

# Fact Sheet

## XRE-D pro 100

**BIZERBA**

*Discover the new XRE-D pro! The intelligent X-ray system for the inspection of packaged products sets standards in terms of detection accuracy and application flexibility.*



**More information**  
High performance  
with a wide range of  
solutions and options.

Specifications	Facts	Details
<b>Inspection area</b>	330/200 450/250 600/120	All dimensions in mm
<b>Use</b>	Foreign body detection  Detection of product defects	<ul style="list-style-type: none"> <li>– Magnetic, non-magnetic metals</li> <li>– Glass</li> <li>– Nonmetallic minerals</li> <li>– Bones</li> <li>– Rubber</li> <li>– PVC</li> <li>– Masking functions (hiding of disturbing effects from packaging components such as clips)</li> <li>– Completeness check / fill level check</li> <li>– Total weight (accuracy depending on the product)</li> <li>– Breakage control</li> <li>– Deformation</li> <li>– Air pockets</li> <li>– Clumping</li> </ul>
<b>Product</b>		
<b>Shape</b>	Packaged	e.g. plastic or aluminum tray, films
<b>Temperature</b>	-20 °C to +70 °C -4 °F to +158 °F	
<b>Weight</b>	Maximum belt load: – 15 kg – 529.1 oz	
<b>Minimum weight</b>	20 g	Note: Minimum weight required to open the radiation protective curtains
<b>Throughput</b>	approx. 300 ppm	Depending on product dimensions and product distance
<b>Minimum distance</b>	Single product length	
<b>Maximum length</b>	250 mm  300 mm	In case of deviating product length > 250 mm – max. 300 mm product test necessary At a conveyor belt speed of up to 0.5 m/s
<b>Maximum width</b>	300 mm 450 mm 600 mm	Inspection area 330/200 450/250 600/120
<b>Mechanical design</b>		

<b>Surfaces</b>	Covers and conveyor belt frame made of stainless steel 1.4301 (AISI 304) Drive, guide and tension rollers made of stainless steel 1.4301 (AISI 304)	Glass beaded finish
<b>Conveyor belt height</b>	900 mm ± 50 mm 35.43 in ± 1.97 in	
<b>Guide roller diameter</b>	Ø 34 mm Ø 1.34 in	
<b>Material</b>	Conveyor belt in white FDA quality made of polyester (PES) Conveying side made of polyurethane (PUR) Running side made of impregnated polyester fabric Wedge bar for belt guidance on running side	
<b>Belt width</b>	360 mm 660 mm	330/200 450/250 600/120
<b>Drive</b>	3-phase drum motor including thermal contact monitoring	140 W  IP rating: IP69
<b>Conveyor belt speed</b>	0.8 m/sec (0.32-1.04 m/sec = 19.2-62.4 m/min) 157.5 ft/min (63.0-204.7 ft/min)	Optional: 1.05 m/s (0.42 – 1.37 m/s = 25.2 - 81.9 m/min) Optional: 206.7 ft/min (82.7 – 268.7 ft/min) Adjustable via frequency converter from -60 % to +30 % of the nominal speed (more speeds upon request). (depending on the product, product test necessary) Maximum belt load: 12 kg; 423.3 oz
<b>Electrical design</b>		
<b>Operating voltage</b>	230 VAC (± 10 %) 50/60 Hz single phase	US/CAN 208-240 VAC (±10%)
<b>Power consumption</b>	Max. 8 A/230 VAC	US/CAN max. 10 A
<b>External fusing</b>	10 A, delay-action	
<b>Mains cable</b>	3 pin CEE connector	Blue (L1 + N + PE)
<b>Cooling</b>	Filter fan	Optionally cooling device
<b>Signal elements</b>	Horn	BK
<b>Signal lamp</b>	X-rays ON System failure Normal Operation Audit check	Red Orange Green Blue
<b>Operating elements</b>	Combined control and operating unit for conveyor belt and X-ray system	Rotary main switch  Key switch Emergency stop
<b>Potential-free outputs</b>	„Machine Inspecting“ „Machine Error“ „Machine X-Ray ON“	Ready to operate Error status X-rays ON

