

PP3

**Push-fit waste and drainage
system inside buildings**

MADE IN ITALY



valsir[®]
QUALITY FOR PLUMBING



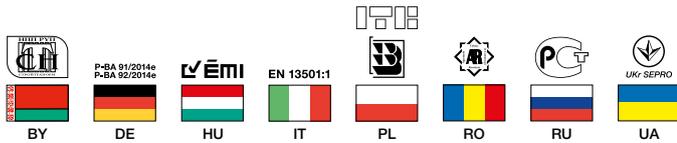
The Kingsbury Hotel - Colombo (Sri Lanka)



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

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 1451-1 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

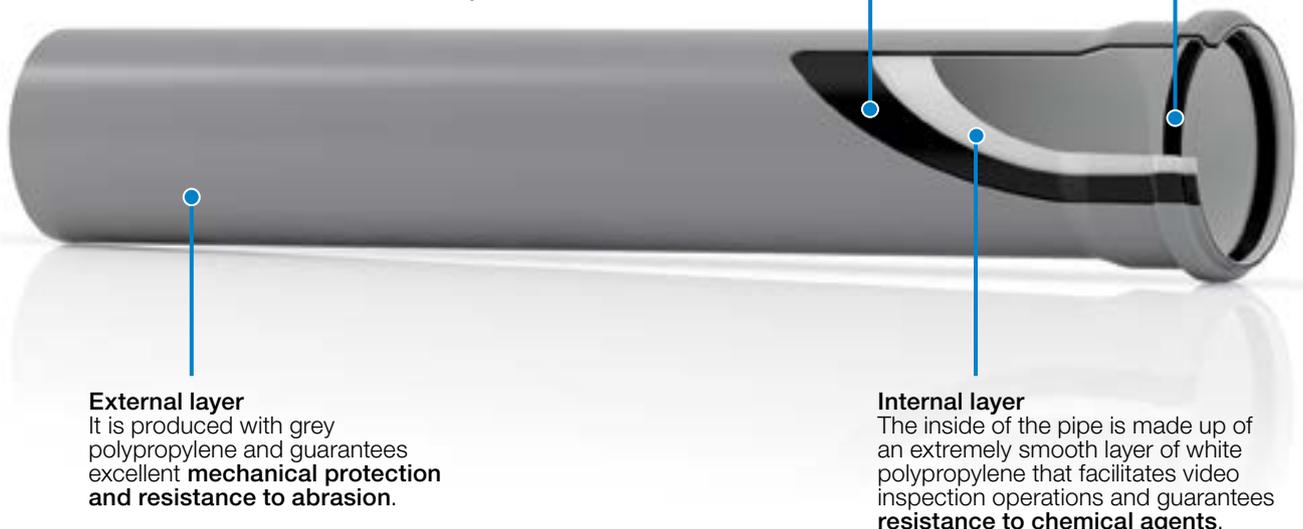
- **Light weight and ease of installation** on site without special tools, thanks to the push-fit connection. Furthermore, the push-fit socket does not require the use of harmful glues or solvents.
- Excellent sound insulating performances: 17 dB(A) with a flow rate of 2 l/s in compliance with EN 14366 (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.

Intermediate layer

It's made of a mix of polypropylene and mineral loads that offers a significant **mechanical resistance** even **at low temperatures**.

Push-fit socket with lip seal

The push-fit socket is fitted with a lip seal that guarantees the hydraulic tightness and free movement of the pipe in the event of thermal expansion. The geometrical characteristics of the socket ensure a fast and easy installation.



External layer

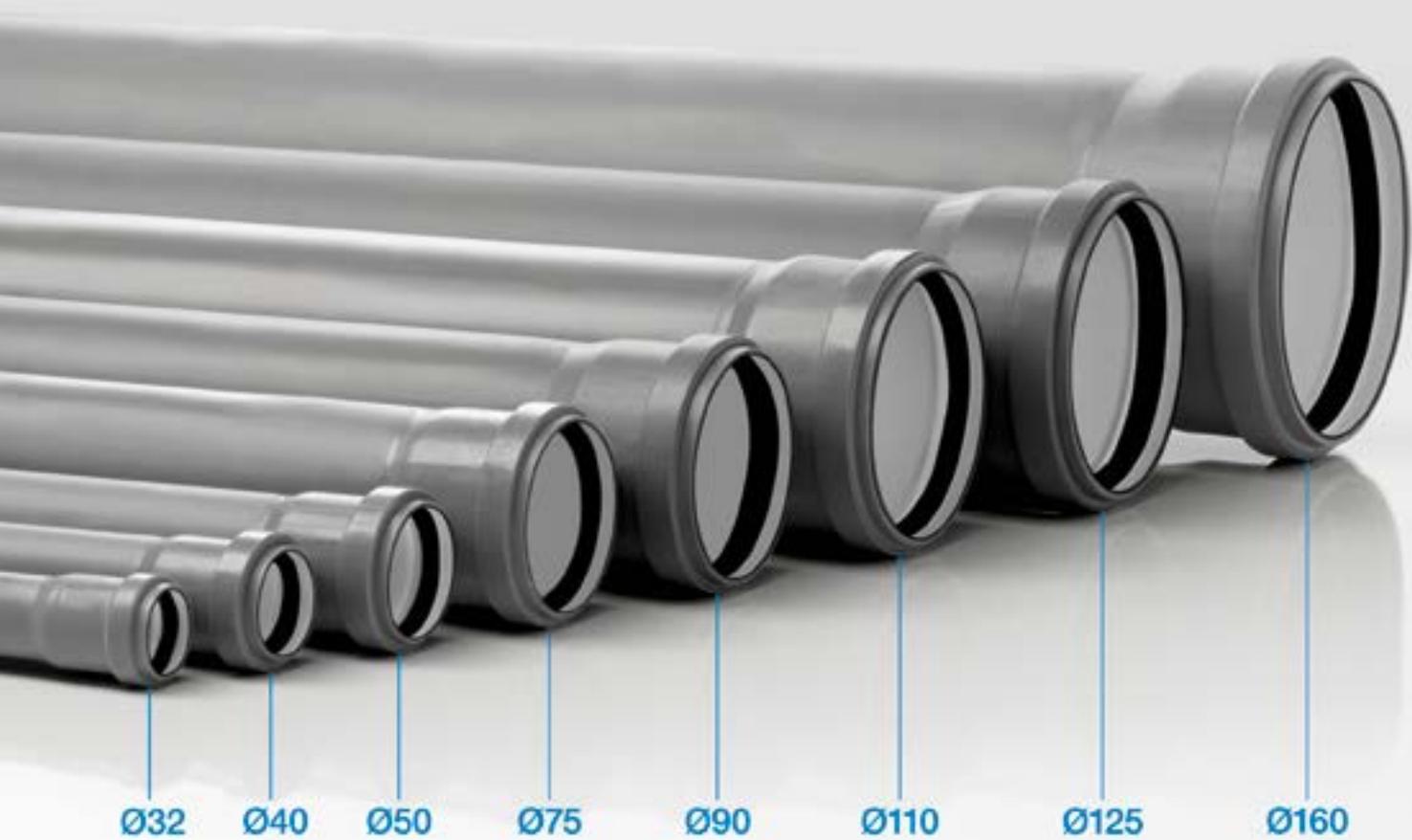
It is produced with grey polypropylene and guarantees excellent **mechanical protection** and **resistance to abrasion**.

