PP3

Push-fit waste and drainage system inside buildings

MADE IN ITALY

valsir®
QUALITY FOR PLUMBING

Museum of Contemporary Art - Bucharest (Romania)

Valsir PP3®, the latest technology in push-fit systems

BY DE HU IT PL RO RU UA

Valsir PP3® is a waste system made up of pipes, fittings and accessories for the construction of waste and rainwater drainage systems.

Valsir PP3® is an extremely light system and with its push-fit socket with hydraulic seal it represents the most simple solution for **the construction of waste and drainage systems**.

Valsir PP3® is manufactured according to the European Standard EN 1451 and can be used for waste systems at low and high temperatures, ventilation systems for waste networks and for rainwater drainage systems **inside buildings for civil and industrial use, hospitals and hotels**.

The wide range of pipes, fittings and accessories allow the entire waste network to be made, from branches to sanitary appliances to stacks and waste manifolds.

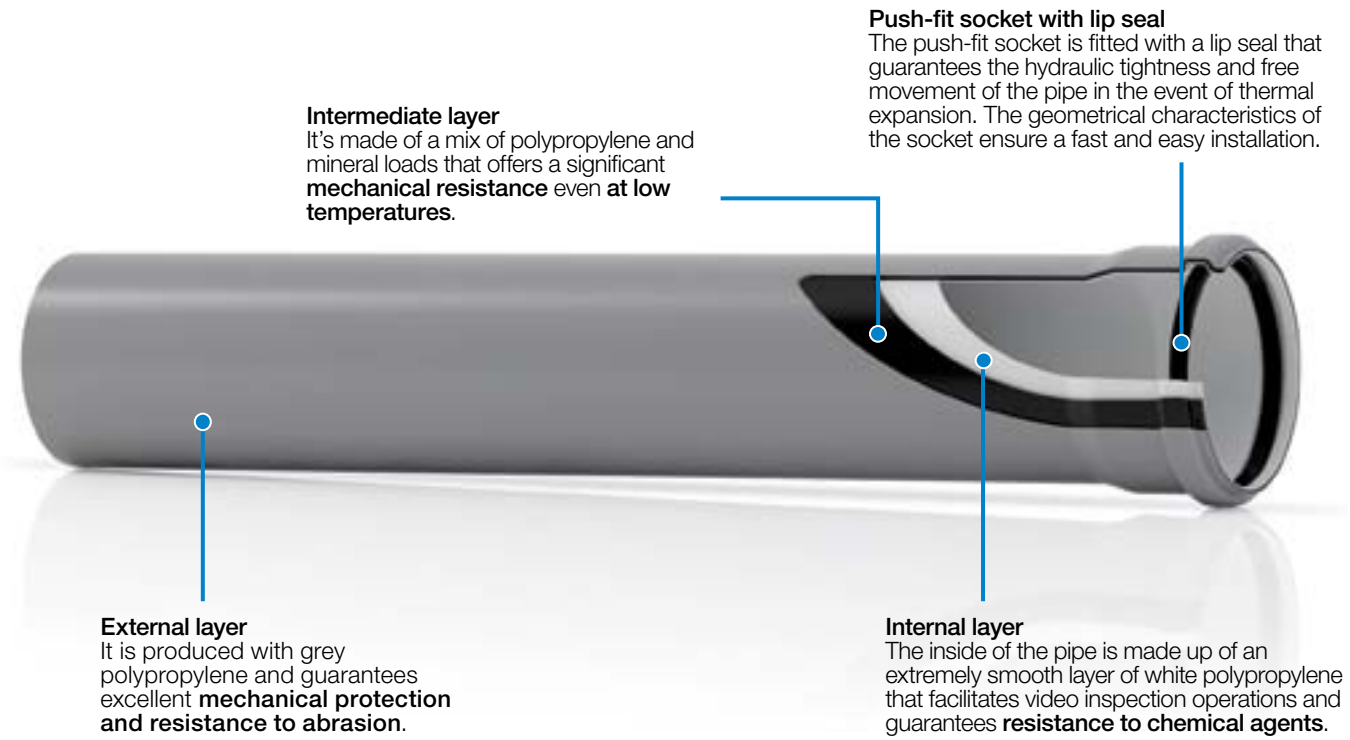
MADE IN ITALY

The Romanian Athenaeum - Bucharest (Romania)

