



EU - Type Examination Certificate

- (1)
(2) **Equipment or Protective Systems Intended for Use
in Potentially Explosive Atmospheres
(Directive 2014/34/EU)**

(3) EU - Type Examination Certificate number:

FTZÚ 21 ATEX 0109X

(4) Product: **Rotary valve, type RPGG *x*-EX; RPGG HL *x*-EX**

(5) Manufacturer: **G&G filtration CZ, s.r.o.**

(6) Address: **Hrubínova 1903/9, 664 51 Šlapanice, Czech Republic**

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

(8) The Physical-Technical Testing Institute, Notified Body number 1026, in accordance with Articles 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26.02.2014, 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 confidential Report number:

21/0109 dated 20.03.2023

(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 IEC 60079-0:2018; EN 15089:2009**

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

(11) This 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:

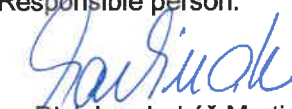
 **D St1
II 1/2 D Ex h IIC T125 °C Da/Db**

or

 **D St1
II 1/3 D Ex h IIC T125 °C Da/Dc**

This certificate is valid till: **31.03.2028**

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 31.03.2023

Page: 1/6



Physical-Technical Testing Institute
Ostrava - Radvanice

(13)

Schedule

(14) **EU - Type Examination Certificate No. FTZÚ 21 ATEX 0109X**

(15) Description of Product:

The rotary valve, type **RPGG 200x200-EX ... RPGG 300x600-EX** with the rotor with the polyurethane blades is the protective system designed as explosion pressure shock resistant equipment. It prevents to the transmission of the effects of explosion as are pressure wave, flames and sparks until the maximum reduced explosion pressure $p_{red,max}$ in both of directions of the divided space contains dangerous atmosphere of the flammable industrial dust, except the metal dusts. The combustible dust is described by the parameters of explosion $K_{st,max}$, **MIE** and **MIT**. The rotary valve, type **RPGG *x*-EX** has the housing with square or rectangular inlet and outlet flanges. The minimal thickness of each fixed vane is 6 mm, the thickness of each support blade is 4 mm and the thickness of each polyurethane (material PLASTON A90) blade is 6.5 mm. There are no allowed gaps between the rotor (8 cells) and the housing. The minimum radial and axial overlap of polyurethane blades is given in the point (17).

The rotary valve, type **RPGG *x*-EX** fulfil the function of the protective system up to the requirements given in the point (17).

The inside of the rotary valve, type **RPGG *x*-EX** corresponds with EPL Da, outside of device corresponds with EPL Db or EPL Dc. The maximum rotating speed of the rotor shall be **< 1 m/s**. Drives and other electrical or non-electrical equipment of the rotary valve are not subject to this certificate.

The rotary valve, type **RPGG HL 150x150-EX ... RPGG 300x300-EX** with the close rotor with the fixed steel blades is the protective system designed as explosion pressure shock resistant equipment. It prevents to the transmission of the effects of explosion as are pressure wave, flames and sparks until the maximum reduced explosion pressure $p_{red,max}$ in one of direction (from input side) of the divided space contains dangerous atmosphere of the flammable industrial dust, except the metal dusts. The combustible dust is described by the parameters of explosion $K_{st,max}$, **MIE** and **MIT**. The rotary valve, type **RPGG HL *x*-EX** has the housing with square inlet and outlet flanges. The minimal thickness of each fixed steel blade is 12 mm. The maximal clearances between the rotor (8 cells) and the housing is given in the point (17).

The rotary valve, type **RPGG HL *x*-EX** fulfils the function of the protective system up to the requirements given in the point (17).

The inside of the rotary valve, type **RPGG HL *x*-EX** corresponds with EPL Da, outside of device corresponds with EPL Db, or EPL Dc. The maximum rotating speed of the rotor shall be **< 1 m/s**. Drives and other electrical or non-electrical equipment of the rotary valve are not subject to this certificate.

