

A sworn translation of Technical Certificate from Polish:

Logo of the Institutions: **"GIG" & PCA & IAF & KDB ATEX**
THE CENTRAL INSTITUTE OF MINING
Certification Unit
Products Certification Team
Experimental Coal Mine in MIKOŁÓW
43-190 Mikołów, ul. Podleska 72
tel.: +48 32 3246550
fax: +48 32 3224931
www.gig.katowice.pl

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Programme of products certification
no. PCW-ISO/IEC-1B
KOD ICS 13.230

[1] **CERTIFICATE OF "Ex" TYPE TEST**

[2] Devices, Protective Systems, Parts and Subassemblies designed for use in the explosion-risk zones / spaces. Directive no. 94/9/WE.
(The Regulation issued by the Ministry of Mining "MG" dated 22nd December 2005, Official Journal of Law - OJL - 'Dz. U.' no. 263, item 2203).

[3] Type Test Certificate:

KDB 15ATEX0013X

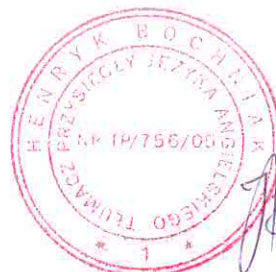
[4] Device name: **The Pressure Reducer with Filter
Type R110-A004-A015**

[5] Manufacturer: **APLISENS S. A. Company**
Branch in Ostrów Wielkopolski

[6] Company's address: **ul. Krotoszyńska 35, PL 63-400 Ostrów Wielkopolski**

[7] The subject Device or Protective System, including its approved versions, was described in the Annex to the present Certificate, and in the documents mentioned in it.

[8] The Central Institute of Mining ("GIG"), on the basis of the Directive no. 94/9/WE dated 23rd March 1994, hereby confirms that the device, protective system, part or subassembly being the subject of the present certificate, fulfills the basic requirements of the safety and health protection, concerning the designing and constructing of the devices and protective systems designed for usage in the explosion-proof spaces, mentioned in the Annex No. 2 of the Directive no. 94/9/WE (Chapter 2 of the Regulation issued by the "MG" Ministry of Mining dated 22nd December 2005, Journal of Law - 'Dz. U.' no. 263, item 2203).



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The results of assessment and tests were specified in the Report made by KDB, Report no. 15.017 [T-7250].

[9] The basic requirements of the safety and health protection were realized by fulfilling of the requirements of the below standards:

PN-EN 13463-1:2010; PN-EN 13463-5:2012 .

[10] The Mark "X" - placed behind the certificate number - denotes the special conditions of using in the explosion-proof spaces, specified in the annex to the present certificate.

[11] The present certificate for type test applies only to the construction, assessment and tests of the subject device, protective system, part or subassembly in accordance with the Directive no. 94/9/WE.

The certificate does not cover the remaining requirements of this Directive, concerning the production process and introducing of the device or protective system into the market.

[12] The device or protective system should be marked as follows:

Ex II 2G EEx c IIC T6

Signed by:

Specialist for Certification
of the Explosion-proof Devices
(-) illegible signature
Michał Górny, dr inż. (Ph. D. Sc. Eng.)

Manager of the Products Certification Team
KD 'Barbara' Experimental Coal Mine in MIKOŁÓW
(-) illegible signature
Krzysztof Cybulski, dr hab. inż. (Ph. D. Sc. Eng.)

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Date of issue: 27th February 2015

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Ostrów Wlkp., 3rd January 2017
Translator's repertorium no.: 1 / Apl / 2017

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63-400 Ostrów Wielkopolski
NIP 622-116-59-49 R-250974814

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The CENTRAL INSTITUTE of MINING "GIG"
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[13]

ANNEX

[14]

Certificate of the Type Test KDB 15ATEX0013X

[15]

Description:

The Pressure Reducer with Filter type R110-A004-A015 is made in explosion-proof version – construction safety "c". The reducer casing is the cover of spring, body and tank. The ceramic filter is placed inside the tank. The drain valve is mounted in the tank. The reducer can be additionally equipped with one or two pressure gauges / manometers.

