

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



[2] Equipment or protective systems
intended for use in potentially explosive atmospheres, Directive 2014/34/EU

[3] EU-type examination certificate number **IBExU25ATEX2009 X** | Issue 0

[4] Product: **Rotary valves**

Type: DN.AAA(A)xBBB(B)-F
DN.AAA(A)xBBB(B)-K

Sizes:	DN.250x250-F	DN 250x250-K
	DN.400x400-F	DN.400x400-K
	DN.500x500-F	DN.500x500-K
	DN.500x700-F	DN.500x700-K
	DN.500x1000-F	DN.500x1000-K

[5] Manufacturer: PAL S.r.l.

[6] Address: Via delle industrie 6/B
31047 Ponte di Piave (TV)
ITALY

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] IBExU Institut für Sicherheitstechnik GmbH, notified body number 0637 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential test report IB-24-2-0071.

[9] Compliance with the essential health and safety requirements has been assured by compliance with:
EN ISO 80079-36:2016 EN ISO 80079-37-2016 EN 15089:2009
except in respect of those requirements listed at item [18] of the schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the specific conditions of use specified in the schedule to this certificate.

[11] This EU-type examination certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

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

D
 II 1 D / 2 D Ex h IIB T135°C Da/Db
-20 °C ≤ Ta ≤ +40 °C

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By order

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

Freiberg, 2025-01-29

[13]

Schedule

[14]

Certificate number IBExU25ATEX2009 X | Issue 0

[15] **Description of product**

The subject of the examination is the mechanical part of the rotary valves up to the shaft end. Purchased attachment parts (e.g. drive or sensors), can be selected depending on the requirements at hand. The assembly can be evaluated according to the assembly guidelines.

The rotary valves mentioned under [4] each consist of a housing in which a rotor runs. The inlet and outlet of the housing are rectangular.

The rotor has 8 rotor blades. The front sides of the rotor are open (without side discs). Rubber lips are attached to the rotor blades of the rotor, which seal the rotor to the housing and to the bearing plates. The rubber lips are 9 mm thick.

The bearings are fitted on the outside of the housing in the bearing plates. Sealing is achieved by two shaft seals, in each case.

The geared motor drives the wheel on the outside.

Details on the design of the rotary valves, can be found in the test report IB-24-2-0071 and the associated test documents.

[16] **Test report**

The test results are recorded in the confidential test report IB-24-2-0071 of 2025-01-24.

The test documents are part of the test report and they are listed there.

Summary of the test results

The rotary valves mentioned under [4] fulfil the requirements for equipment in Equipment Group II, Category 1 D (inside) and 2 D (outside) in type of protection "c" (designated with "Ex h") for use in explosive dust atmospheres.

They also fulfil the requirements for explosion isolation systems for explosions of organic dusts with minimum ignition energies ≥ 10 mJ, except for coal dusts.

Since the inlet and outlet of the rotary valves are designed the same, the test results apply both in the conveying direction and against it.

[17] **Specific conditions of use**

1. *The maximum speeds specified in the operating instructions, must not be exceeded.*
2. *The rubber lips must be regularly checked for wear, in accordance with the operating instructions. Worn rubber lips must be replaced.*
3. *The DN.250x250 rotary valves are flameproof for explosions of organic dusts (except coal dusts), with a minimum ignition energy of ≥ 10 mJ, at reduced explosion pressures up to a maximum of 0.93 bar (g). The rotary valves of the other sizes are protected against flame transmission, for explosions of organic dusts (except coal dusts) with a minimum ignition energy of ≥ 10 mJ, at reduced explosion pressures up to a maximum of 0.71 bar (g). Outside of these conditions, protection against flame transmission, is not guaranteed.*
4. *Lubrication and maintenance intervals must be adhered to in accordance with the operating instructions.*
5. *The rotary valves are to be included in the equipotential bonding of the entire plant.*
6. *If there is a risk of self-ignition of the bulk material, the rotary valves must be emptied before a prolonged standstill.*
7. *Operation of the rotary valves is only permitted if a bulk material discharge is ensured.*
8. *In the event of an explosion, the rotary valves must be automatically shut down immediately to prevent the discharge of burning bulk material.*
9. *The temperature of the bulk material must not exceed 80 °C.*

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

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following are considered relevant to this product, and conformity is demonstrated in the test report:

Clause	Subject
-	-

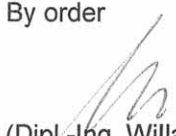
[19] **Drawings and Documents**

<i>Number</i>	<i>Sheet</i>	<i>Issue</i>	<i>Date</i>	<i>Description</i>
-	-	-	-	-

The documents are listed in the test report.

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Freiberg, 2025-01-29