

TRIPLUS

**Triple layer soundproof
waste and drainage system
inside the buildings**

MADE IN ITALY



valsir®
QUALITY FOR PLUMBING

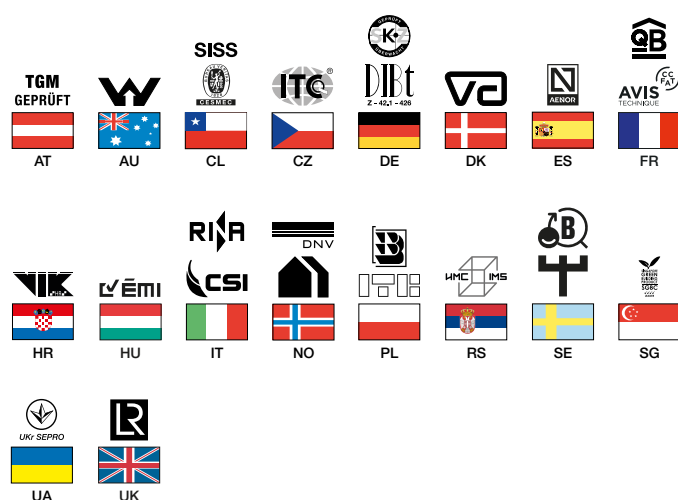


Traveltime Hotel
(Singapore, Singapore)



Triplus®, the evolution of push-fit waste and drainage systems

The market's increasing attention to waste and drainage systems, in particular to the correct design of systems and to their hydraulic performance, convinced Valsir to create a particularly innovative product line.



The Triplus® pipes are in fact made up of three layers of material, which, when joined, result in a system with extremely good mechanical characteristics, even at low temperatures, and an excellent soundproofing performance.

Triplus® is a push-fit system that includes triple layer pipes, fittings and accessories, industrialized, produced and patented by Valsir, that guarantees the levels of low noise emissions of waste systems required by the regulations, laws and standards in force.



Triplus® is manufactured in compliance with European Standard EN 1451 and can be used **for waste and drainage systems** at low and high temperatures, ventilation systems for waste and rainwater networks **inside buildings for residential and industrial use, hospitals and hotels.**

The wide range of pipes, fittings and accessories allows construction of the entire waste network, the branches of the sanitary fixtures, the stacks, waste manifolds, etc.

MADE IN ITALY

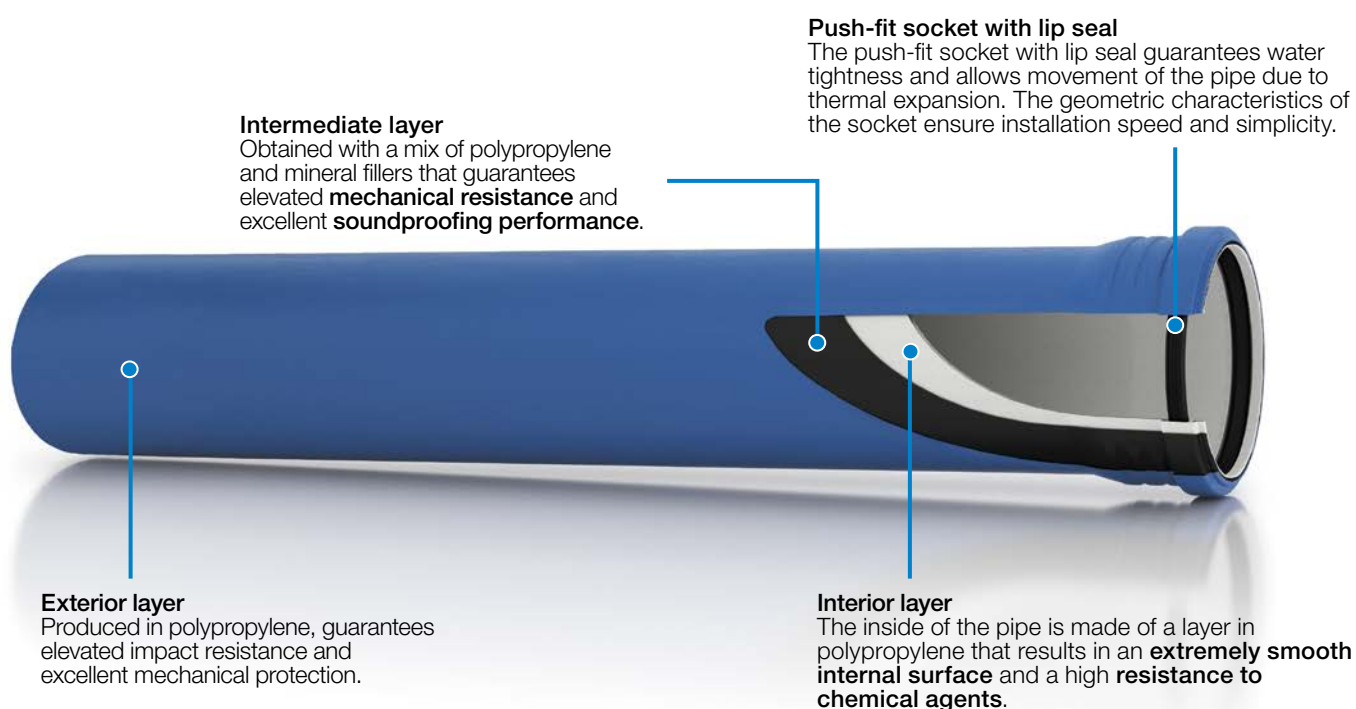


Tentrem Hotel Jakarta
(Jakarta, Indonesia)

