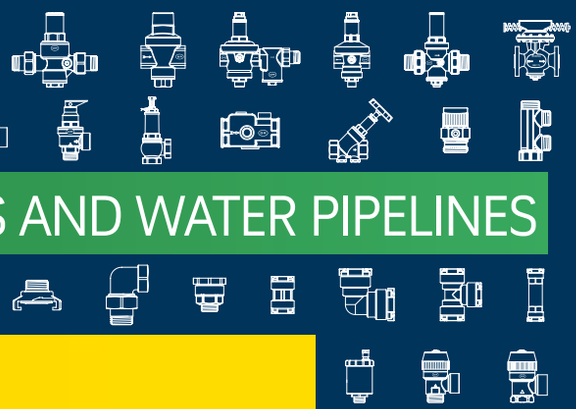
PRESSURE REDUCING VALVES

HEATING

FILTERS/ACCESSORIES FOR PUMPS AND WATER PIPELINES

CONNECTIONS

“SUNSHINE” LINE



OFFICINE RIGAMONTI

La qualità di mano in mano.

PRODUCT CATALOGUE

OFFICINE RIGAMONTI

“Our company was founded in 1950 in Valduggia, in the heart of the valve and tap district of Valsesia.
At first concentrating on the production in cast iron, we moved on to working with brass in the Seventies and specialising in the development and production of pressure reducing valves and heating products in general.
We further integrated our offer in the early Eighties with the unveiling of two new product groups, connections and accessories for water pipelines, dropping cast iron production.
We reached an important milestone in 1995, the UNI EN ISO 9011 Certification, issued by the certification authority BVQI ITALIA.
Our research and development activity carries on as it did before in our internal lab, however, with a greater enthusiasm that permits us over time to constantly improve our product standards from a technological viewpoint so that the same are always in compliance with the latest regulations on various international markets and satisfy the demands of our clients as completely and precisely as possible.
We made a further move towards innovation in 2008 with the presentation of the Sunshine line, which is a line of accessories for solar heating.
Our production over time, as we have demonstrated herein, has evolved and presently counts five product lines:
- pressure reducing valves
- heating
- filters and accessories for pumps and water pipelines
- connections
- Sunshine line

all developed and produced in line with the system of values that distinguishes us, which is based on the quality, Italian origin and innovation of the product oriented towards the complete satisfaction of our sector’s demands. Our company mission stems from these values and can be summarised as the will to create a synergy with the client in order to interact with the same for the resolution of problems, development of designs and to exchange and share experiences, all in the scope of a more rational use of water, one of the resources that shortly will become, in our opinion, the most important for the future of our planet.”

Officine Rigamonti

CERTIFICATIONS

Certification of the Quality Assurance Management System ISO 9001:2000, issued by the BV and accredited by SINCERT.

QUALIFICATION FOR THE TRANSPORTATION OF DRINKING WATER

The valves and hydraulic devices, assigned for the conduction of drinking water, do not form part of the limits of application of the European Directive in contact with food, nor does a harmonisation exist in this sense. Consequently, each Member State has made its own laws on the subject.

Various nations have developed qualitative standards that today continue to affirm themselves as points of reference for the sector. In particular, we have been awarded important certifications, such as:

Water Regulation Advisory Scheme

WRAS - Water Regulation Advisory Scheme

The WRAS approval was necessary for the use of hydraulic devices that have to be used for the conduction of drinking water in the United Kingdom.
The procedure for the achievement of the certification is developed over two very distinct stages: a first stage that involves the verification of compliance to the regulation BS6920:2000 (British Standards) that defines the testing criteria and methods for the materials, in order to evaluate any effect they may have on the organoleptic characteristics (scent, taste, colour) and chemicals of the water designated for human consumption. The second stage involves the hydraulic and mechanical tests.
The hydraulic device for which certification is requested, is subject to a series of tests, performed at the WRc (Water Resource Centre). In order to obtain the WRAS certification is absolutely necessary to utilise DZR brass!

IN ITALY

In Italy reference is made to the Ministry of Health Decree no. 174 of 6 April 2004, which describes the use of all organic and non-organic materials, provided by the law regulating materials and objects destined to enter into contact with food, with all of the conditions, limitations and tolerances of use provided. It is the Producer that must provide a self-certification of the compliance of his products with the above-mentioned decree.

ACS - Attestation de Conformité Sanitaire

In 1999, for the purpose of aiding the industry of the sector to demonstrate the qualification of their products to be used, the French health authorities developed a system to certify the compliance with health regulations called ACS (Attestation de conformité sanitaire).

This system allows for the evaluate the suitability of a product to enter into contact with water destined for human consumption pursuant to the provisions of the French Decree of 29 May 1997 and subsequent modifications.

The laboratory authorised by the French Ministry of Health issues the ACS only against an attentive evaluation of the materials utilised in contact with drinking water in relation to the “wet” surface offered by the device under investigation.

CERTIFICATIONS

CE MARK

Effective since 29 May 2002, pursuant to the PED Directive 97/23/EC (Italian Legislative Decree no. 93 of 25 February 2000), various classes of equipment under pressure must adorn the CE mark in order to be put onto the European Community market. The mentioned equipment under pressure, in order to obtain the CE Mark, is subject to a verification of compliance to the essential safety requirements set-out by the Directive. Only the CE Mark guarantees that the hydraulic devices are designed and manufactured in a way that they are reliable and adapt to the foreseen use.

CE MARK - FOR SAFETY VALVES

1115

The PED Directive establishes that all of the safety devices must be classified in category IV, this means to say the category with the highest level of risk, where the verification and certification of compliance with the Directive must be performed by an “External Notified Body” (N.B.). The PASCAL Consortium (identification no. 1115) verified the respect of the Essential Safety Requirements, authorising the CE 1115 Mark of the valves.

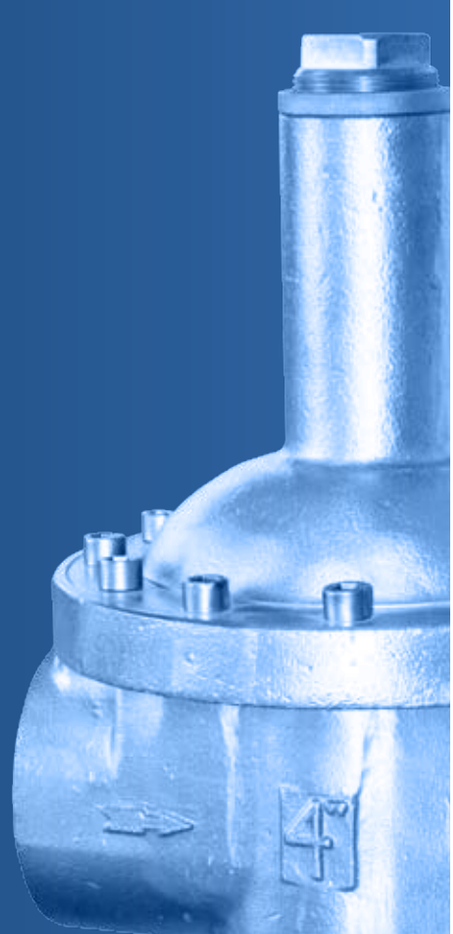
TUV - Safety valves for the solar-thermal sector

Voluntary evaluation of the compliance with the regulation VdTÜV Merkblatt 100, TRD 721 and ISO 4126-1.

ICIM - Valves for the solar-thermal sector

Voluntary evaluation of compliance pursuant to the European regulation EN 12795-02, Annex D, paragraph 5.6.1, that certifies the suitability to be used on solar collectors.

PRESSURE REDUCING VALVES

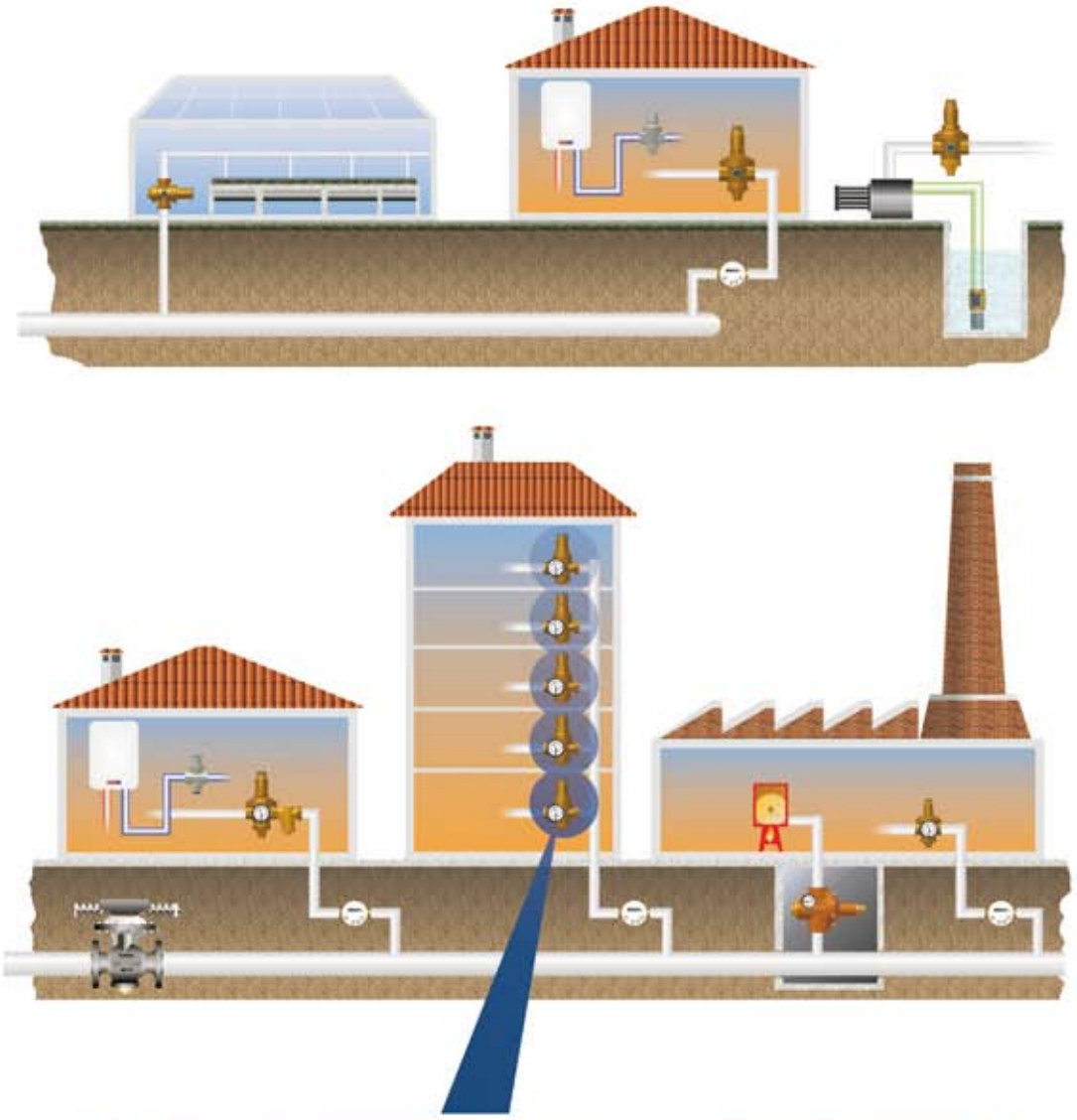


OFFICINE RIGAMONTI
La qualità di mano in mano.

PRESSURE
REDUCING VALVES

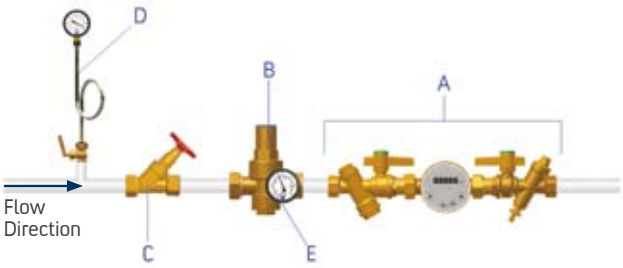
PRESSURE REDUCING VALVES

TEUTON PRESSURE REDUCING VALVES

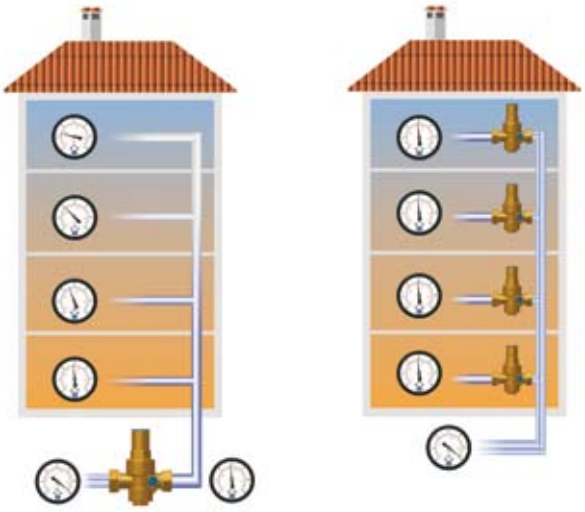


TEUTON PRESSURE REDUCING VALVES

The use of a pressure reducing valve is necessary for limiting the working pressure in pipelines for potable water distribution systems, if the maximum possible static pressure, at any point in the potable water supply system, can reach or surpass the relative maximum allowable working pressure, or if there are apparatus and equipment attached that function exclusively at lower levels of pressure. In particular, these valves are recommended if the static pressure at intake points is larger than 5 bars, if the difference between the upstream pressure and the required downstream pressure is higher than 75%, and if maintaining a stable pressure in hot and cold water systems is necessary.

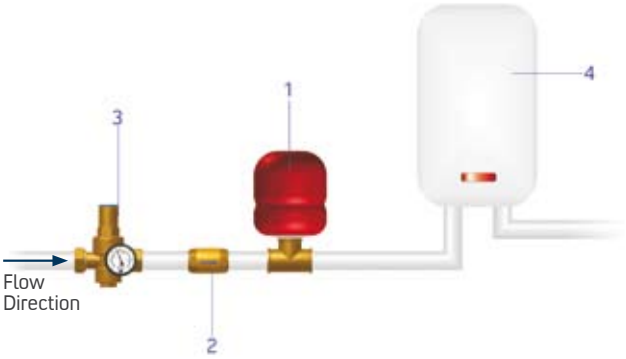


The installation of the pressure reducing valve “Teuton” in potable water supply systems (EN 806-2 §16)) is normally carried out on the downstream cold water pipe of the water meter assembly (A). For each pressure reducing valve (B), the water system should be set up for a shut off valve (C) a manometer (D) upstream that, in conjunction with a manometer (E) installed at the pressure inlets on the reducing valve’s body, facilitate adjustment and maintenance. Should a By-pass tube be necessary, it should also be fitted with a pressure reducing valve. In order to limit the effects of backpressures, it is advisable to install a tract of pipe, of five times the length of the nominal diameter of the device used, downstream to the pressure reducing valve.



In buildings with numerous floors, it is preferable to install lower-dimensioned pressure reducing valves for each floor instead of installing a single higher-dimensioned pressure reducing valve at the foundation of the building. It should in fact be taken into consideration that, in the ascension pipe distributing water to each floor, the water pressure drops.

In order to guarantee a secure and economic functioning of the heating system, it is recommended to install a pressure reducing valve before the heating exchanger, which will maintain the minimum working pressure (automatic refill) required by the heating systems. The European Norm EN12828 §4.7.4. stipulates that, for this application, the supply system should be furnished with an expansion tank (1), a check valve (2) and a tract of pipe between the reducing valve (3) and the water heater (4), with a length equal to 5 times the nominal diameter of the pressure reducing valve used. These setups are necessary in order to avoid dangerous overpressure downstream from the reducing valve due to overheating of the water by the boiler.



COMPRESSED AIR

If the system uses compressed air instead of water, the recommended velocities are between 10 and 20 m/s and the subsequent flow capacity will be 10 times higher than that calculated for use with water.

CHOOSING A PRESSURE REDUCING VALVE

OR's pressure reducing valves should be chosen according to the maximum inlet pressure, the range of regulation of the valve itself and the flow rate required. Once the above three parameters are known, the respective flow capacity diagrams can be consulted in order to choose the most appropriate valve.
PLEASE NOTE: The diagrams show the average velocity of the fluid equal to 2 m/sec. As the velocity of the water passing through the pressure reducing valve increases, also the noise level of the plant increases, and it is thus recommended that a larger (thus less noisy) model be chosen when high acoustic comfort is an important factor (residential use). In any event, it is strongly recommend not to surpass 3 m/sec in order to prevent the cavitation phenomenon.

FUNCTIONING OF THE TEUTON PRESSURE REDUCING VALVE

The figures on the right show the structure of the Teuton pressure reducing valve. A flexible membrane "A" originates the movement of the obturator B as a consequence of the action of two opposing forces: from below, the water pressure in the pipeline downstream from the reducing valve, which tends to close the valve; and from above, the force of the spring appropriately loaded according to the desired working pressure to be maintained, which tends to open the valve. The valve opens, as illustrated in Figure 2, when, as a consequence of water supply to the taps, the pressure under the membrane drops and the force of the spring "C" prevails; thus the opening of the valve is proportional to the flow which passes trough the taps in that moment. As soon as the taps are closed and the water in the downstream tube reaches again a pressure capable of overcoming the force from the spring, the obturator goes up again, closing the valve. The pressure is set by screwing the regulator D that compresses the spring to larger or smaller extent.
The compensated seat with which the TEUTON pressure reducing valves are equipped makes sure that the preset value remains constant, even in conditions of strong inlet pressure variations reaching 40 bar: the inlet pressure pushes the obturator to an open position, but also acts upon the compensation chamber pin in the opposite direction, achieving a substantial balance.
The STAINLESS steel seal seat affords reliability, precision and durability even in the most extreme working conditions.

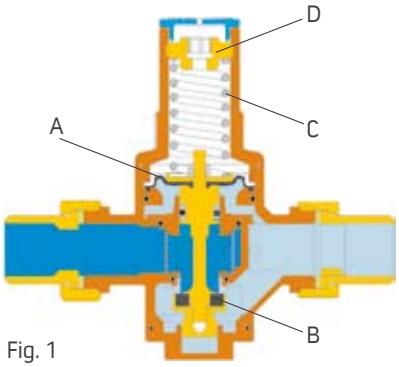


Fig. 1

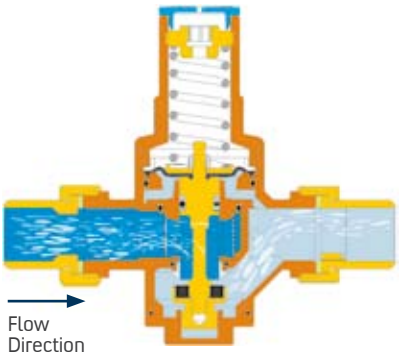


Fig. 2

The fully bored internal cavities have been designed to provide minimum flow resistance, eliminating phenomena, such as vibrations, load loss, or damage caused by cavitation, even when the flow rate is higher than 3.5 m/sec, and obtaining a noise level below 20 dB even at inlet pressures as high as 40 bar.
Both the spring and all the regulating elements are isolated from water and consequently are kept from technical/structural deterioration. The particular rubber mix of the compensation chamber's O-ring washers forestalls any risk of jamming, incrustation or sticking (made of special flexible anti stick-slip Perox EPDM elastomer).
The Diaphragm that actions the obturator's movement can sustain strong outlet backpressures up to 25 bar, whether they are pulsating (water hammers) or constant. The offset pre-convoluted diaphragm assures an extreme sensibility in regulation. Regulation is carried out with a regulator on the upper part of the valve that, when turned clockwise, increases the outlet pressure in compliance with the most recent European standards.
The Teuton pressure reducing valves are equipped with a 500 mk integrated square cell filter with an ample scope for fluid passage and a system for removal/replacement without the need to dismount the pressure reducing valve from the system. All Teuton pressure reducing valves are furnished with two test points for the reduced pressure.
The body in hot pressed brass, whose average thickness is equal to 3 mm, the internal head frame with supporting rib, the stainless steel seat and the sealing system combined with anti-extrusion used on the piston, render this pressure reducing valve ideal to work in situations with a continuous inlet pressures of up to 40 bar.

SETTING

1 - Prior to the installation, open all the taps to clean the system and expel any remaining air in the pipelines.
2 - Install the upstream and downstream shut off valves with a view to facilitating future maintenance tasks.
3 - Install the pressure reducing valve (ensuring its positioning is correct according to the arrow, which indicates the direction of the flow).
4 - Close the downstream shut off valve.
5 - Fix the preset values with the upper regulator. Remove the cover A and use regulator B to set the pressure: rotating clockwise will increase the pressure value; while rotating counterclockwise will decrease it.

6 - Control by reading the set pressure on a gauge. (The OR pressure reducing valves are factory preset at 3 bar).

MAINTENANCE

The cartridge containing the diaphragm, the filter, the seat, the obturator and the compensation piston can be removed in order to facilitate maintenance and filter cleaning tasks.
Maintenance and cleaning must be carried out periodically; at least once every 3 months, or in the event a reduction in the supply flow is noted.
If a new system is installed, it is advisable to clean the filter a few hours after first placing the system in operation, in order to clean out the typical residues due to the new piping installations. After cleaning the filter, verify carefully the lower seat's gasket, substituting it in case of any doubt. Prolonged inactivity of the pressure reducing valve might create dangerous bacterial growth. Therefore, should inactivity last for longer than four (4) days, the filter should be disinfected according to EN 805 §12.

CLEANING / REPLACEMENT OF THE FILTER

These tasks should be carried out every 1-3 years (depending on the local conditions) by qualified personnel. Close the upstream valve

Fig. 1 Remove the cover plug
Fig. 2 Completely unscrew the upper regulation screw until it comes out of the bonnet. Remove the spring.
Fig. 3 Disassemble the bonnet
Fig. 4 Remove the head frame and filtering cartridge, using pliers for the internal seeger rings.
Fig. 5 -6 Check and, if needed, clean the filtering cartridge or substitute the complete head frame with a new one.

Fig. 1 
Fig. 2 
Fig. 3 
Fig. 4 
Fig. 5 
Fig. 6 

In order to guarantee the seal and to ensure a durable product functioning, grease the O-rings lodged in the head frame.
ATTENTION! Only silicone oils and greases should be used for this task.
Proceed to reset the pressure reducing valve.

WATER HAMMERS

A sudden overpressure, also called "water hammer", is one of the most common causes of damage to pressure reducing valves. When installing a pressure reducing valve on systems which might be subject to this phenomenon, it is advisable to use devices especially designed to absorb the "water hammers".

PLEASE NOTE: Prior to installing a new pressure reducing valves, please pay particular attention to the information on the illustrated booklet packed with each OR pressure reducing valve.