<b>Prepared for connection of</b>	Rejection system incl. preparation for Higher Level Compliance	Max. 2 rejection systems
<b>Inspection system</b>		
<b>X-ray tube</b>	50 kV/2.0 mA	100 W
<b>Detection accuracy</b>	High resolution X-ray detector	Accuracy: as from Ø 0.6 mm (product-specific)
<b>Peripherals</b>	Industrial PC with 15" touch screen	Resolution 16:9
<b>Radiation protection</b>	Radiation protection curtains (0.125 mm Pb equivalent value) including wear protection	Light grid (option specified in drawing), for special legal requirements, on request IP65 Temperature range -26 °C to +65 °C
<b>Safety switch</b>	All housing parts required for radiation protection are secured with magnetic safety switches.	
<b>Weight</b>	Approx. 450-590 kg	
<b>IP rating</b>	IP54  IP65 IP66	Filter fan Optionally IP55 cooling device Housing, operating elements, etc. Conveyor belt with drum motor
<b>Storage / transport conditions</b>		
<b>Temperature</b>	-10 °C to +40 °C +14 °F to +104 °F	
<b>Humidity</b>	5-90%, non-condensing	Relative humidity
<b>Ambient conditions</b>		
<b>Place of installation</b>	Indoor areas, no direct sunlight	
<b>Temperature</b>	+5 °C to +30 °C +41 °F to +95 °F +5 °C to +40 °C +41 °F to +104 °F +5 °C to +30 °C +41 °F to +86 °F +5 °C to +35 °C +41 °F to +95 °F	330/200 with filter fan Country set USA, Canada: only with filter fan 330/200 with cooling device  450/250; 600/120 with filter fan Country set USA, Canada: only with filter fan 450/250; 600/120 with cooling device  The maximum and typical temperature indications correspond to an indication at 500 meters above sea level. Derating of the maximum/typical ambient temperature typically 1 °C per 1000 meters as from 500 meters above sea level.
<b>Cleaning conditions</b>		
<b>Complete device</b>	Dry cleaning	Wiping/dusting, vacuuming, drying etc. IP rating: IP55 Pmax< 0.3 bar; 30 kPa at a distance of 3 m
<b>Discharge conveyor</b>	Dry cleaning and water jet cleaning	IP rating: IP66
<b>Water jet pressure</b>	Pmax< 1.0 bar; 100 kPa at a distance of 3 m	
<b>Cleaning and disinfection agents</b>	Cleaning agent must be suitable for cleaning of stainless steel 1.4301, stainless steel 1.4305, stainless steel 1.4057, PTFE, POM, polyamide, PE-UHMW, TPU, silicone and EPDM.	