(16) Report Number: 21/0109

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 31.03.2023

Page: 2/6



**Physical-Technical Testing Institute
Ostrava - Radvanice**

(13)

Schedule

(14) **EU - Type Examination Certificate No. FTZÚ 21 ATEX 0109X**

(17) Specific Conditions of Use:

- Rotary valve, type RPGG *x*-EX and RPGG HL *x*-EX are intended for transport of the flammable industrial dust, except the metal dusts with parameters:

Type /size	K _{Stmax} * [Bar.m.s ⁻¹]	P _{red,max} [Bar]	Maximum speed of the rotor [RPM]	Minimum overlap of polyurethane blades [mm]	
				Radial	Axial
RPGG 200x200-EX	200	0.90	14	27	15
RPGG 200x300-EX		0.70	19		
RPGG 200x400-EX					
RPGG 200x500-EX					
RPGG 300x300-EX		0.60	15		
RPGG 300x400-EX					
RPGG 300x500-EX					
RPGG 300x600-EX					

* for K_{Stmax} = 200 Bar.m.s⁻¹ ... MIE ≥ 13 mJ; MIT ≥ 430 °C (cloud of dust)

Type /size	K _{Stmax} * [Bar.m.s ⁻¹]	P _{red,max} [Bar]	Maximum speed of the rotor [RPM]	Maximum gap [mm]
				Radial
RPGG HL 150x150-EX	200	7	15	0.15
RPGG HL 200x200-EX			14	0.30
RPGG HL 250x250-EX				
RPGG HL 300x300-EX				

* for K_{Stmax} = 200 Bar.m.s⁻¹ ... MIE ≥ 13 mJ; MIT ≥ 430 °C (cloud of dust)

Responsible person:

Lukáš Martinák

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 31.03.2023

Page: 3/6

This certificate is granted subject to the general conditions of the FTZÚ, s.p.
This certificate may only be reproduced in its entirety and without any change, schedule included.



**Physical-Technical Testing Institute
Ostrava - Radvanice**

(13)

Schedule

(14) **EU - Type Examination Certificate No. FTZÚ 21 ATEX 0109X**

(17) Specific Conditions of Use: - continuation

2. Maximum temperature of transported medium T_{medium} for RPPG *x*-EX: ≤ 55 °C.
3. Maximum temperature of transported medium T_{medium} for RPPG HL *x*-EX: ≤ 110 °C.
4. Maximum permissible speed of the rotor for the type RPPG *x*-EX and RPPG HL *x*-EX only as a non-electric equipment with EPL Da/Db: < 1 m/s.
5. The rotary valve must be installed such way to avoid a creating of the propagating brush discharges on the external surface of the rotary valve.
6. User has to add such equipment so that upon detection of an explosion the rotary valve is stopped automatically and instantaneously.
7. The equipment for detection of an explosion and devices for automatic and instantaneous stopping of the rotary valve is not subject of this certificate.

(18) Essential Health and Safety Requirements:

Compliance with the Essential Health and Safety Requirements is covered by standards mentioned in clause (9) of this certificate.

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 31.03.2023

Page: 4/6

This certificate is granted subject to the general conditions of the FTZÚ, s.p.
This certificate may only be reproduced in its entirety and without any change, schedule included.



