





### **WEIGHING IN**

### **HAZARDOUS AREAS**

# **ATEX**

Dini Argeo is a company specializing in the design and production of scales and weighing systems, wellestablished in the world market for its quality and reliability.

The weighing solutions offered by Dini Argeo cover all industrial weighing applications: from counting pieces to automatic dosages, from logistics weighing (pallet truck scales, palletweighers, weighing forks for lift trucks, suspended crane scales) to labelling, from checking production lines to vehicle weighing.

Dini Argeo also offers a wide range of interfaces and accessories guaranteeing the maximum connectivity and flexibility of use.

The products, besides conforming to the quality standards recognised at an international level, are submitted to the best independent certification laboratories, accredited at a European level, in order to guarantee the maximum quality to the customer.

Dini Argeo exports to over 60 countries around the world and offers qualified and specialised technical personnel.

To obtain further information regarding our products, do not hesitate to contact us or visit the www.diniargeo.com web

















Dini Argeo has a Quality Management System Certification according to the UNI EN ISO 9001:2000 norm for the design, production and post sales assistance of measuring instruments, scales and weighing systems, components and software.

(CSQ N° 9105.DINI certificate)



Dini Argeo is an ATEX notified company according to the 94/9/CE directive (attachment IV). The Dini Argeo production process is therefore certified for the production and sale of equipment marked Ex, destined for use in potentially explosive environments. The Ex logo next to the product indicates the possibility of having the ATEX product certified upon request. (CEC 07 ATEX 095 I rev.1 certificate)



The digital ISOLOAD® technology greatly improves the performance and measuring accuracy in every point of the weighing load surface by allowing to manage, control and independently calibrate each single load cell in the scale or weighing system. This also shortens the time for the subsequent periodic calibration or maintenance checks.



Dini Argeo produces instruments approved or approvable for legal for trade use (according to the European standard EN 45501 - Directive 2009/23/EC).

The CE-M certification issued by the Metric Central Office attests that the instrument has a CE TYPE APPROVAL CERTIFICATE that certifies the suitability for legal for trade use. This approval is required for all uses in relation with third parties.



The products bearing this mark conform with the recommendations of the International Organisation of Legal Metrology (OIML) regarding the standardisation of the approval prescriptions. This certification is made by an internationally recognized laboratory.

# THE DINI ARGEO ATEX SOLUTIONS

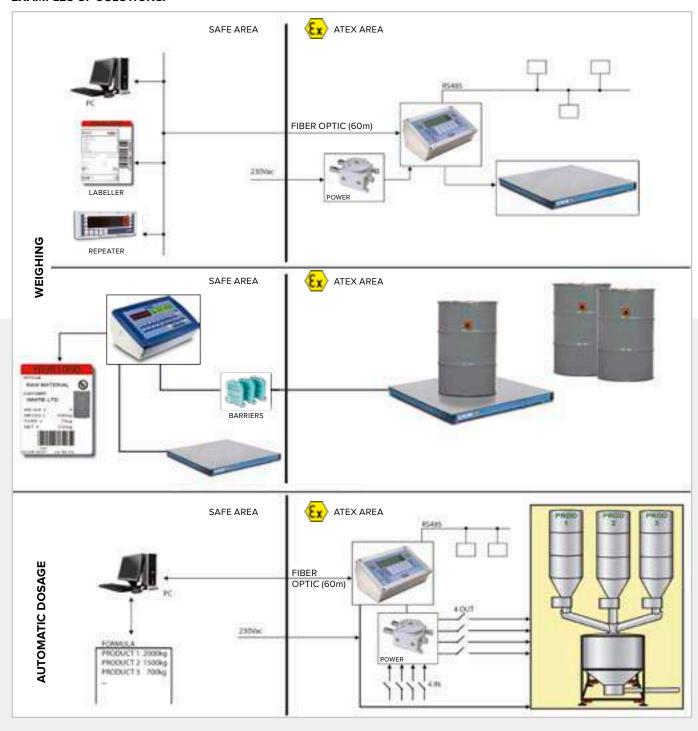
Dini Argeo s.r.l offers weighing solutions for hazardous environments classified by the ATEX 99/92/CE directives.

