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NICOL SCALES & MEASUREMENT IS AN ISO ACCREDITED CALIBRATION  
COMPANY THAT HAS PROVIDED CALIBRATION, REPAIR AND SALES OF ALL TYPES  
OF WEIGHING AND MEASUREMENT PRODUCTS SINCE 1931.



sartorius  
mechatronics

## Explosion-protected weighing equipment for all areas of use | Europe (ATEX)



turning science **into solutions**

# Competence for safety

## A tradition of safety

Over many years, Sartorius has built up a wealth of experience in designing and manufacturing explosion-protected weighing equipment. This experience goes back to products ranging from the first explosion-proof mechanical product solutions to the world's first pressure-encapsulated electronic balance introduced in 1979, all the way to the first intrinsically safe scale that debuted in 1985. Today, Sartorius develops electronic and non-electrical equipment to meet the market requirements in compliance with the provisions governing the

most diverse types of explosion protection. Our scales and load cells are designed according to this protection types. Already in 1997, Sartorius was authorized to put its ATEX-compliant weighing equipment on the market. Since then, we have been offering our customers a continuously growing range of explosion-protected weighing equipment, which meets automated production needs besides the requirements of the advanced types of explosion protection. As a globally operating group, we also offer EX weighing equipment internationally certified, for example, for compliance with FM (USA), CSA (Canada) and other national standards, such as those of Japan and China.



CAPXS..... for dust for gas		Sensor circuit of the indicator:						
Vi	II	Remarks	Vo	Io	Po	Co	Lo	Lo/Ro
13 V	13 V	1)	12,6 V	350 mA	927 mW	1,15 µF	220 µH	32 µH/I
483 mA	425 mA	2)	12,6 V	323 mA	918 mW	1,15 µF	220 µH	35 µH/I
2,0 W	2,0 W	3)	12,6 V	407 mA	1030 mW	1,15 µF	180 µH	28 µH/I
4 µF	---							
6 µH	---							

Weighing platform, CAPXS..... for dust for gas		Zone 1, 2, 20, 21, 22		Gas: IIC T4		CIXS3 indicator			
II 2 GD EEx ib IIC T4 T135°C... 155°C (only with CIXS3 for Zone 20)		Alternate connection		II 2 G EEx ib IIC T4 II 1 D IP6X T135°C					
Load cells (specifications and zones: see chart below) Only the technical data listed on the corresponding EC type examination certificate are valid		Sensor cable for weighing platform For operating reasons, use cables with a low resistance rating. Recommended LIVCY 6x... with 700µH/km maximum, 130nF/km maximum (wire versus wire), 170nF/km maximum (wire vs. ground) and 140 (0.14 mm²) minimum, 80 (0.25 mm²), 35 (0.50 mm²) or 24 (0.75mm²) Ω/km can be installed flexibly up to lengths of 15, 25, 55 and 80m. The 8-wire cable, type PR6136, (Lmax = 1.1 m/km; Cmax = 220nF/km; Rmin = 26 Ω/km) can be used up to 80m (installed in a tube) and up to 30m (installed flexibly). For cables longer than 50m, the screen of the cable may not be connected to the housing of the weighing platform, or the weighing platform and the indicator must be connected with limited resistivity (e.g., by connecting to an equipotential grounding busbar).							
Load cell manufacturer	EC type examination certificate	Vi	II	PI	CI	LI	Can be used in Zone(s)	Remarks	
Sart. Hamburg	TÜV 03 ATEX 2301 X	---	---	2W	---	---	21, 22	(PREZ... and MP56... series)	
Sart. Hamburg	PTB 02 ATEX 2059	25V	160mA	2W	0	0	1, 2	(PREZ... series)	
Sart. Hamburg	PTB 00 ATEX 2039	25V	160mA	2W	0	0	1, 2	(PREZ51... series)	

EX	Date	Name	CIXS3 / Connection of Analog Weighing Platforms	Page
Written by	02.02.04	Kilgusgras	Verification of the Intrinsic Safety	of 7
Reviewed by	02.02.04	Wittmann	sartorius	Rev. 00
Released by	02.02.04	Kilgusgras	65607-741-60-A4	

### Versatile products and verified safety

Despite the restrictive safety requirements in hazardous areas, explosion-protected weighing equipment from Sartorius lets you use all the advantages of modern scales:

- Best accuracy and filter algorithms for reliable weighing data
- User-friendliness for safe work sequences

- Advanced monolithic, 21st-century weighing technology for resolutions of up to 600,000 display digits
- GMP-compliant recording/printing
- Wide variety of interfaces
- Rugged design
- Can be networked with up to 8 client devices
- Standard: minimum 1 data interface

Considering all these features, Sartorius offers an array of products that enable you to easily implement the widest variety of complex weighing solutions.

