



CERTIFICATO DI CONFORMITA'
CERTIFICATE OF CONFORMITY

Secondo il Modulo F della direttiva attrezzature a pressione 97/23/CE
as per Module F of pressure equipment directive 97/23/EC

N° CE-1370-PED-F-FAB 021-09-ITA

Fabbricante (nome) / <i>Manufacturer (name):</i>	FABER INDUSTRIE S.p.A.
Indirizzo / <i>Address:</i>	Via dell'Industria, 23 - XI Zona Industriale, I-33043 Cividale del Friuli (UDINE), ITALY
Mandatario(Nome) / <i>Authorized representative (Name):</i>	N.A.
Indirizzo / <i>Address :</i>	N.A.

APPARECCHIO / EQUIPMENT

Componente / <i>Item :</i>	Seamless Steel Cylinder Batch No. 09/1094
Descrizione / <i>Description :</i>	100 Seamless steel cylinders according to drawing No. EN-203-372-890 Rev.1 CE-PED-B-FAB001-02-ITA Rev.A
Certificato di esame CE del tipo n° <i>EC type-examination certificate n°</i>	
Rilasciato da / <i>issued by:</i>	Bureau Veritas SA
Valido fino a (MM/GG/AAAA) / <i>Valid until(MM/DD/YYYY):</i>	04/05/2012
Certificato di esame CE della progettazione n° <i>EC design-examination certificate n°</i>	N.A.
Rilasciato da / <i>issued by :</i>	N.A.

PROVE EFFETTUATE DAL FABBRICANTE / TESTS CARRIED OUT BY MANUFACTURER

Elenco delle prove / <i>List of tests:</i>	External/Internal visual examination ; hydraulic test ; mechanical test (on cylinder(s) No. 09/1094/101) ; burst test (on cylinder(s) No. 09/1094/102)
Osservazioni / <i>Remarks :</i>	Enclosed FABER Testing certificate (total 2 sheets) and record of hydrostatic test on cylinders.

INFORMAZIONI / INFORMATION

Identificazione del fabbricante / <i>Identification of the manufacturer:</i>	FABER
Identificazione del mandatario / <i>Identification of the authorized representative:</i>	N.A.

Marchio / *Marking :* **CE** 1370 (Numero dell'organismo notificato di Bureau Veritas Italia / *Bureau Veritas Italia notified body number*)

Mese e Anno di fabbricazione / *Month and Year of manufacture:* 03/2009

Numero di serie / *Serial number :* from 09/1094/001 to 09/1094/102

Limiti essenziali minimi/massimi ammissibili / *Essential minimum/maximum allowable limits :*

Ps = 200 bar Ts = -50° / +65°

N° CE-1370-PED-F-FAB 021-09-ITA

INFORMAZIONI SUPPLEMENTARI (dove applicabili) / FURTHER INFORMATION (where applicable)

- volume V degli apparecchi a pressione (l):
volume V of the pressure equipment (l): **18,0 litres**
- dimensione nominale della tubazione DN:
nominal size for piping DN: **N.A.**
- pressione di prova PT applicata (bar) e data:
test pressure PT applied (bar) and date: **318 bar performed on 26-03-2009 (gg-mm-aaaa)**
- pressione di taratura del dispositivo di sicurezza (bar):
safety device set pressure (bar): **N.A.**
- potenza dell'attrezzatura a pressione (kW):
output of the pressure equipment (kW): **N.A.**
- tensione di alimentazione (volts) :
supply voltage (volts): **N.A.**
- utilizzo previsto:
intended use: **Breathing equipment**
- rapporto di riempimento (kg/l):
filling ratio (kg/l): **N.A.**
- massa di riempimento massima (kg):
maximum filling mass (kg): **N.A.**
- tara (kg):
tare mass (kg): **See attached list.**
- gruppo del fluido:
product group: **Group 2**
- altre informazioni:
other information: **None**
- natura ed ubicazione della marcatura dell'attrezzatura:
nature and location of the affixing of the marking of the equipment: **Mandatory markings on cylinders shoulder. Other eventual markings as per agreement with customer on opposite side.**

