

INTERNATIONAL ELECTROTECHNICAL COMMISSION **IEC Certification System for Explosive Atmospheres**

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:

IECEx FIDI 24.0006X

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Certificate history: Issue 0 (2024-06-19)

Status:

Current

Issue No: 1

Date of Issue:

2025-02-25

Applicant:

QUASAR SERVICE S.r.I

Piazza Pontida 28 **BERGAMO (BG) 24126**

Italy

Equipment:

Pressurized cabinets type: QSIT***/**, QSITD***/**, QPST***/** QPSTD***/**

Optional accessory:

Type of Protection:

Pressurized enclosures 'pxb/pzc'; Intrinsic safety 'ia/ib'

Marking:

Type QSIT***/**: Ex ia pxb [ia Ga or ib Gb] IIB or IIB+H2 or IIC T6...T3 Gb

Ex pxb [ia Ga or ib Gb] IIB or IIB+H2 or IIC T6...T3 Gb

Type QSITD***/**: Ex ia pxb [ia Da or ib Db] IIIA or IIIB or IIIC T85°C...T200°C Db

Ex pxb [ia Da or ib Db] IIIA or IIIB or IIIC T85°C...T200°C Db

Type QPST***/**: Ex ia pxb [ia Ga or ib Gb] IIB or IIB+H2 or IIC T6...T3 Gc

Ex pxb [ia Ga or ib Gb] IIB or IIB+H2 or IIC T6...T3 Gc Ex ia pzc [ia Ga or ib Gb] IIB or IIB+H2 or IIC T6...T3 Gc Ex pzc [ia Ga or ib Gb] IIB or IIB+H2 or IIC T6...T3 Gc

Type QPSTD***/**: Ex ia pxb [ia Da or ib Db] IIIA or IIIB or IIIC T85°C...T200°C Dc

Ex pxb [ia Da or ib Db] IIIA or IIIB or IIIC T85°C...T200°C Dc Ex ia pzc [ia Da or ib Db] IIIA or IIIB or IIIC T85°C...T200°C Dc Ex pzc [ia Da or ib Db] IIIA or IIIB or IIIC T85°C...T200°C Dc

Approved for issue on behalf of the IECEx

Certification Body:

Position:

Signature: (for printed version)

(for printed version)

Marino Kelava



Certification Signatory

2025-02-25

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of Conformity

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Manufacturer:

QUASAR SERVICE S.r.I Piazza Pontida 28 BERGAMO (BG) 24126

Italy

Manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS:

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017

Explosive atmospheres - Part 0: Equipment - General requirements

Edition:7.0

IEC 60079-11:2011

Edition:6.0

Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

IEC 60079-2:2014

Edition:6

Explosive atmospheres - Part 2: Equipment protection by pressurized enclosure "p"

IEC 60079-25:2010

Edition:2.0

Explosive atmospheres - Part 25: Intrinsically safe electrical systems

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

HR/FIDI/ExTR24.0009/00

HR/FIDI/ExTR24.0009/01

Quality Assessment Report:

FR/INE/QAR14.0004/09



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The pressurized cabinets type QSIT***/** and QSITD***/** are designed in type of protection pressurised enclosure, with level of protection "pxb", EPL Gb and Db.

The pressurized cabinets type QPST***/** and QPSTD***/** are designed in type of protection pressurised enclosure, with level of protection "pxb" or "pzc", EPL Gc and Dc.

Cabinets type QSIT***/** and QPST***/** are intended for use in places with an explosive gas atmosphere, while cabinets type QSITD***/** and QPSTD***/** are intended for use in places with an explosive dust atmosphere.

For other details see Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:

- · The user must follow the safety instructions and take all necessary precautions before bypassing the pressurisation alarm system.
- User shall connect, on intrinsic safety terminal strip, only equipment which comply with the electrical parameters of the associated intrinsically safe apparatus shown in the safety instructions document.
- The user shall comply with the specific conditions of use related to separately certified Ex equipment, incorporated in the pressurised cabinet according to the manufacturer's documents.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

· Change in product code

· Update of marking to cover option without intrinsic safety

· For the cabinet with limited internal release of a gas or liquid: addition of leakage compensation

Annex:

IECEx_FIDI_24.0006_Annex01.pdf



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Annex 1

Date: 2025.02.25

Equipment description (continued from original certificate)

The pressurised cabinet consists of a metallic enclosure, which is the main volume and can contain electrical and non-electrical equipment, it is made of steel panels, equipped with one or more doors, and with optional windows. A pressurization system is used to control and verify the minimum internal overpressure, to perform the purging of the enclosure, to manage the pressurization by leakage compensation and to energize / switch off the equipment and devices inside the cabinet. The cabinet can be equipped with an electro-mechanical pressurization system, which is composed of a flameproof enclosure with separately IECEx certified associated apparatuses and intrinsically safe pressure switches located in hazardous area. The cabinet can be equipped, as an alternative, with a separately IECEx certified pressurization system from a third-party manufacturer.

