

ATEX 
Certified products



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In light of technical updates, **Univer S.p.A.** reserves the right to modify technical features of their products with no obligation to issue prior notice.

Information contained in the present catalogue is pure indication, for further details about product technical features and related parameter values to be respected for a proper functioning, please refer to the datasheets available at:

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Directive 2014/34/EU ATEX

Products classified for use in potentially explosive atmospheres

The **ATEX Directive 2014/34/EU** (equipment and protective systems intended for use in potentially explosive atmospheres) of the European Parliament and of the Council of 26 February 2014 concerns the harmonisation of the laws of the Member States relating to equipment and protective systems intended to be used in potentially explosive atmospheres.

The European “**ATmosphère EXplosible**” Directive, called **ATEX**, is required by the law of all the EU Member States since 1 July 2013 and it concerns all the products marketed in the European Union intended for use in potentially explosive areas.

The first issue in 1994 has been replaced by the **2014/34/EU Directive**, which finally came into force on 20 April 2016.

- The Directive includes non electrical equipment and devices, such as pneumatic cylinders
- The devices are assigned to categories that are assigned to specific potentially explosive areas
- The devices must bear the CE-Ex marking
- Products designed for use in potentially explosive areas must be accompanied by instructions for use and declaration of conformity
- Products intended for use in potentially explosive areas due to the presence of dusts as well as hazardous gases are included in the directive.

A potentially explosive atmosphere can be composed of gases, mists, vapours or dusts which can originate in factories or in all areas with constant or occasional presence of flammable substances. An explosion can take place in case of simultaneous presence of flammable substances and a source of ignition in a potentially explosive atmosphere.

A source of ignition can have:

- Electric origin (electric arcs, induced currents, heat generated by the Joule effect)
- Mechanical origin (hot surfaces generated by friction, sparks generated by impact between metal bodies, electrostatic discharge, adiabatic compression)
- Chemical origin (exothermic reactions between materials)
- Open flames

Products implying one or more sources of ignition for potentially explosive atmospheres during normal use or caused by malfunctions are subject to approval.

The producer must ensure the conformity of the product to what is declared and indicated on the marking of the product itself.

The product must always be accompanied by the relevant instruction. The machinery manufacturer and/or user must identify the risk zone the products are used in, with reference to the Directive 99/92/CE, and buy the product complying with the use in the provided zone, paying attention to the relevant instructions.

If a product is composed of 2 components with different marking the component belonging to the lower category determines the category of the whole product.

Example:

Coil suitable for Category 3 (zone 2/22), marked Ex - II 3 EEx...

Valve suitable for Category 2 (zone 1/21), marked Ex - II 2 EEx...

The combination of valve and coil can only work in Category 3 (zone 2/22).

EQUIPMENT CLASSIFICATION

Group I Mining equipment			Group II Surface equipment				
CATEGORY	PROTECTION LEVEL	APPLICATIONS	CATEGORY	PROTECTION LEVEL	APPLICATIONS	GAS ZONE	DUST ZONE
M1	Very high	Equipment which can be used in presence of explosive atmospheres	1	Very high	Presence of explosive atmosphere: always, frequently and for long periods of time	0	20
M2	High	Equipment which must be not operated in presence of explosive atmospheres	2	High	Presence of explosive atmosphere: probable	1	21
			3	Normal	Presence of explosive atmosphere: low probability and for a short period of time	2	22

Explosion group

II	For all gases of Group II, if protection class requires it. Ex. "nA" See EN.50021
IIA	For all gases of Group IIA, if protection class requires it. Ex. "ia" See EN.50020
IIB	For all gases of Group IIA - IIB, if protection class requires it. Ex. "ia" See EN.50020
IIC	For all gases of Group IIA - IIB - IIC, if protection class requires it. Ex. "ia" See EN.50020

TEMPERATURE CLASSIFICATION

Group I Mining equipment

Temperatures $\leq 150^{\circ}\text{C}$ or $\leq 450^{\circ}\text{C}$ according to the dust layer that covers the device

