

# FREO - PIPE

F L E X I B L E A / C P I P E



**TECHNICAL SUBMITTAL**

1 INTRODUCTION  
LETTER

CONTENT



## TO WHOM IT MAY CONCERN

**EPEST Co.** is in the business of providing our clients with confidence. EPEST Co. was formed to provide Saudi Arabia with a Professional Systems Integration Company.

**Emaar Pole Co.** provides a specialist service in Supplying HVAC, Firefighting and plumbing systems.

At **EPEST Co.**, we pride ourselves in offering a total service, utilizing Project Teams to manage each project to ensure on-time delivery in accordance with the Project Specifications.

Our interest is to build a long term, ongoing relationship with each of our clients.

In case you require any further details or information, please do not hesitate to contact us at:

### **Emaar Pole Company**

#### RIYADH OFFICE:

Office #32, Amaar 2 Building, Al Ahsaa Street, Malaz District  
P.O Box 3066, Riyadh 12814  
Tele: +966 (11) 2033351  
e-mail: sales@epestksa.com

#### JEDDAH OFFICE:

Office #502, Al Ali Business Center, Prince Majid Street  
Al Rabwa, Jeddah 23534  
Tele: +966 59 021 9191  
e-mail: a.samir@epestksa.com



EMAAR POLE COMPANY  
**SALES DEPARTMENT**

# CONTENT

## 2 COMPANY PROFILE



**EMAAR POLE Co. Ltd.**  
for Trading & Contracting

EST  
S  
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R  
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[www.epestksa.com](http://www.epestksa.com)

**FREO-PIPE®**  
**(Flexible AC Pipe)**



## INTRODUCTION

In terms of installation time and usability Freo-Pipe® is an extraordinary innovation in the world of air conditioning systems and specifically of splits connection.

- Freo-Pipe® is a revolutionary multi-layer polymer tube that makes the use of the copper pipe “expired”, due to its very special features, and so it becomes its best alternative.
- Freo-Pipe® installation speed is surprising: even in the most complex systems it only takes a few, easy, steps to create a complete and functional connection.
- Freo-Pipe® allows you to work in complete safety either for its components certified quality, and for the chance to create a connection “on demand”, i.e adapting it to your needs.
- Fold it and unfold it, roll it and bend it: Freo-Pipe® resists to the most extreme tests without showing the signs!

FAST

SAFE

INNOVATIVE



**FREO - PIPE**  
F L E X I B L E A / C P I P E



## Freo-Pipe® in pills:

- It is **FLEXIBLE**: It easily adapts to every curve and angle, to the point of eliminating any waste caused by errors in the installation process.
- It is **LIGHT**, practical and fast to insert both into channel and underneath trace, covering every special installation requirement.
- It is **TESTED** and **CERTIFIED**: tightness, pressure, gas-proof test, fire resistance; we did not overlook any tests to ensure maximum reliability to our product. Discover all the certificates!
- Freo-Pipe® is entirely Made in Italy and it is so fast, secure and durable that gives higher value to your work and to your time!

## Some Technical Data:

- ▶ F-Gas Refrigeration Circuits Containing:  
R410A, R32, R134a, R404A, R407C (Not compatible with R22)
- ▶ Operating temperatures:  
-30 °C / +110 °C (max 130 °C not continuous)
- ▶ Maximum working pressure  
60 bar (Design pressure 100 bar)
- ▶ Available in Sizes:  
Φ 1/4", 3/8", 1/2" and 5/8"





## CONTACT US:

### CENTRAL & EASTERN REGION

Tele: +966 (11) 2033351

Mobile: +966 59 000 9530

Email: [sales@epestksa.com](mailto:sales@epestksa.com)

Address: Office #32, Al Ahsaa Commercial Center, Al Ahsaa Street, Malaz, Riyadh



Scan to save Riyadh contact



Scan for Riyadh Location

### WESTERN REGION

Tele: +966 (12) 6392313

Mobile: +966 59 021 9191

Email: [a.samir@epestksa.com](mailto:a.samir@epestksa.com)

Address: Office #502, Al Ali Business Center, Prince Majid Road, Ar Rabwah, Jeddah



Scan to save Jeddah contact



Scan for Jeddah Location

3 GOVERNMENT  
CERTIFICATES

CONTENT



شركة قطب الاعمار للتجارة



السجل التجاري: 1010419897

## رمزك التجاري QR Code

من خلاله يمكنك التحقق المباشر من المعلومات:

- السجل التجاري
- رخصة البلدية
- شهادة السعودة
- برنامج نطاقات
- شهادة الزكاة
- الغرفة التجارية



٧٠٠٦٣٩٩٨٥٦

الرقم الموحد :

١٠١٠٤١٩٨٩٧

رقم المنشأة :

١٤٣٥/٠٩/١٨ هـ

التاريخ :

# شهادة تسجيل الشركة Company Registration Certificate

وزارة التجارة  
Ministry of Commerce



الاسم التجاري للشركة : شركة قطب الاعمار للتجارة

نوعها : ذات مسؤولية محدودة

جنسيتها : سعودي

مدة الشركة : ٩٩ سنة

وتنتهي في : ١٥٣٤/٠٩/١٨ هـ

تبدأ من : ١٤٣٥/٠٩/١٨ هـ

مركزها الرئيسي : ٣٢٢٥، ابن هريرة، الزهراء، ٦٣٠٦

هاتف : ٠٠٠٠٠٠٠٠٠٠٠٠

الرمز البريدي : ١٢٨١٥

ص.ب :

ملكية الشركة : مختلطة

النشاط : للاطلاع على بيانات الأنشطة الرجاء مسح الرمز التجاري

رأس المال : ٣١,٠٠٠,٠٠٠ ريال سعودي

المديرون : 1 ابراهيم ابن يحي ابن محمد آل سالم

2 احمد محمد عبد العزيز صالح

3 محمد سمير عبد النبي ابراهيم

4 عادل محمد محمد عبد الخالق

6

8

10

12

14

16

سلطات المدير/المديرون : حسب ما نص عليه عقد الشركة

يشهد مكتب السجل التجاري بمدينة الرياض

بأنه تم تسجيل الشركة المذكورة أعلاه بمدينة الرياض

وتاريخ : ١٤٤٦/٠٥/٠٣ هـ

بموجب الإيصال رقم : ٢٤١١٢٣٦٣١٧٥٨

وتنتهي صلاحية الشهادات في : ١٤٤٧/٠٦/٢٥ هـ



To Verify The Information Of This Certificate Visit <http://qr.mc.gov.sa> يمكنك التحقق من صحة هذه الشهادة بالدخول على

+966 11 294 4444 | الرياض 11162 Kingdom of Saudi Arabia | المملكة العربية السعودية www.mc.gov.sa MCgovSA @ f t y

## السادة / شركة قطب الاعمار للتجارة

نسأل الله أن يكتب لكم التوفيق والنجاح في عملكم التجاري وأن تكونوا شريكاً في تعزيز اقتصاد المملكة العربية السعودية.

### يسرنا إبلاغكم بأن رقم منشآتكم الموحد هو

٧٠٠٦٣٩٩٨٥٦

وقد تم ربطه بالخدمات الحكومية التالية..

٥٠٨٢٤٦٩٣٧

رقم منشآتكم



المؤسسة العامة للتأمينات الاجتماعية  
General Organization for Social Insurance

١٠١٠٤١٩٨٩٧

رقم منشآتكم



وزارة التجارة  
Ministry of Commerce

٧٩٦٠١

رقم منشآتكم



اتحاد الغرف السعودية  
Federation of Saudi Chambers

١٨٤٥١٦٩

رقم منشآتكم



الموارد البشرية  
واللتنمية الاجتماعية

لا يوجد

رقم منشآتكم



بلدي  
balady

١٤٠٢٨٤٨٤٨

رقم منشآتكم



٣١٠٥٧٣٧٧٩١

رقم منشآتكم



هيئة الزكاة والضريبة والجمارك  
Zakat, Tax and Customs Authority

للاستفادة من الخدمات المقدمة  
من الجهات الحكومية



دليل التاجر



التاريخ ١٤٤٥/٠٩/١٧  
الموافق ٢٧/٠٣/٢٠٢٤  
رمز الشهادة ٦٣٦١٣٧١٧

## شهادة

إسم المنشأة : شركة قطب الأعمار  
إسم صاحب العمل : محمد يحيى ابن محمد بن سالم

الرياض  
السعودية

رقم الإشتراك : ٥٣٩٣٦٣٤٢٥  
رقم السجل التجاري : ١٠١٠٤١٩٨٩٧

كتابة  
مشارك واحد فقط  
أربعة مشتركين  
خمسة مشتركين

رقما  
١  
٤  
٥

عدد المشتركين السعوديين  
عدد المشتركين غير السعوديين  
المجموع

تشهد المؤسسة العامة للتأمينات الاجتماعية بأن المنشأة المذكورة أعلاه قد أوفت بالتزاماتها تجاه المؤسسة وفق البيانات المقدمة منها حتى تاريخ إصدار هذه الشهادة ، والتي تم منحها لتقديمها لأية جهة تطلبها ، وهي صالحة لجميع الأغراض التي نص عليها نظام التأمينات الاجتماعية في المادة (١٩/٦) منه.

هذه الشهادة سارية المفعول حتى ١٤٤٥/١٠/١٦ هـ.

يلزم التحقق من صحة وصلاحيّة الشهادة عبر زيارة الرابط  
أدناه في الموقع الإلكتروني للمؤسسة العامة للتأمينات الاجتماعية  
أو عن طريق استخدام  
الرمز المعرف التالي :



[www.gosi.gov.sa/vc](http://www.gosi.gov.sa/vc)

( الشهادة معتمدة من صاحب الصلاحيّة ولا تحتاج إلى توقيع أو ختم )

ننهادة 

[www.gosi.gov.sa](http://www.gosi.gov.sa)  
800 1243344



تعد هذه الشهادة من الوثائق الإلكترونية الحكومية الرسمية ، ويحظر قطعياً تقليدها أو إدخال أي تعديلات عليها سواء بالإضافة أو الحذف أو التغيير في بياناتها أو غير ذلك من أنواع التعديل ، وتعد الشهادة لاغية إذا شابهها شيء من ذلك ، كما تعرض صاحبها للملاحقة النظامية أمام الجهات المختصة بالإضافة إلى مايفرضه نظام التأمينات الاجتماعية من عقوبات ، ولايجوز تداول الشهادة إلا في الأغراض التي أصدرت لأجلها وفقاً لأحكام نظام التأمينات الاجتماعية ، والمؤسسة العامة للتأمينات الاجتماعية غير مسؤولة عن أي آثار أخرى مترتبة قبل الغير عن الشهادة وغير مسؤولة عن أي عملية تزوير أو تعديل تتم على البيانات الواردة فيها .

  
التأمينات الإلكترونية  
بإمكانك من مكانك

# شهادة التوطين

رقم الشهادة	170999-45957969
تاريخ الإصدار	26/03/2024
تاريخ انتهاء الصلاحية	24/06/2024
تاريخ التجديد/التحديث	—
حالة الشهادة	تم التحقق 
اسم المنشأة	شركة قطب الاعمار للتجارة
رقم المنشأة	1-2447201
رقم السجل التجاري	1010419897
رقم المنشأة الموحد	7006399856
مستوى نطاقات	اخضر صغير (فئة أ) 
معدل التوطين	20%



The Ministry of Human Resources and Social Development certifies that the above mentioned Establishment has achieved the required Saudization rate and has been granted this certificate upon request.

The certificate is electronically generated and approved by the authority. It does not require any signature or stamp.

تشهد وزارة الموارد البشرية والتنمية الاجتماعية بأن المنشأة المذكورة أعلاه حققت نسبة التوطين المطلوبة وتم منحها هذه الشهادة بناء عن طلبها.

الشهادة تم إنشاؤها إلكترونياً ومعتمدة من الجهة المختصة ولا تحتاج الى ختم او توقيع



## تفاصيل تسجيل العنوان الوطني National Address Registration

### Account Information

Application No : 140284848

Service No : 140284848

Customer Account : 873059360

### معلومات الحساب

رقم الطلب : ١٤٠٢٨٤٨٤٨

رقم حساب الخدمة : ١٤٠٢٨٤٨٤٨

رقم حساب العميل : ٨٧٣٠٥٩٣٦٠

### Address Details:

شركة قطب الاعمار للتجارة  
3225 Ibn Hubairah - Al Zahra Dist.  
Unit No 3236  
Riyadh 12815 - 6306  
Kingdom of Saudi Arabia

### تفاصيل العنوان:

شركة قطب الاعمار للتجارة  
٣٢٢٥ ابن هبيرة - حي الزهراء  
وحدة رقم ٣٢٣٦  
الرياض ١٢٨١٥ - ٦٣٠٦  
المملكة العربية السعودية

Address Details		تفاصيل العنوان
Building No	3225	رقم المبنى
Street Name	ابن هبيرة Ibn Hubairah	اسم الشارع
District Name	حي الزهراء .Al Zahra Dist	اسم الحي
City Name	الرياض Riyadh	اسم المدينة
Zip Code	12815	الرمز البريدي
Additional No	6306	الرقم الإضافي
Unit No	3236	وحدة رقم

## الخدمات المميزة

الخدمة الإضافية	رقم حساب الخدمة
تسليم بختم الكتروني- 140284848	140284848

### Notes

To receive postal services on the address, you need to have a suitable and durable mailbox installed. The mailbox should be installed on the wall or the door in case of the address is villa or independent house unit; and on the building entrance in case of apartment or building complex.