LIGHT WEIGHT, SIMPLICITY AND RELIABILITY

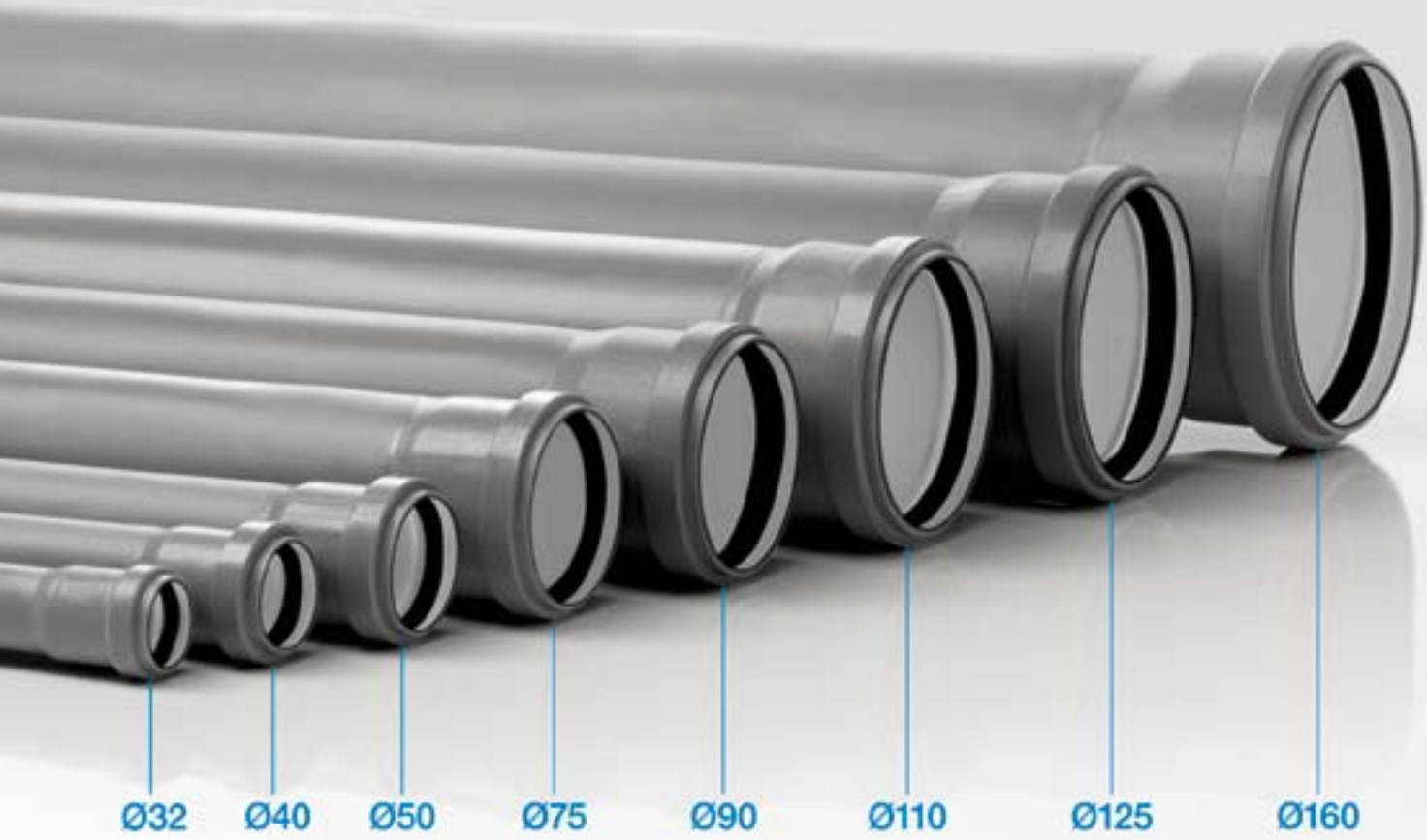
The advantages of using PP3® waste system

- **Light weight and ease of installation** on site without special tools, thanks to the push-fit connection. Furthermore, the push-fit socket does not require the use of harmful glues or solvents.
- Excellent sound insulating performances: 17 dB(A) with a flow rate of 2 l/s in compliance with EN 14366 (certificate P-BA 92/2014).
- **Smooth internal surface, white in colour** to facilitate video inspection.
- High impact resistance at extremely harsh temperatures **below 0°C**.
- **High chemical resistance** to the substances dissolved in civil and industrial waste waters.
- Wide range of **diameters from DN 32 mm to DN 160 mm** characterised by triple layer pipes and single layer fittings.
- Wide range of transition fittings for connection to other waste systems such as cast iron, PE, PP, PVC.
- The product, its recyclability and the production processes used are based on the **Green Building principles**, respecting the environment and the conservation of resources.