From the design of the electronic boards to the production of indicators, load cells, platforms, pallet truck scales, crane scales, and accessories, Dini Argeo srl offers a wide range of devices for ATEX zones.

Dini Argeo is also able to supply a certification or declaration of conformity of the whole system, guaranteeing to the

customer the safety of the purchased system and at the same time supplying a complete service in order to speed up the development or installation time.

### **EXAMPLES OF SOLUTIONS:**



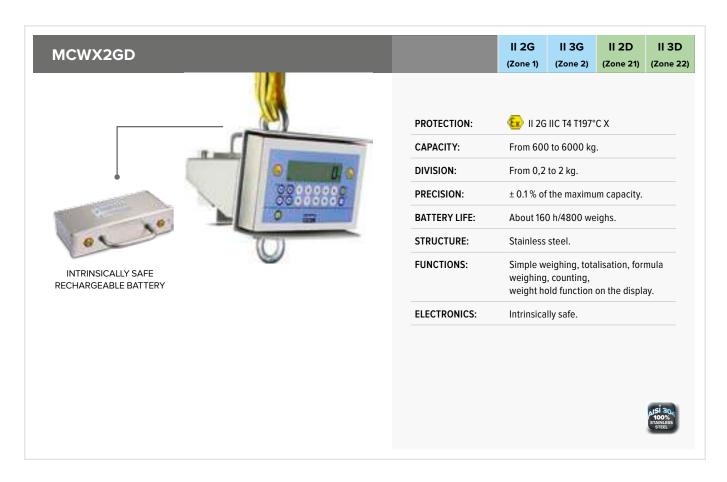
# **PRODUCT SUMMARY TABLE**

			ZONE					
			GASES			DUSTS		
PRODUCT	ТҮРЕ	PROTECTION DEGREE	II 1G (Zone 0)	II 2G (Zone 1)	II 3G (Zone 2)	II 1D (Zone 20)	II 2D (Zone 21)	II 3D (Zone 22)
MCWX2GD MCWATEX2GD	CRANE SCALE	II 2GD IIC T4 T197°C X		1	✓		1	✓
TPWX2GD TPWX2GDI	PALLET TRUCK	II 2GD IIB T4 T197°C X		1	1		1	✓
TPWX3GD TPWX3GDI	PALLET TRUCK	II 3GD IIC T6 T130°C X			1			✓
DFWATEX2GD	INDICATOR	II 2G Ex ia IIC T4 Gb II 2D Ex tb IIIC T197°C Db IP65		1	1		✓	1
DFWATEX2GDF	INDICATOR	II 2G Ex ia IIC T4 Gb II 2D Ex tb IIIC T197°C Db IP65		1	1		✓	✓
3590EXTxxBC3GD	INDICATOR	II 3G Ex nR IIC T6 Gc X II 3D Ex tc IIIC T135°C Dc IP68 X			1			1
3590EGTXT01BC3GD	INDICATOR	II 3G Ex nR IIC T6 Gc X II 3D Ex tc IIIC T135°C Dc IP68 X			✓			✓
DGT603GD	INDICATOR	II 3G Ex nR IIC T6 Gc X II 3D Ex tc IIIC T130°C Dc IP68 X			1			1
DFWATEX3GD	INDICATOR	II 3G Ex nR IIC T6 Gc X II 3D Ex tc IIIC T130°C Dc IP68 X			✓			✓