### ملاحظات

لتستفيد من الخدمات البريدية على عنوانك، يجب توفر صندوق مناسب من حيث الشكل والقوة والمتانة. يجب تركيب الصندوق على الجدار أو الباب في حال كون العنوان فلة أو منزل مستقل، وعلى المداخل الرئيسية في حال كون العنوان في مبنى أو مجمع سكني.

# CONTENT

## 4 PRODUCT PROFILE



The pipe that makes it easy to connect the AC



# FREO - PIPE

F L E X I B L E A / C P I P E

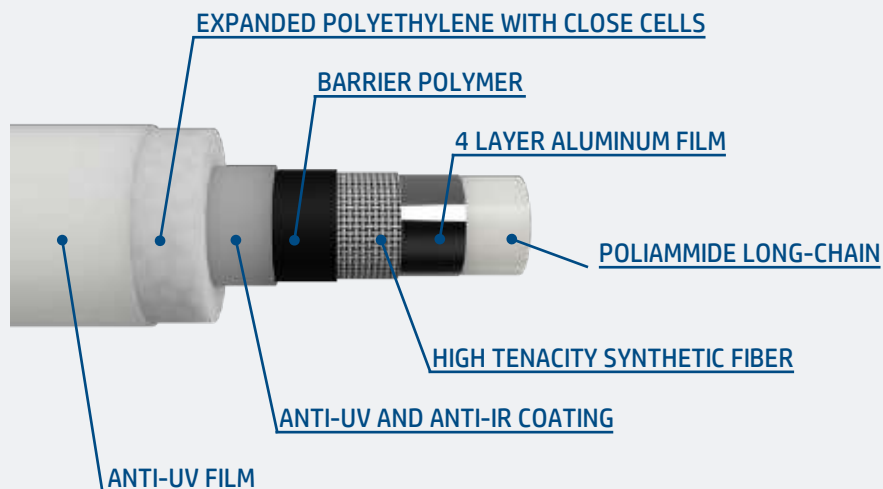


- **RAPID**
- **SAFE**
- **RESISTANCE**

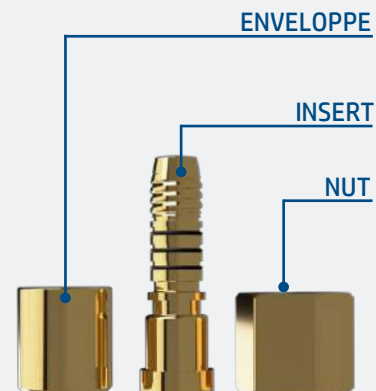


**Freo-Pipe®** is available in diameters  
**1/4", 3/8", 1/2", 5/8"**

## Construction Features



BRASS "ELICA" FITTING:  
GAUGES, SCREWS, CRIMPS



## SOME TECHNICAL DATA

### Field of use

F-GAS refrigeration circuits containing **R410A, R32, R134a, R404A, R407C (Not compatible with R22)**  
Operating temperatures **-30°C / +110°C (max 130°C not continuous)**  
Maximum working pressure **60 bar (Design pressure 100 bar)**

## REFERENCE REGULATIONS AND STANDARDS

Global compliance with	<b>UNI EN 1736:2009 (EN 1736:2008)</b>
Coating (thermal conductivity)	<b>UNI 8457 - UNI 9174</b>
Coating (fire resistance)	<b>UNI EN 1382:2014 - UL 94:2001</b>
Permeation resistance	<b>EN 1736:2008 Par. 7 Classe 1</b>



## Freo-Pipe® System - PIPES

### TUBES KIT

Code	Description
11060.04	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 1/4" L. 4m
11060.08	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 1/4" L. 8m
11060.12	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 1/4" L. 12m
11060.16	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 1/4" L. 16m
11060.00	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 1/4" L > 16m (On Request)

Code	Description
11061.04	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 3/8" L. 4m
11061.08	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 3/8" L. 8m
11061.12	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 3/8" L. 12m
11061.16	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 3/8" L. 16m
11061.00	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 3/8" L > 16m (On Request)

Code	Description
11062.04	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 1/2" L. 4m
11062.08	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 1/2" L. 8m
11062.12	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 1/2" L. 12m
11062.16	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 1/2" L. 16m
11062.00	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 1/2" L > 16m (On Request)

Code	Description
11063.04	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 5/8" L. 4m
11063.08	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 5/8" L. 8m
11063.12	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 5/8" L. 12m
11063.16	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 5/8" L. 16m
11063.00	FREO-PIPE® Tube With UV-PRO Insulation $\Phi$ 5/8" L > 16m (On Request)



### WHAT IS UV-Pro?

It is a pearly gray coating resistant to UV rays and the aggression of sunlight 3 times more than the common polyethylene film. This type of coating preserves both the pipe and the insulating coating, and is therefore able to guarantee an excellent performance of the air conditioning system.

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**Freo-Pipe® KIT**

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# FREO-PIPE KIT



**Freo-Pipe® KIT** is inclusive of 2 pipes already connected and tested by Nitrogen at 78 bar, available in various lengths, the best solution for **quick** and **efficient** installations and to make you finally forget leaking folders! Each kit is individually packaged in sealed bags and is ready for use.

Can't find the length that's right for you? Ask our consultants for help.

N.B. To fix the Freo-Pipe® KIT fittings, the use of the appropriate assembly oil (SKU 11419) is required.

# FREO - PIPE

F L E X I B L E A / C P I P E

Manufacturing Plant  
Viale L. Da Zara, 10  
Albignasego (PD)  
ITALY



[info@freo-pipe.com](mailto:info@freo-pipe.com)



+966 59 415 4040



CONDITIONING



HEATING

FREO-PIPE®

[WWW.FREO-PIPE.COM](http://WWW.FREO-PIPE.COM)

DESIGN ACCORDING TO EN 1736.2009



WEBSITE



YOUTUBE

5 TECHNICAL  
DATASHEET

CONTENT



- Branding: Freo-Pipe®
- Reference standard: EN 1736:2008
- Applications:
  - Connection of indoor/outdoor units of direct expansion systems working with the following refrigerant gases:
    - R410A;
    - R32;
    - R134a;
    - R404a;
    - R407c.
  - Generic transport of refrigerant gases, liquid or vapor, pressurized or non-pressurized;
  - Not compatible with R22.
- Usage conditions:
  - Temperature range (TS): -30°C +110°C (-22°F + 230 °F). Resistant to peaks of 130°C (265°F);
  - Maximum operative pressure (PS): 60 bar (0 - 870 PSI). Tested at 78 bar (1130 PSI);
  - Design pressure (PD): 100 bar (1450 PSI).
- 7-layer MLT. Structure:
  - Long-chain polyamide;
  - Aluminum film;
  - High-strength synthetic fiber braiding;
  - High barrier plastic polymer layer;
  - Anti-wear, anti-UV, anti-abrasion and chemically inert external coating layer;
  - Closed cell expanded polyethylene insulation;
  - Anti-UV polyethylene protective coating, white or grey (improved anti-UV resistance).
- Tube technical specifications:

Nominal diameter (inch)	1/4	3/8	1/2	5/8
Nominal internal diameter (mm)	5,2	8,4	12,6	13,8
Internal diameter tolerance (mm)	0,1	0,1	0,1	0,1
Nominal external diameter (mm)	9,5	13	15,5	19,9
External diameter tolerance (mm)	0,15	0,15	0,15	0,2
Minimum burst pressure (bar   PSI)	500   7900	400   5800	320   4800	300   4300
Length variation at working pressure	± 1%	± 1%	± 1%	± 1%
Minimum bending radius (mm)	65	95	130	170
Weight without insulation (g/m)	64	102	110	176
Weight with insulation (g/m)	100	142	150	220

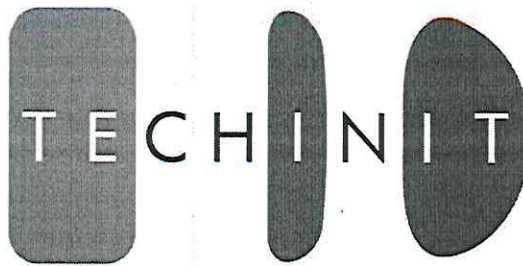


- **Insulation technical specifications (optional):**
  - Thermal conductivity: 0,0397 W/m·K;
  - Resistance to water vapor diffusion: 5482  $\mu$ ;
  - **Structure;**
    - Closed-cell polyethylene foam insulation sheathing (PE-LD), 6 mm thickness (possibility to supply with different thickness on request);
    - Scratch-resistant finish film in closed-cell polyethylene foam (PE-LD), white or grey UV-Pro special to improve the resistance to solar aggression.
- **Permeability (EN 1736:2008 Par. 7):**
  - Class 1.
- **Fittings technical specifications:**
  - 3-pieces fittings kit;
  - Patented design;
  - Fittings completely made of brass;
  - Special treatment on flare to achieve leak-free connection with the machines;
  - For the fittings kit installation instructions, refer to Freo-Pipe® installation manual.
- **Supply methods:**
  - Rolls with long length (>1000m) without insulation, supplied with fitting and tested at 78 bar;
  - 50 m rolls without insulation, without fittings, tested at 78 bar;
  - 4, 8, 12 & 16 meters rolls with insulation, supplied with fittings and tested at 78 bar;
  - 4, 8, 12 & 16 meters coupled rolls with insulation (1/4"+1/2", 1/4"+5/8", 3/8"+5/8") supplied with fittings and tested at 78 bar;
  - Ready-to-use and tested kits in multiple lengths with fittings.
- **Installation:**
  - Freo-Pipe® usage is reserved to F-GAS certified professionals;
  - It's mandatory to follow all the procedures in the product installation manual.
- **Transport and storage:**
  - Ensure the storage of the product is cool and dry;
  - Always remember to plug the ends;
  - In case of prolonged storage of the product in a wet environment, take extra care while pulling the vacuum on the plant.

Issue date: October, 8<sup>th</sup> 2021 - Rev.6

6 ORIGIN  
CERTIFICATES

CONTENT



Tecnologie Innovative Italia

To whom it may concern

We, Techinit S.r.l. located in Via L. da Zara, 16/18 - 35020 Albignasego (PD) ITALY, confirm that FREO-PIPE® is produced in our factory in Italy.

FREO-PIPE® is produced according to EN Standards 1736:2008 and is tested according to par. 6.1 of the Normative, at 78 bars.

Product is inspected by TÜV Austria (Italy branch) with Inspection Report TAI/20/001.

Norm Compliance Dossier is available upon qualified request at [info@techinit.it](mailto:info@techinit.it)

Any technical information or test results issued by Techinit, or by the third certification body, and referred to FastPipe® shall be construed as referred to FREO-PIPE®.

We, Techinit S.r.l., guarantee the integrity of our product (pipe) for 10 years against manufacturing defects, as stated in Annex A.

Limitations, exclusions and warranty voiding clauses may apply.

Albignasego, May 30<sup>th</sup> 2022

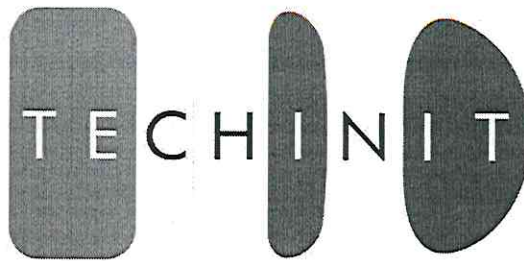
Techinit S.r.l.

Chairman Ivo Lamenti

A handwritten signature in blue ink, appearing to read "Ivo Lamenti", is written over a horizontal line.

**TECHINIT srl**  
Amministratore  
IVO LAMENTI





Tecnologie Innovative Italia

## ANNEX A)

### Warranty limitations, exclusion and warranty voiding clauses

#### Warranty limitations

Techinit's warranty exclusively covers the structural integrity and the pressure strength of FREO-PIPE, in case of manufacturing defect, for a duration of 10 (ten) years from the production date printed on Product. The production date that makes reference is the one that is directly printed onto the grey outer layer of FREO-PIPE. No other dates or information can extend the duration of the warranty.

The warranty issued by Techinit S.r.l. covers the structural integrity and the pressure strength of the pipe, established that no warranty voiding clauses apply.

