

[1] **TYPE EXAMINATION CERTIFICATE**



[2] **for non-electrical equipment  
of the Equipment Groups I and II, Categories M2, 2 or 3  
(Translation)**

[3] Type Examination Certificate Number: **IBExU10ATEXB011 X**

[4] Equipment: **Oil/air coolers OAC**  
Sizes: OAC100 to OAC900

[5] Manufacturer: **KTR Kupplungstechnik GmbH**

[6] Address: **Rodder Damm 170  
48432 Rheine  
Germany**

[7] The design of the equipment mentioned in [4] and any acceptable variations thereto are specified in the schedule to this Type Examination Certificate.

[8] IBExU Institut für Sicherheitstechnik GmbH certifies that the equipment mentioned in [4] has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of the equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive 94/9/EC.

The test results are recorded in the Test Report IB-10-4-011 of 2 September 2010.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 13463-1:2009, EN 13463-5:2003 and EN 14986:2007.

[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 [17] in the schedule to this Type Examination Certificate.

[11] This Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of the Directive 94/9/EC apply to the manufacture and supply of this equipment (see for example [19]).

[12] The marking of the equipment mentioned in [4] shall include the following:



**II 2G c IIB+H<sub>2</sub> T X**



**II 3D c T X**

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Freiberg, 6 September 2010

By order

(Dr. Wagner)

**Schedule**

**IBExU**  
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Certificates without signature and stamp are not valid.  
Certificates may only be duplicated completely and unchanged.  
In case of dispute, the German text shall prevail.

- [13] **Schedule**
- [14] to **Type Examination Certificate IBExU10ATEXB011 X**

[15] **Description**

The oil/air coolers of the series OAC are construction units which consist of a fan component and a metallic cool plate. This cool plate is regarded as a non-electrical component. Electrical and non-electrical drives shall be used for the oil/air coolers of the series OAC. These drives are not regarded as components of the oil/air coolers.

The respective drives supply a fan impeller with curved blades with energy. The fan impeller produces respectively strengthens the cooling stream through the cooling lamellae. The covers and the external parts of the oil/air coolers of the series OAC are constructed of differently quenched and tempered steels. The cooling lamellae are made of aluminium. The fan impeller is constructed of aluminium (hub) and plastic material (blades). The oil/air coolers of the series OAC are intended for use at ambient temperatures  $T_a$  from  $-20\text{ °C}$  to  $+40\text{ °C}$ . The inlet temperature of the medium to be cooled can be considerably higher than the ambient temperatures.

Further details are contained in the documents of the manufacturer which are part of the Test Report IB-10-4-011.

[16] **Test Report**

The test results are recorded in the Test Report IB-10-4-011 of 2 September 2010.

**Summary of test results:**

The oil/air coolers of the series OAC mentioned in [4] meet the requirements for non-electrical equipment in type of protection "c" (Protection by constructional safety) of Equipment Group II, Category 2G as well as Equipment Group II, Category 3D.

The oil/air coolers of the series OAC of the Category 2G fulfil the requirements for the Explosion Group IIB+H<sub>2</sub> (and thus also the Explosion Groups IIA and I (IIA1)).

The maximum surface temperature is determined by the media temperature and the ambient temperature (marking T X).

[17] **Special conditions for safe use**

- The oil/air coolers may only be used if their materials and lubricants resist the mechanical and/or chemical influences resp. corrosion under the respective operating conditions, in such a way, that the explosion protection is always guaranteed.
- The oil/air coolers must be included in the equipotential bonding and they must be connected to earth.
- The oil/air coolers shall be combined only with drives which are suitable and approved for use in hazardous areas (zones) and the corresponding temperature ranges.
- For the operation in explosive areas the oil/air coolers have to be cleaned in regular intervals. Dust deposits with a layer thickness more than 5 mm are inadmissible.
- Further safety instructions of the manufacturer for the intended use have strictly to be taken into account.

[18] **Essential safety and health requirements**

Confirmed by compliance with standards (see [9]).

[19] **Confirmation of the deposit of documents according to Annex VIII of Directive 94/9/EC**

It is confirmed that the documents pursuant to Annex VIII of the Directive 94/9/EC for the non-electrical equipment mentioned in [4] are deposited under No. IB-10-4-011 at the NOTIFIED BODY IBExU (EC-Identification No 0637). The deposit of the documents is carried out according to the regulations of Directive 94/9/EC, item 8 (1) b) ii).

By order



(Dr. Wagner)

Freiberg, 6 September 2010