

EU CERTIFICATE OF CONFORMITY

This is to certify that Lloyd's Register Verification, a Notified Body under the terms of:
The Pressure Equipment Directive, 2014/68/EC;
The Pressure Equipment (Safety) Regulation 2016, Statutory Instrument 2016 No. 1105;
did (in accordance with Module F of the Directive) undertake an EU Product Verification on the stated pressure equipment to ensure its conformity within the requirements of the Directive which apply to it.
The equipment identified below was shown to comply.

This Certificate is issued to:

APPLICANT:

**Faber Industrie S.p.A.
Cividale del Friuli
Udine
Italy**

PRODUCT DESCRIPTION:

**Seamless Steel Gas Cylinder for breathing
apparatus, drawing EN-203-372-890 Rev. 1**

APPLICABLE STANDARD:

EN 1964-1:1999

Quantity	Capacity (L)	Batch and Serial No	Manufacture date
157	12	17/0922/001÷159	06/2017

The seamless steel gas cylinders named above have been manufactured in accordance with EC Type Examination Certificate No CE-1370-PED-B-FAB 002-12-ITA issued by Bureau Veritas, Notified Body No 1370, on 27th March 2012.

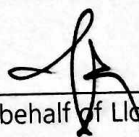
As verified in the Manufacturer Test Certificate No: 17/0922 dated 06th June 2017 and Manufacturing/production Record endorsed by our Surveyors, Ref. VR VEN1790114/83, the final inspection and proof test in accordance with the requirements of Section 3.2 of the essential safety requirements was carried out on the above equipment.

Certificate No.: 0038/PED/VEN1790114/83

Date of Issue: 06th June 2017

Certificate Issue: 1

LRV Notified Body number 0038


G. Agozzino on behalf of Lloyd's Register Verification

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The Company Faber Industrie s.p.a. – Via dell'Industria, 23 - XI Zona Industriale Cividale del Friuli (UD) – ITALY,
La società Faber Industrie s.p.a. – con sede in Via dell'Industria, 23 - XI Zona Industriale Cividale del Friuli (UD) – ITALIA,

DECLARES
DICHIARA

that the manufactured pressure equipment:
che l'attrezzatura a pressione costruita:

Definition: **CYLINDER FOR BREATHING APPARATUS**
Definizione: BOMBOLE PER APPARECCHIO RESPIRATORE

Water capacity V **12** litre/ litri
Capacità

Operating fluid: **1002 AIR**
Fluido contenuto:

Manufacturer N°/ N° di fabbrica
from/ dal **17/0922/001** to/ al **17/0922/159**

Drawing N°: **EN-203-372-890 REV.1**
N° disegno:

Min. e max. allowable temperatures: **-50 + +65 °C**
Temperatura min. e max. ammissibili:

Max. allowable pressure: **232** bar
Pressione max. ammissibile:

No. of cylinders / numero di bombole
156

MEETS THE REQUIREMENTS OF DIRECTIVE PED 2014/68/EU
E' CONFORME AI REQUISITI DELLA DIRETTIVA PED 2014/68/EU

- Conformity assessment procedures used: Module **B+F** (Category **III**)
(Module B in compliance with Annex II and III of Directive 97/23/CE
Module F in compliance with Annex II and III of Directive 2014/68/EU)
*Procedura/e di valutazione di conformità utilizzata: Modulo **B+F** (Categoria **III**)*
(Modulo B in accordo agli allegati II e III della Direttiva 97/23/CE
Modulo F in accordo agli allegati II e III della Direttiva 2014/68/EU)
- Notified Body charged of the conformity assessment: N° **0038 LLOYD'S REGISTER**
Organismo Notificato incaricato della valutazione di conformità: N°
- Registration number of "CE Type Examination Certificate": **CE-1370-PED-B-FAB002-12-ITA**
Estremi dell' "Attestato dell'esame CE del tipo":
- Not harmonized standards applied to designing and manufacture: **EN 1964-1:1999**
Norme non armonizzate applicate alla progettazione ed alla costruzione:
- Harmonized standards applied to designing and manufacture: **None**
*Norme armonizzate applicate alla progettazione ed alla costruzione: **Nessuna***
- Others European Directives applied to the equipment: **None**
*Eventuali altre Direttive europee applicate all'attrezzatura: **Nessuna***
- Registration number of Conformity Certificate issued by the Notified Body charged of assessment procedure
"Module F": **0038/PED/VEN1790114/83**
Estremi dell'Attestato di Conformità rilasciato dall'Organismo Notificato incaricato della procedura di valutazione "Modulo F":