Techinit is not issuing a specific warranty upon the correct functionality of the Air Conditioner or of any other thermo-dynamic device connected using FREO-PIPE, being that there are many conditions that, mutually, can affect the operation of the Air Conditioner or of the device.

By structural integrity of the pipe is strictly intended the capacity of the pipe – fittings excluded - to withstand the hydrostatic pressure of 78 bars, as per Normative Requirements.

#### Warranty voiding clauses

In case of failure of the structural integrity and the pressure strength of the pipe, any wrong assembling procedure, bad habit as well as any other action that could damage or shorten the lifespan of the pipe shall void this warranty.

For example, and without any limitation, such wrong procedures and bad habits includes:

- incorrect insertion and assembly of the fitting kit;
- incorrect crimping of the bushing,
- over-tightening of the nuts (breaking of the internal flare of the fitting is explicitly excluded from the warranty);
- improper use of the assembly lubricant;
- improper use of copper gasket or third-party sealants, direct and continuous exposition to sunlight of the Product (the whole tube shall be entirely protected in a sunproof insulation or cover, for the whole duration of the warranty);
- kinking or over-bending (minimum bending radiuses are provided in the Product Manual);
- improper pipe twisting during the installation;
- use of pliers or other tools to handle and lay the Product.

Being that the Product is completely tested and verified in our production sites, any other external damage on the pipe (including and not limiting to scratches, kinks, pinches and cuts) shall void the warranty. In the event of a dispute, the decision on whether a damage voids or not the warranty is upon the sole manufacturer.

#### Claim exclusions and costs rejections

It is explicitly excluded and rejected any claim that is approximate, unsubstantiated, undefined, not demonstrable and, in general, which does not allow contradictory analysis.

Any cost related to reaching the pipe, including as example and not limiting to opening walls, channels, ducts as well as renting ladders or lifting platforms are not acceptable.

Any costs related to eventual damages of Air Conditioners or other devices are rejected unless there is a demonstrable failure of the structural integrity of the Pipe.

In case of dispute that involves direct or indirect costs for the Manufacturer, the claimer understand that those costs will have to be refunded to the Manufacturer in case of warranty voiding.



**TECHINIT srl**  
Amministratore  
IVO LAMENTI

شهادة مطابقة إرسالية للمنتجات المستوردة  
Shipment Conformity certificate for imported products



نقر ونتعهد نحن (.....) مؤسسة الريادة المتطورة للتجارة (بأن جميع بيانات المنتجات الموجودة في طلب الإرسالية صحيحة ، وأن المنتجات مطابقة للمواصفات القياسية السعودية ذات العلاقة ، ونتعهد بتوفير أي ملفات فنية للمنتجات تطلبها الهيئة السعودية للمواصفات والمقاييس والجودة أو من يمثلها لاحقا ، وفي حال تبين عدم صحة ذلك اتحمل جميع التبعات النظامية المترتبة على ذلك

Certificate Number	IT-22-0070901	Issue Date	19/02/2022
Certificate Type	Shipment Conformity Certificate for Imported Products	Commercial Registration No	1010495497
Establishment Address		Shipment country	Italy

Product and Manufacturer Data

Model Name	FP0145014	Trade Mark	Freo-Pipe®
Product Name	TUBE FREO-PIPE		
Product Description	 		
Country of origin	Italy		
Production Date			
HS Code	400942100004		
Manufacturer name	TECNOLOGIE INNOVATIVE ITALIA		
Exporter name	TECNOLOGIE INNOVATIVE ITALIA	Exporter Address	ITALY

Establishment Stamp



نقر ونتعهد نحن (.....) مؤسسة الريادة المتطورة للتجارة (بأن  
المنتج ليس خاضع لأي من اللوائح الفنية المعتمدة من الهيئة كما أنه ليس بمنتج دوائي أو غذائي أو زراعي ولا يقع  
خارج نطاق المنتجات المشمولة باللوائح الفنية والمواصفات القياسية ذات العلاقة المعتمدة من الهيئة.

19/02/2022 01:10

Establishment manager signature




# شهادة مطابقة للمنتجات الخاضعة للوائح



## Certificate of conformity for regulated products

We (.....Gulftic Europe Certification LLC..... ) office number (.....121127.....) are bearing full responsibility for the product described below is conforms to the conformity assessment procedure Conduct the relevant technical regulations and standards which mentioned during this certificate.

Certificate Number	00845-121-24-1410754	Issue Date	27/05/2024	Expire Date	27/05/2025
Certificate Type	Product Conformity Certificate (COC)	Commercial Registration No	1010419897 / 7006399856		
Establishment Address	الرياض الاحساء 26 7133				
Product and Manufacturer Data					
Model type	TUBE 0 1/4	Trade Mark	FREO PIPE		
Product Name	TUBE FREO-PIPE				
Product Description					
Country of origin					
HS Code	391731000003				
Technical Regulation	Technical Regulation for Building Materials - Part 5 : Tubes and Pipes used in water, electricity and Gas networks				

Manufacturer name	TECHINIT S.r.I
Manufacturer Address	viale L.Da Zara, 16/18 35020 Albignasego (PD) Italy

Product test data	
Report number	
Report Date	
Decision of conformity assessment	Product Approved

CB Organization Office  
Responsabile Manager  
signature

27/05/2024 03:12

CB Organization Office  
Stamp



[Terms and Conditions \(/Home/Terms\)](#) | [Contact Us \(/home/ContactUs\)](#) | [SASO Portal](#)

<http://www.saso.gov.sa/en/contactus/Pages/default.aspx>

# 7 TEST CERTIFICATES

# CONTENT

# FREO - PIPE

F L E X I B L E A / C P I P E

## PRODUCT CERTIFICATES

### TUV AUSTRIA:



TUV Austria Bureau of Inspection & Certification. A leading Testing, Inspection, Certification & Training company globally authorized to offer third party Testing, Inspection, Certification & Training services.

### Giordano Test Inspection:



The Giordano Institute is part of the group of CE notified bodies and works in the field of product certification and laboratory testing on materials.

The tubes have been tested pressure test in accordance with standards UNI EN 1736:2009 and UNI ISO 6605:2005.

### Fire Rating Certificate UL94-V0:



UL94 is a standard set by UL for testing for flammability of plastics. V-0 Vertical Burn Burning stops within 10 seconds after two applications of ten seconds each of a flame to a test bar. NO flaming drips are allowed.

### LifeTime of the tube:



This certificate is issued by 3A Laboratori which illustrates the Product life evaluation in reference to the ASTM E1877-15 (Calculating Thermal Endurance of Materials from Thermogravimetric Decomposition Data).

### Nitrogen Test Certificate:

This is an indoor test certificate for the final kit product, by testing the Tube with Nitrogen at 78 bar pressure.

Leakage points can be observed visually and by the Oil Leakage Detection Spray. Each tube is tested after crimping and before packaging.

**ATTESTATO DI VERIFICA**  
VERIFICATION REPORTATTESTATO N°: TAI/21/007  
REPORT NR.:DATA PROVE: 01/10/2020  
TEST DATE:NOME ED INDIRIZZO DEL RIVENDITORE:  
NAME AND ADDRESS OF THE DEALER:ADVANCED LEADERSHIP EST.  
Office 3, Al Ahsaa Commercial Building  
Al Ahsaa Street P.O. Box 3066  
Riyadh (Saudi Arabia)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 Freo-Pipe®  
Product Freo-Pipe®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/20/0504/04  
The results, conditions and test methods are included in the inspection  
report n. BS/RE/FV/20/0504/04NOTE:  
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:  
CONDITIONS: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.  
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, 22/12/2021Responsabile tecnico  
Technical ManagerTÜV AUSTRIA ITALIA - Blu Solutions s.r.l. - Via del Commercio, 6/A - 60030 Monte Roberto (AN) - T: +39 0731 22781 - F: +39 0731 227806  
E: info@tuvaustriaitalia.com - tuvaustriaitalia@legalmail.it - W: www.tuvaustriaitalia.com - Codice Sdi MSUXCR1  
C.F. - P. IVA IT02217380423 - Cap. Soc. i.v. EUR 10.000,00 - R.L. Ancona REA n. 170070  
A socio unico, soggetta a controllo e coordinamento di: TÜV AUSTRIA HOLDING AG Deutschstrasse 10, A-1230, Vienna, AustriaSede operativa: Via dell'Industria, 14 - 25030 Erbusco (BS) - T: +39 030 982 1049 - F: +39 030 982 2253 - E: info.bs@tuvaustriaitalia.com  
Sede operativa: Via Pasquale Romano, 25 - 72100 Brindisi (BR) - T: +39 347 597 0825 - F: +39 030 982 2253 - E: info.br@tuvaustriaitalia.com

TÜV®

**RAPPORTO DI PROVA N. 374617**
**TEST REPORT No. 374617**

Cliente / Customer

**TECHINIT S.r.l.**

Via Leonino Da Zara, 16/18 - 35020 ALBIGNASEGO (PD) - Italia

Oggetto / Item\*

**tubazioni per uso frigorifero denominate**  
**“Tubo FastPipe by Techinit - Diam DN ¼", ⅜", ½", ⅝"**  
**- PAT.PEND PN60”**

*pipes for refrigeration use named “Tubo FastPipe by Techinit -*  
*Diam DN ¼", ⅜", ½", ⅝" - PAT.PEND PN60”*

Attività / Activity

**prova di resistenza a pressione secondo le norme**  
**UNI EN 1736:2009 e UNI ISO 6605:2005**

*pressure test in accordance with standards*  
*UNI EN 1736:2009 and UNI ISO 6605:2005*



Risultati / Results

Prova Test	Esito Result
resistenza pressione -0,99 bar <sub>g</sub> e 78 bar <sub>g</sub> <i>pressure resistance -0,99 bar<sub>g</sub> and 78 bar<sub>g</sub></i>	<b>positivo</b> <b>nessun cedimento e/o rottura</b> <i>positive</i> <i>no yielding and/or breaking</i>
resistenza a scoppio a 180 bar <sub>g</sub> <i>burst resistance at 180 bar<sub>g</sub></i>	<b>positivo</b> <b>nessun cedimento e/o rottura</b> <i>positive</i> <i>no yielding and/or breaking</i>
resistenza a pressione pulsante <i>resistance to pulsating pressure</i>	<b>positivo</b> <b>nessun cedimento e/o rottura</b> <i>positive</i> <i>no yielding and/or breaking</i>

(\*) secondo le dichiarazioni del cliente.  
*according to that stated by the customer.*

 Bellaria-Igea Marina - Italia, 8 settembre 2020  
 Bellaria-Igea Marina - Italy, 8 September 2020

 L'Amministratore Delegato  
 Chief Executive Officer

Commessa:

 Order:  
 84974

Provenienza dell'oggetto:

 Item origin:  
 campionato e fornito dal cliente  
*sampled and supplied by the customer*

Identificazione dell'oggetto in accettazione:

 Identification of item received:  
 2020/1724 del 10 agosto 2020  
 2020/1724 dated 10 August 2020

Data dell'attività:

 Activity date:  
 dal 27 agosto 2020 al 6 settembre 2020  
 from 27 August 2020 to 6 September 2020

Luogo dell'attività:

 Activity site:  
 Istituto Giordano S.p.A. - Blocco 4 - Via San Mauro, 8 - 47814 Bellaria-Igea Marina (RN) - Italia

Indice	Pagina
Descrizione dell'oggetto*	2
Riferimenti normativi	3
Apparecchiature	4
Modalità	4
Risultati	5
Contents	Page
Description of item*	2
Normative references	3
Apparatus	4
Method	4
Results	5

Il presente documento è composto da n. 5 pagine (in formato bilingue (italiano e inglese), in caso di dubbio è valida la versione in lingua italiana) e non può essere riprodotto parzialmente, estrapolando parti di interesse a discrezione del cliente, con il rischio di favorire una interpretazione non corretta dei risultati, fatto salvo quanto definito a livello contrattuale.

I risultati si riferiscono solo all'oggetto in esame, così come ricevuto, e sono validi solo nelle condizioni in cui l'attività è stata effettuata.

L'originale del presente documento è costituito da un documento informatico firmato digitalmente ai sensi della Legislazione Italiana applicabile.

*This document is made up of 5 pages (in a bilingual format (Italian and English), in case of dispute the only valid version is the Italian one) and shall not be reproduced except in full without extrapolating parts of interest at the discretion of the customer, with the risk of favoring an incorrect interpretation of the results, except as defined at contractual level.*

*The results relate only to the item examined, as received, and are valid only in the conditions in which the activity was carried out.*

*The original of this document consists of an electronic document digitally signed pursuant to the applicable Italian Legislation.*

Responsabile Tecnico di Prova: / Chief Test Technician:

Dott. Ing. Luca Bonini

Laboratorio PED-Saldature-CND: / Head of PED-Welding-NDT Laboratory:

Dott. Alessandro Gaspari

Compilatore: / Compiler: Francesca Manduchi

Revisore: / Reviewer: Dott. Ing. Luca Bonini

Pagina 1 di 5 / Page 1 of 5

## **Descrizione dell'oggetto\***

### Description of item\*

L'oggetto in esame è costituito da tubazioni per uso frigorifero di diametro DN ¼", ⅜", ½", ⅝".

