


THS/FFV21 SERIES

Quality Control at its finest



FREE-FALL INTEGRATED SYSTEM WITH METAL DETECTOR AND EJECTION VALVE

FEATURES

- State-of-the Art Quality Control of powder and granular products
- Detection and ejection of magnetic, non-magnetic and stainless steel metal contaminants
- Fast detection and rejection speed
- Fail-Safe Operations
- Structure and components in AISI 316L Stainless Steel and food-compatible plastics [EU, FDA compliant]
- Very compact size
- ATEX version available 



THS/FFV21

Very high sensitivity.
Multi-Spectrum technology available



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CEIA reserves the right to make changes, at any moment and without notice, to the models, their accessories and options, to the prices and conditions of sale

CEIA THS/FFV21 Integrated System is especially designed for the inspection of granular and powder products and the elimination of any contaminating metals, whether magnetic, non-magnetic or stainless-steel.



INTEGRATED SYSTEM FOR GRAVITY FEED

The carefully selected materials used in construction of the THS/FFV21 Integrated System do not interact with food products, and thus do not modify or alter their composition. The design of the system incorporates a fast reject valve drive response time to detect and reject the contaminant without slowing down the product flow.

The construction guarantees quick, easy cleaning of the components that are in contact with the product. The technological choices made by CEIA allow the parts in contact with the product to be disassembled and maintained in a short time. The system operates in fail-safe mode, thus avoiding the risk of contaminants passing through even when the system is deactivated or when the electrical power supply is interrupted.

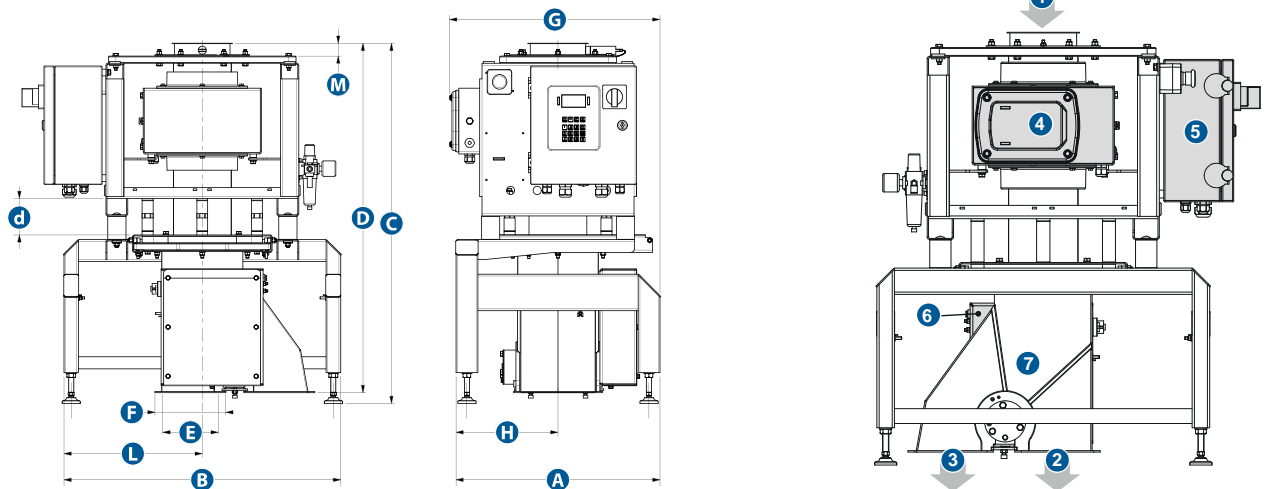
MULTI-SPECTRUM TECHNOLOGY

Exclusively developed by CEIA, this is a unique metal detection technology that both optimizes sensitivity to all metal contaminants and minimizes product effect in a very wide range of possible products.

By recognizing the different frequency response of conductive products and metals, this innovative technology cancels product effect and maintains high performance levels for all types of metal contaminants, both magnetic and non-magnetic.

The autolearn function used by CEIA Multi-Spectrum metal detectors equates to the repetition of hundreds of conventional transits. It explores the whole spectrum of available frequencies in order to determine the best operating conditions resulting in unique detection performance.

THS/FFV21ES and THS/FFV21S models



Model		A	B	C	D	d	E	F	G	H	M
THS/FFV21xS-75	Standard			856 ÷ 906	826	100					
	With Reduction Kit	505	660	766 ÷ 851	736	10	73x117	107x151	534	275	34
THS/FFV21xS-100	Standard			849 ÷ 899	819	100					
	With Reduction Kit	505	660	759 ÷ 844	729	10	73x117	107x151	534	275	27
THS/FFV21xS-150	Standard			990 ÷ 1030	960	100					
	With Reduction Kit	560	760	900 ÷ 975	870	10	155x204	195x244	580	380	35
THS/FFV21xS-200	Standard			1030 ÷ 1070	1000	100					
	With Reduction Kit	560	760	940 ÷ 1015	910	10	155x204	195x244	620	380	36

1	Product to be inspected	
2	Uncontaminated product	On request, the two output exits can be provided rotated by 180°
	Contaminated product	
4	Metal Detector Probe	
5	Power Supply box with Control Panel	
6	Ejection valve activation system	
7	Ejection valve	