The ATEX Directive stipulates that the operator of equipment in a hazardous area must supply written conformity assessment that verifies the safety of the equipment assembly. This must include the individual characteristic values of the equipment configuration including all connecting cables. Explosion risk assessment also covers non-electrical equipment (e.g., roller conveyors).

If only Sartorius components are used in your specific weighing equipment assembly, we have already tested their compatibility and describe this in the Verification of Intrinsic Safety diagrams that are automatically supplied with Sartorius explosion-protected equipment. These diagrams consider all combinations described for the approved equipment so that you can use the appropriate set of Verification of Intrinsic Safety diagrams and instructions as part of your own explosion protection documents.

You will also find this extra Sartorius "Verification of Intrinsic Safety" service useful if you combine Sartorius components with those of other manufacturers (e.g., load cells) or need to select the matching valves for a batching system. For every externally accessible intrinsically safe circuit, Sartorius Verification of Intrinsic Safety diagrams indicate the maximum permissible parameters, such as voltage, current, power, capacitance and inductance.

Advantage: you save time and money in preparing new explosion safety documents!

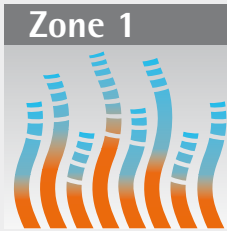
### Potentially explosive atmosphere Zone classification for use

		Risk present continuously or for long periods or frequently	Risk likely to occur in normal operation occasionally	Risk unlikely to occur and, if so, for a short period of time only
Safety measure (category acc. to Directive 94/9/EC (ATEX))		Very high (Category 1)	High (Category 2)	Normal (Category 3)
IEC/CENELEC	Gases Dusts	Zone 0 (II 1 G) Zone 20 (II 1 D)	Zone 1 (II 2 G) Zone 21 (II 2 D)	Zone 2 (II 3 G) Zone 22 (II 3 D)
US	NEC 505 NEC 500	Zone 0 Division 1	Zone 1	Zone 2 Division 2

Category 2 equipment also offers a considerably higher level of protection in category 3 as well.



Examples for certifying institutions



### Zone 1 (according to CENELEC, IEC)

Division of hazardous areas according to the Directive 1999/92/EC, ATEX 137:

A place in which an explosive atmosphere consisting of a mixture with air or flammable substances in the form of gas, vapor or mist is likely to occur in normal operation occasionally.

This zone requires equipment group 2G (1G is also possible).



Factory EX series



Factory series, digital IS-X precision platforms



Combics EX indicator



EX load cell

# Zone 1

### Factory series: Compact FC-X and FCA-X precision scales

- Weighing capacity from 0.001 g to 300 kg, also factory-verified for legal metrology
- ATEX: II 2 G EEx ib IIC T4
- With monolithic weigh cell (metrological advantages; built-in, motorized calibration weight, advantageous for use in quality systems)
- Combinable application programs and product data memory
- Backlit graphical display for menu-driven prompts in plain text (industrial-grade plastic or stainless steel)

### Factory series: FCT-X indicator

- With built-in A/D converter for analog platforms or load cells up to 120 t
- ATEX: II 2 G EEx ib IIC T4
- Data interface standard (other optional data interfaces can be installed)
- Combinable application programs and product data memory
- Backlit graphical display for menu-driven prompts in plain text for configuration of the A/D converter

### Factory series: IS-X digital precision platforms

- Weighing capacity from 0.001 g to 300 kg, also factory-verified for legal metrology
- ATEX: II 2 G EEx ib IIC T4, from 16 kg and up: II 2G 1D EEx ib IIC T4 T135°C
- With monolithic weigh cell (metrological advantages; built-in, motorized calibration weight, advantageous for use in quality systems)
- For use as a digital, explosion-protected "weighing sensor" connected to PLCs, or a max. of 2 platforms can be connected to the Combics indicator (in a hazardous area) or to a series X5 controller (in the non-hazardous area and connected via converter|barrier)

### Economy, EB-X, or Economy "stainless steel", EC1XS

- Economy (aluminum die-cast): Weighing capacity from 0.1 g to 150 kg
- EB-X: ATEX: II 2 G EEx ib IIC T4
- Economy (stainless steel): capacity from 0.1 g to 3 t, also verifiable for legal metrology
- EC1XS: ATEX: II 2 GD EEx ib IIB T4 T155°C

### Combics series: CIXS3 indicator

- With built-in A/D converter for analog platforms or load cells up to 32 t; optional interface for digital platform
- ATEX: II 2G 1D EEx ib IIC T4 T135°C
- Stainless steel housing with cable glands
- 2 application kits for automatic single-component filling up to a target weight
- Backlit graphic display

### Combics series: CAPXS platforms

- Weighing capacity from 0.1 g to 3 t, also factory-verified for legal metrology
- ATEX: II 2 GD EEx ib IIC T4..T6 T135...155°C
- 11 different sizes
- Low-profile, stainless steel design
- Other materials optional for the load plate, underframe, and lift-deck system

### Weighing cells WZA-X

- Weighing capacity from 60 g to 6,000 g
- Readabilities from 0.1 mg to 0.01 g
- Atex II 2 GD EEx ib IIC T4 T135°C
- RS232C data interface standard
- Exceptionally compact design made of stainless steel
- Easy adaptation of customer-specific sample-supporting devices using 3 screws

### PR62..|6.|MP.. load cells

- Wide capacity range up to 300 t
- ATEX: II 1G (also 2G depending on the type) 1D EEx ib IIC T4 T85°C IP65
- Completely hermetically encapsulated, IP68
- Various designs, mounting kits and accessories
- Tension and bending beam load cells made of special high-strength steel or stainless steel for platform, hybrid, tank, hopper scales and suspended vessels
- Compression load cells made of highly corrosion-resistant stainless steel for precision weighing in tank, vessel and silo scales
- PanCake® level cells, ultra-low profile design (25 | 35 mm), for level-by-weight measurements of liquids and bulk solids
- Specialty load cells for trucks and freight cars

### IFXS flat-bed scales

- Weighing capacity from 0.1 g to 3 t, also factory-verified for legal metrology (1 × 3000e | 2 × 3000e; class III)
- ATEX: II 2G 1D EEx ib IIC T4 T135°C
- High-grade material and outstanding workmanship – design ideal for use in the pharmaceutical industry
- Easy to clean thanks to load plate lifting mechanism
- Exceptionally low-profile design for especially easy loading
- High protection rating: IP68

### IUXS pallet scales

- Weighing capacity from 0.1 g to 1.5 t, also factory-verified for legal metrology (1 × 3000e | 2 × 3000e; class III)
- Type of ignition protection: intrinsically safe, ATEX: II 2G 1D EEx ib IIC T4 T135°C
- High protection rating: IP68

## Zone 21



### Zone 21 (acc. to CENELEC, IEC)

Division of hazardous areas according to the Directive 1999/92/EC, ATEX 137:

A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is likely to occur in normal operation occasionally.

This zone requires equipment group 2D (1D is also possible).



Combics EX series indicator



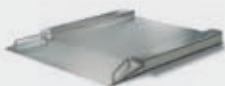
Combics EX series – analog platforms



EC1XS series



Digital WZA-X load cells



IFX flat-bed scale



IUX pallet scale

## Zone 21

### Combics series: CIXS3 indicator

- With built-in A/D converter for analog platforms for load cells up to 32 t; optional interface for digital platform
- ATEX: II 2G 1D EEx ib IIC T4 T1 35°C
- Stainless steel housing with cable glands
- 2 interface ports (1 RS-232C | RS-422 | RS-485 configurable by software) standard
- 2 application kits for automatic single-component filling up to a target weight

### Combics series: CAPXS platforms

- Weighing capacity from 0.1 g to 3 t, also factory-verified for legal metrology
- Type of ignition protection: intrinsically safe, ATEX: II 2 GD EEx ib IIC T4..T6 T135°...155°C
- 11 different sizes
- Low-profile, stainless steel design
- Other materials optional for the load plate, underframe, and lift-deck system
- Can be used with Combics CIXS3 indicator also in zone 20

### Economy EC1XS stainless steel series

- Weighing capacity from 0.1 g to 3 t
- Type of ignition protection: intrinsically safe II 2 GD EEx ib IIB T4 T155°C
- Housing, display unit and platforms made of stainless steel
- RS-232C data interface standard (optional RS-422 data interface)