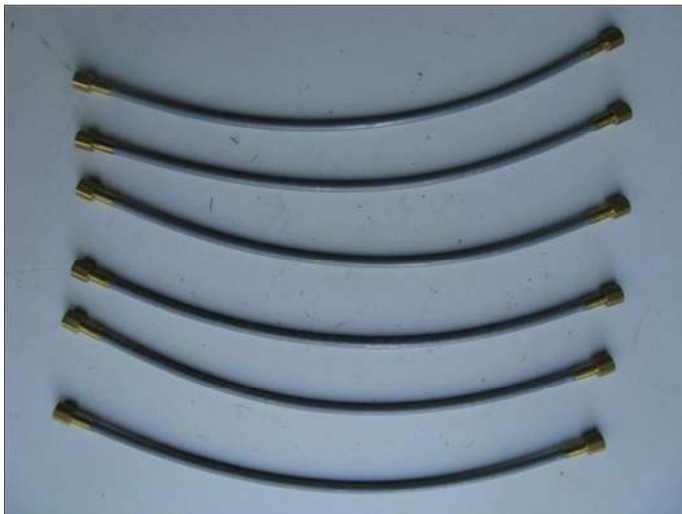
Per ciascun diametro sono state fornite n. 12 tubazioni di cui n. 6 di lunghezza 500 mm e n. 6 di lunghezza conforme alle prescrizioni del paragrafo 6.5 della norma UNI ISO 6605:2005, aventi PN 60 bar<sub>g</sub> e temperatura di lavoro 70 °C.

*The item under examination consists of pipes for refrigeration use DN ¼", ⅜", ½", ⅝".*

*For each diameter, No. 12 pipes of which No. 6 of length 500 mm and No. 6 of length complying with the requirements of paragraph 6.5 of the UNI ISO 6605:2005 standard, with PN 60 bar<sub>g</sub> and working temperature 70 °C.*

## **FOTOGRAFIE DELL'OGGETTO**

### *PHOTOGRAPHS OF THE ITEM*



**Tubazione DN ¼"**

*Pipe DN ¼"*



**Tubazione DN ⅜"**

*Pipe DN ⅜"*

(\*) secondo le dichiarazioni del cliente, a eccezione delle caratteristiche espressamente indicate come rilevate; Istituto Giordano declina ogni responsabilità sulle informazioni e sui dati forniti dal cliente che possono influenzare i risultati.

*according to that stated by the customer, apart from characteristics specifically stated to be measurements; Istituto Giordano declines all responsibility for the information and data provided by the customer that may influence the results.*



**Tubazione DN ½"**  
*Pipe DN ½"*



**Tubazione DN ⅝"**  
*Pipe DN ⅝"*

### **Riferimenti normativi**

#### *Normative references*

<b>Norma</b> <i>Standard</i>	<b>Titolo</b> <i>Title</i>
UNI EN 1736:2009	Impianti di refrigerazione e pompe di calore - Elementi flessibili delle tubazioni, isolatori di vibrazioni, giunti di dilatazione e tubi non metallici - Requisiti, progettazione ed installazione <i>Refrigerating systems and heat pumps - Flexible pipe elements, vibration isolators, expansion joints and non-metallic tubes - Requirements, design and installation</i>
UNI ISO 6605:2005	Oleoidraulica - Tubi e tubi flessibili raccordati - Metodi di prova <i>Hydraulic fluid power - Hoses and hose assemblies - Test methods</i>

## Apparecchiature

### Apparatus

Descrizione <i>Description</i>	Codice di identificazione interna <i>In-house identification code</i>
Centralina oleodinamica modello "U100B302271" della ditta Oleomec <i>Oleomec "U100B302271" hydraulics power unit</i>	TER012
Trasduttore di pressione modello "TP12BL53R" della ditta AEP Transducers, campo di misura 0 ÷ 100 bar <sub>g</sub> <i>AEP Transducers "TP12BL53R" pressure trasducer, measuring range 0 ÷ 100 bar<sub>g</sub></i>	TER013B
Camera climatica modello "TY 560 IU" della ditta Angelantoni <i>Angelantoni "TY 560 IU" climatic chamber</i>	SC406
Pompa manuale modello "PP113SS" della ditta Europress <i>Europress "PP113SS" manual pump</i>	TER035
Manometro digitale 350 bar <sub>g</sub> modello "BIT02" della ditta AEP Transducers <i>AEP transducers "BIT02" digital pressure gauge 350 bar<sub>g</sub></i>	TER022
Manometro digitale -1 ÷ 5 bar <sub>g</sub> modello "BIT02B" della ditta AEP Transducers <i>AEP transducers "BIT02B" digital pressure gauge -1 ÷ 5 bar<sub>g</sub></i>	TER036
Pompa a vuoto <i>Vacuum pump</i>	//

## Modalità

### Method

Su una terna di tubazioni, aventi lunghezza di 500 mm, sono state eseguite le seguenti prove:

- resistenza ad una pressione pari a -0,99 bar<sub>g</sub> e ad una pressione pari a 78 bar<sub>g</sub> in accordo al paragrafo 6.1 della norma UNI EN 1736:2009;
- resistenza a pressione di scoppio pari ad almeno 3 PS ovvero 180 bar<sub>g</sub> in accordo al paragrafo 6.4 della norma UNI EN 1736:2009.

Su una seconda terna di tubazioni, aventi dimensioni in accordo al paragrafo 6.5 della norma UNI ISO 6605:2005, è stata eseguita la prova in accordo al paragrafo 6.5 della norma UNI EN 1736:2009 con i seguenti parametri:

- n. 250000 cicli;
- pressione massima 64 bar<sub>g</sub>, in accordo alla figura 2 della norma UNI ISO 6605:2005;
- pressione minima 8 bar<sub>g</sub>, in accordo alla figura 2 della norma UNI ISO 6605:2005;
- temperatura del fluido 70 °C.

*The following tests were carried out on a set of three pipes, having a length of 500 mm:*

- *resistance to a pressure of -0,99 bar<sub>g</sub> and 78 bar<sub>g</sub>, in accordance with paragraph 6.1 of the UNI EN 1736:2009;*
- *resistance to burst pressure equal to at least 3 PS or 180 bar<sub>g</sub> in accordance with paragraph 6.4 of the UNI EN 1736:2009;*

*On a second set of three pipes, having dimensions in accordance with paragraph 6.5 of the UNI ISO 6605:2005, a test was performed in accordance with paragraph 6.5 of the UNI EN 1736:2009 with the following parameters:*

- *250000 cycles;*
- *maximum pressure 64 bar<sub>g</sub>, according to figure 2 of the UNI ISO 6605:2005;*
- *minimum pressure 8 bar<sub>g</sub>, according to figure 2 of the UNI ISO 6605:2005;*
- *fluid temperature 70°C.*

## **Risultati**

### **Results**

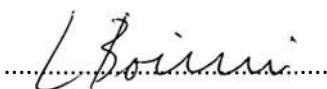
Tutte le tubazioni in esame non hanno manifestato segni di cedimenti e/o rotture alla pressione di -0,99 bar<sub>g</sub> ed hanno raggiunto e superato una pressione di 200 bar<sub>g</sub> senza manifestare rotture. La prova di resistenza a pressione di scoppio è stata interrotta raggiunti i 200 bar<sub>g</sub> in quanto la pressione di scoppio da verificare era di 180 bar<sub>g</sub>.

Tutte le tubazioni in esame hanno superato la prova di resistenza ciclica a pressione senza manifestare cedimento e/o rotture.


*All the pipes under examination showed no signs of yielding and / or breakages at a pressure of -0,99 bar<sub>g</sub> and reached and exceeded a pressure of 200 bar<sub>g</sub> without showing breakages. The burst pressure resistance test was interrupted when a pressure of 200 bar<sub>g</sub> was reached, as the burst pressure to be verified was 180 bar<sub>g</sub>.*

*All the pipes under examination have passed the pulsating pressure test without showing failure and / or breakage.*

Il Responsabile Tecnico di Prova  
 Chief Test Technician  
 (Dott. Ing. Luca Bonini)



Per il Responsabile del Laboratorio  
 PED-Saldature-CND  
 On behalf of Head of PED-Welding-NDT  
 Laboratory  
 (Dott. Alessandro Gaspari)



Dott. Paolo Orioli



## TEST REPORT AP-2022-382

**Date:** 13/05/2022

**Customer:** **TECHINIT SRL** Via L. Da Zara, 16/18 - 35020 Albignasego (PD) - ITALY

**Reference:** Our offer OP-2022-522 of 19/04/2022

**Samples:** Sample Pipe with metal fitting

**Scope of analysis:** UL94 test

### SAMPLE

The samples was identified as follows:

- **Sample** → 5 specimens obtained from customer



Figure 1 – Sample

### ANALYSIS AND RESULTS

- UL94 Vertical Burning-test, after conditioning for 48 hours at 23° C.

	Sample 1 - Specimen (see Figure 1)					
		1	2	3	4	5
FIRST FLAME (10s)	Afterflame time (s) <i>t1</i>	1	2	2	0	1
	Ignition of Cotton	NO	NO	NO	NO	NO
	Flame over support	NO	NO	NO	NO	NO
SECOND FLAME (10s)	Afterflame time (s) <i>t2</i>	2	1	1	0	2
	Ignition of Cotton	NO	NO	NO	NO	NO
	Flame over support	NO	NO	NO	NO	NO

### Sample size NOT compliant with ISO Standards

Based on the results obtained the **material sample is V0** (see video attached)

Laboratory Manager  
(Dr. V. Geretto)

Note: The test results shown in this report refer only to the samples that have been analysed.

Test report n°: **17LA21754** of **16/01/2018**

Dear  
**Techinit srl**  
Via L. Da Zara, 16/18  
35020 Albignasego (PD)

**Sample Information**

Description: **New tube in Polyamide (INTERNAL WHITE) - Product life evaluation in reference to the ASTM E1877-15**

Test subject: **Polymers**

Registration date: **22/12/2017** Registration hour: **07.37**

Date of arrival: **22/12/2017** Hour of arrival: **07.37**

Notes on receipt: **Suitable**

Date analysis commenced: **27/12/2017** Date analysis completed: **08/01/2018**



**Sampling data**

Sampling by: **Client**

Transport: **Client**

The analytical results are exclusively referred to the sample.

**Representation of a Test Report signed electronically in accordance with current legislation.**

The test report can not be reproduced in part without the written permission of the laboratory.

Laboratory management system certified UNI EN ISO 9001: 2008 by CSQA with the No. 14270. Inclusion in the list of regional laboratories carrying out analysis in the context of self-control procedures for Food Industries No. 52. Recommended by AIC for the analysis of quantification of gluten in food matrices. Registered laboratory for the analysis of food contact materials intended for export to Japan.

Test report n°: **17LA21754** of **16/01/2018**

Parameter - Note <i>Method - Note</i>	U.M.	Result Note	LoQ
Arrhenius activation energy - E ASTM E 1641-16	J/mol	<b>148741</b>	

LEGEND: **U.M.** = Unit of measurement; (**Sup**) = upper limit; (**Inf**) = Lower Limit ;; **x ÷ y** = acceptable range; **LoQ** = limit of quantification, the threshold value below which you choose not to bring any numerical result for the parameter in question; this limit is provided directly by the method, or is chosen on the basis of the experimental detection limits (LoQ or LoD) so as not to be changed over time or according to the chemical-physical or microbiological single sample; **LOD** = limit of detection; **NQ** = unquantifiable, indicates a value less than LoQ

"<x" or ">x" respectively indicate a value lower or higher than the measuring range of the test

**UNLESS OTHERWISE SPECIFIED:** Quantitative microbiological tests are performed on single replica and two consecutive dilutions in accordance with UNI EN ISO 7218: 2013 (with the exception of the analysis of water and MPN); the results of this test report are not correct for recovery factors (R) as the values of recovery are in the tolerance specified in the test method; summations are calculated using the criterion of the lower bound (LB)

If the sampling isn't the responsibility of 3ALaboratori Ltd., the test results were obtained on the basis of the data declared.

