



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx INE 14.0071X

Issue No: 0

Certificate history:

Issue No. 0 (2015-02-18)

Status: **Current**

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Date of Issue: **2015-02-18**

Applicant: **QUASAR SERVICE S.r.l.**
Via Bergamo, 14
I-24050 Grassobbio (BG)
Italy

Equipment: **Pressurized Cabinets type QSI**

Optional accessory:

Type of Protection: **ia pxb [ia/ib]**

Marking:

Ex ia pxb[ia Ga or ib Gb] IIB or IIB+H2 or IIC T6 or T5 or T4 or T3 Gb
Ex ia pxb[ia Da or ib Db] IIIA or IIIB or III C T85°C or T100°C or T135°C or T200°C Db

*Approved for issue on behalf of the IECEx
Certification Body:*

Thierry HOUEIX

Position:

Ex Certification Officer

*Signature:
(for printed version)*

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

INERIS
Institut National de l'Environnement Industriel
et des Risques
BP n2
Parc Technologique ALATA
F-60550 Verneuil-En-Halatte
France



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Manufacturer: **QUASAR SERVICE S.r.l.**
Via Bergamo,14
I-24050 Grassobbio (BG)
Italy

Additional Manufacturing location(s):

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 electrical apparatus 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 : 2011 Edition:6.0 | Explosive atmospheres - Part 0: General requirements |
| IEC 60079-11 : 2011 Edition:6.0 | Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i" |
| IEC 60079-2 : 2014-07 Edition:6 | Explosive atmospheres - Part 2: Equipment protection by pressurized enclosure "p" |
| IEC 60079-25 : 2010-02 Edition:2.0 | Explosive atmospheres – Part 25: Intrinsically safe electrical systems |

*This Certificate **does not** indicate compliance with electrical 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 Report:

[FR/INE/ExTR15.0004/00](#)

Quality Assessment Report:

[FR/INE/QAR14.0004/00](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Electrical control cabinets protected by pressurization. Pressurization control unit contains a flameproof enclosure with separated IECEx equipment certificate (IIB or IIB+H2 or IIC and IIIA or IIIB or IIIC) fitted with intrinsically safe elements when located in hazardous area, permitting pressurization by leakage compensation.

The cabinet contains a set of equipment specified by descriptive documents, in particular one or more certified electrical equipment.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- User shall take all convenient precautions before using by-pass system eventually included in the pressurisation control unit.
- User shall connect, on intrinsic safety terminal strip, only elements with electrical characteristics lower or equal to the characteristics defined in any certificates of associated intrinsically safe apparatus.
- All electrical elements associated with this equipment and contributing to his convenient use and safety, when located in hazardous area, must be protected by one or more standardized types of protection, certified and suitable for considered using.

Annex:

[IECEX INE 14.0071X-00_Annex.pdf](#)



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RATINGS

Maximum supply voltage : 11 000 V
 Maximum power : 10 000 KW
 Maximum current : 10 000 A
 Frequency : 48 to 62 Hz
 Protective gas : Air or Nitrogen

PARAMETERS RELATING TO THE SAFETY

| | QSI 007 | QSI 015 | QSI 023 | QSI 030 | QSI 045 | QSI 060 |
|--|----------------------|----------------------|-------------------------|-----------------------|-----------------------|-----------------------|
| Free internal volume | 0.05 m ³ | 0.1 m ³ | 0.15 m ³ | 0.2 m ³ | 0.3 m ³ | 0.42 m ³ |
| Minimum purging flow rate ^{1/2} | 7 Nm ³ /h | 9 Nm ³ /h | 13.8 Nm ³ /h | 16 Nm ³ /h | 18 Nm ³ /h | 20 Nm ³ /h |
| Minimum purging duration ¹ | 3 min | 5 min | 5 min | 6 min | 7.5 min | 9 min |
| Minimum overpressure ³ | 1 mbar | 1 mbar | 1 mbar | 1 mbar | 1 mbar | 1 mbar |
| Maximum overpressure ³ | 5 mbar | 5 mbar | 5 mbar | 5 mbar | 5 mbar | 5 mbar |
| Maximum leakage rate ³ | 2 Nm ³ /h | 2 Nm ³ /h | 2 Nm ³ /h | 2 Nm ³ /h | 3 Nm ³ /h | 3 Nm ³ /h |
| Control point of overpressure | Valve | | | | | |

