

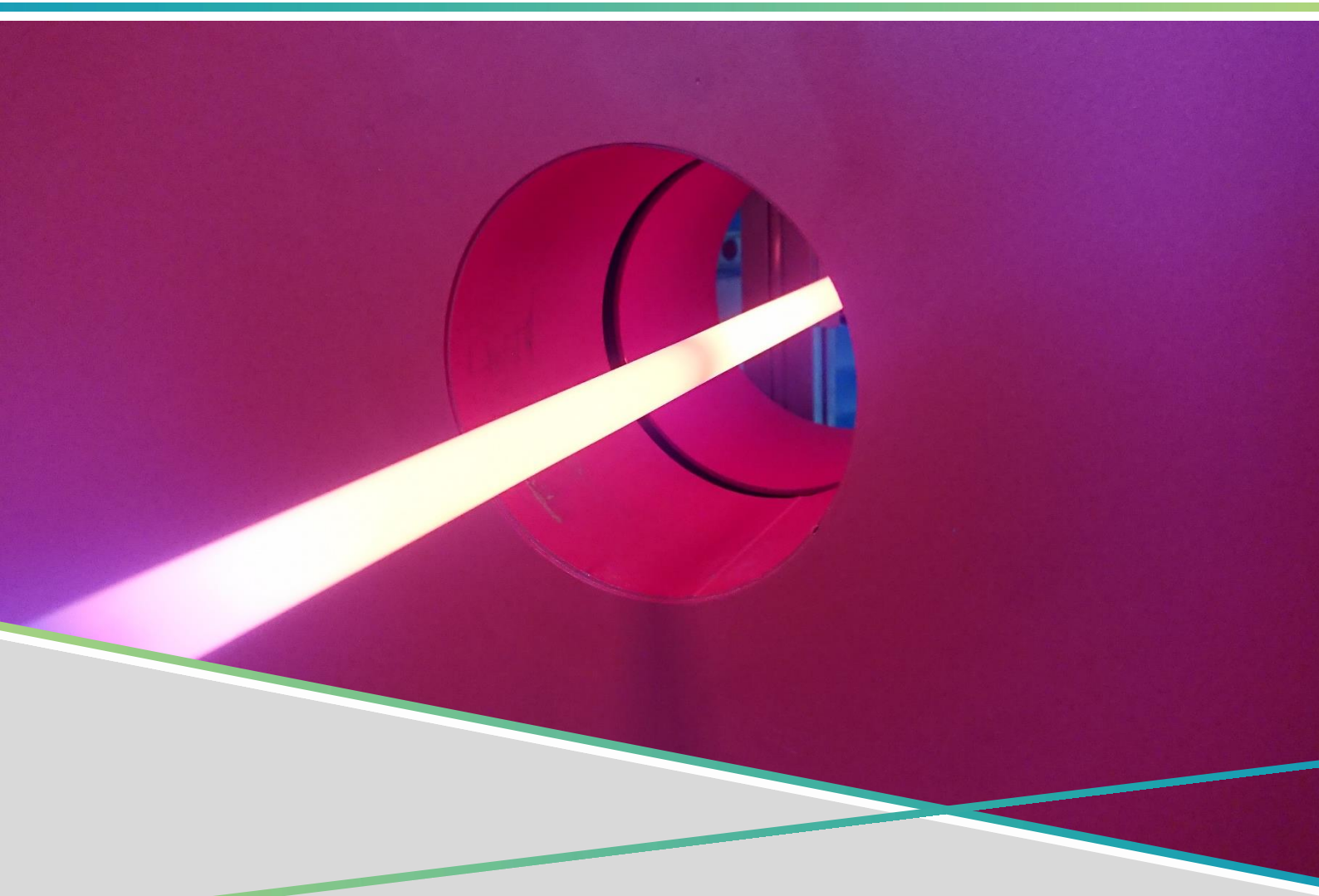


HEXAGON

NEXT**SENSE**

ATON
Data Sheet

ATON product family



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ATON



1 APPLICATION

For rolling and drawing mills the stationary ATON measurement systems offer an affordable way to track the production of wires, rods, bars and tubes. Diameter and ovality of those round profiles are measured with shadow sensor technology.

The ATON product family consists of the ATON Wire, ATON Bar and ATON Rod. Depending on the specific product that needs to be measured, each of these ATON systems offers further sub-variants, e.g., regarding the number of shadow sensor axes.

Use cases for the ATON product family include:


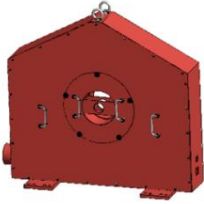
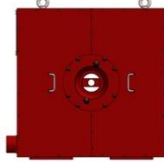
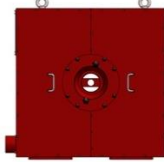
- Quality inspection at final stand for hot rolling mills
- Process optimization at intermediate stands in hot rolling mills
- Wire drawing (in cold, warm or hot environment)
- Cold rolling mills (also with wires having higher temperature)
- Peeling, grinding and polishing of bars, wires and tubes (also in warmer environment)
- Continuous wire annealing and pickling in drawing process (also with wires having a higher temperature)
- Jacketing by plastics extrusion for tubes (also with plastic still warm)
- Hydraulic Extrusion in semi-hot stage
- Continuous casting/rolling of copper rods





All ATON systems are Industry 4.0 ready and can come with a Level 2 interface for remote control and summary reporting on the plant network. Other sensor data like material speed and temperature can be connected and are then used for data representation and analysis.