0200 • 1/2”- 1”1/4

PRESSURE REDUCING VALVES WITH DIAPHRAGM “TEUTON” PN 40 WITH INCORPORATED FILTER AND STAINLESS STEEL SEAT

CONNECTIONS: DISMANTLING FITTINGS MALE

HYDRAULIC FEATURES

The TEUTON model pressure reducing valve is an automatic valve that reduces and stabilizes the pressure of a fluid in a water distribution conduit to a preset value. The use of this device is necessary if the maximum possible pressure at any point in the water distribution system can reach or exceed the relative maximum allowable working pressure, or if apparatus and equipment that function exclusively at lower levels of pressure are connectable. The square cell filtering cartridge inside the reducing valve is designed to separate foreign particles in suspension such as sand, rust flakes, calcareous fragments, etc.; by means of a physical barrier. The dirt transported by water could cause corrosion in the water pipeline and wear down the pressure reducing valves or any other device installed downstream. The enhanced mechanical strength of the shell and its internal components renders this valve particularly suitable for the use in water supply systems outside buildings (EN 805) where the water pressure may reach values as high as 40 bar. Further, the compensated seat nullifies the influence that variations in upstream pressure may have on the downstream pressure. The diaphragm in 70Sh pre-shaped and folded EPDM rubber (peroxide cured) is reinforced with high mechanical strength textile in conjunction with the anti stick-slip Perox EPDM rubber O-ring, allows a precise and long-lasting pressure regulation. The bored internal cavities have been designed to create a minimum flow resistance, eliminating many negative phenomena, such as vibrations, load loss, or damage caused by cavitation even with a flow rate higher than 3.5 m/sec, and to obtain a noise level below 20 dB even with inlet pressures up to 40 bar.
The TEUTON pressure reducing valve with diaphragm and compensation chamber is used in air conditioning systems, sanitary installations for water supply, irrigation systems, compressed air (not oil mist) supply systems, water supply for human consumption within buildings, according to EN 806-2; and for fire extinguisher networks. (PS. It should nevertheless be borne in mind that local government standards for fire protection must always be observed.). This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

ATTENTION: THE PRESSURE GAUGE INSTALLED ON THE PRESSURE REDUCING VALVE INDICATES THE ALREADY-REDUCED PRESSURE (Ps) OF THE OUTGOING LIQUID.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	40 bar
Outlet settings (Ps)	from 1 to 6.5 bar
Ps value set during testing	3 bar
Outlet Ps set tolerance on varying inlet pressure	± 5 %
Temperature:	
Maximum working temperature (TS)	0°C (excluding ice) 80°C
Compatible fluids:	
water	
glycolate solutions	glycol 50%
compressed air	
Filtration Rating:	
Referenced filtering capacity (S)	< 500 µm
Threading:	
Pipeline connection	Threads according to ISO 228/1
Gauge connection	Threads according to EN 10226- Rp1/4” (ex ISO 7/1)

Tests according to
EN 1567 - Compliant with the codes of practice stipulated in DVGW W 570-1 (German Technical and Scientific Association for Gas and Water)
Verification of the deviation from the pre-set pressure (Ps) according to EN 1567 § 8.3.2
Verification of the set point range according to EN 1567 § 8.3.1
Flow rate and outlet pressure according to EN 1567 § 8.3.4 - (compliant with recommendations DVGW W 570-1 §6.1.3)
Acoustic group I - Lmax (dBA) < 20

DESIGN

FORGED brass bodies EN 12420-CW617N CONF.DIN50930-6
FORGED brass bonnets EN 12420-CW617N CONF.DIN50930-6
FORGED brass head frame EN 12420-CW617N CONF.DIN50930-6
Other components in FORGED brass EN 12420-CW617N CONF.DIN50930-6
Other components in turned brass EN 12164 - CW614N
Pre-shaped and folded EPDM rubber (peroxide cured) diaphragm, nylon reinforced to 70 Sh
Seat gaskets in EPDM rubber (peroxide cured)
O-ring washers dynamic seal in EPDM RUBBER (peroxide-cured)
O-ring washers static seal and seat gaskets in NBR RUBBER
Setting spring in SM GALVANIZED STEEL - EN 10270-1
STAINLESS STEEL insert seat EN 10088-14305 (AISI 303)
Square cell filtering cartridge in STAINLESS STEEL EN 10088-1.4301 (AISI 304) 500 µM

PRODUCT CODES

0200.015	dismantling fitting male 1/2”	0200.025	dismantling fitting male 1”
0200.020	dismantling fitting male 3/4”	0200.033	dismantling fitting male 1”1/4

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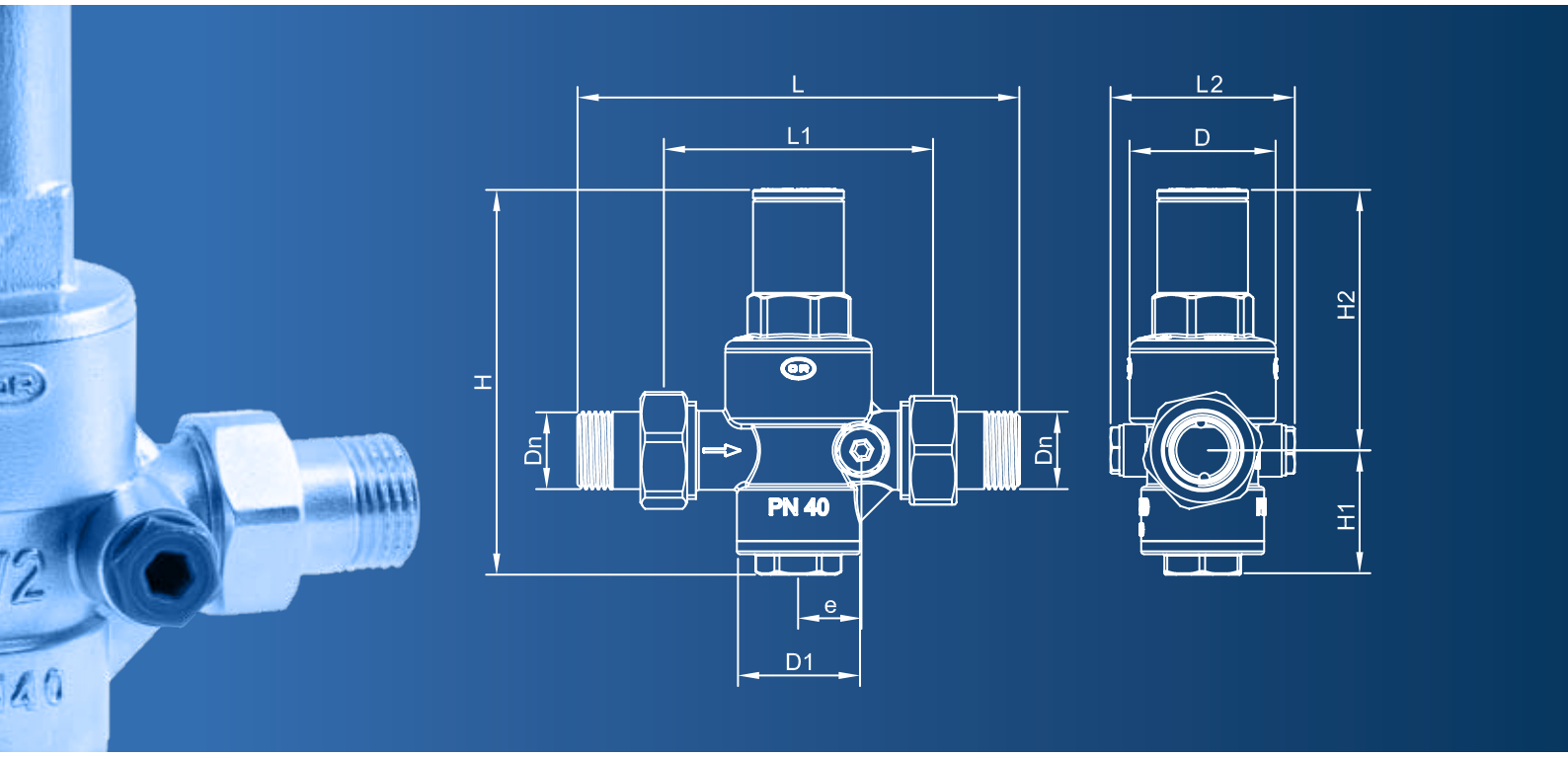
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0200 • 1/2”- 1”1/4

PRESSURE REDUCING VALVES WITH DIAPHRAGM “TEUTON” PN 40 WITH INCORPORATED FILTER AND STAINLESS STEEL SEAT

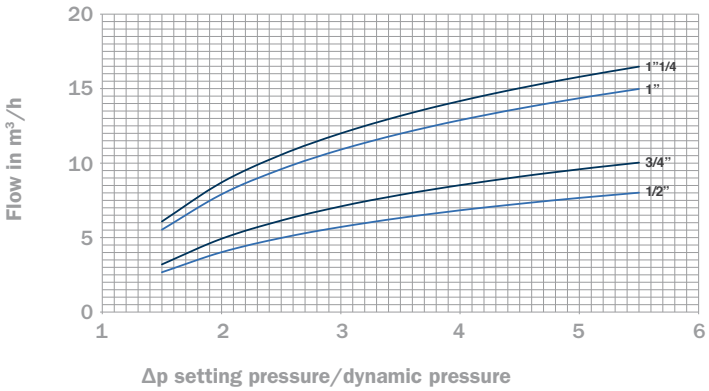
CONNECTIONS: DISMANTLING FITTINGS MALE



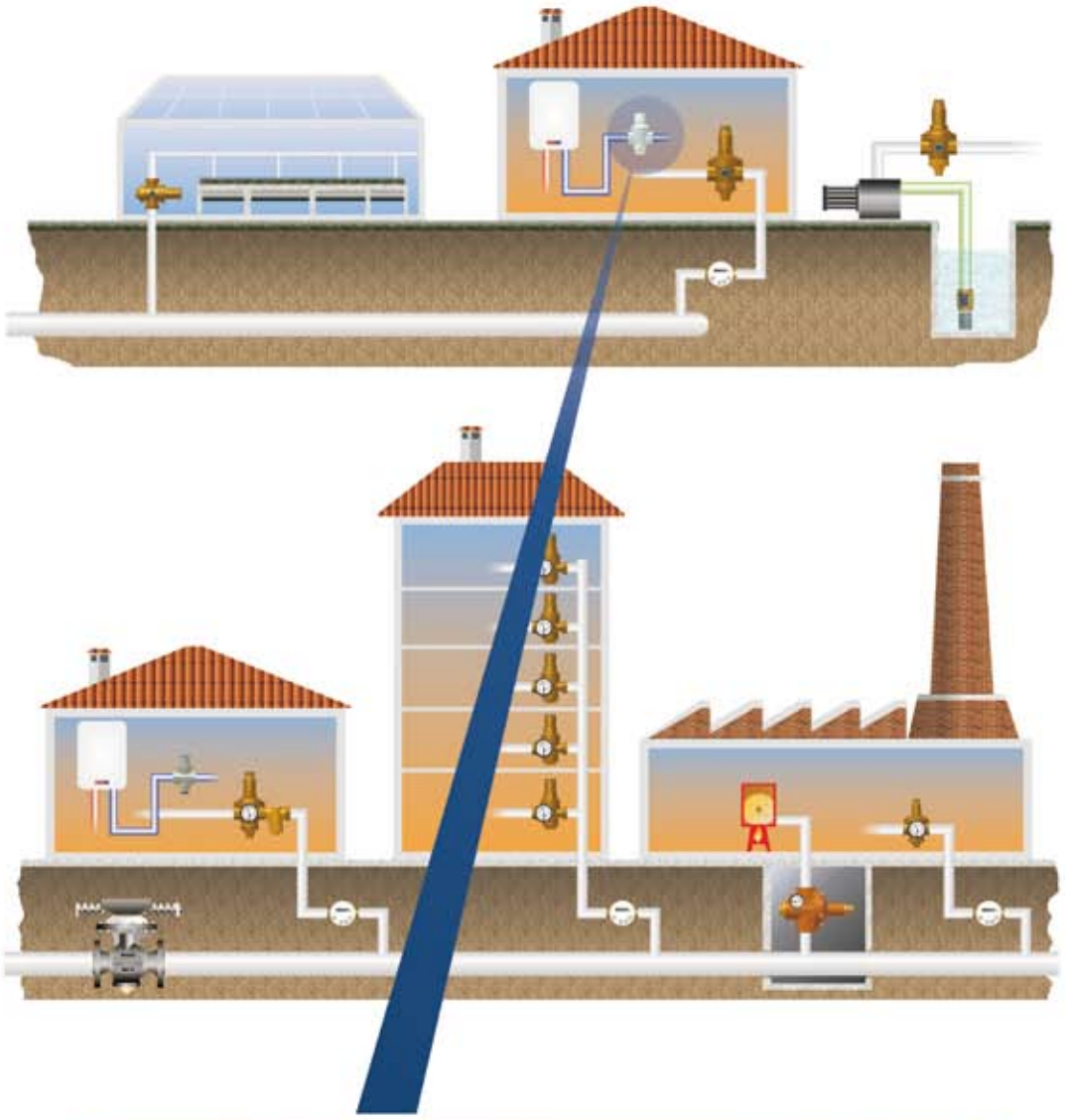
FEATURES

Dn	D	D1	L	L1	L2	H	H1	H2	e
1/2”	Ø50	Ø42	131	76	63	131,5	42,5	89	21,5
3/4”	Ø50	Ø42	151	90	63	131,5	42,5	89	21,5
1”	Ø61	Ø48	165	95	74	161	49	112	25,5
1”1/4	Ø61	Ø48	185	109	74	161	49	112	25,5

PRESSURE REDUCING VALVE “TEUTON” 1/2” - 1”¼



PRESSURE REDUCING VALVES WITH PISTON EOLO



0202 • 1/2”

PRESSURE REDUCING VALVES WITH PISTON EOLO PN 20
NICKEL-PLATED WITHOUT GAUGE CONNECTION
CONNECTIONS: FEMALE-FEMALE

HYDRAULIC FEATURES

The EOLO model pressure reducing valve is an automatic valve that reduces and stabilizes the pressure of a fluid in a water distribution conduit according to a preset value. Its reduced size, silent operation and internal self-cleaning seat render this valve ideal for use in small systems such as apartments and single-family households (according to EN 806-2 and EN 805) or as a safety device in boilers or automatic beverage distributors. The nickel-plated surface, besides giving it a pleasing appearance, protects against corrosion and calcareous incrustation. Given the valve’s elevated maximum allowable working pressure, it may be connected directly to main distribution networks, where the water pressure reaches values up to 20 bar. The internal piston structure guarantees rigidity, strength and an enhanced regulation precision thanks to the compensated seat. The O-rings, in anti stick-slip Perox EPDM elastomer with a low friction coefficient, are durable and require only limited maintenance interventions. The internal finish of the body and the broader dimensions of the passage allow an elevated flow even with a small water draw. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	20 bar
Outlet settings (Ps)	from 1 to 7 bar
Ps value set during testing	3 bar
Outlet Ps set tolerance on varying inlet pressure	± 10 %
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) 80°C
Compatible fluids:	
water	
glycolate solutions	glycol 50%
compressed air	
Threading:	
Pipeline connection	Threads according to ISO 228/1
Tests according to	
Tests according to	EN 1567
Verification of the deviation from the pre-set pressure (Ps) according to EN 1567 § 8.3.2	
Verification of the setpoint range according to EN 1567 § 8.3.1	
Acoustic group	I - Lmax (dBA) < 20

DESIGN

Brass Body EN 12165 - CW617N
Brass bonnet EN 12165 - CW617N
Brass piston EN 12164 - CW614N
Other components in turned brass EN 12164 - CW614N
O-ring washers static seal and seat gaskets in NBR RUBBER
O-ring washers dynamic seal in EPDM RUBBER (peroxide-cured)
Setting spring in SM GALVANIZED STEEL - EN 10270-1
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)

PRODUCT CODES

0202.015 female/female nickel-plated 1/2”

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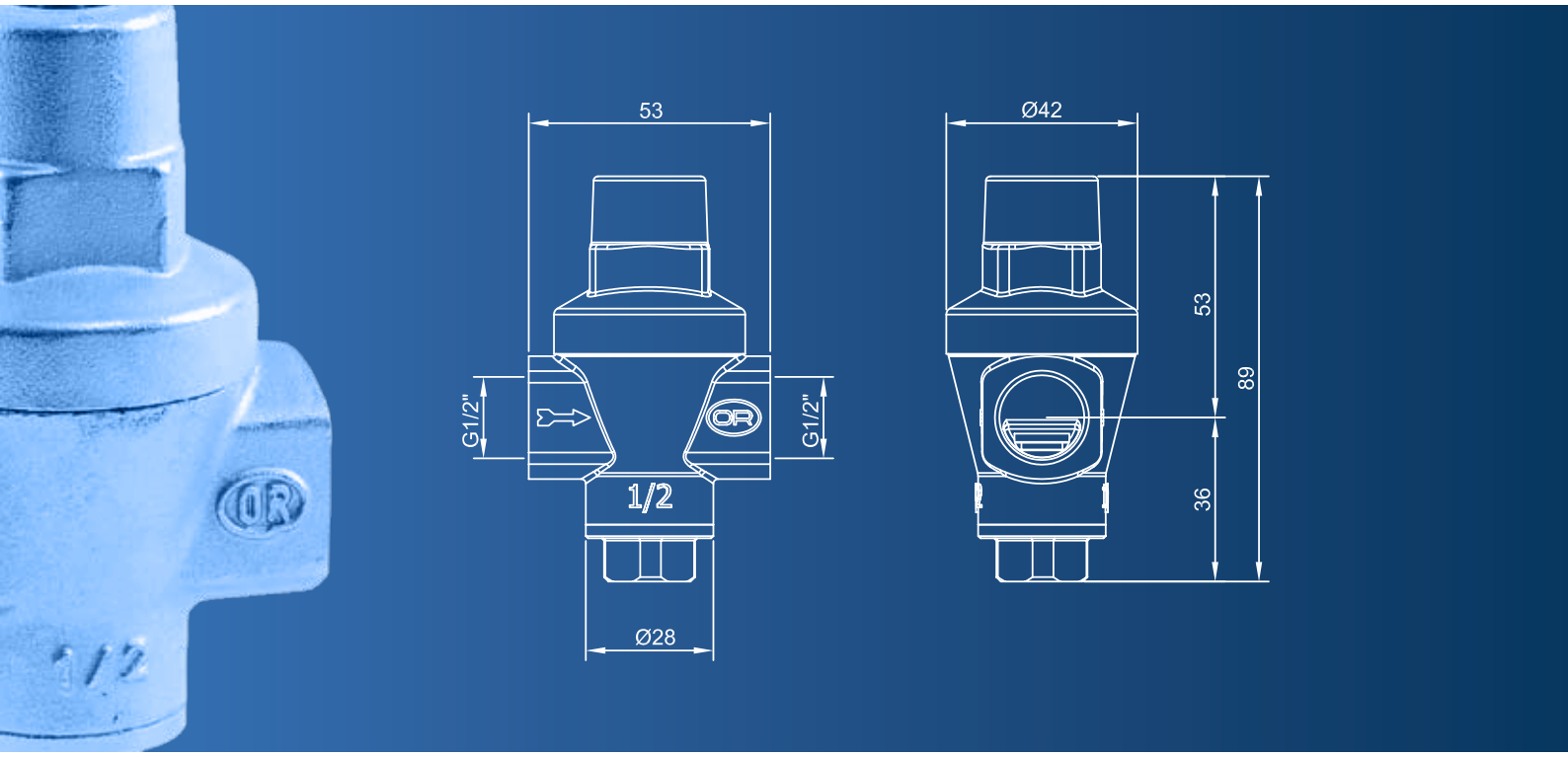
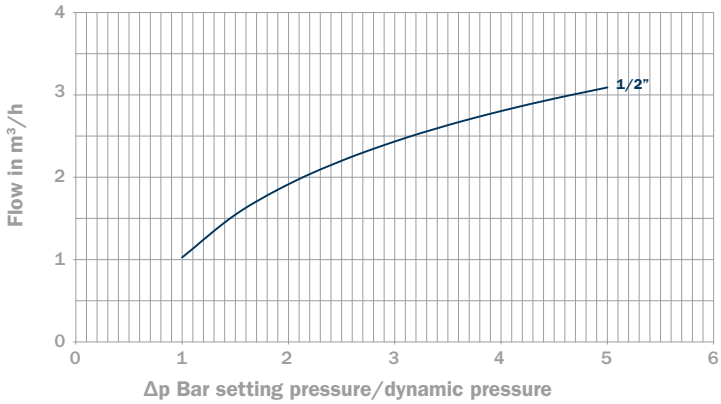
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0202 • 1/2”

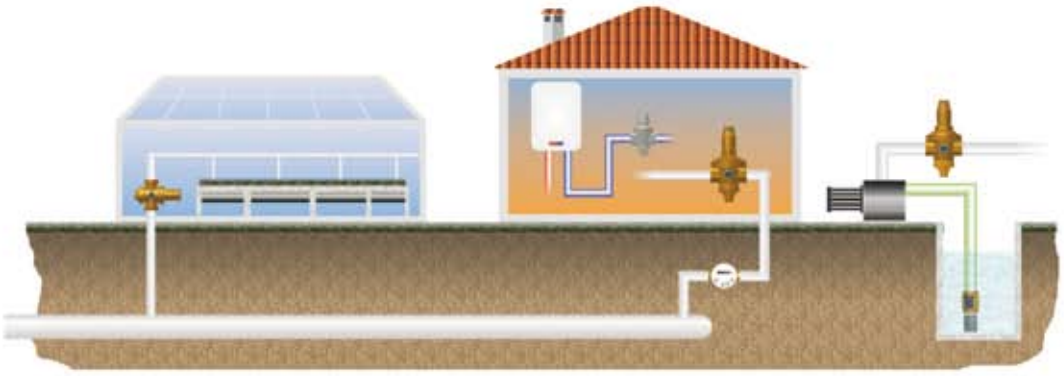
PRESSURE REDUCING VALVES WITH PISTON EOLO PN 20
NICKEL-PLATED WITHOUT GAUGE CONNECTION
CONNECTIONS: FEMALE-FEMALE

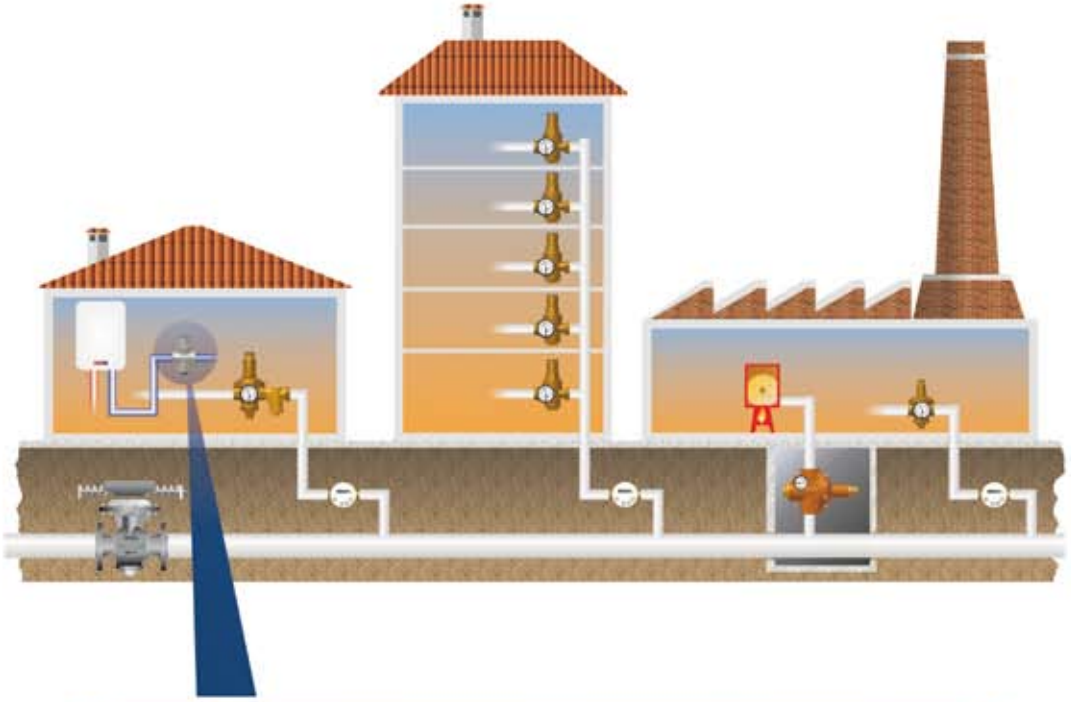


PRESSURE REDUCING VALVE 0202 1/2”



PRESSURE REDUCING VALVES WITH PISTON SABO



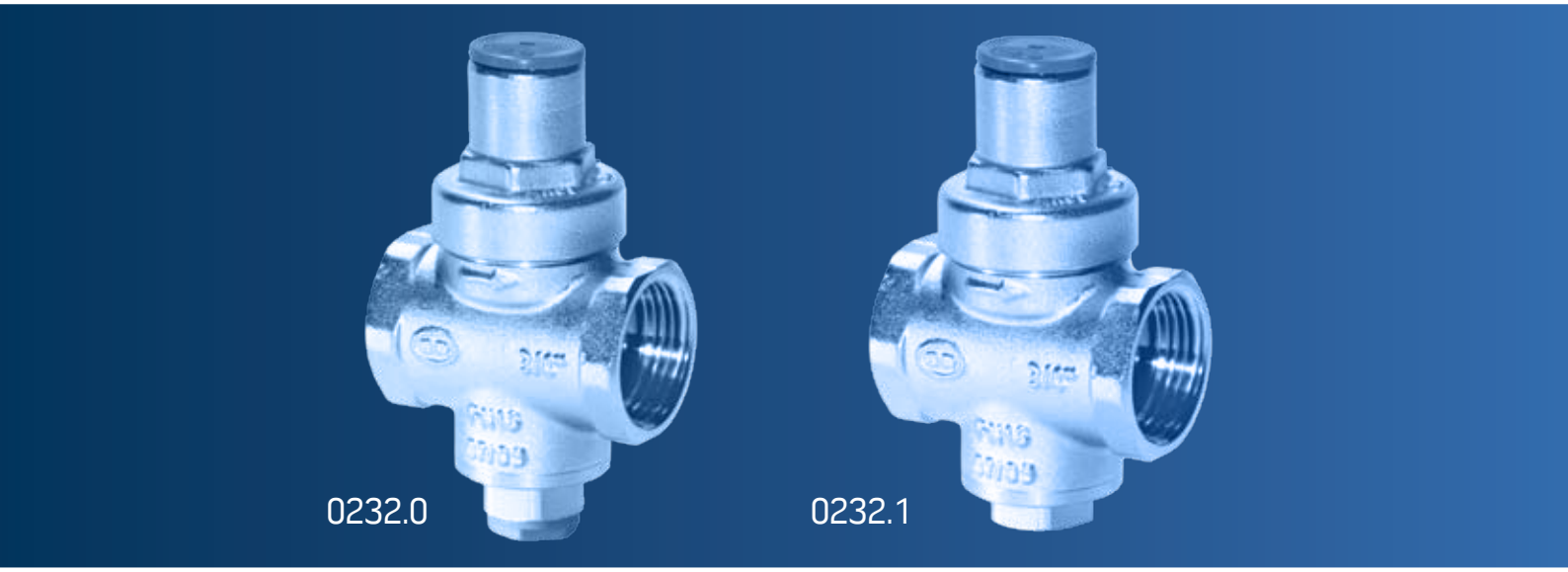


0232.0 • 3/8”-3/4”

0232.1 • 3/8”-3/4”

PRESSURE REDUCING VALVES WITH PISTON SABO PN 16 NICKEL-PLATED WITH GAUGE CONNECTION
PRESSURE REDUCING VALVES WITH PISTON SABO PN 16 NICKEL-PLATED WITHOUT GAUGE CONNECTION

CONNECTIONS: FEMALE-FEMALE
FEMALE-FEMALE



HYDRAULIC FEATURES

The SABO model pressure reducing valve is an automatic valve that reduces and stabilizes the pressure of a fluid in a water distribution conduit according to a preset value. Its reduced size, silent operation and internal self-cleaning seat render this valve ideal for use in small systems such as apartments and single-family households (according to EN 806-2 and EN 805) or as a safety device in boilers or automatic beverage distributors. The nickel-plated surface, besides giving it a pleasing appearance, protects against corrosion and calcareous incrustation.
Given the valve’s elevated flow capacity even with its reduced dimensions, it can be used directly on main distribution networks, where the water pressure reaches up to 16 bar.
The internal piston structure guarantees rigidity, strength and an enhanced regulation precision thanks to the compensated seat. The O-rings, in anti stick-slip Perox EPDM elastomer with a low friction coefficient, are durable and require only limited maintenance interventions.
The internal finish of the body and the broader dimensions of the passage allow an elevated flow even with a small water draw.
This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