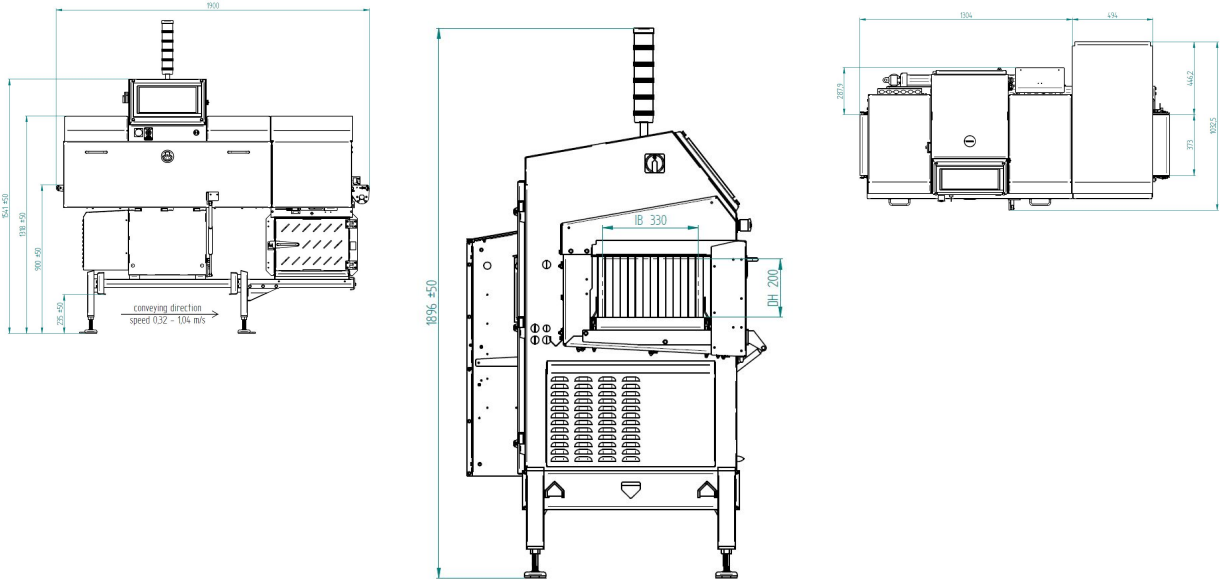
<b>Temperature range</b>	max. +50 °C max. +122 °F	
<b>Options</b>	<b>Facts</b>	<b>Details</b>
<b>Integrated rejection system</b>	Product weight up to 5 kg	Only for 330/200
<b>Version</b>	Conveyor belt extension +500 mm Total length therefore 1,900 mm	Package length 250 mm max.
<b>Rejection system</b>	Pusher Pusher shield Higher Level	
<b>Reject bin</b>	Plastic reject bin	Removable
<b>Maximum product weight</b>	5 kg	
<b>Minimum height</b>	≥ 6 mm	
<b>IP rating</b>	IP65	
<b>Electrical design</b>	Supply and control happen via plug connection to the inspection system	No additional control required
<b>Pneumatic version</b>		
<b>Compressed air supply</b>	6-8 bar	Coupling plug NW 7.2
<b>Compressed air quality</b>	Minimum requirements must be met by customer	Residual dust: Class 1 Residual moisture: Class 7 Residual oil: Class 2
<b>FRL unit</b>	Main switch (lockable) Filter regulator with manometer (lockable) Switch-on valve Pressure build-up valve Pressure switch Safety switch-on valve	
<b>Rejection system separated</b>	Long products	330/200
<b>Version</b>	Conveyor belt extension +800 mm Total length therefore 2,200 mm	Package length 400 mm max.
<b>Rejection system</b>	Pusher Pusher shield Higher Level	
<b>Reject bin</b>	Plastic reject bin	Removable
<b>Maximum product weight</b>	5 kg	
<b>Minimum height</b>	≥ 6 mm	
<b>IP rating</b>	IP65	
<b>Electrical design</b>	Supply and control happen via plug connection to the inspection system	No additional control required
<b>Pneumatic version</b>		
<b>Compressed air supply</b>	6-8 bar	Coupling plug NW 7.2

<b>Compressed air quality</b>	Minimum requirements must be met by customer	Residual dust: Class 1 Residual moisture: Class 7 Residual oil: Class 2
<b>FRL unit</b>	Main switch (lockable) Filter regulator with manometer (lockable) Switch-on valve Pressure build-up valve Pressure switch Safety switch-on valve	
<b>Rejection system separated</b>	Long products	450/250 600/120
<b>Version</b>	Conveyor belt extension +800 mm Total length therefore 2,200 mm	Package length 400 mm max.
<b>Rejection system</b>	Pusher Pusher shield Higher Level	
<b>Reject bin</b>	Plastic reject bin	Removable
<b>Maximum product weight</b>	5 kg	
<b>Minimum height</b>	≥ 6 mm	
<b>IP rating</b>	IP65	
<b>Electrical design</b>	Supply and control happen via plug connection to the inspection system	No additional control required
<b>Pneumatic version</b>		
<b>Compressed air supply</b>	6-8 bar	Coupling plug NW 7.2
<b>Compressed air quality</b>	Minimum requirements must be met by customer	Residual dust: Class 1 Residual moisture: Class 7 Residual oil: Class 2
<b>FRL unit</b>	Main switch (lockable) Filter regulator with manometer (lockable) Switch-on valve Pressure build-up valve Pressure switch Safety switch-on valve	
<b>Quick belt change system</b>	Conveyor belt frame and quick belt tensioner for fast belt change	Only in combination with option rejection system separated
<b>Rejection system separated</b>	Heavy products	450/250 600/120
<b>Version</b>	Conveyor belt extension +800 mm Total length therefore 2,200 mm	Package length 400 mm max.
<b>Rejection system</b>	Pusher  Pusher shield Higher Level	Roller conveyor Modular belt