CHARACTERISTICS OF EXCELLENCE

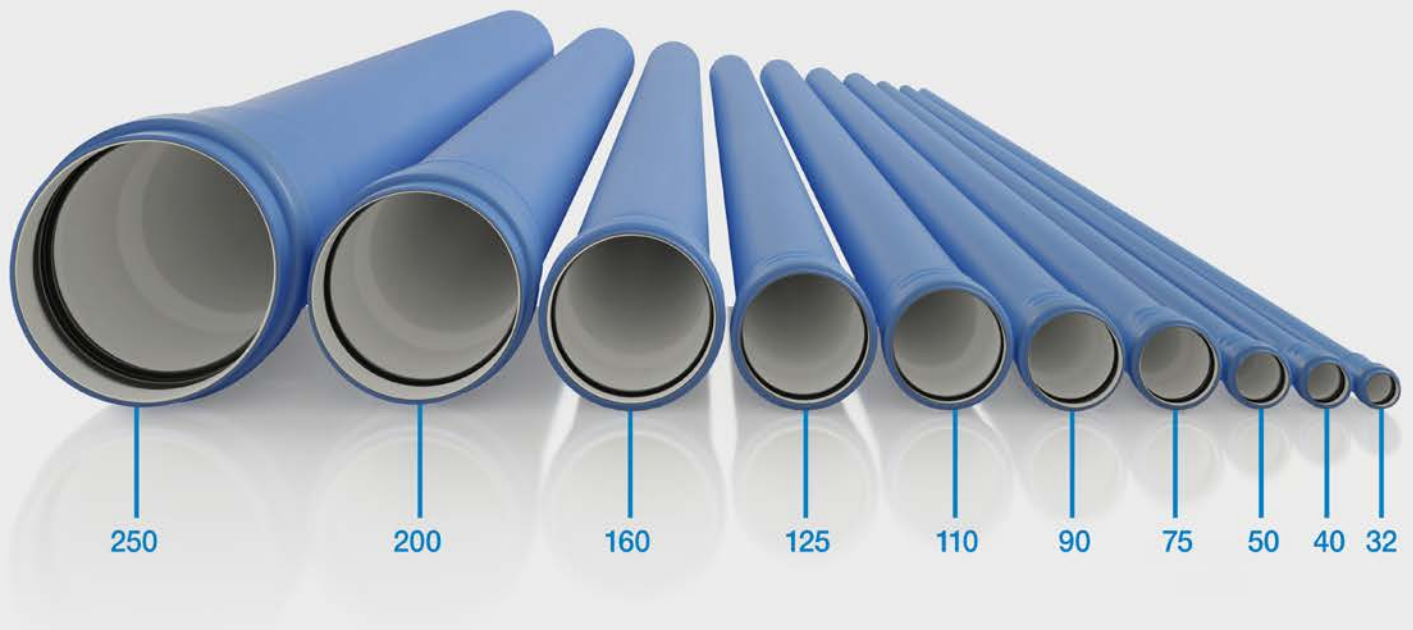
The advantages of using the Triplus® waste system

- **Speed and extreme ease of installation** on site without the use of special tools, thanks to the push-fit connection. The socket connection, moreover, does not require the use of glues or harmful solvents.
- Excellent soundproofing performance: measured in the Fraunhofer laboratories in Stuttgart, in compliance with European Standard EN 14366, **less than 10 dB(A) at a flow rate of 2 l/s and 12 dB(A) at a flow rate of 4 l/s** (certified P-BA 105/2024).
- High impact resistance at extremely harsh temperatures **down to -25°C**.
- Resistance to intermittent discharges at **temperatures as high as 95°C**.
- The pipes are made up of three layers of material joined together to guarantee **elevated mechanical resistance**.
- **High chemical resistance** to substances dissolved in civil and industrial waste waters.
- Wide range of transition fittings for connection to other waste systems in cast iron, PE, PP, PVC.
- Wide range of diameters from **DN 32 mm to DN 250 mm**.
- The product, its recyclability and the production processes are based on Green Building principles which promote respect for the environment and the conservation of natural resources.



The intermediate layer is made from a **patented mixture of polypropylene and mineral fillers** that gives the Triplus® system excellent mechanical properties even at low temperatures (impact resistance down to -25°C).

The Triplus® waste system can transport waste waters with PH values between 2 and 12, it has a high resistance to the most common chemical compounds and is characterised by an extremely smooth internal surface that prevents the build-up of internal deposits inside the waste network.



Eco-sustainability

Valsir Triplus® 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 discharge system Valsir Triplus® according to the LCA analysis, or rather “cradle-to-grave”.

This means having monitored and improved not only the production processes: these systems are optimized 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!

