

alpha.ti 5.0



strip thickness measurement

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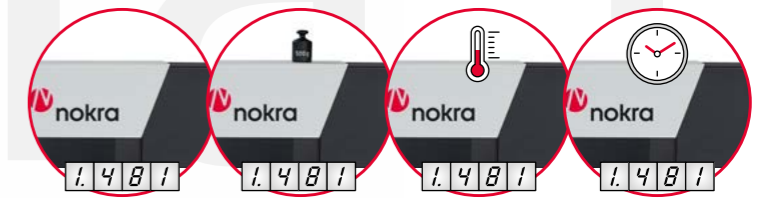
laser based strip thickness measurement offering a measurement depth of up to 2100 mm



product versions C-frame measuring depths 500 / 1000 / 1500 / 2100 mm

The deformation sensor continuously records with the scanning frequency of the triangulation sensors the distance between the two C-frames within 0.5 µm.

Any change is immediately compensated for automatically. This allows C-frame designs with a measuring depth of more than 2 meters with consistent measuring accuracy.



thickness value with real-time deformation sensor
no influence of thermo-mechanical drift effects over long periods

standard scope of supply:

- automatical drift compensation through real-time deformation sensor
- automatic exposure time and laser power control
- temperature independent sensor linearity
- prepared for sensor window air knives

- standard interfaces Profibus/Profinet, TCP/IP, UDP
- prepared for analogue signal interface
- remote access via internet

- E-cabinet (1000 x 600 x 400 mm h x w x d)
- 15 m cable set (max. 80 m)
- signal inputs for safety-door and E-stop

- user interface in national language
- sample measurement mode
- automatic thickness reference unit using standard gauge blocks
- automatic gauge monitoring according to MSA procedure 1
- measuring system capable



continuous measurement data acquisition with high sampling rate and resolution



tooling-free maintenance accesses



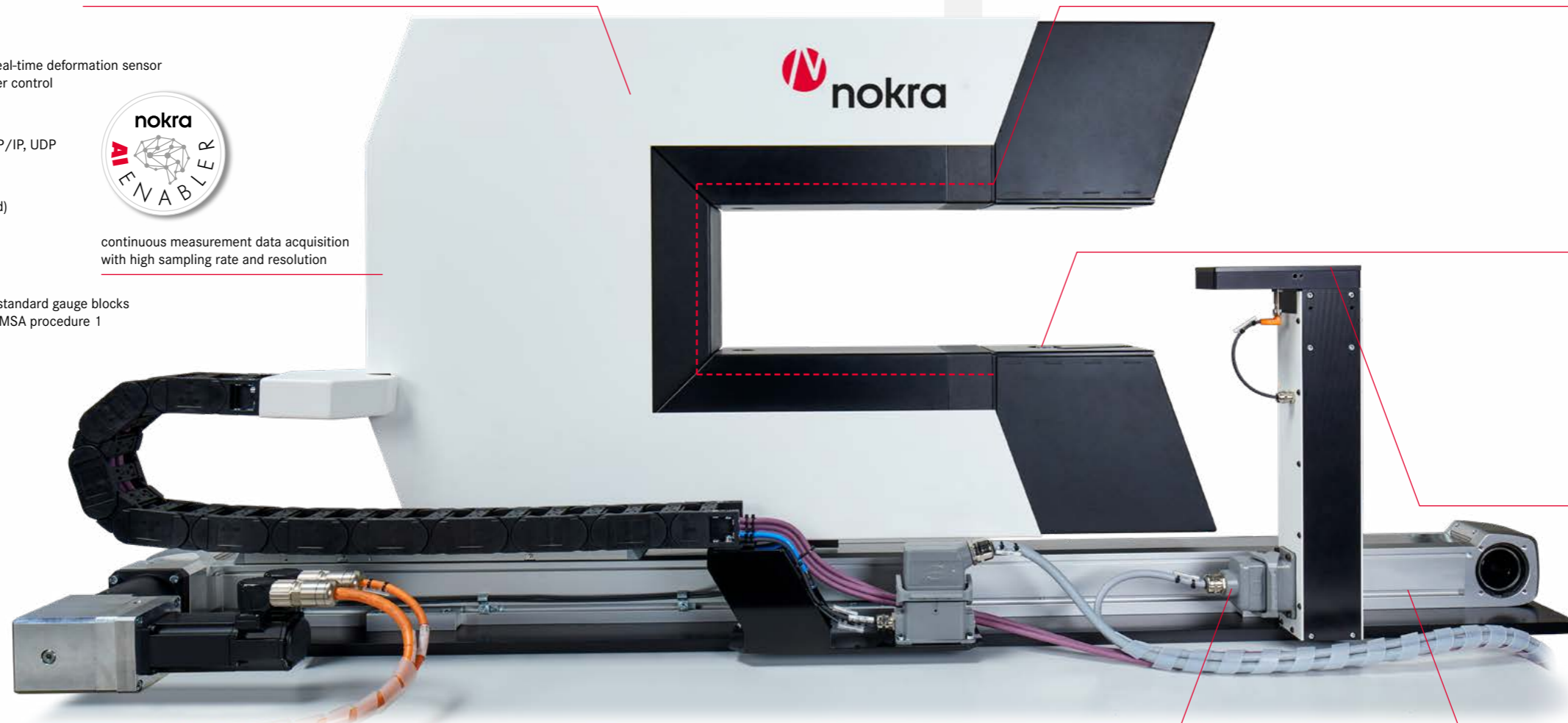
automatic, three-stage reference unit with interchangeable standard gauge blocks



scalable linear guide with servo drive for precise traversing operation



robust and durable design



feature	C-frame alpha.ti 5.0-C-15	C-frame alpha.ti 5.0-C-25	C-frame alpha.ti 5.0-C-40
measurement principle		laser triangulation	
measurement window	15 mm	25 mm	40 mm
linearity	± 1.5 µm	± 2.5 µm	± 4 µm
resolution	0.24 µm	0.39 µm	0.62 µm
measurement frequency		max. 67 kHz	
integration time		0.5 µs - 1000 ms	
laser class		2 (no laser safety officer)	
laser wave length		660 nm (red)	

measurement spot	50 µm
laser life time (MTBF)	80000 h @ 20 °C
measurement depth from strip edge	500 / 1000 / 1500 / 2100 mm
c-frame width	144 mm
traversing speed	0.25 m/s
material type	all non-transparent materials, surface and alloy independent
material speed	> 0 m/min; ≤ 3000 m/min
material temperature	≤ 100 °C, others with active tempering

Your partner

nokra Optische Prüftechnik und Automation GmbH was founded in 1991 as a spin-off from Fraunhofer Institute for Laser Technology (ILT) and Fraunhofer Institute for Production Technology (IPT) in Aachen. As a medium-sized technology company we develop, produce and distribute laser based measurement devices for automatic inline inspection of geometric properties

of products in the metal, automotive and glass industry. Products to be inspected are rolled products (coils, plates, profiles) in the steel, aluminum and non-ferrous metal industry, large-diameter pipes as well as vehicle components, e.g. camshafts and crankshafts, axle supports, automotive glazing.



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