<b>Maximum product weight</b>	15 kg	
<b>Minimum height</b>	≥ 6 mm	
<b>IP rating</b>	IP65	
<b>Electrical design</b>	Supply and control happen via plug connection to the inspection system	No additional control required
<b>Pneumatic version</b>		
<b>Compressed air supply</b>	6-8 bar	Coupling plug NW 7.2
<b>Compressed air quality</b>	Minimum requirements must be met by customer	Residual dust: Class 1 Residual moisture: Class 7 Residual oil: Class 2
<b>FRL unit</b>	Main switch (lockable) Filter regulator with manometer (lockable) Switch-on valve Pressure build-up valve Pressure switch Safety switch-on valve	
<b>Quick belt change system</b>	Conveyor belt frame and quick belt tensioner for fast belt change	Only in combination with option rejection system separated
<b>0.4 mm detector</b>		
<b>Cooling device</b>	For ambient temperatures between 5 °C and +40 °C	IP55
<b>Software package 1</b>	Completeness check Weight deviation Clip detection Shape deviations	
<b>Software package 2</b>	Multi Lane-Software Multi Product-Software Zone Analyser-Software	
<b>Login package</b>	User login with RFID chip	Compatible with Mifare ISO 14443 and ISO 15639 inclusive 4 RFID transponder chips (Mifare ISO 14443)



Dimensional drawings



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**Bizerba SE & Co. KG**

Wilhelm-Kraut-Straße 65  
72336 Balingen

T +49 7433 12-0

fax: +49 7433 12-2696

[marketing@bizerba.com](mailto:marketing@bizerba.com)

**[www.bizerba.com](http://www.bizerba.com)**



# Fact Sheet

## XRE-D pro 200

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Specifications	Facts	Details
<b>Inspection area</b>	330/200 450/250 600/120	All dimensions in mm
<b>Use</b>	Foreign body detection  Detection of product defects	<ul style="list-style-type: none"> <li>– Magnetic, non-magnetic metals</li> <li>– Glass</li> <li>– Nonmetallic minerals</li> <li>– Bones</li> <li>– Rubber</li> <li>– PVC</li> <li>– Masking functions (hiding of disturbing effects from packaging components such as clips)</li> <li>– Completeness check / fill level check</li> <li>– Total weight (accuracy depending on the product)</li> <li>– Breakage control</li> <li>– Deformation</li> <li>– Air pockets</li> <li>– Clumping</li> </ul>
<b>Product</b>		
<b>Shape</b>	Packaged	e.g. plastic or aluminum tray, films
<b>Temperature</b>	-20 °C to +70 °C -4 °F to +158 °F	
<b>Weight</b>	Maximum belt load: – 15 kg – 529.1 oz	
<b>Minimum weight</b>	100 g	Note: Minimum weight required to open the radiation protective curtains
<b>Throughput</b>	approx. 150 ppm	Depending on product dimensions and product distance
<b>Minimum distance</b>	Single product length	
<b>Maximum length</b>	250 mm  300 mm	In case of deviating product length > 250 mm – max. 300 mm product test necessary At a conveyor belt speed of up to 0.5 m/s
<b>Maximum width</b>	300 mm 450 mm 600 mm	Inspection area 330/200 450/250 600/120
<b>Mechanical design</b>		