Fatto a / Made at	Il (MM/GG/AAAA)/ On (MM/DD/YYYY)	Firmato da / Signed by	
Padua - Italy	03/27/2009	Roberto Silvestrin	
Codice di registrazione / Registration code: NE-PED0217-09			



Il presente attestato è sottoposto alle Condizioni Generali di Vendita di Bureau Veritas allegati alla domanda d'intervento firmata dal richiedente.
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	CONFORMITY DECLARATION (according to European Directive 97/23/CE -Annex VII) DICHIARAZIONE DI CONFORMITA' (ai sensi della Direttiva Europea 97/23/CE -Allegato VII)	PAG. 1 OF 1
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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

Drawing N°: **EN-203-318-890 REV.1**
N° disegno:

Water capacity V **18** 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: **200** bar
Pressione max. ammissibile:

Manufacturer N°/ N° di fabbrica

No. of cylinders / numero di bombole

from/ dal **09/1094/001** to/ al **09/1094/102**

100

MEETS THE REQUIREMENTS OF DIRECTIVE 97/23/CE
E' CONFORME AI REQUISITI DELLA DIRETTIVA 97/23/CE

1. Conformity assessment procedures used: Module **B+F** (Category **IV**) (Reference to Annex II and III of Directive 97/23/CE)
*Procedura/e di valutazione di conformità utilizzata: Modulo **B+F** (Categoria **IV**) (Riferimento allegati II e III della Direttiva 97/23/CE)*
2. Notified Body charged of the conformity assessment: N° **1370 BUREAU VERITAS ITALIA**
Organismo Notificato incaricato della valutazione di conformità: N°
3. Registration number of "CE Type Examination Certificate": **CE-PED-B-FAB001-02-ITA REV.A**
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": **CE-1370-PED-F-FAB021-09-ITA**
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) **318** bar, it is marked CE **1370** 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) **318** bar, che è stata marcata CE **1370** 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 97/23/CE.
L'insieme deve essere sottoposto ad una procedura globale di valutazione di conformità così come previsto dalla direttiva PED 97/23/CE.

Cividale del Friuli 04/06/2009

Faber Industrie S.p.A.


INDUSTRIE S.p.A.

48276 

Manufacturer: **FABER INDUSTRIE SPA - CIVIDALE DEL FRIULI - UDINE- ITALY**Inspection: **BUREAU VERITAS**Specification: **EN 1964-1:1999 (PED)**Customer: **Diveproduction s.r.o.**Owner stamping: **SOPRASSUB**

Manufacturer serial No.:

From **09/1094/001** to **09/1094/102**Gas: **1002 AIR**Total cylinders: **100**Type of cylinder: **Seamless steel gas cylinders**Material: **34CRMO4**Working pressure at 15° C: **200 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-203-318-890 REV.1	318	4.5	4.5	203	715	18	18.7

We hereby certify that the cylinders of the batch no. **09/1094** 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: **4.5 mm****Hardness range:**All cylinders have been controlled within the following hardness values: Min **306 HB**, Max **333 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. **09/1094** have been manufactured from the following cast(s) of steel:

Cast Numb.	Code (*)	C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Mo (%)	S+P (%)
556254	BVS	0.32	0.28	0.77	0.012	0.004	0.94	0.20	0.016

(*) marked on outer bottom surface

Date: **04/06/2009**

For and on behalf of the manufacturer:

Faber
INDUSTRIE S.p.A.

For and on behalf of A.I.A.

