



ZERTIFIKAT

CERTIFICATE

Nr. / No.: ZSTS/APZE/2516

Zertifikatsinhaber: Techinit Srl
Licence Holder: Voa L- da Zara 17
35020 Albignasego (PD)
Italien

Hersteller: 56885
Manufacturer:

Produkt: Flexible tubing systems and fittings
Product:

Technische Beschreibung: see page 2
Technical Description:

Prüfgrundlage: EN 1736:2009
Tested in accordance with:

Prüfbericht(e): TAI/20/001
Test report:

Prüfzeichen:
Test mark:



Dieses Zertifikat gilt bis: 30.08.2027
This certificate is valid until:

Die Gesamtbeurteilung und die Prüfergebnisse beziehen sich ausschließlich auf die geprüften Muster. Die Benutzung des Prüfzeichens basiert auf dem Vertrag mit der TÜV AUSTRIA SERVICES GMBH, die darin enthaltenen Regelungen sind strikt einzuhalten.

The overall assessment and the test results only relate to the tested samples. Permission to use Test Mark in accordance with the conditions of the contract with TÜV AUSTRIA SERVICES GMBH is hereby granted.

Wien , 31.08.2022
Vienna

Gottschlich Georg Ing.
Zeichnungsberechtigter
authorized signatory



TÜV AUSTRIA
SERVICES GMBH
Deutschstraße 10
A-1230 Wien

Online Verification



• Our references / Ns rif.**Report n° / Rapporto n° : BS/RE/FV/20/0504****Contract ref. / Rif. contratto : 76-C-200083****• Your references / Vs rif.****Ref. / Rif. : 76-F-200051 dated 09/06/2020**

Spett.le
TECHINIT S.r.l
Via L. da Zara, 16/18
I – 35020 Albignasego (PD)

• Intervention data / Dati dell'intervento**Place / Luogo : Via L. da Zara, 16/18 – Albignasego (PD)****Date / Data : 10/09/2020 and 01/10/2020****Performed by / Eseguito da : F. Vazzoler****INSPECTION CERTIFICATE / CERTIFICATO DI ISPEZIONE****GENERAL INFORMATION / INFORMAZIONI GENERALI**

Inspection performed according EN 1736:2008 on product FastPipe® (flexible tubing system and fittings for air conditioning systems) – (diameter 1/4 “, 3/8 “, 1/2 “ and 5/8 “)

INSPECTION DETAILS / DETTAGLI DELL' ISPEZIONE

Type of performed controls :

- Witness test for vacuum § 6.1 EN 1736, pneumatic test § 6.1 EN 1736, burst test § 6.4 EN 1376
- Witness § 8 EN 1736
- Witness § 11 EN 1736
- Review documental check according annex Dossier
- Review final documentation

Inspected items : 100%

See following pages for details.

CONCLUSION / CONCLUSIONE:

The inspection described in this report has given satisfactory results.

See details inside this report.

TÜV Austria Italia**Assigned inspector / ispettore incaricato:****Printing date / Data di stampa : 06/10/2020****Number of pages / Numero di pagine : 13****Enclosure(s) / Allegato(i) :****Distribution / Distribuzione : or. TECHINIT S.r.l****cc. TÜV Austria Italia****TÜV Austria Italia - Blu Solutions s.r.l.**Sede operativa: Via dell'Industria, 14 – 25030 Erbusco - Brescia, Italy
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Cap. Soc. i.v. EUR 10.000,00; R.I. Ancona – C.F. – P. IVA 02217380423

Cod. Id. CEE IT02217380423 REA AN n. 170070

A socio unico, soggetta a controllo e coordinamento di:
TÜV AUSTRIA HOLDING AG, Deutschstrasse 10, 1230, Vienna, Austria
www.blu-solutions.com www.tuv.at

1. APPLICABLE DOCUMENTS :

EN 1736 : 2008

Dossier di conformità alla Normativa per il prodotto FastPipe® (Quality Control Plan)

(*Conformity Dossier – product FastPipe®*)

Manuale di installazione e dichiarazione di garanzia FastPipe®

(*Installation manual and warranty daclaration FastPipe®*)

