.720.25
CAT 50	50.720.25
Please order ER collet along with above holders:	
ER 25 - 16 mm collet	81.250.16
BT 40	40.500.16
BT 50	50.500.16
SK 40	40.300.16
SK 50	50.300.16
HSK-A 40	A40.000.16
HSK-E 40	E40.000.16
HSK-A 50	A50.000.16
HSK-E 50	E50.000.16
HSK-A 63	A63.000.16
HSK-A 100	A10.000.16

Technical data subject to change without prior notice

THE MORE HAIMER, THE BETTER.



Passion for precision

HAIMER is a German, medium-sized family business. We develop and produce innovative ultra-precision products, primarily in the field of tool clamping. As the market leader in Germany, the continuous technological innovations of our products is very important to us and for this reason we annually invest 8–10% in research and development. With this budget, we can afford our own product development team, which constantly works on practical innovations and continual product improvements. 13 sales and service subsidiaries guarantee the first class HAIMER service and specific customer orientated product consultation worldwide on the spot. However, all products are solely produced in Igenhausen, Germany. In accordance with our corporate philosophy: **Quality Wins.**

Our new North American Headquarters

Located in the Chicago suburb of Villa Park, HAIMER's new 25,000 ft² headquarters is designed and built to help facilitate the company's growth in the North American marketplace. It features state-of-the-art training facilities able to accommodate up to sixty people. The expanded showroom includes a CNC machining center for demo cuts, shrink fit and balancing machines under power, and HAIMER's complete range of tool holding solutions on display. Both the training facilities and showroom are wired with HD cameras for live and web-based presentations. From our new facility, HAIMER will also provide balance inspection, precision balancing and data chipping services for tool holders from HAIMER or any other manufacturer. Future service offerings will include end mill regrinding as well as Safe-Lock groove modifications.



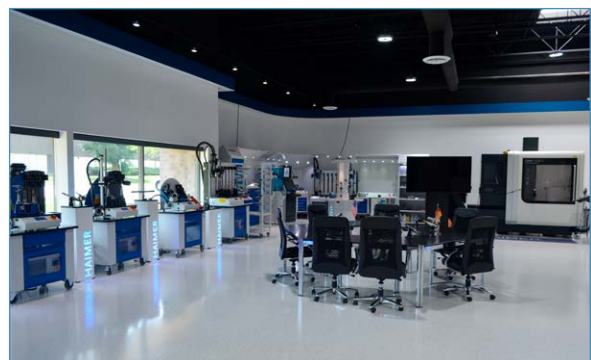
HAIMER USA – Chicago, Illinois



HAIMER USA's Competency Center features a 60-seat Training Room



HAIMER's 25,000 ft² North American Headquarters includes a spacious customer lounge



HAIMER USA's new Showroom is equipped with the latest cutting edge technologies



Haimer USA, LLC | 134 E. Hill Street | Villa Park, IL 60181 | USA

Phone 1-866-837-3265 | Fax (630) 833-1507 | Mail: haimer@haimer-usa.com | www.haimer-usa.com

Haimer Mexico | Anillo Vial Fray Junipero Serra No. 16950 Bodega 2 | Micro Parque Industrial Sotavento

Querétaro., QRO. C.P 76127 | Mexico | Phone +442-243-09 50 | www.haimer-mexico.com | haimer@haimermx.com