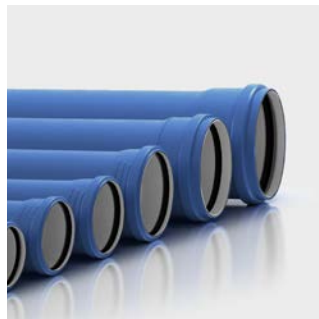


AN EXTREMELY WIDE RANGE

The range is composed of pipe lengths between 150 mm and 3 m and is characterised by a wide choice of fittings and accessories that allows the construction of the most varied system configurations.

The smaller diameters such as 32, 40 and 50 mm are used for the branch pipe connections on each floor, while the larger diameters such as 250 mm are used for the waste manifolds.

The range is completed with accessories for the connection to other Valsir waste systems and pipe clips, which, when fitted with anti-vibration rubber, allow reduction of the vibrations that are transferred to the installation walls when the waste system is in use.



Technical and aesthetic improvements

The tubes and fittings have been updated with advanced details to improve mechanical and aesthetic performance.

The cup areas feature raised protrusions that increase handling and improve acoustic and mechanical characteristics.

The body of the fittings has also been fitted with similar protrusions to optimise resistance to impact from waste flow.

To simplify installation, positioning lines have been added to the outside of the socket and the body of the fitting, thus facilitating alignment and the angle of rotation during assembly.

ADVANCED SOLUTIONS



Valsir was the **first company that supplied a triple layer waste system with a VBF (Ventilation Branch Fitting System)**. This is the ideal solution in high-rise buildings with a high simultaneous use factor of the sanitary appliances.

This innovative waste system guarantees excellent ventilation of the stack and branch connections on each floor thus limiting pressure fluctuations within the system.

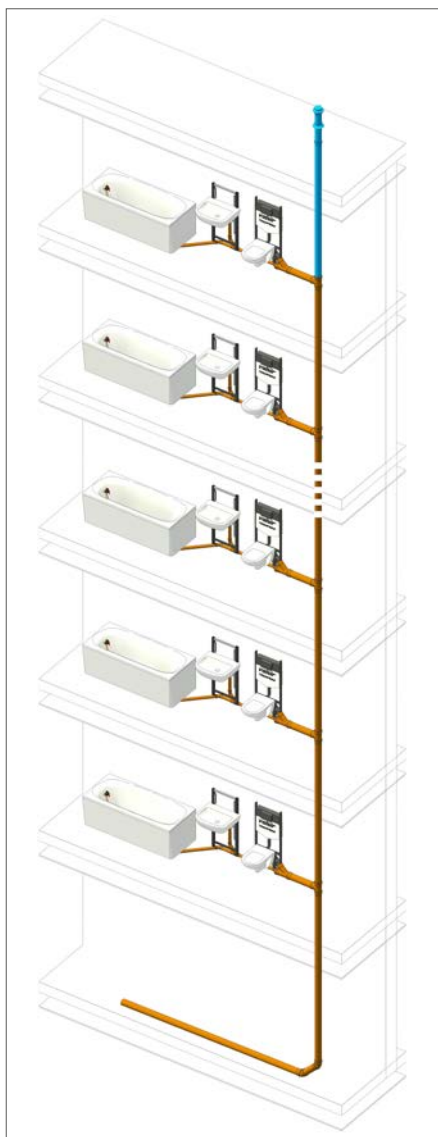
This system allows great advantages and huge savings thanks to the possibility of creating single stacks (therefore without need for parallel ventilation) in the **diameters 110 mm and 160 mm with waste capacity more than three times** that of primary ventilation systems.

The ideal solution for high rise buildings

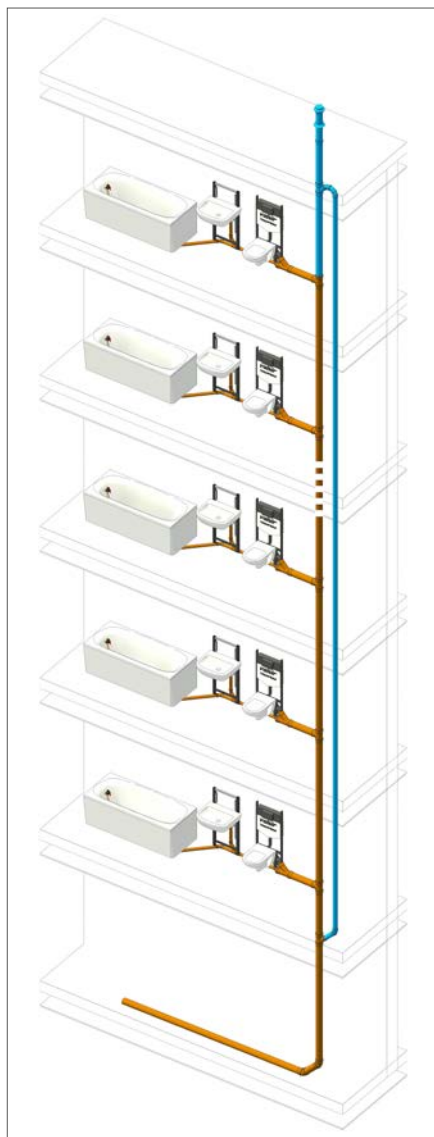
- **One soil stack**, no separate ventilation pipes required.
- **Increase in stack load** in comparison with conventional systems.
- **Reduction in speed** of effluents.
- **Excellent ventilation** of the stack and branches of each floor.
- **Up to 6 connections** on one branch fitting.
- **Up to 100 flats** with VBF 110 and **up to 448 flats** with VBF 160 connected to the same waste stack.

