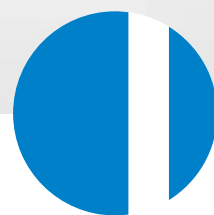


COLLARWINGS



**The new passive fire
protection system**



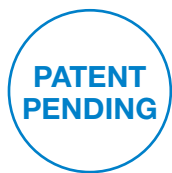
MADE IN ITALY

valsir[®]
QUALITY FOR PLUMBING



Detail of the special metallic elements closing (reinforcing flaps)

Valsir Collarwings, the new passive fire protection system



Tested By CSI - Italy

Valsir Collarwings is the new range of fire stop collars produced in compliance with the most recent standards and suitable for installation on plastic waste and drainage pipes. The Collarwings fire stop collars are made of steel and painted with polyester powder fitted with special intumescent inserts which, in the event of fire, expand and squeeze the pipe thus preventing the passage of flames, combustion gas and vapours and acting as a thermal insulation.

The collars can be installed either in a vertical wall or in the slab and they have a fire resistance **class of EI240 in compliance with European Standard EN 1366-3**.



The resistance and insulation of at least 240 minutes (4 hours) are guaranteed by the presence of special metal elements (reinforcing flaps) that increase the effectiveness of the two types of intumescence which, when combined, provide high expansion reactivity and high mechanical resistance over time. The latch mechanism and wide base plate with holes guarantee simple positioning and quick installation.

MADE IN ITALY

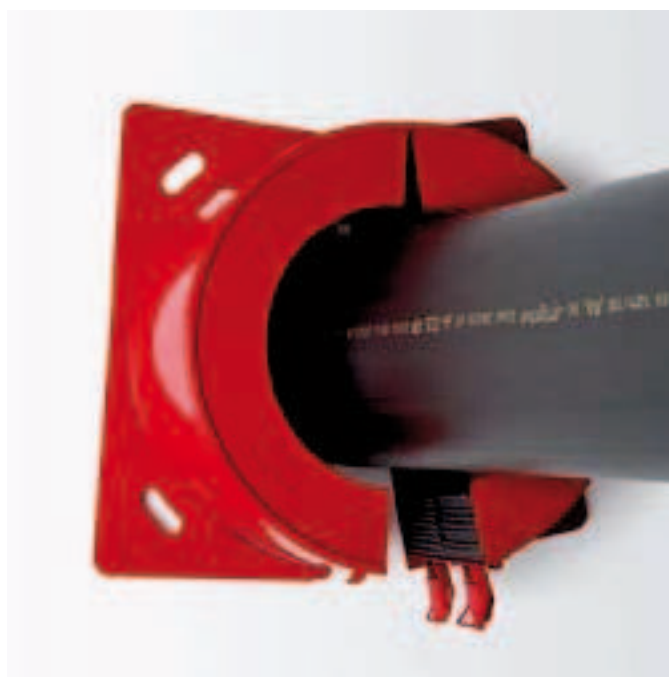


RELIABLE PROTECTION

- **Resistance class EI240** in compliance with standard EN 1366-3, the equivalent of a resistance to fire and combustion gas and a thermal insulation of at least 4 hours.
- **Range of diameters from 32 mm up to 160 mm.**
- Can be installed in a vertical wall and in the ceiling.
- Can be used on ventilated and non ventilated waste pipes and on rainwater drainage pipes.
- **Suitable for a wide range of pipes** (PP, HDPE, ABS, SAN+PVC, PVC-C, PVC-U) and soundproof systems (Triplus®, Silere®).
- **Simple and quick installation** thanks to the latch mechanisms and pre drilled base plate.
- **Can also be fitted to existing pipelines.**
- **Tested** in compliance with EN 1366-3 on a standard **wall in cellular concrete** (reports CSI1917FR and CSI1862FR) **and in reinforced concrete slab** (report CSI1915FR).



Latch mechanism for ease of closure



Installation on existing pipes

OPERATING PRINCIPLE

In the event of fire the intumescent material contained in the collar expands forming a “plug” thus cutting off the fire and preventing gas and fumes from spreading.



The special closure elements (reinforcing flaps) increase reactivity and efficiency of the system by completely squeezing the plastic pipe during the melting phase.

Phase 1

During the first phase of the fire the plastic pipe melts and the intumescent inserts expand. The first is more reactive and acts immediately, the second, which expands at a higher temperature results in a high performance over time.