<b>Surfaces</b>	Covers and conveyor belt frame made of stainless steel 1.4301 (AISI 304) Drive, guide and tension rollers made of stainless steel 1.4301 (AISI 304)	Glass beaded finish
<b>Conveyor belt height</b>	900 mm ± 50 mm 35.43 in ± 1.97 in	
<b>Guide roller diameter</b>	Ø 34 mm Ø 1.34 in	
<b>Material</b>	Conveyor belt in white FDA quality made of polyester (PES) Conveying side made of polyurethane (PUR) Running side made of impregnated polyester fabric Wedge bar for belt guidance on running side	
<b>Belt width</b>	360 mm 660 mm	330/200 450/250 600/120
<b>Drive</b>	3-phase drum motor including thermal contact monitoring	140 W  IP rating: IP69
<b>Conveyor belt speed</b>	0.8 m/sec (0.32-1.04 m/sec = 19.2-62.4 m/min) 157.5 ft/min (63.0-204.7 ft/min)	Optional: 1.05 m/s (0.42 – 1.37 m/s = 25.2 - 81.9 m/min) Optional: 206.7 ft/min (82.7 – 268.7 ft/min) Adjustable via frequency converter from -60 % to +30 % of the nominal speed (more speeds upon request). (depending on the product, product test necessary) Maximum belt load: 12 kg; 423.3 oz
<b>Electrical design</b>		
<b>Operating voltage</b>	230 VAC (± 10 %) 50/60 Hz single phase	US/CAN 208-240 VAC (±10%)
<b>Power consumption</b>	Max. 8 A/230 VAC	US/CAN max. 10 A
<b>External fusing</b>	10 A, delay-action	
<b>Mains cable</b>	3 pin CEE connector	Blue (L1 + N + PE)
<b>Cooling</b>	Cooling device	
<b>Signal elements</b>	Horn	BK
<b>Signal lamp</b>	X-rays ON System failure Normal Operation Audit check	Red Orange Green Blue
<b>Operating elements</b>	Combined control and operating unit for conveyor belt and X-ray system	Rotary main switch  Key switch Emergency stop
<b>Potential-free outputs</b>	„Machine Inspecting“ „Machine Error“ „Machine X-Ray ON“	Ready to operate Error status X-rays ON

<b>Prepared for connection of</b>	Rejection system incl. preparation for Higher Level Compliance	Max. 2 rejection systems
<b>Inspection system</b>		
<b>X-ray tube</b>	100 kV/2.0 mA	200 W
<b>Detection accuracy</b>	High resolution X-ray detector	Accuracy: as from Ø 0.3 mm (product-specific)
<b>Peripherals</b>	Industrial PC with 15" touch screen	Resolution 16:9
<b>Radiation protection</b>	Radiation protection curtains (0.5 mm Pb equivalent value) including wear protection	Light grid (option specified in drawing), for special legal requirements, on request IP65 Temperature range -26 °C to +65 °C
<b>Safety switch</b>	All housing parts required for radiation protection are secured with magnetic safety switches.	Double evaluation
<b>Weight</b>	Approx. 450-590 kg	
<b>IP rating</b>	IP55 IP65 IP66	Cooling device Housing, operating elements, etc. Conveyor belt with drum motor
<b>Storage / transport conditions</b>		
<b>Temperature</b>	-10 °C to +40 °C +14 °F to +104 °F	
<b>Humidity</b>	5-90%, non-condensing	Relative humidity
<b>Ambient conditions</b>		
<b>Place of installation</b>	Indoor areas, no direct sunlight	
<b>Temperature</b>	+5 °C to +40 °C +41 °F to +104 °F +5 °C to +35 °C +41 °F to +95 °F +5 °C to +30 °C +41 °F to +86 °F	330/200  450/250; 600/120  Dual energy option  The maximum and typical temperature indications correspond to an indication at 500 meters above sea level. Derating of the maximum/typical ambient temperature typically 1 °C per 1000 meters as from 500 meters above sea level.
<b>Cleaning conditions</b>		
<b>Complete device</b>	Dry cleaning	Wiping/dusting, vacuuming, drying etc. IP rating: IP55
<b>Discharge conveyor</b>	Dry cleaning and water jet cleaning	IP rating: IP66
<b>Water jet pressure</b>	Pmax< 0.3 bar; 30 kPa at a distance of 3 m	
<b>Cleaning and disinfection agents</b>	Cleaning agent must be suitable for cleaning of stainless steel 1.4301, stainless steel 1.4305, stainless steel 1.4057, PTFE, POM, polyamide, PE-UHMW, TPU, silicone and EPDM.	
<b>Temperature range</b>	max. +50 °C max. +122 °F	

