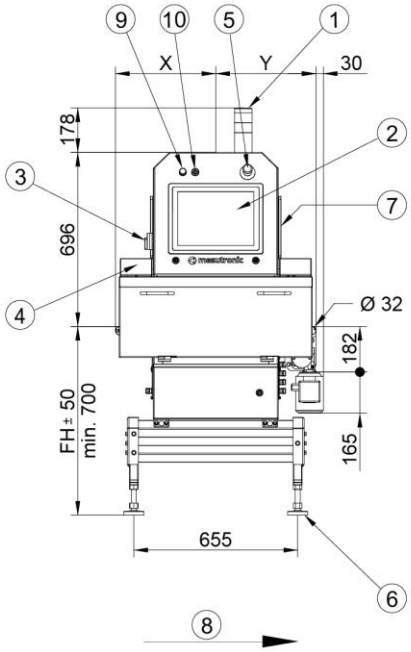
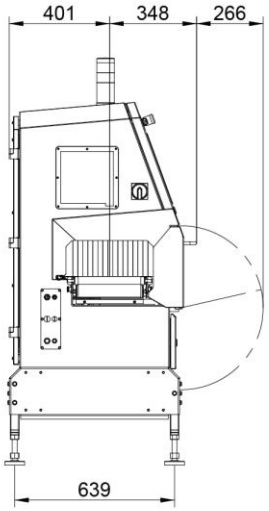
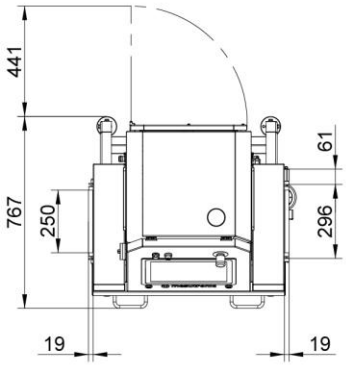
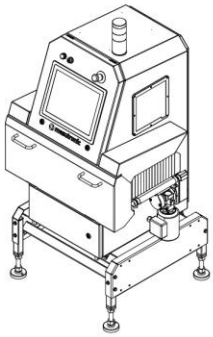
Dimensions without separation system









All dimensions in [mm]

1 Signal tower
2 Operating panel
3 Main switch
4 Radiation protection tunnel
5 Emergency off switch
6 Adjustable feet *(optional: swivel castors)*
7 Fan with filter *(optional: air conditioning unit)*
8 Conveying direction
9 USB port
10 Key switch (X-ray operation)

Conveying length (X, Y)									
X	400	500	600	700	800	900	1000	1100	1200 *
Y	400	500	600	700	800	900	1000	1100	1200 *