Phase 2

During the next few minutes the intumescent elements of the collar occupy the entire section left free by the plastic pipe that is in the process of melting. The intumescent inserts expand and act on the closure elements (reinforcing flaps) bringing them to the position of exposure to the fire.



Phase 3

The intumescent inserts shut off the hole entirely in a sufficient period of time so that the fire does not spread to other areas. During this phase the closure elements (reinforcing flaps) are completely oriented and, as well as acting as a “container” for the expanded intumescent material, create another metal barrier against the fire.

The innovative design methods and attentive research activity have enabled the Collarwings collars to reach the EI240 classification, both in wall

installations and in the slabs for different types of pipes and with a range of sizes from Ø 32 mm to Ø 160 mm.

The Collarwings collars were tested in the U/U (Open/Open) arrangement, that is with the pipes open both on the side exposed to the fire and the side not exposed to the fire.

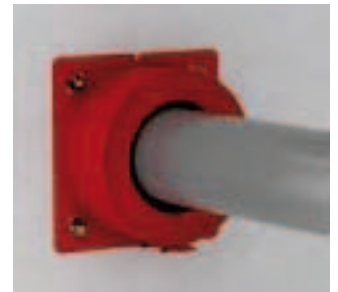
This is the most demanding layout and if passed allows the collars to be used in all applications as provided for in standard 1366-3.

Testing arrangement	Side exposed to fire	Side not exposed to fire	Application for waste and rainwater drainage pipes in plastic
U/U	Open	Open	Applicable on any type of ventilated and non ventilated plastic pipe
C/U	Close	Open	n.a.
U/C	Open	Close	Applicable only on plastic non ventilated pipes
C/C	Close	Close	n.a.

Valsir Collarwings can therefore be fitted on to a wide range of pipes of different diameters and types of plastic material, making it an extremely versatile and high performing product.

Collarwings can be installed on the following range of pipes:

- HDPE, high density polyethylene for drainage inside the building.
- PP, polypropylene for drainage inside the building.
- Triplus®, triple layer soundproof waste system for drainage inside the building.
- Silere®, soundproof waste system for drainage inside the building.
- ABS, SAN+PVC, PVC-C, PVC-U for drainage inside the building.



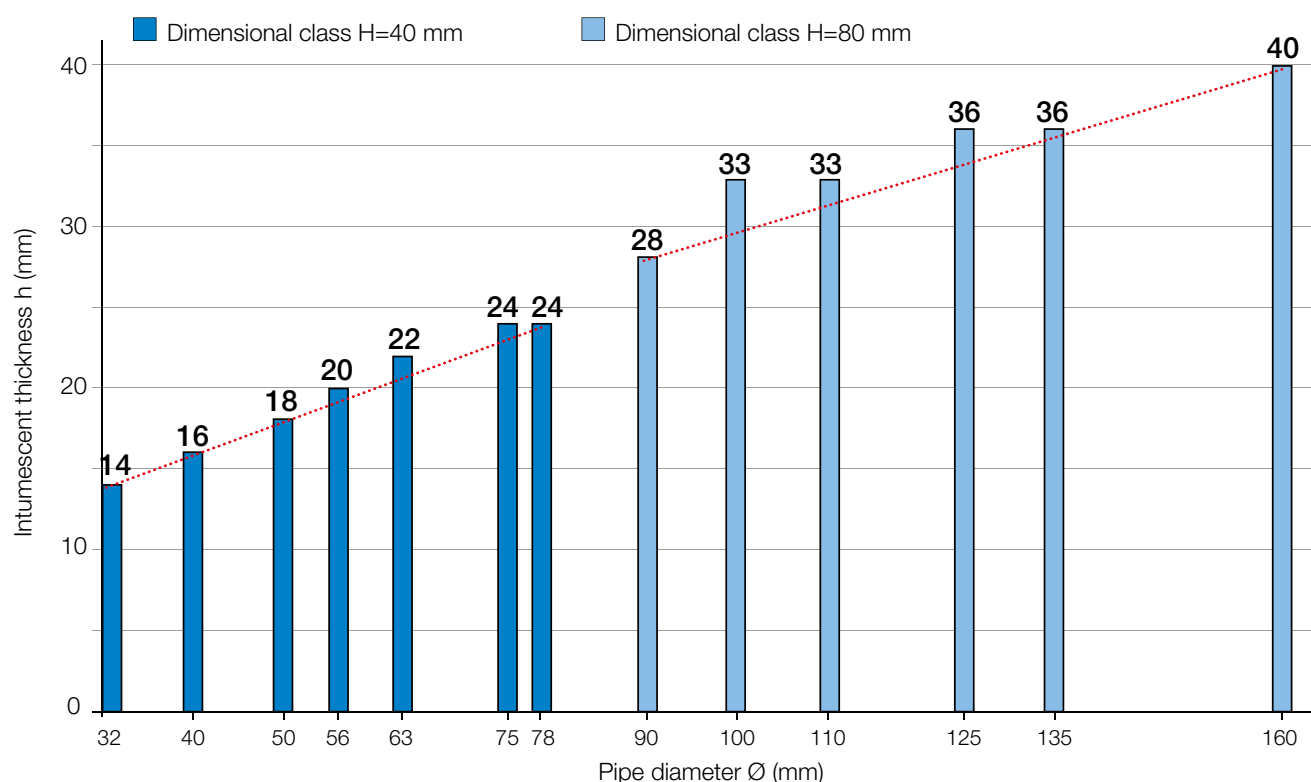
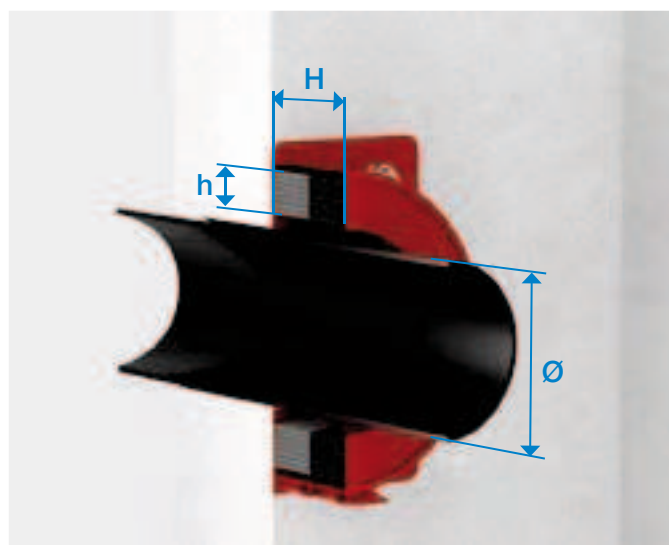
TEST RESULTS

