

MULTILAYER SYSTEM

**Multilayer systems for water
supply, heating, cooling,
refrigerating and industrial
applications**

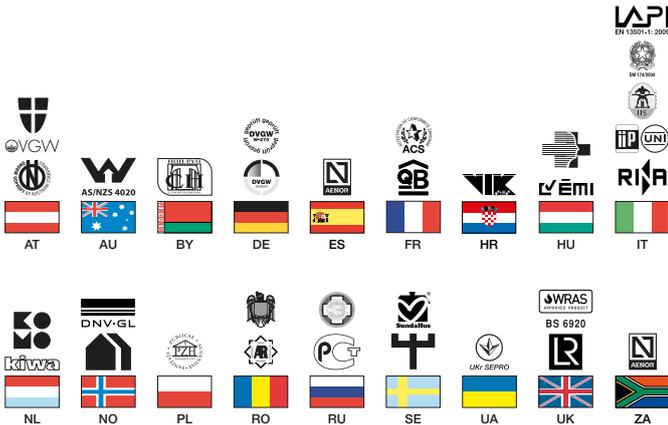
MADE IN ITALY



valsir[®]
QUALITY FOR PLUMBING

A system of excellence

Pexal® is a system composed of multilayer pipes and different fitting types that fully meet the requirements of every installation techniques and applications: from the distribution of hot and cold drinking water to centralized water supply systems, from radiator and fan heating systems to radiant floor, wall and ceiling heating and cooling systems, from compressed air systems to industrial plants.



An important trait of Pexal® multilayer pipes is that they combine the advantages of synthetic materials and in particular, those of crosslinked polyethylene, such as a high resistance to abrasion, corrosion and chemical agents, and a high standard of hygiene, with those of aluminium, such as an excellent resistance to high temperatures and pressures, dimensional stability, an unequalled barrier to oxygen and light and a low thermal expansion.

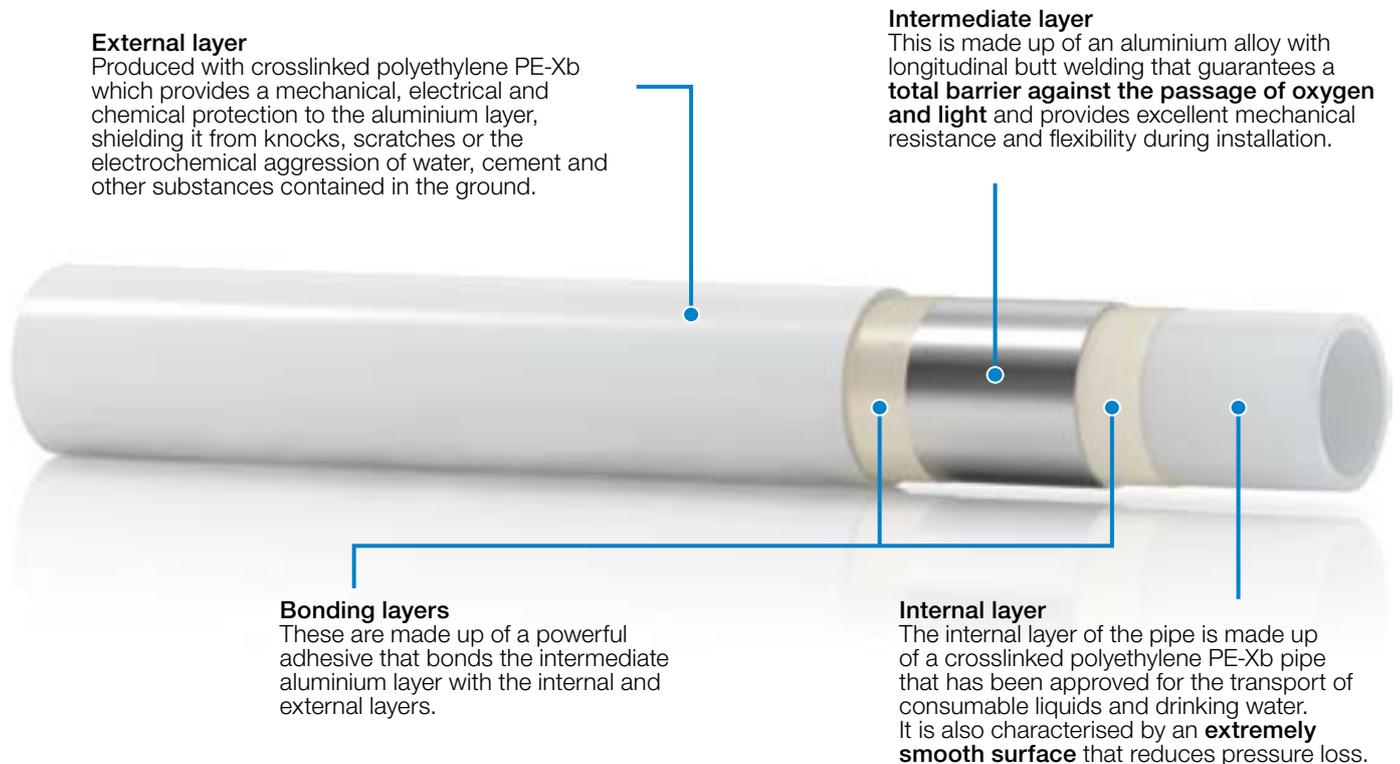


MADE IN ITALY

THE ADVANTAGES OF PLASTIC MATERIALS AND METAL IN ONE PRODUCT

The Pexal® multilayer system unites the qualities of **crosslinked polyethylene PE-Xb with those of aluminium; crosslinked polyethylene PE-Xb guarantees excellent mechanical, chemical and physical properties, and the butt-welded**

aluminium pipe improves mechanical resistance, introducing flexibility and pliancy, qualities that are fundamental for accelerating and simplifying installation operations.



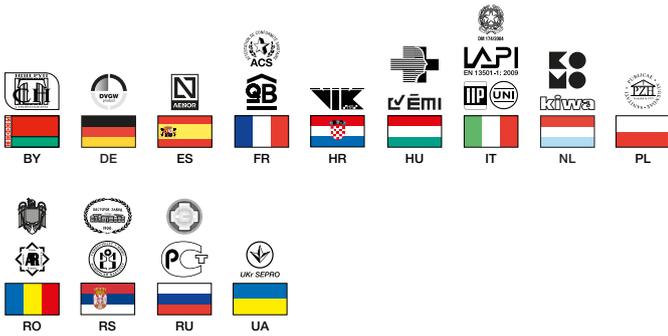
The result is a product made up of different layers of material bonded together that provide **excellent properties that would otherwise not be obtained with a pipe made up of a single material.**

The Pexal® system is manufactured in compliance with the European Standard EN ISO 21003 and its characteristics of reliability and quality are guaranteed by the most severe certification bodies that control and verify product performance with meticulous frequency within the manufacturing plants.

A universal system for the supply of water

Thanks to its extreme flexibility, it is the ideal product for the construction of radiant floor, wall and ceiling heating and cooling systems.

Due to its excellent performance it is used for the distribution of hot and cold drinking water, in radiator and fan heating system and in industrial plants including systems for the distribution of compressed air.