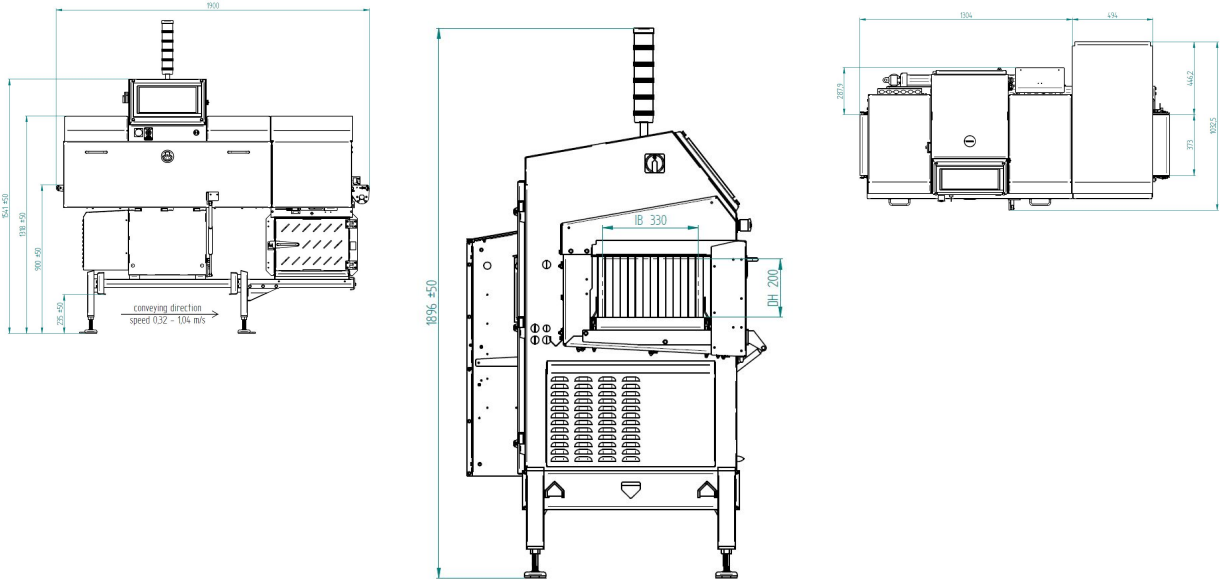
Options	Facts	Details
<b>Integrated rejection system</b>	Product weight up to 5 kg	Only for 330/200
<b>Version</b>	Conveyor belt extension +500 mm Total length therefore 1,900 mm	Package length 250 mm max.
<b>Rejection system</b>	Pusher Pusher shield Higher Level	
<b>Reject bin</b>	Plastic reject bin	Removable
<b>Maximum product weight</b>	5 kg	
<b>Minimum height</b>	≥ 6 mm	
<b>IP rating</b>	IP65	
<b>Electrical design</b>	Supply and control happen via plug connection to the inspection system	No additional control required
<b>Pneumatic version</b>		
<b>Compressed air supply</b>	6-8 bar	Coupling plug NW 7.2
<b>Compressed air quality</b>	Minimum requirements must be met by customer	Residual dust: Class 1
		Residual moisture: Class 7
		Residual oil: Class 2
<b>FRL unit</b>	Main switch (lockable) Filter regulator with manometer (lockable) Switch-on valve Pressure build-up valve Pressure switch Safety switch-on valve	
<b>Rejection system separated</b>	Long products	330/200
<b>Version</b>	Conveyor belt extension +800 mm Total length therefore 2,200 mm	Package length 400 mm max.
<b>Rejection system</b>	Pusher Pusher shield Higher Level	
<b>Reject bin</b>	Plastic reject bin	Removable
<b>Maximum product weight</b>	5 kg	
<b>Minimum height</b>	≥ 6 mm	
<b>IP rating</b>	IP65	
<b>Electrical design</b>	Supply and control happen via plug connection to the inspection system	No additional control required
<b>Pneumatic version</b>		
<b>Compressed air supply</b>	6-8 bar	Coupling plug NW 7.2
<b>Compressed air quality</b>	Minimum requirements must be met by customer	Residual dust: Class 1
		Residual moisture: Class 7
		Residual oil: Class 2