ATTENTION: THE PRESSURE GAUGE INSTALLED ON THE PRESSURE REDUCING VALVE (only for valve 0232.0) INDICATES THE ALREADY-REDUCED PRESSURE (Ps) OF THE OUTGOING LIQUID.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Outlet settings (Ps)	from 1.5 to 5.5 bar
Ps value set during testing	3 bar
Outlet Ps set tolerance on varying inlet pressure	± 10 %
Temperature:	
Maximum working temperature (TS)	0°C (excluding ice) 80°C
Compatible fluids:	
water	
glycolate solutions	glycol 50%
compressed air	
Threading:	
Pipeline connection	Threads according to ISO 228/1
Gauge connection (only for valve 0232.0)	Threads according to EN 10226- Rp1/4” (ex ISO 7/1)
Tests according to:	
Tests in compliance with	EN 1567
Verification of the deviation from the pre-set pressure (Ps) according to EN 1567 § 8.3.2	
Verification of the set point range according to EN 1567 § 8.3.1	
Acoustic group	I - Lmax (dBA) < 20

DESIGN

Brass Body EN 12165 - CW617N
Brass bonnet EN 12165 - CW617N
Brass piston EN 12164 - CW614N
Other components in turned brass EN 12164 - CW614N
O-ring washers static seal and seat gaskets in NBR RUBBER
O-ring washers dynamic seal in EPDM RUBBER (peroxide-cured)
Setting spring in SM GALVANIZED STEEL - EN 10270-1
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)

Product codes

0232.012	F/F	3/8” nickel-plated with gauge connection	0232.112	F/F	3/8” nickel-plated without gauge connection
0232.015	F/F	1/2” nickel-plated with gauge connection	0232.115	F/F	1/2” nickel-plated without gauge connection
0232.020	F/F	3/4” nickel-plated with gauge connection	0232.120	F/F	3/4” nickel-plated without gauge connection

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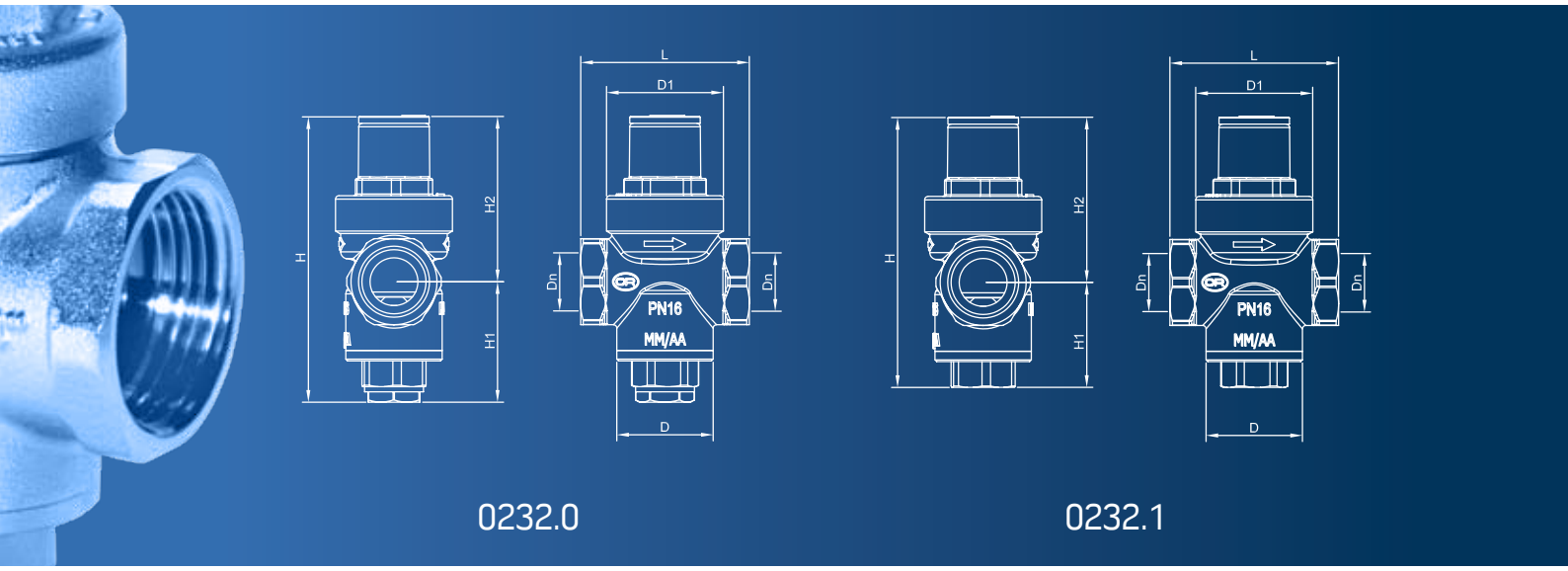
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0232.0 • 3/8”-3/4”

0232.1 • 3/8”-3/4”

PRESSURE REDUCING VALVES WITH PISTON SABO PN 16 NICKEL-PLATED WITH GAUGE CONNECTION
PRESSURE REDUCING VALVES WITH PISTON SABO PN 16 NICKEL-PLATED WITHOUT GAUGE CONNECTION

CONNECTIONS: FEMALE-FEMALE
FEMALE-FEMALE



0232.0 0232.1

FEATURES

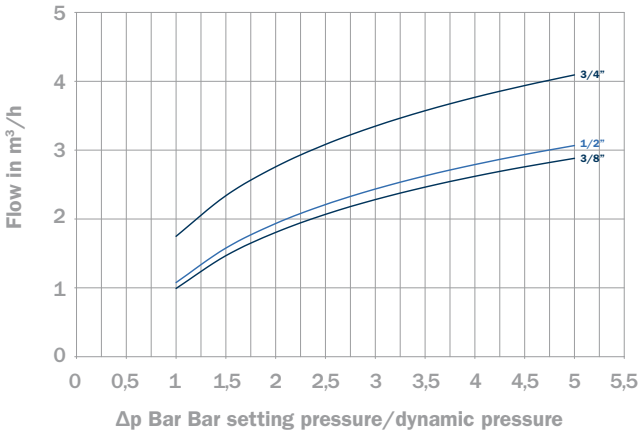
0232.0

Dn	D	D1	L	H	H1	H2
3/8”	Ø28	Ø34	49	83	35	48
1/2”	Ø28	Ø34	49	83	35	48
3/4”	Ø28	Ø34	50	88	36,5	51,5

0232.1

Dn	D	D1	L	H	H1	H2
3/8”	Ø28	Ø34	49	76	28	48
1/2”	Ø28	Ø34	49	76	28	48
3/4”	Ø28	Ø34	50	81	29,5	51,5

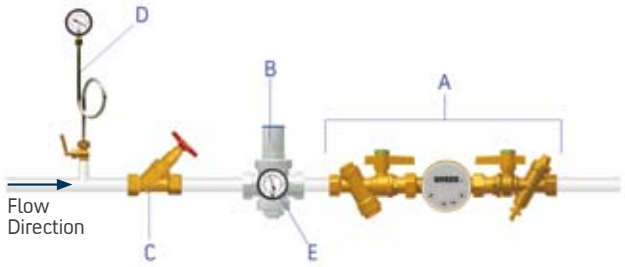
PRESSURE REDUCING VALVE 0232 3/8” - 3/4”



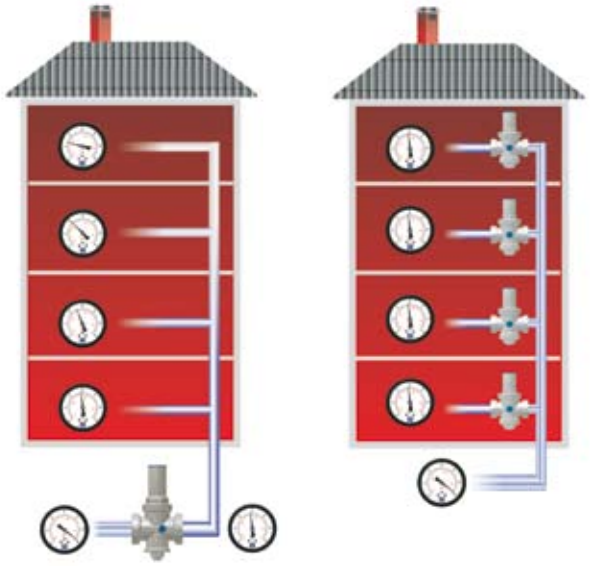
PRESSURE REDUCING VALVES WITH PISTON

PRESSURE REDUCING VALVES WITH PISTON

The use of a pressure reducing valve is necessary for limiting the pipeline working pressure for potable water distribution systems if the maximum possible static pressure, at any point in the potable water supply system, can reach or surpass the relative maximum allowable working pressure, or if there are apparatus and equipment attached that function exclusively at lower levels of pressure. In particular, these valves are recommended if the static pressure at intake points is larger than 5 bars, if the difference between the upstream pressure and the required downstream pressure is higher than 75%, and if the same pressure is required in the hot and cold water systems.

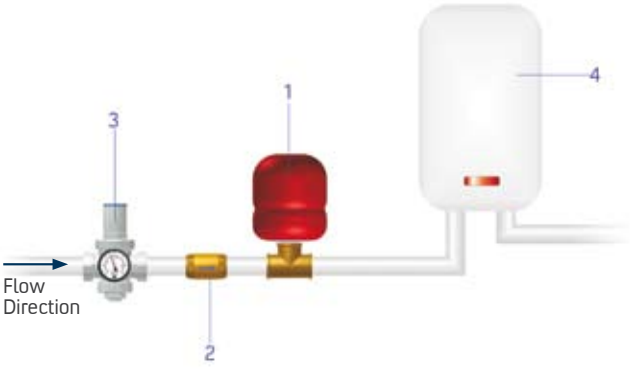


In buildings with numerous floors, it is preferable to install lower-dimensioned pressure reducing valves for each floor instead of installing a single higher-dimensioned pressure reducing valve at the foundation of the building. It should in fact be taken into consideration that, in the ascension pipe distributing water to each floor, the water pressure drops.



In buildings with numerous floors, it is preferable to install as many lower-gauged reducing valves for each floor instead of installing a single higher-gauged reducing valve at the foundation of the building. A water pressure loss in the ascension pipe distributing water to each floor should in fact be considered.

In order to guarantee a secure and economic functioning of the heating system, it is recommended to install a pressure reducing valve before the heating exchanger, which will maintain the minimum working pressure (automatic refill) required by the heating systems. The European Norm EN12828 §4.7.4. stipulates that, for this application, the supply system should be furnished with an expansion tank (1), a check valve (2) and a tract of pipe between the reducing valve (3) and the water heater (4), with a length equal to 5 times the nominal diameter of the pressure reducing valve used. These setups are necessary in order to avoid dangerous overpressure downstream from the reducing valve due to overheating of the water by the boiler.



PRESSURE REDUCING VALVES WITH PISTON

COMPRESSED AIR

If the system uses compressed air instead of water, the recommended velocities are between 10 and 20 m/s and the subsequent flow capacity will be 10 times higher than that calculated for use with water.

CHOOSING A PRESSURE REDUCING VALVE

OR's pressure reducing valves, scaled according to their sizes, should be chosen according to the maximum inlet pressure, the setting range of the valve itself and the flow rate required. Once the above three parameters are known, the appropriate reducing valve can be chosen as indicated on the respective flow capacity diagrams.
PLEASE NOTE: The diagrams show the average velocity of the fluid equal to 2 m/sec. As the velocity of the water passing through the reducing valve increases, the noise level of the plant also increases, and it is thus recommended to choose a larger (thus less noisy) model when high acoustic comfort is an important factor (residential use). In any event, it is strongly recommend not to surpass 3 m/sec in order to prevent the excavating phenomenon.

OPERATION OF THE PISTON PRESSURE REDUCING VALVE

The piston pressure reducing valve is an automatic valve whose opening and closure depends on the downstream water pressure. Figures 1 and 2 present its structure schematically: a stamped plastic rigid piston "A" causes the obturator "B" to move as a consequence of the action of two opposing forces. From below, the water pressure in the pipeline downstream from the reducing valve, which tends to close the valve; and from above, the force of the spring appropriately loaded according to the desired working pressure to be maintained, which tends to open the valve.
The valve opens, as illustrated in Figure 2, when, following the supply of water to the tap, the pressure under the piston falls and the force of the spring prevails; thus the opening of the valve is proportional to the flow during the drawing of water from the tap. As soon as the tap water supply is closed, the downstream water pressure reaches a pressure capable of overcoming the force from the spring and the obturator thus rises up, closing the valve. Regulation of the pressure is obtained by screwing in the regulator "C", which compresses the spring to larger or smaller extent.

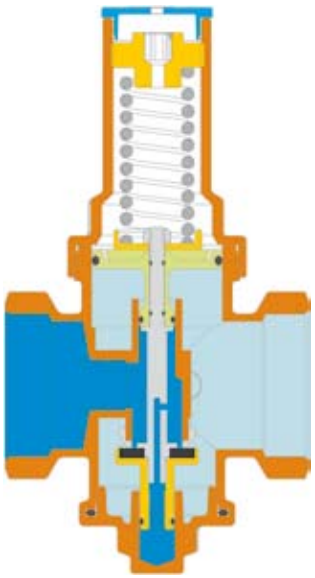


Fig. 1

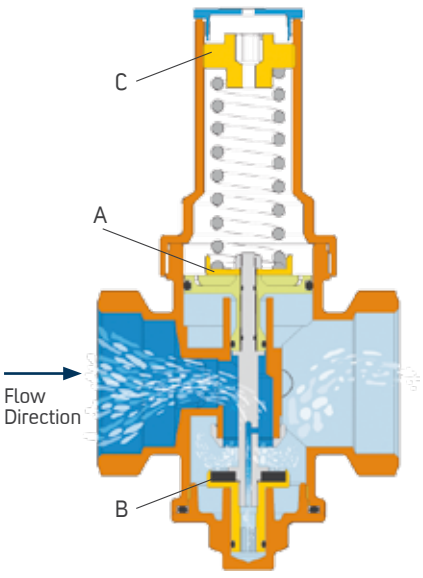
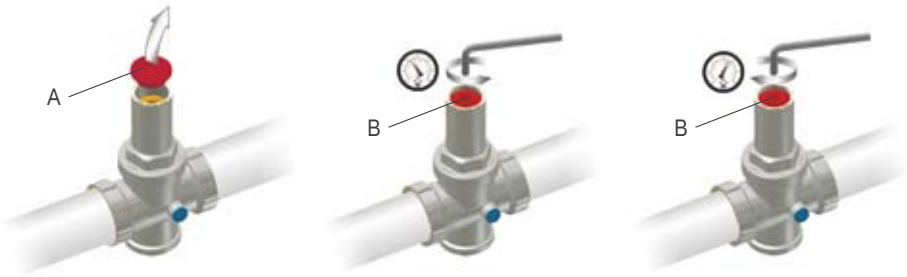


Fig. 2

PRESSURE REDUCING VALVES WITH PISTON

SETTING

1 - Prior to the installation, open all the taps to clean the system and expel any remaining air in the pipelines.
2 - Install the upstream and downstream shut off valves with a view to facilitating future maintenance tasks.
3 - Install the pressure reducing valve (ensuring its positioning is correct according to the arrow, which indicates the direction of the flow).
4 - Close the downstream shut off valve.
5 - Fix the preset values with the upper regulator. Remove the cover A and use regulator B to set the pressure: rotating clockwise will increase the pressure value; while rotating counterclockwise will decrease it.



6 - Control by reading the set pressure on a gauge. (The OR pressure reducing valves are factory preset at 3 bar)

WATER HAMMERS

A sudden overpressure, also called “water hammer” is one of the most common causes of damage to pressure reducing valves. When installing reducing valves on systems that may be subject to these phenomena, it is advisable to use devices especially designed to absorb water hammers.

PLEASE NOTE: Prior to installing or operating new pressure reducing valves, please pay particular attention to the information on the illustrated booklet packed with each OR pressure reducing valve.

0233.1 • 1/2”- 2”1/2

PRESSURE REDUCING VALVES WITH PISTON PN 25 NICKEL-PLATED WITH COMPENSATION CHAMBER AND STAINLESS STEEL SEAT

CONNECTIONS: FEMALE-FEMALE

HYDRAULIC FEATURES

The PISTON-type pressure reducing valve PN 25 is an automatic valve that reduces and stabilizes the pressure of a fluid in a water distribution conduit according to a preset value. The use of this hydraulic device is necessary if the maximum possible pressure at any point in the water distribution system can reach or exceed the relative maximum allowable working pressure, or if connectable to apparatus and equipment that function exclusively at lower levels of pressure. The piston-type pressure reducing valve is designed for use in either internal or external water distribution systems, where the water main pressure values do not surpass 25 bar. The thermoplastic material of the internal piston structure guarantees rigidity, strength and an enhanced regulation precision thanks to the compensated seat. The O-rings, in antistick-slip Perox EPDM elastomer with a low coefficient of friction, are durable and require only limited maintenance interventions.
The internal finish of the body and the broader dimensions of the passage allow an elevated flow even with a minimal water draw.
The piston-type pressure reducing valve (PN 25) is used in air conditioning plants, sanitary installations for water supply, irrigation systems, compressed air (not oil mist) distribution systems, fire suppression piping (it should be borne in mind that local government standards for fire protection must always be observed), and sanitary installations for water supply in buildings (according to EN 806-2 and EN 805).
This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

ATTENTION: THE PRESSURE GAUGE CONNECTED TO THE PRESSURE REDUCING VALVE INDICATES THE ALREADY-REDUCED PRESSURE (Ps) OF THE OUTLET LIQUID FLOW.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	25 bar
Outlet settings (Ps)	from 1.5 to 5.5 bar
Ps value set during testing	3 bar
Outlet Ps set tolerance on varying inlet pressure	± 10 %
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) 80°C
Compatible fluids:	
water	
glycolate solutions	glycol 50%
compressed air	
Threading:	
Pipeline connection: Threads according to	ISO 228/1
Gauge connection: Threads according to	EN 10226- Rp1/4” (ex ISO 7/1)

Tests according to
EN 1567 - Compliant with the codes of practice stipulated in DVGW W 570-1 (German Technical and Scientific Association for Gas and Water)
Verification of the deviation from the pre-set pressure (Ps) according to EN 1567 § 8.3.2
Verification of the setpoint range according to EN 1567 § 8.3.1
Flow rate and outlet pressure according to EN 1567 § 8.3.4 - (compliant with recommendations DVGW W 570-1 §6.1.3)
Acoustic group II - Lmax (dBA) < 30

DESIGN

Brass Body EN 12165 - CW617N
Brass bonnets EN 12165 - CW617N
Piston in PA66-GF30 POLYAMIDE (Nylon 66) reinforced with glass fiber
Other forged components in brass EN 12165 - CW617N
Other components in turned brass EN 12164 - CW614N
Static O-ring washers and seat gaskets in NBR RUBBER
Dynamic O-ring washers in EPDM RUBBER (peroxide-cured)
SM GALVANIZED STEEL calibration spring - EN 10270-1
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)
STAINLESS STEEL insert seat EN 10088-1.4305 (AISI 303)

PRODUCT CODES

0233.115	female/female nickel-plated	1/2”	0233.142	female/female nickel-plated	1”1/2
0233.120	female/female nickel-plated	3/4”	0233.150	female/female nickel-plated	2”
0233.125	female/female nickel-plated	1”	0233.166	female/female nickel-plated	2”1/2
0233.133	female/female nickel-plated	1”1/4			

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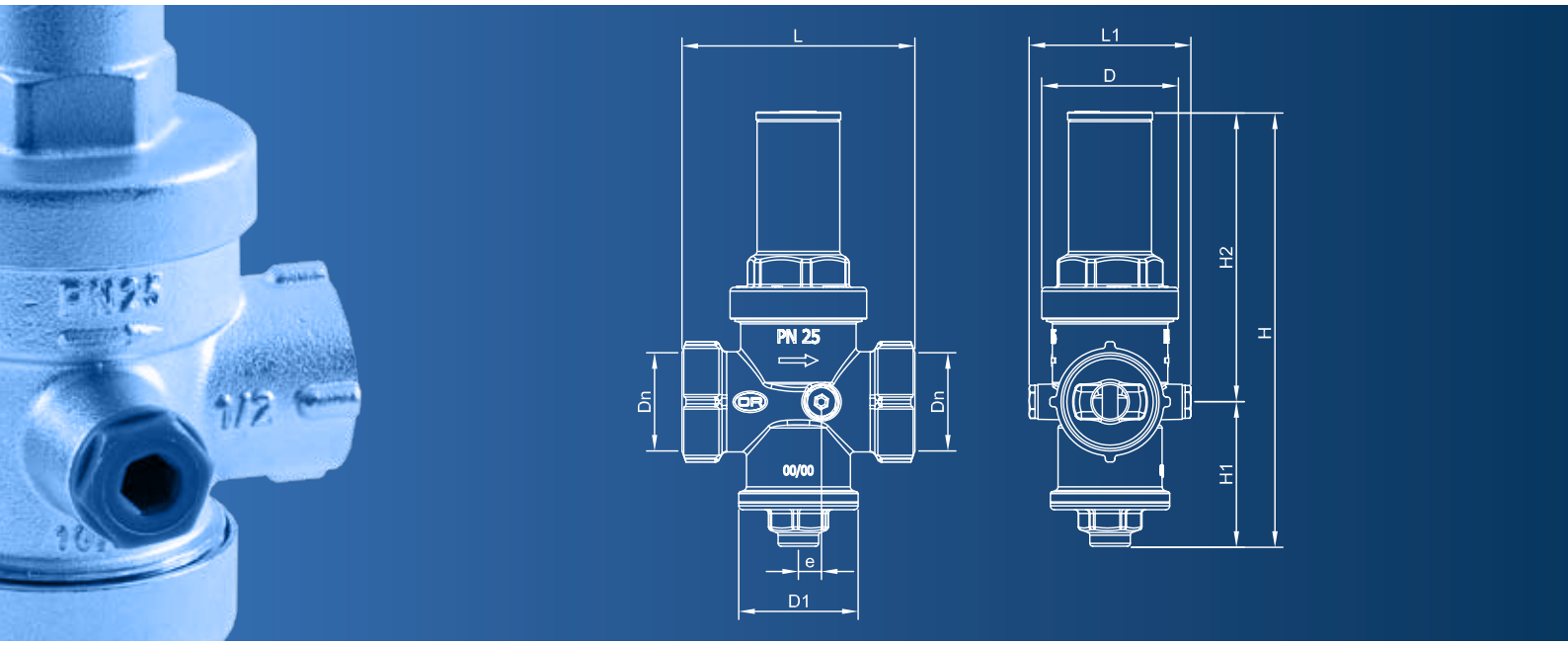
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0233.1 • 1/2”- 2”1/2

PRESSURE REDUCING VALVES WITH PISTON PN 25 NICKEL-PLATED WITH COMPENSATION CHAMBER AND STAINLESS STEEL SEAT

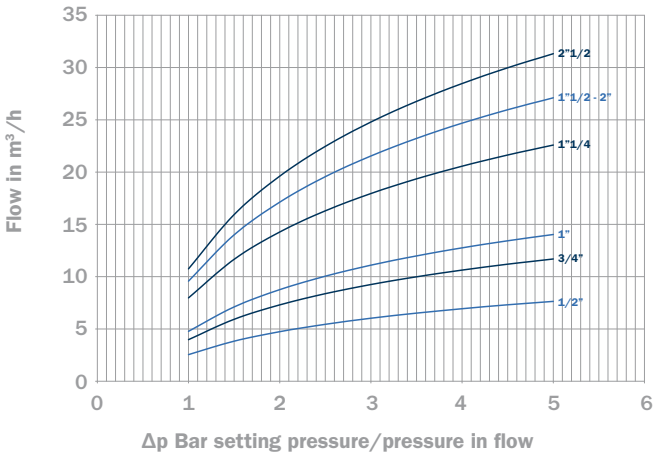
CONNECTIONS: FEMALE-FEMALE



FEATURES

Dn	D	D1	L	L1	H	H1	H2	e
1/2”	Ø48	Ø44	69	73	114	42	72	\
3/4”	Ø48	Ø44	82	73	114	42	72	\
1”	Ø59	Ø52	96	73	145,5	52,5	93	\
1”1/4	Ø59	Ø52	100	73	151,5	56,5	95	\
1”1/2	Ø71	Ø62	121	84	225,5	75	150,5	12
2”	Ø71	Ø62	121	84	225,5	75	150,5	12
2”1/2	Ø71	Ø62	131	94	230	75,5	154,5	\

PRESSURE REDUCING VALVE ART.0233 1/2”-2”1/2



0234.0 • 1/2”- 2”

0234.1 • 1/2”- 2”

PRESSURE REDUCING VALVES WITH PISTON PN 25 YELLOW WITH STAINLESS STEEL SEAT
PRESSURE REDUCING VALVES WITH PISTON PN 25 NICKEL-PLATED WITH STAINLESS STEEL SEAT

CONNECTIONS: DISMANTLING FITTINGS MALE
DISMANTLING FITTINGS MALE

HYDRAULIC FEATURES

The PISTON-type pressure reducing valve PN 25 with male dismantling fittings is an automatic valve that reduces and stabilizes the pressure of a fluid in a water distribution conduit according to a preset value. The use of this hydraulic device is necessary if the maximum possible pressure at any point in the water distribution system can reach or exceed the relative maximum allowable working pressure, or if connectable to apparatus and equipment that function exclusively at lower levels of pressure. The piston-type pressure reducing valve is designed for use in either internal or external water distribution systems, where the water main pressure values do not surpass 25 bar. The thermoplastic material of the internal piston structure guarantees rigidity, strength and an enhanced regulation precision due to the compensated seat. The O-rings, in antistick-slip Perox EPDM elastomer with a low coefficient of friction, are durable and require only limited maintenance interventions.
The internal finish of the body and the broader dimensions of the passage allow an elevated flow even when the water draw is small.
The piston-type pressure reducing valve (PN 25) is used in air conditioning plants, sanitary installations for water supply, irrigation systems, compressed air (not oil mist) distribution systems, fire suppression piping (it should be borne in mind that local government standards for fire protection must always be observed), and sanitary installations for water supply in buildings (according to EN 806-2 and EN 805).
This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