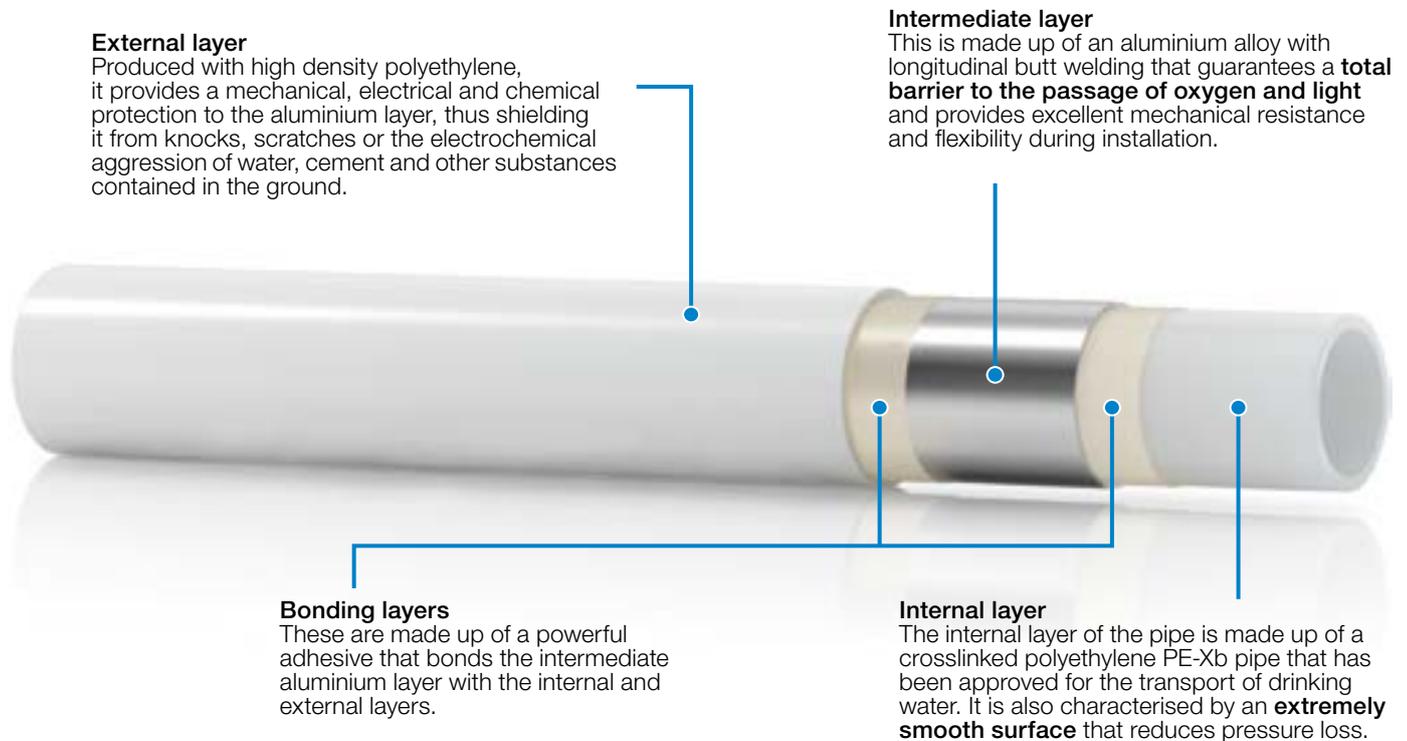
Mixal® multilayer pipes combine the advantages of synthetic materials, in particular those of crosslinked polyethylene, such as resistance to abrasion, corrosion, chemical agents and high hygiene standards, with those of aluminium: resistance to high temperatures and pressures, dimensional stability, an excellent barrier to oxygen and light and low thermal expansion.

MADE IN ITALY

THE FLEXIBILITY OF PLASTIC MATERIALS AND THE RESISTANCE OF METAL

The Mixal® multilayer system combines the qualities of crosslinked polyethylene PE-Xb with those of aluminum; the crosslinked polyethylene PE-Xb present in the inner layer in contact with the transported fluid guarantees excellent mechanical properties,

physical and chemical and the welded head-to-head aluminum tube accentuates the mechanical resistance by introducing excellent flexibility and ductility characteristics, essential for accelerating and simplifying the installation phases.



The result is a product made up of different layers of material coupled together which allow to obtain excellent properties that cannot be reached by a pipe consisting of a single material.

The Mixal® system is produced in accordance with the EN ISO 21003 standards and its reliability and quality is guaranteed by the most stringent approval bodies that monitor and verify its performance with strict frequency at production plants in Italy.

THE ADVANTAGES OF USING A MULTILAYER SYSTEM



The **total resistance to corrosion, to construction materials and the main chemical compounds** allow it to be used in a wide variety of applications, both residential and industrial.



The system has a **guaranteed durability of at least 50 years** in compliance with product standards; in this period the product can be used at **pressures of 10 bar and temperatures as high as 95°C**.



The **extremely smooth internal surface**, as well as preventing the formation of deposits such as lime scale, ensures **reduced pressure loss** also with the passage of time.



The elastic nature of the crosslinked polyethylene allows excellent absorption of vibrations and therefore an **excellent acoustic insulation**.



The combination of crosslinked polyethylene and aluminium guarantees **excellent flexibility when bending** (also when bent manually) and **dimensional stability in the long term**.



The **range of fittings, accessories and relative tools** is **extremely wide** and allows all requirements to be met. The fittings are available **both in metal and in technopolymer** to cover different system applications.

Ecosostenibilità

Valsir Pexal® system is produced with completely recyclable materials that can be sent for recovery at the end of their lifespan.

The related production processes are energy efficient and have a low impact.

The available EPD declarations certify the reduced environmental impact associated with the production of water supply systems composed of Pexal® pipes and Valsir fittings (Bravopress®, Pexal® Brass e Pexal® Easy) according to the LCA analysis, or rather “cradle-to-grave”.

This means having monitored and improved not only the production processes: these systems are op-timized from the extraction of raw materials to the disposal of the product itself.

Choose them for your project and get credits for the sustainability protocols (e.g., LEED V4) of Green Procurement!





The butt welded aluminium layer acts as a **total barrier against oxygen and light**, which in plastic pipes would otherwise favour algae growth and the corrosion of the metal parts that make up the system.



The system is made up of materials that are completely non-toxic and **is certified for the transport of drinking water**.



Thermal expansion is approximately 8 times lower than all-plastic pipes and is **similar to the expansion of metal pipes**.



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



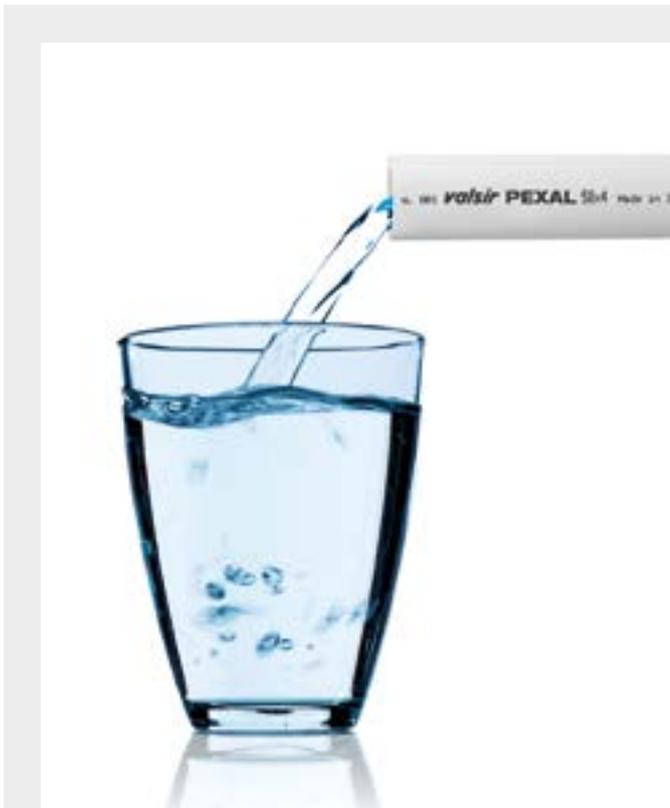
It is the **ideal solution in areas subject to earthquakes** thanks to the excellent mechanical properties such as flexibility and the capacity to alleviate vibrations.



