



# Technická inšpekcia, a.s.

Tomášikova 64, 831 04 Bratislava, Slovenská republika

## EU – TYPE EXAMINATION CERTIFICATE PRODUCTION TYPE no.: 12074/5/2024-CERT-01

Notified body	Technická inšpekcia, a. s. Tomášiková 64, 831 04 Bratislava, Slovakia Identification number: 1354
Name of pressure equipment:	Composite cylinder for breathing apparatus (details are described in the Annex to the Certificate)
Type designation:	T4CC158-3.7~9.0-30-A
Applied rules and standards:	EN 12245: 2022
Drawing no.:	QCR158-3.7~9.0-30-A (2024.11.4) - cylinder T4PND144-3.7~9.0-30-A (2024.11.1) - liner
Manufacturer:	Kaibo Pressure Vessel Co., Ltd, No. 15, Zijin Road, Xiaoyue Town, Shangyu District, Zhejiang Province, China
Certificate issued on the basis of requirements:	Module B according to the European Directive 2014/68/EU on pressure equipment.
Inspection Report:	12074/5/2024-IS-01
Conclusions of examination:	Type of pressure equipment meets essential safety requirements according to the European Directive 2014/68/EU on pressure equipment.
Conditions of validity:	The manufacturer shall inform Technická inšpekcia, a. s. of every modification to the pressure equipment that may affect its conformity.

Bratislava, 17<sup>th</sup> December 2024

The certificate is valid until: 16<sup>th</sup> December 2034

JUDr. Vladimír Jurík  
General Director



**Annex to the Certificate no. 12074/5/2024-CERT-01**  
**Description of the family of cylinders which has received type approval**

Design life: non-limited  
Underwater use: no  
Special torque: 95 Nm  
Pressure relief device: yes/ burst disc

Fluid: air  
Manufacturing factory address: same as manufacturer

**Finished cylinder**

Capacity: 3.7 L; 6.8 L, 9.0 L

Max. allowable pressure (PS): 300 bar  
Test pressure (PT): 450 bar

Diameter: 158 ± 2.0 mm

Length:

3.7 L	6.8 L	9.0 L
326 ± 5.0 mm	518 ± 5.0 mm	653 ± 5.0 mm

Thread: M18 x 1.5 – 6H

**Liner**

Material: PET CB-651S  
Density: 1.39 g/cm<sup>3</sup>  
Melting point: 254 ± 2 °C  
Glass transition temperature: 78 °C  
Auto - ignition temperature: 510 °C  
Minimum thickness: 0.5 ± 0.15 mm

**Composite material**

Fibre: carbon fibre – SYT49S  
Fibre tensile strength: ≥ 4400 MPa  
Fibre modulus: ≥ 230 GPa  
Matrix components: Epoxy resin DER 383 LCL + D230  
Shear strength: ≥ 34.5 MPa  
Thickness: min. 7.0 ± 1.0 mm

**Metal end boss**

Material: AA 6061 T6  
Min. yield strength: ≥ 240 MPa  
Min. tensile strength: ≥ 262 MPa  
Elongation: ≥ 10 %



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