



## EC-Type Examination Certificate

- (1)
- (2) **Equipment or Protective Systems Intended for Use  
in Potentially Explosive Atmospheres  
(Directive 94/9/EC)**

(3) EC-Type Examination Certificate Number:

**FTZÚ 15 ATEX 0128X**

- (4) Protective system: **Explosion isolation flap valve type CARZ 160-400 (6" –16")**
- (5) Manufacturer: **Nederman Manufacturing Poland Sp. z o.o.**
- (6) Address: **Okólna 45A, 05-270 Marki, Poland**
- (7) This equipment or protective system and any of 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 Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report N°:

**15/0128 dated 29.06.2015**

- (9) Compliance with Essential Health and Safety Requirements has been assured by compliance with:  
**EN 16447:2014**
- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This EC-Type Examination Certificate relates only to the design, examination and testing of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.
- (12) The marking of the equipment or protective system shall include the following:

 **D St1**

This EC-Type Examination Certificate is valid till: **30.06.2020**

Responsible person:

*V. E. Fojt*

Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 30.06.2015

Page: 1/3

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) **EC-Type Examination Certificate N° FTZÚ 15 ATEX 0128X**

(15) Description of Protective System:

The explosion isolation flap valve type CARZ are designed as explosion pressure resistant equipment, which is able to prevent a transmission of dangerous effects of explosion, pressure wave, and flames in one direction and separates volumes with potentially explosive atmosphere of industrial dusts. In opposite direction back pressure flaps enable transfer of powdery flammable material. Type series of explosion isolation flap valves CARZ works as protective system up to the requirements in article (17).

(16) Report No.: 15/0128

(17) Special conditions for safe use:

(17.1) Installation

- I. Ambient temperature from -20°C to 60°C
- II. Dust parameters:  $K_{st,max} \leq 20 \text{ MPa}\cdot\text{ms}^{-1}$ , MESH \*  $\geq 2 \text{ mm}$
- III. Pull and push system is allowed without restrictions
- IV. The maximum allowable opening angle of the blade is 55° to the vertical
- V. The maximum flow velocity is:  $30 \text{ m}\cdot\text{s}^{-1}$
- VI. The maximum number of bends between the flap and the protected vessel is  $2 \times 90^\circ$
- VII. Flap position is horizontal.

(17.2) Parameters dependent on the size of the flap:

Parameter (unit):	Sizes CARZ (mm):	
	160	180 - 400
Maximum explosion reduced pressure $p_{red,max}$ (kPa)	45	45
Explosion resistance of flap valve. $p_{max}$ (kPa)	100	90
Minimum volume of protected vessel ( $\text{m}^3$ )	0,4	0,9
Minimum installation distance (m)	3	5
Maximum installation distance (m)	8	10
Max. dust concentration in duct where device will be installed	no limit	< LEL**

\* MESH – maximum experimental safe gap

\*\* LEL – lower explosion limit

Responsible person:

*V. Z. Fojt*

Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 30.06.2015

Page: 2/3

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.

FTZÚ, s.p., Pikartská 1337/7, 716 07 Ostrava-Radvanice, Czech Republic,  
tel +420 595 223 111, fax +420 596 232 672, ftzu@ftzu.cz, www.ftzu.cz



Physical Technical Testing Institute  
Ostrava – Radvanice

(13)

**Schedule**

(14) **EC-Type Examination Certificate N° FTZÚ 15 ATEX 0128X**

(18) Essential Health and Safety Requirements:

Essential health and safety requirement of Directive 94/9/EC are covered by the standard mentioned in (9), according which the product was verified and in the manufacturer's instruction for use.

(19) List of Documentation:

Documents:	Date:
Manual	07/2015
Assessment of ignition sources	05/2015
Drawings No.: 80305_NEIFV_S_00	04/2015
80305_NEIFV_W_00	04/2015
80305_NEIFV_01	03/2015
80305_NEIFV_02	03/2015

Responsible person:

Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 30.06.2015

Page: 3/3

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.

FTZÚ, s.p., Pikartská 1337/7, 716 07 Ostrava-Radvanice, Czech Republic,  
tel +420 595 223 111, fax +420 596 232 672, ftzu@ftzu.cz, www.ftzu.cz