DFWLKI3GD	INDICATOR	II 3G Ex nR IIC T6 Gc X II 3D Ex tc IIIC T130°C Dc IP68 X			✓			✓
DFWATEX3D	INDICATOR	II 3D Ex tc IIIC T130°C Dc IP65 X						✓
PW200XRD	POWER SUPPLIER	II (2)/2 G [Ex ib]/Ex d IIC T4 Gb II (2)/2 D [Ex ib]/Ex tb IIIC T140°C Db		1	1		1	1
DFWBP76ATEXC	RECHARGEABLE BATTERY	II 2G Ex ia IIC T4 Gb II 2D Ex tb IIIC T197°C Db IP65		✓	✓		1	✓
BP6ESTATEX3GD	RECHARGEABLE BATTERY	II 3G Ex nA IIC T6 Gc X II 3D Ex tc IIIC T130°C Dc IP65 X			✓			✓
OBRF3GD	RADIO FREQUENCY MODULE	II 3G Ex nA IIC T6 Gc X II 3D Ex tc IIIC T125°C Dc IP66 X			✓			✓
OBWIFI3GD	WIFI MODULE	II 3G Ex nA IIB T6 Gc X II 3D Ex tc IIIC T125°C Dc IP66 X			✓			✓
PLATFORMS	WEIGHING MODULE	II 2GD c IIC T6 85°C		✓	✓		1	✓
LOAD CELLS	LOAD RECEPTORS	II 1G Ex ia IIC T6 (Ta -20÷+40°C) TX (Ta -20÷+65°C) Ga II 1D Ex ta IIIC TX°C (Ta -20÷+40°C) TX°C (Ta -20÷+65°C) Da IP65	•	1	1	•	•	•
ZBPW ZBSG ZBSN	ZENER BARRIERS	II (1) GD [Ex ia Ga] IIC [Ex ia Da] IIIC	1	1	•	1	1	1
KMB4	BOX WITH ZENER BARRIERS	II 3G Ex nA II T4 IP65 (-20°C ≤ Ta ≤ +40°C)			1			
JB4QAI	JUNCTION BOX	II 2G Ex ib IIC T6 Gb II 2D Ex tb IIIC T115°C Db IP65		1	•		1	•

## **ELECTRONIC CRANE SCALES**

These are quickly installed on the lifting system (cranes, crane bridges, etc.). The whole structure is in steel guaranteeing the maximum resistance to accidental knocks. Great resistance to overloads. Very little distance between upper ring and lower hook, in order to not reduce the load capacity of the lifting system.



