



[1] **EU-Type-Examination Certificate**

[2] Equipment and Protective Systems intended for use in Potentially Explosive Atmosphere – **Directive 2014/34/EU**

[3] **EU-Type-Examination Certificate**

PTZ 18 ATEX 0036 X

Rev. 0

[4] **Applicant:** **Rubarth Apparate GmbH**

[5] **Address:** Mergenthalerstr. 8
D-30880 Laatzen
Germany

[6] **Equipment:** T-Line
T320, T500, T820, T1000, T1640

X-Line
X320, X500, X820, X1000, X1640

[7] This Equipment and any acceptable variation thereto are specified in the annex to this certificate and the documents referred to.

[8] Primara Test- und Zertifizier GmbH, Notified Body No. 2572 in accordance with the Council Directive, dated 26th February 2014 (2014/34/EU), certifies that this equipment has been found to comply with the Essential Health and Safety Requirements related to the design and construction of equipment and protective systems intended for use in potentially explosive atmosphere, given in Annex II to the directive.

The examination and test results are recorded in the confidential report 17PP307-02.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with the following standards:

EN 60079-0:2012+ A11:2013	EN 60079-1:2014	EN 60079-7:2015
EN 60079-11:2012	EN 60079-18:2015	EN ISO 80079-36: 2016
EN ISO 80079-37: 2016		

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the annex to this certificate.

[11] This EU-Type-Examination Certificate relates only to the design, examination and tests of specified equipment or protective system in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by the certificate.

[12] The marking of the equipment shall include the following:



II 2/- G Ex db eb h [ib] ib mb IIB+H2 T3 Gb for equipment of T-Line

II 2 G Ex db eb h [ib] ib mb IIB T3 Gb for equipment of X-Line

Raphael Rader

- Digitally signed | see <http://ca.primara.net> for more details -

Raphael Rader
Certification body

Kaufbeuren, 2018-11-12

EU-type-examination Certificates without signation and stamp shall not be valid.
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This document is internally administrated under no: 18-340-00

[13] Annex

[14] EU-Type-Examination Certificate PTZ 18 ATEX 0036 X

[15] Description of the equipment

The products are cooling/heating cabinets used as test and simulation devices suitable for safe storage of explosive materials, such as aerosols, or for tests with adhesives or paint even if the storage tests might occasionally or temporary cause an explosive atmosphere (T-Line) or can also be used in explosive areas of Zone 1 or Zone 2 (X-Line). The storage of materials are done in the test room of the cooling/heating cabinets.

Description of the Equipment of the T-Line (T320, T500, T820, T1000, T1640):

The test room of devices of the T-line is suitable for zone 1. At the installation site there must be no danger of explosion at any time. The test room contains temperature sensors. The supply of the temperature sensors is intrinsically safe. The heating is standard with hot gas of the refrigeration system. With the +80°C option, heating is provided via an additional Ex-certified heating system in the test room with the type of protection "increased safety". Fan and drive motor are located in the test room.

The test room is sealed around the boundary to largely prevent carry-over of the explosive atmosphere. When the door is opened, a safety shutdown occurs through a contactless door limit switch, which is designed in the "flameproof enclosure" type of protection. As a result, the circuits of ventilation, heating and cooling are interrupted. A permanent shutdown takes place when the set device limit temperature is exceeded by a maximum of 40°C or 90°C with the temperature range extension to +80°C.

The controller, the control panel and the chiller are located in a separate volume in the upper part of the test and simulation unit. During shutdown by opening the door, the control located on the rear of the unit continues to run. The control panel above the inspection room door is switched off because of possible formation of steam. After closing the door, the control panel will start up again.

An optional humidity control is provided by an ultrasonic humidifier mounted on the outer housing. If there is insufficient air flow into the test chamber, the pneumatically actuated zone separator closes the connection between the installation room (no zone) and the test room (zone 1) and switches off the humidifier. Explosion protection is achieved by the Ex version of the humidity sensor and the zone divider valve in front of the humidifier.

Minimum and maximum test chamber temperatures are 0°C / + 35°C (standard version) or +80°C (upper temperature extension) and -30°C (lower temperature extension).

Description of the Equipment of the X-Line (X320, X500, X820, X1000, X1640):

Devices of the X-line are used for installation in Zone 1 and Zone 2. The test room contains the temperature sensors whose supply is "intrinsically safe". For optimal spatial temperature distribution there are fans with drive motors in the test room, both are Ex certified.

The heating is standard with hot gas of the refrigeration system. With the +80°C option, heating is provided via an additional Ex-certified heating system in the test room with the type of protection "increased safety".

The test room is sealed off all around in order to prevent carry-over of the potentially explosive atmosphere.

The control cabinet is located in a pressure-resistant housing. When the door is opened, a safety shutdown occurs through a contactless door limit switch, which is designed in the "flameproof enclosure" type of protection. As a result, the circuits of ventilation, heating and cooling are interrupted. A permanent shutdown takes place when the set device limit temperature is exceeded by a maximum of 40°C or 90°C with the temperature range extension to +80 ° C.

The control unit and the chiller are located in a separate volume in the upper part of the test and simulation unit and are designed to be explosion-proof. During shutdown by opening the door, control continues. Explosion protection is achieved here by Ex version of the temperature controller. Minimum and maximum test chamber temperatures are 0°C / + 35°C (standard version) or +80°C (upper temperature extension) and -20°C (lower temperature extension).

[16] Technical data:

T320, T500, T820, T1000, T1640 = 230V / 50Hz (at 35°C); 400 V/230 V / 50 Hz (with upper temperature extension 80°C)

X320, X500, X820, X1000, X1640 = 400 V/230 V / 50 Hz

[17] Test report no.:

17PP307-02

[18] Special conditions:

For all equipment:

1. It must be ensured that, due to the stored media, only a potentially explosive Zone 1 is to be expected within the usual atmospheric conditions in the test room (air pressure between 88 and 110 kPa, oxygen content approx 21%).
2. The manufacturer's settings on the motor protection switch for the fan motor and on the temperature limiter must not be changed.
3. When installing the device, it must be ensured that adequate space and, if necessary, ventilation in case of the escape of explosive gases from the test chamber, reliably prevent the formation of a potentially explosive atmosphere.
4. It must be ensured that after opening the door, an ignition of the potentially leaking explosive atmosphere can not take place.
5. The devices may only be operated with a perfect door seal. The device may no longer be operated if there is a fault in the safety shutdown (door limit switch).
6. Make sure that the floor drain is not always open to the test room. However, ventilation to the outside or a source of source-free exhaust air system is permitted.

[19] Essential Health and Safety Requirements:

Covered by the standards.