nokra

alpha.ti 5.0

strip thickness measurement

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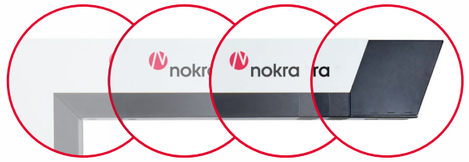
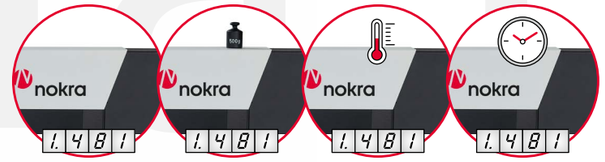
laser based strip thickness measurement offering a measurement depth of up to 2100 mm



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

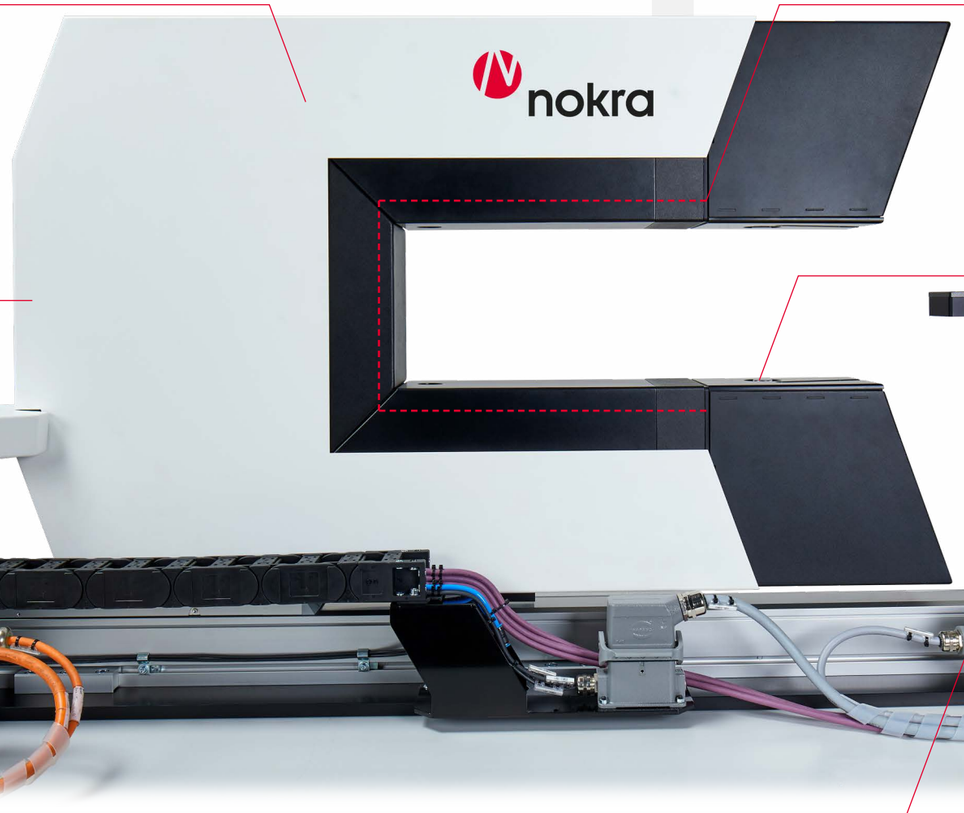
standard scope of supply:
automatical drift compensation through real-time deformation sensor
automatical exposure time and laser power control
temperature independent sensor linearity
prepared for sensor window air knifes

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 B x T)
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

robust and durable design

scalable linear guide with servo drive
for precise traversing operation

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.

nokra
Optische Prüftechnik und Automation GmbH

Max-Planck-Straße 12
52499 Baesweiler · Germany
Phone +49 2401 6077-0
Fax +49 2401 6077-11
www.nokra.de · info@nokra.de

nokra Inc. (USA)
423 South Eighth Court
Saint Charles, IL 60174
Fax +1 630 485-6133
info@nokra.us