Waste systems with Triplus® VBF (Ventilation Branch Fitting System) allow greater stack loads than any other waste system (systems with primary ventilation, systems with direct or indirect parallel ventilation, systems with secondary ventilation).

System with primary ventilation

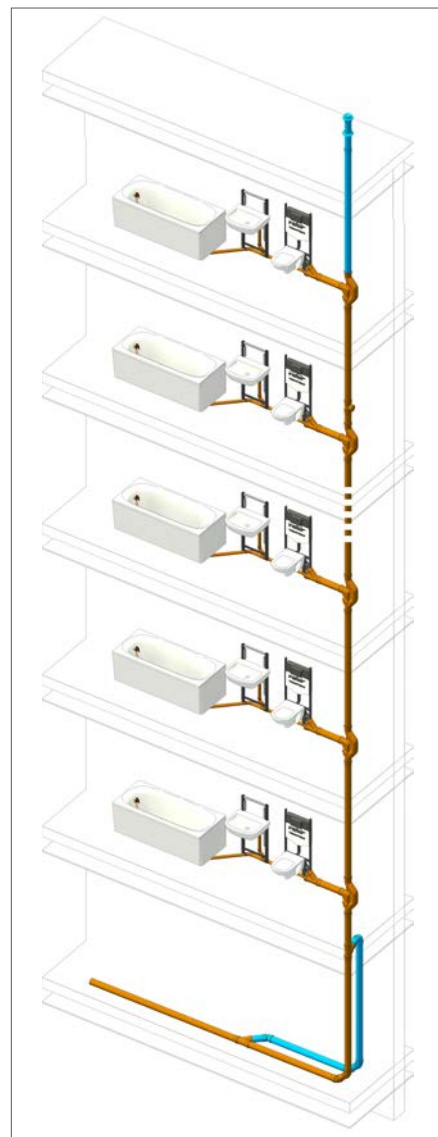


System with parallel ventilation

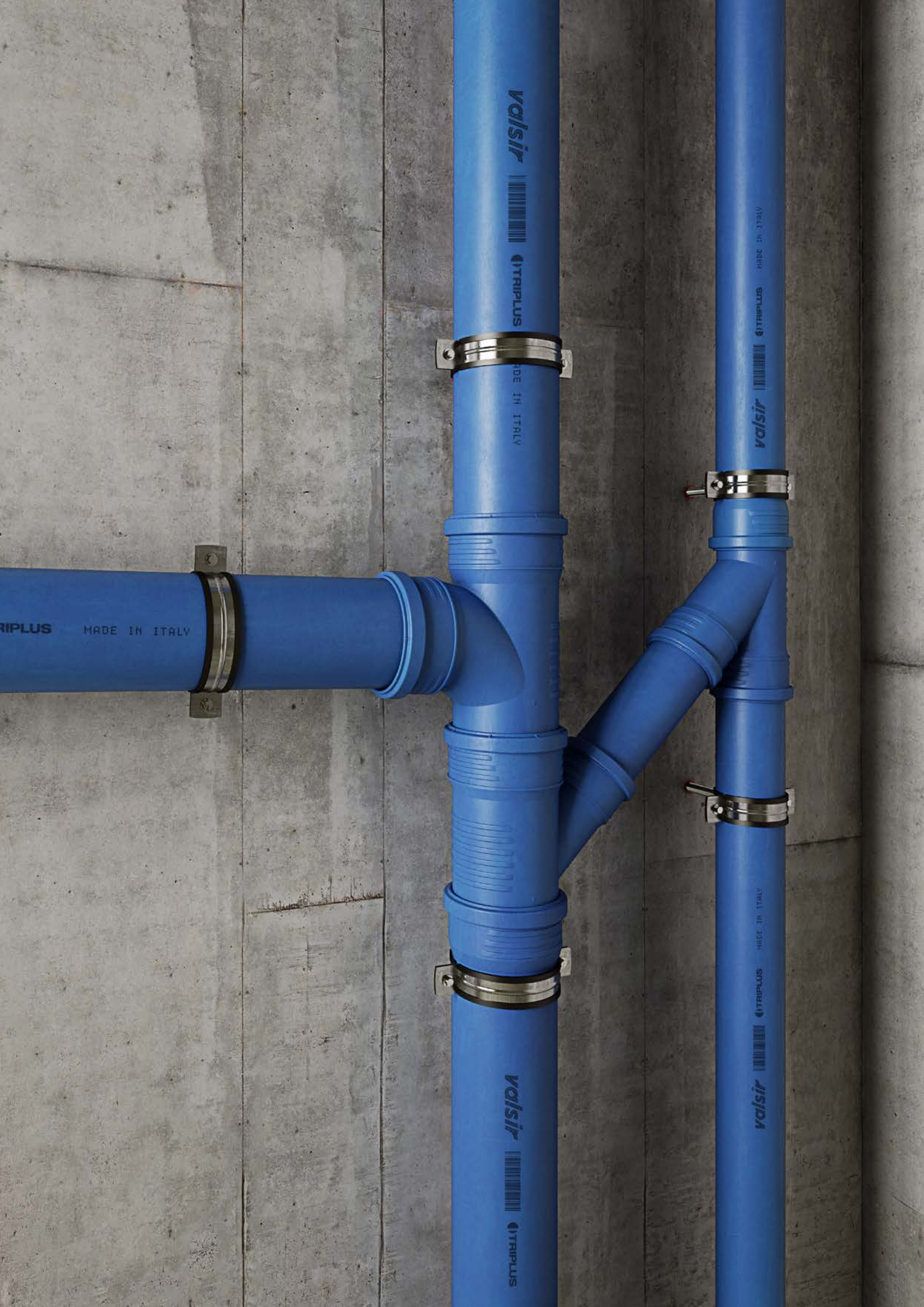


Drainage capacity **40% greater** than systems with primary ventilation.

System with VBF