It is declared that the equipment has been hydraulic tested with favourable result at the pressure of: (PT) **372** bar, it is marked
CE **0038** and with identification data and the working parameters upside reported.
*Dichiara inoltre che l'attrezzatura è stata sottoposta con esito favorevole a prova di pressione idraulica di : (PT) **372** bar, che è stata
marcata CE **0038** e con i dati identificativi e le caratteristiche di esercizio sopra riportati.*

The assembly must be subjected to a global conformity assessment procedure described in the directive PED 2014/68/EU.
L'insieme deve essere sottoposto ad una procedura globale di valutazione di conformità così come previsto dalla direttiva PED 2014/68/EU.

Cividale del Friuli 06/06/2017

129543 

Faber Industrie S.p.A.

Faber
INDUSTRIE S.p.A.
Cividale del Friuli

Manufacturer: **FABER INDUSTRIE SPA - CIVIDALE DEL FRIULI - UDINE- ITALY**Inspection: **LLOYD'S REGISTER**Specification: **EN 1964-1:1999 (PED)**Customer: **Aerotecnica Coltri S.p.A.**

Manufacturer serial No. :

From **17/0922/001** to **17/0922/159**Gas: **1002 AIR**Total cylinders: **156**Type of cylinder: **Seamless steel gas cylinders**Material: **34CRMO4**Working pressure at 15° C: **232 bar**Working temperature: **-50° + +65° C****Nominal data**

Drawing no.	Test Pressure (bar)	Minimum Thickness		Nominal Diameter (mm)	Nominal Length without valve (mm)	Nominal Water Capacity (l)	Nominal Weight (Kg)
		wall (mm)	base (mm)				
EN-203-372-890 REV.1	372	5.3	5.3	203	510	12	15.1

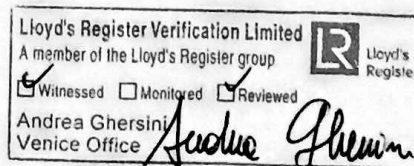
We hereby certify that the cylinders of the batch no. **17/0922** comply with the following requirementsManufacturing process: cylinders manufactured from **plate**Neck thread : **M25X2 EN 144-1 2000**Identification marks stamped on cylinders shoulder according to drawing: **PPED004 2****Minimum cylindrical shell thickness:**The wall thickness of all cylinders has been measured and found to be not less than : **5.3 mm****Hardness range:**All cylinders have been controlled within the following hardness values: **Min 298 HB, Max 354 HB****Heat treatment:**

All cylinders have been heat treated at the following temperatures:

Liquid quench: **900 °C ± 20 °C**Temper at: **570 °C ± 30 °C****Chemical analysis:**Material: **34CRMO4**The cylinders of the batch no. **17/0922** have been manufactured from the following cast(s) of steel:

Cast Numb.	Code (*)	C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Mo (%)	S+P (%)
570355	DPN	0.33	0.23	0.85	0.013	0.002	1.05	0.22	0.015

(*)marked on outer bottom surface



Date: 06/06/2017	For and on behalf of the manufacturer: Faber INDUSTRIE S.p.A. Cividal del Friuli	For and on behalf of A.I.A.
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MEASUREMENTS OF SAMPLE CYLINDERS:

Cylinder Serial no.	Water Capacity (L)	Empty Weight (Kg)	Minimum measured thickness	
			of the wall (mm)	of the base (mm)
17/0922/158	12	15.10	5.4	5.8
17/0922/159	12	15.00	5.4	5.8

MECHANICAL TESTS CARRIED OUT ON SAMPLE CYLINDERS:

Cylinder Serial no.	Code (*)	Test piec dimension (mm)	Yield strength (MPa)	Tensile strength (MPa)	Elongation (%)	Impact test -50 °C			Bend test 180° without cracking
						Direction	Individual (J/cm²)	Mean (J/cm²)	
17/0922/158	DPN	9.9 x 5.6	998	1095	17.0	TRASV	38 42 33	38	SATISF.
Minimum values specified			890	990	14		28	35	

BURST TESTS CARRIED OUT ON SAMPLE CYLINDERS:

Cylinder Serial no.	Code (*)	Hydraulic burst test bar	Description of the fracture
17/0922/159	DPN	676	LONGITUDINAL
Minimum values specified		596	

For and on behalf of the manufacturer:

For and on behalf of A.I.A.

