

[1] **TYPE EXAMINATION CERTIFICATE**  
**- Translation -**



[2] Equipment intended for use in Potentially Explosive Atmospheres,  
**Directive 94/9/EC**

[3] Type Examination Certificate Number: **IBExU02ATEXB007 X**

[4] Equipment: **POLY - couplings**  
of the designs and sizes  
- PKN, sizes 24 up to 55  
- PKZ, sizes 8 up to 80  
- PKD, sizes 15 up to 80  
- PKA, sizes 8 up to 28

[5] Manufacturer: KTR Kupplungstechnik GmbH

[6] Address: Rodder Damm 170  
D-48432 Rheine

[7] This equipment as well as any acceptable variations thereto are specified in the schedule to this Type Examination Certificate.

[8] IBExU Institut für Sicherheitstechnik GmbH certifies that this equipment has been found to comply with the Essential Health and Safety Requirements of the Annex II of the Directive relating to the design and construction of equipment intended for use in potentially explosive atmospheres.  
The test results are recorded in the confidential test report IB-02-4-124/1, part 2, of 16.04.2002.

[9] Compliance with Essential Health and Safety Requirements has been assured by compliance with EN 1127-1:1997, prEN 13463-1:2001, prEN 13463-5:2000.

[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 under [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. Further requirements of this Directive apply to the manufacture and supply of this equipment.

[12] The marking of the POLY - couplings of the design mentioned in [4] shall include the following assignments:



**II 2G/2D EEx c IIC T4/T 110 °C / I M2**  
-20 °C ≤ T<sub>a</sub> ≤ +80 °C

**IBExU Institut für Sicherheitstechnik GmbH**  
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Authorised for certifications Explosion Protection

(Prof. Dr. Redeker)



- Seal -

Freiberg, 16.04.2002

Certificates without signature and seal aren't valid.  
This certificate may only be duplicated completely and unchanged. In case of dispute, the German text shall prevail.

**Schedule**

- [13] **Schedule**
- [14] **to TYPE EXAMINATION CERTIFICATE IBExU02ATEXB007 X**

[15] **Description**

POLY - couplings are torsionally flexible claw couplings with elastic plastic elements. The plastic elements are arranged as single blocks in both coupling halves. The couplings are not spin-proofed. With the couplings can be compensated for axial, radial and angular misalignment between gear and distillate within provided limits. The several designs of the couplings differ in the design of the hubs an the configuration of various distance pieces.

Details are contained in the documentation of the manufacturer, which are part of the test report IB-02-4-124/1, part 2, of 16.04.2002.

[16] **Test Report**

The test results are recorded in the confidential test report IB-02-4-124/1, part 2, of 16.04.2002.

**Summary of the Test Results:**

The POLY - couplings of the in [4] mentioned designs fulfil the requirements for non-electrical devices of the type of protection c (protection by constructional safety) of the equipment group II, category 2G, temperature class T4 (for an ambient temperature  $T_a$  of  $-20\text{ °C}$  up to  $+80\text{ °C}$ ) and fulfil the requirements for use in the explosion group IIC. Thus, they fulfil the requirements of the temperature class T3 up to T1 as well as the explosion groups IIB and IIA.

Furthermore, they fulfil the requirements for non-electrical devices of the equipment group II, category 2D, maximum surface temperature  $T = 110\text{ °C}$ , as well as equipment group I, category M2.

**Note**

The manufacturer has to guarantee, that each manufactured POLY - coupling corresponds to the conditions, which are lied down in the Type Examination Certificate. The manufacturer has to guarantee, that the appropriate requirements of the directive 94/9/EC are fulfilled.

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

At the assembly of screw connections screws provided by the manufacturer only have to be used. The torque stipulated by the manufacturer has to be adhered at the tighten of the screws.

All screw connections for the fixing of the hub on the wheels have to be protected against self- loosening.

The POLY - couplings may be used only if their materials under the respective operation conditions resist the mechanical and/or chemical influences respectively corrosion in such way, that the explosion protection is always guaranteed.

The POLY - couplings have to be equipped with stable covers. The covers have to protect the couplings from the impact of falling objects.  
In the covers may be arranged regular openings, which may not exceed the following measurements:

	Circular openings, diameter in mm	Rectangular openings, lateral length in mm
Top side of the cover	4	4
Side part of the cover	8	8

The distance between the cover and rotating parts must be at least 5 mm.

The cover must be electrically conductive and must be included in the compensation of potential. It mustn't consist of lay light weight metal.  
The removing of the cover is only allowed in standstill.

At use of the couplings as an equipment of the equipment group I, category M2, the cover must withstand greater mechanical loads as at the use as an equipment of the equipment group II.

No dust may accumulate between the cover and the coupling.

The user is obliged to observe the specifications of the installation instructions and maintenance instructions for each coupling. This is valid especially for the indications for use of the couplings in explosive atmospheres.

[18] **Essential Health and Safety Requirements**

Confirmed by norms (see [9]).



(Prof. Dr. Redeker)

Freiberg, 16.04.2002

1st addition to the  
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[4] **Additions/Modifications**


The notes for safety and the "Special Conditions for safe use" [17], which are given in the Type Examination Certificate IBExU02ATEXB007 X are changed as follows:


Modification of the break 6, sentence 2, according to test report IB-02-4-602/1 of 05.12.2002:

The materials of the safety devices have to be selected according to EN 13463-1:2001. Light metal should not be used for covers with unsealed openings on the top.

- [5] The marking of the POLY - couplings mentioned in [1], shall include the following assignments according to equipment group and category:

 **II 2G c IIC T4**  
-20 °C ≤ T<sub>a</sub> ≤ +80 °C

 **II 2D c T 110 °C**  
-20 °C ≤ T<sub>a</sub> ≤ +80 °C

 **I M2 c**  
-20 °C ≤ T<sub>a</sub> ≤ +80 °C

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