

PEXALGAS



**The widest range
for the distribution
of combustible gas**



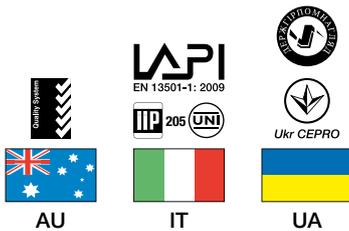
MADE IN ITALY

valsir[®]
QUALITY FOR PLUMBING

PEXALGAS

The widest range
for the distribution
of combustible gas

Pexal Gas® is the result of the years of experience gained by Valsir in the production of multilayer systems for combustible gas in residential buildings: the international certifications obtained over recent years for **Pexal Gas® in Italy, Australia, New Zealand and Ukraine** are proof of the reliability and quality of the system.



Valsir supplies **the widest range of diameters on the market, from 16 to 75 mm**, available both in straight lengths and in coils, pre-fitted with a **protective corrugated covering, flame retardant and anti UV** in class 320 in compliance with European Standard EN 61386.

MADE IN ITALY



WATER CLASS B - UV RES

WALSIR 2/100 -

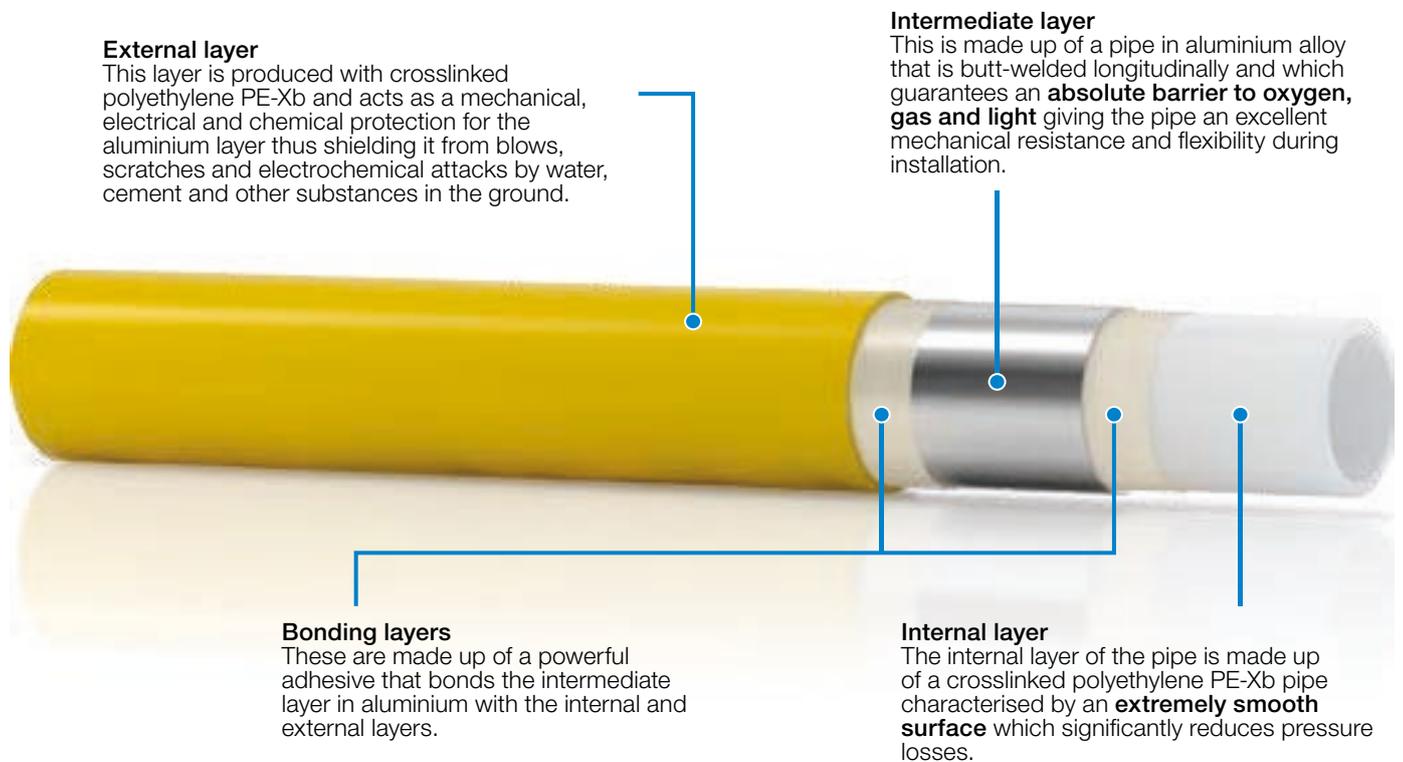
WALSIR 2/100 -

WALSIR 2/100 -

ONE PRODUCT OFFERS THE ADVANTAGES OF SYNTHETIC MATERIALS AND OF METAL

The Pexal Gas® multilayer system combines the positive features that are typical of crosslinked polyethylene PE-Xb and also those of aluminium; **crosslinked polyethylene PE-Xb guarantees excellent mechanical, physical and chemical**

properties and the butt-welded aluminium pipe strengthens mechanical resistance introducing excellent characteristics of flexibility and malleability, fundamental features for accelerating and simplifying installation operations.



External layer

This layer is produced with crosslinked polyethylene PE-Xb and acts as a mechanical, electrical and chemical protection for the aluminium layer thus shielding it from blows, scratches and electrochemical attacks by water, cement and other substances in the ground.

Intermediate layer

This is made up of a pipe in aluminium alloy that is butt-welded longitudinally and which guarantees an **absolute barrier to oxygen, gas and light** giving the pipe an excellent mechanical resistance and flexibility during installation.

Bonding layers

These are made up of a powerful adhesive that bonds the intermediate layer in aluminium with the internal and external layers.

Internal layer

The internal layer of the pipe is made up of a crosslinked polyethylene PE-Xb pipe characterised by an **extremely smooth surface** which significantly reduces pressure losses.

The end result is a product that is composed of different layers of material, connected to each other, that allows **excellent properties to be reached that otherwise would not be possible with a pipe made of one single material.**

The Pexal Gas® system is manufactured in compliance with European Standard EN ISO 21003 and the international standards for the production of gas multilayer systems (UNI TS 11344, AS4176.8). Its reliability and quality are guaranteed by the most strict approval bodies that control and verify performance with meticulous frequency within the production plants.

THE ADVANTAGES OF THE MULTILAYER SYSTEM



The **total resistance to corrosion, to construction materials and to the principal chemical compounds** allows it to be used in the most varied applications.



The system has a **service life of at least 50 years** that is **guaranteed** by product standards.



The extreme smoothness of the internal surface ensures reduced pressure losses.



The elasticity of the crosslinked polyethylene means vibrations are absorbed which therefore guarantees **excellent sound absorption.**



Connection between the crosslinked polyethylene and aluminium guarantees **excellent flexibility during bending** (also manual) and **structure permanence in the long term.**



The **range of fittings, accessories and relative tools is particularly wide** and allows all requirements to be satisfied.

Aluminium

There are different methods for the production of multilayer pipes and they differ mainly in the technology used in forming the aluminium pipe. It can be formed by overlapping, overlapping and welding, or by butt connection and welding.

The latter is the technology chosen by Valsir in that it guarantees a uniform thickness across the entire circumference, greater resistance to pressure and bending, uniform mechanical characteristics, greater adhesion values with the bonding layers and a total barrier to oxygen.





The layer of butt-welded aluminium acts as an **absolute barrier to the passage of oxygen, gas and light.**



It is also the **ideal solution in areas subject to earthquakes** thanks to the excellent mechanical properties such as flexibility and capacity to dampen vibrations.



Thermal expansion is about 8 times lower than that of plastic pipes and is **similar to that of metal pipes.**



Wide range of pipes **from De 16 mm to De 75 mm.**



The **pipes are extremely light** as compared with metal pipes, the weight is 1/3 in comparison with the weight of a copper pipe and is 1/10 of the weight of a steel pipe.



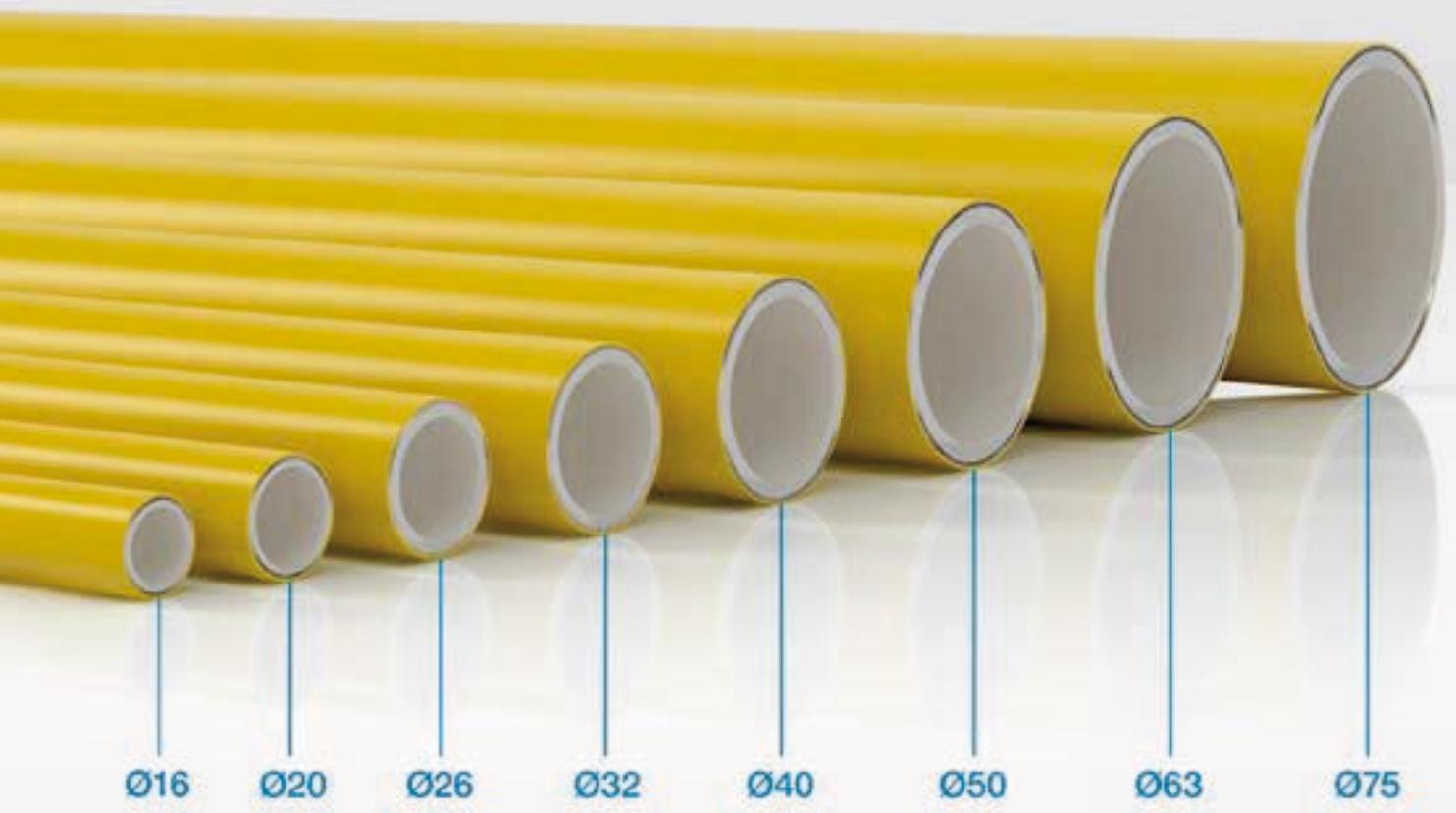
The Valsir Pexal Gas® system is produced with materials that are completely recyclable which can be recovered at the end of their service life. The production processes employed are energy efficient and of reduced impact. Valsir has adopted the Green Building principles in terms of environmental protection and conservation of resources.



Crosslinked polyethylene

The crosslinking process can be performed using different technologies, recognised by International standards and identified as follows: A (peroxides), B (silanes), C (radiation), D (azo-compounds); the method used is indicated together with the abbreviation for the material, thus obtaining PE-Xa, PE-Xb, PE-Xc, PE-Xd.

There is much conflicting information in the market as to which is the best technology; however, it is not the type of crosslinking process that determines the quality of the pipe but the capacity to produce it in compliance with all the relevant quality standards which are applied to all four of the abovementioned crosslinking methods.



Ø16

Ø20

Ø26

Ø32

Ø40

Ø50

Ø63

Ø75

THE WIDEST RANGE ON THE MARKET

The range is composed of pipes in straight 5 m lengths in diameters from 16 to 75 mm, in 100 m coils up to diameter 32 mm and in 50 m coils with a corrugated covering that is flame retardant and anti UV as far as diameter 26 mm.

The system is made complete with a wide range of “multipress” fittings (U, C, TH, H, F, VAL) and a series of useful accessories for the creation of systems such as **derivation manifolds**, **interception valves**, in-wall and for meters and **boxes for housing fittings**.



The solution for terminal connections

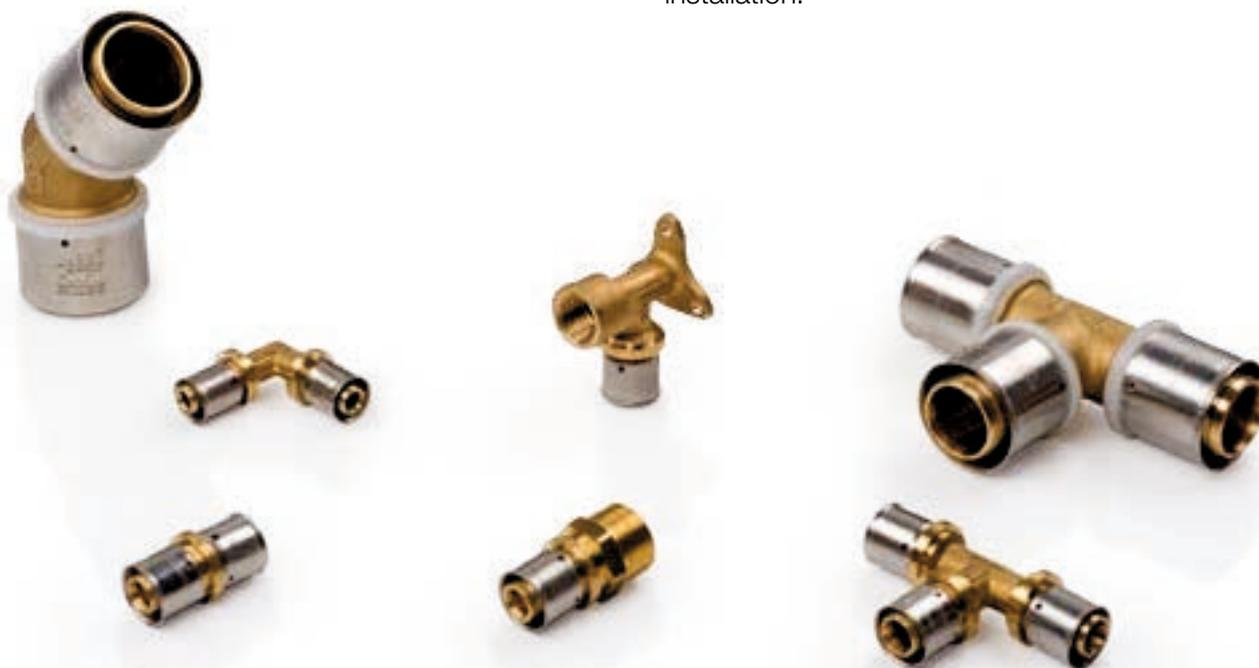
To install flanged fittings for connection to appliances, Valsir has designed an innovative and compact fittings box that allows the connection of flanged fittings of the Valsir Pexal Gas® range to pipe diameters 16, 20, 26 mm with corrugated covering.

The Pexal Gas® fittings box blocks the corrugated covering, protects that pipe and fitting and guarantees an **accessible connection** as required by installation standards.

EASY AND SAFE CONNECTION

Connections of the Valsir Pexal Gas® system are performed easily and safely with a few simple operations.

The Pexal Gas® fittings are differentiated from the fittings for transporting water in that they carry the inscription “Gas” on the sleeve and the o-rings are yellow in colour, specifically for this type of installation.



Multipress

The Valsir press fittings in brass are called “multipress” in that they adapt to the different pressing profiles that are most widely used on the market.

This prerogative represents an exceptional advantage: plumbers can use the revolutionary multipress Pexal Gas® fittings produced by Valsir regardless of the type of equipment in their possession.



Pressing profile B



Pressing profile F



Pressing profile H, U

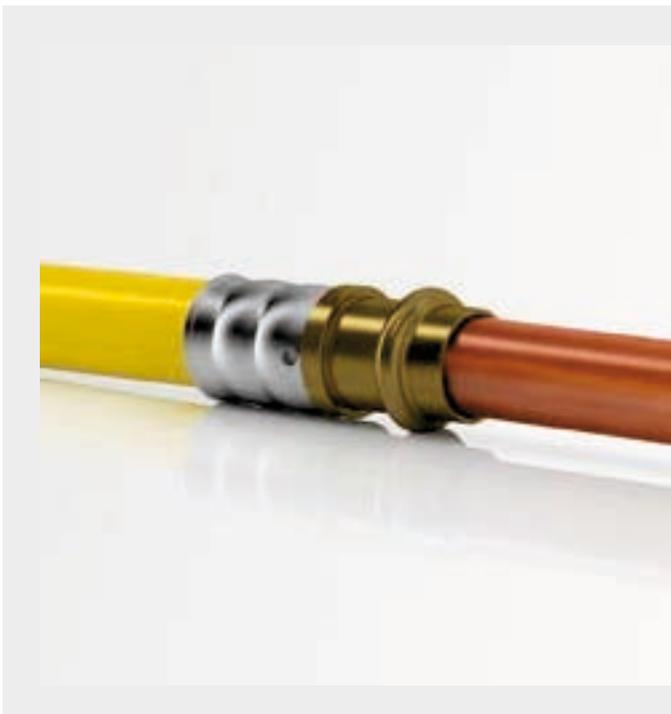


Pressing profile TH

The Pexal Gas® fittings **guarantee immediate leakage in the event of incorrect pressing;** therefore, in the event of poor pressing, the error can be immediately identified, guaranteeing an easy and safe installation.

The stainless steel sleeves have four holes on the end that allow the plumber to verify that the pipe has been fully inserted.

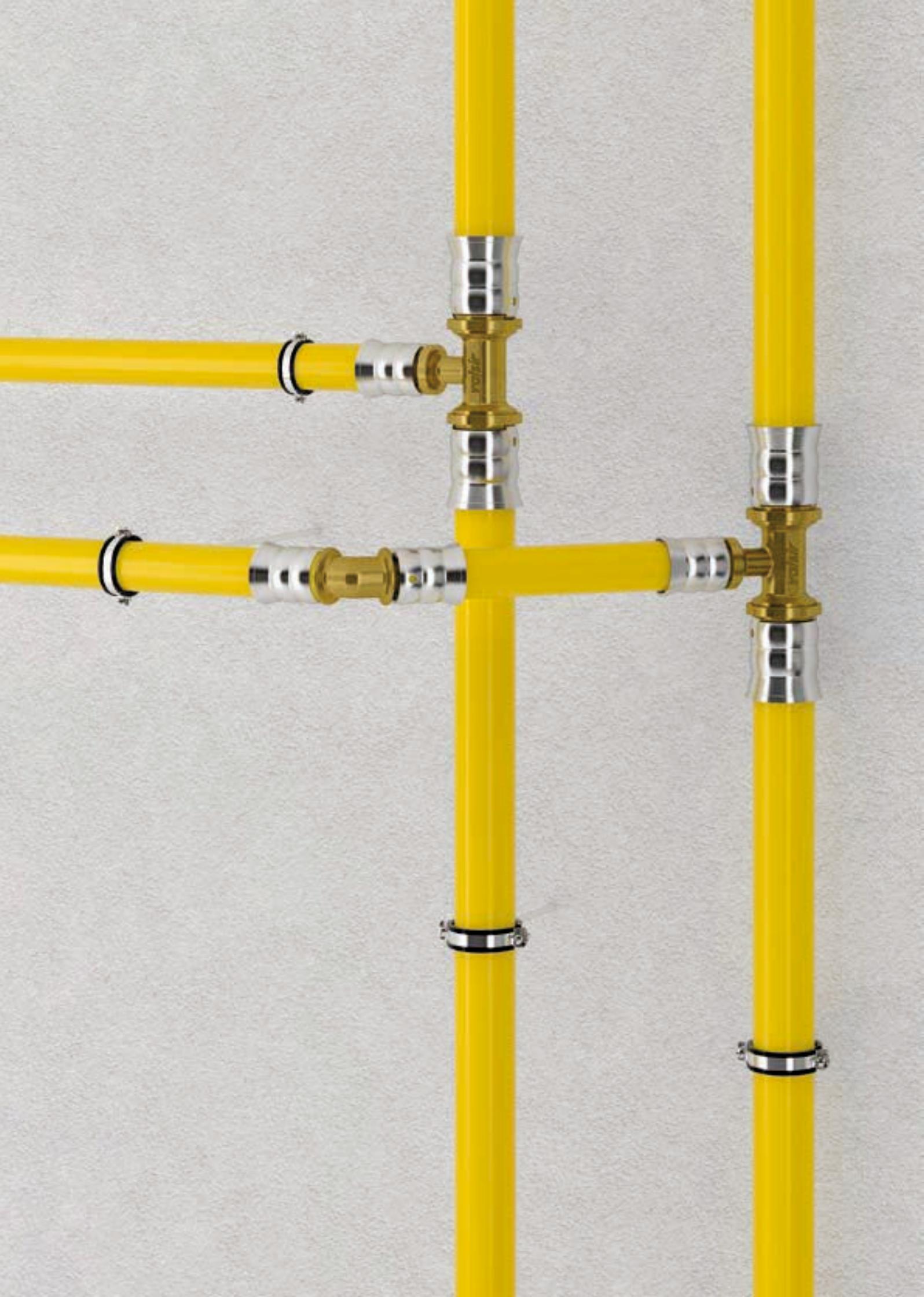
A special seal in teflon on the end of the fitting prevents contact between the brass and aluminium of the pipe, thus avoiding galvanic corrosion.