Wide range of diameters from **De 14 mm to De 110 mm for the Pexal® pipe**, and from **De 14 to De 32 for Mixal®**.



Pexal® and Mixal® are produced with materials that can be completely recycled, which, at the end of their service life can be recovered. The production processes used are energy efficient and are of a low environmental impact; in terms of the environment and conservation of resources, Pexal® and Mixal® are in line with the Green Building principles.



Product certified for drinking water

When multilayer pipes are certified for applications in water supply systems, they must be tested and approved for the distribution of drinking water.

Valsir multilayer pipes have been certified by the strictest International Institutes by means of tests that verify the absence of foreign substances and the elimination of biofilm proliferation by means of organoleptic tests.

Such tests, which are conducted both at low and high temperatures, determine whether molecules from the pipes migrate to the water thus transferring tastes and odours.

Valsir multilayer pipes successfully passed these tests thus obtaining certifications in the main countries of interest: Italy, France, Germany, Great Britain, Australia, Holland, Hungary, Ukraine, Russia, Romania and Croatia.

THE RESULT OF TECHNOLOGY AND EXPERIENCE

Crosslinked polyethylene

In the crosslinking process, the polymer chains undergo a reaction that creates very strong links between them thus modifying the chemical, physical and mechanical properties of the polyethylene.

As compared with high density polyethylene (PE) or polyethylene of raised temperature resistance (PE-RT), crosslinked polyethylene (PE-X) guarantees greater performance, among which the most important feature is long term resistance to ageing and to high temperatures.

Crosslinked polyethylene can be produced by using different technologies recognized by International Standards and identified by the methods 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 above-mentioned crosslinking methods.

An innovative crosslinking process

Drawing on its own experience and available technologies, Valsir implemented an innovative crosslinking method for PE-Xb that allows outstanding physical and mechanical characteristics to be obtained. The polyethylene that composes Valsir multilayer pipes is crosslinked by means of the admission of steam at 100°C inside sealed chambers in which the product is placed. A level of vacuum is created in the chambers such as to guarantee that the steam entering the chamber completely penetrates each single coil thus ensuring a uniform level of crosslinking regardless of the diameter and the length of the pipe. It is an innovative crosslinking process as compared with traditional crosslinking methods such as soaking or water circulation, and ensures extreme homogeneity of the mechanical characteristics of the finished product.



Aluminium

The combination of crosslinked polyethylene and aluminium allows pipes to be obtained that provide exceptional mechanical characteristics; in one single product, the advantages of two materials are combined, but there is much more than this. The performance of multilayer pipes depends on numerous factors such as the type of aluminium alloy, the ratio of the aluminium thickness to the total thickness of the pipe, the position of the aluminium layer, the technology used to form and weld the aluminium, the adhesion of the same to the layers of crosslinked polyethylene.

The creation of a multilayer pipe that combines high resistance to pressure and high temperature, flexibility and stability is the result of a careful and accurate design phase that not only involves the most delicate aspects of the product but also the processes and technologies employed to produce it. Many years of experience in the production of multilayer pipes enabled Valsir to implement processes and technologies making its product recognized on the most important international markets and these factors are decisive in contributing to the superiority of Valsir as compared with most producers worldwide.



The aluminium forming process

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.

AN EXCELLENT MULTILAYER SYSTEM

Time and money saving installations

Thanks to their excellent mechanical characteristics the Valsir multilayer pipes can be bent instead of employing fittings thus obtaining significant advantages from an economical point of view.

Valsir multilayer pipes can be bent by hand with diameters up to 32 mm and mechanically for larger diameters, with bending radii up to 2.5 times the pipe's diameter.

The excellence of Valsir multilayer pipes also lies in the extraordinary dimensional stability and in the low coefficient of thermal expansion: once bent and installed the pipes remain in place over time and thus allow the number of anchor clips to be reduced which, in surface mounting, can be reduced by 40% of the number of clips necessary for plastic pipes in PE-X, PE-RT, PP-R, PB, PVC-C, etc.



Manual bending with external spring



Mechanical bending

Fire resistance

The installation of a system must always be performed in compliance with local and national standards and regulations, observing any fire protection provisions in force that may vary from one country to another.

The most widely used method is that of fitting fire stop collars: devices composed of an intumescent material that in the presence of high temperatures expands thus blocking off the passage of flames, gas and heat through the hole where the pipe is melting.

There is, however, **another technique** that depends greatly on the quality and the performance of the multilayer pipe, certified by specialised institutes which consists of covering the pipe with a special elastomeric insulating sheath.

Legionella and treatments

Pipes are increasingly being treated to reduce the risk of the formation of bacteria that can lead to disease, one of the most lethal being the Legionnaires disease.

There are different types of treatment available; however the most widely used method, generally because it's the most economical, is chlorine super shock and consists of rinsing out the entire system with large doses of chlorine.

Chlorine super shock has extremely negative effects on metal pipes in that it accelerates corrosion; **Valsir multilayer pipes**, however, have a greater resistance to chemical compounds and **can undergo this type of treatment for several years** without any reduction in performance.

Multilayer pipes, when used together with Pexal® Easy or Bravopress® fittings are therefore the ideal solution of use in hospitals where these treatments are performed at regular intervals throughout the year.

There exist new anti-legionella and water treatment technologies as treatments based on chlorine dioxide and mono-chloramine. For these sanitation products there are no certain compatibility data, therefore use is not recommended.





Heating system realized with multilayer pipe insulated or with coloured protective conduit

APPLICATIONS

Pexal® and Mixal® multilayer systems are suitable in renovations as well as new buildings such as shopping centres, hospitals, offices, schools, multi-storey residential buildings, and industrial plants.

Thanks to its excellent quality, it can be used on sight or under track (with appropriate protection) for any type of system:

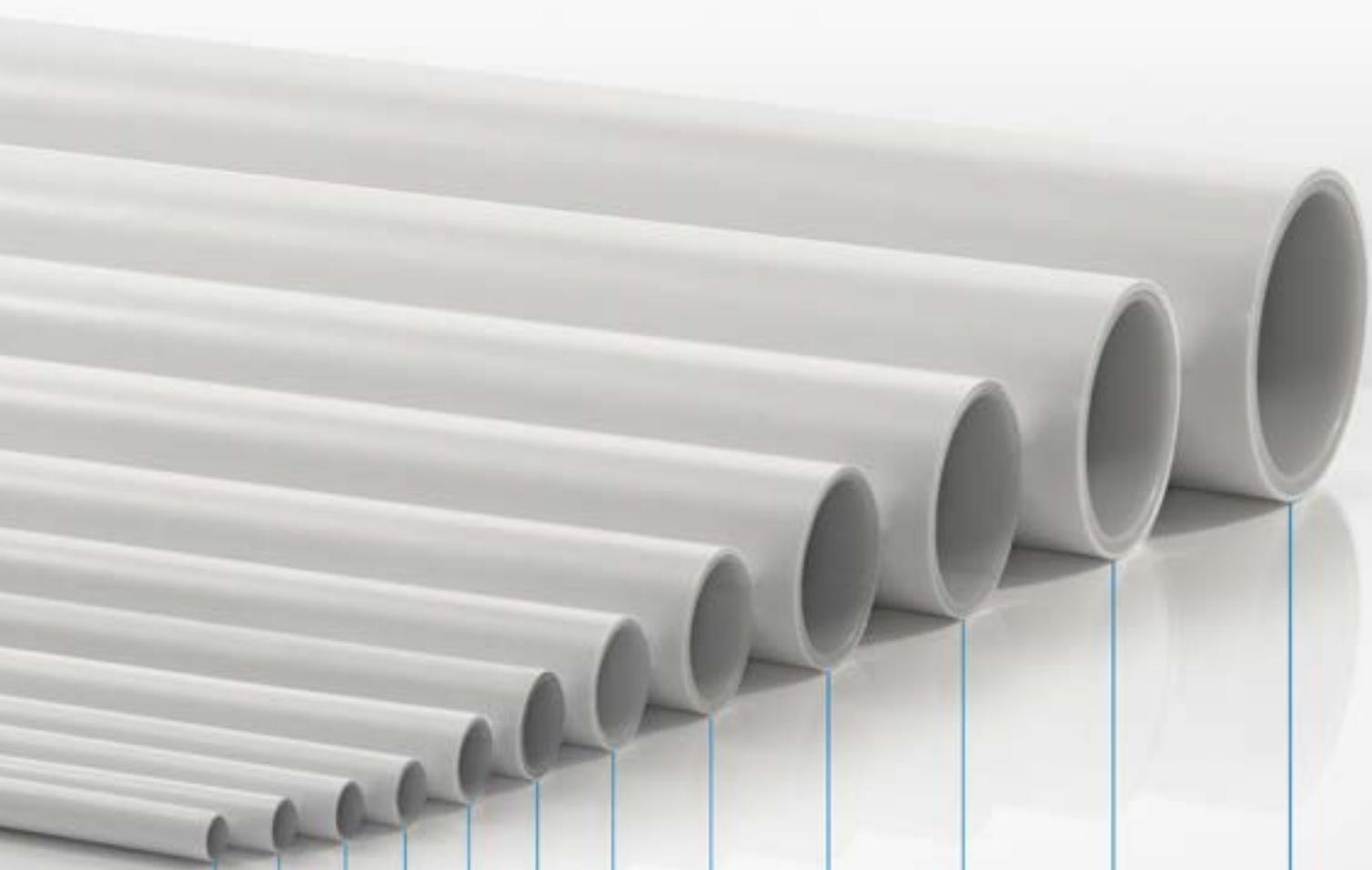
- **Supply** of high and low temperature water **to radiators**
- **Supply** of hot and refrigerated water **to fans**
- **Distribution of hot and cold water**
- **Radiant floor**, wall and ceiling heating and cooling systems
- **Central heating stations**
- **Distribution of compressed air**
- Laboratories, **technical and industrial plants** in general



Radiant system made of multilayer pipe



Water supply system realized with multilayer pipe insulated or with coloured protective conduit



Ø PEXAL	Ø 14	Ø 16	Ø 18	Ø 20	Ø 26	Ø 32	Ø 40	Ø 50	Ø 63	Ø 75	Ø 90	Ø 110
Ø MIXAL	Ø 14	Ø 16	Ø 18	Ø 20	Ø 25	Ø 32						
					Ø 26							

A SOLUTION FOR ALL REQUIREMENTS

The range is composed of pipes supplied in straight lengths (up to diameter 90 mm for the Pexal® pipe and up to 32 mm for Mixal®) and in coils (up to diameter 32 mm) of various lengths, from 50 m up to 200 m.

The Valsir multilayer pipes can also be supplied with a protective corrugated covering, either in red or blue and can be pre-insulated with a flame retardant layer in grey, blue or red diameter 6 mm, 10 mm or 13 mm.

The numerous solutions provided with the different types of fittings allow all system requirements to be satisfied, providing a wide choice of manifolds, valves, accessories and anchor clips.

The fittings

Pexal® Brass

These are fittings made of brass and equipped with a stainless steel sleeve, when pressed onto the multilayer pipe with a special tool, guarantees the integrity and durability of the connection.

Bravopress®

The jointing technique is similar to that of the corresponding version in brass. The body in technopolymer (PPSU) offers an exceptional mechanical and corrosion resistance.

Pexal® XL

The innovative modular fitting system made of PPSU. Thanks to a diameter range up to 110 mm, it is possible to install multilayer system configurations never attempted before.

Pexal® Easy

These fittings are made entirely of technopolymer (PPSU) and provide an exceptional corrosion resistance. Thanks to the special shape and jointing technique they guarantee a 30% increase in bore as compared with conventional press and compression fittings. They are compatible with Pexal® pipes only.

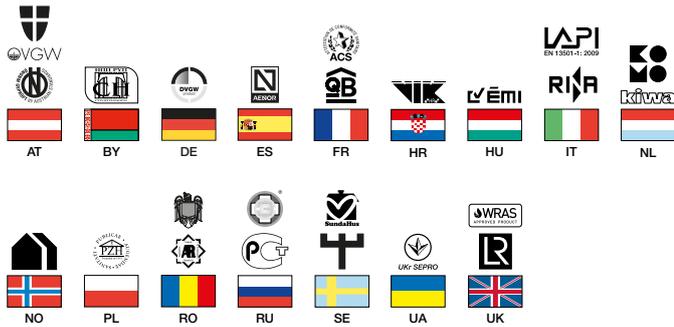
Pexal® Twist

This was the first jointing system used with multilayer pipes. They are made of brass and the coupling is guaranteed by a ring that presses against the pipe once the hexagonal nut has been tightened.





Brass press fittings



Pexal® Brass press fittings are produced with a brass alloy body and stainless steel sleeve fixed with a ring in transparent polymeric material. They are suited to a multitude of applications, from hot and cold drinking water supply systems to heating and industrial plants.

The fittings are equipped with a special base ring in transparent polymeric material that disconnects the aluminium in the pipe from the brass in the fitting, increasing the insertion depth on the insert and allowing greater control.

Each fitting is individually wrapped to improve handling on the installation site and for greater protection from dust and debris.



MADE IN ITALY

PEXAL® BRASS AND ITS ADVANTAGES

- Fittings equipped with a **special base ring in transparent polymeric material** that isolates the aluminium in the pipe from the brass fitting.
- **Greater insertion depth** of the pipe on the insert.
- **Greater control of insertion of the pipe on the fitting** thanks to the transparent base ring and the holes on the sleeve.
- **Each fitting is individually wrapped for improved handling** on the installation site and to protect it from dust and debris.
- Compatibility with a **wide range of pressing profiles** (H, TH, C, U, VAL).
- **Wide range of fitting types** and accessories.
- **Leakage detection during system testing** in the event of incomplete pressing on diameters from 16 mm to 32 mm (**for leaking test pressure between 0.5 and 2 bar**).
- Certificate for **the transport of drinking water**.
- Range of **diameters from 14 to 90 mm**.
- Anti-loosening profile and double ring seal.



Multipress

The Valsir press fittings, both in brass and in technopolymer, are termed “multipress” as they can be used with the various pressing profiles most widely used in the market.

This is an important advantage: the plumber can use the revolutionary Pexal® Brass and Bravopress® multipress fittings produced by Valsir, regardless of the type of tool they possess. (if crimping profile is included in the ones listed).