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Test report n°: **17LA21754** of **16/01/2018**

**Note:**

Heating Rates: 1 °C/min - 2 °C/min - 5 °C/min - 10 °C/min

Instrumentation:

TGA 2950 - TA Instruments - Division of Waters SpA:

- Platinum Sample Pan 100 $\mu$ l (Ø10.16mm)
- Sample Thermocouple inside the rack

For temperature calibration was used Nickel

The calibration of the mass was performed at room temperature

Acquisition parameters

+ Heating from 30 ° C to 700 ° C - Oxygen

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Mod.PT01.01 Rev.6

3A-Laboratori SRL

Via A.Volta 1/d Maserà di Padova - 35020 (PD) Email [amministrazione1@3alaboratori.it](mailto:amministrazione1@3alaboratori.it) Phone 049 0994658-0994671 Fax 049 8868430  
Cap. Soc. €100000,00 I.V. - REA di PD 378402 - Codice Fiscale, Iscriz. Reg. Imprese di Padova e Partita Iva 04296730288

Page 3 of 9



Test report n°: **17LA21754** of **16/01/2018**

**Opinions and Interpretations:**

With reference to ASTM E1877-15 (Calculating Thermal Endurance of Materials from Thermogravimetric Decomposition Data) the Arrhenius activation energy obtained from the ASTM E1641-16 test method, is used to construct the resistance curve thermal of an organic material from which an estimate of the service life at certain temperatures can be obtained.

It is emphasized that this is a processing and that, by modifying the calculation equations, we could deduce different results.

Taking into account that the activation energy of the material was calculated on the basis of the weight loss of 10%, we are taken into account two critical temperatures for the polymer object of the tests:

70 ° C (Maximum temperature of real pipe use)

150 ° C (Extreme aging conditions)

Therefore:

Thermal Endurance at 70°C = 97516 years of work

Thermal Endurance at 150°C = 5.11 years of work

Please note that this test does NOT take into account other sources of aging that could accelerate the degradation of the polymer early.

Technical Director

Dr. Giovanni Mitaritonna  
Chemist

Ordine Interprov. Chimici del Veneto - Padova n° 910 SEZ. A

The analytical results are exclusively referred to the sample.

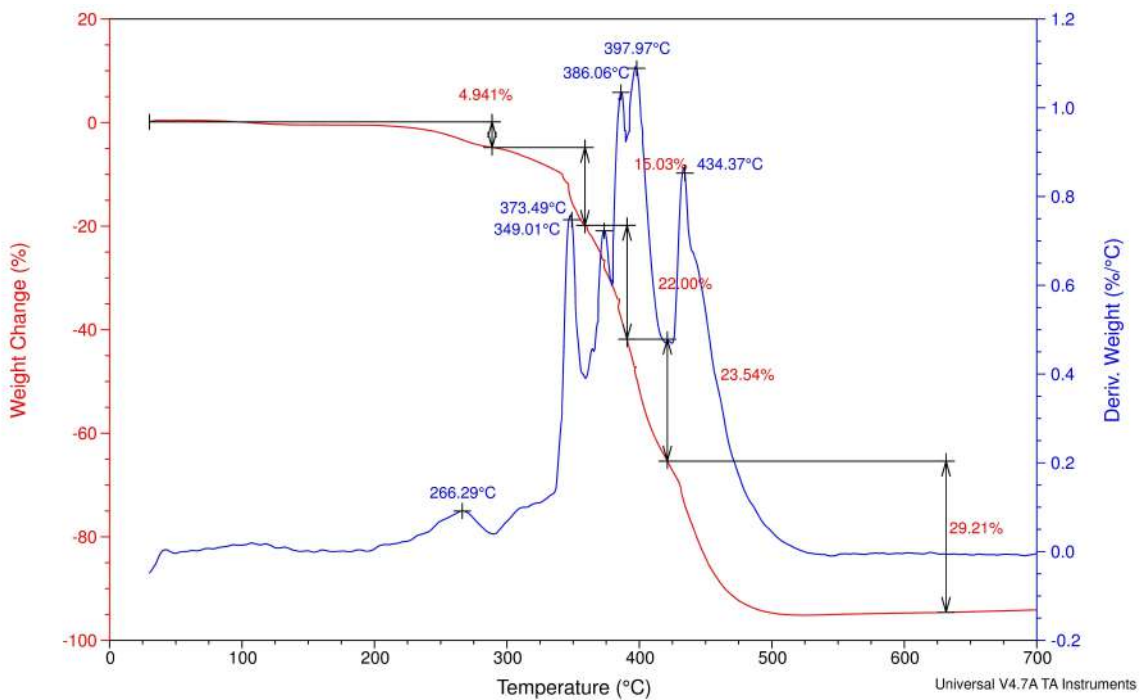
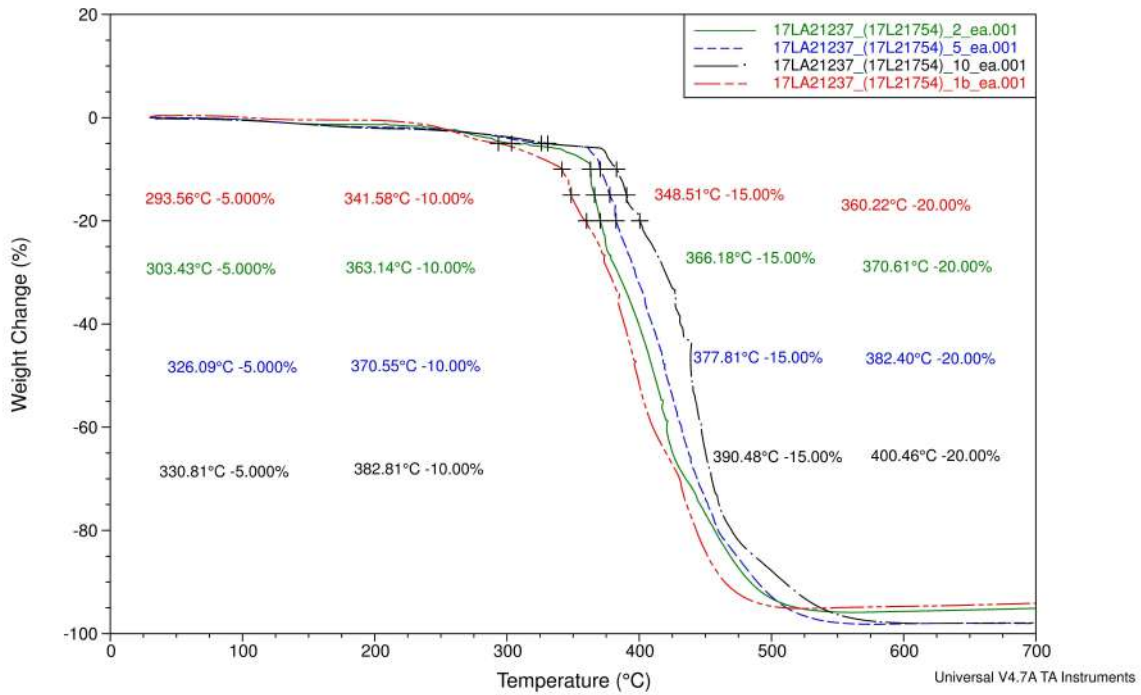
**Representation of a Test Report signed electronically in accordance with current legislation.**

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Mod.PT01.01 Rev.6

Test report n°: 17LA21754 of 16/01/2018



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TGA Parameters

Sample: 17LA21237\_1b\_ea

Method Log:

Comment:

1: Equilibrate at 30.00 °C

Date of Experiment: 2-Jan-18

2: Ramp 1.00 °C/min to 700.00 °C

Operator: lz

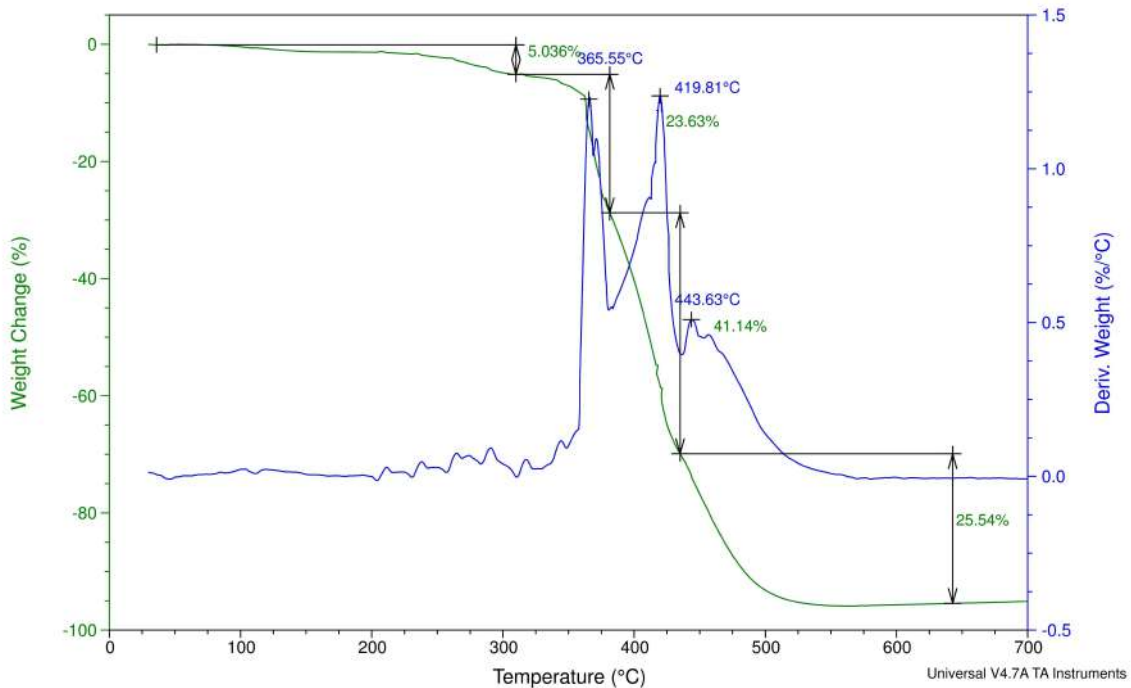
3: End of method

File Name: 17LA21237\_1b\_ea.001

Instrument Type: 2950 TGA HR V5.4A

Sample Size: 2.91400 mg

Method: Energia attivazione 1°C



The analytical results are exclusively referred to the sample.

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### TGA Parameters

Sample: 17LA21237\_2\_ea

Method Log:

Comment:

1: Equilibrate at 30.00 °C

Date of Experiment: 27-Dec-17

2: Ramp 2.00 °C/min to 700.00 °C

Operator: Iz

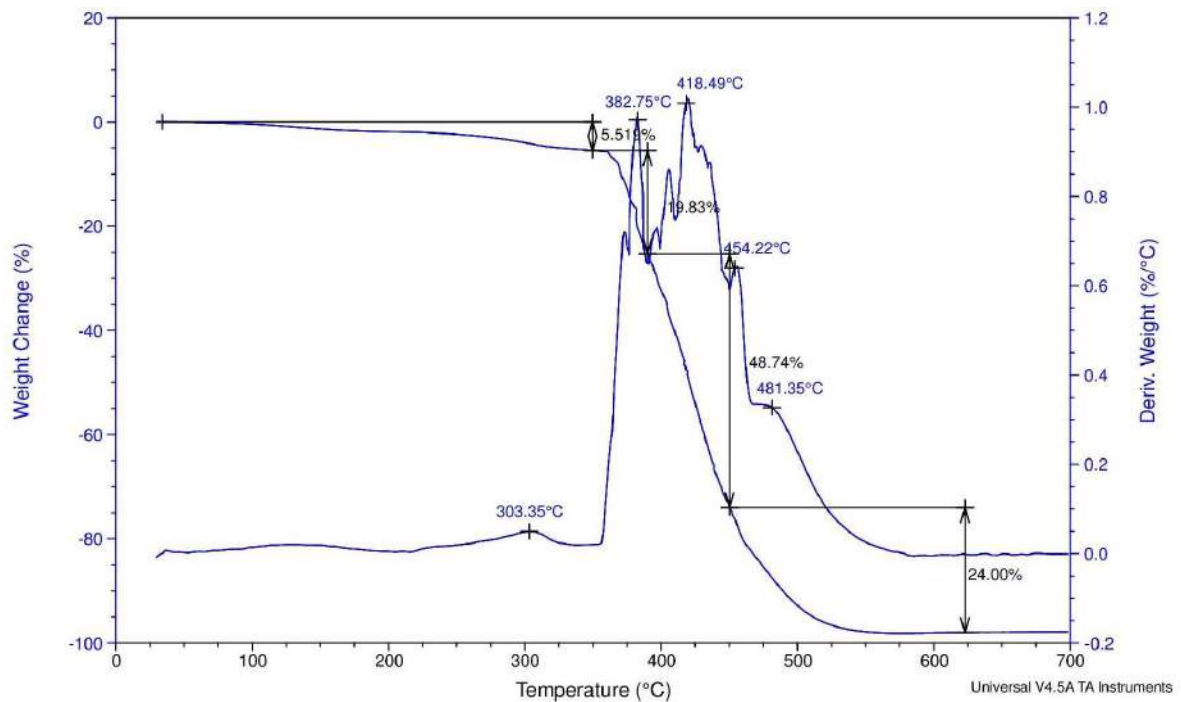
3: End of method

File Name: 17LA21237\_2\_ea.001

Instrument Type: 2950 TGA HR V5.4A

Sample Size: 2.98100 mg

Method: Energia attivazione 2°C



The analytical results are exclusively referred to the sample.