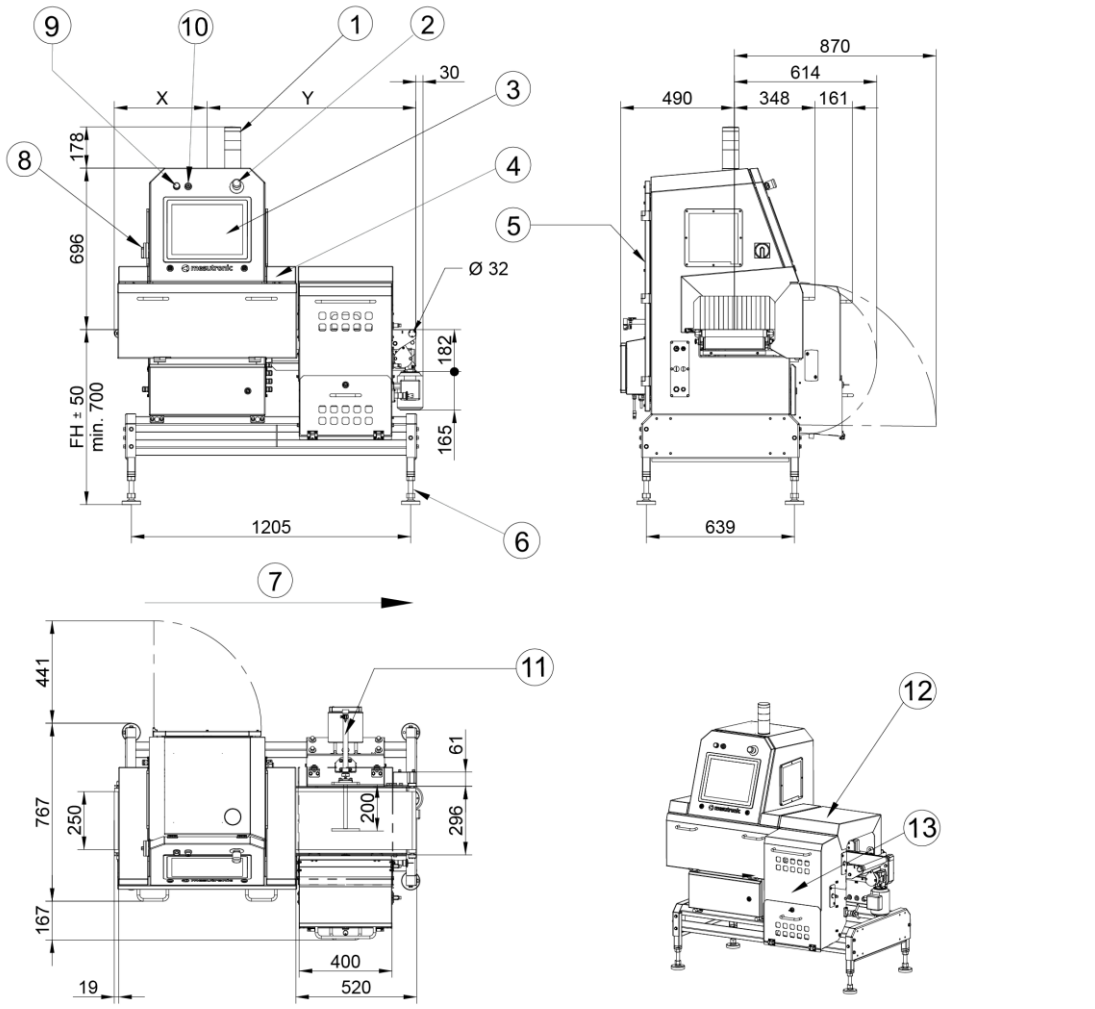
* Max. length – *longer lengths on request*

Conveying height (FH)													
Adjustable feet	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
Swivel castors	--	--	--	850	800	950	1000	1050	1100	1150	1200	1250	1300

Note: Deviating conveyor lengths and heights must be agreed with Mesutronic GmbH.

Version 001-01

Dimensions with separation system



All dimensions in [mm]

1 Signal tower
2 Emergency off switch
3 Operating panel
4 Radiation protection tunnel
5 Fan with filter *(optional: air conditioning unit)*
6 Adjustable feet *(optional: swivel castors)*
7 Conveying direction
8 Main switch
9 USB port
10 Key switch (X-ray operation)
11 *Optional: Separation system (pusher, blower nozzle)*
12 *Optional: Protective cover*
13 *Optional: Collecting container - folding*

Conveying length (X, Y)									
X	400	500	600	700	800	900	1000	1100	1200 *
Y	900	900	900	900	900	900	1000	1100	1200 *

* Max. length – *longer lengths on request*

Conveying height (FH)													
Adjustable feet	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
Swivel castors	--	--	--	850	800	950	1000	1050	1100	1150	1200	1250	1300

Note: Deviating conveyor lengths and heights must be agreed with Mesutronic GmbH.

