



PRD N° 009B

Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC mutual Recognition Agreements

**BUREAU
VERITAS**

CERTIFICATO DI CONFORMITA'
CERTIFICATE OF CONFORMITY

Secondo il Modulo F della direttiva attrezzature a pressione 2014/68/EU
as per Module F of pressure equipment directive 2014/68/EU

N° CE-1370-PED-F-FAB 054-21-ITA

Bureau Veritas Italia SpA, agendo all'interno dello scopo della sua notifica (numero dell'organismo notificato 1370), per il modulo F in accordo all'allegato III della direttiva « Attrezzature a Pressione » N° 2014/68/UE, certifica che gli esami e le prove sono stati eseguiti sull'apparecchiatura identificata sotto, con risultati positivi.

Bureau Veritas Italia SpA, acting within the scope of its notification (Notified Body number 1370) for module F according to annex III of the Pressure Equipment Directive 2014/68/EU, certifies that examination and the tests have been carried out on the equipment below identified, with satisfactory result.

Fabbricante (Nome) / <i>Manufacturer (Name):</i>	FABER INDUSTRIE S.p.A
Indirizzo / <i>Address:</i>	Via dell'Industria, 64 33043, CIVIDALE DEL FRIULI, Italy
Rappresentante Autorizzato (Nome) / <i>Authorised representative (Name):</i>	N.A.
Indirizzo / <i>Address:</i>	N.A.

ATTREZZATURA / EQUIPMENT

Componente / <i>Item:</i>	pressure vessel. Batch No.21/0367
Descrizione dell'attrezzatura / <i>Equipment description:</i>	156 off 10 liters Seamless Steel Cylinder according to drawing No. EN-171-318-890 rev.0

MARCHI / INFORMATION

Identificazione del fabbricante: <i>Trading Name - Mark</i>	FABER
--	-------

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

Anno di fabbricazione <i>Year of manufacture (and month whereas requested by applied standard)</i>	2021/ 03
Numero di serie / <i>Serial number:</i>	from 21/0367/001 to 21/0367/158 [excluded cylinder(s) : none]

Fatto a <i>Made at</i>	Il (gg/mm/aaaa) <i>On (dd/mm/yyyy)</i>	Approvato e Registrato in <i>Approved and Recorded in</i>	Firmato da <i>Signed by</i>	Firma autorizzata dall'Organismo Notificato N 1370 <i>Signature Authorized by Notified Body No 1370</i>
PADUA	16/03/2021	Italy	ANDREA GHERSINI	

Codice di Registrazione / *Registration Code :* 2021/000811/CE-1370-PED

Il presente documento è soggetto ai termini delle Condizioni Generali di Vendita allegate al contratto firmato dal richiedente.

The present document is subject to the terms of General Conditions of Service attached to the agreement signed by the applicant.

Il presente documento non può essere riprodotto, se non dal fabbricante nel rispetto delle disposizioni del contratto stipulato con Bureau Veritas Italia SpA.

The present document shall not be reproduced, except by the manufacturer in compliance with the provisions of the contract entered into between the local Bureau Veritas entity and the manufacturer.



PED - F - Rev. 06/2016 F

N° CE-1370-PED-F-FAB 054-21-ITA

Nell'esecuzione dell'attività finalizzata all'emissione del presente certificato, è stato preso come riferimento il dossier tecnico del fabbricante di seguito indicato: <i>For the activity carried out for the issuance of the present certificate, the following manufacturer's technical book was taken as reference</i>	production testing certificate No. 21/0367, with manufacturing data, mechanical and NDT test results.
Esistenza di un allegato al certificato : <i>Existence of an annex to the certificate</i>	none.

Certificato di esame CE del tipo o della progettazione n° <i>EC type or design-examination certificate n°</i>	CE-1370-PED-B-FAB 004-12-ITA
--	------------------------------

Emesso da / <i>Issued by:</i>	Bureau Veritas Italy S.p.A.
Valido fino a (gg/mm/aaaa) / <i>Valid until (dd/mm/yyyy):</i>	26/03/2022

Limiti essenziali massimi / minimi ammissibili / <i>Essential minimum/maximum allowable limits:</i>	
-	PS(bar) = 200 bar @15°C
-	TS(°C) = -50° / +65°

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. 21/0367/157]; burst test [on cylinder(s) No. 21/0367/158]
Osservazioni - allegati / <i>Remarks - enclosures:</i>	none.