The European standards EN 1363-1 and EN 1366-3 defines the standard test criteria applicable to fire collars and introduce requirements that must be met in order to ensure the proper functioning of the passive safety system.

The UNI EN 1366-6 observes that it is of primary importance in addition to the configuration of the collar also the fire classification of the pipe and its scope (ventilated and non- ventilated waste pipes and rain water drainage pipes etc.) in addition to the type of wall and its orientation (rigid wall, flexible wall, slab).

The Collarwings collars are produced in 13 different diameters and they are featured by intumescent inserts having thicknesses that meet the constraints imposed by current legislation and ensure the performance achieved thanks to a severe test campaign.

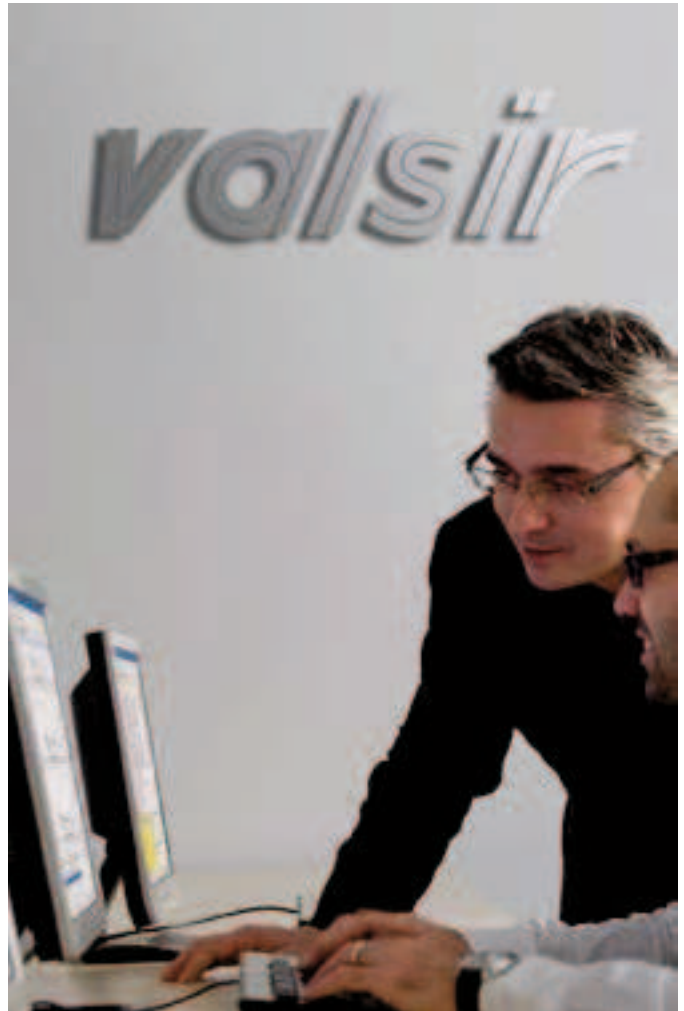
Always refer to the scope of direct application reported in the classification report freely downloadable from the website or ask to technical support.



