Lloyd's Register

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/EU;
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
152	**15**	**18/0011/001÷152**	**01/2018**

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 27 March 2012.

As verified in the Manufacturer Test Certificate No: 18/0011 dated 11 January 2018 and Manufacturing/production Record endorsed by our Surveyors, Ref. VR VEN1790114/188, 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/VEN1790114/188
Date of Issue:	11/01/2018
Certificate Issue:	1

LRV Notified Body number 0038

G. Agozzino on behalf of Lloyd's Register Verification

Faber INDUSTRIE SPA	**CONFORMITY DECLARATION** (according to European Directive 2014/68/EU) ***DICHIARAZIONE DI CONFORMITA'*** *(ai sensi della Direttiva Europea 2014/68/EU)*	**PAG. 1 OF 1**

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

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

Water capacity V **15** litre/ *litri*
Capacità

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

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

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

Manufacturer N°/ *N° di fabbrica*

No. of cylinders / *numero di bombole*

from/ *dal* **18/0011/001** to/ *al* **18/0011/154**

152

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

1. Conformity assessment procedures used: Module **B+F** (Category **IV**)
   (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* ***IV*** *)*
   (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)
2. Notified Body charged of the conformity assessment: N° **0038 LLOYD'S REGISTER**
   Organismo Notificato incaricato della valutazione di conformità: N°
3. Registration number of "CE Type Examination Certificate": **CE-1370-PED-B-FAB002-12-ITA**
   Estremi dell' "Attestato dell'esame CE del tipo":
4. Not harmonized standards applied to designing and manufacture: **EN 1964-1:1999**
   Norme non armonizzate applicate alla progettazione ed alla costruzione:
5. Harmonized standards applied to designing and manufacture: **None**
   Norme armonizzate applicate alla progettazione ed alla costruzione: ***Nessuna***
6. Others European Directives applied to the equipment: **None**
   Eventuali altre Direttive europee applicate all'attrezzatura: ***Nessuna***
7. Registration number of Conformity Certificate issued by the Notified Body charged of assessment procedure "Module F": **0038/PED/VEN1790114/188**
   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 11/01/2018

Faber Industrie S.p.A.
Faber
INDUSTRIE S.p.A.
Cividale del Friuli

134823

Faber INDUSTRIE SPA

PRODUCTION TESTING CERTIFICATE OF SEAMLESS STEEL GAS CYLINDERS

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.**
Owner stamping: **COLTRI SUB**
Manufacturer serial No. :
From **18/0011/001** to **18/0011/154**

Gas: **1002 AIR**

Total cylinders: **152**
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 wall (mm)	Minimum Thickness base (mm)	Nominal Diameter (mm)	Nominal Length without valve (mm)	Nominal Water Capacity (l)	Nominal Weight (Kg)
EN-203-372-890 REV.1	**372**	**5.3**	**5.3**	**203**	**620**	**15**	**18.2**

We hereby certify that the cylinders of the batch no. **18/0011** comply with the following requirements
Manufacturing 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. **18/0011** have been manufactured from the following cast(s) of steel:

Cast Numb.	Code (*)	C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Mo (%)	S+P (%)
572513	DQD	0.35	0.25	0.80	0.009	0.000	1.07	0.22	0.009

(*)marked on outer bottom surface

In case of use with compressed air and its mixture, synthetic air may be used and special precautions are required to avoid condensation of moisture in the cylinder.

Date: **11/01/2018**	For and on behalf of the manufacturer:	For and on behalf of R.I.N.A.
	Faber INDUSTRIE S.p.A. Cividale del Friuli	Lloyd's Register Group Limited A member of the Lloyd's Register group ☑ Witnessed ☐ Monitored ☐ Reviewed Andrea Ghersini Venice Office

11/01/2018

134823

MEASUREMENTS OF SAMPLE CYLINDERS:

Cylinder Serial no.	Water Capacity (L)	Empty Weight (Kg)	Minimum measured thickness	
			of the wall (mm)	of the base (mm)
18/0011/153	15	18.00	5.4	5.7
18/0011/154	15	17.90	5.4	5.7

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)	
18/0011/153	DQD	10.0 x 5.7	965	1066	15.5	TRASV	35 37 35	36	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
18/0011/154	DQD	648	LONGITUDINAL
Minimum values specified		596	