INFORMAZIONI SUPPLEMENTARI (se applicabile) / FURTHER INFORMATION (where applicable)

- volume V degli apparecchi a pressione (L): <i>volume V of the pressure equipment (L)</i>	10.0 liters
- dimensione nominale della tubazione DN: <i>nominal size for piping DN</i>	N.A.
- pressione di prova PT applicata (bar) e data: <i>test pressure PT applied (bar) and date</i>	318 bar performed by water, on 16th March 2021
- pressione di taratura del dispositivo di sicurezza (bar): <i>safety device set pressure (bar)</i>	N.A.
- potenza dell'attrezzatura a pressione (kW): <i>output of the pressure equipment (kW)</i>	N.A.
- tensione di alimentazione (volts): <i>supply voltage (volts)</i>	N.A.
- utilizzo previsto: <i>intended use</i>	breathing apparatus
- rapporto di riempimento (kg/L): <i>filling ratio (kg/L)</i>	N.A.
- massa di riempimento massima (kg): <i>maximum filling mass (kg)</i>	N.A.
- tara (kg): <i>tare mass (kg)</i>	tare for each cylinder is indicated on manufacturer's list
- gruppo dei fluidi (sostanze e miscele): <i>fluids group (substances and mixtures)</i>	group 2 (UN 1002 - Compressed Air)
- altri informazioni: <i>other information</i>	see operating instructions of cylinders.
Natura ed ubicazione della marcatura dell'attrezzatura: <i>Nature and location of the affixing of the marking of the equipment</i>	mandatory markings on cylinders shoulder. Other eventual markings on opposite side

The Company Faber Industrie s.p.a. – Via dell'Industria, 64 - XI Zona Industriale Cividale del Friuli (UD) – ITALY,
La società Faber Industrie s.p.a. – con sede in Via dell'Industria, 64 - 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 **10** litre/ litri
Capacità

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

Manufacturer N°/ N° di fabbrica
from/ dal **21/0367/105** to/ al **21/0367/158**

Drawing N°: **EN-171-318-890 REV0**
N° disegno:

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

Max. allowable pressure: **200** bar
Pressione max. ammissibile:

No. of cylinders / numero di bombole
52

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° **1370 BUREAU VERITAS ITALIA**
Organismo Notificato incaricato della valutazione di conformità: N°
- Registration number of "CE Type Examination Certificate": **CE-1370-PED-B-FAB004-12-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": **CE-1370-PED-F-FAB 054-21-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 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 16/03/2021

Faber Industrie S.p.A.

Faber
CYLINDERS

Manufacturer: **FABER INDUSTRIE SPA - CIVIDALE DEL FRIULI - UDINE- ITALY**

Inspection: **BUREAU VERITAS**

Specification: **EN 1964-1:1999 (PED)**

Customer: **Aerotecnica Coltri S.p.A.**

Owner stamping: **COLTRI SUB**

Manufacturer serial No. :

From **21/0367/105** to **21/0367/158**

Gas: **1002 AIR**

Total cylinders: **52**

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-171-318-890 REVO	318	3.8	3.8	171	575	10	10.2

We hereby certify that the cylinders of the batch no. **21/0367** 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 : **3.8 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. **21/0367** have been manufactured from the following cast(s) of steel:

Cast Numb.	Code (*)	C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Mo (%)	S+P (%)
911549	DYR	0.33	0.23	0.78	0.010	0.002	1.01	0.23	0.012

(*)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: 16/03/2021	For and on behalf of the manufacturer:		For and on behalf of A.A. BUREAU VERITAS ITALY WITNESSED - NOTED - REVIEWED SURVEYOR E BULEON DATE
-------------------------	--	--	--

MEASUREMENTS OF SAMPLE CYLINDERS:

Cylinder Serial no.	Water Capacity (L)	Empty Weight (Kg)	Minimum measured thickness	
			of the wall (mm)	of the base (mm)
21/0367/157	10	10.80	4.0	5.0
21/0367/158	10	10.70	4.0	5.0

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/cm ²)	Mean (J/cm ²)	
21/0367/157	DYR	10.0 x 4.3	904	1026	17.1	TRASV	86 86 80	84	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
21/0367/158	DYR	592	LONGITUDINAL
Minimum values specified		509	

For and on behalf of the manufacturer:



For and on behalf of A.I.A.



TESTING OBJECT:

CYLINDER ACCORDING TO DRAWING: **EN-171-318-890 REV0**
OUTSIDE DIAMETER: 171 mm WATER CAPACITY: 10 l
MIN. WALL THICKNESS: 3.8 mm NOMINAL LENGTH: 575 mm
FROM CYLINDER SERIAL No. : 21/0367/105 to 21/0367/158

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**

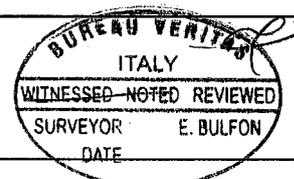
EXAMINATION RESULTS:

ALL CYLINDERS HAVE BEEN CHECKED GIVING SATISFACTORY RESULTS.

For and on behalf of the manufacturer:

Faber
CYLINDERS

For and on behalf of A.I.A.