Version 001-01

Device description

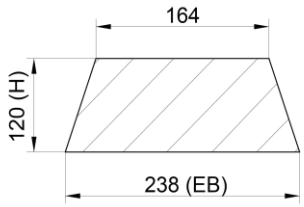
The **easySCOPE ST** is an X-ray inspection system for the reliable detection of metallic and non-metallic foreign objects such as glass, ceramics, stones or plastic.
Thanks to high-resolution image processing and intelligent evaluation algorithms, the system offers maximum detection accuracy and also enables quality checks such as weight and integrity checks.

The easySCOPE ST is designed for food contact in accordance with FDA regulations and is therefore ideal for demanding inspection tasks in the food, pharmaceutical and packaging industries.

Areas of application

The easySCOPE ST is suitable for a wide range of inspection tasks in the food and non-food sectors. The system is used in both sectors for reliable foreign body detection and quality control.
In the food sector, the easySCOPE ST can be used to inspect meat and sausage products, baked goods, dairy products, ready meals, snacks and fruit and vegetables, for example.
The system can also inspect cosmetic products, plastic parts, packaging, electronic components and textiles in the non-food sector.
Thanks to its ease of cleaning, the easySCOPE ST fulfils the highest hygiene requirements and is therefore ideal for use in sensitive production environments.

Product specification & ambient conditions

Inspection area	Product dimensions
	**Sensitive width (EB)** = 238 mm (on belt) – 0.617 x product height (H) **Examples of product dimensions (width x height):** 1) 231 x 10 mm 2) 219 x 30 mm 3) 207 x 50 mm 4) 194 x 70 mm 5) 182 x 90 mm 6) 164 x 120 mm

Product shape	Packaged products
Product length	Max. 200 mm 200 mm to max. 600 mm – *on request*
Product temperature	-10°C to +70°C
Min. product weight	10 g (application-specific; required for opening the Radiation protection curtains) – *Product test is recommended*
Max. product weight	Approx. 5 kg at 1.0 m/s; 10 kg at 0.5 m/s Conveying speed
Storage and transport conditions	-10°C to +60°C, 0 – 90 % (without condensation)
Operating conditions	Ambient temperature +2°C to 35°C (fan with filter) *Optional: +2°C to 45°C (with air conditioning unit)* Installation site: Interiors Degree of contamination: 2

The throughput capacity depends on product size, weight and conveying speed.
The detection accuracy is tested on a product-specific basis and depends on the material properties as well as the type, size and position of the foreign object. The detection quality remains consistently high even at high speeds.

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Functional characteristics

Detection & testing

Foreign object detection	Detection of metallic and non-metallic foreign objects (e.g. glass, Ceramics, stones) using intelligent evaluation algorithms.
Quality inspection	Object counting *Optional: Weight test, integrity test, clip test*
Area management	Edge masking, segmentation *Optional: Clip masking*
Lane evaluation	Single-lane evaluation

Operation & software

Operating system	Windows 11
Operator interface	15" Touch display 4:3; tempered glass, capacitive
Multilingual capability	Multilingual user interface

Product & user management

Product management	Storage and management of max. 500 products with individual parameters.
Log book / logging	Max. 100,000 entries
Automatic learning of products	User-friendly configuration of the detection settings with Wizards for product learning.
Event / product counter	Display on the display, exportable

Communication

Interfaces	Ethernet (LAN), USB
Communication protocols	OPC UA, XML

Security & system control

Functional test	Software-based detector test and monitoring of device functions
X-ray	Radiation measurement, signal plot
Password protection	Customised access and user management
Test function	Detector test, contamination level, self-diagnosis
Protected against power failure	Settings & data protected against power failure, exportable

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Device design

X-ray technology

X-ray tubes	Generator – max. 40-60 kV / 2-3 mA (120 W)
Receiver width	256 mm; *optional: 205 mm*
Receiver resolution	0.8 mm; *optional: 0.4 mm*
Radiation emission	< 0.5 µSv/h
Radiation protection curtain	Lead-free rubber matrix with reinforcement fabric (blue), FDA approved