Faber
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Cividale del Friuli

Lloyd's Register Verification Limited
A member of the Lloyd's Register group

☒ Witnessed ☐ Monitored ☐ Reviewed

Andrea Gherini
Venice Office

Andrea Gherini

TESTING OBJECT:

CYLINDER ACCORDING TO DRAWING: **EN-203-372-890 REV.1**

OUTSIDE DIAMETER: **203 mm** WATER CAPACITY: **12 l**

MIN. WALL THICKNESS: **5.3 mm** NOMINAL LENGTH: **510 mm**

FROM CYLINDER SERIAL No. : **17/0922/001** to **17/0922/159**

TEST TECHNICAL DATA:

EXAMINATION STANDARD: **EN 1964-1**

INSPECTED PART: **CYLINDRICAL WALL**

EXTENTION OF EXAMINATION: **100 %**

FABRICATION STAGE: **AFTER HEAT TREATMENT (QUENCHING AND TEMPERING), SHOT BLASTING
AND BEFORE PRESSURE TESTING**

PROBES: **LONGITUDINAL, TRANSVERSAL AND THICKNESS**

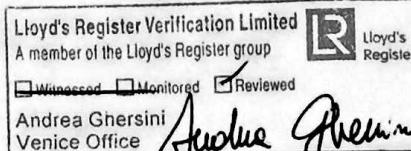
COUPLANT: **EMULSIFIED WATER**

SCANNING DIRECTION: **CIRCUMFERENTIAL, AXIAL AND RADIAL DIRECTIONS**

REFERENCE REFLECTOR: **CALIBRATION CYLINDER ACCORDING TO EN 1964-1**

EXAMINATION RESULTS:

ALL CYLINDERS HAVE BEEN CHECKED GIVING SATISFACTORY RESULTS.



For and on behalf of the manufacturer:

For and on behalf of A.I.A.

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INDUSTRIE S.p.A.
Cividale del Friuli

LOT No. 17/0922 NUMBER OF CYLINDERS: 156 TEST DATE: 06/2017

ACCORDING TO DWG.: EN-203-372-890 REV.1

WORKING PRESSURE AT 15° C: 232 bar HOLDING TIME AT TEST PRESSUR 30 sec

CYLINDER SIZE : OUTSIDE DIAMETER 203 mm LENGTH 510 mm

REMARKS: M = Mechanical Tests, B = Burst Tests, P = Prototype Tests, S = Cylinder Discarded, C = Cycling Test,

C+B = Cycling + Burst Test, F = Flattening Test.

FITTINGS : "CO" = Collar

CYLINDER SERIAL No.	CUSTOMER NUMBER	HEAT CODE AND NUMBER	TEST PRESSURE (bar)	CYLINDER WATER CAPACITY (l)	FITTINGS	MASS (Kg)	TARE (Kg)	REMARKS
17/0922/001		DPN 570355	372	12.0		15.1		
17/0922/002		DPN 570355	372	12.0		15.1		
17/0922/003		DPN 570355	372	12.0		15.1		
17/0922/004		DPN 570355	372	12.0		15.1		
17/0922/005		DPN 570355	372	12.0		15.1		
17/0922/006		DPN 570355	372	12.0		15.1		
17/0922/007		DPN 570355	372	12.0		15.1		
17/0922/008		DPN 570355	372	12.0		15.1		
17/0922/009		DPN 570355	372	12.0		15.1		
17/0922/010		DPN 570355	372	12.0		15.1		
17/0922/011		DPN 570355	372	12.0		15.1		
17/0922/012		DPN 570355	372	12.0		15.1		
17/0922/013		DPN 570355	372	12.0		15.1		
17/0922/014		DPN 570355	372	12.0		15.1		
17/0922/015		DPN 570355	372	12.0		15.1		
17/0922/016		DPN 570355	372	12.0		15.1		
17/0922/017		DPN 570355	372	12.0		15.1		
17/0922/018		DPN 570355	372	12.0		15.1		
17/0922/019		DPN 570355	372	12.0		15.1		
17/0922/020		DPN 570355	372	12.0		15.0		
17/0922/021		DPN 570355	372	12.0		15.3		
17/0922/022		DPN 570355	372	12.0		15.1		
17/0922/023		DPN 570355	372	12.0		15.1		
17/0922/024		DPN 570355	372	12.0		15.1		
17/0922/025		DPN 570355	372	12.0		15.1		
17/0922/026		DPN 570355	372	12.0		15.1		
17/0922/027		DPN 570355	372	12.0		15.1		
17/0922/028		DPN 570355	372	12.0		15.1		
17/0922/029		DPN 570355	372	12.0		15.2		
17/0922/030		DPN 570355	372	12.0		15.1		
17/0922/031		DPN 570355	372	12.0		15.2		
17/0922/032		DPN 570355	372	12.0		15.1		
17/0922/033		DPN 570355	372	12.0		15.1		
17/0922/034		DPN 570355	372	12.0		15.1		
17/0922/035		DPN 570355	372	12.0		15.2		
17/0922/036		DPN 570355	372	12.0		15.1		
17/0922/037		DPN 570355	372	12.0		15.1		
17/0922/038		DPN 570355	372	12.0		15.1		
17/0922/039		DPN 570355	372	12.0		15.1		
17/0922/040		DPN 570355	372	12.0		15.1		