Pressing profile U, H, C



Pressing profile TH

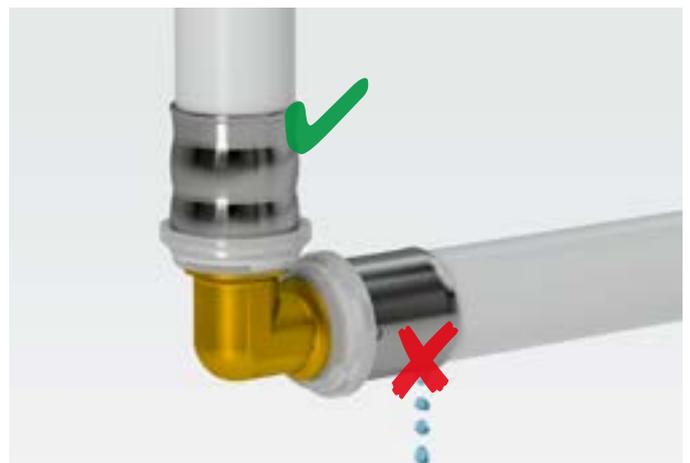
The Pexal® Brass press fittings were designed to further simplify installation operations, significantly reducing mounting times.

By using a portable pressing machine equipped with a suitable insert, the pipe is shaped around the fitting insert.

The joint, even in the presence of temperature fluctuations, is perfectly watertight and cannot be loosened thanks to the stainless steel sleeve that covers the portion of pipe in contact with the insert.

The physical and chemical integrity of the coupling is guaranteed by a plastic ring that insulates the aluminium layer of the multilayer pipe from the brass alloy of the fitting body.

The insert of these fittings, equipped with two O-rings is characterised by a special profile which, in the event of a badly pressed fitting, allows the immediate identification of the leakage by dripping during pressure testing of the system.



Unpressed leaking

Quality packaging

Each Pexal® Brass fitting is individually wrapped. This is a huge advantage for storing and handling on the installation site.

The bag protects the insert and the O-rings from being damaged and from dust and debris that could compromise the pressing operation.

All information relating to the product is clearly indicated (pressing profiles, diameters and product marks) as well as all information relating to installation in order to avoid errors during installation.



50x4
VALSIR
VAL-TH-U

valsir
16090144-1
BRAVO
press
0112 PPSU

50x4
VALSIR
VAL-TH-U

PE-112-AL-PE-112

Press fittings in technopolymer

Bravopress® is a press fittings system made of technopolymer (PPSU), a plastic material characterised by an exceptional mechanical and corrosion resistance.

Bravopress® can be used with Pexal® and Mixal® multilayer pipes and can be employed for the construction of water supply, heating and cooling and industrial systems.



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THE ADVANTAGES OF BRAVOPRESS®

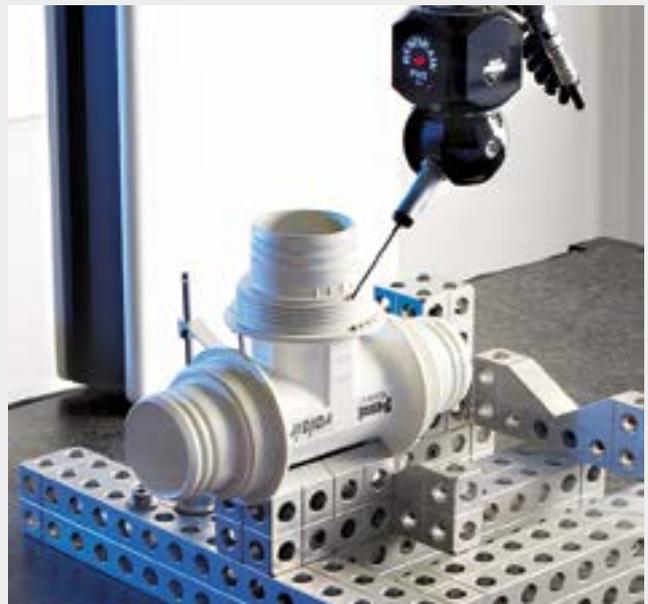
- Total **absence of oxidation and corrosion**.
- Compatibility **with a wide range of pressing profiles** (H, TH, U, C, VAL).
- Certificate for the **transport of drinking water**.
- **Chemical resistance** to the most common substances dissolved in water.
- Range of **diameters from 16 to 63 mm**.
- Extremely **lightweight**.
- High resistance against legionella with thermal or hypochlorite treatment.
- **Leakage detection during system testing** in the event of incomplete pressing on diameters from 16 mm to 32 mm (**for leaking test pressure between 0.5 and 2 bar**).
- **Greater control of insertion of the pipe on the fitting** thanks to the transparent base ring and the holes on the sleeve.



Polyphenylsulfone

Polyphenylsulfone (PPSU) is a technopolymer that provides exceptional mechanical performance, used mainly in automotive applications, in the aerospace and medical industry, and which in recent years is now widely used in the plumbing industry.

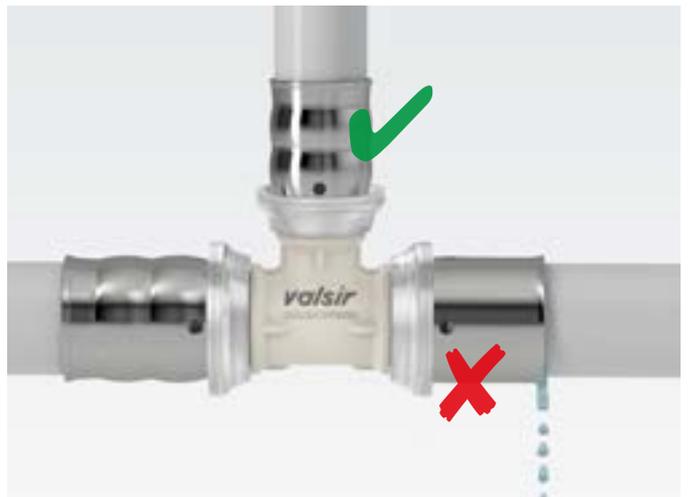
This material stands out for its excellent mechanical resistance even at high temperatures and its resistance to the main chemical compounds. The mechanical characteristics such as tensile strength, modulus of elasticity and ageing resistance far exceeds those of normal polymers.



The Bravopress® line of fittings combines the exceptional mechanical characteristics of polyphenylsulfone with the advantages of a pressed joint with stainless steel sleeve.

Just like the brass press fittings, Bravopress® line was designed to reduce installation times by using a portable pressing machine equipped with specific pressing jaws.

The insert of these fittings, equipped with two O-rings is characterised by a special profile which, in the event of a non-pressed fitting, allows the immediate identification of the leakage by dripping during pressure testing of the system.



Unpressed leaking



Pressing profile H, U



Pressing profile TH



valsir

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PEXAL XL

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Max 25°C Prodotto Confor

Modular technopolymer fittings

Pexal® XL is the innovative **modular fitting system** produced by Valsir!

Thanks to a **diameter range up to 110 mm**, it is possible to install multilayer system configurations **never attempted before**.

The material chosen for Pexal® XL is PPSU.

This is a technopolymer with exceptional mechanical and corrosion resistance, making it ideal for water supply, heating, cooling and industrial installations.

Therefore, the points of excellence of this system are its safety and modular structure.

Additionally, thanks to its **easy, quick, and intuitive installation process**, it provides value not only in terms of technology but also productivity and efficiency on the job site.



MADE IN ITALY

THE ADVANTAGES OF PEXAL® XL

- **Hygienic properties.** Fittings are certified for drinking water supply, therefore they can be used for domestic hot and cold water distribution systems. The material of these fittings ensures an outstanding level of hygiene, as well as an excellent resistance to the treatments against legionella.
- **Chemical resistance.** The polyphenylsulfone (PPSU) is a technopolymer featuring excellent resistance to oxidation, corrosion, and to the main chemical components dissolved in water, cement and lime.
- **Prefabrication.** The closure with collar allows the prefabrication of fittings directly on the counter resulting in great simplification of the assembly procedures, in case of installation at height, and a significant accident risk reduction.
- **Ease of use.** Pexal® XL is a simple and userfriendly system. The assembly of modules requires no special equipment, as sealing collars are closed manually. Moreover, the technopolymer lightweight is a further advantage.
- **Logistics.** The modularity of Pexal® XL is a benefit also for logistics: the possibility of creating all the necessary set-ups with a reduced number of items, allows maximum efficiency even in case of little storage available.



Modularity

The modular philosophy that characterises the Pexal® XL range ensures extreme installation flexibility while using just a few items. The assembly versatility allows wide system design freedom, and easily remedying the unforeseen events at the site. The closure with collar allows the prefabrication of fittings:

this means, in case of installation at height, a considerable simplification of the installation procedures, with a significant reduction in the risk of accidents.

The modularity of Pexal® XL is a benefit also for logistics: the reduced number of items to manage allows maximum efficiency even with a small warehouse.



Safety

The Pexal® XL fittings are made with a special insert using a profile with two seals to ensure maximum safety and reliability over time. The system is completed by PPS collars, ensuring mechanical strength and system uniformity. To further ensure proper installation, the collars are locked with a pin that prevents unintentional openings of the system.



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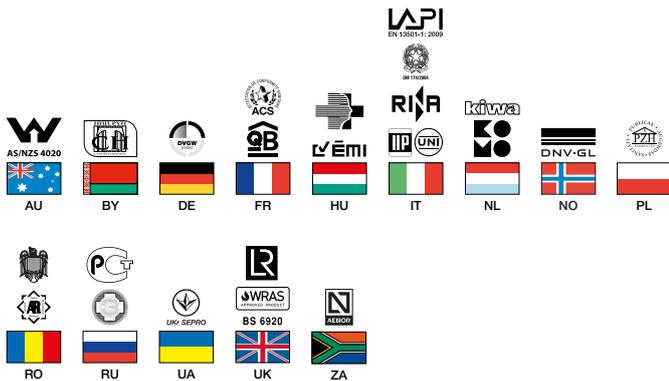
 **Exal**
PPSU

Valis PPSU

Full bore fittings in technopolymer

Pexal® Easy is an advanced fittings system in technopolymer (PPSU) for water supply, heating, cooling and refrigerating systems, as well as being the ideal solution for compressed air systems and industrial installations in general.

It is used with the Pexal® pipe and **guarantees an increase of 30% in bore as compared with normal compression or press fittings**. The fittings can be re-used and installation times are reduced to a minimum.



MADE IN ITALY

PEXAL® EASY, ITS STRONG POINTS

- Reduced pressure loss thanks to the **full bore**.
- Total **absence of oxidation and corrosion** also in compressed air systems.
- **Exceptional** mechanical and ageing resistance.
- Easy and rapid **installation**.
- Certification for **transporting drinking water**.
- **Chemical resistance** to the most common substances dissolved in water.
- Range of **diameters from 14 to 75 mm**.
- All the fittings can be **removed and re-used**.
- High resistance against legionella with thermal or hypochlorite treatment.



Socketing and full bore

The socketing process of the pipe involves the use of a special tool that widens the pipe diameter.

This operation can only be performed on the Pexal® pipes produced by Valsir in that only a particular ratio between the thickness of the materials that make up the multilayer pipe (crosslinked polyethylene, adhesive and aluminium) and a high quality standard allow

for expansion from the inside of the pipe without compromising the mechanical and physical characteristics of the pipe.

Thanks to the socketing process, the Pexal® Easy system ensures a full bore and a significant reduction in pressure loss.

Pexal® Easy is an advanced system that involves the use of fittings entirely made of technopolymer which, thanks to the type of connection made by socketing the pipe, makes it impossible for the pipe to come away from the fitting.

Unlike other systems, with Pexal® Easy there is no reduction in the bore caused by the fitting insert which means that pressure loss is greatly reduced, by an average of 30%.



Ideal for applications in marine environments

Thanks to the exceptional physical, chemical and mechanical properties of Pexal® Easy installations can be made in direct contact with sea water without compromising performance in any way.

Pexal® Easy is the ideal solution for installations in the presence of strong salt concentrations, placing it among the most widely used systems in the marine industry.





PEXALTWIST

Brass compression fittings

Pexal® Twist is the classical compression system made of brass that can be used with Pexal® and Mixal® multilayer pipes. Pexal® Twist provides reliability and an extremely simple installation.



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PEXAL® TWIST, THE ADVANTAGE OF A TRADITIONAL SYSTEM

- Extreme **ease of installation** without the need for special tools.
- Certificate for **transportation of drinking water**.
- **Removable fitting**.
- **Anti-loosening profile** and double ring seal.
- Range of **diameters from 14 to 32 mm**.



Quality system

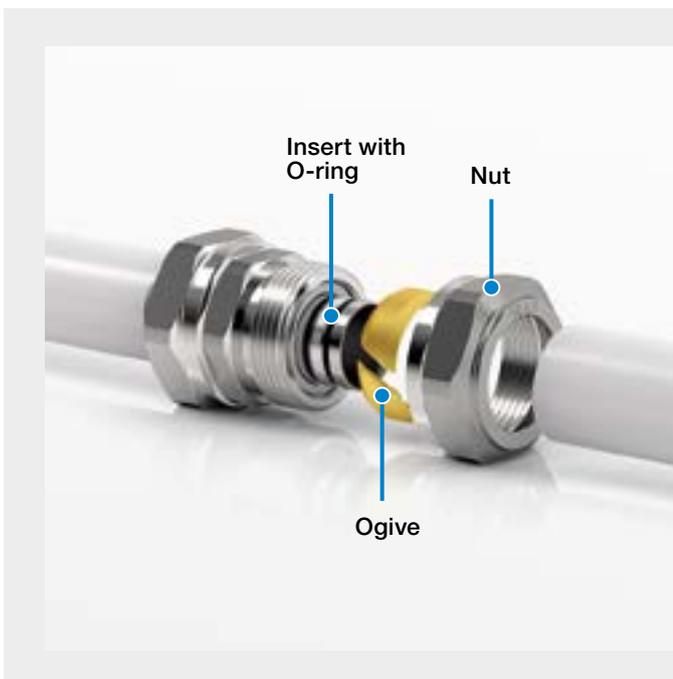
Valsir, in order to verify and guarantee the quality of the connections between the multilayer pipe and fitting, performs numerous types of tests, and not just those imposed by the International quality standards.

High temperature pressure tests, oven tests, bursting tests, tensile tests, water hammer tests and vibration tests on the joint are just some of the tests performed in our laboratories to guarantee the quality and reliability of our multilayer system. The tests are carried out on all fitting types, Pexal® Brass, Bravopress®, Pexal® Easy and Pexal® Twist.



The permanent connection of the pipe is created by compression by tightening the nut over the slotted ogive.

The internal profiles allow tightening of the ogive and the distribution of the compression force over the entire surface of the multilayer pipe.



Simple and reliable principle

By tightening the nut the pre-cut ogive is also progressively tightened and, thanks to the distribution of the compression over the entire surface of the pipe in contact with the fitting a long-lasting mechanical coupling is guaranteed.

The two O-rings on the insert guarantee a water tight connection when the system is under pressure.

ACCESSORIES FOR ALL REQUIREMENTS

A wide range of accessories and special components complete the system in order to meet all system requirements.