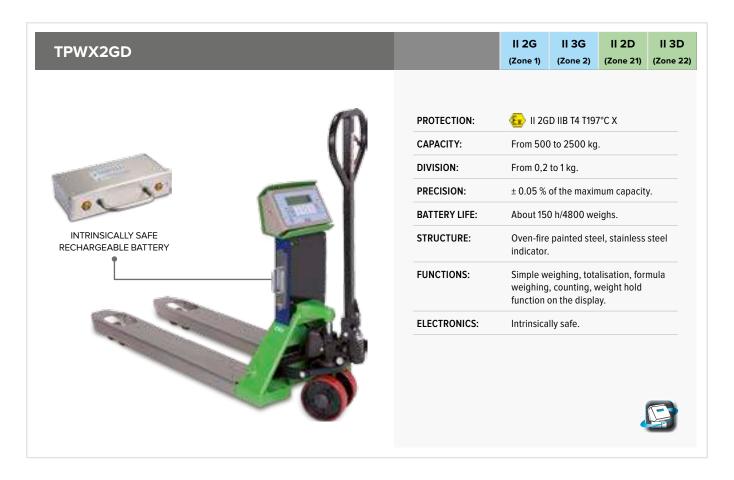


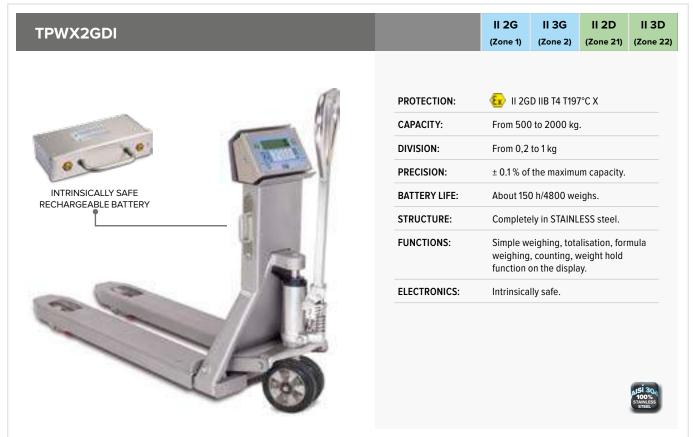


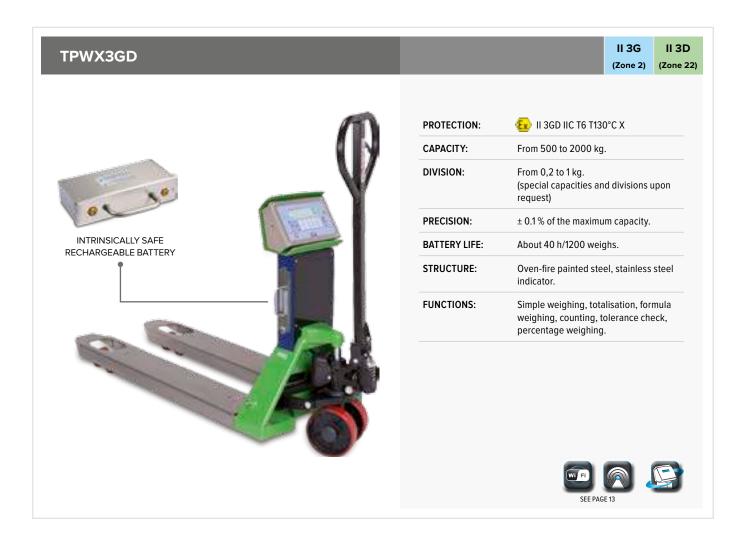
## **PALLET TRUCK SCALES**

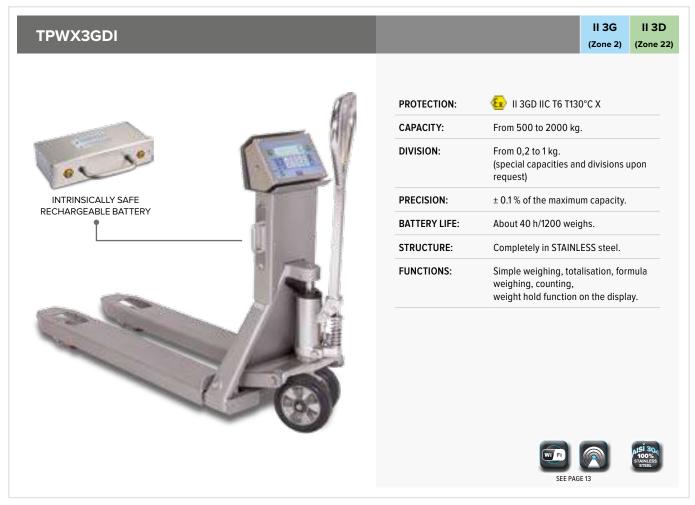
For weighing quickly, directly where it is necessary. The TPWX pallet truck scales are precise, sturdy and easy to use. The dimensions are standardised for EUROPALLETS. The indication of the weight is clear and easy to read. The electronic parts are protected from knocks, sprays, and dust.











# **WEIGHT INDICATORS**

Suitable for the creation of weighing and dosage systems in hazardous areas, offering a wide range of functioning modes and interfaces for communicating with external devices, as well as a great versatility of use.





