PHYNIX

PHYNIX PROBES
THE HEART OF OUR
COATING THICKNESS GAUGES

COATING THICKNESS MEASUREMENT · POROSITY DETECTION
WALL THICKNESS MEASUREMENT · SURFACE ROUGHNESS MEASUREMENT
HARDNESS MEASUREMENT · GLOSS MEASUREMENT · CROSS HATCH CUTTING

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PROBE OVERVIEW

The various measurement tasks of our customers are reflected in our comprehensive probe program. Innovations and ongoing further developments provide optimal results with high accuracy for a wide range of industrial applications.

To determine the optimal probe the following aspects need to be considered:

+ Material combination of layer and base material
+ Thickness of the layer and of the base material
+ Dimensions of the measurement object
+ Surface texture of the object

Your application decides on the optimal combination of probe and gauge.

+ **F-type probes (ferromagnetic)**
  Magnetic-inductive method (according to DIN EN ISO 2808/2178 and ASTM B499) on ferromagnetic base materials, such as iron and steel.

+ **N-type probes (non-ferromagnetic)**
  Eddy current method (according to DIN EN ISO 2808/2360 and ASTM D1400) on non-magnetic, metal based materials, such as aluminum, zinc, copper, etc.

+ **FN-type probes (combination probes)**
  Suitable for magnetic and non-magnetic base materials such as iron / steel and non-ferrous metals. The appropriate measurement method for each base material is automatically activated and is indicated in the display.

STANDARD PROBES

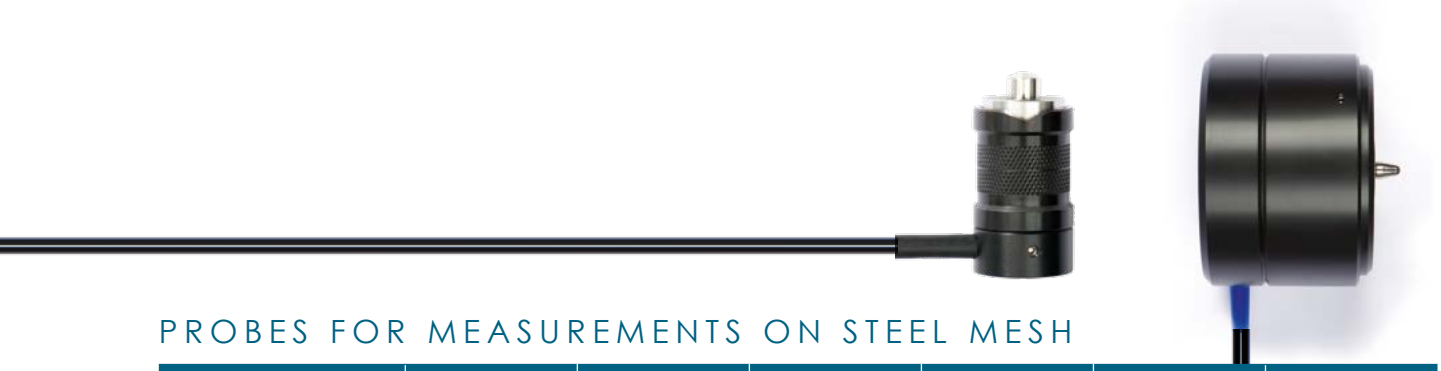
Technical data		FN 0.2	FN 1.5	F 1.5	N 1.5
Measurement range		0–200 µm on steel/iron and non-ferr. metals	0–1,500 µm on steel/iron and non-ferr. metals	0–1,500 µm on steel/iron	0–1,500 µm on non-ferrous metals
Accuracy	with works calibration	+/– 2.5 µm or 2.5 % (whichever is greater)	+/– 3 µm or 3 % (whichever is greater)		
	with zero calibration	+/– (0.7 µm + 1.5 %)	+/– (1 µm + 2 %)		
	with foil calibration	+/– (0.7 µm + 1.0 %)	+/– (1 µm + 1 %)		
Acid-resistant pole-tip		—	optional	—	optional
Temperature range		0 °C to 60 °C			
Dimensions		Ø 14 mm x 83 mm			
Weight		appr. 70 g			
Hot measurement foot		–15 °C to 150 °C			
High temperature foot		—	–15 °C to 300 °C (0 bis 1,000 µm)		