| | QSI 075 | QSI 090 | QSI 105 | QSI 120 | QSI 132 | QSI 160 |
|--|-------------------------|-----------------------|-------------------------|-----------------------|-----------------------|-----------------------|
| Free internal volume | 0.5 m ³ | 0.65 m ³ | 0.7 m ³ | 0.8 m ³ | 1 m ³ | 1.2 m ³ |
| Minimum purging flow rate ^{1/2} | 22.5 Nm ³ /h | 23 Nm ³ /h | 26.5 Nm ³ /h | 24 Nm ³ /h | 26 Nm ³ /h | 32 Nm ³ /h |
| Minimum purging duration ¹ | 10 min | 12 min | 12 min | 15 min | 15 min | 15 min |
| Minimum overpressure ³ | 1 mbar | 1 mbar | 1 mbar | 1 mbar | 1 mbar | 1 mbar |
| Maximum overpressure ³ | 5 mbar | 5 mbar | 5 mbar | 5 mbar | 5 mbar | 5 mbar |
| Maximum leakage rate ³ | 3 Nm ³ /h | 3 Nm ³ /h | 4 Nm ³ /h | 4 Nm ³ /h | 4 Nm ³ /h | 5 Nm ³ /h |
| Control point of overpressure | Valve | | | | | |



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| | QSI 190 | QSI 215 | QSI 240 | QSI 290 | QSI 340 |
|--|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Free internal volume | 1.4 m ³ | 1.55 m ³ | 1.7 m ³ | 2.1 m ³ | 2,5 m ³ |
| Minimum purging flow rate ^{1/2} | 31.5 Nm ³ /h | 34 Nm ³ /h | 36 Nm ³ /h | 35 Nm ³ /h | 34 Nm ³ /h |
| Minimum purging duration ¹ | 18 min | 18 min | 19 min | 25 min | 30 min |
| Minimum overpressure ³ | 1 mbar | 1 mbar | 1 mbar | 1 mbar | 1 mbar |
| Maximum overpressure ³ | 5 mbar | 5 mbar | 5 mbar | 5 mbar | 5 mbar |
| Maximum leakage rate ³ | 5 Nm ³ /h | 5 Nm ³ /h | 5 Nm ³ /h | 6 Nm ³ /h | 8 Nm ³ /h |
| Control point of overpressure | Valve | | | | |

- (1) Not enquired for dust marking
- (2) Measured at the inlet
- (3) During normal operation (service)

ROUTINE EXAMINATIONS AND TESTS

Each piece of equipment defined above, must have undergone successfully prior to delivery:

- According to clause 17.1 of the IEC 60079-2 standard, a verification of the performance of safety devices.
- According to clause 17.2 of the IEC 60079-2 standard, a leakage test has to be done to check the maximum leakage rate.

MARKING :

Marking has to be readable and indelible; it has to include the following indications:

- QUASAR SERVICE S.r.l
I - 24050 GRASSOBBIO (BG)
- QSI .../.. ¹
- IECEx INE 14.0071X
- (Serial number)
- Ex ia pxb [i* G**] II**** T***** Gb
- Ex ia pxb [i* D***] III***** T***** Db
- Tamb = -40°C to +50°C for T6/T85°C and T5/T100°C
-40°C to +60°C for T4/T135°C and T3/T200°C
- WARNINGS: PRESSURIZED ENCLOSURE

DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT



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- WARNINGS: THIS ENCLOSURE CONTAINS INERT GAS AND MAY BE AN ASPHYXIATION HAZARD (if inert gas)
POWER SHALL NOT BE RESTORED AFTER THE ENCLOSURE HAS BEEN OPENED UNTIL COMBUSTIBLE DUST ACCUMULATIONS WITHIN THE ENCLOSURE HAVE BEEN REMOVED

¹: In accordance with the Identification code and tables of specifications which are defined in the manufacturers documents.

(*) : ia or ib

(**) : Ga or Gb

(***) : Da or Db

(****) : IIB or IIB+H2 or IIC

(*****) : IIIA or IIIB or IIIC

(*****) : T6 or T5 or T4 or T3

(*****) : T85°C or T100°C or T135°C or T200°C