To meet challenging return-of-investment requirements the ATON systems offer high accuracy at a reasonable price. The integrated highly efficient cooling and heating system in ATON gauges extends the temperature usage range to -10 °C – 50 °C at minimal energy cost. ATON systems only use a minimal footprint because of the lack of computer cabinets and external cooling units.

Benefit from enhanced product quality and higher throughput in your production and increase yield by choosing an ATON system. Choosing a sophisticated dimensional measurement system allows for maintaining dimensional accuracy over the entire coil length and enables you to take immediate corrective actions after the detection of deviations.

2 PRODUCT VARIANTS

	Product variants			
	ATON Wire 50 Product. ID: SAW52x	ATON Wire 90 Product ID: SAW92	ATON Rod 40 Product ID: SAR4x	ATON Rod 50 Product ID: SAR5x
				
Accuracy	5 µm @ 20 mm ø	7 µm @ 50 mm ø	6 µm @ 10 mm ø	8 µm @ 25 mm ø
Measurement range	50 mm (1.97 inch)	90 mm (3.54 inch)	40 mm (1.57 inch)	50 mm (1.97 inch)
No. of sensor axes	2	2	2, 3, 4 or 6	2, 3, 4 or 6
Measuring diameter and ovality	✓	✓	✓	✓
Detection of roll defects (e.g., roll shift, over and under fill)			✓	✓
Measuring rebar structures			✓	✓
Measure trilobed rounds			✓	✓
Material condition	Cold <40°C (104 °F) Warm <200 °C (392 °F) Hot <1200 °C (2200 °F)	Hot <1200 °C (2200 °F)	Hot <1200 °C (2200 °F)	Hot <1200 °C (2200 °F)
Environment condition	Clean (without Air purge) <40 °C (104 °F) (without Cooler) Dirty (with Air purge) <50 °C (122 °F) (with Cooler)	Dirty <50 °C (122 °F) (with Cooler and Air purge)	Dirty <50 °C (122 °F) (with Cooler and Air purge)	Dirty <50 °C (122 °F) (with Cooler and Air purge)
Dimensions				
– Width	580 mm (24 in)	860 mm (34 in)	890 mm (35 in)	890 mm (35 in)
– Height	580 mm (24 in)	950 mm (37 in)	890 mm (35 in)	890 mm (35 in)
– Depth	152 mm (6 in)	180 mm (7 in)	286 mm (11 in)	286 mm (11 in)
– Hole diameter	100 mm (4 in)	180 mm (7 in)	110 mm (4.3 in)	110 mm (4.3 in)
– Pass line	290 mm (11.5 in)	425 mm (17 in)	460 mm (18 in)	460 mm (18 in)

	Product variants			
	ATON Rod 70 Product ID: SAR7x	ATON Rod 90 Product ID: SAR9x	ATON Bar 120 Product ID: SAB12x	ATON Bar 150 Product ID: SAB15x
				
Accuracy	8 µm @ 35 mm ø	12 µm @ 45 mm ø	15 µm @ 60 mm ø	25 µm @ 75 mm ø
Measurement range	70 mm (2.75 inch)	70 mm (2.75 inch)	120 mm (4.72 inch)	150 mm (5.9 inch)
No. of sensor axes	2, 3, 4 or 6	2, 3, 4 or 6	2, 3, 4 or 6	2, 3, 4 or 6
Measuring diameter and ovality	✓	✓	✓	✓
Detection of roll defects (e.g., roll shift, over and under fill)	✓	✓	✓	✓
Measuring rebar structures	✓	✓		
Measure trilobed rounds	✓	✓	✓	✓
Material condition	Hot <1200 °C (2200 °F)	Hot <1200 °C (2200 °F)	Hot <1200 °C (2200 °F)	Hot <1200 °C (2200 °F)
Environment condition	Dirty <50 °C (122 °F) (with Cooler and Air purge)	Dirty <50 °C (122 °F) (with Cooler and Air purge)	Dirty <50 °C (with Cooler and Air purge)	Dirty <50 °C (with Cooler and Air purge)
Dimensions				
– Width	1050 mm (41 in)	1050 mm (41 in)	1900 mm (75 in)	1900 mm (75 in)
– Height	1015 mm (40 in)	1015 mm (40 in)	1715 mm (67.5 in)	1715 mm (67.5 in)
– Depth	282 mm (11 in)	282 mm (11 in)	287 mm (11 in)	287 mm (11 in)
– Hole diameter	195 mm (7.7 in)	195 mm (7.7 in)	350 mm (13.8 in)	350 mm (13.8 in)
– Pass line	530 mm (21 in)	530 mm (21 in)	760 mm (30 in)	760 mm (30 in)

3 SOFTWARE



ATON software suite offers an operator display of the currently measured billet and the retrieval of dimensional data of the last 4000 shifts in an SQL database. ATON gauges can act as a web application server to access operator or retrieval screens and the measurement database.



4 SCOPE OF SUPPLY & SERVICES

Each system consists of 4 parts: the frame, the connection box, the PC and a blower box (except for ATON Wire Cold). The frame includes 2 to 6 laser sensors, an optional pyrometer and active cooling/heating.

Frame, blower and connection box should be positioned within a 10 m vicinity. External speed and start/stop signals are connected to the connection box.

Each frame has its own connection box. Up to 4 frames can be connected through their connection boxes to one Terminal PC.



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