**Physical-Technical Testing Institute
Ostrava - Radvanice**

(13)

Schedule

(14) **EU - Type Examination Certificate No. FTZÚ 21 ATEX 0109X**

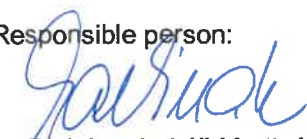
(19) Drawings and Documents:

Number	Sheets	Date	Description
RPGG *x*-EX	25	20.03.2023	Operation and maintenance manual
RPGG HL *x*-EX	25	20.03.2023	Operation and maintenance manual
RPGG *x*-EX_2023	5	20.03.2023	Risk analysis
RPGG HL *x*-EX_2023	5	20.03.2023	Risk analysis

RPGG 20-20 - S7	Assembly RPGG 200x200-EX
RP-S078-00	Drawing
RP-S077-00	Drawing
RP-M003-37	Drawing
RP-S150-00	Drawing
RP-D001-21	Drawing
RP-D001-22	Drawing
RPGG 20-30	Assembly RPGG 200x300-EX
RP-S173-00	Drawing
RP-S077-00	Drawing
RP-M003-48	Drawing
RP-S174-00	Drawing
RP-D001-55	Drawing
RP-D001-56	Drawing
RPGG 20-40	Assembly RPGG 200x400-EX
RP-S169-00	Drawing
RP-S077-00	Drawing
RP-M003-46	Drawing
RP-S170-00	Drawing
RP-D001-50	Drawing
RP-D001-51	Drawing

RPGG 20-50 - S4	Assembly RPGG 200x500-EX
RP-S095-00	Drawing
RP-S077-00	Drawing
RP-M003-41	Drawing
RP-S154-00	Drawing
RP-D000-98	Drawing
RP-D000-99	Drawing
RPGG 30-30 - S2	Assembly RPGG 300x300-EX
RP-S132-00	Drawing
RP-S115-00	Drawing
RP-M003-40	Drawing
RP-S153-00	Drawing
RP-D001-38	Drawing
RP-D001-39	Drawing
RPGG 30-40	Assembly RPGG 300x400-EX
RP-S175-00	Drawing
RP-S115-00	Drawing
RP-M003-49	Drawing
RP-S176-00	Drawing
RP-D001-57	Drawing
RP-D001-58	Drawing

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 31.03.2023

Page: 5/6

This certificate is granted subject to the general conditions of the FTZÚ, s.p.
This certificate may only be reproduced in its entirety and without any change, schedule included.



**Physical-Technical Testing Institute
Ostrava - Radvanice**

(13)

Schedule

(14) **EU - Type Examination Certificate No. FTZÚ 21 ATEX 0109X**

(19) Drawings and Documents: - continuation

RPGG 30-50	Assembly RPPG 300x400-EX
RP-S168-00	Drawing
RP-S115-00	Drawing
RP-M003-45	Drawing
RP-S167-00	Drawing
RP-D001-48	Drawing
RP-D001-49	Drawing
RPGG 30-60 - S7	Assembly RPPG 300x400-EX
RP-S116-00	Drawing
RP-S115-00	Drawing
RP-M003-39	Drawing
RP-S152-00	Drawing
RP-D000-63	Drawing
RP-D001-20	Drawing

RPGG 15-15 HL-S2	Assembly RPPG HL 150x150-EX
RP-S091-00-M /-W	Drawing
RP-D001-54	Drawing
RP-M003-47	Drawing
RP-D001-52	Drawing
RP-S090-00	Drawing
RPGG 20-20 HL - S2	Assembly RPPG HL 200x200-EX
RP-S162-00-M /-W	Drawing
RP-D001-46	Drawing
RP-M003-43	Drawing
RP-D001-45	Drawing
RP-S066-00	Drawing
RPGG 25-25-HL - S3	Assembly RPPG 250x250-EX
RP-S101-00-M /-W	Drawing
RP-D001-41	Drawing
RP-M003-38	Drawing
RP-D001-42	Drawing
RP-S112-00	Drawing
RPGG 30-30-HL - S2	Assembly RPPG 300x300-EX
RP-S088-00-M /-W	Drawing
RP-D001-12	Drawing
RP-M003-27	Drawing
RP-D001-11	Drawing
RP-S106-00	Drawing

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 31.03.2023

Page: 6/6

This certificate is granted subject to the general conditions of the FTZÚ, s.p.
This certificate may only be reproduced in its entirety and without any change, schedule included.