ATTENTION: THE PRESSURE GAUGE CONNECTED TO THE PRESSURE REDUCING VALVE INDICATES THE ALREADY-REDUCED PRESSURE (Ps) OF THE OUTLET LIQUID FLOW.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	25 bar
Outlet settings (Ps)	from 1.5 to 5.5 bar
Ps value set during testing	3 bar
Outlet Ps set tolerance on varying inlet pressure	± 10 %
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) 80°C
Compatible fluids:	
water	
glycolate solutions	glycol 50%
compressed air	
Threading:	
Pipeline connection	Threads according to ISO 228/1
Gauge connection	Threads according to EN 10226- Rp1/4” (ex ISO 7/1)
Tests according to:	
EN 1567 - Compliant with the codes of practice stipulated in DVGW W 570-1 (German Technical and Scientific Association for Gas and Water)	
Verification of the deviation from the pre-set pressure (Ps) according to EN 1567 § 8.3.2	
Verification of the setpoint range according to EN 1567 § 8.3.1	
Flow rate and outlet pressure according to EN 1567 § 8.3.4 - (compliant with recommendations DVGW W 570-1 §6.1.3)	
Acoustic group	II - Lmax (dBA) < 30

DESIGN

Brass Body EN 12165 - CW617N
Brass bonnets EN 12165 - CW617N
Piston in PA66-GF30 POLYAMIDE (Nylon 66) reinforced with glass fiber
Other forged components in brass EN 12165 - CW617N
Other components in turned brass EN 12164 - CW614N
Static O-ring washers and seat gaskets in NBR RUBBER
Dynamic O-ring washers in EPDM RUBBER (peroxide-cured)
SM GALVANIZED STEEL calibration spring - EN 10270-1
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)
STAINLESS STEEL insert seat EN 10088-1.4305 (AISI 303)

Product codes

0234.015	dismantling fitting male yellow	1/2”	0234.115	dismantling fitting male nickel-plated	1/2”
0234.020	dismantling fitting male yellow	3/4”	0234.120	dismantling fitting male nickel-plated	3/4”
0234.025	dismantling fitting male yellow	1”	0234.125	dismantling fitting male nickel-plated	1”
0234.033	dismantling fitting male yellow	1”1/4	0234.133	dismantling fitting male nickel-plated	1”1/4
0234.042	dismantling fitting male yellow	1”1/2	0234.142	dismantling fitting male nickel-plated	1”1/2
0234.050	dismantling fitting male yellow	2”	0234.150	dismantling fitting male nickel-plated	2”

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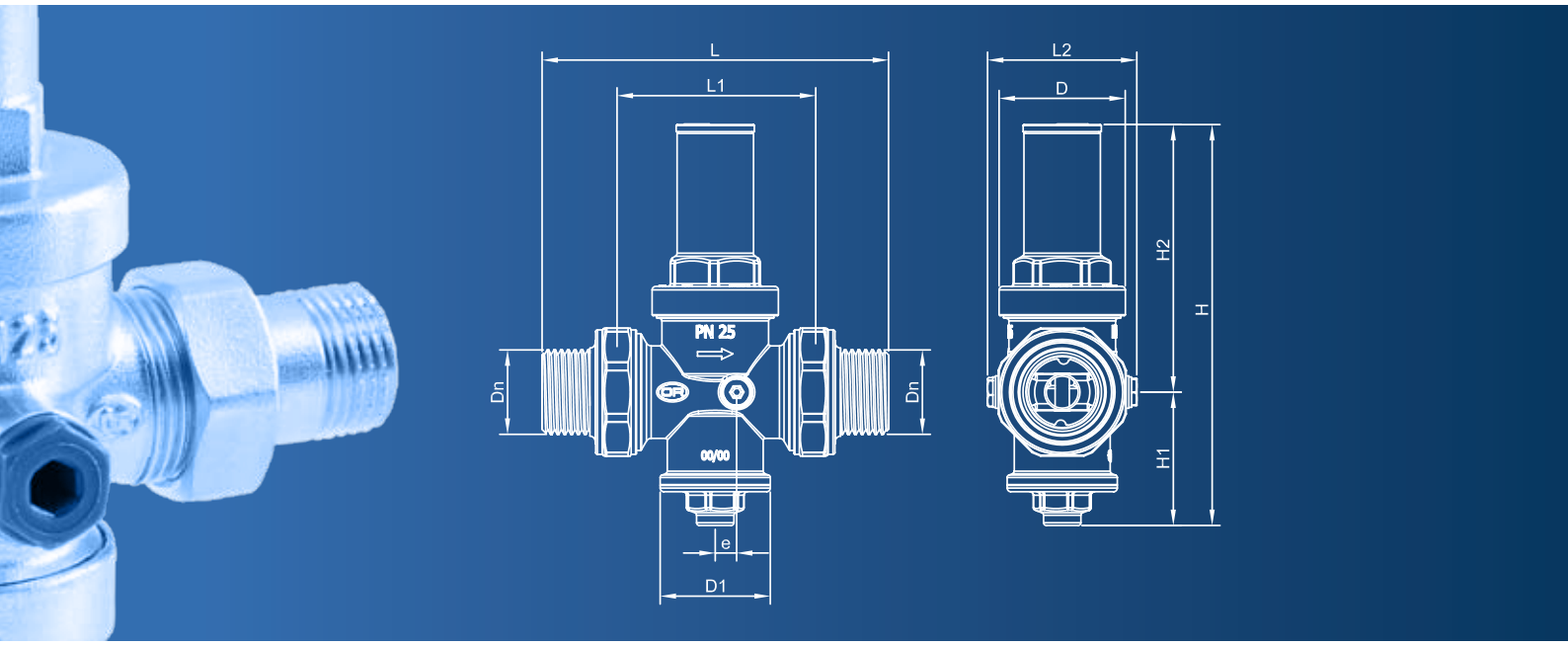
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0234.0 • 1/2”- 2”

0234.1 • 1/2”- 2”

PRESSURE REDUCING VALVES WITH PISTON PN 25 YELLOW WITH STAINLESS STEEL SEAT
PRESSURE REDUCING VALVES WITH PISTON PN 25 NICKEL-PLATED WITH STAINLESS STEEL SEAT

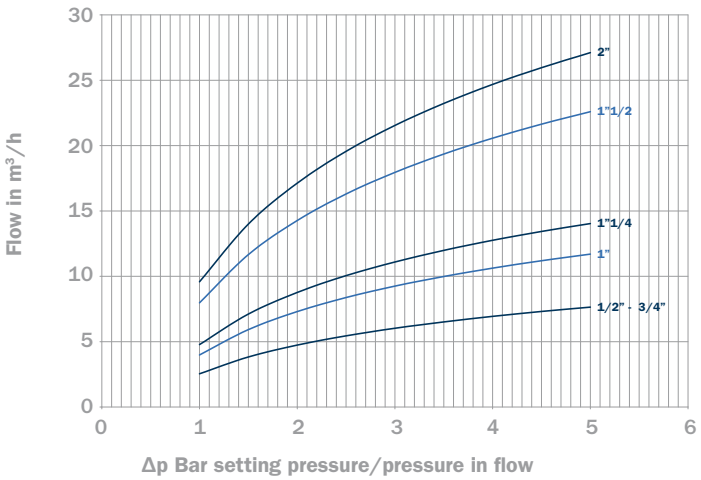
CONNECTIONS: DISMANTLING FITTINGS MALE
DISMANTLING FITTINGS MALE



FEATURES

Dn	D	D1	L	L1	L2	H	H1	H2	e
1/2”	Ø48	Ø44	126	69	73	114	42	72	\
3/4”	Ø48	Ø44	139	78	73	114	42	72	\
1”	Ø59	Ø52	160	90	73	145,5	52,5	93	\
1”1/4	Ø59	Ø52	172	92	73	151,5	56,5	95	\
1”1/2	Ø71	Ø62	195	115	84	225,5	75	150,5	12
2”	Ø71	Ø62	231	131	84	225,5	75	150,5	12

PRESSURE REDUCING VALVE ART.234 1/2”-2”

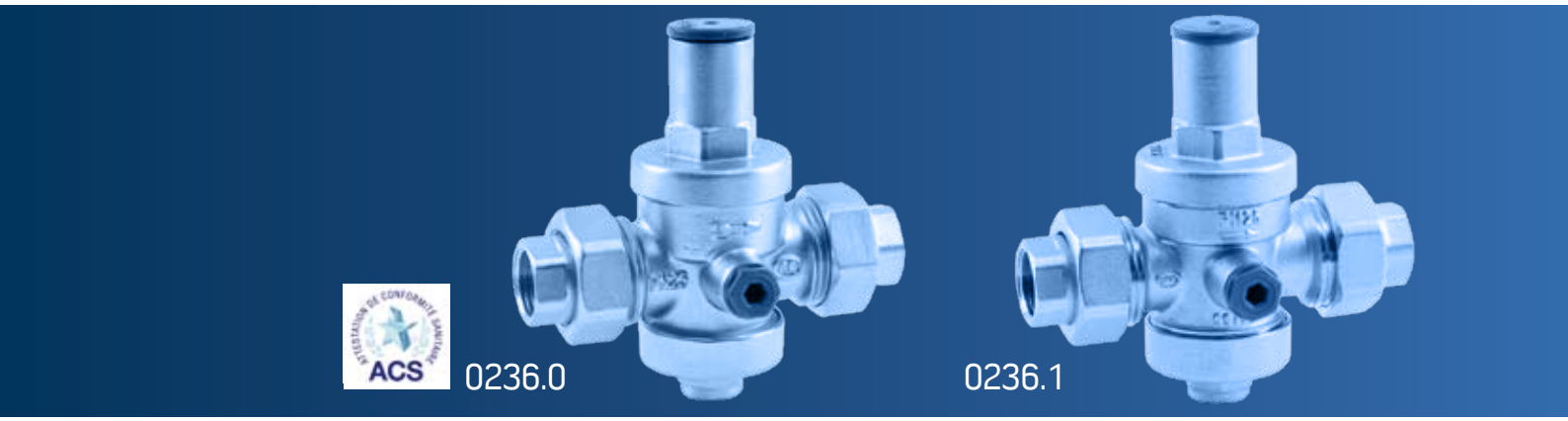


0236.0 • 1/2”- 2”

0236.1 • 1/2”- 2”

PRESSURE REDUCING VALVES WITH PISTON PN 25 YELLOW WITH STAINLESS STEEL SEAT
PRESSURE REDUCING VALVES WITH PISTON PN 25 NICKEL-PLATED WITH STAINLESS STEEL SEAT

CONNECTIONS: DISMANTLING FITTINGS FEMALE
DISMANTLING FITTINGS FEMALE



HYDRAULIC FEATURES

The PISTON-type pressure reducing valve PN 25 with female dismantling fittings is an automatic valve that reduces and stabilizes the pressure of a fluid in a water distribution conduit according to a preset value. The use of this hydraulic device is necessary if the maximum possible pressure at any point in the water distribution system can reach or exceed the relative maximum allowable working pressure, or if connectable to apparatus and equipment that function exclusively at lower levels of pressure. The piston-type pressure reducing valve is designed for use in either internal or external water distribution systems, where the water main pressure values do not surpass 25 bar. The thermoplastic material of the internal piston structure guarantees rigidity, strength and an enhanced regulation precision due to the compensated seat. The O-rings, in antistick-slip Perox EPDM elastomer with a low coefficient of friction, are durable and require only limited maintenance interventions.
The internal finish of the body and the broader dimensions of the passage allow an elevated flow even when the water draw is small.
The piston-type pressure reducing valve (PN 25) is used in conditioning plants, sanitary installations for water supply, irrigation systems, compressed air (not oil mist) distribution systems, fire suppression piping (it should be borne in mind that local government standards for fire protection must always be observed), and sanitary installations for water supply in buildings (according to EN 806-2 and EN 805).
This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

ATTENTION: THE PRESSURE GAUGE CONNECTED TO THE PRESSURE REDUCING VALVE INDICATES THE ALREADY-REDUCED PRESSURE (Ps) OF THE OUTLET LIQUID FLOW.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	25 bar
Outlet settings (Ps)	from 1.5 to 5.5 bar
Ps value set during testing	3 bar
Outlet Ps set tolerance on varying inlet pressure	± 10 %
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) 80°C
Compatible fluids:	
water	
glycolate solutions	glycol 50%
compressed air	
Threading:	
Pipeline connection	Threads according to ISO 228/1
Gauge connection: Threads according to	EN 10226- Rp1/4” (ex ISO 7/1)

Tests according to:
EN 1567 - Compliant with the codes of practice stipulated in DVGW W 570-1 (German Technical and Scientific Association for Gas and Water)
Verification of the deviation from the pre-set pressure (Ps) according to EN 1567 § 8.3.2
Verification of the setpoint range according to EN 1567 § 8.3.1
Flow rate and outlet pressure according to EN 1567 § 8.3.4 - (compliant with recommendations DVGW W 570-1 §6.1.3)
Acoustic group II - Lmax (dBA) < 30

DESIGN

Brass Body EN 12165 - CW617N
Brass bonnets EN 12165 - CW617N
Piston in PA66-GF30 POLYAMIDE (Nylon 66) reinforced with glass fiber
Other forged components in brass EN 12165 - CW617N
Other components in turned brass EN 12164 - CW614N
Static O-ring washers and seat gaskets in NBR RUBBER
Dynamic O-ring washers in EPDM RUBBER (peroxide-cured)
SM GALVANIZED STEEL calibration spring - EN 10270-1
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)
STAINLESS STEEL insert seat EN 10088-14310 (AISI 303)

Product codes

0236.015	dismantling fitting female yellow	1/2”	0236.115	dismantling fitting female nickel-plated	1/2”
0236.020	dismantling fitting female yellow	3/4”	0236.120	dismantling fitting female nickel-plated	3/4”
0236.025	dismantling fitting female yellow	1”	0236.125	dismantling fitting female nickel-plated	1”
0236.033	dismantling fitting female yellow	1”1/4	0236.133	dismantling fitting female nickel-plated	1”1/4
0236.042	dismantling fitting female yellow	1”1/2	0236.142	dismantling fitting female nickel-plated	1”1/2
0236.050	dismantling fitting female yellow	2”	0236.150	dismantling fitting female nickel-plated	2”

OFFICINE RIGAMONTI
La qualità di mano in mano.

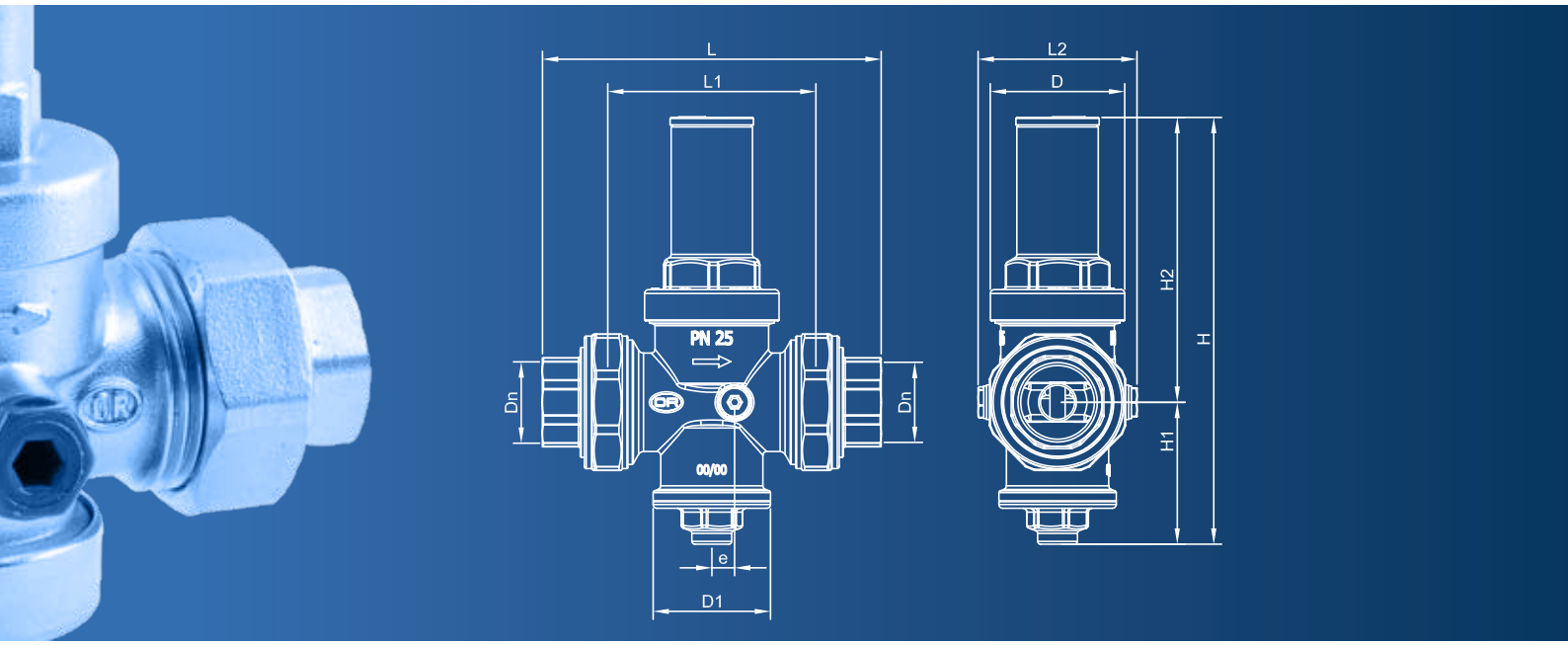
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0236.0 • 1/2”- 2”

0236.1 • 1/2”- 2”

PRESSURE REDUCING VALVES WITH PISTON PN 25 YELLOW WITH STAINLESS STEEL SEAT
PRESSURE REDUCING VALVES WITH PISTON PN 25 NICKEL-PLATED WITH STAINLESS STEEL SEAT

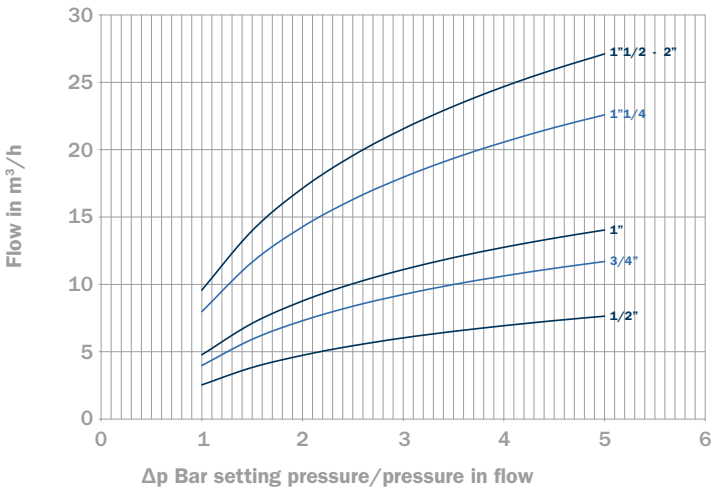
CONNECTIONS: DISMANTLING FITTINGS FEMALE
DISMANTLING FITTINGS FEMALE



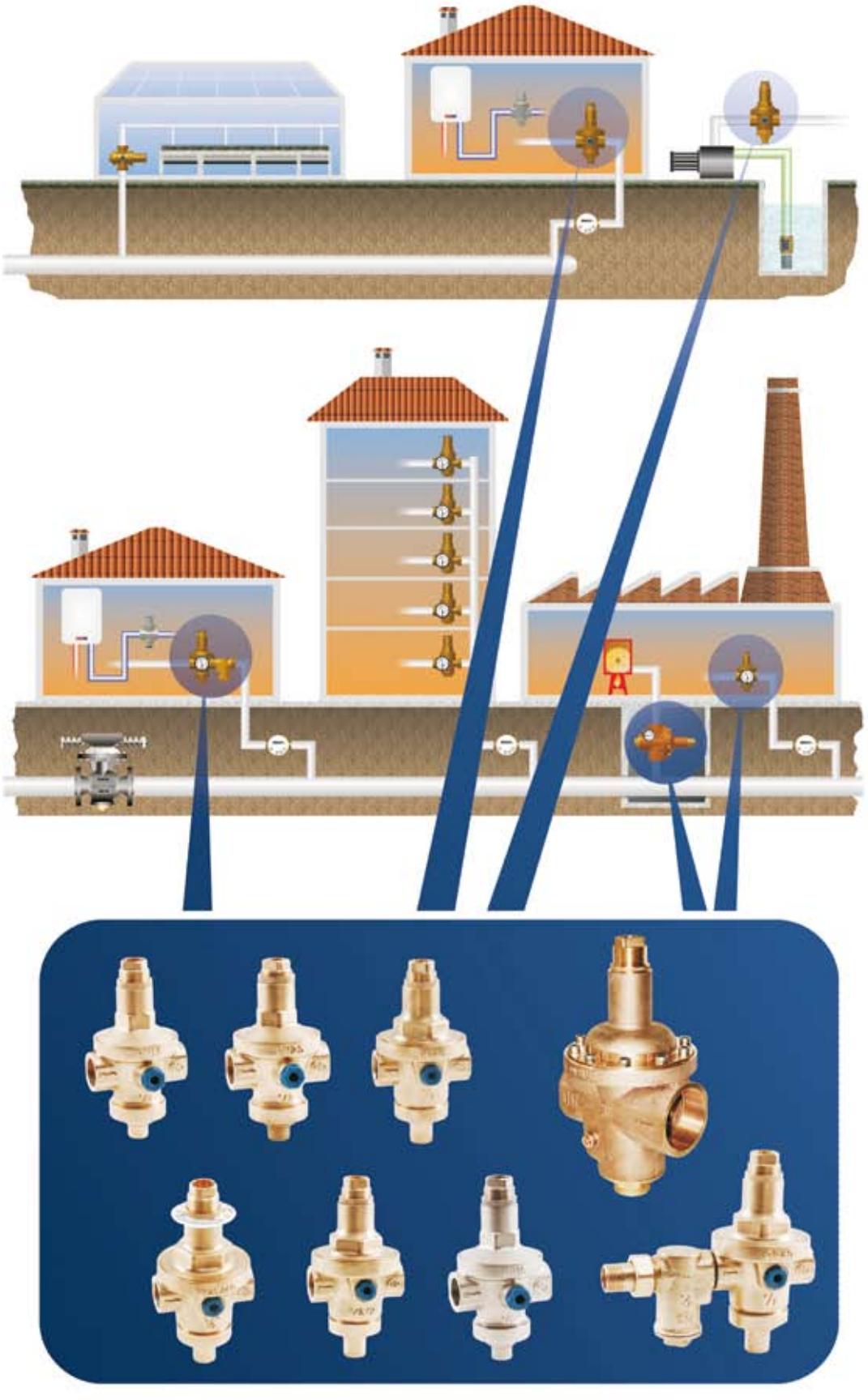
FEATURES

Dn	D	D1	L	L1	L2	H	H1	H2	e
1/2”	Ø48	Ø44	118	69	73	114	42	72	\
3/4”	Ø48	Ø44	134	78	73	114	42	72	\
1”	Ø59	Ø52	140	90	73	145,5	52,5	93	\
1”1/4	Ø59	Ø52	179	92	73	151,5	56,5	95	\
1”1/2	Ø71	Ø62	189	115	84	225,5	75	150,5	12
2”	Ø71	Ø62	219	131	84	225,5	75	150,5	12

PRESSURE REDUCING VALVE ART.236 1/2”- 2”

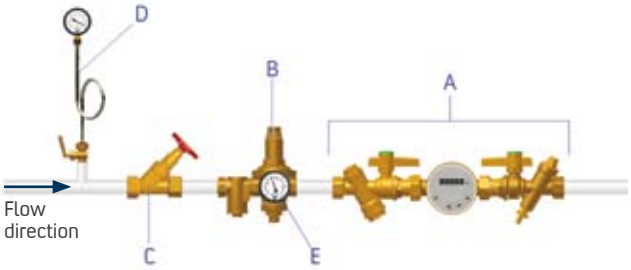


PRESSURE REDUCING VALVES WITH DIAPHRAGM

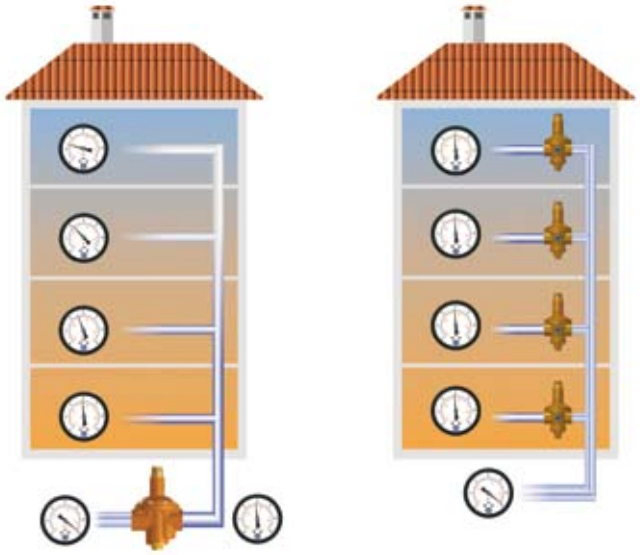


PRESSURE REDUCING VALVES WITH DIAPHRAGM

The use of a pressure reducing valve is necessary for limiting the pipeline working pressure for potable water distribution systems if the maximum possible static pressure, at any point in the potable water supply system, can reach or surpass the relative maximum allowable working pressure, or if there are apparatus and equipment attached that function exclusively at lower levels of pressure. In particular, these valves are recommended if the static pressure at intake points is larger than 5 bars, if the difference between the upstream pressure and the required downstream pressure is higher than 75%, and if the same pressure is required in the hot and cold water systems.