Manufacturer stamp and signature:

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Civitate del Friuli

129543



A.I.A. stamp and signature:

Lloyd's Register Verification Limited
A member of the Lloyd's Register group

☒ Witnessed ☐ Monitored ☐ Reviewed

Andrea Gherini
Venice Office

Andrea Gherini

LOT No. 17/0922 NUMBER OF CYLINDERS: 156 TEST DATE: 06/2017

ACCORDING TO DWG.: EN-203-372-890 REV.1

WORKING PRESSURE AT 15° C: 232 bar HOLDING TIME AT TEST PRESSUR 30 sec

CYLINDER SIZE : OUTSIDE DIAMETER 203 mm LENGTH 510 mm

REMARKS: M = Mechanical Tests, B = Burst Tests, P = Prototype Tests, S = Cylinder Discarded, C = Cycling Test,

C+B = Cycling + Burst Test, F = Flattening Test.

FITTINGS : "CO" = Collar

CYLINDER SERIAL No.	CUSTOMER NUMBER	HEAT CODE AND NUMBER	TEST PRESSURE (bar)	CYLINDER WATER CAPACITY (l)	FITTINGS	MASS (Kg)	TARE (Kg)	REMARKS
17/0922/041		DPN 570355	372	12.0		15.1		
17/0922/042		DPN 570355	372	12.0		15.2		
17/0922/043		DPN 570355	372	12.0		15.1		
17/0922/044		DPN 570355	372	12.0		15.1		
17/0922/045		DPN 570355	372	12.0		15.2		
17/0922/046		DPN 570355	372	12.0		15.1		
17/0922/047		DPN 570355	372	12.0		15.1		
17/0922/048		DPN 570355	372	12.0		15.2		
17/0922/049		DPN 570355	372	12.0		15.2		
17/0922/050		DPN 570355	372	12.0		15.1		
17/0922/051		DPN 570355	372	12.0		15.2		
17/0922/052		DPN 570355	372	12.0		15.1		
17/0922/053		DPN 570355	372	12.0		15.0		
17/0922/054		DPN 570355	372	12.0		15.0		
17/0922/055		DPN 570355	372	12.0		15.1		
17/0922/056		DPN 570355	372	12.0		15.1		
17/0922/057		DPN 570355	372	12.0		15.1		
17/0922/058		DPN 570355	372	12.0		15.1		
17/0922/059		DPN 570355	372	12.0		15.0		
17/0922/060		DPN 570355	372	12.0		15.1		
17/0922/061		DPN 570355	372	12.0		15.1		
17/0922/062		DPN 570355	372	12.0		15.0		
17/0922/063		DPN 570355	372	12.0		15.1		
17/0922/064		DPN 570355	372	12.0		15.1		
17/0922/065		DPN 570355	372	12.0		15.0		
17/0922/066		DPN 570355	372	12.0		15.0		
17/0922/067		DPN 570355	372	12.0		15.0		
17/0922/068		DPN 570355	372	12.0		15.1		
17/0922/069		DPN 570355	372	12.0		15.1		
17/0922/070		DPN 570355	372	12.0		15.1		
17/0922/071		DPN 570355	372	12.0		15.1		
17/0922/072		DPN 570355	372	12.0		15.2		
17/0922/073		DPN 570355	372	12.0		15.1		
17/0922/074		DPN 570355	372	12.0		15.1		
17/0922/075		DPN 570355	372	12.0		15.3		
17/0922/076		DPN 570355	372	12.0		15.1		
17/0922/077		DPN 570355	372	12.0		15.3		
17/0922/078		DPN 570355	372	12.0		15.2		
17/0922/079		DPN 570355	372	12.0		15.2		
17/0922/080		DPN 570355	372	12.0		15.1		