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.

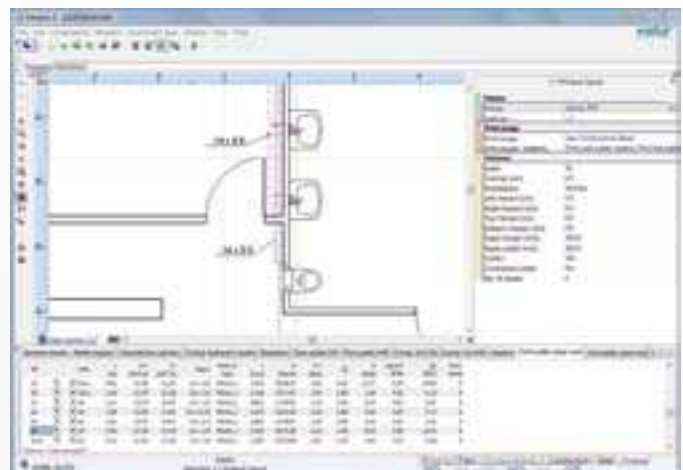
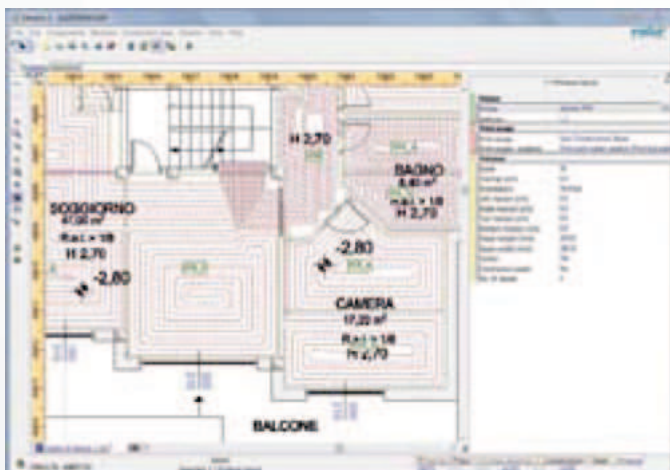


SILVESTRO SOFTWARE

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.



valsir

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 11/09/2013), 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



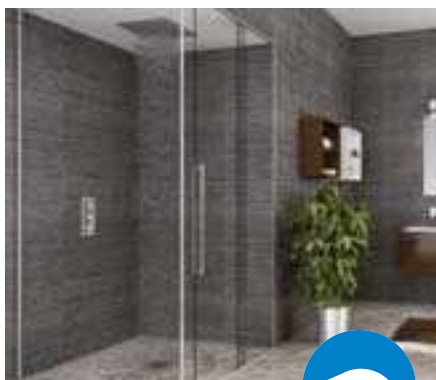
SUPPLY SYSTEMS



GAS SYSTEMS



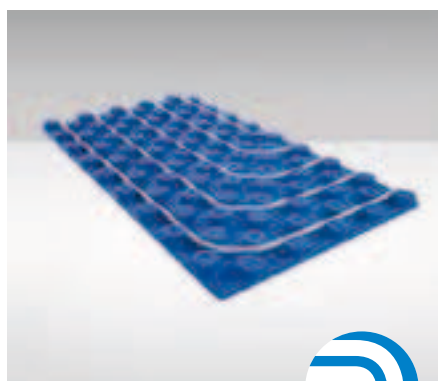
FLUSHING SYSTEMS



BATHROOM SYSTEMS



TRAPS



RADIANT SYSTEMS



DRAINAGE SYSTEMS



ACADEMY



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