Internal layer

The inside of the pipe is made up of an extremely smooth layer of white polypropylene that facilitates video inspection operations and guarantees **resistance to chemical agents**.

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**.



GTC 41 - Belgrado (Serbia)

THE BEST SOUNDPROOFING PERFORMANCE IN ITS CATEGORY

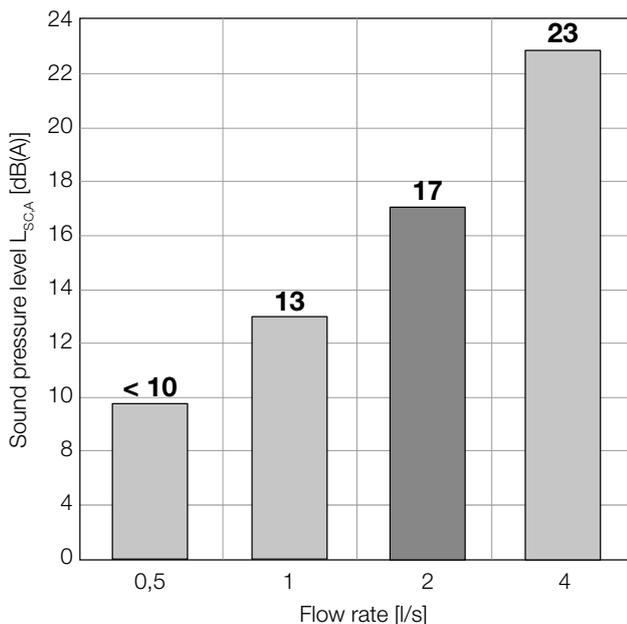
When a waste system is called into action, noises are generated inside the pipelines, causing them to vibrate from the fall of the liquid being discharged.

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.

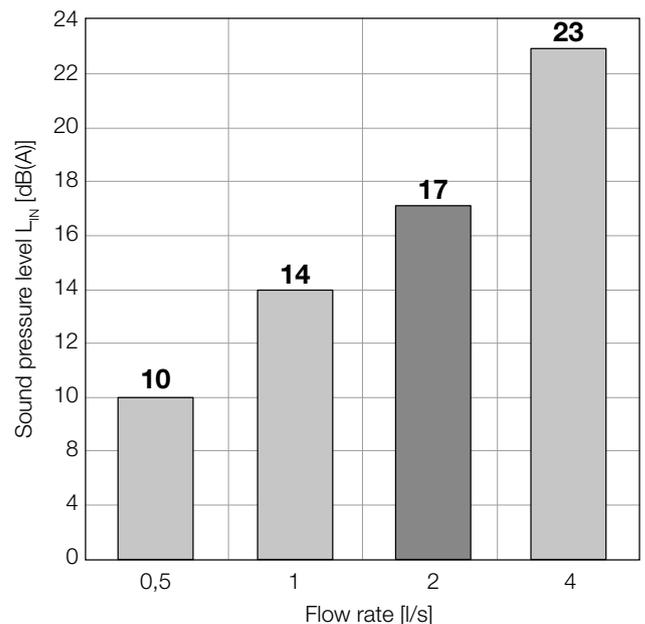
To limit noise levels in waste and drainage systems, not only should the system be designed properly and the waste circuit mounted correctly but it is also important to choose a drainage system with elevated soundproofing performance.

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 92/2014e in accordance with EN 14366.
Certificated P-BA 91/2014e 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 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 through 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 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



Signature Lux Hotel - Johannesburg (South Africa)



Zazerkalie housing estate - Samara (Russia)



Peles Castle - Sinaia (Romania)



Pendergardens - St. Julian (Malta)



The Elements - Colombo (Sri Lanka)

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.

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 01/05/2022), 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



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