Group II Surface equipment

T-Class	MAXIMUM SURFACE TEMPERATURE	MINIMUM IGNITION TEMPERATURE OF GASES
T1	450 °C	>450 °C
T2	300 °C	>300 °C - $\leq 450^{\circ}\text{C}$
T3	200 °C	>200 °C - $\leq 300^{\circ}\text{C}$
T4	135 °C	>135 °C - $\leq 200^{\circ}\text{C}$
T5	100 °C	>100 °C - $\leq 135^{\circ}\text{C}$
T6	85 °C	>85 °C - $\leq 100^{\circ}\text{C}$

HOW TO READ THE MARKING

EXAMPLE OF ATEX MARKING

  II 2 Gc IIC T5 II 2 Dc T100°C

Type of equipment

Mechanical

 = European Community Mark

 = Conformity Mark with reference to Directive 2014/34/UE and relevant technical rules

II = Group II, equipment for surface industries

2 = Equipment of Category 2

G = Equipment for use with GAS zone 1 and 2

D = Equipment for use with DUSTS zone 21 and 22

c = Type of protection applied, i.e. constructional safety (EN 13463-5)

IIC = GAS Group

T5 = Temperature class (GAS)

T100°C = Maximum surface temperature (DUST)

COMPONENTS AND ACCESSORIES WITHOUT ATEX CLASSIFICATION

Accessories for UNIVER products (fittings, silencers, nipples, nuts, tubes, reservoirs, pressure gauges, manual valves, check valves, quick exhaust valves, blocking valves, selectors, limit switches and any other accessoires which can be attributed to various product families) can be used in ATEX zones 1,2 and 21,22.

The accessories are not sources of ignition if assembled correctly according to instructions for use and maintenance, therefore they can't change in any way the classification of the products they are assembled on, in compliance with the directive 2014/34/EU.

S1 Rodless Cylinders Standard version - Ø 16 ÷ 50 mm

**Carriage type**

- Standard carriage
- Medium carriage (except for Ø16)
- Long carriage (except for Ø16)

Stroke (mm)

- Up to 5000 (Ø16)
- Up to 6000 (Ø25÷50)

CATEGORY 2

II 2Gc IICT5 II 2Dc T100°C

L1-N Locking unit for cylinders and piston rods

**Cylinder bore (mm)**

Ø 16-20-25-32-40-50-63-80-100-125

Piston rod bore (mm)

Ø 6-8-10-12-16-20-25-32

CATEGORY 2

II 2Gc IICT5 II 2Dc T100°C

RT 2/3 stage Telescopic Pneumatic Cylinders Ø 25 ÷ 63 mm

**Type**

- Stainless steel piston rod
- Chromium-plated steel piston rod

Version

- D.A. Female piston rod
- D.A. Male piston rod

CATEGORY 2

II 2Gc IICT5 II 2Dc T100°C

VALVES - Category II certificate n. 557/Ex - Ab 2411/15

Solenoid valves are supplied without coil and connector. The choice of the coil determines the ATEX category.