Drainage capacity **325% greater** than systems with primary ventilation.



SIGNIFICANT ACOUSTIC PERFORMANCE

When a waste system is in use, noises are generated inside the pipelines causing it to vibrate from the fall of the liquid being discharged.

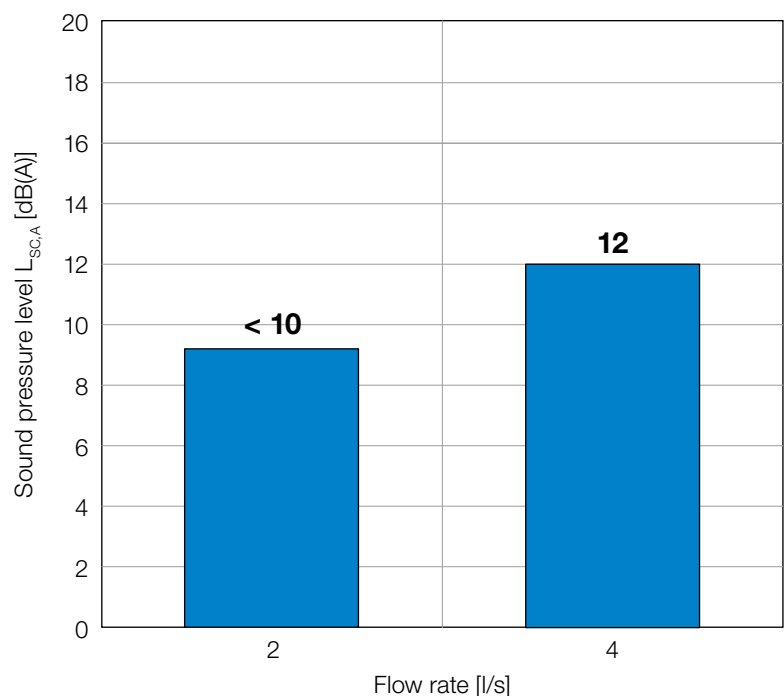
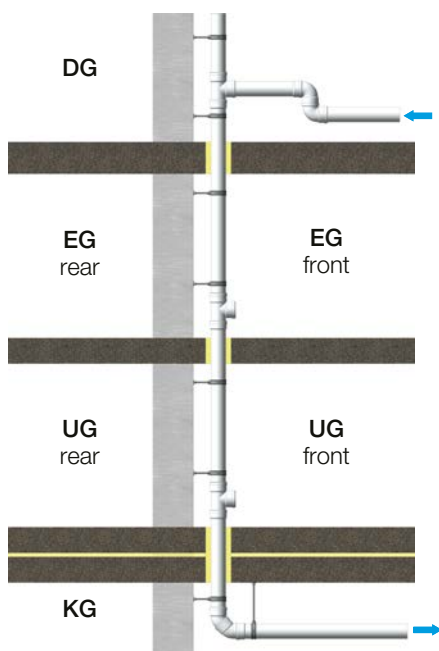
Most of the noise generated spreads inside the pipe but the vibrations that are generated are transmitted from the walls of the pipe to the surrounding area and to the bracketing systems and consequently to the building structure.

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

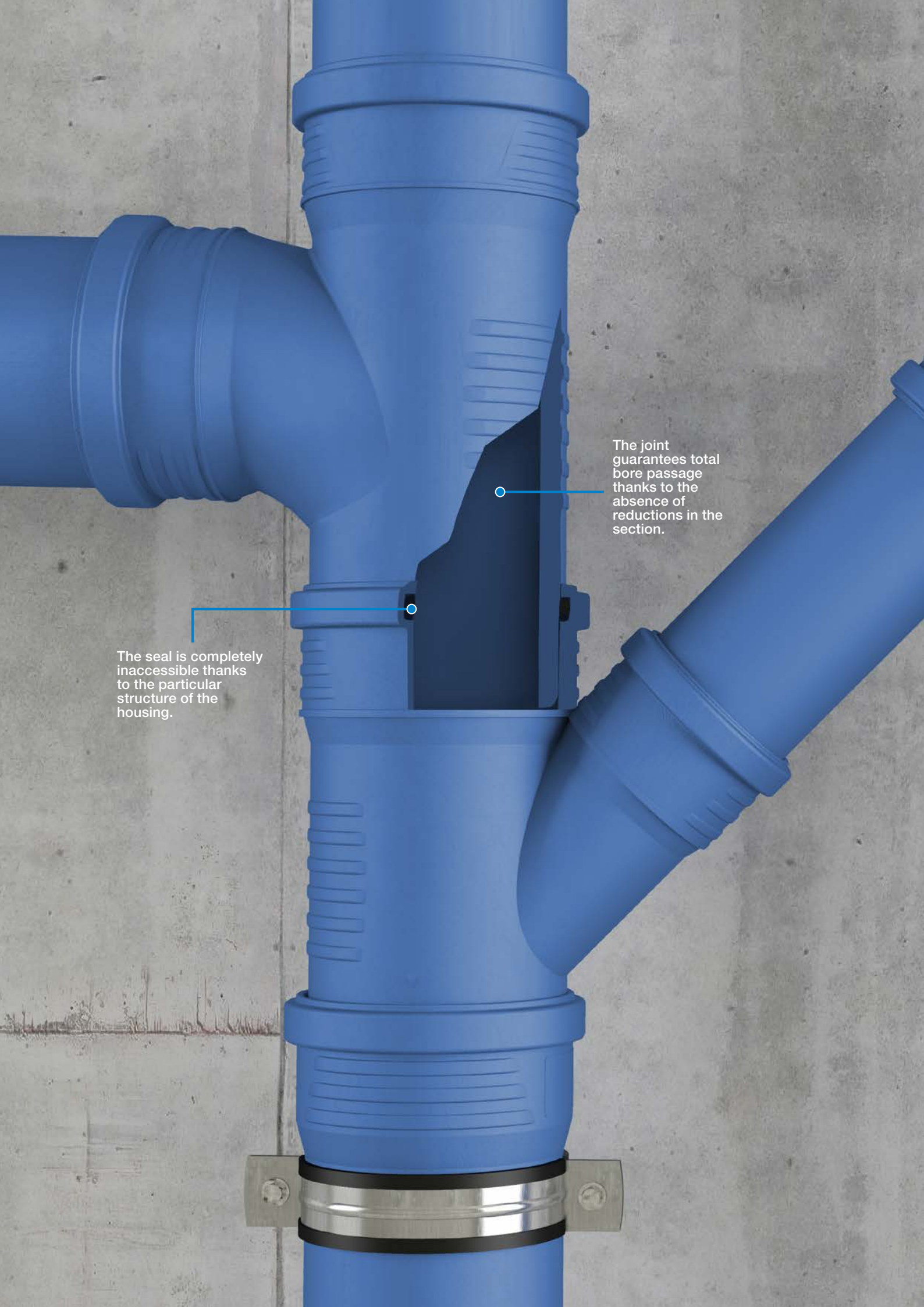
Triplus® allows waste systems to be installed that guarantee excellent soundproofing performance, **with 2 l/s (typical waste from a toilet), noise levels of less than 10 dB(A) are measured.**

The extraordinary soundproofing performance of Triplus® have also been demonstrated by laboratory tests conducted at the CSIRO Australian complying with the requirements of the Building Code of Australia.

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



Certificate P-BA 105/2024 in accordance with EN 14366.



The seal is completely inaccessible thanks to the particular structure of the housing.

The joint guarantees total bore passage thanks to the absence of reductions in the section.

PUSH-FIT JOINTS, INSTALLATION EASE AND RAPIDITY

Triplus® ensures practical and rapid installations without the use of glues, electrical appliances or special tools, thanks to the push-fit jointing system.

The special geometry of the seal and the push-fit socket guarantee total water tightness and allow the normal movements of the pipeline including those caused by thermal expansion.



A system suited to temperature fluctuations:
thermal expansion of Triplus® is extremely low in comparison with other more common plastic materials: a 3 m pipe expands by just 9 mm when the flow of liquid is at a continuous temperature of 60°C.

It is thanks to its low coefficient of heat expansion that the push-fit joints are capable of absorbing the variations in pipe length, without the need to take any particular measures; simply follow the installation instructions indicated in the Valsir technical handbooks.



The bi-joint sleeve to minimise waste

In order to make use of pipe cut offs that would otherwise be discarded, Valsir supplies the bi-joint sleeve. This is a special fitting that allows plain ended pipes to be connected guaranteeing water tightness without penalising waste flow rates.



Altair
(Colombo, Sri Lanka)