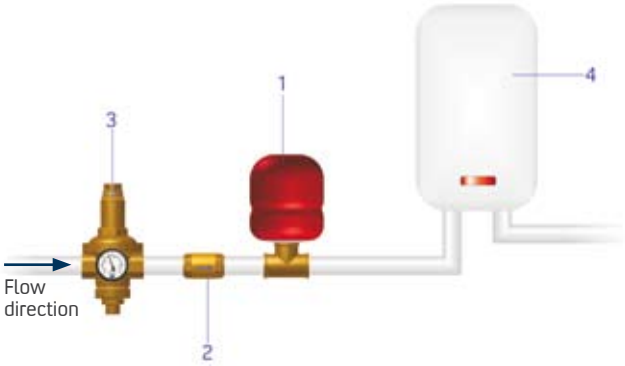


The installation of the pressure reducing valve with diaphragm in potable water supply systems (EN 806-2 §16)) is normally carried out on cold water pipe downstream the water meter system (A). For each pressure reducing valve (B), the water system should be set up for a shut off valve (C) a gauge (D) upstream that, in conjunction with a gauge (E) installed at the pressure inlets on the reducing valve's body, facilitate adjustment and maintenance. Should a By-pass tube be necessary, it should also be fitted with a pressure reducing valve. In order to limit the effects of backpressures, it is advisable to install a tract of pipe, of 5 times the length of the nominal diameter of the device used, downstream to the pressure reducing valve.



In buildings with numerous floors, it is preferable to install lower-dimensioned pressure reducing valves for each floor instead of installing a single higher-dimensioned pressure reducing valve at the foundation of the building. It should in fact be taken into consideration that, in the ascension pipe distributing water to each floor, the water pressure drops.

In order to guarantee a secure and economic functioning of the heating system, it is recommended to install a pressure reducing valve before the heating exchanger, which will maintain the minimum working pressure (automatic refill) required by the heating systems. The European Norm EN12828 §4.7.4. stipulates that, for this application, the supply system should be furnished with an expansion tank (1), a check valve (2) and a tract of pipe between the reducing valve (3) and the water heater (4), with a length equal to 5 times the nominal diameter of the pressure reducing valve used. These setups are necessary in order to avoid dangerous overpressure downstream from the reducing valve due to overheating of the water by the boiler.



PRESSURE REDUCING VALVES WITH DIAPHRAGM

COMPRESSED AIR

If the system uses compressed air instead of water, the recommended velocities are between 10 and 20 m/s and the subsequent flow capacity will be 10 times higher than that calculated for use with water.

CHOOSING A PRESSURE REDUCING VALVE

OR's pressure reducing valves, scaled according to their sizes, should be chosen according to the maximum inlet pressure, the setting range of the valve itself and the flow rate required. Once the above three parameters are known, the appropriate reducing valve can be chosen as indicated on the respective flow capacity diagrams.
PLEASE NOTE: The diagrams show the average velocity of the fluid equal to 2 m/sec. As the velocity of the water passing through the reducing valve increases, the noise level of the plant also increases, and it is thus recommended to choose a larger (thus less noisy) model when high acoustic comfort is an important factor (residential use). In any event, it is strongly recommend not to surpass 3 m/sec in order to prevent the excavating phenomenon.

OPERATION OF THE DIAPHRAGM-TYPE PRESSURE REDUCING VALVE

The figures on this page show a schematic structure of the OR pressure reducing valve. A flexible diaphragm (A) causes the obturator (B) to move as a consequence of the action of two opposing forces: from below, the water pressure in the pipeline downstream from the reducing valve, which tends to close the valve; and from above, the force of the spring (C) appropriately loaded according to the desired working pressure to be maintained, which tends to open the valve. The valve opens, as illustrated in Figure 2, when, following the supply of water to the tap, the pressure under the diaphragm falls and the force of the spring prevails; thus the opening of the valve is proportional to the flow during the drawing of water from the tap. As soon as the tap water supply is closed, the water in the downstream tube reaches a pressure capable of overcoming the force from the spring and the obturator thus rises up, closing the valve. Regulation of the pressure is obtained by screwing in the regulator (D) that compresses the spring to larger or smaller extent. The compensated seat of the pressure reducing valves "with compensation chamber" likewise aids in maintaining the preset value, even in conditions of strong inlet pressure variations, which could reach 40 bar: the upstream pressure pushes the obturator to an open position, and also acts upon the compensation chamber hub in the opposite direction, which achieves a substantial balance.
the seal seat insert in STAINLESS steel affords reliability and precision of the pressure reducing valves throughout the years, even in the most extreme working conditions.

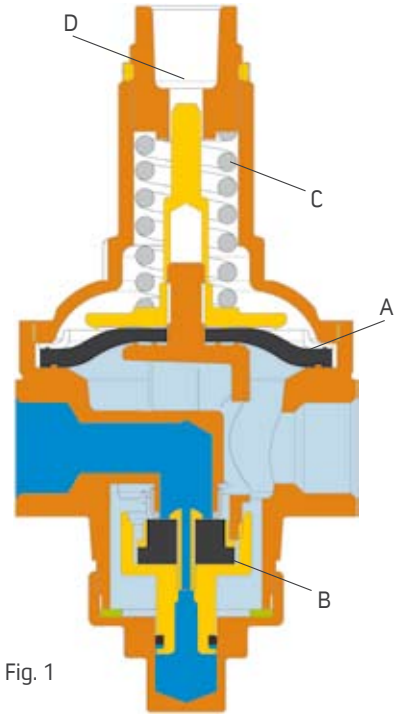


Fig. 1

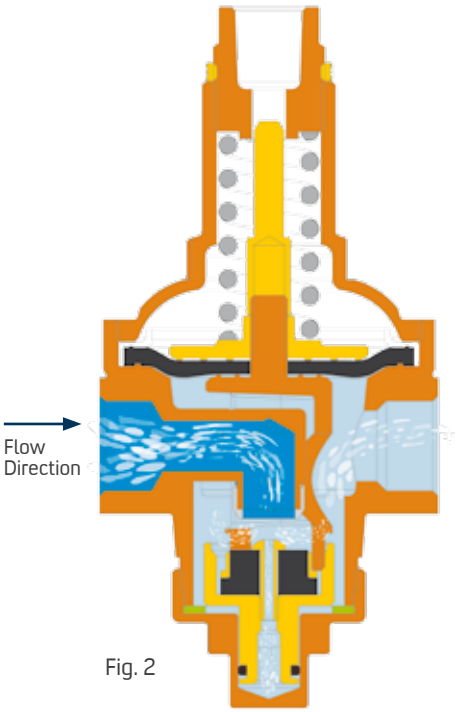


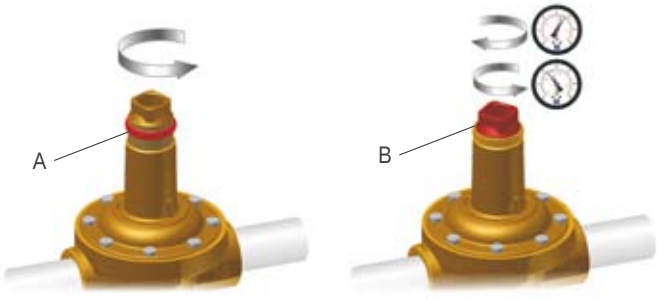
Fig. 2

The internal cavities have been designed to get noise levels below 30 dB (Class 2) for water velocities between 1.5 and 2.5 m/sec.
Both the spring and all the regulating elements are isolated from water and consequently are kept from technical/structural deterioration. The particular structure of the O-ring washers of the compensation chamber forestall any risk of jamming, incrustation or sticking (made of special flexible anti stick-slip Perox EPDM elastomer). The limited use of moving parts guarantees enhanced sensitivity and precision. The DIAPHRAGM that actions the obturator's movement can sustain strong outlet backpressures of up to 25 bar, whether they are pulsating (water hammers) or constant. Regulation is carried out with a regulator on the upper part of the valve that, when turned clockwise, increases the outlet pressure in compliance with the most recent European standards. All the OR pressure reducing valves are furnished with two test points for the reduced pressure, threading Rp ¼".

PRESSURE REDUCING VALVES WITH DIAPHRAGM

SETTING

1 - Prior to the installation, open all the taps to clean the system and expel any remaining air in the pipelines.
2 - Install the upstream and downstream shut off valves with a view to facilitating future maintenance tasks.
3 - Install the pressure reducing valve (ensuring its positioning is correct according to the arrow,which indicates the direction of the flow).
4 - Close the downstream shut off valve.
5 - Fix the preset values with the upper regulator. Remove the cover A and use regulator B to set the pressure: rotating clockwise will increase the pressure value; while rotating counterclockwise will decrease it.



6 - Control by reading the set pressure on a gauge. (The OR pressure reducing valves are factory preset at 3 bar)

WATER HAMMERS

A sudden overpressure, also called “water hammer” is one of the most common causes of damage to pressure reducing valves. When installing reducing valves on systems that may be subject to these phenomena, it is advisable to use devices especially designed to absorb water hammers.

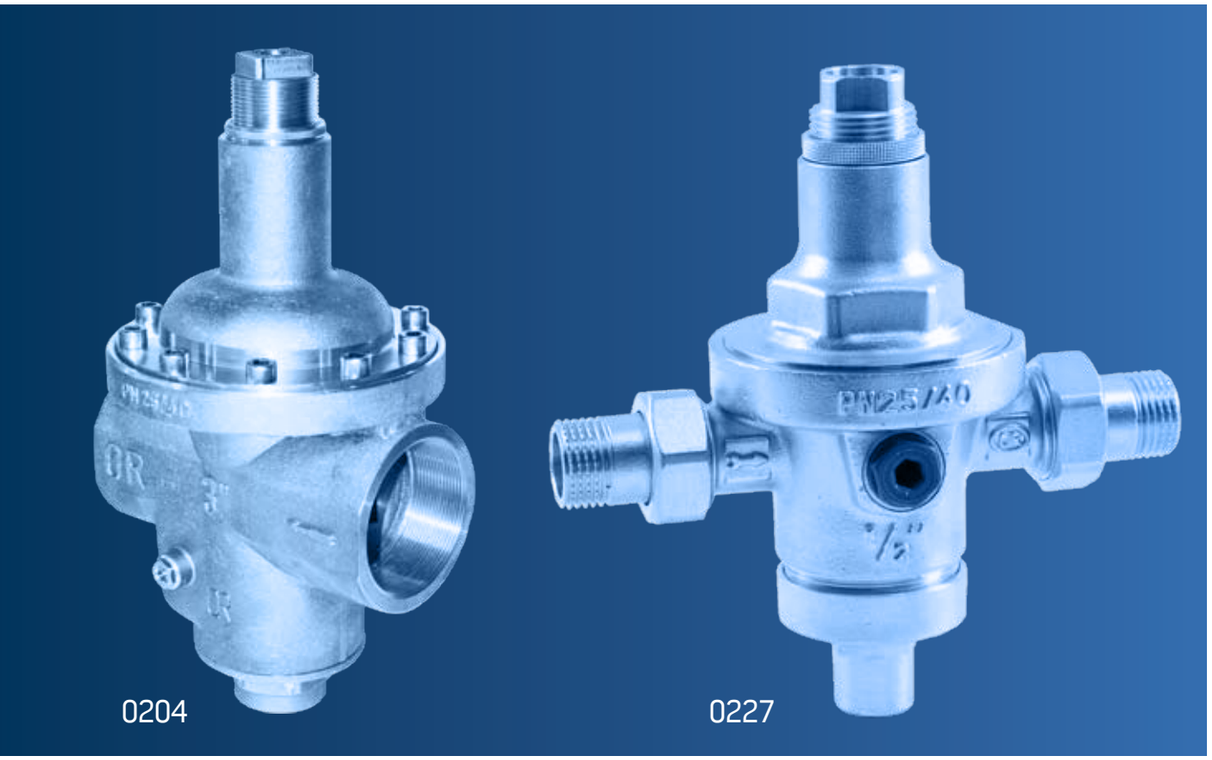
PLEASE NOTE: Prior to installing or operating new pressure reducing valves, please pay particular attention to the information on the illustrated booklet packed with each OR pressure reducing valve.

0204 • 1/2”- 4”

0227 • 1/2”- 2”

PRESSURE REDUCING VALVES WITH DIAPHRAGM PN 40
WITH COMPENSATION CHAMBER AND STAINLESS STEEL SEAT

CONNECTIONS: FEMALE-FEMALE
DISMANTLING FITTINGS MALE



HYDRAULIC FEATURES

The pressure reducing valve with diaphragm PN 40 with compensation chamber is an automatic valve that reduces and stabilizes the pressure of a fluid in a water distribution conduit according to a preset value. The use of this hydraulic device is necessary if the maximum possible pressure at any point in the water distribution system can reach or exceed the relative maximum allowable working pressure, or if apparatus and equipment that function exclusively at lower levels of pressure are connectable. The enhanced mechanical strength of the shell and its internal components renders this valve particularly suitable for sanitary installations for water distribution outside buildings (EN 805), where the water pressure in the water mains may reach values as high as 40 bar. Further, the compensated seat offsets the influence that variations in upstream pressure may have on the downstream pressure. The flexible diaphragm in EPDM rubber is reinforced with high mechanical strength polyamide textile and in conjunction with the antistick-slip O-ring made of Perox EPDM rubber, they allow a precise and long-lasting pressure regulation. The internal finish of the valve’s body and the absence of moving parts guarantee an elevated flow capacity, even when the water draw is minimal. The diaphragm-type pressure reducing valve with compensation chamber (PN 40) is used in air conditioning plants, sanitary installations for water supply, irrigation systems, compressed air (not oil mist) distribution systems, sanitary installations for water supply within buildings, according to EN 806-2; and for fire suppression piping. (It should nevertheless be borne in mind that local government standards for fire protection must always be observed.)
This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

ATTENTION: THE PRESSURE GAUGE CONNECTED TO THE PRESSURE REDUCING VALVE INDICATES THE ALREADY-REDUCED PRESSURE (Ps) OF THE OUTLET LIQUID FLOW.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	40 bar
Outlet settings (Ps)	from 1 to 7 bar
Ps value set during testing	3 bar
Outlet Ps set tolerance on varying inlet pressure	± 5 %
Temperature:	
Maximum working temperature (TS)	0°C (excluding ice) 80°C

Compatible fluids:	
water	
glycolate solutions	glycol 50%
compressed air	
Threading:	
Pipeline connection	Threads according to ISO 228/1
Gauge connection	Threads according to EN 10226- Rp1/4” (ex ISO 7/1)
Tests according to:	
EN 1567 - Compliant with the codes of practice stipulated in DVGW W 570-1 (German Technical and Scientific Association for Gas and Water)	
Verification of the deviation from the pre-set pressure (Ps) according to EN 1567 § 8.3.2	
Verification of the setpoint range according to EN 1567 § 8.3.1	
Flow rate and outlet pressure according to EN 1567 § 8.3.4 - (compliant with recommendations DVGW W 570-1 §6.1.3)	
Acoustic group	II - Lmax (dBA) < 30

DESIGN

Brass body dimensions 1/2”-2” EN12165-CW617N
Cast bronze body dimensions 2”1/2-4” EN1982-CB491K
Brass bonnet dimensions 1/2”-2” EN12165-CW617N
Cast bronze bonnet dimensions 2”1/2-4” EN1982-CB491K
Other forged brass components dimensions 1/2”-4” EN12165-CW617N
Other cast bronze components dimensions 2”1/2-4” EN1982-CB491K
Other components in turned brass dimensions 1/2”-4” EN12164 - CW614N
EPDM rubber diaphragm, nylon reinforced to 70 Sh
Static O-ring washers and seat gaskets in NBR RUBBER
Dynamic O-ring washers in EPDM RUBBER (peroxide-cured)
SM GALVANIZED STEEL calibration spring - EN 10270-1
STAINLESS STEEL insert seat EN 10088-1.4305 (AISI 303)

PRODUCT CODES

0204.015	female/female	1/2”	0227.015	dismantling fittings male	1/2”
0204.020	female/female	3/4”	0227.020	dismantling fittings male	3/4”
0204.025	female/female	1”	0227.025	dismantling fittings male	1”
0204.033	female/female	1”1/4	0227.033	dismantling fittings male	1”1/4
0204.042	female/female	1”1/2	0227.042	dismantling fittings male	1”1/2
0204.050	female/female	2”	0227.050	dismantling fittings male	2”
0204.066	female/female	2”1/2			
0204.080	female/female	3”			
0204.100	female/female	4”			

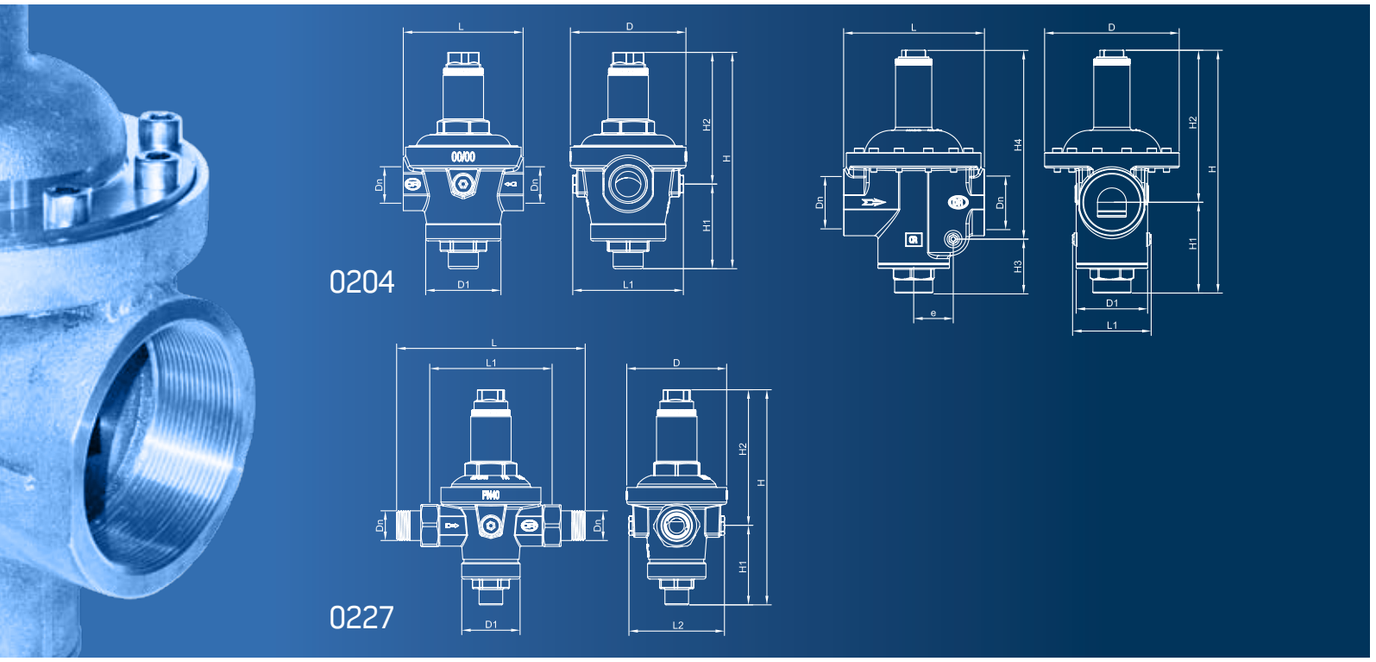
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0204 • 1/2”- 4”

0227 • 1/2”- 2”

PRESSURE REDUCING VALVES WITH DIAPHRAGM PN 40
WITH COMPENSATION CHAMBER AND STAINLESS STEEL SEAT

CONNECTIONS: FEMALE-FEMALE
DISMANTLING FITTINGS MALE



FEATURES

0204

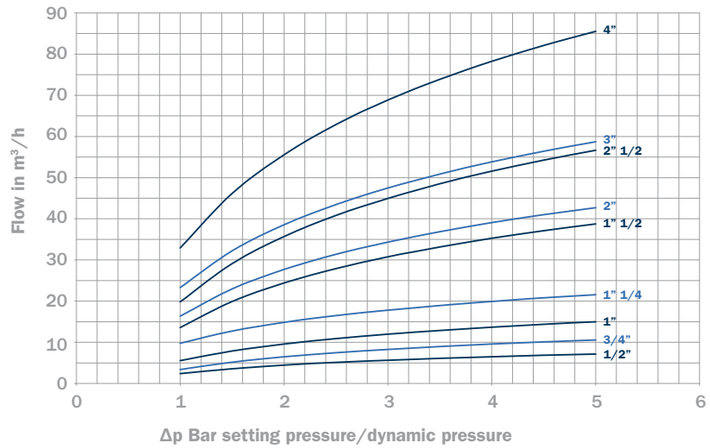
Dn	D	D1	L	L1	H	H1	H2	H3	H4	e
1/2”	Ø72,5	Ø44	76	67	152,5	65	87,5	\	\	\
3/4”	Ø89	Ø52	91	85	191,5	70,5	121	\	\	\
1”	Ø100	Ø65	104	96	187	73	114	\	\	\
1”1/4	Ø123	Ø72	137	92	229,5	82,5	147	\	\	\
1”1/2	Ø153	Ø80	170	109	258	93	165	\	\	\
2”	Ø168	Ø90	183,5	119	276	92	184	\	\	\
2”1/2	Ø179	Ø93	206	104	339	122	217	77	262	43
3”	Ø191	Ø102,5	203	129,5	374,5	141,5	233	91,5	283	30
4”	Ø260	Ø139	274	153	482	176,5	305,5	105	377	77

0227

Dn	D	D1	L	L1	H	H1	H2
1/2”	Ø72,5	Ø44	147	95	146	63	83
3/4”	Ø89	Ø52	168	109	191,5	70,5	121
1”	Ø100	Ø65	196	127	192,5	78,5	114
1”1/4	Ø123	Ø72	239	158	232,5	82,5	150
1”1/2	Ø153	Ø80	279	195	256	93	163
2”	Ø168	Ø90	316,5	209,5	276	92	184

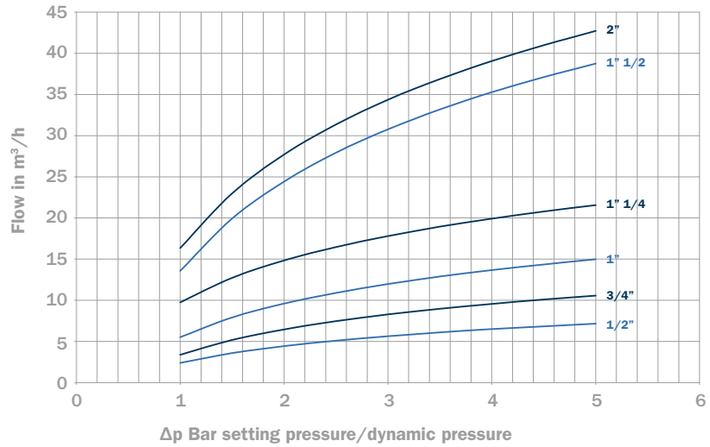
2004

PRESSURE REDUCING VALVE 0204 1/2” - 4”



0227

PRESSURE REDUCING VALVE 0227 1/2” - 2”



0204 • 1/2”- 3/4”

PRESSURE REDUCING VALVES WITH DIAPHRAGM LOW PRESSURE PN10 WITH COMPENSATION CHAMBER AND STAINLESS STEEL SEAT

CONNECTIONS: FEMALE-FEMALE

HYDRAULIC FEATURES

The pressure reducing valve with diaphragm and with compensation chamber (PN 10) is an automatic valve that reduces and stabilizes the pressure of a fluid in a water distribution conduit according to a preset value. The use of this hydraulic device is necessary if the maximum possible pressure at any point in the water distribution system can reach or exceed the relative maximum allowable working pressure, or if connectable to apparatus and equipment that function exclusively at lower levels of pressure. This type of reducer is used when the preset outlet pressure needs to be highly accurate, such as in the case of systems that work at pressures less than or equal to 1 bar.
The enhanced mechanical strength of the shell (which can support pressures up to 40 Bar) and its internal components renders this valve particularly suitable for sanitary installations for water distribution outside buildings (EN 805), where the water main pressure may reach values as high as 10 bar. Further, the compensated seat offsets the influence that variations in upstream pressure may have on the downstream pressure. The flexible diaphragm in EPDM rubber is reinforced with high mechanical strength polyamide textile and in conjunction with the antistick-slip O-ring made of Perox EPDM rubber, they allow a precise and long-lasting pressure regulation. The internal finish of the valve’s body and the absence of moving parts guarantee an elevated flow capacity, even when the water draw is minimal.
The diaphragm-type pressure reducing valve with compensation chamber (PN 10) is used in air conditioning plants, sanitary installations for water supply, irrigation systems, compressed air (not oil mist) distribution systems, sanitary installations for water supply within buildings, according to EN 806-2; and for fire suppression piping. It should nevertheless be borne in mind that local government standards for fire protection must always be observed. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

ATTENTION: THE PRESSURE GAUGE CONNECTED TO THE PRESSURE REDUCING VALVE INDICATES THE ALREADY-REDUCED PRESSURE (Ps) OF THE OUTLET LIQUID FLOW.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Outlet settings (Ps)	from 0 to 1 bar
PS value set during testing	0.5 bar
Outlet Ps set tolerance on varying inlet pressure	± 5 %
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) 80°C
Compatible fluids:	
water	
glycolate solutions glycol 50%	
compressed air	
Threading:	
Pipeline connection	Threads according to ISO 228/1
Gauge connection	Threads according to EN 10226- Rp1/4” (ex ISO 7/1)

Tests according to
EN 1567 - Compliant with the codes of practice stipulated in DVGW W 570-1 (German Technical and Scientific Association for Gas and Water)
Verification of the deviation from the pre-set pressure (Ps) according to EN 1567 § 8.3.2
Verification of the setpoint range according to EN 1567 § 8.3.1
Flow rate and outlet pressure according to EN 1567 § 8.3.4 - (compliant with recommendations DVGW W 570-1 §6.1.3)
Acoustic group I - Lmax (dBA) < 20