Mechanical design

Surfaces / housing	Stainless steel AISI 304, sandblasted
Construction method	Housing with integrated front flap and conveyor belt
Weight	Approx. 225 kg
Protection class	Housing IP 55 (*optional IP 65*) / conveyor belt system IP 65

Conveyor technology

Belt width	250 mm
Roller diameter	Ø 32 mm
Belt material	TPU white (*optional: blue*), smooth, non-adhesive, without studs and Corrugated edge - EU / FDA / USDA-compliant
Belt change	Quick-release device for belt
Slide plate	Stainless steel AISI 304 – satin / polished
Conveying length	800 – 2400 mm (without separation) 1300 – 2400 mm (with separation) - *longer lengths on request* -
Conveying height	750 – 1250 mm ± 50 mm
Conveying direction	Horizontal: Left–right or right–left
Conveying speed	Up to 1.2 m/s – *adjustable for specific applications*

Drive and cooling

Motor	Worm gear motor
Cooling	Filter ventilation (optional: air conditioning unit)

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Electrical design

Operating voltage	230 V AC +/- 10%, 50/60 Hz; *optional: 115 V AC, 60 Hz*
Power consumption	Fan with filter: max. 500 W; *optional: Air conditioning unit: max. 750 W*
Mains cable	3 m cable with Schuko plug
Signalling elements	LED signal light: red, yellow; *optional: blue, green, acoustic*
Sensors	Entry light barrier, rotary encoder
Control components	PLC, safety controller, frequency converter
Switching inputs and switching outputs	Enable signals for predecessor and successor systems *- Further options on request -*

Standard scope of delivery

Product inspection system without separation system:

Conveyor system, radiation protection covers, radiation protection curtains, subframe

Operating instructions with spare parts list and electronic connection diagram

EU Declaration of Conformity:

- 2006/42/EC - Machinery Directive
- 2014/30/EU - EMC Directive
- 2011/65/EU - RoHS Directive
- EC 1907/2006 - REACH - Regulation
- 2013/59/EURATOM – Radiation protection

Product inspection system with separation system (Compressed air supply: min. 6 bar - max. 10 bar):

Plus compressed air and function monitoring, entry light barrier, collecting container fill level control, separation control

Versions

- **US package:**
  Operating voltage: 115 V AC, 60 Hz
  FDA compliant – (21 CFR Part 1020.40, 21 CFR Part 21 1010)
  NRTL certification (UL 61010-1, UL 61010-2-091)

Conformity

Optionally available:

- FDA – Contact with food (documentation)
- France: NF C 74-100 & NF C 74-100 ADD 3

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Options

Mechanical design:

- Separation system: Pusher | Blower nozzle, including compressed air and function monitoring, Stainless steel collecting container (lockable, hinged) and protective cover
- Swivel castors – Stainless steel AISI 304

Drive and cooling:

- Stainless steel air conditioning unit (+2°C to +45°C)

Electrical design:

- Operating voltage: 115 V AC, 60 Hz

Service / connectivity / confirmation:

- mesuCOMPKIT (sensor package)
- mesuREMOTE (remote maintenance kit)
- mesuLINK (networking software)
- mesuEXPORT (automatic protocol export)
- RFID user authentication

Accessories

Mechanical design:

- Additional compressed air tank for separation system with blower nozzle

Conveyor technology:

- Side guide rails: Stainless steel, inside the radiation protection curtains
- Wear protection: Thermoplastic polyurethane (TPU), transparent
  - Curtain at the infeed of the radiation protection curtains (no food approval)
- Conveyor belt: TPU blue, smooth non-adhesive, without studs and corrugated edge – EU / FDA / USDA-compliant
- Signal tower: Acoustic, green, blue

Software:

- Integrity test, clip test, clip masking, weight test

Miscellaneous:

- Test cards: Various designs and materials on request

Note:
If you require further product information that goes beyond the content of this technical data sheet and in particular concerns a specific use and the application of this product, please contact us.

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