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### TGA Parameters

Sample: 17LA21237\_5\_ea

Method Log:

Comment:

1: Equilibrate at 30.00 °C

Date of Experiment: 27-Dec-17

2: Ramp 5.00 °C/min to 700.00 °C

Operator: Iz

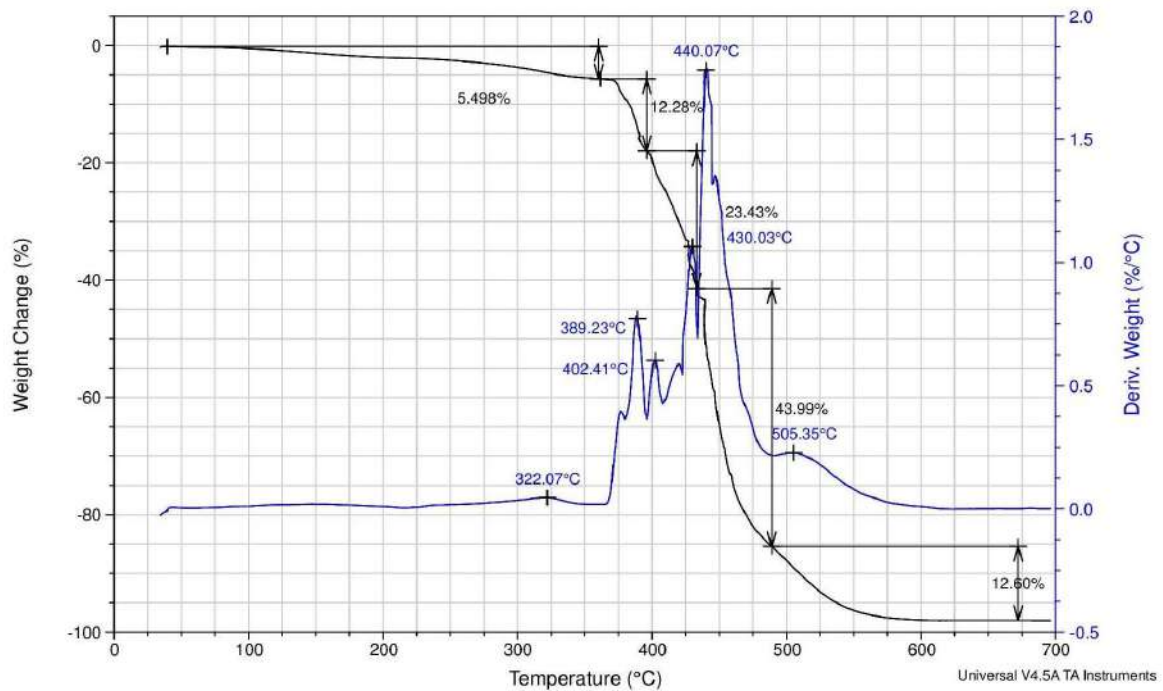
3: End of method

File Name: 17LA21237\_5\_ea.001

Instrument Type: 2950 TGA HR V5.4A

Sample Size: 3.26100 mg

Method: Energia attivazione 5°C



The analytical results are exclusively referred to the sample.

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Test report n°: **17LA21754** of **16/01/2018**

#### TGA Parameters

Sample: 17LA21237\_10\_ea

Comment:

Date of Experiment: 27-Dec-17

Operator: IZ

File Name: 17LA21237\_10\_ea.001

Instrument Type: 2950 TGA HR V5.4A

Sample Size: 3.13100 mg

Method: Energia attivazione 10°C

Method Log:

1: Equilibrate at 30.00 °C

2: Ramp 10.00 °C/min to 700.00 °C

3: End of method

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Mod.PT01.01 Rev.6



## Test Certificate, Nitrogen Pressure Test

**Product** : Flexible tubing system and brass fittings

**Trade Mark:** Freo-pipe®

**Size** : Diameter 1/4", 3/8", 1/2" & 5/8"

---

Hereby, Freo-Pipe® certifies that the material listed below, complies with the requirements of the Purchase Order and to the non-specific test results performed in accordance with manufacturing processes and quality assessments provided by the Quality Management System and by the product specifications.

**Materials** : 7-layer MLT. Structure, Long-chain polyamide, Aluminum film, High-strength synthetic fiber braiding, High barrier plastic polymer layer, Anti-wear, anti-UV, anti-abrasion and chemically inert external coating layer,

**Insulation:** Closed cell expanded polyethylene insulation, Anti-UV resistance polyethylene protective coating(grey) & two brass Elica fitting.

**Length** : 4, 8, 12 & 16 meters

**Testing** : Tested at 78 bar of Nitrogen, according to EN 1736:2008

**Test Result** : Success, No Leak.

8 WARRANTY  
LETTER

CONTENT

# Certificate WARRANTY

Emaar Pole Co. (Freo-Pipe®) warrants its pipe and fittings against defective workmanship and material for a period of **TEN** years from date of applicable invoice.

Products sold under this limited warranty must (1) be installed according to applicable Freo-Pipe® product manual/instructions using appropriate trade workmanship and according to the local building code(s). (2) remain in their originally installed location. (3) be applied for authorized applications and within authorized temperature and pressure limits, and (4) show no evidence of tampering, mishandling, neglect, accidental damage, modification, or repair without the approval of Emaar Pole Co., or damage none to the product by acts of anyone other than Emaar Pole Company.

Project Name: \_\_\_\_\_

Purchase Date: \_\_\_\_\_ Invoice No. \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



# 9 INSTALLATION MANUAL

# CONTENT

**FREO - PIPE®**  
F L E X I B L E A / C P I P E

# KIT FREO-PIPE

Istruzioni di installazione  
Installation Instructions



[www.freo-pipe.com](http://www.freo-pipe.com)

+966 59415 4040

## KIT FREO-PIPE

L'installazione di Kit Freo-Pipe® deve essere effettuata solo da personale qualificato in base alle direttive locali. Una installazione non a regola d'arte di Freo-Pipe® può generare un malfunzionamento del sistema di condizionamento che può portare ad un danneggiamento dello stesso.

Freo-Pipe® installation must be performed by qualified technicians only, respecting local regulations. An incorrect installation of Freo-Pipe® can lead to a malfunction of the A/C unit and, possibly, to a permanent damage of the units.

### Installazione | Installation

1. Posare Freo-Pipe® rispettando i raggi di curvatura minimi indicati nella tabella sottostante. | Install Freo-Pipe® respecting minimum bending radius shown in the table below.
2. Applicare del lubrificante per cartelle (SKU FP1141900) alle connessioni flangiate per una perfetta connessione. | Spray some lubricant (SKU FP1141900) on the flare of the fitting for a perfect connection.
3. Fissare i raccordi alle unità di condizionamento con una chiave dinamometrica, avendo cura di non superare i serraggi massimi indicati nella tabella sottostante. | Fix the fittings onto the A/C units with a torque wrench. Always respect maximum torque shown in the table beside.
4. Prima di avviare il sistema, eseguire sempre la prova di tenuta e il vuoto dell'impianto per l'esecuzione dell'installazione a regola d'arte. | Before starting up the A/C system, always perform the leakage test and pull the vacuum of the system.

### Raggi di curvatura minimi Minimum bending radius

1/4"	3/8"	1/2"	5/8"
65 mm	95 mm	130 mm	170 mm

### Coppia di serraggio Tightening torque

1/4"	3/8"
15-17 Nm (Max. 20 Nm)	28-32 Nm (Max. 35 Nm)

1/2"	5/8"
38-42 Nm (Max. 45 Nm)	60-68 Nm (Max. 80 Nm)

### Dati tecnici | Tech Specs:

Gas Compatibili   Compatible gases	R407c, R410a, R32, TR422b, R134a, R404
Gas <b>non</b> compatibili   <b>Not</b> compatible gases	R22
Temp. di funzionamento   Working temp.	-30° C to 110° C   -22° F to 230° F
P. massima di utilizzo   Max. working pressure	60 bar   870 psi



10 PREVIOUS  
APPROVALS

CONTENT

## Notification

### TO WHO IT MAY CONCERN

Kindly be noted that as per the given FREO PIPE technical specifications and certificates, we have no objection to use FREO PIPE as the technical data confirms it's capable to withstand the operation conditions of Midea air conditioning units – residential type, noting that we cannot measure the reliability of FREO PIPE material and the supplier has to provide the needful warranty to cover the required operation period.

Some the received FREO PIPE technical data:

- Reference standard: EN 1736:2008
- Applications:
  - Connection of indoor/outdoor units of direct expansion systems working with the following refrigerant gases: R410A
- Usage conditions:
  - Temperature range (TS): -30°C +110°C (-22°F + 230 °F). Resistant to peaks of 130°C (265°F);
  - Maximum operative pressure (PS): 60 bar (0 - 870 PSI). Tested at 78 bar (1130 PSI);
  - Design pressure (PD): 100 bar (1450 PSI).

This letter if for information and is issued upon request



GD MIDEA AIR-CONDITIONING EQUIPMENT CO., LTD  
DATE: 2 May 2024

HUSSEIN & AL-HASSAN G. SHAKER BROS.  
FOR MODERN TRADING CO. LTD.



شركة الأخوان حسين والحسن غازي شاکر  
للتجارة الحديثة المحدودة

Date: 2nd April 2024

Dear valued customer.

We Hussein & Al-Hassan G. Shaker Bros for Modern Trading Co. Ltd. State that, according to our review to the technical file of Freo-pipe. Which confirm the pipes application in AC With all Freon types. Since the product was TUV tested, which Confirms their report that it complies with European specification for AC PIPES EN1736:2008, also that being certified by certificate of conformity for imported goods by SASO, we do not see any technical comments opposing its use in the project s air conditioners. Without the slightest responsibility on us.

Sincerely.

التاريخ: 2/4/2024

تحية طيبة و بعد

نحن شركة الأخوان حسين والحسن غازي شاکر للتجارة الحديثة المحدودة نفيدكم بأنه طبقاً لمراجعتنا للملف الفني لمواسير فريوجايب، والتي تؤكد استخدام المواسير مع كافة أنواع الفريون و بما أن المنتج مختبر لدى TUV و التي أكدت في تقريرها أن المنتج مطابق للمواصفات الأوروبية لمواسير التكييف (كما حصله على شهادة مطابقة لمنتجات المستوردة) (سأير) و طبقاً لسابقة أعماله داخل المملكة، فإتينا لا نرى أي ملاحظات فنية تعارض استخدامه بمكيفات المشروع دون أدنى مسؤولية علينا

و لكم كل التحية و التقدير

Ali Hassan



P.O. Box: 78 Jeddah 21411- Tel.:0126454227 - Fax:0126454228  
P.O. Box: 15 Riyadh 11411 - Tel.:0112761900 - Fax:0112761966  
P.O. Box: 78 Khobar 31952 - Tel.:0138975922 - Fax:0138974337  
Kingdom of Saudi Arabia C.R. : 1010402836



ص.ب. ٧٨ جدة ٢١٤١١ - تليفون: ٠١٢٦٤٥٤٢٢٧ - فاكس: ٠١٢٦٤٥٤٢٢٨  
ص.ب. ١٥ الرياض ١١٤١١ - تليفون: ٠١١٢٧٦١٩٠٠ - فاكس: ٠١١٢٧٦١٩٦٦  
ص.ب. ٧٨ الخبر ٣١٩٥٢ - تليفون: ٠١٣٨٩٧٥٩٢٢ - فاكس: ٠١٣٨٩٧٤٣٣٧  
المملكة العربية السعودية - س.ت: ١٠١٠٤٠٢٨٣٦

File : Y24-1023  
Ref. : LTR-220424-1363-AQ  
Date : April 22, 2024

**TO WHOM SO EVER IT MAY CONCERN**

**Subject: Freo-Pipe Application confirmation**

Dear Sir,

We Johnson Controls Arabia hereby confirm the technical documents and certificates shared with us, which confirms the acceptance of Freo-pipe application for the R410a products as per TUV tested with European standards EN1736:2008 that it will stand the operating pressure and will not affect the air conditioner product reliability and performance during the product operation in Saudi Arabia T3 region market.

It is very clear that installation must carry out their work in accordance with the instructions contained in the YORK IOM as well as in compliance with the current SASO regulations.

This is for your information and record.