### PR62..|6 load cells

- Wide capacity range up to 300 t
- Type of ignition protection: intrinsically safe, ATEX: II 1G (also 2G depending on the type) 1D EEx ib IIC T4 T85°C IP65
- Completely hermetically encapsulated, IP68
- Various designs, mounting kits and accessories:
  - Tension and bending beam load cells made of special high-strength steel or stainless steel for platform, hybrid, tank, hopper scales and suspended vessels
  - Compression load cells made of highly corrosion-resistant stainless steel for precision weighing in tank, vessel and silo scales
  - PanCake®, level cells, ultra-low profile design (25 | 35 mm), for level-by-weight measurements of liquids and bulk solids
  - Specialty load cells for trucks and freight cars

### Weighing cells WZA-X

- Weighing capacity from 60 g to 6,000 g
- Readabilities from 0.1 mg to 0.01 g
- Atex II 2 GD EEx ib IIC T4 T135°C
- RS232C data interface standard
- Exceptionally compact design made of stainless steel
- Easy adaptation of customer-specific sample-supporting devices using 3 screws

### IFXS flat-bed scales

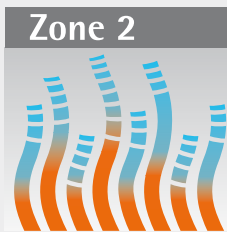
- Weighing capacity from 0.1 g to 3 t, also factory-verified for legal metrology (1 × 3000e | 2 × 3000e; class (III))
- Type of ignition protection: intrinsically safe, ATEX: II 2G 1D EEx ib IIC T4 T135°C
- High-grade material and outstanding workmanship – design ideal for use in the pharmaceutical industry
- Easy to clean thanks to load plate lifting mechanism
- Exceptionally low-profile design for especially easy loading
- High protection rating: IP68

### IUXS pallet scales

- Weighing capacity from 0.1 g to 1.5 t, also factory-verified for legal metrology (1 × 3000e | 2 × 3000e ; class (III))
- Type of ignition protection: intrinsically safe, ATEX: II 2G 1D EEx ib IIC T4 T135°C
- High protection rating: IP68

### Factory series: IS-X digital precision platforms

- Weighing capacity from 0.001 g to 300 kg, also factory-verified for legal metrology
- Type of ignition protection: intrinsically safe, ATEX: II 2 G EEx ib IIC T4; from 16 kg and up: II2G 1D EEx ib IIC T4 T135°C
- With monolithic weigh cell (metrological advantages; built-in, motorized calibration weight, advantageous for use in quality systems)
- RS-232C data interface standard (other optional data interfaces can be installed)
- For use as a digital, explosion-protected "weighing sensor" connected to PLCs, or a max. of 2 platforms can be connected to the Combics indicator (in a hazardous area) or to a series X5 controller (in the non-hazardous area and connected via converter | barrier)
- Can be networked with up to 8 client devices



**Zone 2 (acc. to CENELEC, IEC)**  
Division of hazardous areas according to the Directive 1999/92/EC, ATEX 137:

A place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapor or mist is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

This zone requires equipment group 3G (1G or 2G is also possible).



Combics series + option Y2



Midrics series + option Y2



IF Flat-bed scale + option Y2



IU Pallet scale + option Y2



X5 controller

## Zone 2

### Combics series:

#### CIS. indicator + Option Y2

- With built-in A/D converter for analog platforms or load cells up to 32 t
- Type of ignition protection: "restricted breathing enclosure" (non-breathing), ATEX: II 3GD EEx nR II T6 T80°C
- In 3 versions featuring different levels of applications
- Stainless steel housing with cable glands
- 3 interface ports standard

### Combics series:

#### CISPRO terminal + Option Y2

- For analogue platforms, load cells or digital platforms
- Type of ignition protection: "restricted breathing enclosure" (non-breathing), ATEX: II 3 GD EEx nA nC nL IIC T4 T80°C IP6X
- Various application programs
- Programmable
- Stainless steel housing with cable glands
- 3 interface ports standard | 4 optional interface ports

### Combics series:

#### CAP platforms + Option Y2

- Weighing capacity from 0.1 g to 3 t, also factory-verified for legal metrology
- Type of ignition protection: "non-sparking," ATEX: II 3 GD EEx nA II T6 T80°C
- Low-profile, stainless steel design or painted
- Other materials optional for the load plate, underframe and lift-deck system