Modular manifolds with and without interception valves, coplanar manifolds, manifolds with shut-off valves, in-wall ball valves, fixing plates for sanitary appliances and many other items provide several solutions for all types of systems whether they are heating, cooling, water supply, or for the distribution of compressed air or industrial systems.

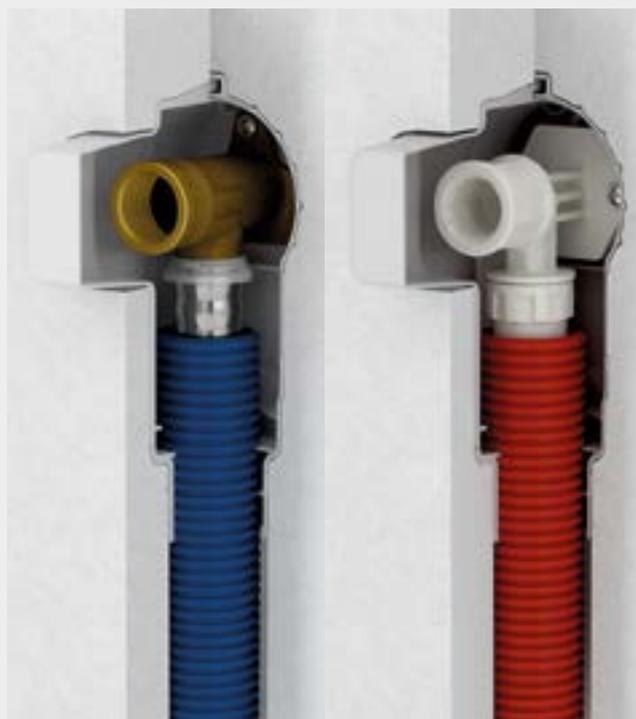


The solution for terminal connections

In order to install flanged fittings for connection to appliances, Valsir has designed an innovative and compact junction box that allows the connection of flanged fittings of the Valsir range to diameters 16, 20, 26 mm.

The junction box allows the pipe and corrugated sheath to be blocked, protecting the pipe and the fitting and furthermore guaranteeing an accessible connection.

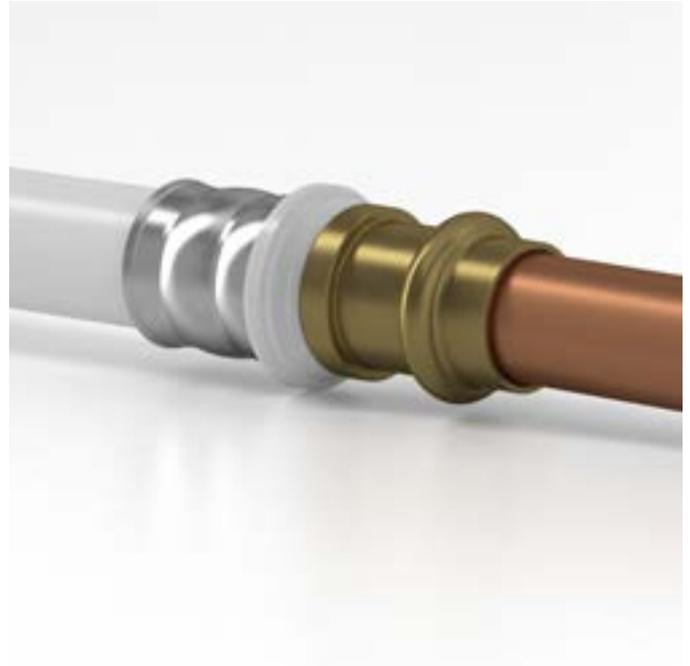
It can be used with the various types of fittings produced by Valsir (Pexal® Brass, Bravopress®, Pexal® Easy and Pexal® Twist).



Compatibility with other systems

Pexal® Brass ensures full compatibility with other piping systems.

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



Need for repair? The space-saving solution

The repair joints can be used for repairing a damaged pipe within a space no greater than 20 cm in length, the equivalent of no more than two tiles. The repair joints of the Pexal® Brass product line allow sections of damaged pipe

to be replaced in small spaces thanks to the telescopic system of the joints. In the case of finished surfaces no more than two tiles need to be broken. An essential space-saving solution for limiting the effects of a repair job.





TOOLS

Reliability, durability and quality are the characteristics that distinguish the range of Valsir tools used in the installation of the Pexal® and Mixal® systems; these products were designed to the suggestions of our most trusted plumbers and made with only top quality materials.

Pressing machines up to diameter 110 mm, socketing machines up to diameter 75 mm, pipe cutters, multi-diameters expanders, systems for manual and mechanical bending are just some of the tools that make up and complete the various product lines.



Tools for Pexal® Brass, Bravopress® and Pexal® XL



Tools for Pexal® Easy



AUTODROMO NAZIONALE MONZA

Monza motor racing circuit - Monza (Italy)

BMW Sauber F1 Team

BMW Sauber F1 Team

REFERENCES



Grand Stade de Lyon Stade des Lumières - Lyon (France)



Zealand University Hospital - Koge (Denmark)



85 Greystone Building - Johannesburg (South Africa)



Zazerkalie housing estate - Samara (Russia)



The MRC Laboratory of Molecular Biology - Cambridge (England)



Romanian Athenaeum - Bucharest (Romania)



Nine Elms Square - London (England)



900 Hay St. - Perth (Australia)



Uffizi Museum - Firenze (Italy)



Himalaya - Farroupilha (Brazil)



Vitoria Aqua Park - Samara (Russia)



Mondango 3 yacht - Sidney (Australia)



European community building - Tirana (Albania)



CUSTOMER SERVICE

Technical support

Valsir provides complete support during design and on site, thanks to a high-level technical department that consists of a team of engineers with international experience that are capable of providing solutions to all installation needs.



Valsir Academy

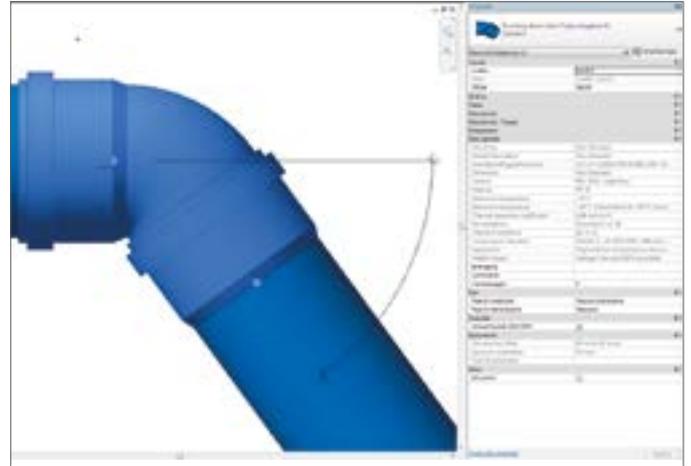
Valsir has an important training facility - **Valsir Academy** - dedicated to clients, distributors, plumbers and planners that provides perfectly equipped courses, both theoretical and practical on the use and the design of plumbing and heating systems. Courses are provided both inside the training facility and on customers' premises.