2. INSPECTED EQUIPMENT :

DESCRIPTION	DATA SHEET	TESTED BATCH
Flexible tubing 1/4"	Scheda Tecnica FastPipe®	LOT 19/042C LOT 19/070C LOT 20/005A LOT 20/005C LOT 20/020C
Flexible tubing 3/8"	Scheda Tecnica FastPipe®	LOT 20/009B LOT 20/010C LOT 20/015C LOT 20/023B LOT 20/029B
Flexible tubing 1/2"	Scheda Tecnica FastPipe®	LOT 19/047A LOT 19/068C LOT 19/075E LOT 20/007B LOT 20/026B
Flexible tubing 5/8"	Scheda Tecnica FastPipe®	LOT 19/048G LOT 20/002B LOT 20/013F LOT 20/019C LOT 20/035E

3. INSPECTIONS PERFORMED :

The following inspections were witnessed with satisfactory results in accordance with order requisitions follow explanation and discussion of test witness and reviewed according point relevant defined on EN 1736 :

a) Term and definition (part 3 – EN 1736)

Before the inspection in order to check compliance, the type of product to be certified according to the standard is defined: Pipes inspected are in point 3.4.: non-metallic flexible tube (definition given in Annex 1 – Dossier)

The manufacturer declares the maximum allowable pressure and maximum and minimum allowable temperature:

3.7.: maximum allowable pressure (PS): 60 Bar

3.8.: maximum / minimum allowable temperature (TS): - 30 ° C / + 110 ° C.

Results : Satisfactory

b) Application (part 4 – EN 1736)

4.1. General

The points described in the general section of standard are described in the dossier as being according responsibility of the installation by the customer.

The Use and maintenance manual shows the correct use of the product.

- From now on, with respect to the regulation, the manufacturer's piping system is defined as fixed installed flexible pipe elements, then the sections are analyzed only at § 4.4 :

4.4.1. Installation is declared responsibility on workshop by customer (described on Manual).

4.4.2. On the basis of the technical data sheet (Annex 2 – Dossier) the surface resistivity value is based in the order of 10^{11} Ohm (Declared value lower than the technical documentation that establishes 10^{12} Ohm as a transition from antistatic to insulating condition) for only internal material used on the pipes in contact with the fluid.

4.4.3. Two test methods are defined by the manufacturer:

a) verification of aging on condition : light and humidity (see Annex 3 - Dossier). Tests performed according to EN ISO 4892-1 and EN ISO 4892-2.

No degradation verified after accelerated aging (gray scale remains unchanged).

b) to verify the freezing, internal qualitative tests were performed with positive results.

4.4.4. The point is satisfied with the information described on the marking (see description of parts 7 and 8 according standard)

Results: Satisfactory.

c) Material (part 5 – EN 1736)

The material used as an internal core is analyzed according to EN ISO 175 standards where it is applicable, for fluids for which contact is permitted (both for refrigerant gases and for oils present inside the system).

Verified Annex 4 - Dossier that defines the values obtained for contact with the refrigerant gas:
Standard test parameters required by EN ISO 175 are defined: 168 hours of exposure (standard) and 110 ± 10 ° C because it is the value that within the range of use of the product allows the situation of a critical chemical attack.

Verified Annex 5 - Dossier that defines the values obtained for contact with oils.
Standard test parameters required by EN ISO 175 are defined: 168 hours of exposure (standard) and 105 ° C (standard value - because the value is within the range of general use of the product).

Verified Annex 3 - Dossier that defines the resistance of the product to the external environment, verified that the product is not degraded.

Verification Annex 2, 6 and 7 - Dossier that defines the resistance of the polymers used at low temperatures, within the TS range declared by the manufacturer, according tabular values.

The manufacturer considers the values obtained to be compliant with the use of the product as declared.
Result : All test have been performed with satisfactory result.






d) Pressure and pulsation requirements (part 6 – EN 1736):




6.1. It is defined that the pipeline must withstand a hydrostatic test pressure at 1.3 times the pressure of the machinery connected to the pipeline (operating pressure)

The manufacturer declares that customer generally used 45 Bar like operating pressure.




The manufacturer declares from section 1 of this report (point 3.7 - EN 1736) a PS pressure of 60 Bar therefore already including a general operating pressure, however at the level of testing in production the continuous test at 1.3 x PS is attended and verified for 78 Bar.