For and on behalf of the manufacturer:	For and on behalf of A.I.A.
Faber INDUSTRIE S.p.A. Cividale del Friuli	Lloyd's Register Verification Limited A member of the Lloyd's Register group Lloyd's Register ☑ Witnessed ☐ Monitored ☐ Reviewed Andrea Ghersini Venice Office

TESTING OBJECT:

CYLINDER ACCORDING TO DRAWING: **EN-203-372-890 REV.1**
OUTSIDE DIAMETER: **203** mm WATER CAPACITY: **15** l
MIN. WALL THICKNESS: **5.3** mm NOMINAL LENGTH: **620** mm
FROM CYLINDER SERIAL No. : **18/0011/001** to **18/0011/154**

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.
Faber. INDUSTRIE S.p.A. Cividale del Friuli	Lloyd's Register Verification Limited A member of the Lloyd's Register group ☐ Witnessed ☐ Monitored ☑ Reviewed Andrea Ghersini Venice Office

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Faber INDUSTRIE SPA	RECORD OF HYDROSTATIC TESTS ON CYLINDERS	PAG. 4 OF 9

LOT No. **18/0011** NUMBER OF CYLINDERS: **152** TEST DATE: **01/2018**

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

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

CYLINDER SIZE : OUTSIDE DIAMETER **203** mm LENGTH **620** 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
18/0011/001		DQD 572513	372	15.0		18.0		
18/0011/002		DQD 572513	372	15.0		18.0		
18/0011/003		DQD 572513	372	15.0		18.0		
18/0011/004		DQD 572513	372	15.0		18.0		
18/0011/005		DQD 572513	372	15.0		18.0		
18/0011/006		DQD 572513	372	15.0		18.0		
18/0011/007		DQD 572513	372	15.0		18.0		
18/0011/008		DQD 572513	372	15.0		18.0		
18/0011/009		DQD 572513	372	15.0		18.0		
18/0011/010		DQD 572513	372	15.0		18.0		
18/0011/011		DQD 572513	372	15.0		18.0		
18/0011/012		DQD 572513	372	15.0		18.0		
18/0011/013		DQD 572513	372	15.0		18.0		
18/0011/014		DQD 572513	372	15.0		18.0		
18/0011/015		DQD 572513	372	15.0		18.0		
18/0011/016		DQD 572513	372	15.0		18.0		
18/0011/017		DQD 572513	372	15.0		18.0		
18/0011/018		DQD 572513	372	15.0		18.0		
18/0011/019		DQD 572513	372	15.0		18.0		
18/0011/020		DQD 572513	372	15.0		18.0		
18/0011/021		DQD 572513	372	15.0		18.0		
18/0011/022		DQD 572513	372	15.0		18.0		
18/0011/023		DQD 572513	372	15.0		18.0		
18/0011/024		DQD 572513	372	15.0		18.0		
18/0011/025		DQD 572513	372	15.0		18.0		
18/0011/026		DQD 572513	372	15.0		18.0		
18/0011/027		DQD 572513	372	15.0		18.0		
18/0011/028		DQD 572513	372	15.0		18.0		
18/0011/029		DQD 572513	372	15.0		18.0		
18/0011/030		DQD 572513	372	15.0		18.0		
18/0011/031		DQD 572513	372	15.0		18.0		
18/0011/032		DQD 572513	372	15.0		18.0		
18/0011/033		DQD 572513	372	15.0		18.0		
18/0011/034		DQD 572513	372	15.0		18.0		
18/0011/035		DQD 572513	372	15.0		18.0		
18/0011/036		DQD 572513	372	15.0		18.0		
18/0011/037		DQD 572513	372	15.0		18.0		
18/0011/038		DQD 572513	372	15.0		18.0		
18/0011/039		DQD 572513	372	15.0		18.0		
18/0011/040		DQD 572513	372	15.0		18.0		