The allowed protective gas is instrumental compressed air or inert gas, as specified in the marking plate. The maximum internal free volume is from 0.07 m3 to 10 m3. The degree of enclosure protection according to IEC 60529 is IP4X minimum for level of protection "pxb" and IP3X minimum for level of protection "pxc" (declared by the manufacturer).

The pressurised cabinet with level of protection "pxb" may contain an internal source of release of flammable substance.

The incorporation of explosion protected electrical and non-electrical equipment and apparatus, with their own certificate, is allowed according to the manufacturer documents. IECEx certified air conditioner(s) can be used with this pressurized cabinets as well as gas analysers.

Type code identification

This certificate covers the following pressurized cabinets: QSIT***/**, QPST***/**, QSITD***/** and QPSTD***/**. The asterisks in this document are used in place of one or more optional character(s) concerning additional information about the pressurized cabinet as specified in the following table:

| QSIT | *** | ** * | | QSIT: external gas explosive atmosphere, EPL Gb | |
|-------|-----|------|--|---|--|
| QSITD | | | | QSITD: external dust explosive atmosphere, EPL Db QPST: external gas explosive atmosphere, EPL Gc | |
| QPST | | | | | |
| QPSTD | | | | QPSTD: external dust explosive atmosphere, EPL Dc | |
| | | | | | |
| | | | | Volume (cubic meters multiplied by 100) | |
| | | | | Range: from 7 to 1000 | |
| | | | | | |
| | | | | A = Quasar pressurization system | |
| | | | | B = Pepperl+Fuchs pressurization system | |
| | | | | C = Stahl pressurization system | |
| | | | | D = Bartec pressurization system | |
| | | | | E = Expo pressurization system | |
| | | | | F = Gonnhaimer pressurization system | |
| | | | | | |
| | | | | X = internal dilution | |
| | | | | Y = with compound-filled cable entries | |
| | | | | XY = both options | |





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Ratings:

Maximum rated voltage 11 000 V

Maximum internally generated voltage 24 kV r.m.s.

Maximum controlled voltage 11 kV r.m.s. – 1.5 kV d.c.

Maximum rated current 10 000 A

Maximum controlled current 4 000 A

Maximum controlled power 10 000 kW - kVA

Maximum dissipated power 5 000 W

Frequency Up to 62 Hz

Protective gas Air or Inert gas (density equal to air ±10%)

Rated ambient temperature range (°C) -40°C to +50°C for T6/85°C or T5/100°C

-40°C to +60°C for T4/135°C or T3/200°C

Parameters related to safety:

Supply pressure of protective gas 1 to 8 bar

Maximum internal overpressure 13 mbar

Minimum overpressure in service

Level of protection "pxb" 0.5 mbar

Level of protection "pzc" 0.25 mbar

Maximum leakage rate 3 x internal volume (in m³/h)