RECORD OF HYDROSTATIC TESTS
ON CYLINDERS

LOT No. 21/0367 NUMBER OF CYLINDERS: 52 TEST DATE: 03/2021

ACCORDING TO DWG.: EN-171-318-890 REVO

WORKING PRESSURE AT 15° C: 200 bar HOLDING TIME AT TEST PRESSURE : 30 sec

CYLINDER SIZE : OUTSIDE DIAMETER 171 mm LENGTH 575 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.

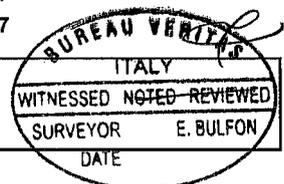
FITTINGS : "CO" = Collar

CYLINDER SERIAL No.	CUSTOMER NUMBER	HEAT CODE AND NUMBER	TEST PRESSURE (bar)	CYLINDER WATER CAPACITY (l)	FITTINGS	MASS (Kg)	TARE (Kg)	REMARKS
21/0367/105		DYR 911549	318	10.0		10.8		
21/0367/106		DYR 911549	318	10.0		10.7		
21/0367/107		DYR 911549	318	10.0		10.8		
21/0367/108		DYR 911549	318	10.0		10.7		
21/0367/109		DYR 911549	318	10.0		10.8		
21/0367/110		DYR 911549	318	10.0		10.8		
21/0367/111		DYR 911549	318	10.0		10.7		
21/0367/112		DYR 911549	318	10.0		10.7		
21/0367/113		DYR 911549	318	10.0		10.7		
21/0367/114		DYR 911549	318	10.0		10.7		
21/0367/115		DYR 911549	318	10.0		10.7		
21/0367/116		DYR 911549	318	10.0		10.7		
21/0367/117		DYR 911549	318	10.0		10.7		
21/0367/118		DYR 911549	318	10.0		10.7		
21/0367/119		DYR 911549	318	10.0		10.7		
21/0367/120		DYR 911549	318	10.0		10.8		
21/0367/121		DYR 911549	318	10.0		10.7		
21/0367/122		DYR 911549	318	10.0		10.7		
21/0367/123		DYR 911549	318	10.0		10.8		
21/0367/124		DYR 911549	318	10.0		10.8		
21/0367/125		DYR 911549	318	10.0		10.8		
21/0367/126		DYR 911549	318	10.0		10.7		
21/0367/127		DYR 911549	318	10.0		10.7		
21/0367/128		DYR 911549	318	10.0		10.7		
21/0367/129		DYR 911549	318	10.0		10.8		
21/0367/130		DYR 911549	318	10.0		10.8		
21/0367/131		DYR 911549	318	10.0		10.8		
21/0367/132		DYR 911549	318	10.0		10.8		
21/0367/133		DYR 911549	318	10.0		10.7		
21/0367/134		DYR 911549	318	10.0		10.8		
21/0367/135		DYR 911549	318	10.0		10.7		
21/0367/136		DYR 911549	318	10.0		10.8		
21/0367/137		DYR 911549	318	10.0		10.8		
21/0367/138		DYR 911549	318	10.0		10.7		
21/0367/139		DYR 911549	318	10.0		10.8		
21/0367/140		DYR 911549	318	10.0		10.7		
21/0367/141		DYR 911549	318	10.0		10.7		
21/0367/142		DYR 911549	318	10.0		10.7		
21/0367/143		DYR 911549	318	10.0		10.7		
21/0367/144		DYR 911549	318	10.0		10.7		

Manufacturer stamp and signature:



A.I.A. stamp and signature:





RECORD OF HYDROSTATIC TESTS
ON CYLINDERS

LOT No. 21/0367 NUMBER OF CYLINDERS: 52 TEST DATE: 03/2021

ACCORDING TO DWG.: EN-171-318-890 REV0

WORKING PRESSURE AT 15° C: 200 bar HOLDING TIME AT TEST PRESSURE : 30 sec

CYLINDER SIZE : OUTSIDE DIAMETER 171 mm LENGTH 575 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
21/0367/145		DYR 911549	318	10.0		10.8		
21/0367/146		DYR 911549	318	10.0		10.7		
21/0367/147		DYR 911549	318	10.0		10.8		
21/0367/148		DYR 911549	318	10.0		10.7		
21/0367/149		DYR 911549	318	10.0		10.7		
21/0367/150		DYR 911549	318	10.0		10.8		
21/0367/151		DYR 911549	318	10.0		10.7		
21/0367/152		DYR 911549	318	10.0		10.8		
21/0367/153		DYR 911549	318	10.0		10.8		
21/0367/154		DYR 911549	318	10.0		10.7		
21/0367/155		DYR 911549	318	10.0		10.8		
21/0367/156		DYR 911549	318	10.0		10.8		
21/0367/157		DYR 911549	318	10.0		10.8		M
21/0367/158		DYR 911549	318	10.0		10.7		B

Manufacturer stamp and signature:



A.I.A. stamp and signature:

