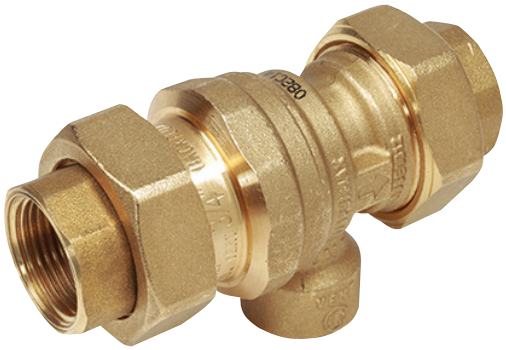
R624

Backflow preventer with non-controlled reduced pressure zone. CA type

Water Management

Energy Management

Datasheet
0539EN 11/2023



The protection of the water supply is fundamental in modern systems.
To protect the supply, it is necessary to install devices in the domestic system to prevent any flow-back of potentially polluted water.
These devices are called backflow preventers.
The **R624** backflow preventer with non-controllable reduced pressure zone is used upstream from usage points that contain polluted water (e.g. boiler rooms, tanks containing chemical products in a water solution, lab equipment, etc.).
When correctly fitted, the backflow preventer can, for example, stop the heating system water (containing chemical additives) from reaching the domestic taps or - even worse - the public water system in the event of reflux due to lower supply pressure or damaged check valves.

Versions and product codes

PRODUCT CODE	CONNECTIONS
R624Y003	G 1/2"F
R624Y004	G 3/4"F

Technical data

Characteristics
- Female threaded connections with tail piece (EN 14367)
- Temperature range: 5÷90 °C
- Max. working pressure: 10 bar
- CA type (UNI EN 1717)
- Protection against fluids of categories: 1 - 2 - 3 (UNI EN 1717)
- A.S.S.E. type-approval 1012
- In compliance with EN 14367

Materials
- Body: UNI EN 12165 CW617N brass
- Internal filter: stainless steel
- Internal stems: UNI EN 12164 CW614N brass
- Gaskets: EPDM
- Spring: stainless steel
- Elastic ring: phosphorous bronze

GIACOMINI WATER E-MOTION

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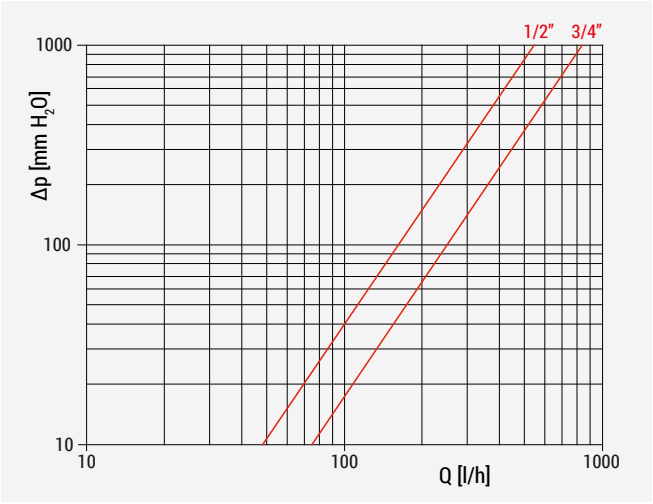
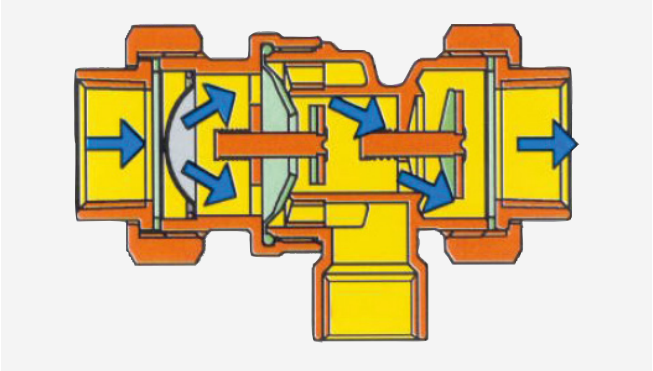
Loss of pressure

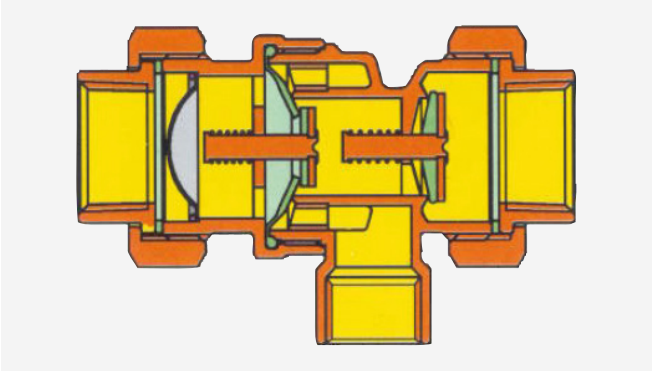


PRODUCT CODE	CONNECTIONS	Kv
R624Y003	G 1/2"F	1,7
R624Y004	G 3/4"F	2,6

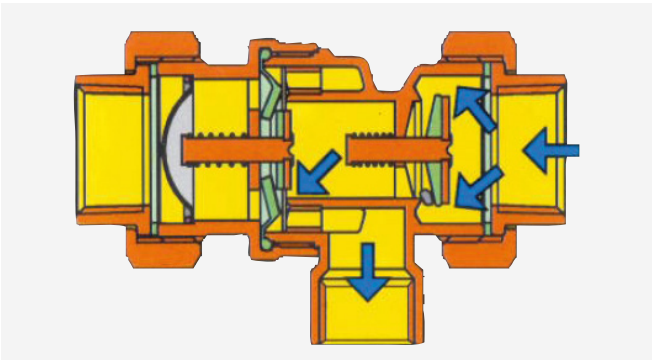
Operation



The transit sections are calculated so as to limit the pressure loss of the backflow preventer, thereby guaranteeing optimum flow rates.
When the water flows normally, the check valves open to allow transit.
The drain remains closed.



In static conditions, the check valves are closed.



In the event of back pressure or depression upstream, the drain will open and, if the second check valve is obstructed for any reason, the polluted water is expelled.

Whatever the operating conditions, the water cannot flow back into the main supply system.

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Applications

According to UNI EN 1717, the R624 backflow preventer falls within category type "CA".
"C" indicates the protection family (uncontrollable disconnection).
"A" indicates the type of protection of that family (vacuum breaker valve with various uncontrollable pressure areas).
The fluids that the system must be protected against are divided into categories on the basis of their use (UNI EN 1717).
Standard EN 14367 defines the application field and size, chemical/physical and mechanical characteristics of the non-adjustable area backflow preventer with reduced pressure - family C, type A.
According to this Standard, the R624 backflow preventer offers protection against fluids of categories 1, 2, 3.

NOTE. For waters of category 4, BA-type backflow preventer is needed.

1	WATER DESTINED FOR CONSUMPTION	CATEGORY
1.1	Drinking water	1
1.2	High pressure water	1
1.3	Stagnant water	2
1.4	Iced water	2
1.5	Hot sanitary water	2
1.6	Steam (in contact with foodstuffs; additive-free)	2
1.7	Purified water (inside buildings)	2
2	**WATER WITH ADDITIVES, OR IN CONTACT WITH LIQUID OR SOLID ELEMENTS OTHER THAN THOSE IN CATEGORY 1**	**CATEGORY**
2.1	Softened water not destined for human consumption	3 / 4*
2.2	Water + anti-corrosive not destined for human consumption	3 / 4*
2.3	Water + antifreeze	3 / 4*
2.4	Water + algicide	3 / 4*
2.5	Water + liquid foodstuffs	2
2.6	Water + solid foodstuffs	2
2.7	Water + alcoholic drinks	2
2.8	Water + cleaning products	3 / 4*
2.9	Water + surface-active products	3 / 4*
2.10	Water + disinfectants not destined for human consumption	3 / 4*
2.11	Water + detergents	3 / 4*
2.12	Water + coolant	3 / 4*

3	WATER FROM OTHER USES	CATEGORY
3.1	Water for cooking food	2
3.2	Water used for cleaning fruit and vegetables (catering system)	3 / 5**
3.3	Water for pre-washing and washing dishes and cooking utensils	5
3.4	Water for rinsing dishes and cooking utensils	3
3.5	Water from the central heating system, without additives	3
3.6	Refluent water from sewers	5
3.7	Water used for personal hygiene	5
3.8	Water from the toilet tank	3
3.9	Water from the toilet	5
3.10	Drinking water for animals	5
3.11	Water for swimming pools	5
3.12	Water used for cleaning clothes	5
3.13	Sterilised water	2
3.14	Demineralised water	2

* The boundary between categories 3 and 4 refers to the Directive 1272/2003/EC of 17/07/2003..
** Categ. 5 for water for pre-washing and washing - Categ. 3 for rinsing water.

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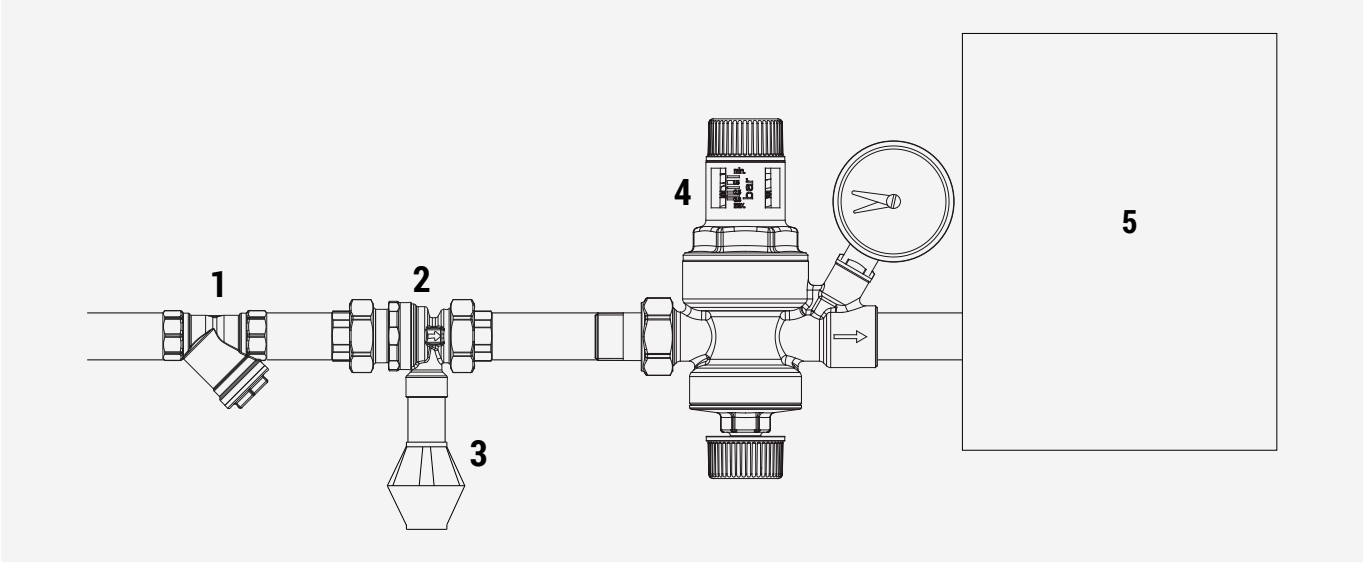
Installation

The R624 backflow preventer must be installed on the supply pipes, in a horizontal position with vertical drainage, and in an accessible place to facilitate maintenance and checks along with any possible antifreeze protection.
When assembling the device, make sure the flow direction corresponds with the direction indicated by the arrow on the device itself.
Use the hexagonal tail piece seats to fit the device, and don't squeeze the body with tools that could damage it.
No sealing material should be applied to the thread of the nuts that join the body with the tail pieces, as the seal is guaranteed by internal gaskets.
The backflow preventer has a stainless steel mesh filter inside, but correct operation is only guaranteed if another filter is installed first to eliminate any impurities in the water.
The drainage point must be connected to a visible R141 relief funnel + R189D 1/2" nipples, so that any operating faults can be noted immediately.
For boiler supply, install the backflow preventer before the automatic filling unit.
In this way, if the backflow preventer is not working properly (due to impurities that may settle in the check valve seats) the check valve inside the filling unit prevents the drainage of the system.
Periodically it is advisable to disassemble the body to check the cleanliness of the internal filter.



1	Filter R74A/R74M
2	Backflow preventer R624
3	Relief funnel R141
4	Filling unit R150M
5	Boiler

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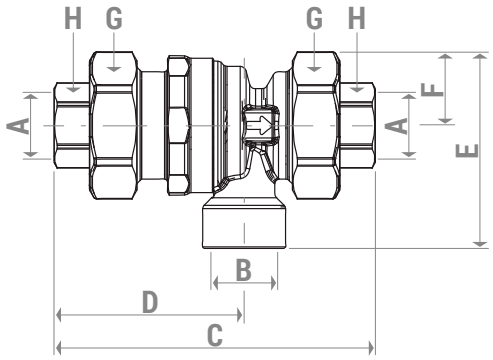
Dimensions



PRODUCT CODE	CONNECTIONS A	DRAIN B	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]
R624Y003	G 1/2"F	G 1/2"F	105	62	64	24	43	25
R624Y004	G 3/4"F	G 1/2"F	105	62	64	24	43	31

Product specifications

R624

Backflow preventer with non-controllable reduced pressure zone. CA type (UNI EN 1717). Protection against fluids of categories 1, 2, 3 (UNI EN 1717). Threaded connections G 1/2"F or G 3/4"F, with female tail piece (EN 14367). Drain G 1/2"F. Body in UNI EN 12165 CW617N brass. Internal filter in stainless steel. Internal stems in UNI EN 12164 CW614N brass. Gaskets in EPDM. Spring in stainless steel. Elastic ring in phosphorous bronze. Temperature range 5÷90 °C. Max. working pressure 10 bar. A.S.S.E. type-approval 1012. In compliance with EN 14367.

Safety Warning. Installation, commissioning and periodical maintenance of the product must be carried out by qualified operators in compliance with national regulations and/or local standards. A qualified installer must take all required measures, including use of Individual Protection Devices, for his and others' safety. An improper installation may damage people, animals or objects towards which Giacomini S.p.A. may not be held liable.

Package Disposal. Carton boxes: paper recycling. Plastic bags and bubble wrap: plastic recycling.

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Product Disposal. Do not dispose of product as municipal waste at the end of its life cycle. Dispose of product at a special recycling platform managed by local authorities or at retailers providing this type of service.

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