04 GIU. 2009

MEASUREMENTS OF SAMPLE CYLINDERS:

Cylinder Serial no.	Water Capacity (L)	Empty Weight (Kg)	Minimum measured thickness	
			of the wall (mm)	of the base (mm)
09/1094/101	18	19.00	5.0	5.7
09/1094/102	18	19.00	5.0	5.7

MECHANICAL TESTS CARRIED OUT ON SAMPLE CYLINDERS:

Cylinder Serial no.	Code (*)	Test piece 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)	
09/1094/101	BVS	10.1 x 5.1	911	1013	15.0	TRASV	44 39 42	42	SATISF.
Minimum values specified			890	990	14		24	30	

BURST TESTS CARRIED OUT ON SAMPLE CYLINDERS:

Cylinder Serial no.	Code (*)	Hydraulic burst test bar	Description of the fracture
09/1094/102	BVS	550	LONGITUDINAL
Minimum values specified		509	

For and on behalf of the manufacturer:

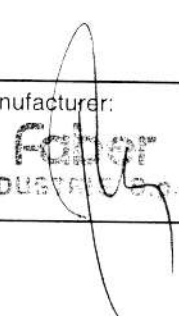
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INDUSTRIE S.p.A.

For and on behalf of A.I.A.

TESTING OBJECT:CYLINDER ACCORDING TO DRAWING: **EN-203-318-890 REV.1**OUTSIDE DIAMETER: **203 mm** WATER CAPACITY: **18 l**MIN. WALL THICKNESS: **4.5 mm** NOMINAL LENGTH: **715 mm**FROM CYLINDER SERIAL No. : **09/1094/001** to **09/1094/102****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.

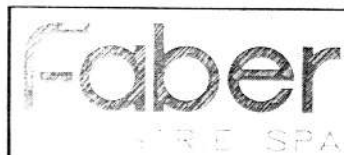
For and on behalf of the manufacturer:


Faber
INDUSTRIE SPA

For and on behalf of A.I.A.


SUN YON
DATE

04 GIU. 2009



RECORD OF HYDROSTATIC TESTS ON CYLINDERS

PAG. 5 OF 7

LOT No. 09/1094

NUMBER OF CYLINDERS: 100

TEST DATE: 03/2009

ACCORDING TO DWG.:

EN-203-318-890 REV.1

WORKING PRESSURE AT 15° C: 200 bar

CYLINDER SIZE : OUTSIDE DIAMETER 203 mm LENGTH 715 mm

REMARKS: M = Mechanical Tests, B = Burst Tests, P = Prototype Tests, S = Cylinder Discarded, C = Cycling Test,
C+B = Cycling + Burst 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
09/1094/041		BVS 556254	318	18.0		19.0		
09/1094/042		BVS 556254	318	18.0		19.1		
09/1094/043		BVS 556254	318	18.0		19.0		
09/1094/044		BVS 556254	318	18.0		19.0		
09/1094/045		BVS 556254	318	18.0		19.0		
09/1094/046		BVS 556254	318	18.0		19.1		
09/1094/047		BVS 556254	318	18.0		19.0		
09/1094/048		BVS 556254	318	18.0		19.0		
09/1094/049		BVS 556254	318	18.0		19.0		
09/1094/050		BVS 556254	318	18.0		19.0		
09/1094/051		BVS 556254	318	18.0		19.0		
09/1094/052		BVS 556254	318	18.0		19.1		
09/1094/053		BVS 556254	318	18.0		19.1		
09/1094/054		BVS 556254	318	18.0		19.1		
09/1094/055		BVS 556254	318	18.0		19.0		
09/1094/056		BVS 556254	318	18.0		19.1		
09/1094/057		BVS 556254	318	18.0		19.0		
09/1094/058		BVS 556254	318	18.0		19.1		
09/1094/059		BVS 556254	318	18.0		19.1		
09/1094/060		BVS 556254	318	18.0		19.0		
09/1094/061		BVS 556254	318	18.0		19.0		
09/1094/062		BVS 556254	318	18.0		19.0		
09/1094/063		BVS 556254	318	18.0		19.0		
09/1094/064		BVS 556254	318	18.0		19.1		
09/1094/065		BVS 556254	318	18.0		19.0		
09/1094/066		BVS 556254	318	18.0		19.0		
09/1094/067		BVS 556254	318	18.0		19.0		
09/1094/068		BVS 556254	318	18.0		19.0		
09/1094/069		BVS 556254	318	18.0		19.0		
09/1094/070		BVS 556254	318	18.0		19.0		
09/1094/071		BVS 556254	318	18.0		19.0		
09/1094/072		BVS 556254	318	18.0		19.0		
09/1094/073		BVS 556254	318	18.0		19.0		
09/1094/074		BVS 556254	318	18.0		19.1		
09/1094/075		BVS 556254	318	18.0		19.0		
09/1094/076		BVS 556254	318	18.0		19.0		
09/1094/077		BVS 556254	318	18.0		19.0		
09/1094/078		BVS 556254	318	18.0		19.0		
09/1094/079		BVS 556254	318	18.0		19.0		
09/1094/080		BVS 556254	318	18.0		19.1		
						19.2		