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 Ghersini
Venice Office

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Faber INDUSTRIE SPA

RECORD OF HYDROSTATIC TESTS ON CYLINDERS

LOT No. **18/0011** NUMBER OF CYLINDERS: **152** TEST DATE: **01/2018**

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

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

CYLINDER SIZE : OUTSIDE DIAMETER **203** mm LENGTH **620** 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
18/0011/041		DQD 572513	372	15.0		18.0		
18/0011/042		DQD 572513	372	15.0		18.0		
18/0011/043		DQD 572513	372	15.0		18.0		
18/0011/044		DQD 572513	372	15.0		18.0		
18/0011/045		DQD 572513	372	15.0		18.0		
18/0011/046		DQD 572513	372	15.0		18.0		
18/0011/047		DQD 572513	372	15.0		18.0		
18/0011/048		DQD 572513	372	15.0		18.0		
18/0011/049		DQD 572513	372	15.0		18.0		
18/0011/050		DQD 572513	372	15.0		18.0		
18/0011/051		DQD 572513	372	15.0		18.0		
18/0011/052		DQD 572513	372	15.0		18.0		
18/0011/053		DQD 572513	372	15.0		18.0		
18/0011/054		DQD 572513	372	15.0		18.0		
18/0011/055		DQD 572513	372	15.0		18.0		
18/0011/056		DQD 572513	372	15.0		18.0		
18/0011/057		DQD 572513	372	15.0		18.0		
18/0011/058		DQD 572513	372	15.0		18.0		
18/0011/059		DQD 572513	372	15.0		18.0		
18/0011/060		DQD 572513	372	15.0		18.0		
18/0011/061		DQD 572513	372	15.0		18.0		
18/0011/062		DQD 572513	372	15.0		18.0		
18/0011/063		DQD 572513	372	15.0		18.0		
18/0011/064		DQD 572513	372	15.0		17.9		
18/0011/065		DQD 572513	372	15.0		18.0		
18/0011/066		DQD 572513	372	15.0		18.0		
18/0011/067		DQD 572513	372	15.0		17.9		
18/0011/068		DQD 572513	372	15.0		18.0		
18/0011/069		DQD 572513	372	15.0		17.9		
18/0011/070		DQD 572513	372	15.0		18.0		
18/0011/071		DQD 572513	372	15.0		18.0		
18/0011/072		DQD 572513	372	15.0		18.0		
18/0011/073		DQD 572513	372	15.0		18.0		
18/0011/074		DQD 572513	372	15.0		18.0		
18/0011/075		DQD 572513	372	15.0		17.9		
18/0011/076		DQD 572513	372	15.0		18.0		
18/0011/077		DQD 572513	372	15.0		18.0		
18/0011/078		DQD 572513	372	15.0		18.0		
18/0011/079		DQD 572513	372	15.0		18.0		
18/0011/080		DQD 572513	372	15.0		18.0		

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

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Faber INDUSTRIE SPA	RECORD OF HYDROSTATIC TESTS ON CYLINDERS	PAG. 6 OF 9

LOT No. **18/0011** NUMBER OF CYLINDERS: **152** TEST DATE: **01/2018**

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

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

CYLINDER SIZE : OUTSIDE DIAMETER **203** mm LENGTH **620** 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
18/0011/081		DQD 572513	372	15.0		17.9		
18/0011/082		DQD 572513	372	15.0		18.0		
18/0011/083		DQD 572513	372	15.0		18.0		
18/0011/084		DQD 572513	372	15.0		18.0		
18/0011/085		DQD 572513	372	15.0		18.0		
18/0011/086		DQD 572513	372	15.0		18.0		
18/0011/087		DQD 572513	372	15.0		18.0		
18/0011/088		DQD 572513	372	15.0		17.9		
18/0011/089		DQD 572513	372	15.0		18.0		
18/0011/090		DQD 572513	372	15.0		18.0		
18/0011/091		DQD 572513	372	15.0		18.0		
18/0011/092		DQD 572513	372	15.0		18.0		
18/0011/093		DQD 572513	372	15.0		18.0		
18/0011/094		DQD 572513	372	15.0		18.0		
18/0011/095		DQD 572513	372	15.0		18.0		
18/0011/096		DQD 572513	372	15.0		18.0		
18/0011/097		DQD 572513	372	15.0		18.0		
18/0011/098		DQD 572513	372	15.0		18.0		
18/0011/099		DQD 572513	372	15.0		18.0		
18/0011/100		DQD 572513	372	15.0		17.9		
18/0011/101		DQD 572513	372	15.0		17.9		
18/0011/102		DQD 572513	372	15.0		18.0		
18/0011/103		DQD 572513	372	15.0		18.0		
18/0011/104		DQD 572513	372	15.0		18.0		
18/0011/105		DQD 572513	372	15.0		18.0		
18/0011/106		DQD 572513	372	15.0		18.0		
18/0011/107		DQD 572513	372	15.0		18.0		
18/0011/108		DQD 572513	372	15.0		18.0		
18/0011/109		DQD 572513	372	15.0		18.0		
18/0011/110		DQD 572513	372	15.0		18.0		
18/0011/111		DQD 572513	372	15.0		18.0		
18/0011/112		DQD 572513	372	15.0		18.0		
18/0011/113		DQD 572513	372	15.0		17.9		
18/0011/114		DQD 572513	372	15.0		18.0		
18/0011/115		DQD 572513	372	15.0		18.0		
18/0011/116		DQD 572513	372	15.0		18.0		
18/0011/117		DQD 572513	372	15.0		18.0		
18/0011/118		DQD 572513	372	15.0		18.0		
18/0011/119		DQD 572513	372	15.0		18.0		
18/0011/120		DQD 572513	372	15.0		18.0		