B 10 mm Nanovalves

**Version**

3/2 NC, 3/2 NO

Connections

on sub-base

CATEGORY 3

II 3 GD c nA II T5 -10 °C ≤ Ta ≤ 45 °C

A ISO 15218 - 15 mm Microvalves

**Version**2/2 NC, 2/2 NO
3/2 NC, 3/2 NO**Connections**

interface on sub-base

CATEGORY 3

II 3 GD c nA II T5 -10 °C ≤ Ta ≤ 45 °C

AA U1 Miniature Electropilots

**Version**2/2 NC
3/2 NC, 3/2 NO**Connections**

M5, G1/8, CNOMO, for sub-base

CATEGORY 2

II 2Gc IICT5 II 2Dc T100°C

AB U2 Miniature Electropilots

**Version**2/2 NC
3/2 NC, 3/2 NO**Connections**

G1/8, G1/4, CNOMO, for sub-base

CATEGORY 3

II 3 GD c nA II T5 -10 °C ≤ Ta ≤ 45 °C

D.A. = Double acting

S.A. = Single acting

BE ISO 5599/1 Valves size 1-2-3-4

**Version**

- Single/double pneumatic impulse
- Single/double electrical impulse

Connections

on sub-base

CATEGORY 2

CE  II 2Gc IIC T5 II 2Dc T100°C

AE ISO 5599/1 Light Series Valves size 1-2

**Version**

- Single/double pneumatic impulse
- Single/double electrical impulse

Connections

on sub-base

CATEGORY 2

CE  II 2Gc IIC T5 II 2Dc T100°C

BDA ISO 02 (18 mm), ISO 01 (26 mm) ISO 15407/1-2 Valves

**Version**

- Single/double pneumatic impulse

Connections

on sub-base

CATEGORY 2

CE  II 2Gc IIC T5 II 2Dc T100°C

AC-N NAMUR Valves

**Version**

- Single/double pneumatic impulse
- Single/double electrical impulse

Connections

G1/4

CATEGORY 2

CE  II 2Gc IIC T5 II 2Dc T100°C

CL/CM UNIVERSAL Valves G1/8 - G1/4

**Version**

- Mechanical operation
- Manual operation
- Single/double pneumatic impulse
- Single/double electrical impulse

Connections

G1/8, G1/4

CATEGORY 2

CE  II 2Gc IIC T5 II 2Dc T100°C

E COMPA 2 Miniature Valves

**Version**

- Mechanical operation
- Manual operation
- Single/double pneumatic impulse

Connections

M5, for sub-base

CATEGORY 2

CE  II 2Gc IIC T5 II 2Dc T100°C

**Version**

- Single/double electrical impulse

Connections

M5, for sub-base

CATEGORY 3

CE  II 3 GD c nA II T5 -10 °C ≤ Ta ≤ 45 °C

F COMPA 4 Miniature Valves



Version
- Single/double pneumatic impulse

Connections
for sub-base

CATEGORY 2

CE $\text{\textcircled{Ex}}$ II 2Gc IIC T5 II 2Dc T100°C



Version
- Single/double electrical impulse

Connections
for sub-base

CATEGORY 3

CE $\text{\textcircled{Ex}}$ II 3 GD c nA II T5 -10 °C ≤ Ta ≤ 45 °C

G6/GL6 20 mm - Valves and Solenoid Valves



Version
- Single/double pneumatic impulse

Connections
G1/8, for sub-base

CATEGORY 2

CE $\text{\textcircled{Ex}}$ II 2Gc IIC T5 II 2Dc T100°C



Version
- Single/double electrical impulse

Connections
G1/8, for sub-base

CATEGORY 3

CE $\text{\textcircled{Ex}}$ II 3 GD c nA II T5 -10 °C ≤ Ta ≤ 45 °C

G7 26 mm - Valves and Solenoid Valves



Version
- Single/double pneumatic impulse
- Single/double electrical impulse

Connections
G1/8

CATEGORY 2

CE $\text{\textcircled{Ex}}$ II 2Gc IIC T5 II 2Dc T100°C

PS COMBOBOX Valves



Version
- Single/double pneumatic impulse

Connections
tube Ø 4, 6, 8

CATEGORY 2

CE $\text{\textcircled{Ex}}$ II 2Gc IIC T5 II 2Dc T100°C

AC MIXED Valves G1/8 - G1/4 - G1/2



Version
- Mechanical operation
- Manual operation
- Single/double pneumatic impulse
- Single/double electrical impulse

Connections
G1/8, G1/4

CATEGORY 2

CE $\text{\textcircled{Ex}}$ II 2Gc IIC T5 II 2Dc T100°C

Version
- Single/double electrical impulse
(versions with U2 coil)

Connections
G1/2

CATEGORY 3

CE $\text{\textcircled{Ex}}$ II 3 GD c nA II T5 -10 °C ≤ Ta ≤ 45 °C

CH 2/2 - 3/2 Poppet Valves



Version
- Mechanical operation
- Manual operation

Connections
G1/8

CATEGORY 2

CE $\text{\textcircled{Ex}}$ II 2Gc IIC T5 II 2Dc T100°C

AF Poppet Valves for compressed air G1/8 ÷ G1 1/2

**Version**

- Single pneumatic impulse
- Single electrical impulse

Connections

G1/8 ÷ G1 1/2

CATEGORY 2


 II 2Gc IIC T5 II 2Dc T100°C
**Version**

- Single electrical impulse (versions with U2 coil)