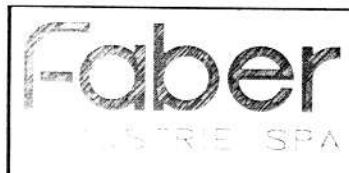
Manufacturer stamp and signature:

A.I.A. stamp and signature:

48276

**Faber**
INDUSTRIE S.p.A.

04 GIU. 2009



RECORD OF HYDROSTATIC TESTS ON CYLINDERS

PAG. 6 OF 7

LOT No. 09/1094

NUMBER OF CYLINDERS: 100

TEST DATE: 03/2009

ACCORDING TO DWG.:

EN-203-318-890 REV.1

WORKING PRESSURE AT 15° C: 200 bar

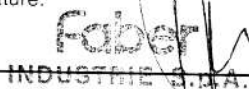
CYLINDER SIZE : OUTSIDE DIAMETER 203 mm LENGTH 715 mm

REMARKS: M = Mechanical Tests, B = Burst Tests, P = Prototype Tests, S = Cylinder Discarded, C = Cycling Test,
C+B = Cycling + Burst 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
09/1094/081		BVS 556254	318	18.0		19.1		
09/1094/082		BVS 556254	318	18.0		19.1		
09/1094/083		BVS 556254	318	18.0		19.1		
09/1094/084		BVS 556254	318	18.0		18.9		
09/1094/085		BVS 556254	318	18.0		19.2		
09/1094/086		BVS 556254	318	18.0		18.9		
09/1094/087		BVS 556254	318	18.0		19.1		
09/1094/088		BVS 556254	318	18.0		19.0		
09/1094/089		BVS 556254	318	18.0		19.0		
09/1094/090		BVS 556254	318	18.0		19.2		
09/1094/091		BVS 556254	318	18.0		19.0		
09/1094/092		BVS 556254	318	18.0		19.1		
09/1094/093		BVS 556254	318	18.0		19.1		
09/1094/094		BVS 556254	318	18.0		19.0		
09/1094/095		BVS 556254	318	18.0		19.1		
09/1094/096		BVS 556254	318	18.0		19.1		
09/1094/097		BVS 556254	318	18.0		19.0		
09/1094/098		BVS 556254	318	18.0		19.0		
09/1094/099		BVS 556254	318	18.0		19.1		
09/1094/100		BVS 556254	318	18.0		19.0		

Manufacturer stamp and signature:


Faber
INDUSTRIE S.p.A.

A.I.A. stamp and signature:

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04 GIU. 2009

Operating instructions for the mounting, putting into service, use, maintenance and periodic inspection of Faber Steel Cylinders for Scuba Diving (PED 97/23/CE).

-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 97/23/CE.

-The assembly shall be subjected to a global conformity assessment procedure described in the directive PED 97/23/CE.

-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.

-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 $< 50 \text{ mg/m}^3$ for a charging pressure of 200 bar and water content $< 35 \text{ mg/m}^3$ 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, 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.