### Combics series: CW.S. complete scale + Option Y2

- Weighing capacity from 0.1 g to 3 t, also factory-verified for legal metrology
- Type of ignition protection: "non-sparking, restricted breathing enclosure," ATEX: II 3 GD EEx nAR II T6 T80°C
- 4 display unit versions featuring different levels of applications
- Stainless steel material, 11 different sizes
- Customized equipment and features (interfaces, materials,...) optionally available

### Signum series:

#### SIW. + Option Y2

- Weighing capacity: 3 kg up to 65 kg
- ATEX: II 3GD Ex nA nC nL IIC T4 T80°C IP6x
- 3 different technologies
- 3 application levels
- exceptional performance features and, despite its wide variety of functions, is a very easy-to-operate scale

### Factory series: IS digital precision platforms

- Weighing capacity from 0.1 g to 300 kg, also factory-verified for legal metrology
- Type of ignition protection (150, 300 kg): "restricted breathing enclosure" ATEX: II 3 GD EEx nR II T6 T80°C
- Type of ignition protection (16..64 kg): "non-sparking," ATEX: II 3 GD EEx nA II T4 T80°C IP65 (without built-in, motorized calibration weight)

### Midrics series:

#### MIS. indicator, MAP. platforms, MW.. complete scales

- Weighing capacity: 3 kg up to 3 t
- ATEX: Platform: II 3GD Ex nA II T6 T80°C IP6x
- Atex: Indicator/complete scale: II 3GD Ex nA nL IIC T4 T 80°C IP6x
- 2 Indicators, 13 Platform sizes, 3 resolutions
- easy to use, robust and easy to clean

### IFS and IFP flat-bed scales with Option Y2

- Weighing capacity 0.1 g to 3 t, also factory verified for legal metrology
- IFS material: stainless steel; IFP material: painted steel; other materials optional
- Type of ignition protection: "non-sparking," ATEX: II 3GD EEx nA II T6 T80°C
- High-grade material and outstanding workmanship – design ideal for use in the pharmaceutical industry
- Easy to clean thanks to load plate lifting mechanism
- Exceptionally low-profile design for especially easy loading
- High protection rating: IP68

### IUS and IUG pallet scales with Option Y2

- Weighing capacity from 0.1 g to 1.5 t, also factory-verified for legal metrology (1 × 3000e | 2 × 3000e ; class III)
- IUS material: stainless steel; IUG material: galvanized steel
- Type of ignition protection: "non-sparking," ATEX: II 3GD EEx nA II T6 T80°C
- High protection rating: IP68

### PR17... transmitters

- Modern field instrumentation for tank and hopper scales
- Type of ignition protection (PR171x digital transmitters): "non-sparking," ATEX: II 3 G Ex nA II T4
- Type of ignition protection (PR1720 fieldbus transmitters): "non-sparking," ATEX: II 3 GD EEx nA II T4 T100°C IP65
- Intrinsically safe load cell power supply
- With or without weight display
- "Smart calibration" via load cell data
- Field housing: IP65 or 19" Euroformat

### X5 controllers

- Pre-programmed applications
- Type of ignition protection: "non-sparking, hermetically sealed device, energy limited," ATEX: II 3 G Ex nACL II T4
- Easy menu-guided operation, integrated PLC function
- Option cards already installed

### Load cells

- Wide capacity range up to 300 t
- Various designs (tension and bending beam load cells, compression load cells, PanCake® level cells, specialty load cells)

## Zone 22



### Zone 22 (acc. to CENELEC, IEC)

Division of hazardous areas according to the Directive 1999/92/EC, ATEX 137:

A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

This zone requires equipment group 3D (1D and 2D are also possible).