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 Ghersini
Vienna Office

134823

Faber INDUSTRIE SPA	RECORD OF HYDROSTATIC TESTS ON CYLINDERS	PAG. 7 OF 9

LOT No. **18/0011** NUMBER OF CYLINDERS: **152** TEST DATE: **01/2018**

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

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

CYLINDER SIZE : OUTSIDE DIAMETER **203** mm LENGTH **620** 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
18/0011/121		DQD 572513	372	15.0		18.0		
18/0011/122		DQD 572513	372	15.0		18.0		
18/0011/123		DQD 572513	372	15.0		18.0		
18/0011/124		DQD 572513	372	15.0		18.0		
18/0011/125		DQD 572513	372	15.0		18.0		
18/0011/126		DQD 572513	372	15.0		18.0		
18/0011/127		DQD 572513	372	15.0		18.0		
18/0011/128		DQD 572513	372	15.0		18.0		
18/0011/129		DQD 572513	372	15.0		18.0		
18/0011/130		DQD 572513	372	15.0		18.0		
18/0011/131		DQD 572513	372	15.0		18.0		
18/0011/132		DQD 572513	372	15.0		18.0		
18/0011/133		DQD 572513	372	15.0		17.9		
18/0011/134		DQD 572513	372	15.0		18.0		
18/0011/135		DQD 572513	372	15.0		18.0		
18/0011/136		DQD 572513	372	15.0		18.0		
18/0011/137		DQD 572513	372	15.0		18.0		
18/0011/138		DQD 572513	372	15.0		18.0		
18/0011/139		DQD 572513	372	15.0		18.0		
18/0011/140		DQD 572513	372	15.0		18.0		
18/0011/141		DQD 572513	372	15.0		17.9		
18/0011/142		DQD 572513	372	15.0		17.9		
18/0011/143		DQD 572513	372	15.0		18.0		
18/0011/144		DQD 572513	372	15.0		18.0		
18/0011/145		DQD 572513	372	15.0		17.9		
18/0011/146		DQD 572513	372	15.0		18.0		
18/0011/147		DQD 572513	372	15.0		18.0		
18/0011/148		DQD 572513	372	15.0		18.0		
18/0011/149		DQD 572513	372	15.0		18.0		
18/0011/150		DQD 572513	372	15.0		18.0		
18/0011/151		DQD 572513	372	15.0		18.0		
18/0011/152		DQD 572513	372	15.0		18.0		

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 Ghersini, Venice Office

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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) .

-La bombola per l'apparecchio respiratore è soggetta ai regolamenti e alle norme per l'uso, manutenzione e le ispezione 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.

-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.

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

- 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.

-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/m^3 per una pressione di carica di 200 bar e contenuto d'acqua < 35mg/m^3 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.
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 a 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

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

-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.

-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 PED 2014/68/EU.

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

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

- 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.

- 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/m^3 for a charging pressure of 200 bar and water content < 35mg/m^3 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.

-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 the 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.