Dimensions in mm

THS/FFV21 ATEX series



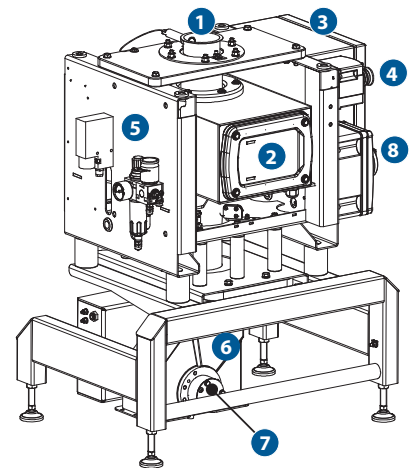
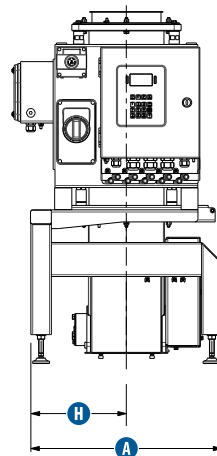
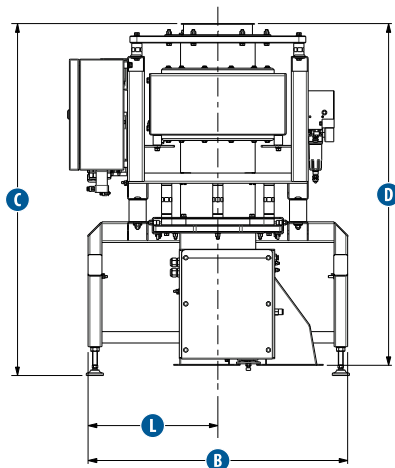
THS/FFV21 ATEX COMPLIANCE

- Compliant with ATEX Directive 2014/34/UE “on equipment and protective systems intended for use in potentially explosive atmospheres”
- IP66/69K protection rating [control power box and detector]
- Classified as Group II, Category 1/2D equipment

LOCAL AND ADVANCED CONNECTIVITY [optional]



THS/FFV21-ATEX model



Model (aperture)	A	B	C	D	H	L
THS/FFV21-75S-ATEX	505	660	856 ÷ 906	826	275	330
THS/FFVMS21-75S-ATEX						
THS/FFV21-100S-ATEX						
THS/FFVMS21-100S-ATEX	560	760	990 ÷ 1065	960	280	380
THS/FFV21-150S-ATEX						
THS/FFVMS21-150S-ATEX						
THS/FFV21-200S-ATEX						
THS/FFVMS21-200S-ATEX	525	685	1030 ÷ 1105	1000	286	343
THS/FFV21-100x40S-ATEX						

It is available, on request, a compact version that reduce the C and D dimensions by 90 mm.

1	Infeed flange for material to be inspected
2	Metal Detector probe
3	Power supply and control unit
4	Emergency pushbutton
5	Compressed air group
6	Ejection valve (deviator)
7	Valve actioning group
8	Main switch

THS/FFV21 SERIES SPECIFICATIONS



SPECIAL FEATURES

	THS/FFV21E	THS/FFV21	THS/FFV21-ATEX
Detection sensitivity	High	Ultra High	
Immunity to environmental interference	High	High	
Data display type	Alphanumeric OLED 4x20 characters	High-contrast graphical OLED 128x64 pixels	
Local programming	4 keys, 3 with double function	16 keys, 3 with double function	
Construction compliant with 21 CFR Parts 210 and 211			
Inspected/contaminated product counter			
Autolearn and automatic tracking of the product effect			
ISO 9001 certified manufacturer			

DATA MANAGEMENT

Management of electronic production data and electronic signatures as per CFR 21, Part 11	Data security
	Data integrity
	Data traceability

I/O INTERFACES

RS232, Auxiliary RS232, Bluetooth, Ethernet interface (on request), WI-FI and USB (on request)

SIGNALLING

Acoustic	Via internal buzzer
Optical	Graphic display with bar-graph indication
	Light indicators on control unit: RED: Alarm or Fault / GREEN: Power on

PROGRAMMING

LOCAL: built-in keyboard and high-contrast display
 REMOTE: through computer connected via Bluetooth, RS232, Ethernet or WiFi and managed with CEIA MD Scope software, THS Production Plus software or any other terminal emulation program or through Web Server (with optional IXC card)

SAFETY AND SECURITY

Protection degree	THS/FFV21E	IP65
	THS/FFV21	IP66 – IP69K (control power box) IP65 (all other components)
	THS/FFV21-ATEX	IP66 – IP69K (control power box and detector) IP65 (all other components)
Electrical insulation	Galvanic isolation of the mains voltage Compliant with international standards for safety and radio interference	
Pollution degree (IEC61010-1)	Class 2	
Installation category (IEC61010-1)	Category II	

SUPPLY

Control Power Box	Main voltage	100-240 VAC
	Frequency and phase	50/60 Hz - single phase
	Full load current (FLA)	2.2 A
Compressed air	Pressure	0,6 ÷ 1 Mpa 0,6 ÷ 0,8 Mpa (THS/FFV21-ATEX)
	Flow	100 l/min 600 l/min (THS/FFV21-ATEX)

ENVIRONMENTAL CONDITIONS

Temperature	Operating	-10 to +55 °C 0 to +40 °C (THS/FFV21-ATEX)
	Storage	-40 to +70 °C -25 to +70 °C (THS/FFV21-ATEX)
Relative humidity	Operating / Storage	5 – 90 %, non-condensing

PRODUCT CONDITIONS

Maximum temperature	Product in transit	70 °C 40 °C (THS/FFV21-ATEX)
Maximum allowed pressure	Internal pressure	The ejection valve is suitable for plants with differences in pressure of 0.1 bar maximum respect to the external pressure or the other internal sections



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