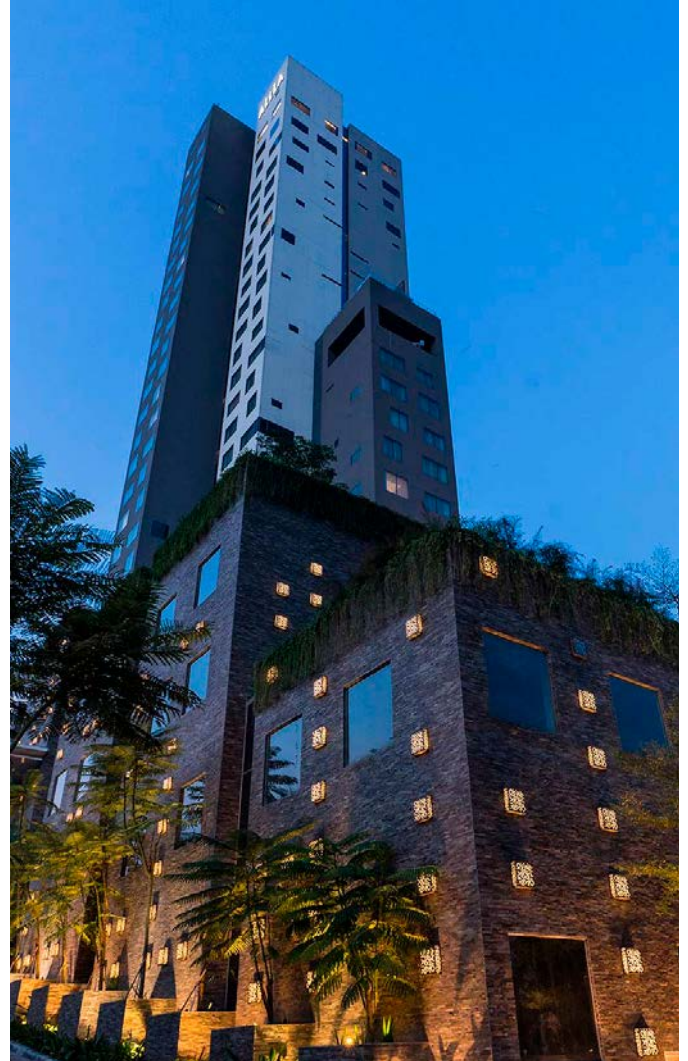
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Botín Centre (Santander, Spain)



Alila Hotel (Solo, Indonesia)



Crown Plaza Hotel (Muscat, Oman)



Home Limassol (Limassol, Cipro)



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

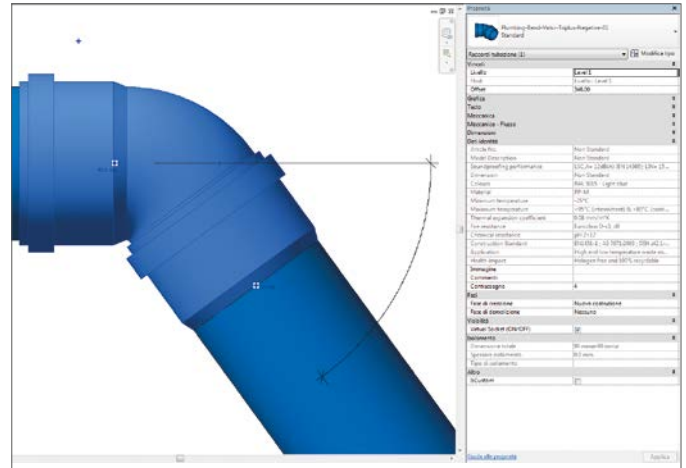
Valsir has an important training facility - **Valsir Academy** - dedicated to clients, distributors, plumbers and planners that provides perfectly equipped courses, both theoretical and practical on the use and the design of plumbing and heating systems. Courses are provided both inside the training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

VALSIR IS BIM-READY

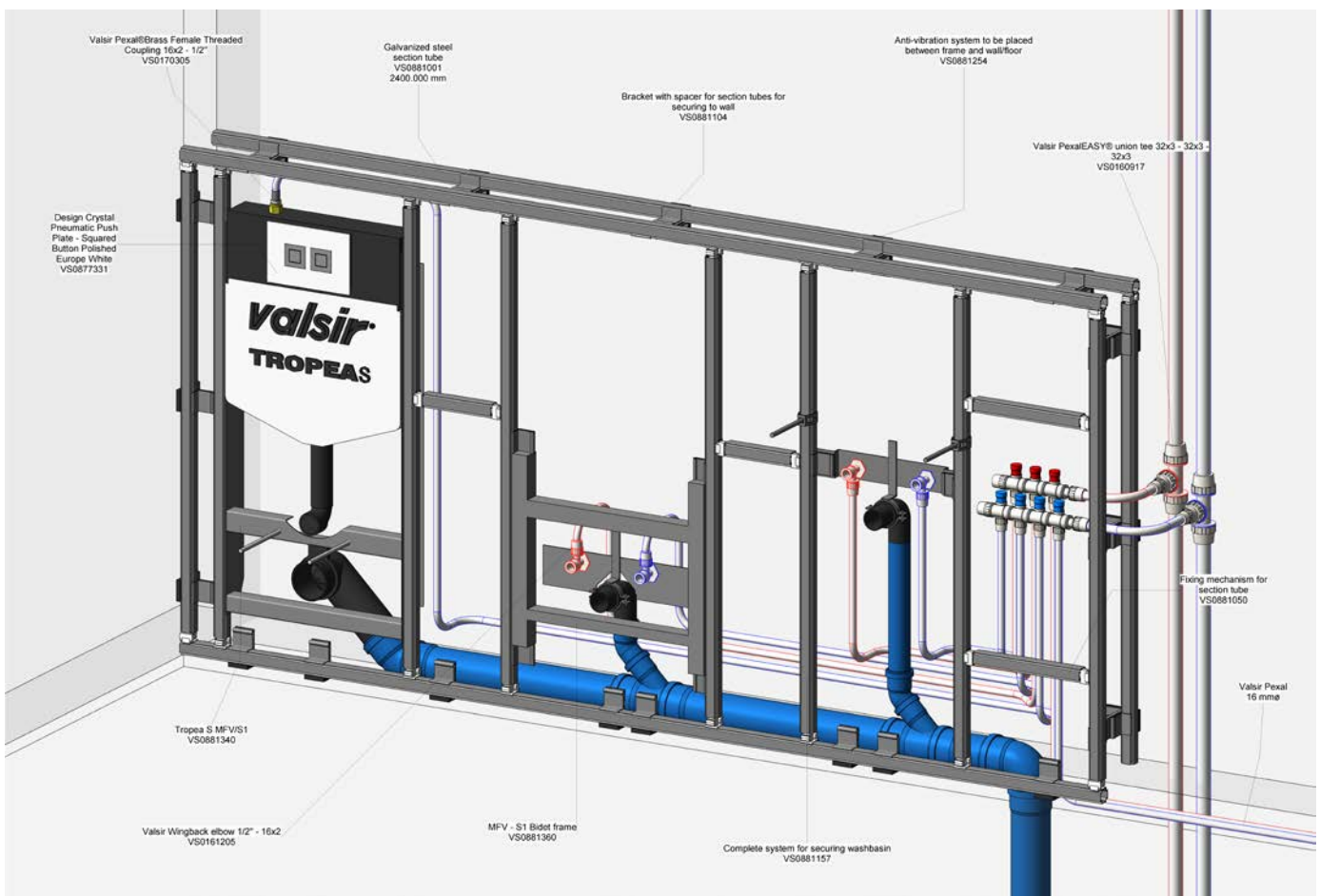
Valsir has adopted the BIM philosophy, the modelling process that allows to improve planning, design construction and management of buildings, aligning with the industry transition to digital building modelling.