See tests performed in Annex 8 – Dossier and also table of tests witness during 01/10/2020, mentioned below (from page 5 to 9) :

PIPE DIAMETER	LOT	TEST PRESSURE (FULL VACUUM) (-1 Bar)	RESULT
1 / 4 "	LOT 19/042C LOT 19/070C LOT 20/005A LOT 20/005C LOT 20/020C		ACCEPTABLE
3 / 8 "	LOT 20/009B LOT 20/010C LOT 20/015C LOT 20/023B LOT 20/029B		ACCEPTABLE
1 / 2 "	LOT 19/047A LOT 19/068C LOT 19/075E LOT 20/007B LOT 20/026B		ACCEPTABLE
5 / 8 "	LOT 19/048G LOT 20/002B LOT 20/013F LOT 20/019C LOT 20/035E		ACCEPTABLE
EXAMPLE PUMP VACUUM AND VALUE CHECK			

PIPE DIAMETER	LOT	TEST PRESSURE 78 Bar Minumun declared (1,3 x PS)	RESULT
1 / 4 "	LOT 19/042C LOT 19/070C LOT 20/005A LOT 20/005C LOT 20/020C	  	ACCEPTABLE

<p>3 / 8 “</p>	<p>LOT 20/009B LOT 20/010C LOT 20/015C LOT 20/023B LOT 20/029B</p>	  	<p>ACCEPTABLE</p>
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<p>1 / 2 "</p>	<p>LOT 19/047A LOT 19/068C LOT 19/075E LOT 20/007B LOT 20/026B</p>	  	<p>ACCEPTABLE</p>
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<p>5 / 8 “</p>	<p>LOT 19/048G LOT 20/002B LOT 20/013F LOT 20/019C LOT 20/035E</p>		<p>ACCEPTABLE</p>
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The hydrostatic tests are verified by reading the maximum pressure required of 78 Bar using the TECNOGAS S/n 2512 pressure gauge.
(TECNOGAS calibration report n. 20/1043 - expire date: 09/09/2021).

Extension : 100%

Result : Satisfactory (No Leak at 78 Bar)






6.2. Not applicable





6.3. The burst pressure is 180 Bar (because 3 times the PS pressure is expected, in this case for 60 Bar)






6.4. The burst tests were checked and attended as per the table mentioned.

See even tests performed by Annex 8 - Dossier

See also the table of tests witness during 01/10/2020, mentioned below (from page 10 to 12) :

PIPE DIAMETER	LOT	BURST TEST 180 Bar Minumun declared (3 x PS)		RESULT
<p>1 / 4 “</p>	<p>LOT 19/042C LOT 19/070C LOT 20/005A LOT 20/005C LOT 20/020C</p>			<p>ACCEPTABLE</p>
				
				

<p>3 / 8 “</p>	<p>LOT 20/009B LOT 20/010C LOT 20/015C LOT 20/023B LOT 20/029B</p>			<p>ACCEPTABLE</p>
<p>1 / 2 “</p>	<p>LOT 19/047A LOT 19/068C LOT 19/075E LOT 20/007B LOT 20/026B</p>			<p>ACCEPTABLE</p>

5 / 8 “	LOT 19/048G LOT 20/002B LOT 20/013F LOT 20/019C LOT 20/035E			ACCEPTABLE
				
				

The bursting tests are verified by reading the maximum pressure before bursting using the KELLER ECO 1 S/n 2832 pressure gauge.
(TECNOGAS calibration report n. 20/1243 - expire date: 26/09/2021)

Extension : 100%

Result : Satisfactory (No Burst after 180 bar)

6.5. The fatigue test conditions according to ISO 6605: 2002 (§ 5.6) are defined :

Number of cycles: 250000

Test pressure: 66 Bar (1.1 PS)

Working temperature: 70 ° C - WT (declared value of operating temperature likely to be used continuously)

See satisfactory results in Annex 8 – Dossier

e) Permeability of non-metallic flexible tubes (part 7 – EN 1736):

On the basis of Annex 9 and 10 - Dossier and explanation of the tests done on pages 14 and 15, compliance with the Class 1 marking for permeation is verified.

f) Internal cleanliness, internal humidity and permeability of water vapour (part 8 – EN 1736):

During the process, the cleaning and packaging in order to comply with § 8.1, 8.2 and the first part of 8.4 is verified.

