Metso IQ Scanner

Precise MD and CD controls require a solid foundation of accurate and stable scanning paper quality measurements. Metso IQ Scanner is a distortion-free platform for Metso IQ sensors, providing fast, high resolution sheet quality profiles from edge to edge. A solid construction plus built-in intelligence and diagnostics ensure trouble-free operation year after year.

Benefits to the papermaker

- Accurate scan averages and CD profiles from the very first scan
- Operates reliably, year after year for maximum on control performance
- Selectable intelligent scanning function is adaptive to suit the control situation and the process state
- Fast startups with minimum off-quality waste
- Edge to edge measurement for total profile control
- Accurate CD positioning for stable, precise CD controls
- Built in diagnostic feature will inform service personnel for periodic maintenance.

Scanner description

Metso IQ Scanner is designed to produce accurate and stable sheet quality measurements in the hot, humid and dusty environment of a paper machine. Unique stiffbeam design combines low scanner height with high mechanical stiffness.

A special floating bridge bearing design allows thermal expansion without beam distortion. Furthermore, the scanner beams are protected from radiant heat by reflective stainless steel shrouds. A filtered air purge system also ensures temperature stability and maintains internal cleanliness. Scanner beam temperatures are continuously monitored to warn of temperature gradients and to diagnose their causes.

In addition to performance diagnostics, the intelligence built into Metso IQ Scanner also allow its scanning speed, acceleration and deceleration rates to be adjusted and controlled to suit the CD and MD control requirements. Edge to edge scanning is controlled by precise sheet edge detectors.

The sensor platform employs a modular design, using standard sized slots for Metso IQ sensors. Sensors are therefore easily interchanged and new sensors can be easily added and plugged into IQ Bus, the common utility supply system.

These plug in services include closed circuit cooling water, compressed air, power and digital communications lines.

Metso IQ Scanner has been designed for minimal preventive maintenance. Typically, lubrication is required only once per year.

Sensor platforms are provided with air wipe and heater system for removing dust from the air gap and stabilizing air gap temperature. For very dusty applications optional offsheet air blast cleaning is available. For demanding scanner locations shroud TempCoat insulation option is available.

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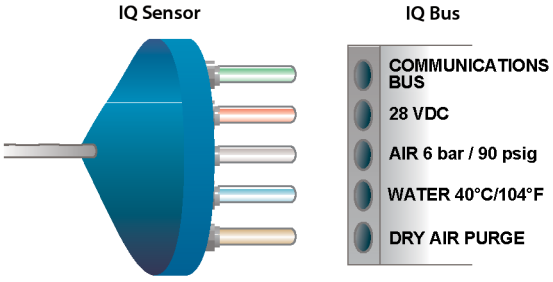
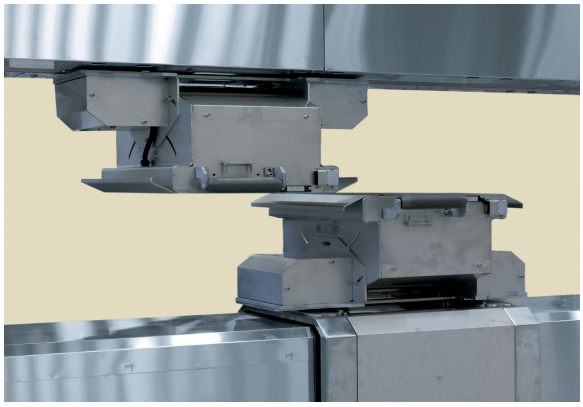
Technical features

- Designed to tolerate harsh environment conditions
- Noise immunity meets European EMC requirements
- Intelligence in the Metso IQ Scanner provides:
- Controllable scanning speed, acceleration, deceleration and torque limit
- Improved alarming capability
- High-resolution position sensor for accurate positioning
- Accurate optical sheet edge detection
- Unique stiffbeam construction provides high torsional stiffness
- AC-motor driven with inverter and low platform bearing friction for smooth and accurate scanning edge to edge
- Sealed construction with air flow tolerates harsh conditions
- Air distribution and temperature measurements inside frame ensures stability of beams
- Floating end installation (bridge bearing) allows thermal expansion without beam deflection
- High data transmission speed utilizing digital communication thru Ethernet or a multi-point bus provides a common infrastructure for all sensors
- Single switch head separation
- Controlled water cooling system to ensure optimal environment for all sensors
- Designed to minimize the maintenance required
- Lubrication period 1 year, alarm provided.

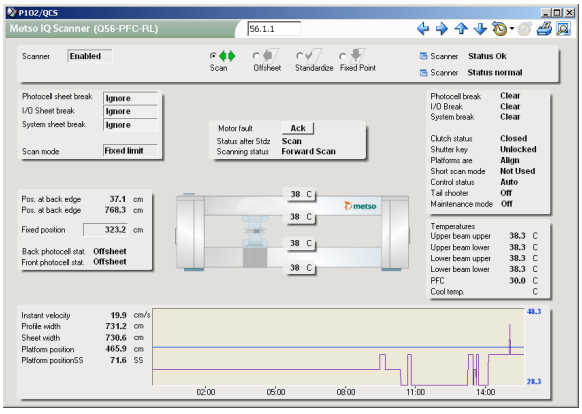


IQ Bus provides a common infrastructure for all sensors

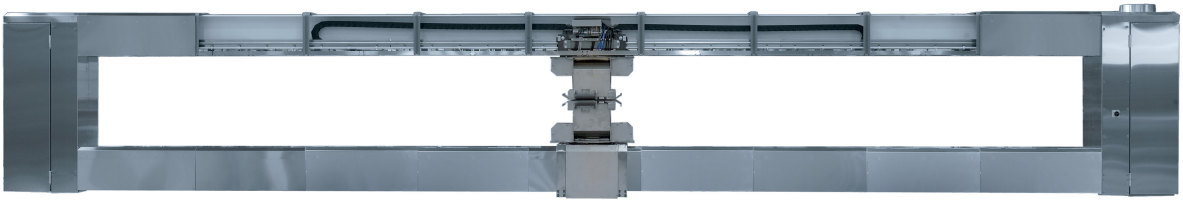
Metso IQ Scanner control panel



Platform separation system provides easy access to sensors.



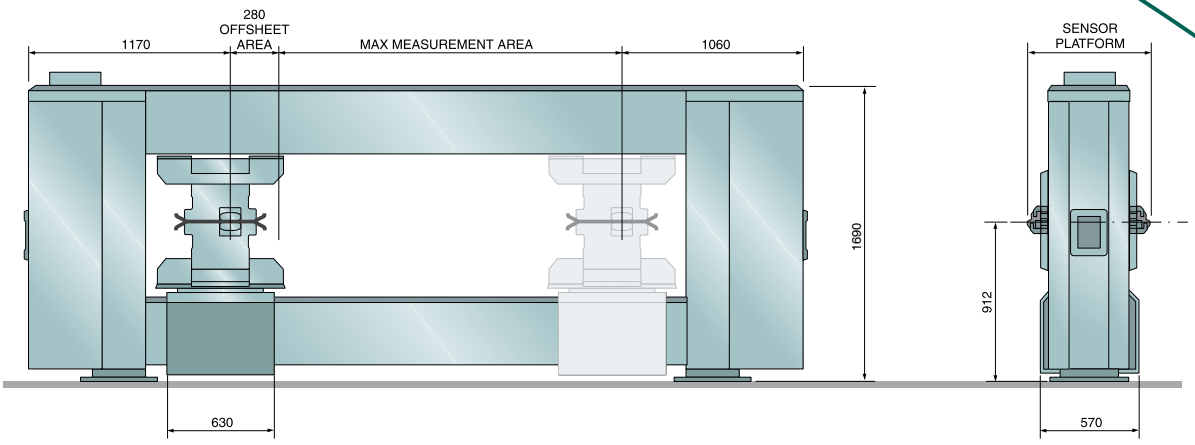
Metso IQ Scanner diagnostic picture



Dual cable track system separates electricity from water and air, and provides smooth scanning to both directions.

Stainless steel Metso IQ Scanner is designed for a mill environment.

Metso IQ Scanner main dimensions



Technical specifications

Scanning platform	Metso IQ Scanner
Scan speed	0...100 cm/sec
Platform positioning accuracy	< 1 mm
Pass-line angle	0...30 degrees *
Beam	350 x 300 mm stiffbeam construction
Frame coating	Epoxy over Al-pigmented epoxy primer
Carriage rails	25 mm stainless steel
Shroud material	AISI 304 stainless steel
Weight	1380 kg + 240 kg/m; 3067 lb. + 162 lb./ft
Dimensions	See scanner diagram
Power requirements	230 VAC, 50/60 Hz; 2.0 ... 7.0 kW
Air requirements	Instrument air 6 bar / 700 l/min (90 psi/25 cfm)
Cooling air requirements	Filtered cooling air 1.0 m^3/sec (2000 cu ft/min) **
Water requirements	Filtered mill water 5 l/min (1.3 gpm), max 30 °C (90 °F)
Environmental conditions	Max. temp. 70 °C/158 °F, 10-95% RH, non-condensing ***

* Depending on platform, max 55 degrees
** Depending on environmental conditions
*** 100 °C/212 °F with TempCoat insulation

Sensor platform dimensions

In-line platforms	Tandem platforms
1 x 3 520 x 587 mm	2 x 3 900 x 587 mm
1 x 4 520 x 712 mm	2 x 4 900 x 712 mm
1 x 5 520 x 837 mm	2 x 5 900 x 837 mm
1 x 6 520 x 962 mm	
1 x 7 520 x 1087 mm	
1 x 8 520 x 1212 mm	

For more information, contact your local automation expert at Metso.
Product code: A418771...A418792
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