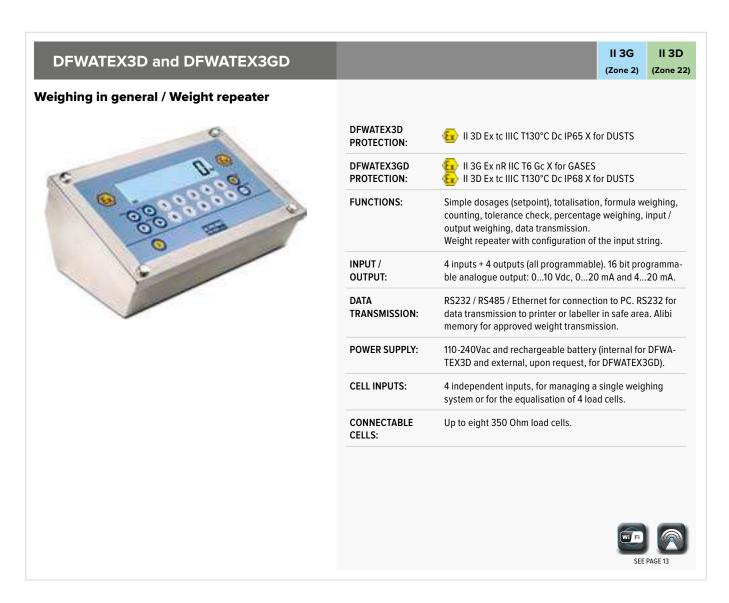


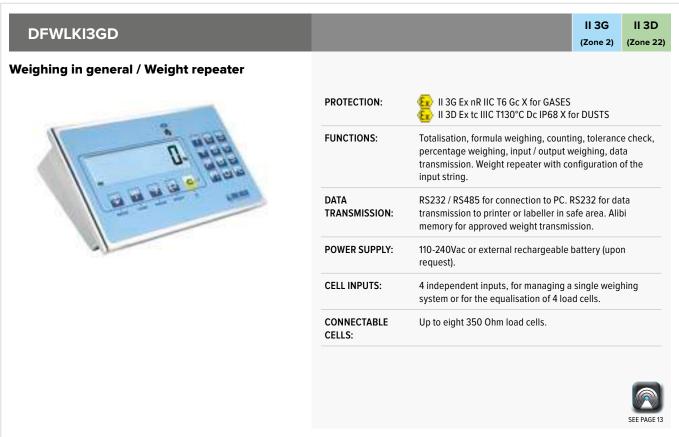
DFWATEX2GDF		II 2G (Zone 1)	II 3G (Zone 2)	II 2D (Zone 21)	II 3D (Zone 22)		
Weighing and dosage							
C	PROTECTION:	II 2G Ex ia IIC T4 Gb for GASES II 2D Ex tb IIIC T197°C Db IP65 for DUST:					
E 0.00	FUNCTIONS:	Single/multi-product in loading or unloading, 16 products/15 formulas (multi-product mode) or 40 formulas (single-product mode).					
6000000	INPUT / OUTPUT:	4 inputs + 4 outputs (all programmable).					
600	DATA TRANSMISSION:	Through RS485 or fiber optics, up to 60m (longer distances available upon request). Alibi memory for approved weight transmission.					
	POWER SUPPLY:	10,5 Vdc with PV power adapter of safe external re	ATEXC intrin				
Single-product Multi-product Dosage Dosage	CELL INPUTS:	4 independent i weighing syster cells.					
	CONNECTABLE CELLS:	Up to four 350 (	Ohm load ce	lls.			
	ELECTRONICS:	Intrinsically safe	2.				
Loading Unloading							