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LIST OF SEPARATELY CERTIFIED PRESSURIZATION SYSTEMS

| MANUFACTURER | MODEL | CERTIFICATE | MARKING |
|--------------------------|-----------|--------------------|--|
| BARTEC GmbH | SILASpz | IECEx BVS 19.0038X | Ex ec mc ic [ic pzc] IIC T5 Gc |
| | | | Ex tc [ic pzc] IIIC T95°C Dc |
| | APEX px | IECEx BVS 19.0038X | Ex eb mb ib [ib pxb] [ia Ga] IIC T5 Gb |
| | | | Ex tb [ib pxb] [ia Da] IIIC T95°C Db |
| EXPO Technologies | MINIPURGE | IECEx SIR 07.0027X | Ex [pzc] IIC T6 Gc |
| Ltd | | | Ex [pzc] IIIC T85° Dc |
| | | IECEx SIR 07.0027X | Ex [pxb] ia IIC T5 Gb |
| | | | Ex [pxb] ia IIIC T100°C Db |
| Gönnheimer | FS 830 | IECEx BVS 15.0037X | Ex ec nC ic [pzc] IIC T6 Gc |
| Elektronic GmbH | | | Ex ec nC ic [pzc] IIC T5 Gc |
| | FS 840 | IECEx BVS 15.0037X | Ex tc ic [pzc] IIIB T85°C Dc |
| | | | Ex tc ic [pzc] IIIC T85°C Dc |
| | F 850S | IECEx BVS 12.0033 | Ex e mb [ib] [px] IIC T6 Gb |
| | | | Ex eb mb [ib] [pxb] IIC T6 |
| | | | Ex tb [ib] [p] IIIC T 70°C Db IP65 |
| | | | Ex tb [ib] [pb] IIIC T 70°C Db IP65 |
| | | | Ex e mb [ib] [px] IIC T4 Gb |
| | | | Ex eb mb [ib] [pxb] IIC T4 |
| | | | Ex tb [ib] [p] IIIC T 70°C Db IP65 |
| | | | Ex tb [ib] [pb] IIIC T 70°C Db IP65 |
| | F 870S | IECEx BVS 10.0095 | Ex eb db mb ib [pxb] IIC T4 Gb |
| | | | Ex tb IIIC T100°C [ib] [pxb] Db |
| Pepperl+Fuchs SE | 6000 | IECEx UL 08.0003X | Ex db ib [ib Gb] [pxb Gb] IIC T4 Gb |
| | | | Ex ib tb [ib Db] [pxb Db] IIIC T60°C Db |
| | 6100 | IECEx CML 19.0156X | Ex db eb ib [ib Gb] [pxb Gb] IIC T4 Gb |
| | 6500 | IECExUL 16.0003X | Ex eb q ib [ib Gb] [pxb Gb] IIC T4 Gb |
| | | | Ex tb ib [ib Db] [pxb Db] IIIC T135°C Db |
| | 5500 | IECEx UL 14.0019X | Ex ic ec nC [ic Gc] [pzc Gc] IIC T4 Gc |
| | | | Ex ic tc [ic IIIC Dc] [pzc Dc] IIIB T80°C |
| | | | Ex ic ec nC [ic Gc] [pzc Gc] IIC T6 Gc |
| | | | Ex ic tc [ic IIIC Dc] [pzc Dc] IIIB T60°C Dc |
| | 7500 | IECEx UL 18.0022X | Ex ec mc nC [pzc Gc] IIC T6T4 Gc |
| | | | Ex mc tc [pzc Dc] IIIC T60°CT80°C Dc |
| R. STAHL | 8621 | IECEx TUR 19.0033X | Ex eb mb ia [pxb Gb] [ia Ga] IIC T4 Gb |
| Schaltgeräte GmbH | | | Ex tb [pxb Db] [ia Da] IIIC T130°C Db |
| | 7621 | IECEx TUR 19.0033X | Ex ec mc ia [pzc Gc] [ia Ga] IIC T6 Gc |
| | | | Ex tb [pzc Dc] [ia Da] IIIC T80°C Dc |



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LIST OF SEPARATELY CERTIFIED 'Exi' EQUIPMENT

| MANUFACTURER | PRODUCT | CERTIFICATE | MARKING |
|--------------------|---|---------------------|---|
| GM International | Isolator D1130S | IECEX BVS 07.0027X | Ex ec [ia Ga] IIC T4 Gc [Ex ia Ga] IIC [Ex ia Da] IIIC |
| Pepperl+Fuchs | Amplifier KCD2-SR-Ex2 | IECEx BAS 06.0025X | Ex ec nC [ia Ga] IIC T4 Gc [Ex ia Da] IIIC |
| | Amplifier KFU8-SR-Ex2.W | IECEx FIDI 22.0003X | Ex ec nC [ia Ga] IIC T4 Gc [Ex ia Da] IIIC |
| PR electronics A/S | Pulse Isolator Series 9202B | IECEX KEM 06.0039X | Ex ec nC IIC T4 [Ex ia Ga] IIC/IIB/IIA [Ex ia Da] IIIC |
| Turck | Isolating switching amplifier IM1*-***-Ex-**; IM1*-***-Ex** | IECEX TUN 21.0020 X | [Ex ia Ga] IIC, [Ex ia Da] IIIC, Ex ec [ia Ga] IIC T4 Gc Ex ec nC [ia Ga] IIC T4 Gc |

The separately certified Ex equipment with 'Ex i' and 'Ex p' type of protection, listed above were not certified according to the latest edition of standards but have no major gaps to the standards listed in this CoC.