Manufacturer stamp and signature:

Faber
INDUSTRIE S.p.A.
Cividale del Friuli

A.I.A. stamp and signature:

Lloyd's Register Verification Limited
A member of the Lloyd's Register group
☒ Witnessed ☐ Monitored ☒ Reviewed
Andrea Ghersin
Venice Office *Andrea Ghersin*

129543

LOT No. 17/0922 NUMBER OF CYLINDERS: 156 TEST DATE: 06/2017

ACCORDING TO DWG.: EN-203-372-890 REV.1

WORKING PRESSURE AT 15° C: 232 bar HOLDING TIME AT TEST PRESSUR 30 sec

CYLINDER SIZE : OUTSIDE DIAMETER 203 mm LENGTH 510 mm

REMARKS: M = Mechanical Tests, B = Burst Tests, P = Prototype Tests, S = Cylinder Discarded, C = Cycling Test,

C+B = Cycling + Burst Test, F = Flattening Test.

FITTINGS : "CO" = Collar

CYLINDER SERIAL No.	CUSTOMER NUMBER	HEAT CODE AND NUMBER	TEST PRESSURE (bar)	CYLINDER WATER CAPACITY (l)	FITTINGS	MASS (Kg)	TARE (Kg)	REMARKS
17/0922/081		DPN 570355	372	12.0		15.1		
17/0922/082		DPN 570355	372	12.0		15.2		
17/0922/083		DPN 570355	372	12.0		15.1		
17/0922/084		DPN 570355	372	12.0		15.2		
17/0922/085		DPN 570355	372	12.0		15.2		
17/0922/086		DPN 570355	372	12.0		15.2		
17/0922/087		DPN 570355	372	12.0		15.2		
17/0922/088		DPN 570355	372	12.0		15.3		
17/0922/089		DPN 570355	372	12.0		15.1		
17/0922/090		DPN 570355	372	12.0		15.1		
17/0922/091		DPN 570355	372	12.0		15.1		
17/0922/092		DPN 570355	372	12.0		15.1		
17/0922/093		DPN 570355	372	12.0		15.1		
17/0922/094		DPN 570355	372	12.0		15.2		
17/0922/095		DPN 570355	372	12.0		15.3		
17/0922/096		DPN 570355	372	12.0		15.1		
17/0922/097		DPN 570355	372	12.0		15.1		
17/0922/098		DPN 570355	372	12.0		15.3		
17/0922/099		DPN 570355	372	12.0		15.1		
17/0922/100		DPN 570355	372	12.0		15.1		
17/0922/102		DPN 570355	372	12.0		15.1		
17/0922/103		DPN 570355	372	12.0		15.1		
17/0922/104		DPN 570355	372	12.0		15.3		
17/0922/105		DPN 570355	372	12.0		15.1		
17/0922/106		DPN 570355	372	12.0		15.2		
17/0922/107		DPN 570355	372	12.0		15.1		
17/0922/108		DPN 570355	372	12.0		15.1		
17/0922/109		DPN 570355	372	12.0		15.1		
17/0922/110		DPN 570355	372	12.0		15.1		
17/0922/111		DPN 570355	372	12.0		15.1		
17/0922/112		DPN 570355	372	12.0		15.1		
17/0922/113		DPN 570355	372	12.0		15.1		
17/0922/114		DPN 570355	372	12.0		15.1		
17/0922/115		DPN 570355	372	12.0		15.1		
17/0922/116		DPN 570355	372	12.0		15.1		
17/0922/117		DPN 570355	372	12.0		15.1		
17/0922/118		DPN 570355	372	12.0		15.1		
17/0922/119		DPN 570355	372	12.0		15.1		
17/0922/120		DPN 570355	372	12.0		15.1		
17/0922/121		DPN 570355	372	12.0		15.1		

Manufacturer stamp and signature:

Faber
INDUSTRIE S.p.A.
Civiale del Friuli

129543

A.I.A. stamp and signature:

Lloyd's Register Verification Limited
A member of the Lloyd's Register group

☒ Witnessed ☐ Monitored ☒ Reviewed

Andrea Ghersin
Venice Office

Andrea Ghersin

LOT No. 17/0922 NUMBER OF CYLINDERS: 156 TEST DATE: 06/2017

ACCORDING TO DWG.: EN-203-372-890 REV.1

WORKING PRESSURE AT 15° C: 232 bar HOLDING TIME AT TEST PRESSUR 30 sec

CYLINDER SIZE : OUTSIDE DIAMETER 203 mm LENGTH 510 mm

REMARKS: M = Mechanical Tests, B = Burst Tests, P = Prototype Tests, S = Cylinder Discarded, C = Cycling Test,

C+B = Cycling + Burst Test, F = Flattening Test.