#### II 3G II 3D 3590EGT and 3590EXT (Zone 2) (Zone 22) **Advanced industrial applications** PROTECTION: II 3G Ex nR IIC T6 Gc X for GASES For industrial applications in which, in addition to the II 3D Ex tc IIIC T135°C Dc IP68 X for DUSTS simple weighing, one needs the advanced management DISPLAY: Backlit graphic display with TOUCH SCREEN of the databases, totals and printouts. Particolarly suitable technology and multilanguage software, in the for interfacing with PC software. 3590EGT model. Red LED display for clear visualization of the weight and LCD display for visualizing the user messages, in the 3590EXT model. PROGRAMS: "AF01" Totalisation and simple dosage. "AF03" Input / output weighing. "BATCH1" Single-product dosage. "BATCH" Multi-product dosage. Statistical check upon request. INPUT / Up to 8 inputs and 16 outputs (all programmable). OUTPUT: 16 bit programmable analogue output: 0...10 Vdc, 0...20 mA and 4...20 mA. DATA RS232 / RS485 / Ethernet serial ports for connection 3590EGT TRANSMISSION: to printer (in safe area), PC or PLC. Profibus, to install in safe area. Alibi memory for approved weight transmission. POWER SUPPLY: 110-240Vac or external rechargeable battery (upon request). **CELL INPUTS:** 4 independent inputs, for managing up to 4 weighing systems or for the equalisation of 4 load cells. CONNECTABLE CELLS: Up to sixteen 350 Ohm load cells.

3590EXT

DGT603GD		II 3G II 3D (Zone 2) (Zone 22)				
fultifunction weighing / Weight repeater	PROTECTION:	II 3G Ex nR IIC T6 Gc X for GASES II 3D Ex tc IIIC T130°C Dc IP68 X for DUSTS				
	DISPLAY:	Maxi 6-digit 60mm display made up of highly efficient SMT LEDs, clearly visible from a distance and from all angles. Brightness: 750mdc. Brightness intensity adjustable directly through the software.				
	FUNCTIONS:	Simple dosages (setpoint), totalisation, formula weighing, counting, input / output weighing, data transmission. Weight repeater with configuration of the input string.				
8888	INPUT / OUTPUT:	2 inputs + 2 outputs (all programmable). 16 bit, programmable analogue output: 010 Vdc, 020 mA and 420 mA.				
	DATA TRANSMISSION:	RS232 / Ethernet and RS485 ports for connection to printer, or other external units (in safe area), PC. Integrated PROFIBUS. Available Modbus RTU protocol. Alibi memory for approved weight transmission.				
	POWER SUPPLY: 110-240Vac					
	CELL INPUTS:	4 independent inputs, for managing up to 4 weighing systems or for the equalisation of 4 load cells.				
	CONNECTABLE Up to sixteen 350 Ohm load cells. CELLS:					
		SEE PAGE 13				