Thanks, and regards

**AL SALEM AIR CONDITIONING CO. LTD.**



**Date:** 29 March 2022  
**Ref:** SCA-BH-001/HS/45  
**To:** NAWADER AL OMRAN Co.  
**Subject:** Copper pipes for the Connection between indoor and outdoor  
**Project:** MENA TENTS PROJECT

الى من يهمله الامر

يرجى العلم بأنه حسب المواصفات الموضحة في الاسفل التي وصلتنا من قبلكم لمواسير Ferro-pipes و بعد فحص المواسير لدينا في مصنع الزامل فأتنا نؤكد بأن هذه المواسير بضغط التحمل الموضحة في مواصفاتها و اختبارات الضغط التي تم عملها في مصنعنا نؤكد بأن هذه المواسير مناسبة لاستخدامها مع مكيفات شركة الزامل, علما بأننا لا يمكننا التأكيد على ديمومة جودة هذه المواسير و على المورد لهذه المواسير تقديم ضمان يغطي كامل الفترة الزمنية المطلوبة لعمل هذه المواسير

### SOME TECHNICAL DATA

#### Field of use

F-GAS refrigeration circuits containing **R410A**  
Operating temperatures **-30°C / +110°C (max 130°C not continuous)**  
Maximum working pressure **60 bar (Design pressure 100 bar)**



ملاحظة: اقطار المواسير المطلوبة لمكيفات شركة الزامل هي على النحو التالي  
for MAZ18 : ¼" X 5/8" and for MAZ24 : 3/8"X5/8"

*We greatly appreciate your continued patronage and doing business with Zamil Air Conditioners.*

Very truly yours,



C.R. No. 4030130644



Member of Zamil Industrial Investment Co.

مصنع الزامل للمكيفات  
عضو شركة الزامل للاستثمار الصناعي

رقم العضوية ٧٦٢١١ - ص ب ١٣٠٦٤٤  
ص ب ٧٦٠٤ جدة ٢١٤٧٢ - المملكة العربية السعودية - هاتف: ٧٧٠٠٠٢٠ (٠٩) - فاكس: ٧٧١٤٥٦٦ (٠٩)  
خدمات العملاء الهاتف المجاني: ٨٠٠٠٣٠١٠٠٠ (داخل المملكة العربية السعودية فقط)  
P.O. Box 7504, Jeddah 21472, Saudi Arabia - Tel: (+966-2) 6700020, Fax: (+966-2) 6714566  
<http://www.zamilac.com> Customer Service Toll Free : 800-304 1000 (K.S.A. only)

Material Submittal form					
Submittal Ref:	ZAS-OEC-JF01-TSL-MEC-0006	Rev No:	00	Date:	26/07/2023
Program Title:	Developmental Housing Program Wave #6 (Contract No: 21000488)				
Project Title:	Developmental Housing Projects for Dowmat Al-Jandal				
The Employer:	National Housing Company (NHC)				
Third party:	DAR AL RIYADH				
Consultant:	Al-Omran Engineering Consultants				
Contractor:	Zahrat Al-Sahra for Trading and Contracting (ZAS)				

RECEIVED

26 JUL 2023

OMRAN  
Engineering Consultants  
مكتب عبدالله العمران  
للاستشارات الهندسية

**Guidance notes:**

The submission should only include materials which are compliant with the SOPR and CODE requirements and have been reviewed and coordinated between the Contractor and Designer (and Engineer if applicable) and should include any authorised variations/changes as instructed.

**Review Discipline**

Architectural <input type="checkbox"/>	Structural/Civil <input type="checkbox"/>	Mech/Plumb <input checked="" type="checkbox"/>	Elec. <input type="checkbox"/>	Others (specify) <input type="checkbox"/>
---	---	--	-----------------------------------	--

**Material Details**

**Notes:** DAR AL RIYADH review will recommend either Objection or No Objection to each item. Non-Objected shall be issued to the NHC with the recommendation to approve. Objected shall be returned to the Contractor with an Objection report. This sheet must be signed by any specialist sub-contractor applicable to the Material element Design/Production (e.g. Pre-cast panel manufacturer)

**Proposed by:**

The Contractor	The Consultant (Designer & The Engineer)	Specialist /Sub-Contractor
Sign/Stamp	Sign/Stamp	Sign/Stamp

**Material Information & Checklist**

**DAR AL RIYADH REVIEW**

Location /element Ref:	AC [Indoors & Outdoor]	Checklist of Attachments:	
Specified Material:	Nominal internal diameter [1/4 x 3/8 x 1/2 x 5/8 inch]	Drawing/Specification	<input checked="" type="checkbox"/>
Proposed Material:	FREO-PIPE [Flexible AA/C Pipe]	Product <u>Datasheet</u>	<input checked="" type="checkbox"/>
SOPR/CODE Ref(s):		Compliance Certificates/Documents	<input checked="" type="checkbox"/>
Manufacturer & Product code ref:	Supplier: EMAAR POLE Co.Ltd Manufacturer: TECHNOLOGIE INNOVATIVE ITALIA	Compliance Statement	<input checked="" type="checkbox"/>
Remarks/Notes:		Sample (available)	<input checked="" type="checkbox"/>

THE ENGINEER*	Review Date:	27-JUL-23	Rejected	Approved	Signed:	
	Print Name:	Naseem Alomran	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

DAR AL RIYADH	Recommendations to NHC Date:	03:08:2023	Objection	No Objection	Signed:	
	Print Name:	zahir hussain	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

NHC	Review Date:	07.08.23	Objection	No Objection	Signed:	
	Print Name:	Sahul hameed	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

A.K.S

Dar review comments: 1. No objection for the brand.3. Sizing of the Refrigerant pipe based on approved cooling capacity.3. Follow the Manufacturer's Installation method and carry out leak test.

مكتب د.م. احمد فريد مصطفى

مشروع الإسكان التنموي بمدينة صيба - جازان



المقاول العام  
شركة اصول البناء

المطور  
شركة مبانى الصفاة المحدودة  
طلب اعتماد مواد / مورد

الاستشاري  
مكتب د.م. / احمد فريد مصطفى

31/10/2023

تاريخ التقديم

OSOUL/RV.01

رقم التقديم

ميكانيك

نوع التقديم

104

اعتماد مواد

مواسير فريون للتكييف -5/8- -3/8- -1/4- 1/2 FREO PIPE

موضوع التقديم

مسلسل	اسم الشركة	تصنيف المصنع في مجاله	العمل في المشاريع المثيلة
1	شركة قطب الاعمار للمقاولات (EMAAR POLE CO)		نعم <input checked="" type="checkbox"/> لا <input type="checkbox"/>
	هاتف: فاكس:		المرفقات: بروفائل
2			نعم <input type="checkbox"/> لا <input type="checkbox"/>
	هاتف: فاكس:		المرفقات:
3			نعم <input type="checkbox"/> لا <input type="checkbox"/>
	هاتف: فاكس:		المرفقات:
4			نعم <input type="checkbox"/> لا <input type="checkbox"/>
	هاتف: فاكس:		المرفقات:

توقيع وختم المقاول الرئيسي

بهذا نقر بان المصنع المقدم متخصص في الاعمال المطلوب إسنادها إليه وسوف يقوم بتنفيذها طبقاً للمواصفات والمخططات والعينات المعتمدة والأصول الفنية المطلوبة لمثل هذه الاعمال وتحت إشرافنا الكامل ونتحمل كامل المسئولية المترتبة على الاعمال

المهندس المختص	مدير المشروع	الختم
التوقيع	التوقيع	
التاريخ	التاريخ	
	31/10/2023	

ملاحظات وتوصيات الاستشاري

التوصية بالموافقة A  التوصية بالموافقة مع ملاحظات B  التوصية بالرفض مع إعادة التقديم C

لا مانع من اعادة دبراسير فريون لتكييف ماركة Frio pipe مع الالتزام بالاساس  
 - الالتزام بمواد اللمبة و دبراسير C لفنيكم متطلبات وزارة الاسكان  
 - تقديم شهادة بناء وشهادة SASO وشهادة SABER  
 - تقديم شهادة لاصحاب ائتمان التوزيع ولا تقل عن عشرة ارباب  
 - توفير دبراسير دالة لسواراج وكذلك اعداد دبراسير

المهندس المختص	مدير المشروع	الختم
التوقيع	التوقيع	
التاريخ	التاريخ	

ملاحظات وتوصيات المطور

موافق  موافق مع ملاحظات  مفروض

لا مانع من اعتماد المواصفات الفريون ووفق ملاحظات  
 وتحت إشرافنا الكامل

مدير المشروع المشرف	مدير مشاريع المنطقة الجنوبية	الختم
المهندس / احمد العباسي	مهندس / هاني بكار	
التوقيع	التوقيع	
التاريخ	التاريخ	
	2023/10/31	

Mall of Saudi مول السعودية

MATERIAL SUBMITTAL

Work Package: Early Works

Material Ref. No. KSA101001-MBL-EAW-MSO-ME-MTS-000047[0]

Date: 25-Oct-22

Revision: 0

FROM : MBL

TO : AECOM

Attachments :

- Samples  
 Catalogues & Product Data  
 Specification Comparison Sheet  
 Others ( state )

Discipline :

- Civil  
 Architectural  
 Mechanical  
 Electrical  
 LEED  
 Other (state) \_\_\_\_\_

Approval Required By Date :

Introduction Letter, Company Profile, Government Certificates, Product Profile, Product Technical Data Sheet, Origin certificates, Warranty Letter, Installation Manual & Previous Approval

Attach all relevant literature marked by "clouding": to identify relevant description, current test certificates, samples as appropriate.

Material Description : FREO-Pipe Flexible A/C Pipe

- Product - FREO-PIPE® Tube With UV-PRO Insulation Ø 1/4" L.4 M To 16 M
- Product - FREO-PIPE® Tube With UV-PRO Insulation Ø 3/8" L.4 M To 16 M
- Product - FREO-PIPE® Tube With UV-PRO Insulation Ø 1/2" L.4 M To 16 M
- Product - FREO-PIPE® Tube With UV-PRO Insulation Ø 5/8" L.4 M To 16 M

Location / Area : Main Site Office

Drawing Ref. :

Specification Ref.:

Manufacturer / Supplier :

Company Name : M/s. EMAAR COMPANY  
 Country of Origin : KSA  
 Local Agent : M/s. NA

Delivery :

Long Lead Item (YES / NO) NO

Production Period :

Total Delivery Time :

Expected Date of Delivery on Site :

Time Required at Site:

Technical Dept.

QA/QC Manager

  
 Eng. M. Abdul Aziz

Project Manager

  
 Eng. Ibrahim Matroud

In accordance with the terms and conditions of the Contract, any comments on this submittal do not constitute a variation. Should you consider that the comments or this submittal constitute a variation, you shall notify the Contract Administrator within two (2) days of receipt.

Consultant's Comment: 1. Proposed Freo Ac pipe is conditional approval only for ground floor and if there is probability for route from Ground to Roof floor by passing the beams.  
 2. Provide sample for final approval.

NAME : Mohamed Khaja

SIGNATURE :

DATE : 5/11/2022

FOR CONSULTANT USE ONLY

- (A) Approved  
 (B) Approved with Comments  
 (C) Revise & Resubmit  
 (D) Rejected

Required:

- Samples  
 Test Certificate  
 Original Brochure  
 Manufacturer's Guarantee  
 Compliance Statement  
 Copy of Specifications  
 Test Results  
 Others (specify)

FOR CLIENT REPRESENTATIVE USE ONLY (If Applicable)

- (A) Approved  
 (B) Approved with Comments  
 (C) Revise & Resubmit  
 (D) Rejected

DISTRIBUTION :

Original :  CONTRACTOR  
 Copies :  MAF  T&T  AECOM

98	Duct Accessories	ABRO, KIMMCO MUELLER DUCTFIX ETC	
99	Water supply Pipe Insulation	AFICO	
100	Water supply Pipe Insulation	KIMCO	
101	Mechanical	BETA Industrial	
102	Mechanical	National Marketing Est. Co. Ltd.	
103	Mechanical	XYLEM	Goulds Water Technology
104	Mechanical	NIDEC MOTOR CORPORATION	
105	HVAC PIPE	قطب الاعمار للتجارة	بدیل النحاس للمكيفات FREO-PIPE






Engineer's comments

ملاحظات المهندس

لا مانع من اعتماد نظام تصديرات نماز الفريون من نوع  
FERO pipe لوجبات التكيف  
\* التكمية السليم والتفصيل والافتبار مسؤول المقار  
\* يلزم تقديم شهادات الضمان والمنشآت

Status code رمز الحالة	<input checked="" type="checkbox"/> Approved مع الموافقة <input type="checkbox"/> Rejected مرفوض	<input checked="" type="checkbox"/> Approved as noted revise and resubmit for record موافقة مع الملاحظات، تعديل وإعادة <input type="checkbox"/> Revise and resubmit تعديل وإعادة التقديم
Engineer's name اسم المهندس	م. د. محمد / م. د. محمد Date 23/04/2024 للتقديم للتسجيل على مشاريع التأهيل والتنظيم منطقة الرياض س. ت 1010768935 للإستشارات الهندسية	
Signature التوقيع		

Note:

ملاحظة

These documents have been reviewed for general conformity with Contract terms & conditions, the specifications and bill of quantities. Such review doesn't relieve the Contractor of his responsibilities under the terms of the Contract and shall not be deemed as approval for any further compensation or permission to carry out additional works.