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 high-quality products is demonstrated by over **350 product approvals** obtained worldwide from the most stringent certification bodies (data updated to 01/07/2025), by a Quality Management System (QMS) certified in accordance with the **UNI EN ISO 9001:2015** standard, and by the Energy Management System (EMS) certified according to the **UNI EN ISO 50001:2018** standard.

Valsir S.p.A. has further demonstrated its environmental commitment by obtaining **ISO 14001:2015** certification.

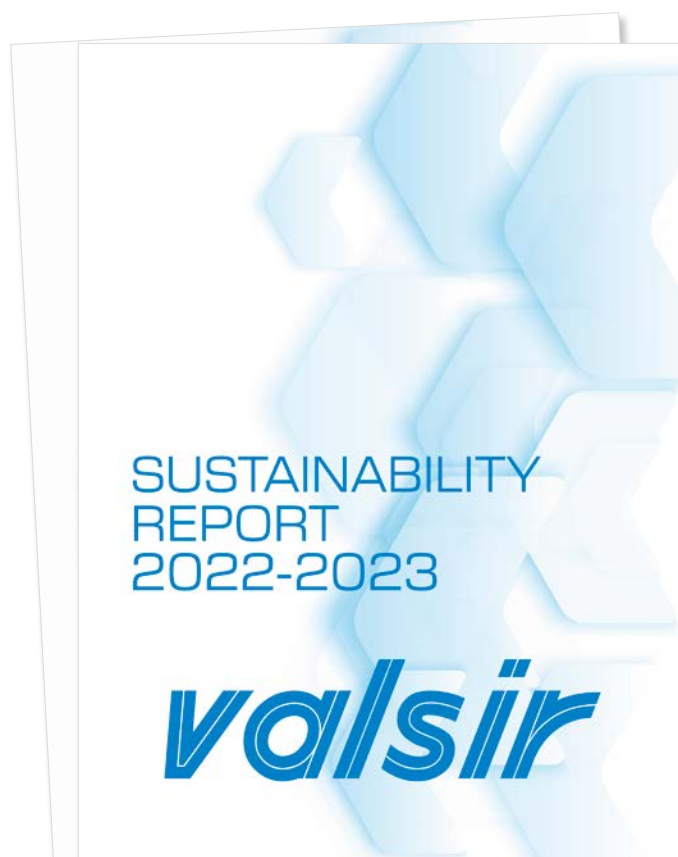
Since 2019, an innovative facility has been in operation, which, integrated with the already installed photovoltaic park, produces over 30% of the electricity required for Valsir's manufacturing plants. This is a trigeneration system powered by methane gas, capable of producing electricity, steam, and cooling energy.



Sustainability

Efficient processes and reliable products are no longer the only criteria for evaluating the quality of a company's operations. Today, an equally decisive factor is the ability of the company and its management to design and implement production processes that are environmentally sustainable.

Valsir has launched a Corporate Social Responsibility (CSR) project, which includes the creation of a Sustainability Report. This report gathers information and data on the company's daily commitment in the social, economic, and environmental fields.



Download

www.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



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Soggetta all'attività di direzione e coordinamento ex art. 2497 bis C.C.
da parte di Silmar Group S.p.A. - Codice Fiscale 02075160172

L02-634/4 - Luglio 2025