CISPRO + option Y2



Combics platform + option Y2



Signum + option Y2



PR1720 fieldbus transmitter



MDP metal detector



EX load cells

## Zone 22

### Combics series:

#### CIS indicator + Option Y2

- Can be used with Option Y2 in zones 2 and 22
- With built-in A/D converter for analog platforms for load cells up to 32 t
- Type of ignition protection: "restricted breathing enclosure," ATEX: II 3GD EEx nR II T6 T80°C
- Stainless steel housing with cable glands
- 3 data interfaces standard

### Combics series:

#### CISPRO terminal + Option Y2

- For analogue platforms, load cells or digital platforms
- Type of ignition protection: "restricted breathing enclosure"(non-breathing) ATEX: II 3 GD EEx nA nC nL IIC T4 T80°C IP6X
- Various application programs
- Programmable
- Stainless steel housing with cable glands
- 3 interface ports standard | 4 optional interface ports

### Combics series:

#### CAPx platforms + Option Y2

- Weighing capacity from 0.1 g to 3 t, also factory-verified for legal metrology
- Type of ignition protection: "non-sparking," ATEX: II 3 GD EEx nA II T6 T80°C
- Low-profile, stainless steel design
- Other materials optional for the load plate, underframe, and lift-deck system

### Combics series: CW.S. complete scale + Option Y2

- Weighing capacity from 0.1 g to 3 t, also factory-verified for legal metrology
- Type of ignition protection: "non-sparking, restricted breathing enclosure," ATEX: II 3 GD EEx nAR II T6 T80°C
- 4 display unit versions featuring different levels of applications
- Stainless steel material, 11 different sizes
- Customized equipment and features (interfaces, materials...) optionally available

### Signum series:

#### SIW. + Option Y2

- Weighing capacity: 3 kg up to 65 kg
- ATEX: II 3GD Ex nA nC nL IIC T4 T80°C IP6x
- 3 different technologies
- 3 application levels
- exceptional performance features and, despite its wide variety of functions, is a very easy-to-operate scale

### Midrics series:

#### MIS. indicator, MAP. platforms, MW.. complete scales

- Weighing capacity: 3 kg up to 3 t
- ATEX: Platform: II 3GD Ex nA II T6 T80°C IP6x
- ATEX: Indicator/complete scale: II 3GD Ex nA nL IIC T4 T 80°C IP6x
- 2 Indicators, 13 Platform sizes, 3 resolutions
- easy to use, robust and easy to clean

### Factory series: IS digital precision platforms

- Weighing capacity from 0.1 g to 300 kg, also factory-verified for legal metrology
- Type of ignition protection (150, 300 kg): "restricted breathing enclosure," ATEX: II 3 GD EEx nR II T6 T80°C
- Type of ignition protection (16...64 kg): "non-sparking," ATEX: II 3 GD EEx nA II T4 T80°C IP65 (without built-in motorized calibration weight)
- RS-232C data interface standard (other optional data interfaces can be installed)
- For use as a digital, explosion-protected "weighing sensor" connected to PLCs, or a max. of 2 platforms can be connected to the Combics indicator (in a hazardous area) or to a series X5 controller (in the non-hazardous area)
- PR1720 fieldbus transmitter

### IFS and IFP flat-bed scales with Option Y2

- Weighing capacity from 0.1 g to 3 t, also factory-verified for legal metrology (1 × 3000e | 2 × 3000e ; class (III))
- IFS material: stainless steel; IFP material: painted steel; other materials optional
- Type of ignition protection: "non-sparking," ATEX: II 3GD EEx nA II T6 T80°C
- High-grade material and outstanding workmanship – design ideal for use in the pharmaceutical industry
- Easy to clean thanks to load plate lifting mechanism
- Exceptionally low-profile design for especially easy loading
- High protection rating: IP68

### IUS and IUG pallet scales with Option Y2

- Weighing capacity from 0.1 g to 1.5 t, also factory-verified for legal metrology (1 × 3000e | 2 × 3000e ; class (III))
- IUS material: stainless steel; IUG material: galvanized steel
- Type of ignition protection: "non-sparking," ATEX: II 3GD EEx nA II T6 T80°C
- High protection rating: IP68

### PR1720 transmitters

- Modern field instrumentation for tank and hopper scales
- Type of ignition protection (PR1720 fieldbus transmitters): "non-sparking," ATEX: II 3 GD EEx nA II T4 T100°C IP65
- Intrinsically safe load cell power supply
- Fieldbus protocols, interface (also analog output)
- "Smart calibration" via load cell data
- Field housing: IP65

### MDP metal detector

- For detection of metal particles
- ATEX: II 3 D T80°C IP5X
- Safeguards against machine damage and downtimes
- Optimal compliance with legal requirements, e.g., HACCP
- Assures product quality in compliance with ISO9001

### Load cells

- Wide capacity range up to 300 t
- Various designs (tension and bending beam load cells, compression load cells, PanCake® level cells, specialty load cells)



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