تمت مراجعة هذه الوثائق للتأكد من مطابقتها لأحكام وشروط ومواصفات وجداول كميات العقد. ولا تعفي هذه المراجعة المقاول من مسؤولياته العامة التعاقدية ولا تعتبر موافقة على أي تعويضات أو تصريح بالقيام بأعمال إضافية.



S5-PRS-01-P01-F12  
Material Submittal Form  
نموذج تقديم مواد

Program البرنامج	إنشاء 4 مدارس ضمن المشاريع الممسوخ عقودها بالرياض	Package / Group الدفعة / المجموعة	المجموعة الأولى والثانية
Project no. رقم المشروع	TBC - C&O-368	Project name اسم المشروع	- حتى طيبة 20-5 متوسطة بنين
Contractor name اسم المقاول	شركة أهراس للمقاولات	Material submittal no. رقم تقديم المواد	ME-57
Contract no. رقم العقد	822	Date التاريخ	21- 9-2022
Consultant name اسم الاستشاري	مكتب الرأي للاستشارات الهندسية	Approved Subcontractor (as applicable) مقاول الباطن المعتمد (إنما لزم)	
Material Description One item only per Form (system) وصف المواد بند واحد فقط لكل نموذج (نظام)	FREO - PIPES الاسبليت فقط اما باقي الاحجام الكبيرة مواسير نحاس مولر	As per specification حسب المواصفة	
Drawing reference مرجع المخططات		BOQ reference no. الرقم المرجعي بجدول الكميات	باب 15 - نظام الميكة 15420
Specification reference مرجع المواصفة	باب 15 - أعمال الميكانيكا	Standards, BS DIN, ASTM, SASO المقاييس ، BS ، DIN, ASTM, SASO	

Manufacturer/Supplier

المصنع / المورد

Company name اسم الشركة	FREO PIPE	manufacturer المصنع	FREO PIPE
Address العنوان	ص.ب : 15365 - الرياض - 54154	Other details تفاصيل أخرى	هاتف : 01254698
Local agent الوكيل المحلي		Expected date of arrival on site التاريخ المتوقع للموصول إلى الموقع	
Programme date material required on site تاريخ احتياج المواد بالموقع حسب البرنامج		Date التاريخ	
Contractor's name اسم المقاول	شركة أهراس للمقاولات		
Signature التوقيع	عاصم بن مشاريح وزارة التنظيم ص.ب 1010070444		



Engineer's comments

ملاحظات المهندس

للماتع من اعتماد نظام تمهيد غاز الفريون من نوع (Free Pipe) وذلك لوحدة التكييف من النوع المنفصل (Split) بالمهارة المتوسطة يتنا مع المتابعة الدقيقة أثناء التنفيذ وتأمين الملاحظات والشاكا التي قد تحدث أثناء التركيب والمتابعة له بشكل جيد التنفيذ بعناية مهرة ومدارية وطبقاً للوائح

Status code رمز الحالة	<input type="checkbox"/> Approved الموافقة	<input checked="" type="checkbox"/> Approved as noted revise موافقة حسب الملاحظات	<input type="checkbox"/> Revise and resubmit تعديل وإعادة التقديم
Engineer's name اسم المهندس	م/ حسين عبد الهادي		Date التاريخ
Signature التوقيع			

Note:

ملاحظة

These documents have been reviewed for general conformity with Contract terms & conditions, the specifications and bill of quantities. Such review doesn't relieve the Contractor of his responsibilities under the terms of the Contract and shall not be deemed as approval for any further compensation or permission to carry out additional works.

تمت مراجعة هذه الوثائق للتأكد من مطابقتها لأحكام وشروط ومواصفات وجدول كميات العقد. ولا تعفي هذه المراجعة المقاول من مسؤولياته العامة التعاقدية ولا تعتبر موافقة على أي تعويضات أو تصريح بالقيام بأعمال إضافية.

وأصول العتالة وترصيات جهازه شاق ومهلباً وإرشادات التركيب من الشركة المصنعة (الموردة) وكل ما من شأنه إتمام العمل على الوجه المطلوب

عبد الوهاب  
21104  
2022

Section	S/N	Item	Description	Manufacturer
	1	Air Conditioning Units	As per BOQ description	Daikin
				Trane
	2	Fans	As per BOQ description	Zamil AC
				York
	3	G.I. METAL SHEET FOR DUCTING	GALVANIZED STEEL SPECIFICATION ASTM 653-G90 LOCK FORMING QUALITY	Carrier
				SKM
	6	CHILLED WATER PUMP		LG
				Craft
	7	Refrigerant line		Green Heck
				InfinAir
8	REFRIGERANT LINE INSULATION		PENN	
			Dyn air	
9	REFRIGERANT LINE INSULATION- CLADDING		Loren Cook	
			SABIC	
10	DUCT INSULATION	FIBER GLASS BOARD FOR INDOOR & OUTDOOR	SAFID	
			SAUDI DUCT FACTORY	
				ATAI
				KBE
				GRUNDFOS-DENMARK
				SPP - UK
				ARMSTRONG- USA
				Mueller
				Freo Pipe-Flexible
				NIBCO
				AERMAFLEX
				AERFOAM
				NIPPON STEEL PIPE & TUBE
				SAUDI IRON& STEEL COMPANY
				AFICO

المحترمين

السادة شركة قطب الاعمار للمقاولات

السلام عليكم ورحمة الله وبركاته

اشارة الى الكتلوجات المقدمة من قبلكم لاعتماد منتج مواسير ( FRP-PIPE ) والمصممة لاعمال تركيب  
الكيفيات ضمن المنتجات المعتمدة لدي مشاريع (الانشائية والتطويرية ) ادارة المشاريع بصحة منطقة تبوك .  
وبالاطلاع من قبل المهندسين المختصين لدينا .على الكتالوجات الفنية والاختبارات العملية على المنتج بالاضافة الى  
الشهادات المعتمدة من قبل المختبرات العالمية بمطابقة المنتج للمواصفات السعودية ،  
عليه نفيديكم بانه لا مانع لدينا من ضم اعتماد المنتج مواسير ( FRP-PIPE ) لمشاريع صحة منطقة تبوك  
لمطابقته للمواصفات .

خالص تحياتي وتقديري ،،

2,4

مدير ادارة المشاريع بصحة تبوك

م / محمد بن سعود الشريف



داخلي: 612-44-000675  
التاريخ: 44/01/24  
المرفقات: (0)





## تأهيل منتج

اسم المشروع: منازل الورد

المورد / الريادة المتطورة للتجاره سجل تجاري رقم 1010495497

المنتج / مواسير التكييف المرنة الإيطالية ما ركه (FREO-PIPE)

مواصفات المنتج /

- 1- operating tempting temperature -30 / +110 c (max) ،  
maximum pressure 60 bar and tested @78 bar .
- 2- Anti- UV polyethylene protective gry coating .
- 3- Coating (fire resistance as per UL 94:2001)
- 4-size available 1/4 ,1/2,3/8,5/8

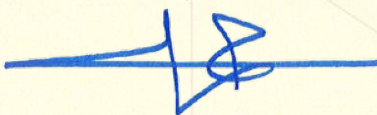
الشهادات /

- 1- شهاده سابر المطابق للمواصفات والمقاييس السعوديه تحت رقم (IT-22-0070901)
- 2- TUV Austria tested and certificated product.
- 3- Coating (fire resistance as per UL 94:2001)
- 4- اعتماد شركه الزامل باستخدام المنتج

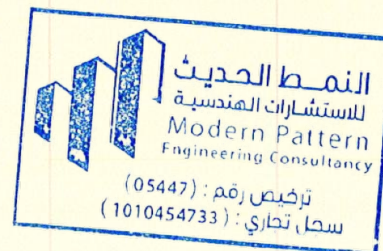
التوصيات /





نوصي باعتماد المنتج حسب المواصفات والشهادات أعلاه مع تقديم ضمان لمدته عشر سنوات من تاريخ استلام المشروع.

مكتب النمط الحديث للاستشارات الهندسية



المهندس / خميس حسن الزهراني



 <b>مكتب م. صلاح الزغبي للاستشارات الهندسية</b> <b>Eng. Salah Al Zughaihy Office</b> <b>for Engineering Consultancy</b> License # 1293 B.O.Box 7519, Jedd 21472, Fax: 0717737 Tel: 0715802		 <b>شركة الميكان للاستثمار العقاري</b> <b>Alobaik Real Estate Investment Co</b>		 <b>لصيف الفجر</b> <b>LASEEF AL FAJER</b>		
Project Name		ALOBAIKAN HILLS 2				
Developer/ Client		ALOBAIKAN REALESTATE INVESTMENT CO.				
Consultant		Eng.Salah Alzughaihy Office For Engineering Consultant				
Contractor		LASIEF AL-FAJER COMPANY				
<b>Material Submittal</b>		Date		15-10-2022		
		Submittal no.		1		
		Revision no.				
<b>Type of Material:</b>			<b>Reference in Contract Documents:</b>			
Structural / Civil	<input type="checkbox"/>	Landscape Works	<input type="checkbox"/>	BOQ	<input type="checkbox"/>	
Architectural	<input type="checkbox"/>	Interior Design	<input type="checkbox"/>	Specifications	<input type="checkbox"/>	
Electrical	<input type="checkbox"/>	Others	<input type="checkbox"/>	Drawings	<input type="checkbox"/>	
Mechanical	<input checked="" type="checkbox"/>			Others	<input type="checkbox"/>	
Origin Country:			Supplier Name:		SFSP	
Factory Name:			Brand name			
Attachments:		Catalogs	<input type="checkbox"/>	Samples	<input type="checkbox"/>	
		Model (Mock Up)	<input type="checkbox"/>	Others	<input type="checkbox"/>	
Item No.	Specified Material			Material Description		
1	FREO-PIPE حواسن فريو للبناء					
Submitted by Contractor Engineer		Contractor Project Manager		Received by Consultant		
Name:	ENG/MAHER					
Title:						
Signature:						
Date:	15-10-2022					
<b>For Consultant Use Only:</b>						
Approval Code:	Approved (A)	<input type="checkbox"/>	Approved with Notes (B)	<input checked="" type="checkbox"/>	Revise & Resubmit (C)	<input type="checkbox"/>
Rejected (D) <input type="checkbox"/>						
<b>Consultant Notes:</b>						
<p>1- تم اعتماد المنتج مع تقديم المورد شهادة الفحص لمدة 12 شهرا للمشروع.</p> <p>2- تم استخدام الأنظار المناسبة لفحص المنتج وعدم استخدام التقاطعات.</p> <p>3- تم استخدام العزل وحلته واحدة من الوحدة الداخلية إلى الوحدة الخارجية.</p> <p>4- تم (فحص المنتج) بعمل وإصلاح في المورد.</p> <p>5- الالتزام بأقل نصف قطر للف العزل كما هو مذكور في كذا الوحد المعنى.</p> <p>6- يلزم المقاول بإجراءات التركيب المملوورة من قبل المصنوع.</p>						
Resident Consultant Engineer			Received by Contractor			
Name:						
Title:						
Signature:						
Date:						

## شهادة إنجاز عمل

السلام عليكم ورحمة الله وبركاته،،

يشهد مكتب إفريز للاستشارات الهندسية بأن مؤسسة الريادة المتطورة للتجارة ذات سجل تجاري رقم ( 1010495497 ) قاموا بتوريد وتركيب المواسير المرنة للمكيفات ماركة (FREO-PIPE) صناعه إيطالية وحسب اعتماد مصانع التكييف العالمية للمنتج والمواصفات التالية :

- 1- SABER CERTIFICATE NO# (IT-22-0070901)
- 2- TUV Austria tested and certificated product.
- 3- operating tempting temperature -30 / +110 c (max) , maximum pressure 60 bar and tested @78 bar .
- 4- Anti- UV polyethylene protective gry coating .
- 5- Coating (fire resistance as per UL 94:2001)

وحيث تم استخدام المنتج في المشاريع التي يشرف عليها مكتبنا وهي :

1- سكن الأطباء بمستشفى الحياة الوطني بجازان

2- توسعة المبنى الاداري لشركة الانماء بالقصيم

3- سكن التمريض بمستشفى آية بجدة

4- عمارة سكنية 11 شقة بالرياض

وقد اعطى هذه الشهادة بناء على طلبه دون ادنى مسؤوليه

مع اطيب تحياتي

المدير العام



المهندس / عبد الله بن محمد السواط