DESIGN

Brass Body EN 12165 - CW617N
Brass bonnets EN 12165 - CW617N
Other forged components in brass EN 12165 - CW617N
Other components in turned brass EN 12164 - CW614N
EPDM rubber diaphragm, nylon reinforced to 70 Sh
Static O-ring washers and seat gaskets in NBR RUBBER
Dynamic O-ring washers in EPDM RUBBER (peroxide-cured)
SM GALVANIZED STEEL calibration spring - EN 10270-1
STAINLESS STEEL insert seat EN 10088-14310 (AISI 303)

PRODUCT CODES

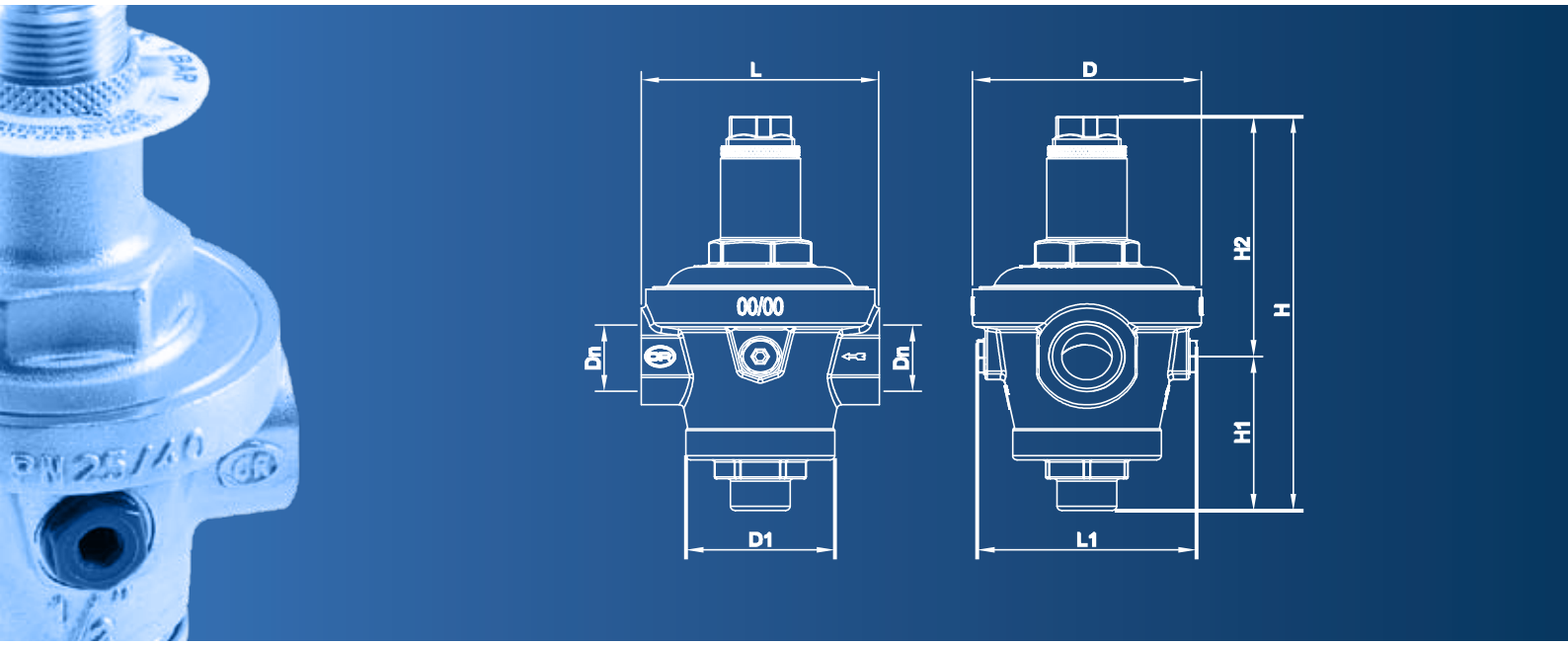
0204.014	female/female	1/2”	0204.019	female/female	3/4”

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0204 • 1/2”- 3/4”

PRESSURE REDUCING VALVES WITH DIAPHRAGM LOW PRESSURE PN10 WITH COMPENSATION CHAMBER AND STAINLESS STEEL SEAT

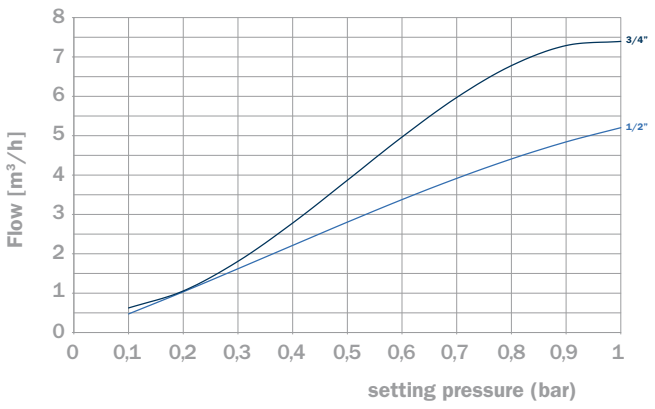
CONNECTIONS: FEMALE-FEMALE



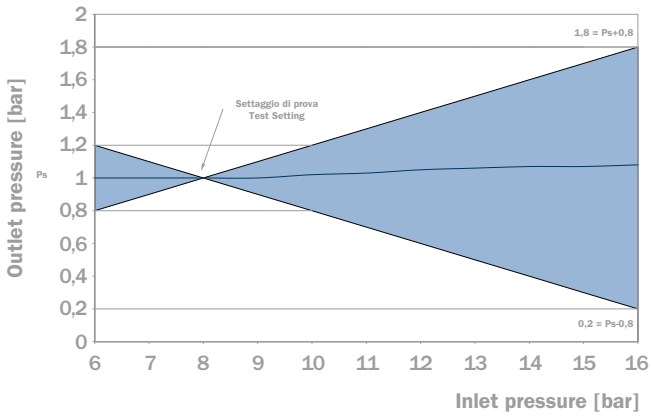
FEATURES

Dn	D	D1	L	L1	H	H1	H2
1/2”	Ø72,5	Ø44	76	67	152,5	65	87,5
3/4”	Ø89	Ø52	91	85	191,5	70,5	121

PRESSURE REDUCING VALVE 0204.014-.019 1/2” - 3/4



OUTLET PS SET TOLERANCE ON VARYING INLET PRESSURE



Tolerance

Pressure reducing valve “Low pressure”

0223 • 1/2”- 2”

PRESSURE REDUCING VALVE WITH DIAPHRAGM PN 40 WITH FILTER, COMPENSATION CHAMBER AND STAINLESS STEEL SEAT

CONNECTIONS: DISMANTLING FITTING MALE - SLEEVE FEMALE

HYDRAULIC FEATURES

The pressure reducing valve with diaphragm and with filter and compensation chamber (PN 40) is an automatic valve that reduces and stabilizes the pressure of a fluid in a water distribution conduit according to a preset value. The use of this hydraulic device is necessary if the maximum possible pressure at any point in the water distribution system can reach or exceed the relative maximum allowable working pressure, or if apparatus and equipment that function exclusively at lower levels of pressure are connectable. The mechanical brass vertical-type PN40 filter assembled on the reducing valve is ideal for installation outside of buildings, and is designed to separate foreign particles suspended in the water such as sand, rust flakes, calcareous fragments, etc.; by means of a physical steel mesh barrier. The impure particles transported by water could cause corrosion in the water pipeline and wear down pressure reducing valves or any other device installed downstream.
The enhanced mechanical strength of the shell (which can support pressures up to 40 Bar) and its internal components renders this valve particularly suitable for sanitary installations for water distribution outside buildings (EN 805), where the water main pressure may reach values as high as 40 bar. Further, the compensated seat offsets the influence that variations in upstream pressure may have on the downstream pressure. The flexible diaphragm in EPDM rubber is reinforced with high mechanical strength polyamide textile and in conjunction with the antistick-slip O-ring made of Perox EPDM rubber, they allow a precise and long-lasting pressure regulation. The internal finish of the valve’s body and the absence of moving parts guarantee an elevated flow capacity, even when the water draw is minimal.
The diaphragm-type pressure reducing valve with compensation chamber (PN 40) is used in air conditioning plants, sanitary installations for water supply, irrigation systems, compressed air (not oil mist) distribution systems, sanitary installations for water supply within buildings, according to EN 806-2; and for fire suppression piping. It should nevertheless be borne in mind that local government standards for fire protection must always be observed. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

ATTENTION: THE PRESSURE GAUGE CONNECTED TO THE PRESSURE REDUCING VALVE INDICATES THE ALREADY-REDUCED PRESSURE (Ps) OF THE OUTLET LIQUID FLOW.

TECHNICAL FEATURES

Pressioni:	
Maximum allowable working pressure (PN)	40 bar
Outlet settings (Ps)	from 1 to 7 bar
Ps value set during testing	3 bar
Outlet Ps set tolerance on varying inlet pressure	± 5 %
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) 80°C
Compatible fluids:	
water	
glycolate solutions	glycol 50%
compressed air	
Filtration Rating:	
Reference micron rating (S)	< 500µm
Threading:	
Pipeline connection	Threads according to ISO 228/1
Gauge connection	Threads according to EN 10226- Rp1/4” (ex ISO 7/1)

Tests according to
EN 1567 - Compliant with the codes of practice stipulated in DVGW W 570-1 (German Technical and Scientific Association for Gas and Water)
Verification of the deviation from the pre-set pressure (Ps) according to EN 1567 § 8.3.2
Verification of the setpoint range according to EN 1567 § 8.3.1
Flow rate and outlet pressure according to EN 1567 § 8.3.4 - (compliant with recommendations DVGW W 570-1 §6.1.3)

Acoustic group	II - Lmax (dBA) < 30
Shell body filter tightness	Test P11 - EN 12266-1
General type tests for mechanical filters	EN 13443-1 (applicable parts)

DESIGN

Body pressure reducer in brass EN 12165 - CW617N
Body filter in cast brass EN 1982 - CW753S
Filter plugs in brass EN 12165 - CW617N
Bonnets pressure reducers in brass EN 12165 - CW617N
Other forged components in brass EN 12165 - CW617N
Other components in turned brass EN 12164 - CW614N
EPDM rubber diaphragm, nylon reinforced to 70 Sh
Static O-ring washers and seat gaskets in NBR RUBBER
Dynamic O-ring washers in EPDM RUBBER (peroxide-cured)
PRESSED FIBER filter gaskets
SM GALVANIZED STEEL calibration spring - EN 10270-1
MICROSTRETCHED STAINLESS STEEL mesh filtering cartridge EN 10088-1.4301 (AISI 304)
STAINLESS STEEL insert seat EN 10088-1.4305 (AISI 303)

PRODUCT CODES

0223.015	dismantling male /sleeve female	1/2”	0223.033	dismantling male /sleeve female	1”1/4
0223.020	dismantling male /sleeve female	3/4”	0223.042	dismantling male /sleeve female	1”1/2
0223.025	dismantling male /sleeve female	1”	0223.050	dismantling male /sleeve female	2”

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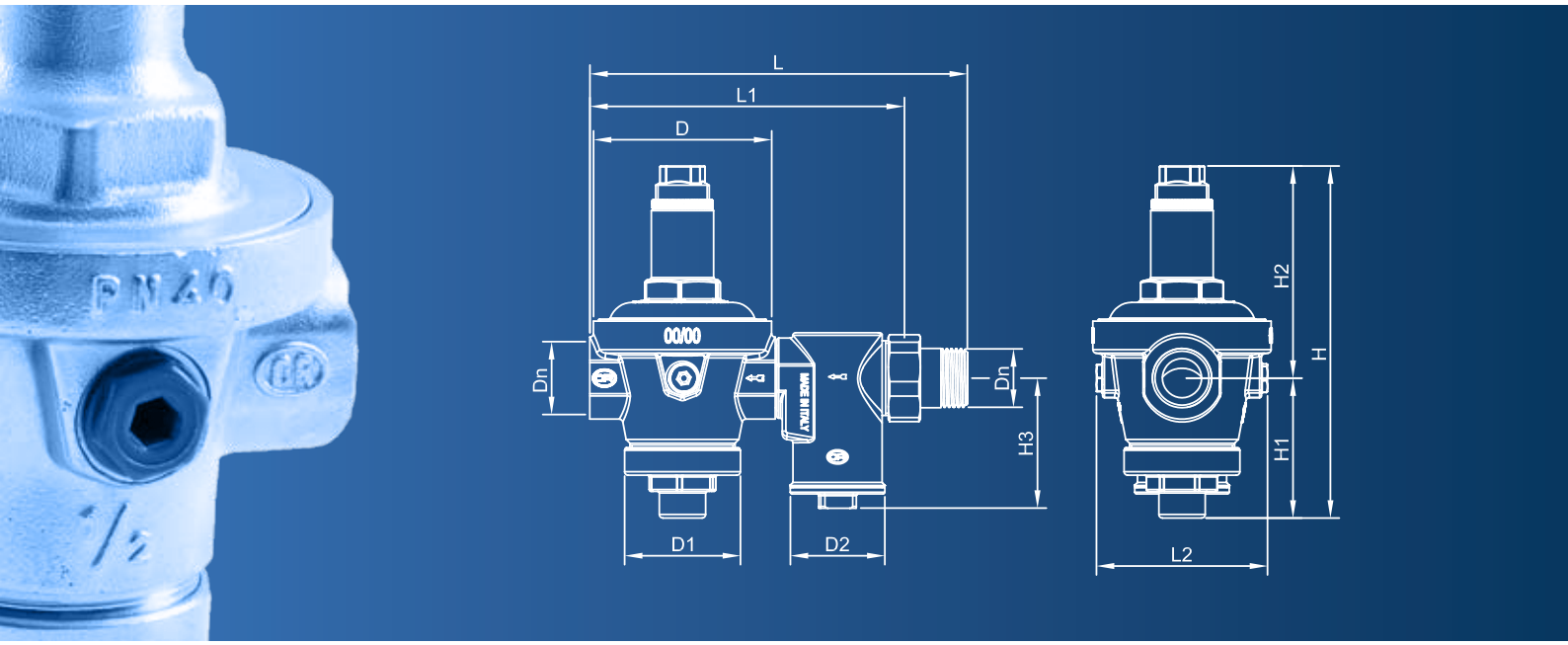
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0223 • 1/2”- 2”

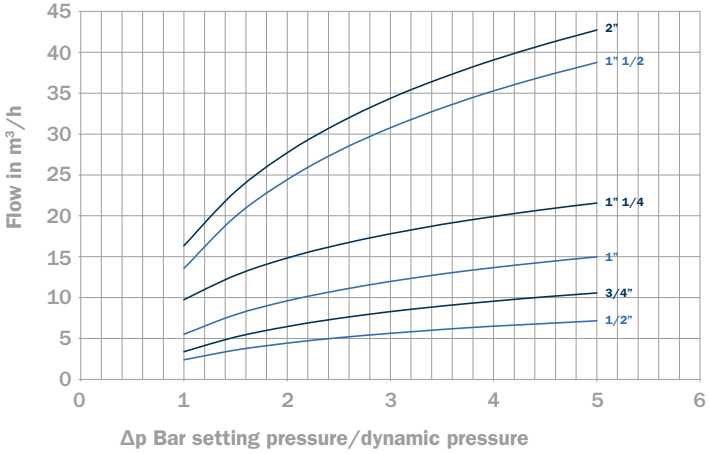
PRESSURE REDUCING VALVE WITH DIAPHRAGM PN 40
WITH FILTER, COMPENSATION CHAMBER AND STAINLESS STEEL SEAT
CONNECTIONS: DISMANTLING FITTING MALE - SLEEVE FEMALE



FEATURES

Dn	D	D1	D2	L	L1	L2	H	H1	H2	H3
1/2”	Ø72,5	Ø44	Ø33	154,5	128,5	67	153	65	88	54
3/4”	Ø89	Ø52	Ø41,5	183,5	154	85	190	70,5	119,5	62
1”	Ø100	Ø65	Ø53	211	176,5	96	197,5	78,5	119	73
1”1/4	Ø123	Ø72	Ø60	263,5	235,5	92	234	82,5	152	86
1”1/2	Ø153	Ø80	Ø71	314,5	272	109	279,5	106,5	173	106,5
2”	Ø168	Ø90	Ø74	338,5	285	119	281	92,5	188,5	102

PRESSURE REDUCING VALVE 0223 1/2” - 2”



0224 • 1/2”- 2”

PRESSURE REDUCING VALVE WITH DIAPHRAGM PN 25 WITH COMPENSATION CHAMBER AND STAINLESS STEEL SEAT

CONNECTIONS: FEMALE-FEMALE

HYDRAULIC FEATURES

The Rio Export model pressure reducing valve PN 25 is an automatic valve that reduces and stabilizes the pressure of a fluid in a water distribution conduit according to a preset value. The use of this hydraulic device is necessary if the maximum possible pressure at any point in the water distribution system can reach or exceed the relative maximum allowable working pressure, or if apparatus and equipment that function exclusively at lower levels of pressure are connectable. The enhanced mechanical strength of the shell and its internal components renders this valve particularly suitable for sanitary installations for water distribution outside buildings (EN 805), where the water pressure in the water mains may reach values as high as 40 bar. Further, the compensated seat offsets the influence that variations in upstream pressure may have on the downstream pressure. The flexible diaphragm in EPDM rubber is reinforced with high mechanical strength polyamide textile and in conjunction with the antistick-slip O-ring made of Perox EPDM rubber, they allow a precise and long-lasting pressure regulation. The internal finish of the valve’s body and the absence of moving parts guarantee an elevated flow capacity, even when the water draw is minimal.
The Rio Export pressure reducing valve (PN 25) is used in air conditioning plants, sanitary installations for water supply, irrigation systems, compressed air (not oil mist) distribution systems, sanitary installations for water supply within buildings, according to EN 806-2; and for fire suppression piping. (It should nevertheless be borne in mind that local government standards for fire protection must always be observed).
This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

ATTENTION: THE PRESSURE GAUGE CONNECTED TO THE PRESSURE REDUCING VALVE INDICATES THE ALREADY-REDUCED PRESSURE (Ps) OF THE OUTLET LIQUID FLOW.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	25 bar
Regulation range (Ps)	from 1 to 7 bar
Ps value set during testing	3 bar
Outlet Ps set tolerance on varying inlet pressure	± 5 %
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) 80°C
Compatible fluids:	
water	
glycolate solutions	glycol 50%
compressed air	
Threading:	
Pipeline connection	Threads according to ISO 228/1
Gauge connection	Threads according to EN 10226- Rp1/4” (ex ISO 7/1)

Tests according to:
EN 1567 - Compliant with the codes of practice stipulated in DVGW W 570-1 (German Technical and Scientific Association for Gas and Water)
Verification of the deviation from the pre-set pressure (Ps) according to EN 1567 § 8.3.2
Verification of the setpoint range according to EN 1567 § 8.3.1
Flow rate and outlet pressure according to EN 1567 § 8.3.4 - (compliant with recommendations DVGW W 570-1 §6.1.3)
Acoustic group II - Lmax (dBA) < 30

DESIGN

Brass body dimensions 1/2”-1” EN12165-CW617N
Cast brass body dimensions 1”1/4-2” EN1982-CB753S
Brass bonnets EN 12165 - CW617N
Other forged components in brass EN 12165 - CW617N
Other components in turned brass EN 12164 - CW614N
EPDM rubber diaphragm, nylon reinforced to 70 Sh
Static O-ring washers and seat gaskets in NBR RUBBER
Dynamic O-ring washers in EPDM RUBBER (peroxide-cured)
SM GALVANIZED STEEL calibration spring - EN 10270-1
STAINLESS STEEL insert seat EN 10088-1.4305 (AISI 303)

PRODUCT CODES

0224.015	female/female	1/2”	0224.033	female/female	1”1/4
0224.020	female/female	3/4”	0224.042	female/female	1”1/2
0224.025	female/female	1”	0224.050	female/female	2”

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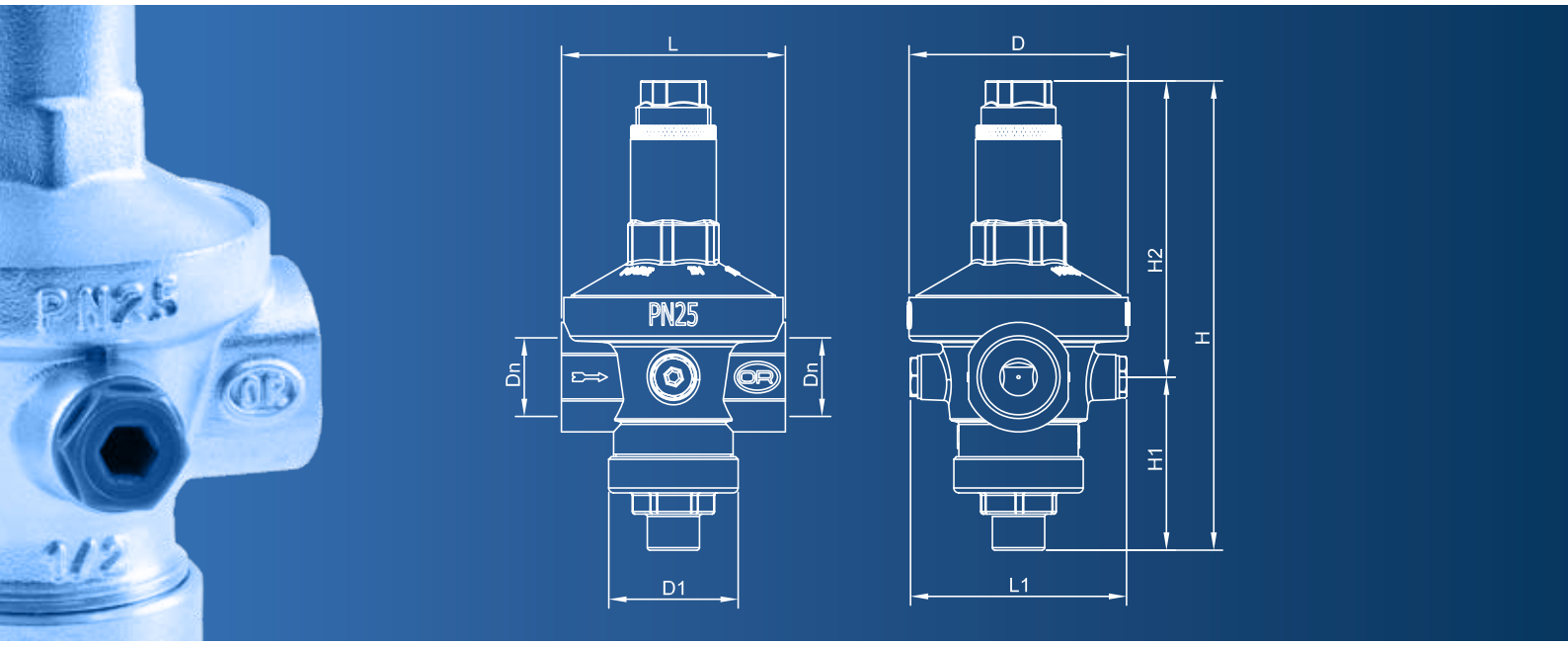
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0224 • 1/2”- 2”

PRESSURE REDUCING VALVE WITH DIAPHRAGM PN 25
WITH COMPENSATION CHAMBER AND STAINLESS STEEL SEAT

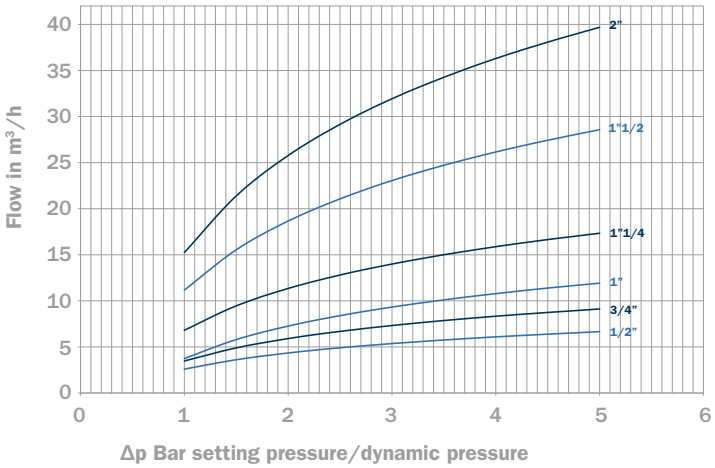
CONNECTIONS: FEMALE-FEMALE



FEATURES

Dn	D	D1	L	L1	H	H1	H2
1/2”	Ø59	Ø40,5	67,5	74	127,5	52,5	75
3/4”	Ø72	Ø44	77	73	157	65,5	85,5
1”	Ø88	Ø52	90	87	188,5	69,5	119
1”1/4	Ø100	Ø65	106	99	201,5	76,5	125
1”1/2	Ø123	Ø72	137	104	235	81	154
2”	Ø153	Ø80	170	117	266	87	179

PRESSURE REDUCING VALVE 0224 1/2” - 2”



0225 • 1/2”- 1”

0226 • 3/8”- 2”

0228 • 1/2”- 1”