Compatibility with other systems

Pexal Gas® ensures total compatibility with other piping systems.

The special transition fittings and accessories allow existing copper fittings to be connected to Valsir multilayer pipes with extreme ease.



TOOLS

Reliability, long service life and high quality are the main characteristics that differentiate the Valsir tools used in the installation of the Pexal Gas® system; these products were designed to the suggestions of our most trusted plumbers and are produced using high quality materials.

Pressing machines, socketing machines, pipe cutters, multi-diameter expanders, bending tools for bending the pipes by hand or mechanically are just some of the tools that make up and complete the entire product line.



Bending diameter 20 mm



Bending diameter 75 mm

THE INTERNATIONAL REGULATORY FRAMEWORK

The international standard ISO 17484 specifies the requirements and performance of multilayer piping systems; systems to be understood as pipes and fittings, destined for the transport of combustible gas, natural gas and LPG inside the building.

As specified, multilayer piping systems can be used at temperatures that vary between -20°C to $+60^{\circ}\text{C}$ with a maximum operating pressure as high as 500 kPa (5 bar). Nevertheless, local technical standards or specific national regulations that are issued in single countries and which generally introduce further limitations on construction characteristics and on the limits of use of the system must always be analysed.

The aim of these national regulations is also that of defining the rules regarding the installation of multilayer pipes, it is in fact fundamental that these are in compliance with the particular construction techniques adopted for the buildings, with the climatic conditions of the location and with the distribution methods of the combustible gas adopted in that country.

These are the main reasons why it is not possible to create a universal Standard that complies with the different methods that each country has adopted and developed over the years.

We therefore recommend verifying the existence of national regulations or laws that not only allow the use of multilayer systems for the distribution of combustible gas inside the building, but that also define the rules on installation and use.



REFERENCE



Chaffers dock - Wellington (New Zealand)



Torri Camuzzi - Pescara (Italy)



I Navigli - Padova (Italy)



TECHNICAL SERVICE AND ASSISTANCE

Valsir can provide complete assistance during the planning phase and on the building site, thanks to a top notch technical office made up a highly experienced team of engineers that is capable of satisfying all system requirements.

Valsir also has an important training centre - **Valsir Academy** - for its clients, distributors, plumbers and planners where theoretical and practical courses are held in its perfectly equipped training halls on the use and design of plumbing and heating systems also using the Silvestro software program which was specifically developed by Valsir.