The Valsir PP3® waste system can transport waste liquids at temperatures as high as 95°C, it has a high resistance to the most common chemical agents and is characterised by an extremely smooth internal surface that prevents the accumulation of deposits inside the waste network.

Furthermore, polypropylene is a material that is not attacked by microorganisms and guarantees the absence of internal deposits and the build-up of bacterial flora. This system is also free of problems relating to stray currents.


Ø32
Ø40
Ø50
Ø75
Ø90
Ø110
Ø125
Ø160

A COMPLETE RANGE FOR ALL REQUIREMENTS

The range is composed of pipe lengths from 150 mm to 3 m with one socket, two sockets or smooth pipes without sockets.

It features a wide choice of fittings and accessories that allow the most diverse system configurations to be constructed.
Diameters range from the smallest such as 32, 40 and 50 mm for the installation of branches on each floor to larger diameters such as 160 mm for waste manifolds.

The range completed by accessories for connection to other Valsir waste systems, accessories for connection to sanitary appliances and anchor brackets.

Fire collars

When fire protection standards or local regulations require the compartmentalization of rooms such as, for example, central heating plants, underground car parks and industrial facilities that are at risk of fire, then fire collars can be used.

To meet all system requirements a **complete range** is available which covers diameters **from 40 to 160 mm**.

It is important to remember that the Valsir PP3® waste system is made of polypropylene and therefore, unlike other materials such as PVC, it **does not produce carcinogenic compounds** such as dioxins and vinyl chloride **in the event of fire**.

Golf Club Riviera - Cattolica (Italy)

THE BEST SOUNDPROOFING PERFORMANCE IN ITS CATEGORY

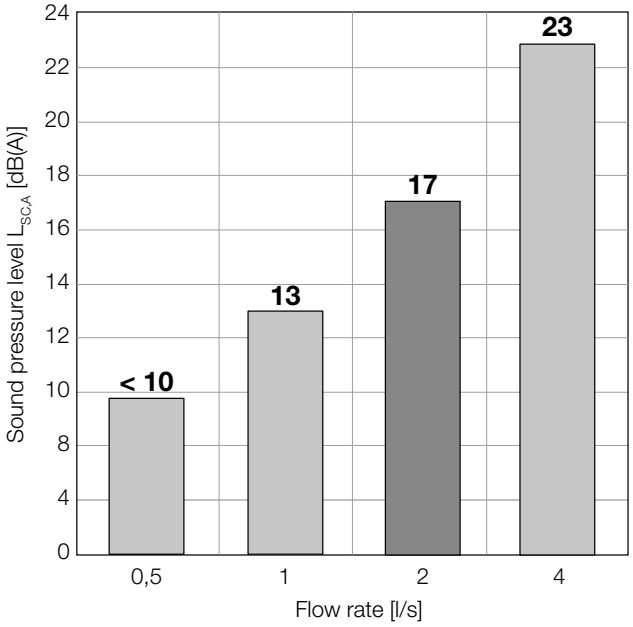
When a waste system is called into action, noises are generated inside the pipelines, causing them to vibrate from the fall of the liquid being discharged.

Most of the generated noise spreads inside the pipe but the vibrations are transmitted from the walls of the pipe to the surrounding area and to the bracketing elements and consequently to the building structure.

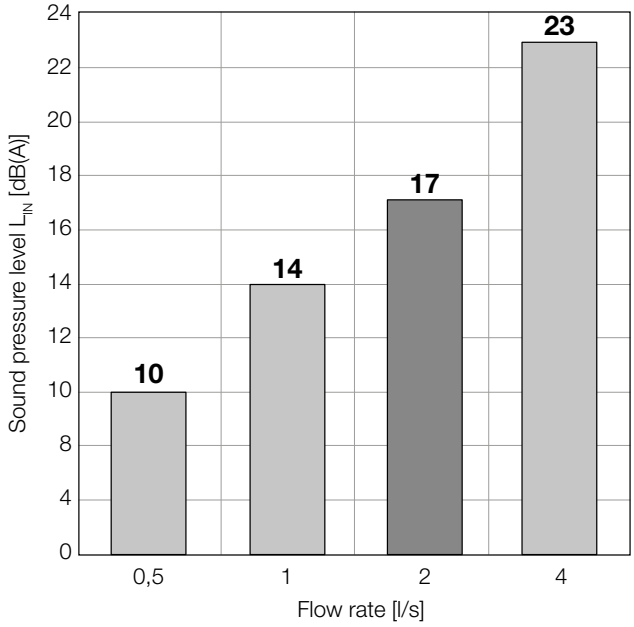
To limit noise levels in waste and drainage systems, not only should the system be designed properly and the waste circuit mounted correctly but it is also important to choose a drainage system with elevated soundproofing performance.

PP3® with 2 l/s (typical drainage from a WC) reaches noise levels of 17 dB(A).

Sound pressure levels $L_{SC,A}$ of the PP3 pipe in compliance with EN 14366



Sound pressure levels L_{IN} of the PP3 pipe in compliance with DIN 4109



Certificated P-BA 92/2014 in accordance with EN 14366.
Certificated P-BA 91/2014 in accordance with DIN 4109.

Athénée Palace Hilton - Bucharest (Romania)

The measurement of the soundproofing performance of waste systems

The reference standards used to assess the performance of waste and drainage systems in the laboratory and that specify the measurement methods are the German Standard DIN 4109 (together with DIN 52219) and the European Standard EN 14366.

Both standards require the use of a four-storey test building with an inside wall in concrete to which the waste stack is anchored.

The measurement floors are divided into two rooms: the front room is where the waste stack is installed, the rear room has no pipes running though it but receives the sound vibrations that are transferred to the partition wall.

The measured values can be expressed using different indicators depending on the requirements and reference standards.

$L_{SC,A}$ is the indicator required by EN 14366 and indicates the structural-borne noise level transmitted whereas L_{IN} is an indicator that also takes air-borne noise into consideration required by DIN 4109.

It doesn't matter which indicator is more important: the aspect that needs to be taken into consideration is that in order to compare different waste systems the same indicator must be used. Noise emissions depend on numerous factors, such as the installation and the building type. Consequently, the actual noise level of a waste system can only be measured on site: laboratory indicators should only be used as a on means for comparison.


The seal is completely inaccessible thanks to the particular shape of the housing.
The joint guarantees total bore passage thanks to the absence of reductions in the section.

PUSH-FIT JOINT: RAPID AND EASY INSTALLATION

Valsir PP3® ensures a practical and rapid installation without glues or special tools thanks to the jointing system with push-fit sockets.

The particular shape of the seal and the housing of the push-fit joint guarantee hydraulic tightness and allow the normal movements of the pipe including those caused by thermal expansion.

A system that is suitable for temperature fluctuations: **the thermal expansion of Valsir PP3® is extremely low compared to the most common plastic materials**, a 3 m pipe will expand in length by just 13 mm when the waste liquid flows at a continuous temperature of 60°C.

It is thanks to this low thermal expansion coefficient that the push-fit joints are capable of absorbing the variations in length of the pipe without taking any particular precautionary measures;
just follow the installation instructions in the Valsir technical manuals.

The bi-joint sleeve to reduce wastage to a minimum

To allow leftover pieces of pipe to be used, Valsir supplies a bi-joint sleeve. This is a special fitting that allows two pipes without sockets to be connected guaranteeing hydraulic tightness without compromising flow rates.

Estate - Puegnago del Garda (Italy)

REFERENCES

Peles Castle - Sinaia (Romania)

Dinamo stadium - Bucarest (Romania)

Hotel Oktiabrskaya - Pskov (Russia)

Zazerkalie housing estate - Samara (Russia)

Hotel Europa - Bucharest (Romania)


THE TECHNICAL MANUAL FOR WASTE SYSTEMS
Characteristics, project design, calculation, installation and testing
valsir
SILVESTRO
valsir

TECHNICAL SUPPORT AND ASSISTANCE

Valsir provides complete support both during the designing phase and on site, thanks to a first class technical office made up of a team of highly experienced engineers, capable of dealing with the most complex system requirements.

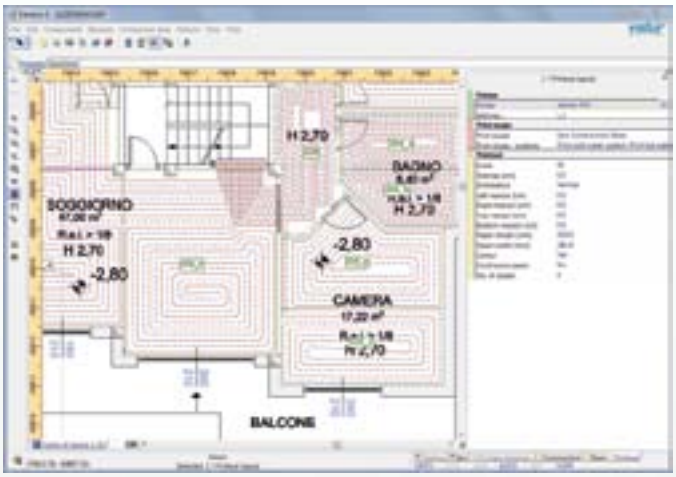
Valsir also boasts an important training centre called **Valsir Academy** catering for clients, distributors, plumbers and planners. Highly equipped halls are available where theoretical and practical courses are organized, also on the use and design of water supply systems using the Silvestro software, a software specifically developed within Valsir.