PRESSURE REDUCING VALVES WITH DIAPHRAGM PN 16 RIO EXPORT NICKEL-PLATED WITH STAINLESS STEEL SEAT AND FEMALE SLEEVES

PRESSURE REDUCING VALVES WITH DIAPHRAGM PN 16 RIO EXPORT YELLOW WITH STAINLESS STEEL SEAT AND FEMALE SLEEVES

PRESSURE REDUCING VALVES WITH DIAPHRAGM PN 16 RIO EXPORT YELLOW WITH STAINLESS STEEL SEAT AND MALE DISMANTLING FITTINGS

CONNECTIONS: FEMALE-FEMALE
FEMALE-FEMALE
DISMANTLING FITTINGS MALE

HYDRAULIC FEATURES

The Rio Export model pressure reducing valve PN 16 is an automatic valve that reduces and stabilizes the pressure of a fluid in a water distribution conduit according to a preset value. The use of this hydraulic device is necessary if the maximum possible pressure at any point in the water distribution system can reach or exceed the relative maximum allowable working pressure, or if apparatus and equipment that function exclusively at lower levels of pressure are connectable. The Rio Export pressure reducing valves are designed for use in either internal or external water distribution systems, where the water main pressure values do not surpass 16 bar. Moreover, given the larger wetted area of the diaphragm, the downstream pressure is barely affected by upstream pressure variations. The flexible diaphragm in EPDM rubber, reinforced with high mechanical strength Polyamide textile, guarantees enhanced performance and durability, even in unfavorable conditions. The absence of moving parts, together with the valve's internal finish and broader dimensions of the passages guarantee an elevated flow capacity, even when the water draw is minimal. The Rio Export pressure reducing valve (PN 25) is used in air conditioning plants, sanitary installations for water supply, irrigation systems, compressed air (not oil mist) distribution systems, sanitary installations for water supply within buildings, according to EN 806-2, and for supply outside of buildings, as per EN 805; and for fire suppression piping. (It should nevertheless be borne in mind that local government standards for fire protection must always be observed). This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

ATTENTION: THE PRESSURE GAUGE CONNECTED TO THE PRESSURE REDUCING VALVE INDICATES THE ALREADY-REDUCED PRESSURE (Ps) OF THE OUTLET LIQUID FLOW.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Outlet settings (Ps)	from 1,5 to 7 bar
Ps value set during testing	3 bar
Outlet Ps set tolerance on varying inlet pressure	± 10 %
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) 80°C

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

Compatible fluids:	
water	
glycolate solutions	glycol 50%
compressed air	
Threading:	
Pipeline connection	Threads according to ISO 228/1
Gauge connection	Threads according to EN 10226- Rp1/4” (ex ISO 7/1)
Tests according to:	
EN 1567 - Compliant with the codes of practice stipulated in DVGW W 570-1 (German Technical and Scientific Association for Gas and Water)	
Verification of the deviation from the pre-set pressure (Ps) according to EN 1567 § 8.3.2	
Verification of the setpoint range according to EN 1567 § 8.3.1	
Flow rate and outlet pressure according to EN 1567 § 8.3.4 - (compliant with recommendations DVGW W 570-1 §6.1.3)	
Acoustic group	I - Lmax (dBA) < 20

DESIGN

Brass body dimensions 3/8”-1” EN12165-CW617N
Cast brass body dimensions 1”1/4-2” EN1982-CB753S
Brass bonnets EN 12165 - CW617N
Other forged components in brass EN 12165 - CW617N
Other components in turned brass EN 12164 - CW614N
EPDM rubber diaphragm, nylon reinforced to 70 Sh
O-ring washers and seat gaskets in NBR RUBBER
SM GALVANIZED STEEL calibration spring - EN 10270-1
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)
STAINLESS STEEL insert seat EN 10088-1.4305 (AISI 303)

PRODUCT CODES

Product codes 0225
0225.015 female/female nickel-plated 1/2”
0225.020 female/female nickel-plated 3/4”
0225.025 female/female nickel-plated 1”

Product codes 0226
0226.012 female/female yellow 3/8”
0226.015 female/female yellow 1/2”
0226.020 female/female yellow 3/4”
0226.025 female/female yellow 1”
0226.033 female/female yellow 1”1/4
0226.042 female/female yellow 1”1/2
0226.050 female/female yellow 2”

Product codes 0228
0228.015 dismantling fittings male yellow 1/2”
0228.020 dismantling fittings male yellow 3/4”
0228.025 dismantling fittings male yellow 1”

0225 • 1/2”- 1”

0226 • 3/8”- 2”

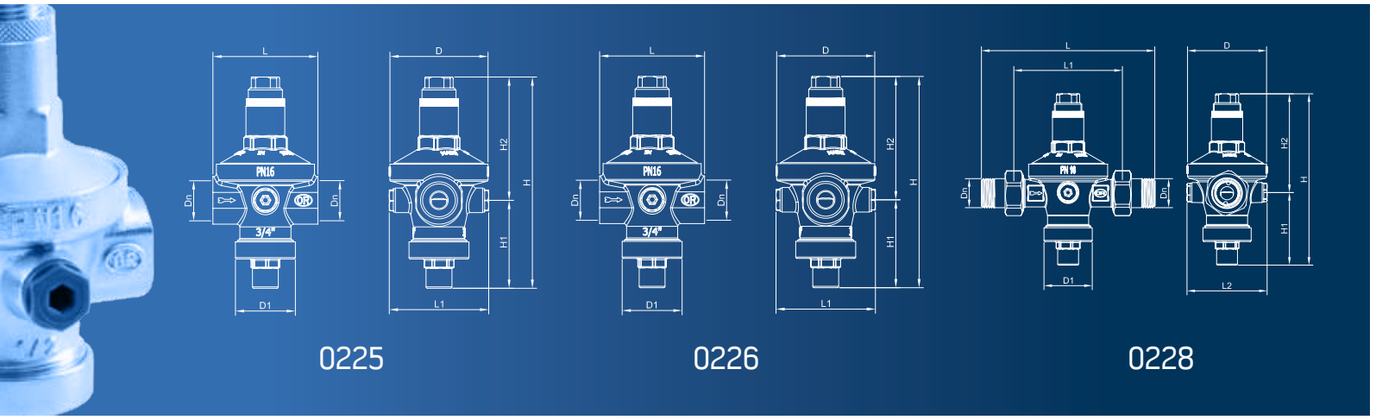
0228 • 1/2”- 1”

PRESSURE REDUCING VALVES WITH DIAPHRAGM PN 16 RIO EXPORT NICKEL-PLATED WITH STAINLESS STEEL SEAT AND FEMALE SLEEVES

PRESSURE REDUCING VALVES WITH DIAPHRAGM PN 16 RIO EXPORT YELLOW WITH STAINLESS STEEL SEAT AND FEMALE SLEEVES

PRESSURE REDUCING VALVES WITH DIAPHRAGM PN 16 RIO EXPORT YELLOW WITH STAINLESS STEEL SEAT AND MALE DISMANTLING FITTINGS

CONNECTIONS: FEMALE-FEMALE
FEMALE-FEMALE
DISMANTLING FITTINGS MALE



FEATURES

0225

Dn	D	D1	L	L1	H	H1	H2
1/2”	Ø59	Ø40,5	67,5	73	132,5	52,5	80
3/4”	Ø72	Ø44	77	73	156	65,5	90,5
1”	Ø88	Ø52	90	87	189	68,5	120,5

0226

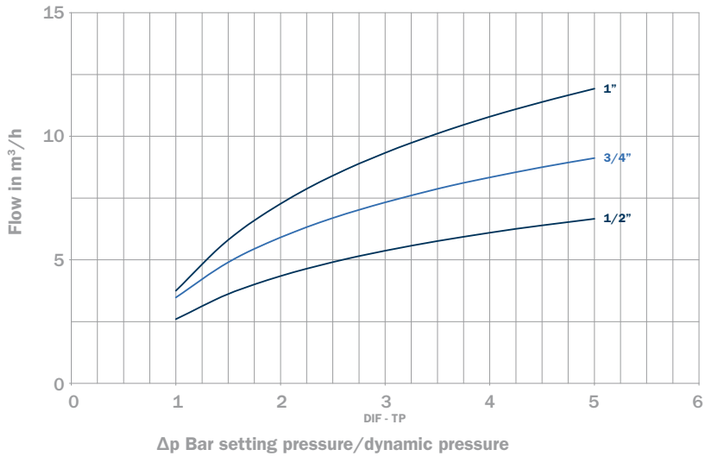
Dn	D	D1	L	L1	H	H1	H2
3/8”	Ø59	Ø40,5	67,5	73	132,5	52,5	80
1/2”	Ø59	Ø40,5	67,5	73	132,5	52,5	80
3/4”	Ø72	Ø44	77	73	187	65,5	90,5
1”	Ø88	Ø52	90	87	189	68,5	120,5
1”1/4	Ø100	Ø65	106	99	198	76,5	121,5
1”1/2	Ø123	Ø72	137	104	235	80	155
2”	Ø153	Ø80	170	117	265	87	178

0228

Dn	D	D1	L	L1	H	H1	H2
1/2”	Ø59	Ø40,5	133,5	78,5	133,5	52,5	82
3/4”	Ø72	Ø44	158	99	156	65,5	90,5
1”	Ø88	Ø52	182	112	189	69,5	119,5

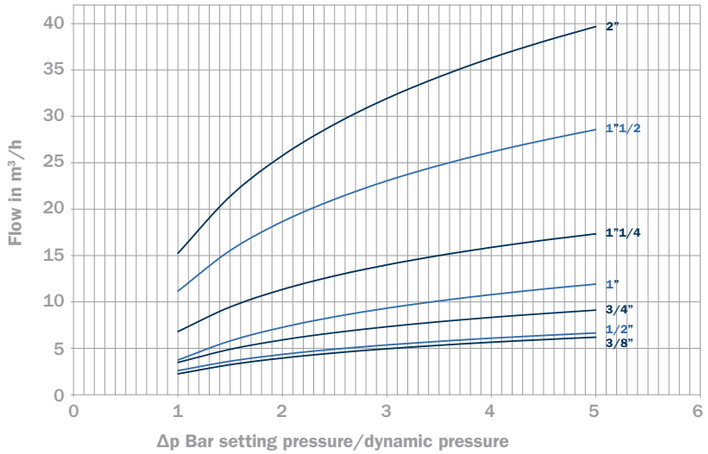
0225

PRESSURE REDUCING VALVE 0225 1/2” - 1”



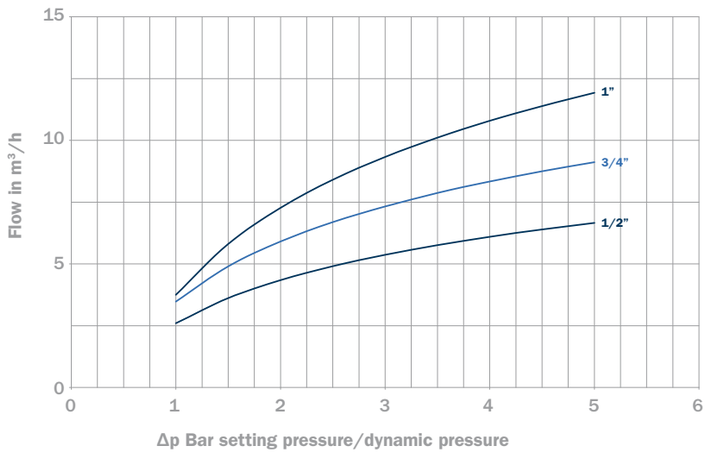
0226

PRESSURE REDUCING VALVE 226 3/8” - 2”



0228

PRESSURE REDUCING VALVE 0228 1/2” - 1”



0229 • 1/2”- 4”

PRESSURE REDUCING VALVE WITH DIAPHRAGM PN 40 WITH COMPENSATION CHAMBER AND STAINLESS STEEL SEAT - WITH “WRAS” APPROVAL

CONNECTIONS: FEMALE-FEMALE

HYDRAULIC FEATURES

The pressure reducing valve PN 40 with diaphragm and compensation chamber, “WRAS” approved (UK Water Regulations Advisory Scheme), is an automatic valve that reduces and stabilizes the fluid pressure in a water distribution conduit according to a preset value. The use of this hydraulic device is necessary if the maximum possible pressure at any point in the water distribution system can reach or exceed the relative maximum allowable working pressure, or if connectable to apparatus and equipment that function exclusively at lower levels of pressure. The “WRAS” approved pressure reducing valve is made of CR brass which is resistant to dezincification and reduces corrosion in the system to a minimum; even if the local water supply should cause such a phenomenon (likewise ideal in conditions described in EN 806-2 A.1). The enhanced mechanical strength of the shell and its internal components renders this valve particularly suitable for sanitary installations for water distribution outside buildings (EN 805), where the water pressure in the water mains may reach values as high as 40 bar. Further, the compensated seat offsets the influence that variations in upstream pressure may have on the downstream pressure. The flexible diaphragm in EPDM rubber is reinforced with high mechanical strength polyamide textile and in conjunction with the antistick-slip O-ring made of Perox EPDM rubber, they allow a precise and long-lasting pressure regulation. The internal finish of the valve’s body and the absence of moving parts guarantee an elevated flow capacity, even when the water draw is minimal. The diaphragm-type, “WRAS” approved pressure reducing valve with compensation chamber (PN 40) is used in air conditioning plants, sanitary installations for water supply, irrigation systems, compressed air (not oil mist) distribution systems, sanitary installations for water supply within buildings, according to EN 806-2; and for fire suppression piping. (It should nevertheless be borne in mind that local government standards for fire protection must always be observed). This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

ATTENTION: THE PRESSURE GAUGE CONNECTED TO THE PRESSURE REDUCING VALVE INDICATES THE ALREADY-REDUCED PRESSURE (Ps) OF THE OUTLET LIQUID FLOW.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	40 bar
Outlet settings (Ps)	from 1 to 7 bar
Ps value set during testing	3 bar
Outlet Ps set tolerance on varying inlet pressure	± 5 %
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) 80°C
Compatible fluids:	
water	
glycolate solutions	glycol 50%
compressed air	

Threading:
Pipeline connection: Threads according to ISO 228/1
Gauge connection: Threads according to EN 10226- Rp1/4” (ex ISO 7/1)

Tests according to
EN 1567 - Compliant with the codes of practice stipulated in DVGW W 570-1 (German Technical and Scientific Association for Gas and Water)
Determination of dezincification resistance according to EN 6509.
Verification of the deviation from the pre-set pressure (Ps) according to EN 1567 § 8.3.2
Verification of the setpoint range according to EN 1567 § 8.3.1
Flow rate and outlet pressure according to EN 1567 § 8.3.4 - (compliant with recommendations DVGW W 570-1 §6.1.3)

Acoustic group	II - Lmax (dBA) < 30
Maximum depth of dezincification	200 µm - grade A -

DESIGN

rass body dimensions 1/2”-1” EN12165-CW602N (DZR)
Cast bronze body dimensions 1”1/4-4” EN1982-CB491K
Brass bonnet dimensions 1/2”-2” EN12165-CW617N
Cast bronze bonnet dimensions 2”1/2-4” EN1982-CB491K
Other forged brass component dimensions 1/2”-4” EN12165-CW602N (DZR)
Other components in turned brass EN 12164 - CW614N
EPDM rubber diaphragm, nylon reinforced to 70 Sh
Static O-ring washers and seat gaskets in NBR RUBBER
Dynamic O-ring washers in EPDM RUBBER (peroxide-cured)
SM GALVANIZED STEEL calibration spring - EN 10270-1
STAINLESS STEEL insert seat EN 10088-14310 (AISI 303)

PRODUCT CODES

0229.015	female/female	1/2”	0229.033	female/female	1”1/4	0229.066	female/female	2”1/2
0229.020	female/female	3/4”	0229.042	female/female	1”1/2	0229.080	female/female	3”
0229.025	female/female	1”	0229.050	female/female	2”	0229.100	female/female	4”

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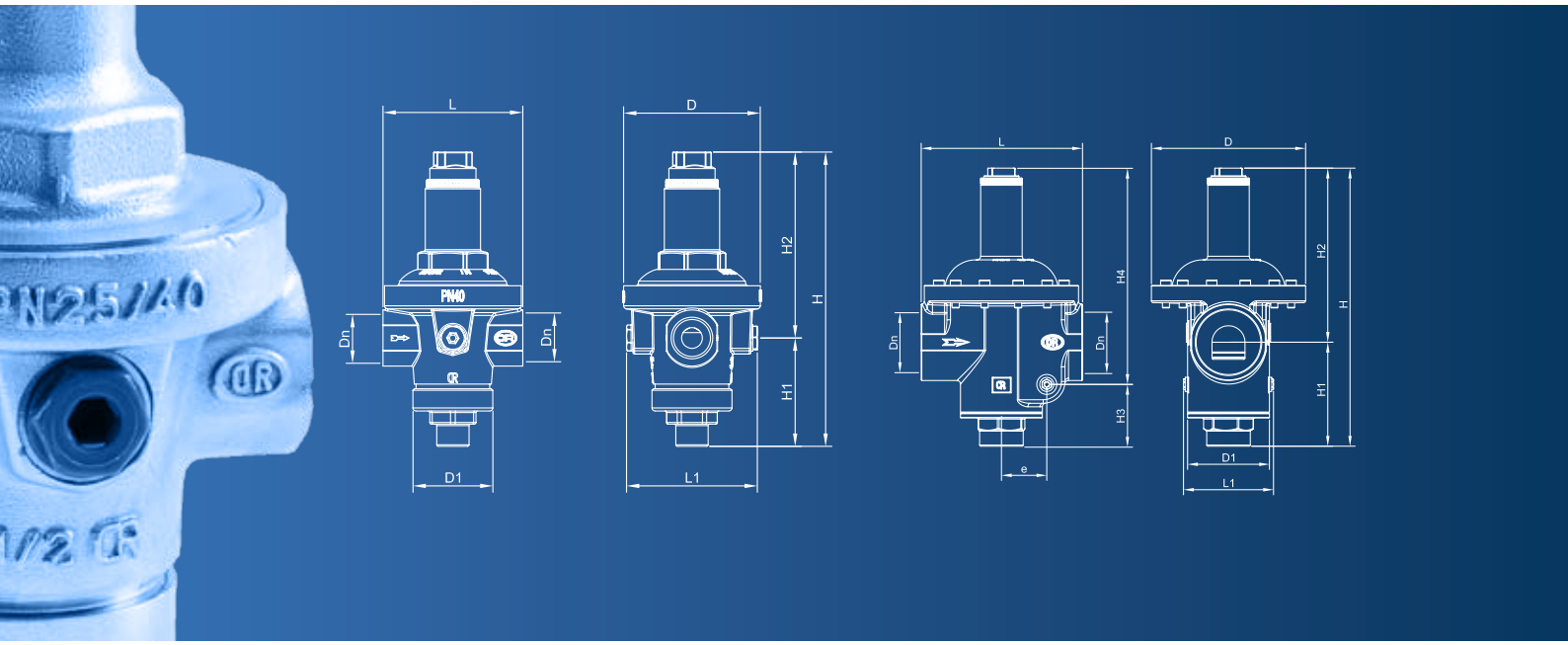
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0229 • 1/2”- 4”

PRESSURE REDUCING VALVE WITH DIAPHRAGM PN 40 WITH COMPENSATION CHAMBER AND STAINLESS STEEL SEAT - WITH “WRAS” APPROVAL

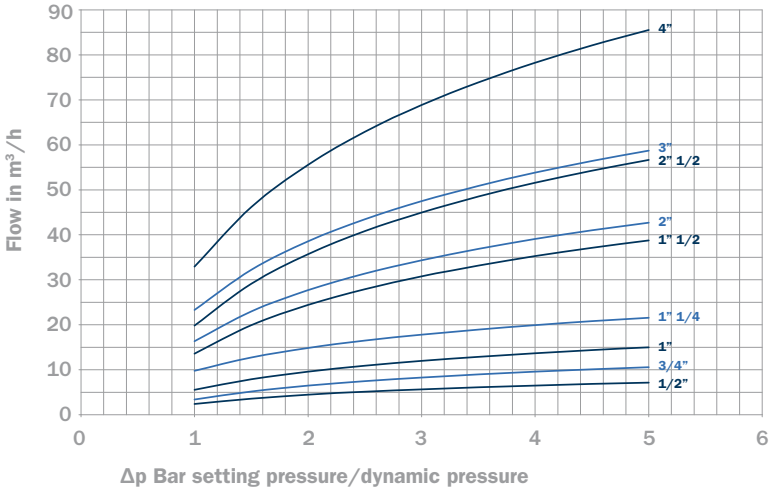
CONNECTIONS: FEMALE-FEMALE



FEATURES

Dn	D	D1	L	L1	H	H1	H2	H3	H4	e
1/2”	Ø72,5	Ø44	76	67	152,5	65	87,5	\	\	\
3/4”	Ø89	Ø52	91	85	191,5	70,5	121	\	\	\
1”	Ø100	Ø65	104	96	187	73	114	\	\	\
1”1/4	Ø121	Ø78	138	84	197	83,5	113,5	50,5	146,5	25,5
1”1/2	Ø151,5	Ø78	170	84	265	94	171	60	205	35
2”	Ø166,5	Ø84	186	88,5	263,5	91	162,5	51	212,5	34
2”1/2	Ø179	Ø93	206	104	339	122	217	77	262	43
3”	Ø191	Ø102,5	203	129,5	374,5	141,5	233	91,5	283	30
4”	Ø260	Ø139	274	153	482	176,5	305,5	105	377	77

PRESSURE REDUCING VALVE 0229 1/2” - 4”



HEATING

OR
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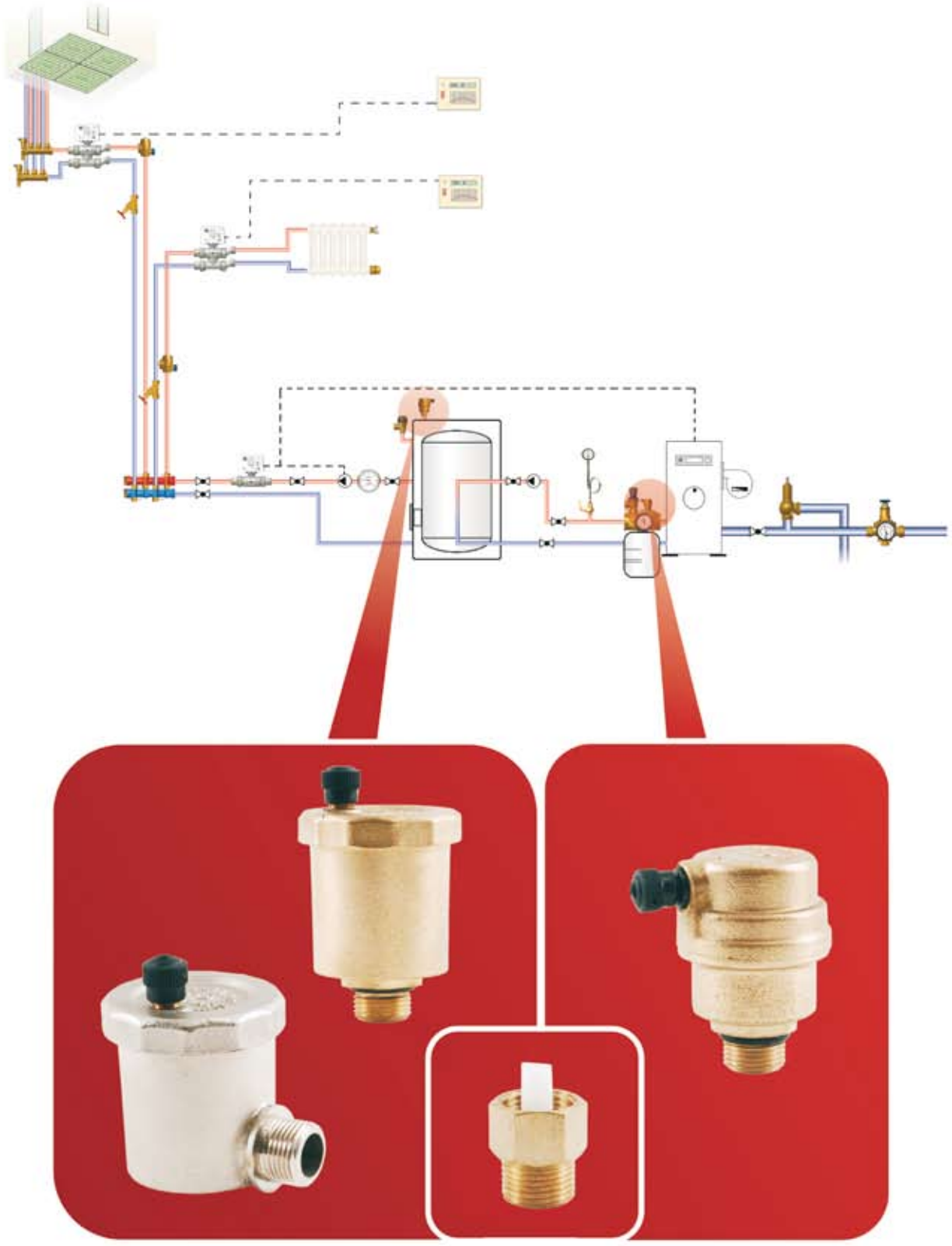
La qualità di mano in mano.

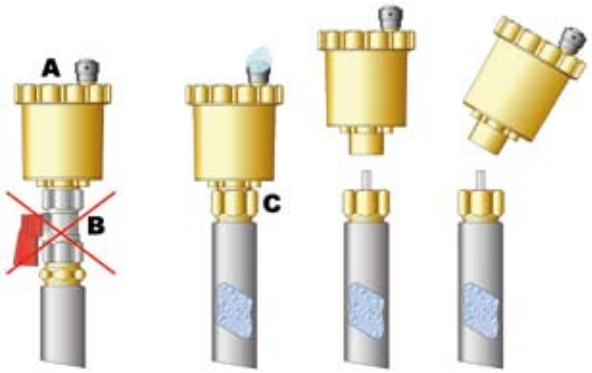
AIR VENTS



- OR air vent valves must be installed in a vertical position on an air separator, manifolds, ascension pipes and anywhere there may be an accumulation of air pockets.
- They may be used as terminal connections to venting pipes according to EN 10412.
- These valves are ideal for use on circulation pumps for heat generators.
- They are also ideal for use in networks designed for potable water distribution.
according to EN 805.