Instead, according to the second requirement in § 8.4, the compliance of the value obtained for the permeation of water vapours is verified, lower than 10 mg / dm² x year according the test report Annex 11 – Dossier.

Result : Satisfactory

g) End connection (part 9 – EN 1736):

9.1. From the burst test attended, the correct tightness of the fittings above the allowed pressure PS is checked. The verification of the crimping process is certified by the information given in Annex 12 - Dossier (part of Instruction Manual).

9.2. Not applicable

9.3. The use of fittings as per EN 378-2: 2016 specification is confirmed.

h) Pre-charged flexible pipe elements (part 10 – EN 1736):

Not applicable.

i) Marking (part 11 – EN 1736):

The correct assessment of all requirements by standard as regards the marking is verified. See label example checked according Annex 14 – Dossier.

l) Documentation (part 12 – EN 1736):

Manufacturer maintain available at disposal of the user all document declared according standard on part 12 of standard.

4. RESULTS :

SATISFACTORY : ok.

TECHNICIAN " TÜV Austria Italia "

IL TECNICO "TÜV Austria Italia "

Franco Vazzoler



ATTESTATO DI VERIFICA VERIFICATION REPORT

ATTESTATO N°: TAI/20/001
REPORT NR.:

DATA PROVE: 01/10/2020
TEST DATE:

NOME ED INDIRIZZO DEL FABBRICANTE:
NAME AND ADDRESS OF THE MANUFACTURER:

TECHINIT S.r.l.
Via L. da Zara, 16/18
I – 35020 Albignasego (PD) - Italy

NOME ED INDIRIZZO DEL RICHIEDENTE:
NAME AND ADDRESS OF THE LICENSE HOLDER:

TECHINIT S.r.l.
Via L. da Zara, 16/18
I – 35020 Albignasego (PD) - Italy

CARATTERISTICHE DELL'E.U.T.:
E.U.T. FEATURES:

GENERE:
Category: Sistema di tubi flessibili e connessioni.
Flexible tubing system and fittings.

MARCA:
Trade mark: Prodotto FastPipe®
Product FastPipe®

TIPO:
Type: Diametri 1/4 " , 3/8 " , 1/2 " , 5/8 " .
Diameter 1/4 " , 3/8 " , 1/2 " , 5/8 " .

MATRICOLA/ lotto:
Serial number / Lot:

Flexible tubing 1/4 "	Flexible tubing 3/8 "	Flexible tubing 1/2 "	Flexible tubing 5/8 "
19/042C, 19070C, 20/005A, 20/005C, 20/020C	20/009B, 20/010C, 20/015C, 20/032B, 20/092B	19/047A, 19/068C, 19/075E, 20/007B, 20/062B	19/048G, 20/002B, 20/013F, 20/019C, 20/035E

NORME DI RIFERIMENTO:
TEST STANDARDS:

EN 1736 : 2008

RISULTATO DELLE PROVE:
TEST RESULT:

I risultati, le condizioni e le modalità di prova sono contenuti nel rapporto d'ispezione n. BS/RE/FV/20/0504.
The results, conditions and test methods are included in the inspection report n. BS/RE/FV/20/0504

NOTE:
REMARKS: Le verifiche fanno riferimento alle parti applicabili delle norme di riferimento citate. Prove superate.
Tests refer to the applicable parts of the applicable reference standards. Tests passed.

CONDIZIONI: Questo certificato non autorizza l'apposizione di alcun tipo di marcatura CE. È vietata la parziale riproduzione del certificato senza l'approvazione di TÜV AUSTRIA ITALIA – BLU SOLUTIONS s.r.l.
CONDITIONS: This certificate does not allow to affix any kind of EC mark. The partial reproduction of the certificate is forbidden without TÜV AUSTRIA ITALIA – BLU SOLUTIONS s.r.l. approval.

Eventuali variazioni delle norme di riferimento e/o modifiche rispetto al campione testato, fanno decadere la validità del presente attestato.
Variation of the reference standards and/or modifications regarding to the sample tested, invalidate the validity of this certificate.

Revisione r00 / Rev. r00
Erbusco, 16.10.2020




L'ispettore
Inspector

Responsabile tecnico
Technical Manager

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