<b>FRL unit</b>	Main switch (lockable) Filter regulator with manometer (lockable) Switch-on valve Pressure build-up valve Pressure switch Safety switch-on valve	
<b>Rejection system separated</b>	Long products	450/250 600/120
<b>Version</b>	Conveyor belt extension +800 mm Total length therefore 2,200 mm	Package length 400 mm max.
<b>Rejection system</b>	Pusher Pusher shield Higher Level	Roller conveyor
<b>Reject bin</b>	Plastic reject bin	Removable
<b>Maximum product weight</b>	5 kg	
<b>Minimum height</b>	≥ 6 mm	
<b>IP rating</b>	IP65	
<b>Electrical design</b>	Supply and control happen via plug connection to the inspection system	No additional control required
<b>Pneumatic version</b>		
<b>Compressed air supply</b>	6-8 bar	Coupling plug NW 7.2
<b>Compressed air quality</b>	Minimum requirements must be met by customer	Residual dust: Class 1 Residual moisture: Class 7 Residual oil: Class 2
<b>FRL unit</b>	Main switch (lockable) Filter regulator with manometer (lockable) Switch-on valve Pressure build-up valve Pressure switch Safety switch-on valve	
<b>Quick belt change system</b>	Conveyor belt frame and quick belt tensioner for fast belt change	Only in combination with option rejection system separated
<b>Rejection system separated</b>	Heavy products	450/250 600/120
<b>Version</b>	Conveyor belt extension +800 mm Total length therefore 2,200 mm	Package length 400 mm max.
<b>Rejection system</b>	Pusher  Pusher shield Higher Level	Roller conveyor Modular belt
<b>Maximum product weight</b>	15 kg	
<b>Minimum height</b>	≥ 6 mm	
<b>IP rating</b>	IP65	

<b>Electrical design</b>	Supply and control happen via plug connection to the inspection system	No additional control required
<b>Pneumatic version</b>		
<b>Compressed air supply</b>	6-8 bar	Coupling plug NW 7.2
<b>Compressed air quality</b>	Minimum requirements must be met by customer	Residual dust: Class 1
		Residual moisture: Class 7
		Residual oil: Class 2
<b>FRL unit</b>	Main switch (lockable) Filter regulator with manometer (lockable) Switch-on valve Pressure build-up valve Pressure switch Safety switch-on valve	
<b>Quick belt change system</b>	Conveyor belt frame and quick belt tensioner for fast belt change	Only in combination with option rejection system separated
<b>Dual energy</b>	Proof of soft impurities (bones, gristle)	Using a dual energy sensor increases the accuracy in detecting foreign substances in determined applications by contemporaneous evaluation of two line scan cameras. Device operation and design are almost identical to the standard device with single energy detector.
<b>Software package 1</b>	Completeness check Weight deviation Clip detection Shape deviations	
<b>Software package 2</b>	Multi Lane-Software Multi Product-Software Zone Analyser-Software	
<b>Software package 3</b>	Sensibility forecast and self-monitoring	not combinable with software package 2
<b>Login package</b>	User login with RFID chip	Compatible with Mifare ISO 14443 and ISO 15639 inclusive 4 RFID transponder chips (Mifare ISO 14443)



Dimensional drawings



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**Bizerba SE & Co. KG**

Wilhelm-Kraut-Straße 65  
72336 Balingen

T +49 7433 12-0

fax: +49 7433 12-2696

[marketing@bizerba.com](mailto:marketing@bizerba.com)

**[www.bizerba.com](http://www.bizerba.com)**