Connections

G1/4 ÷ G1 1/2

CATEGORY 3


 II 3 GD c nA II T5 -10 °C ≤ Ta ≤ 45 °C

AG Poppet Valves for vacuum G1/8 ÷ G1 1/2

**Version**

- Single pneumatic impulse
- Single electrical impulse

Connections

G1/8 ÷ G1 1/2

CATEGORY 2


 II 2Gc IIC T5 II 2Dc T100°C
**Version**

- Single electrical impulse (versions with U2 coil)

Connections

G1/4 ÷ G1 1/2

CATEGORY 3


 II 3 GD c nA II T5 -10 °C ≤ Ta ≤ 45 °C

AI-JET Pneumatic Switches

**Version**

- Mechanical operation
- Manual operation

Connections

M5, tube Ø4

CATEGORY 2


 II 2Gc IIC T5 II 2Dc T100°C

AI-JET2 Valves with panel operation 3/2 - 5/2 - 5/3

**Version**

- Manual operation

Connections

M5, tube Ø4

CATEGORY 2


 II 2Gc IIC T5 II 2Dc T100°C

AM Pneumatic and Solenoid Foot Valves

**Version**

- Mechanical operation

Connections

G1/8, G1/4

CATEGORY 2


 II 2Gc IIC T5 II 2Dc T100°C

P10/P15 COMPACT Valves

**Version**

- Single/double pneumatic impulse

Connections

M5, G1/8, for sub-base

CATEGORY 3


 II 3 GD c nA II T5 -10 °C ≤ Ta ≤ 45 °C

AP Binary Counter (flip-flop)

**Version**

- Single pneumatic impulse
- Single electrical impulse

Connections

G1/8

CATEGORY 2

II 2Gc IIC T5 II 2Dc T100°C

AM Complementary Valves

**Version**

- AM-50 Flow control valve
- AM-51 Signal processing valve
- AM-52 Gradual starter
- AM-53 Economizer
- AM-54 Check valve
- AM-55 Blocking valve

CATEGORY 2

II 2Gc IIC T5 II 2Dc T100°C

COILS

DA/DB/DC/DD/DE Coils

**30 mm (U1/U3)**

DC-0502L300Z 24 V DC 5,3 W
 DC-0507L300Z 24 V AC 50/60 Hz 10 VA
 DC-0509L300Z 110 V AC 50/60 Hz 10 VA
 DC-0510L300Z 230 V AC 50/60 Hz 10 VA

CATEGORY 2

II 2Gd Ex mb II eT4 Gb

II 2Gd Ex mb IIIC T135° CDb

**10 mm (U04)**

DE-052L030X 24 V DC 1,2 W
 With loose cables
 (length 300 mm)

15 mm (U05)

DD-051L030X 24 V DC 2 W
 With loose cables
 (length 300 mm)

CATEGORY 3

**22 mm (U1)**

DA-0050X 12 V DC 3,5 W
 DA-0051X 24 V DC 3,5 W
 DA-0106X 24 V AC 50/60 Hz 5 VA
 DA-0108X 110 V AC 50/60 Hz 5 VA
 DA-0124X 230 V AC 50/60 Hz 5 VA

30 mm (U2)

DB-0501X 12 V DC 11 W
 DB-0502X 24 V DC 11 W
 DB-0507X 24 V AC 50/60 Hz 10 VA
 DB-0509X 110 V AC 50/60 Hz 10 VA
 DB-0510X 230 V AC 50/60 Hz 10 VA

30 mm (U3)

DC-0301X 12 V DC 2,5 W
 DC-0302X 24 V DC 2,5 W
 DC-0307X 24 V AC 50/60 Hz 3,3 VA
 DC-0309X 110 V AC 50/60 Hz 3,3 VA
 DC-0310X 230 V AC 50/60 Hz 3,3 VA

Connectors are included.

II 3 GD c nA II T5 -10 °C ≤ Ta ≤ 45 °C

SENSORS

DF/DH Magnetic and Electronic Proximity Sensors

**Type**

- Electromechanical
- Electronic

DF-220

DF-330

DF-440

DH-100

DH-200

DH-500

CATEGORY 3

II 3 GD c nA II T5 -10 °C ≤ Ta ≤ 45 °C