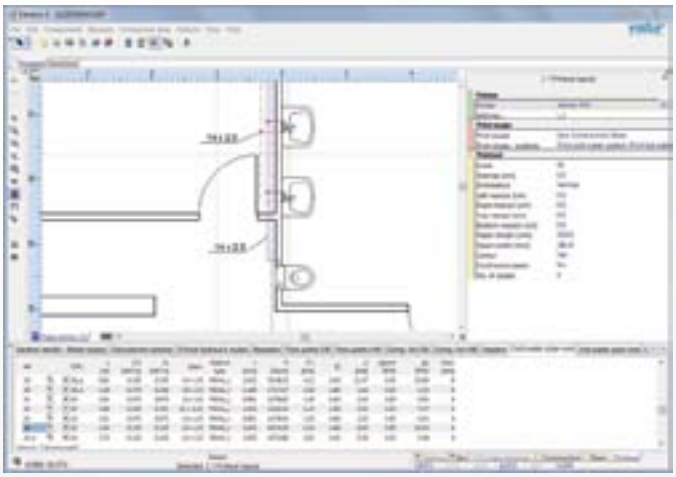
SILVESTRO SOFTWARE

The design of floor and radiator heating systems, water supply as well as waste and drainage systems, is extremely easy and the production of the project technical documents is rapid when using the Silvestro software program.

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

- rapid learning curve thanks to a simple and intuitive interface;
- completely graphic background that facilitates input of the project details;
- automatic drawing of the loops in the floor radiant systems;
- automatic repositioning of the stack points on the plan view;
- generation of calculation reports that are exportable in an .xls format;
- import and export of files in .dwg format;
- immediate update of software with a guided procedure;
- creation of complete bill of materials from the project files.





QUALITY AND SUSTAINABILITY

Efficient processes and reliable products are not the only parameters used to evaluate a company's conduct: today, in fact, the capacity of the company and its management team **to design and implement production processes that are sustainable from an environmental point of view** are of equal importance.

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

The consistency of Valsir's commitment is demonstrated by its **product approvals** which amount to **170** in total, obtained around the world from the most severe certification bodies (figure updated on 01/07/2015), and by the **certified quality system** in compliance with the European Standard **UNI EN ISO 9001:2008**.

Production processes and management systems that are verified, monitored and certified.

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

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

Recyclable products and low impact production processes in line with the Green Building principles.

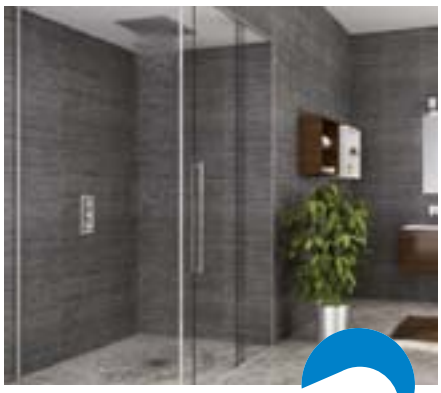
THE VALSIR RANGE

WASTE SYSTEMS

SUPPLY SYSTEMS

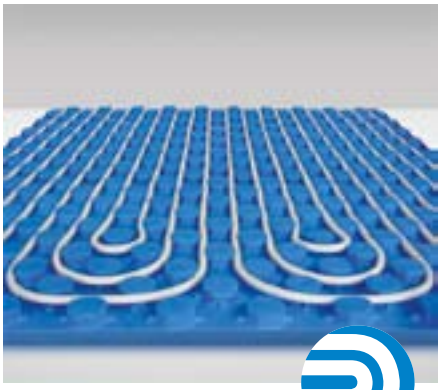
GAS SYSTEMS

FLUSH CISTERNS



BATHROOM SYSTEMS

TRAPS



RADIANT SYSTEMS

DRAINAGE SYSTEMS

ACADEMY

L02-544/1 – Luglio 2015

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

MADE IN ITALY

QUALITY SYSTEM CERTIFICATION DNV·GL ISO 9001

valsir®
QUALITY FOR PLUMBING