VALSIR IS BIM-READY

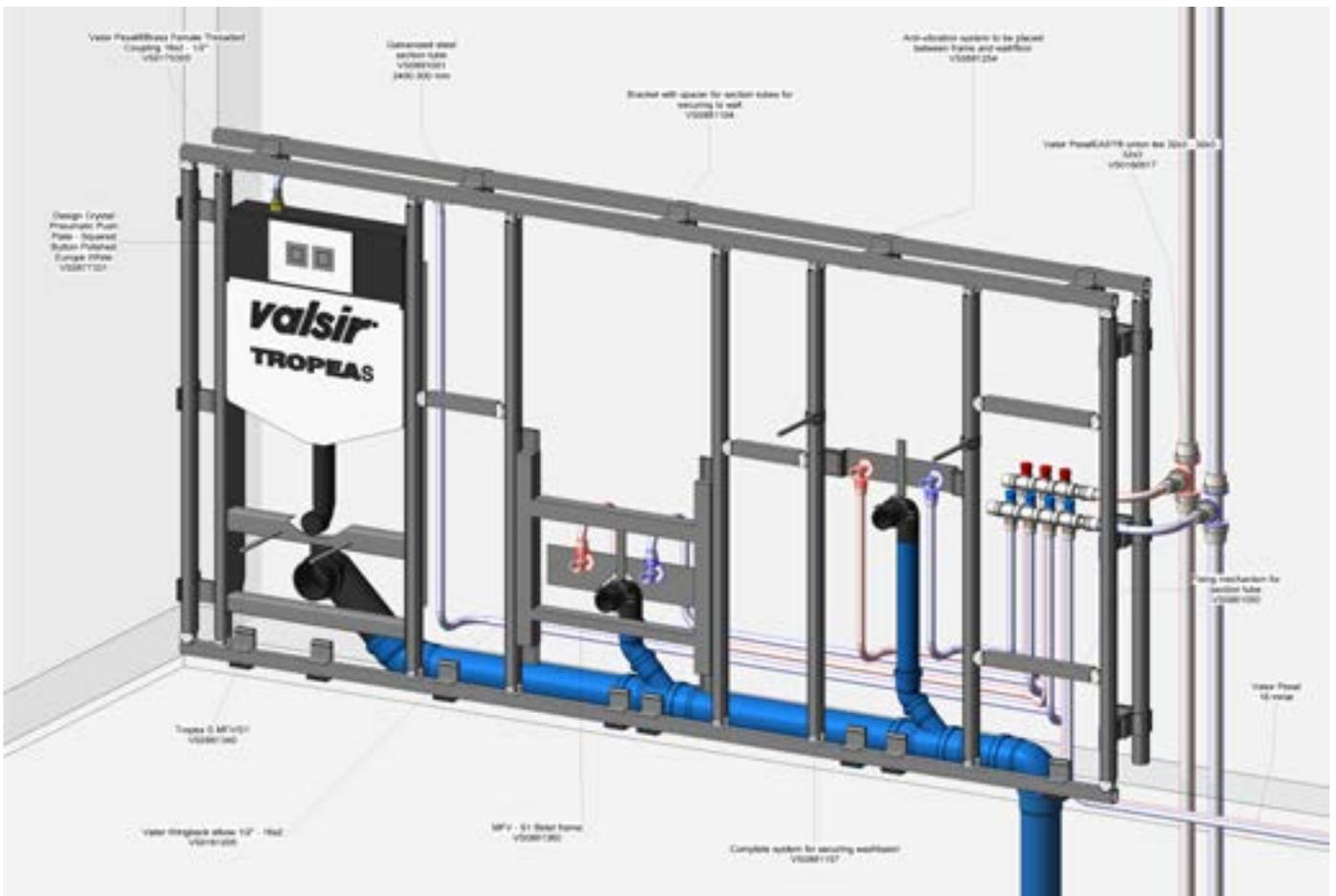
Valsir has adopted the BIM philosophy, the modelling process that allows to improve planning, design, construction and management of buildings, aligning with the industry transition to digital building modelling.

A “BIM-oriented” design offers outstanding competitive advantages: more efficiency and productivity, less errors, less downtime, less costs, greater interoperability, maximum information sharing, more timely and consistent project control.

Valsir captures the essence of this system with a set of Revit models and applications designed for quick and easy use.



www.valsir.it/u/revit



QUALITY AND ENVIRONMENT

Quality

The constant commitment of Valsir in the production of quality products is attested by over **200 product approvals** obtained throughout the world by the most stringent certification bodies (data updated to 01/08/2022), by a Management System of the Quality (QMS) certified in compliance with the **UNI EN ISO 9001:2015** standard and the Energy Management System (SGE) certified according to the international standard **UNI EN ISO 50001:2018**. Valsir S.p.A. has further demonstrated its commitment to the environment by obtaining certification **ISO 14001:2015** on the Vestone production site.

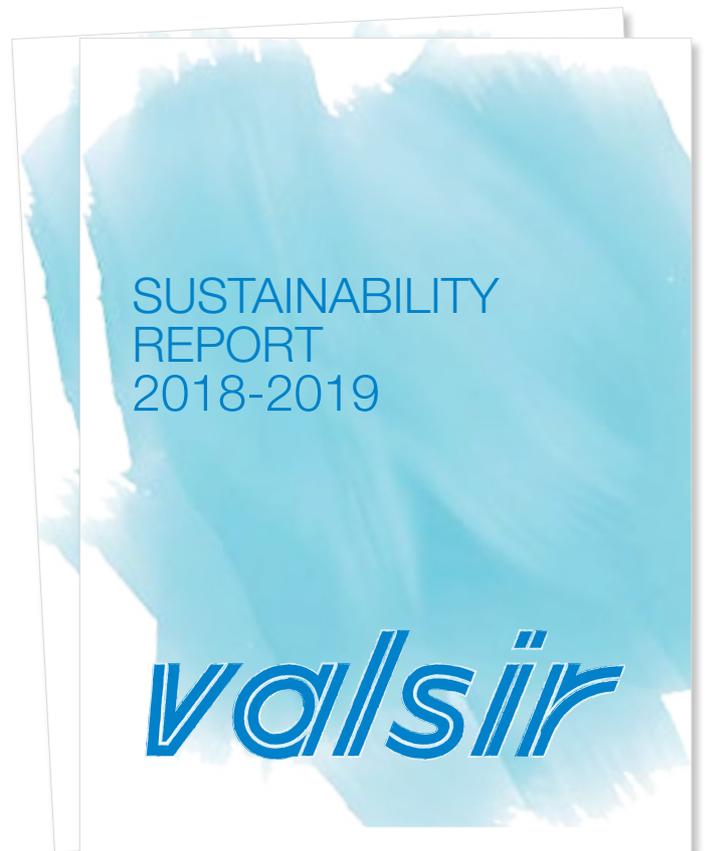
Since 2019 an innovative and modern plant has also been built that, integrated with the already installed photovoltaic park, will be able to produce over 30% of the electricity needed for all Valsir plants. This is a Trigenerator powered by methane gas capable of producing electricity, steam and cooling energy.



Sustainability

Efficient processes and reliable products are no longer the only parameters used to perform an assessment of the quality of a company's conduct: the capacity of the company and its management to design and implement production process that are sustainable from an environmental point of view is of equal importance.

Valsir has started a project of Corporate Social Responsibility and has published its 3th Sustainability Report that gathers facts and figures relating to the daily commitment of Valsir in terms of social, economic and environmental responsibility.



Download
valsir.it/u/sostenibilita-en



WASTE SYSTEMS



SUPPLY SYSTEMS



GAS SYSTEMS



FLUSHING SYSTEMS



BATHROOM SYSTEMS



TRAPS



RADIANT SYSTEMS



DRAINAGE SYSTEMS



HRV SYSTEM



ACADEMY



SEWER SYSTEMS



WATER TREATMENT



valsir[®]
QUALITY FOR PLUMBING



VALSIR S.p.A. - Società a Socio Unico
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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