FITTINGS : "CO" = Collar

CYLINDER SERIAL No.	CUSTOMER NUMBER	HEAT CODE AND NUMBER	TEST PRESSURE (bar)	CYLINDER WATER CAPACITY (l)	FITTINGS	MASS (Kg)	TARE (Kg)	REMARKS
17/0922/122		DPN 570355	372	12.0		15.1		
17/0922/123		DPN 570355	372	12.0		15.1		
17/0922/124		DPN 570355	372	12.0		15.1		
17/0922/125		DPN 570355	372	12.0		15.1		
17/0922/126		DPN 570355	372	12.0		15.1		
17/0922/127		DPN 570355	372	12.0		15.1		
17/0922/128		DPN 570355	372	12.0		15.1		
17/0922/129		DPN 570355	372	12.0		15.1		
17/0922/130		DPN 570355	372	12.0		15.1		
17/0922/131		DPN 570355	372	12.0		15.1		
17/0922/132		DPN 570355	372	12.0		15.1		
17/0922/133		DPN 570355	372	12.0		15.2		
17/0922/134		DPN 570355	372	12.0		15.1		
17/0922/135		DPN 570355	372	12.0		15.1		
17/0922/136		DPN 570355	372	12.0		15.1		
17/0922/137		DPN 570355	372	12.0		15.1		
17/0922/138		DPN 570355	372	12.0		15.1		
17/0922/139		DPN 570355	372	12.0		15.2		
17/0922/140		DPN 570355	372	12.0		15.1		
17/0922/141		DPN 570355	372	12.0		15.1		
17/0922/142		DPN 570355	372	12.0		15.1		
17/0922/143		DPN 570355	372	12.0		15.1		
17/0922/144		DPN 570355	372	12.0		15.1		
17/0922/145		DPN 570355	372	12.0		15.1		
17/0922/146		DPN 570355	372	12.0		15.1		
17/0922/147		DPN 570355	372	12.0		15.1		
17/0922/148		DPN 570355	372	12.0		15.1		
17/0922/149		DPN 570355	372	12.0		15.1		
17/0922/150		DPN 570355	372	12.0		15.1		
17/0922/151		DPN 570355	372	12.0		15.1		
17/0922/152		DPN 570355	372	12.0		15.1		
17/0922/153		DPN 570355	372	12.0		15.1		
17/0922/154		DPN 570355	372	12.0		15.1		
17/0922/155		DPN 570355	372	12.0		15.1		
17/0922/156		DPN 570355	372	12.0		15.1		
17/0922/157		DPN 570355	372	12.0		15.1		

Manufacturer stamp and signature:

129543



Faber
INDUSTRIE S.p.A.
Civiale del Friuli

A.I.A. stamp and signature:

Lloyd's Register Verification Limited
A member of the Lloyd's Register group



☒ Witnessed ☐ Monitored ☒ Reviewed
Andrea Gherardini
Venice Office

Andrea Gherardini

Istruzioni operative per il montaggio, la messa in servizio, l'impiego, la manutenzione e le visite periodiche delle bombole in acciaio per autorespiratori subacquei (PED 2014/68/EU).

Operating instructions for the mounting, putting into service, use, maintenance and periodic inspection of Faber Steel Cylinders for Scuba Diving (PED 2014/68/EU).

-La bombola per l'apparecchio respiratore è soggetta ai regolamenti e alle norme per l'uso, manutenzione e le ispezioni periodiche, vigenti nel paese in cui viene utilizzata. E' responsabilità del proprietario della bombola eseguire le visite periodiche siano entro i termini prefissati. Si raccomanda di sottoporre la bombola ad un controllo visivo interno ed esterno da personale competente almeno una volta l'anno.

-The cylinder for breathing apparatus is subjected to the national regulations and standards for the use, maintenance and periodic inspection, in force in the country of use. The owner of pressure equipment is responsible that periodical inspections are carried out as required by the national regulation and standards. It is recommended that the cylinder will be inspected visually (internally and externally) by a competent person at least annually.