hot measurement foot

high temperature foot

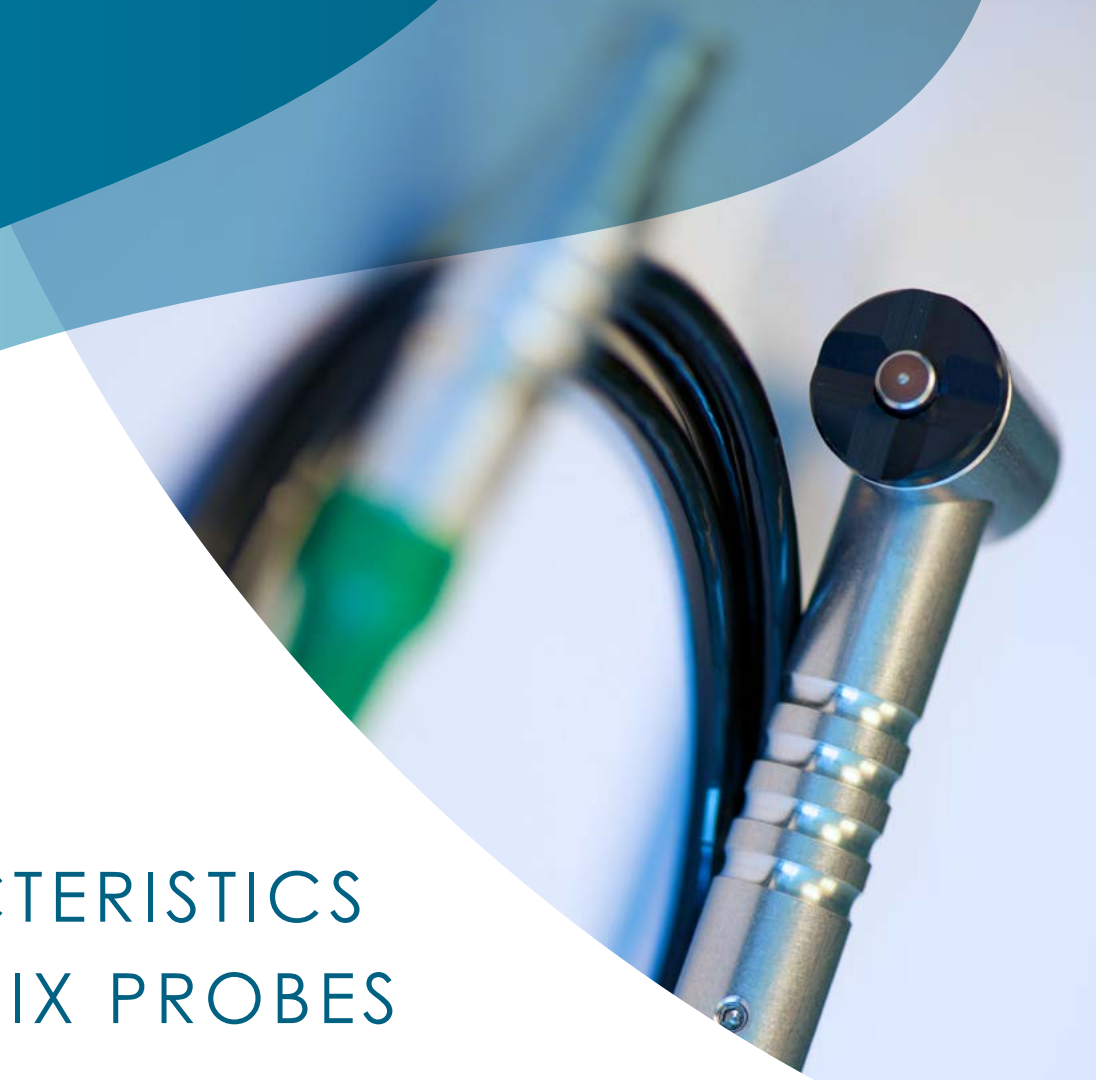
SPECIAL PROBES

Technical data		FN 1.5R F 1.5R	FN 1.5/90° (for pipes and tubes)	FN 3.5 F 3.5	F 10	F 20
Measurement range		0–1,500 µm	0–1,500 µm	0–3,500 µm (F) 0–3,000 µm (N)	0–10 mm	0–20 mm
Accuracy	with works calibration	+/– 3 µm or 3 % (whichever is greater)	+/– 3 µm or 3 % (whichever is greater)	+/– 5 µm or 3 % (whichever is greater)	+/– 10 µm or 3 % (whichever is greater)	n. a.
	with zero calibration	+/– (1 µm + 2 %)	+/– (1 µm + 2 %)	+/– (2 µm + 2 %)	+/– (5 µm + 2 %)	+/– (10 µm + 4 %)
	with foil calibration	+/– (1 µm + 1 %)	+/– (1 µm + 1 %)	+/– (2 µm + 1 %)	+/– (3 µm + 1 %)	+/– (10 µm + 2 %)
Temperature range		0 °C to 60 °C				
Dimensions		Ø 16 mm x 24 mm x 62 mm	8 mm x 12 mm x 180 mm	Ø 25 mm x 47 mm	Ø 25 mm x 47 mm	Ø 50 mm x 57 mm
Weight		appr. 90 g	appr. 85 g	appr. 105 g	appr. 85 g	appr. 200 g



PROBES FOR MEASUREMENTS ON STEEL MESH

Technical data		F 10-1	F 10-2	F 10-3	F 10-CP	F 30-T	F 30-C
Application area		tyres					conveyor belts
		side wall	tread inside	bead	sidewall thickness	tread outside	
Measurement range		0–6.5 mm			0–10 mm	0–30 mm	0–20 mm
Accuracy	with works calibration	n. a.					
	with zero calibration	+/– (0.1 mm + 5 %)			+/– (0.05 mm + 5 %)	+/– (0.2 mm + 5 %)	+/– (0.2 mm + 5 %)
	with foil calibration	+/– (0.1 mm + 3 %)			+/– (0.05 mm + 3 %)	+/– (0.2 mm + 3 %)	+/– (0.2 mm + 3 %)
Temperature range		0 °C bis 60 °C					
Dimensions		Ø 25 mm x 47 mm				Ø 75 mm x 55 mm	
Weight		appr. 85 g				appr. 400 g	



CHARACTERISTICS OF PHYNIX PROBES

+ **Durability**
  PHYNIX probes are extremely robust and resistant to wear and have a nearly unlimited lifespan.

+ **Made in Germany**
  All probes are designed and manufactured in our production site in Cologne under the highest quality standards.

+ **Curvature compensation**
  The different calibration methods allow measurement on highly curved surfaces by a simple calibration procedure.

+ **Works calibration**
  Each probe passes through an individual, internal calibration to ensure maximum accuracy.

+ **Switch on and measure**
  In most cases, a measurement without additional calibration is possible.

PHYNIX probes are manufactured under the highest quality standards in Germany only.

Depending on the application, a probe must meet very specific requirements in order to achieve an optimal result with high accuracy.

That's why we offer probes for different base materials such as iron and steel and non-ferrous metals, different layer thicknesses, different measurement locations or measuring area sizes.

For each measurement application, the optimal probe! Our engineers can also develop an optimal probe for your specific needs – contact us!

www.phynix.com

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