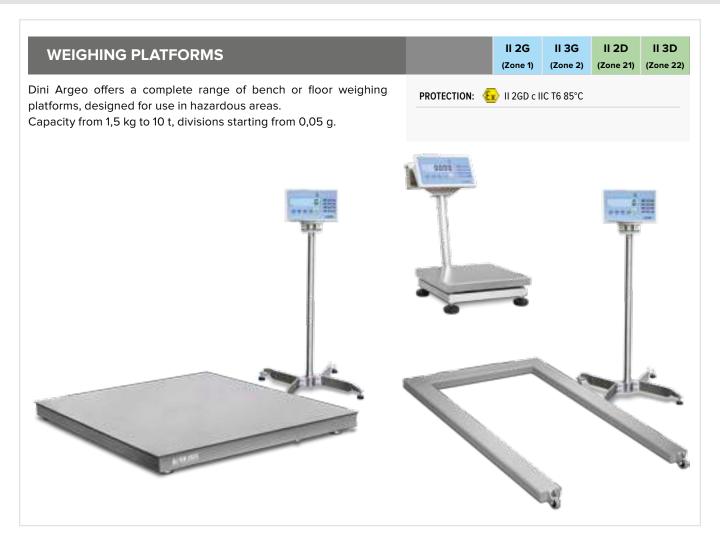


# **PLATFORMS AND LOAD CELLS**



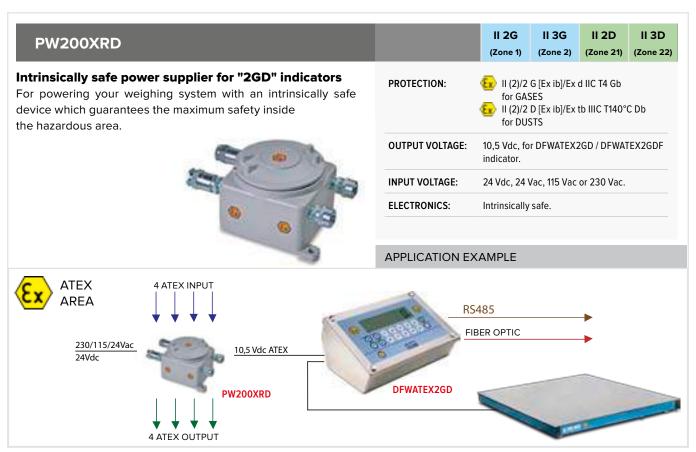


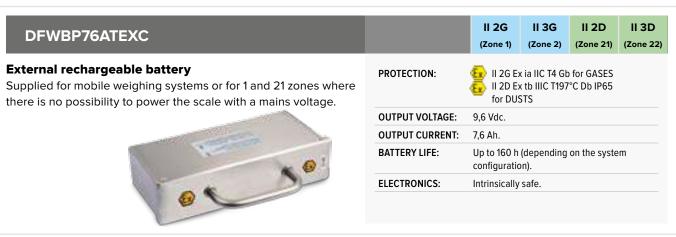




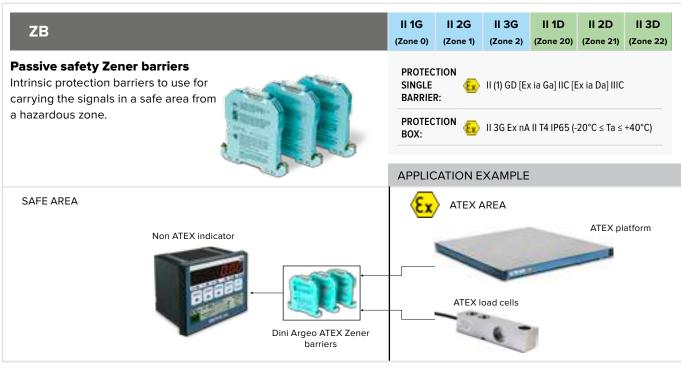


### **ACCESSORIES**

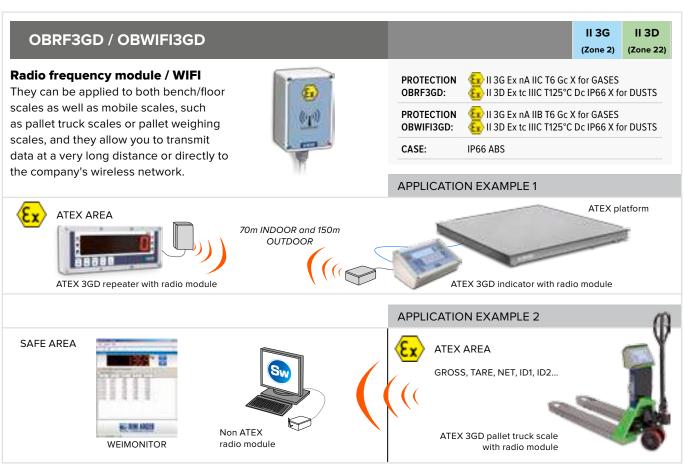












# **ANALYSIS OF THE SYSTEM, CERTIFICATES,** AND DECLARATIONS OF CONFORMITY

Dini Argeo offers also a free pre-sales service with the purpose of creating a custom-made price estimate according to the customer's needs.