-L'insieme (costituito da varie attrezzature a pressione montate per costruire un tutto integro e funzionale "apparecchio respiratore") deve soddisfare i requisiti essenziali di sicurezza di cui all'allegato I della direttiva PED 2014/68/EU.

-The assembly (that means several pieces of pressure equipment assembled to constitute an integrated and functional whole "breathing apparatus") must satisfy the essential safety requirements set out in Annex I of the directive PED 2014/68/EU.

-L'insieme deve essere sottoposto ad una procedura globale di valutazione di conformità così come previsto dalla direttiva PED 2014/68/EU.

-The assembly shall be subjected to a global conformity assessment procedure described in the directive PED 2014/68/EU.

-E' di importanza vitale avere sempre estrema attenzione alla cura e alla manutenzione della bombola per respiratori subacquei. E' essenziale che il respiratore subacqueo sia accuratamente esaminato per verificare l'eventuale presenza di danneggiamenti o difetti dopo ogni utilizzo. Tutti i difetti devono essere eliminati prima che il respiratore subacqueo venga di nuovo utilizzato. La mancanza di cura durante la manipolazione, con attrezzatura impropria, può non solo innescare difetti pericolosi, ma rendere le successive manutenzioni costose o addirittura impossibili.

-Strict attention to care and maintenance of all types of breathing apparatus used underwater is of vital importance at all times.

It is essential that the complete equipment be thoroughly examined for damage or defect before and after every occasion on which it is used. All defects should be rectified before the equipment is used again. Careless manipulation with inappropriate tools may not only give rise to dangerous defects, but render further maintenance expensive or impossible.

- Le bombole devono essere manipolate con cura non devono essere fatte cadere. Quando trasportate devono essere bloccate in maniera sicura in modo tale che non si muovano durante il trasporto.

- Cylinders should be handled with care and should not be dropped. When being transported they should be firmly secured so that they cannot move about.

-Le condizioni della superficie interna delle bombole possono essere mantenute integre solo se la superficie interna rimane sempre asciutta. La bombola deve essere caricata con aria secca (contenuto d'acqua < 50 mg/m³ per una pressione di carica di 200 bar e contenuto d'acqua < 35mg/m³ per una pressione di carica maggiore di 200 bar, secondo EN12021) e non deve mai essere completamente scaricata in quanto dell'acqua potrebbe essere risucchiata all'interno della bombola contaminandola.

- The condition of the inside of the cylinder can be maintained by keeping it dry at all times. The cylinder should be filled with dry air (Water content <50 mg/m³ for a charging pressure of 200 bar and water content < 35mg/m³ for a charging pressure greater than 200 bar, as for EN12021), and never completely discharged as this can lead to water getting back into the cylinder and causing contamination.

Cylinders should be stored, preferably in the vertical position, in a cool, dry place and away from excessive heat.

Le bombole devono essere immagazzinate, preferibilmente in posizione verticale, in un posto fresco, secco e lontane da fonti di calore.

-Dopo l'uso, soprattutto in acqua di mare, dalla bombola devono essere tolti le cinghie e il fondello e accuratamente lavata con acqua dolce al fine di rimuovere le tracce di acqua salata e lo sporco, specialmente dalle cavità e poi asciugata. Prima dell'immagazzinamento, o quando la bombola è stata completamente scaricata e l'acqua di mare può essere

-After use, particularly in seawater, the outside surface of the cylinder should be removed from its harness and boot and then washed in clean, fresh water to remove all traces of salt water and dirt, especially from any crevices and then dried.

Before storage, or when the cylinder has been completely discharged and seawater may have entered the cylinder,

entrata nella bombola, la valvola deve essere rimossa dalla bombola e la bombola deve essere lavata internamente ed esternamente con acqua dolce e accuratamente asciugata. Questa operazione deve essere normalmente fatta da personale competente. Mai svitare o rimuovere la valvola con la bombola in pressione. La bombola non deve essere immagazzinata con la valvola rivolta all'ingiù. L'azione corrosiva dell'acqua di mare non deve essere mai sottovalutata, se non vengono prese opportune precauzioni per la pulizia delle bombole dopo l'utilizzo, seri danni potranno essere arrecati alla bombola durante il periodo in cui rimarrà inutilizzata. Anche se si fanno immersioni in acqua dolce, ci possono essere delle sostanze corrosive in soluzione quali rifiuti chimici e oleosi che non sono visibili al momento, ma che possono innescare una azione corrosiva se lasciate a contatto con la bombola.