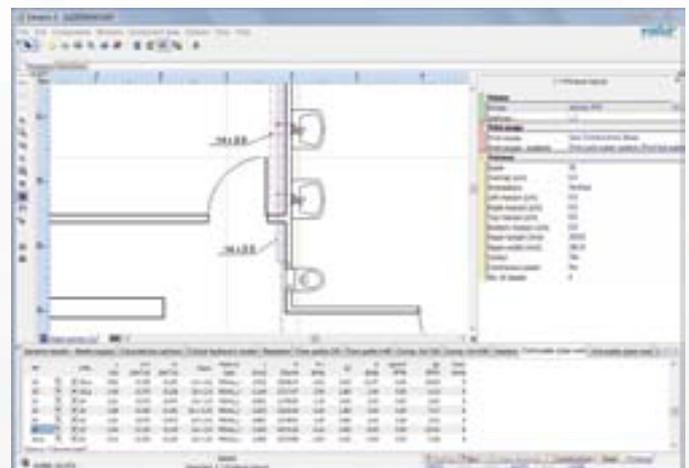
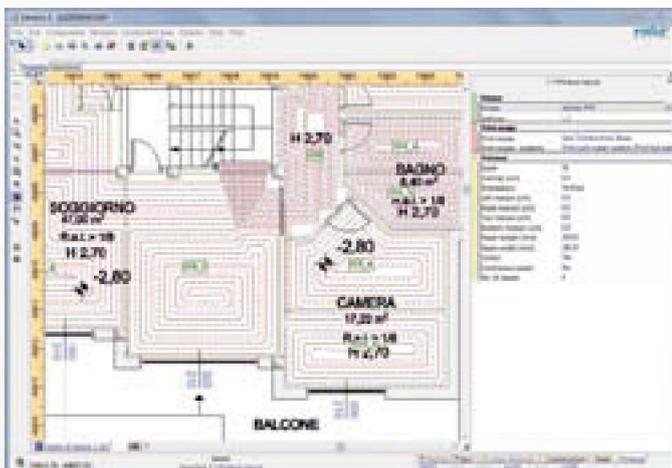


SILVESTRO SOFTWARE

Silvestro makes the design of floor and radiator heating systems, water supply and waste systems extremely easy. And production of all the technical documents for the project is extremely rapid.

Rapid, simple, unique, Silvestro has numerous strong points:

- quick learning curve thanks to a simple and intuitive interface;
- completely graphical facilitating insertion of project data;
- automatic design of loops in floor radiant systems;
- automatic repositioning of stack points on plan views;
- generation of calculation reports that can be exported in .xls format;
- import and export of files in .dwg format;
- immediate updating of software using guided procedures;
- creation of complete bill of materials starting with the project file.



QUALITY AND ENVIRONMENT



Efficient processes and reliable products are no longer the only parameters used to evaluate corporate conduct: today, in fact, the capacity of the company and its management to **design and implement sustainable production processes is of equal importance.**

Valsir has always been committed to the production of **recyclable products** and the implementation of **sustainable processes**, in line with the most advanced **Green Building** principles (green building and environmentally friendly design), and today boasts highly sustainable production plants which, thanks to the use of renewable energy and a design aimed at the conservation of resources, it has obtained a **Class A energy efficiency rating.**

The on-going commitment of Valsir is also demonstrated by the number of its **product approvals which exceeds 150**, obtained around the world from the strictest certification bodies (figure updated on 30/10/2013), and by **its certified quality system** in compliance with **UNI EN ISO 9001:2008.**



Production processes and management systems constantly verified, monitored and certified.



Sustainable production plants and processes, the use of renewable energy, sustainability of resources.



Products that are verified, monitored and certified by accredited certification bodies.



Recyclable products and production processes with a low environmental impact.

THE VALSIR RANGE



WASTE SYSTEMS



SUPPLY SYSTEMS



GAS SYSTEMS



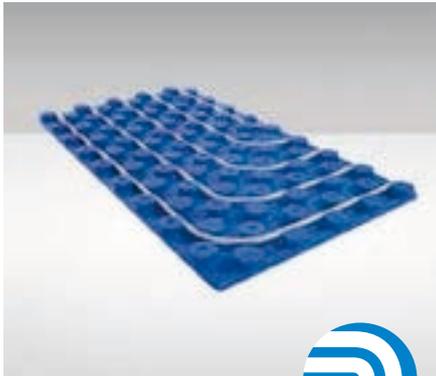
FLUSHING SYSTEMS



BATHROOM SYSTEMS



TRAPS



RADIANT SYSTEMS



DRAINAGE SYSTEMS



ACADEMY



VALSIR S.p.A.
 Località Merlaro, 2
 25078 Vestone (BS) - Italy
 Tel. +39 0365 877.011
 Fax +39 0365 81.268
 e-mail: valsir@valsir.it

www.valsir.it

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