The reducer casing can be made from the aluminium alloy, brass, steel or stainless steel.

The reducer is designed for compressed air.

The pressure reducer with filter can appear in the following versions:

- R110-A004 – without manometers;
- R110-A005 – with one manometer, 40 mm dia. (at the outlet);
- R110-A006 – with two manometers, 40 mm dia.;
- R110-A007 – with one manometer, 50 mm dia. (at the outlet);
- R110-A008 – with two manometers, 50 mm dia.;
- R110-A009 – with one manometer, 50 mm dia. in acidproof casing (at the outlet);
- R110-A010 – with two manometers, 50 mm dia. in acidproof casing;
- R110-A011 – acidproof version, without manometers;
- R110-A012 – acidproof version, with one manometer, 40 mm dia. in acidproof casing (at the outlet);
- R110-A013 – acidproof version, with two manometers, 40 mm dia. in acidproof casing;
- R110-A014 – acidproof version, with one manometer, 50 mm dia. in acidproof casing (at the outlet);
- R110-A015 – acidproof version, with two manometers, 50 mm dia. in acidproof casing.

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Certificate of the Type Test KDB 15ATEX0013X

Technical parameters:

Working medium:	Air free from contaminations which react chemically and causing corrosion of steel, alloys of copper and aluminium and reacting on the oil-proof rubber
Supply pressure:	< 16 bars
Pressure adjustment range:	0.1 - 6.0 bars
Maximum own air consumption:	80 g/h (at supply pressure of 5 bars)
Flow rate at pressure drop of 5 kPa at the output:	4.6 - 6.5 kg/h (value dependent of the supply pressure quantity)
Maximum air flow at the outlet to atmosphere:	16.9 kg/h for supply pressure of 4 bars 31.2 kg/h for supply pressure of 8 bars 45.5 kg/h for supply pressure of 12 bars 58.5 kg/h for supply pressure of 16 bars
Efficiency of solid particles filtration:	> 2.5 μm - up to 100% 1.4 - 2.5 μm - up to 99.98% 0.5 - 1.4 μm - up to 99.66% 0.3 - 0.5 μm - up to 99.6%
Efficiency of water particles filtration:	1.4 - 2.5 μm - up to 86%
Ambient temperature:	$-20^{\circ}\text{C} \leq T_a \leq +80^{\circ}\text{C}$

[16] **Reports of the Tests:**

KDB Report no. 15.017

[17] **Special conditions of the application:**

- Ambient temperature, at which the pressure reducer with filter can be used, is equal to: $-20^{\circ}\text{C} \leq T_a \leq +80^{\circ}\text{C}$;
- Maximum temperature, at the inlet of pressure reducer with filter cannot exceed 80°C .



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[18] **Essential requirements of the safety and health protection:**

These were realized by meeting the requirements of the standards:

PN-EN 13463-1:2010 (*EN 13463-1:2009*);
PN-EN 13463-5:2012 (*EN 13463-5:2011*)

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Certificate of the Type Test KDB 15ATEX0013X

[19] Confirmation of documentation storing:

The Central Institute of Mining "GIG" (Notified Unit no. 1453) hereby acknowledges keeping of the documentation of the non-electric device mentioned in point 4. Documentation is being stored in accordance with procedure determined in § 51.1, subpoint 2) b) (Article 8, subpoint (b) ii of the Directive no. 94/9/WE).

Documentation is stored under the number KDB ATEX 15.442, documentation will be stored for ten (10) years since the date of the present certificate issue.

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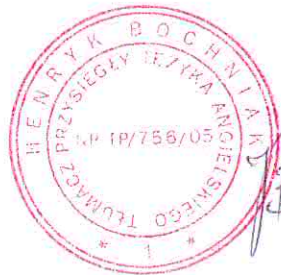
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