- La verniciatura, la metallizzazione e i componenti devono essere mantenuti in buone condizioni. Abrasioni e graffi delle bombole devono essere evitate. Per la rimozione della vernice non devono essere utilizzati metodi chimici o a caldo. Zone di corrosione della bombola possono essere eliminate solo secondo le normative nazionali applicabili (Es.: BS 5430). Dopo la necessaria preparazione, la bombola può essere riverniciata. La bombola non deve essere modificata in nessuna circostanza. Questo può comportare seri indebolimenti della bombola e portare ad incidenti. La filettatura della bombola non deve essere alterata in alcun modo. Boccole o adattatori non devono essere utilizzati. Se la bombola non viene utilizzata per un lungo periodo di tempo si raccomanda che debba essere vista da personale competente per essere scaricata e successivamente ricaricata con una leggera pressione positiva. Se la bombola non viene ricaricata subito, deve essere lasciata con la valvola chiusa. Una bombola che è risultata scarta all'ispezione deve essere resa inutilizzabile da personale competente.

- La ricarica deve essere fatta solo con idonei impianti che assicurino che l'aria compressa sia esente da umidità, olio e altre impurità, e che è adeguata all'utilizzo per respiratori subacquei.

Mai caricare ossigeno o altri gas diversi dall'aria nelle bombole per aria.

Prima della carica della bombola, è responsabilità della ditta o persona che esegue la carica verificare che la bombola sia conforme ai regolamenti nazionali in vigore. E' essenziale che le bombole siano caricate con attenzione e lentamente al fine di prevenire sovraccariche e surriscaldamenti, e che la pressione di carica sia tale che, dopo raffreddamento a temperatura ambiente, la pressione di carica della bombola non sia superata. La pressione di esercizio massima ammissibile a 15°C ed espressa in bar è punzonata sulla bombola. Sovraccaricare le bombole è altamente pericoloso. L'identificazione della sigla della filettatura della bombola è punzonata sulla bombola. Utilizzare valvole con filettatura diversa è vietato perché altamente pericoloso.

the cylinder valve should be removed and the cylinder washed internally and externally in clean fresh water and thoroughly dried. This operation should normally be undertaken by a competent person. Never unscrew or remove the valve when the cylinder is under pressure. The cylinder should not be stored with the valve downwards.

The corrosion action of seawater and water-borne contaminants should never be underestimated, and if precautions are not taken to clean the apparatus properly after use, serious damage may be caused to all parts of the apparatus while it is stowed away. Even when diving in apparently fresh water, there may be corrosive substances in solution such as chemical and petroleum wastes which are not noticeable at the time, but which will start corrosive action if left in contact with the apparatus.

- The paintwork, metal spray undercoating and fittings should be kept in good condition. Scratching of cylinders should be avoided. Heat or chemical process may not be used to remove old paint. Corrosion on cylinders should also be removed in accordance with national standards in force in the country of use (Eg.: BS 5430). After the necessary preparation, cylinders should be re-painted. Cylinders should not be modified under any circumstance. This may result in serious weakening of cylinder and lead to accident. The threads in the cylinder neck should not be altered in any way. Bushes or adapters should not be used. If the cylinder is not required for a long period it is recommended that it be returned to a competent person for discharging, removal of the valve, extraction of any oil or water, drying out and refitting of the valve. The cylinder should then be recharged to a slight positive pressure. If the cylinder is not to be recharged immediately, it should be left with the valve closed. A cylinder that has failed on inspection should be left with a competent person who will then destroy it.

- Recharging should be undertaken only with proper equipment that ensures that the compressed air is free from moisture, oil and other impurities, and is fit for breathing purposes. Never put oxygen or any gas, other than air, in an air cylinder.

Before recharging a cylinder, it is the responsibility of the gas compressing firm or person to ensure that the cylinder complies with statutory regulations.

It is essential that cylinders be charged carefully and slowly to prevent overcharging and overheating, and that the charging pressure be such that, after cooling to ambient temperature, the maximum allowable pressure for the cylinder is not exceeded.

The maximum allowable pressure at 15°C, in bar, is stamped on the cylinder.

Overcharging of cylinders is highly dangerous.

The identification code of the neck tread is stamped on the cylinder. Use of valves with different threads are forbidden because highly dangerous.