Once one has identified the classification of the hazardous area in which the scale will be installed as well as the desired weighing application, our authorised technical personnel will suggest the best solution for satisfying your requirements with our products.

Each single scale or component for wei-

ghing is accompanied by the relative certificate or declaration of conformity, as a guarantee of safety.

Each weighing system can also be supplied with a relative declaration of conformity of the whole.

#### THE MAIN AVAILABLE DECLARATIONS OF CONFORMITY ARE:

### **DCATEX2GD and DCATEX3GD** (for gases and dusts)

ATEX declaration of conformity of the whole system for a weighing system completely installed in a hazardous area. An example of a weighing system is a weight indicator powered by battery or power supplier, connected to a junction box with 4 load cells or to a weighing platform.



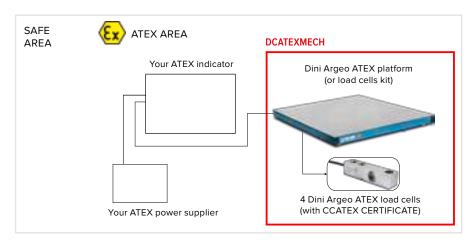
### **DCATEXMB4** (for gases and dusts)

ATEX declaration of conformity of the whole system which allows you to install the platform or the load cells in a hazardous area and the weight indicator in the safe area, with the aid of the ZENER barriers.



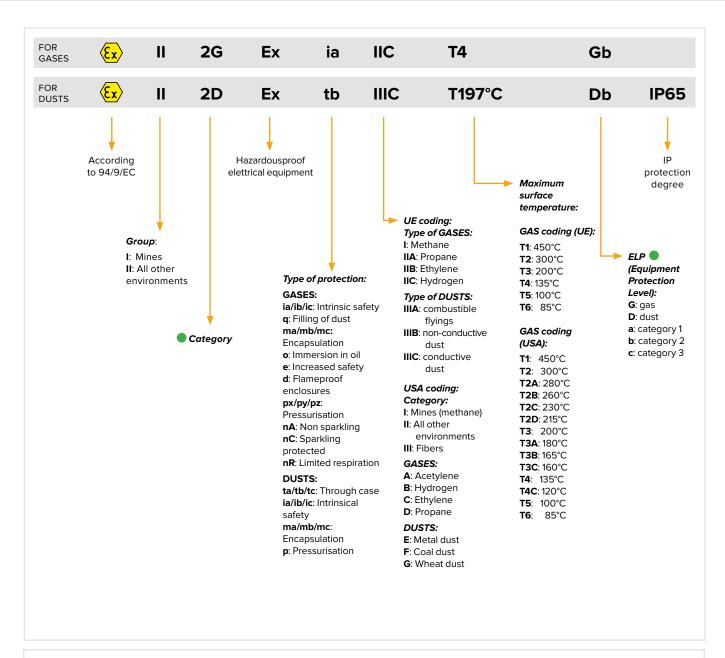
### **DCATEXMECH** (for gases and dusts)

ATEX declaration of conformity of the whole system which allows to use the mechanical structure in the hazardous area. An example of a mechanical structure can be a KIT for installing a cell with a relative ATEX load cell or a platform, with a junction box and 4 ATEX load cells. This certification is useful, when, for example one purchases from Dini Argeo only the load receptor (i.e. the platform).



**CCATEX** (for gases and dusts) ATEX certification of conformity for each single load cell intended for use in hazardous areas.

# **DECODING EXAMPLE OF AN ATEX MARKING**



Instrument category:	ZONE	Atmosphere G= gases D= dusts	EPL
CATEGORY 1 Very high protection, for areas which are permanently or highly probable to be hazardous.	0 20	G D	Ga Da
CATEGORY 2 High protection, for areas that are probably hazardous.	1	G	Gb
	21	D	Db
CATEGORY 3	2	G	Gc
Normal protection, for areas which are unlikely to be hazardous.	22	D	Dc

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