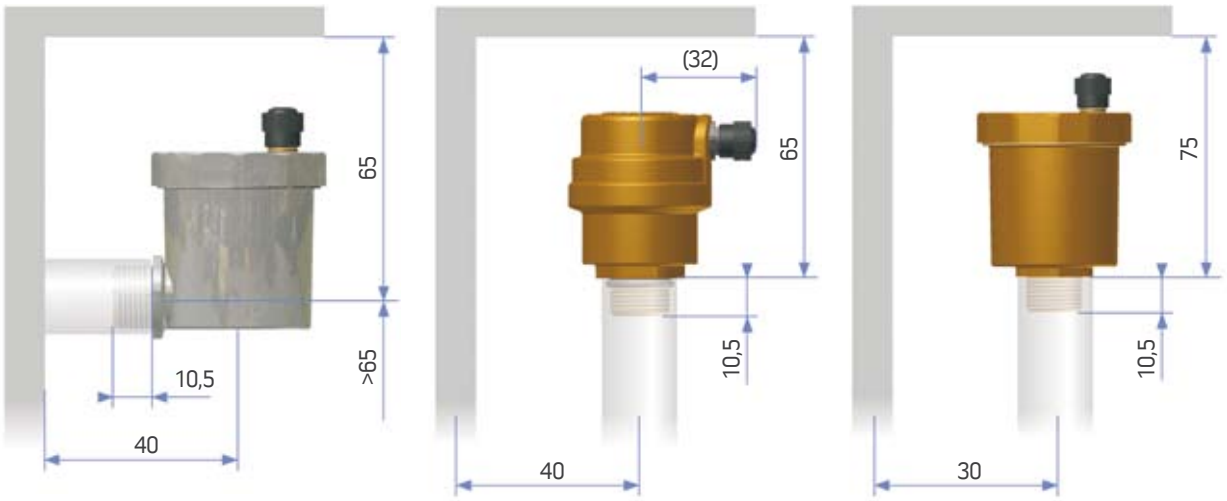
The internal float is designed to convey a large volume of air on the lower part, subsequently releasing it with a violent descending movement. The increased weight of the float, obtained by a particular type of polypropylene, allows a complete opening of the vent orifice during discharge. The internal anti-vibration and anti-rotation guide prevents the float from moving in any other direction when under pressure, except vertically. The fully automated production process from manufacturing to the final tests, and the complete assembly of the internal design, whether the body or the plug, guarantee an elevated quality standard. The external profile of the float, designed to prevent a "suspension" effect, renders it advisable to use a "flowbreaker" on wall mounted boilers. The internal volumetric design prevents heat-transfer fluids from ever coming into contact with the closing seat in any operational situation. This thus prevents possible breaks in air-tightness due to the infiltration/deposit of impurities present in the fluid itself.

INSTALLATION



When installing an air vent, **(A)** it is recommended not to install a shut off valve with manual closure **(B)** at its inlet, since the user might inadvertently close the valve, thus blocking the vent's normal operation. However, it is advisable to install a shutoff tap, product code 0539 **(C)**, which will open and close automatically with the screwing or unscrewing of the air vent valve during normal interventions such as cleaning or substitution.

INSTALLATION QUOTA



0499 • 3/8” - 1/2”

0500 • 3/8” - 1/2”

AUTOMATIC AIR VENTS WITH ANGLE DISCHARGE

CONNECTIONS: MALE WITH O-RING
MALE WITHOUT O-RING

0499

0500

HYDRAULIC FEATURES

The automatic air vent with angle discharge has a single automatic float that carries out two main functions: the evacuation of a consistent air flow through a pipeline (e.g., during loading/pressurization of the plant) and degassing, which discharges air trapped or formed during operation in the pipeline. This valve has a paramount importance in climatisation networks and systems, evacuating and discharging trapped air in water pipes for services under pressure. Moreover, as thoroughly documented in European Standard EN 14868, the presence of oxygen in heating systems can provoke anodic corrosion, noise, air pockets, obstructions, etc., that may significantly compromise the performance and integrity of the systems. Further, its reduced space requirements make this valve ideal for use inside modern heat generators, where air must be evacuated from the circulation pumps in order to prevent unwanted cavitation phenomena.

TECHNICAL FEATURES

Pressure:	
maximum allowable working pressure (PN)	10 bar
minimum accumulation	0.2 bar (Grade A according to EN 12266-1)
range of operation air evacuation	from 0.5 bar to 7 bar (tolerance ± 10% max. detected)
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) +110 °
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per	EN 1074-4 (together with additional requisites under FL.GQ.11)

DESIGN

Body and plug in brass - EN 12165 - CW617N
Seat and internal mechanisms in ACETAL RESIN (POM)
Seat gaskets and o-ring in NBR RUBBER
Float in highly resistant POLYPROPILENE PP
STAINLESS STEEL Spring EN 10088-14310 (AISI 302)

PRODUCT CODES

0499.012	male 3/8” with o-ring	yellow
0499.015	male 1/2” with o-ring	yellow
0500.012	male 3/8” without o-ring	yellow
0500.015	male 1/2” without o-ring	yellow

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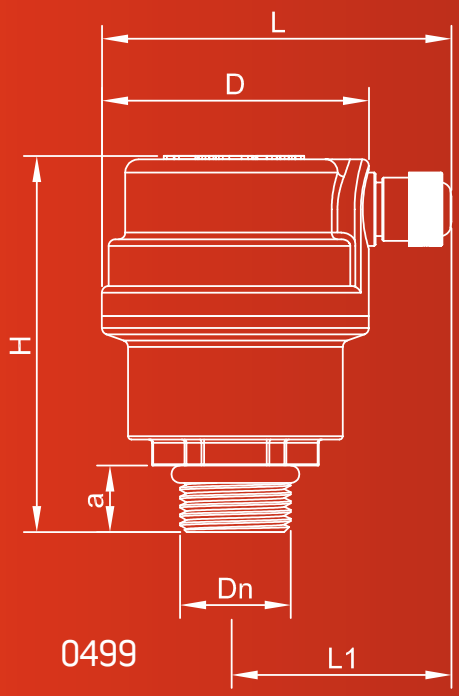
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

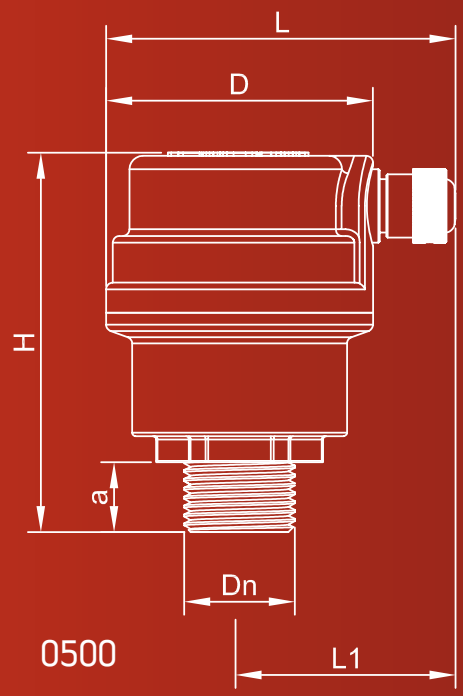
0499 • 3/8” - 1/2”

0500 • 3/8” - 1/2”

AUTOMATIC AIR VENTS WITH ANGLE DISCHARGE

CONNECTIONS: MALE WITH O-RING
MALE WITHOUT O-RING

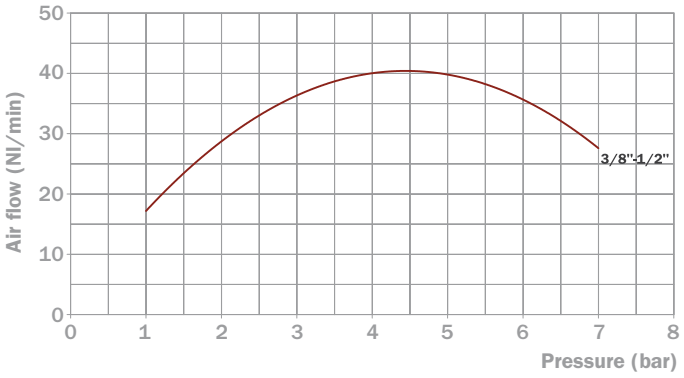




FEATURES

Cod.	Dimensions					
	Dn	D	L	L1	H	a
0499	3/8”	Ø40	52,5	32,5	57	10,5
0499	1/2”	Ø40	52,5	32,5	57	10,5
0500	3/8”	Ø40	52,5	32,5	57	10,5
0500	1/2”	Ø40	52,5	32,5	57	10,5

OPERATIONAL CURVE AIR VENTS

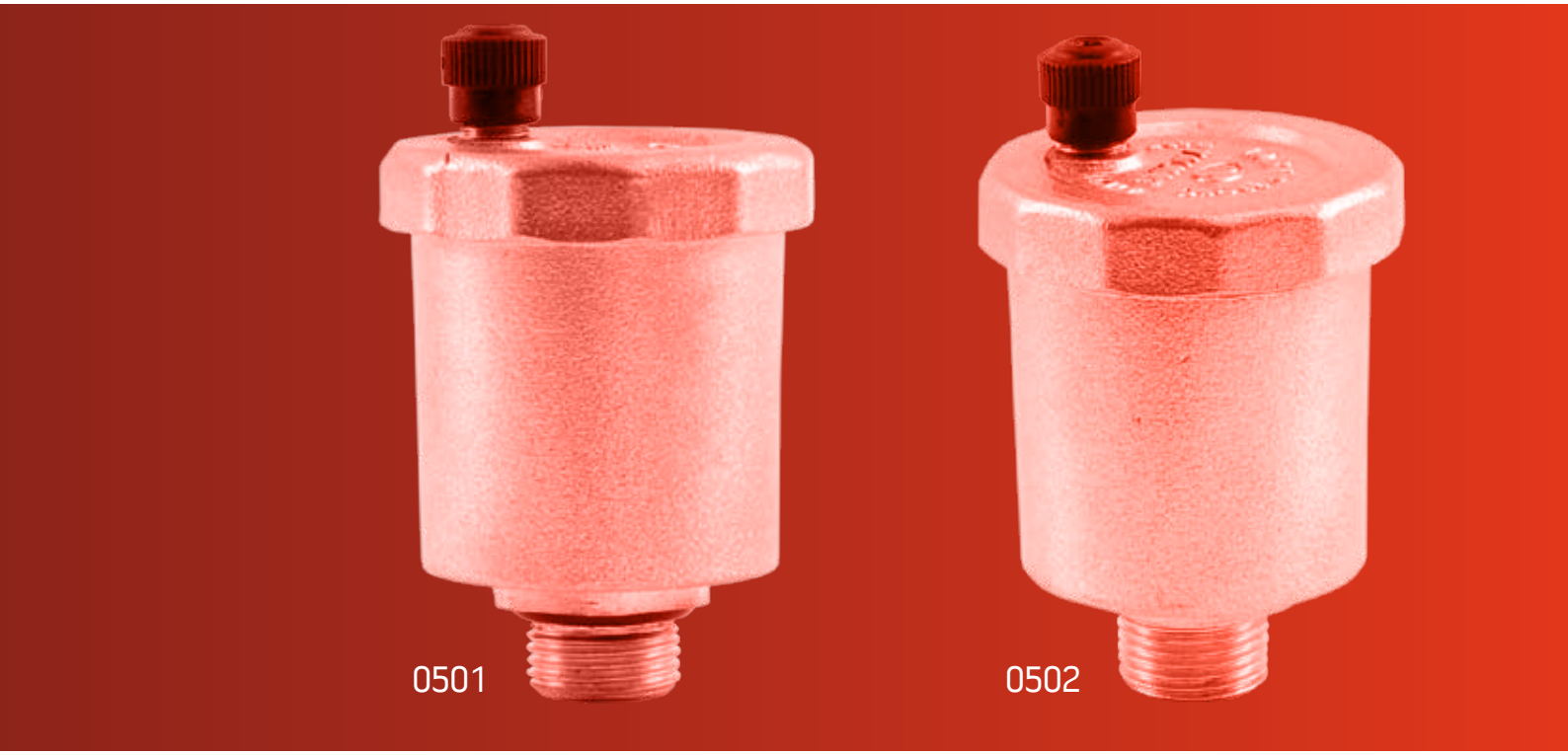


0501 • 3/8”-1/2”

0502 • 3/8”-3/4”

AUTOMATIC AIR VENTS “VALMAT” WITH O-RING YELLOW AND NICKEL-PLATED

CONNECTIONS: MALE WITH O-RING
MALE WITHOUT O-RING



HYDRAULIC FEATURES

The automatic air vent “Valmat “has a single automatic float and carries out two main functions: the evacuation of a consistent air flow through a pipeline (e.g., during loading/pressurization of the plant) and degassing, which discharges air trapped or formed in the pipeline, while functioning. This valve has a paramount importance in climatisation networks and systems, evacuating and discharging trapped air in water pipes for services under pressure. Moreover, as thoroughly documented in European Standard EN 14868, the presence of oxygen in heating systems can provoke anodic corrosion, noise, air pockets, obstructions, etc., that may significantly compromise the performance and integrity of the systems. Further, its reduced space requirements make this valve ideal for use inside modern heat generators, where air must be evacuated from the circulation pumps in order to prevent unwanted cavitation phenomena.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
minimum sealing pressure	0.2 bar (Grade A according to EN 12266-1)
range of operation air evacuation	from 0.5 bar to 7 bar (tolerance ± 10% max. detected)
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) +110°C
Compatible fluids :	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per	EN 1074-4 (together with additional requisites under FL.GQ.11)

DESIGN

Die cast brass body EN 1982-CB754S
Brass plug EN 12165 - CW617N
Seat in brass EN 12164 - CW614N
Internal mechanisms in ACETAL RESIN (POM)
Seat gaskets and o-ring in NBR RUBBER
Float in highly resistant POLYPROPILENE PP
STAINLESS STEEL spring EN 10088-14310 (AISI 302)
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)

PRODUCT CODES

0501.012	male	3/8”	with o-ring yellow
0501.015	male	1/2”	with o-ring yellow
0501.112	male	3/8”	with o-ring nickel plated
0501.115	male	1/2”	with o-ring nickel plated

0502.012	male	3/8”	yellow
0502.013	male	3/8”	nickel plated
0502.015	male	1/2”	yellow
0502.016	male	1/2”	nickel plated
0502.020	male	3/4”	yellow

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via Circonvallazione, 9
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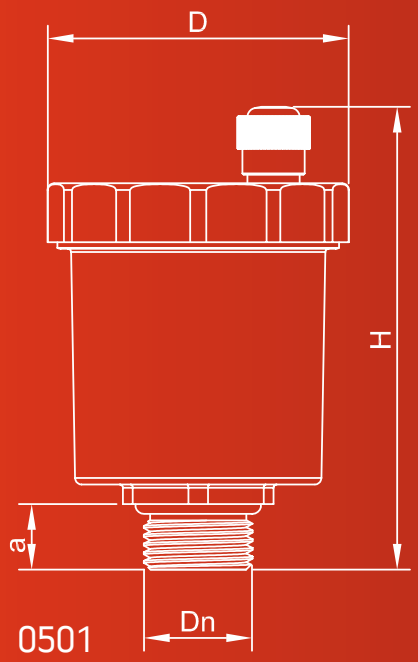
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

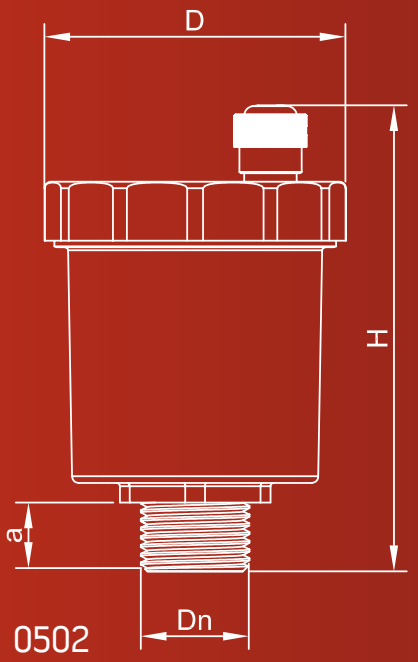
0501 • 3/8”-1/2”

0502 • 3/8”-3/4”

AUTOMATIC AIR VENTS “VALMAT” WITH O-RING YELLOW AND NICKEL-PLATED

CONNECTIONS: MALE WITH O-RING
MALE WITHOUT O-RING

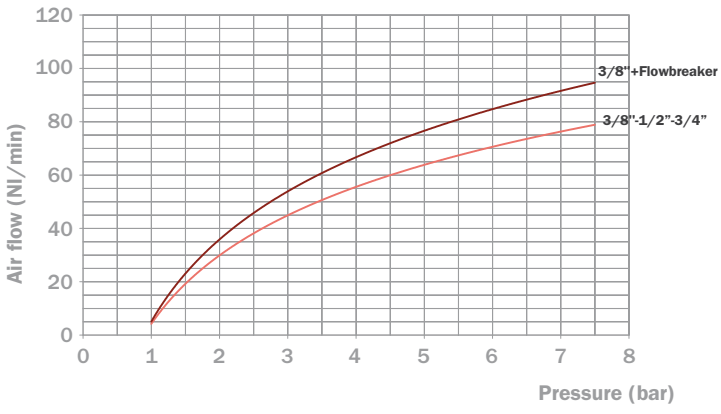




FEATURES

Cod.	Dimensions			
	Dn	D	H	a
0501	3/8”	Ø46	70	7,5
0501	1/2”	Ø46	70	8
0502	3/8”	Ø46	70	9
0502	1/2”	Ø46	70	9
0502	3/4”	Ø46	70	8,5

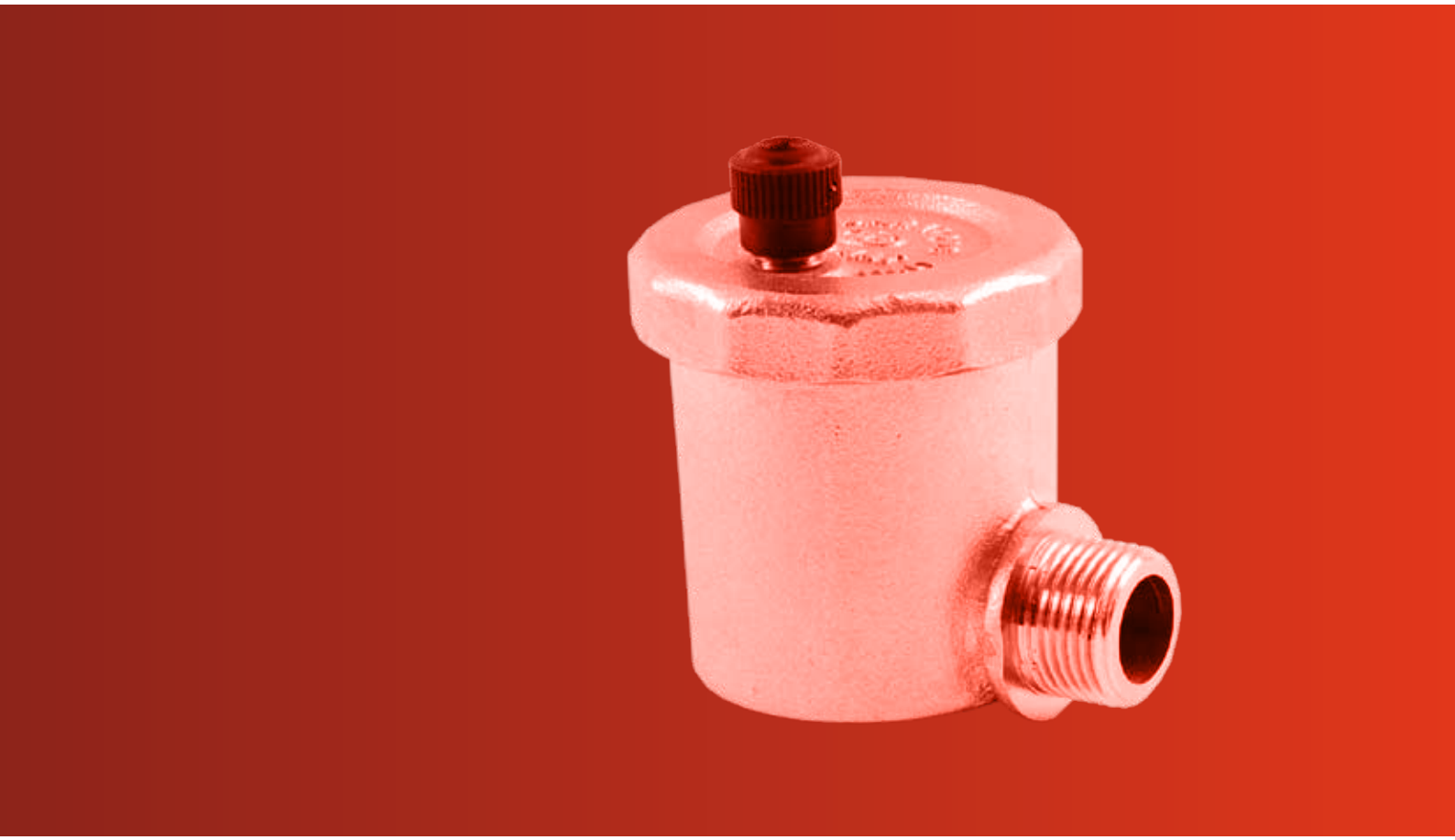
OPERATIONAL CURVE AIR VENTS



0502.4 • 3/8”

AUTOMATIC AIR VENTS WITH ANGLE CONNECTION 90° NICKEL-PLATED

CONNECTION: MALE



HYDRAULIC FEATURES

The automatic air vent “Valmat “has a single automatic float and carries out two main functions: the evacuation of a consistent air flow through a pipeline (e.g., during loading/pressurization of the plant) and degassing, which discharges air trapped or formed during operation in the pipeline. This valve has a paramount importance in climatisation networks and systems, evacuating and discharging trapped air in water pipes for services under pressure. Moreover, as thoroughly documented in European Standard EN 14868, the presence of oxygen in heating systems can provoke anodic corrosion, noise, air pockets, obstructions, etc., that may significantly compromise the performance and integrity of the systems. Further, its reduced space requirements make this valve ideal for use inside modern heat generators, where air must be evacuated from the circulation pumps in order to prevent unwanted cavitation phenomena.

TECHNICAL FEATURES

Pressure:	
maximum allowable working pressure (PN)	10 bar
minimum accumulation	0.2 bar (Grade A according to EN 12266-1)
range of operation air evacuation	from 0.5 bar to 7 bar (tolerance ± 10% max. detected)
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) +110°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per	EN 1074-4 (together with additional requisites under FL.GQ.11)

DESIGN

Die cast brass body EN 1982-CB754S
Brass plug EN 12165 - CW617N
Seat in brass EN 12164 - CW614N
Internal mechanisms in ACETAL RESIN (POM)
Seat gaskets and o-ring in NBR RUBBER
Float in highly resistant POLYPROPILENE PP
STAINLESS STEEL Spring EN 10088-14310 (AISI 302)
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)

PRODUCT CODE

0502.412 male 3/8” nickel plated

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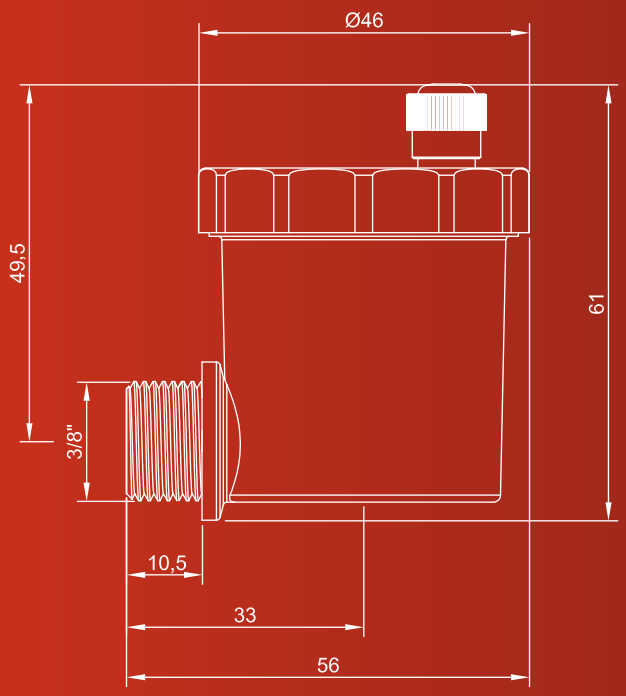
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

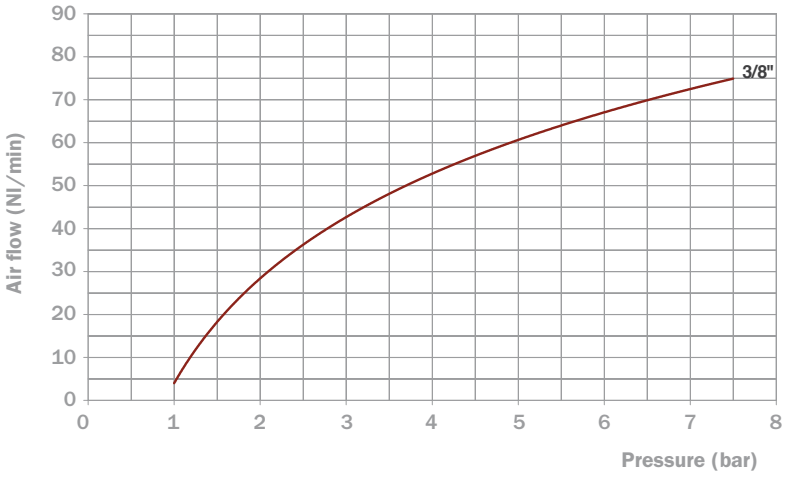
0502.4 • 3/8”

AUTOMATIC AIR VENTS WITH ANGLE CONNECTION 90° NICKEL-PLATED

CONNECTION: MALE



OPERATIONAL CURVE “VALMAT” AIR VENT WITH ANGLE CONNECTION



0539 • 3/8”- 1/2”

SHUT OFF VALVES FOR AUTOMATIC AIR VENTS YELLOW AND NICKEL-PLATED

CONNECTIONS: FEMALE-MALE

HYDRAULIC FEATURES

The shutoff valve is useful for tasks of substitution or inspection of air vents, blocking the flow to the disconnected valve. The hydraulic closing of the valve body can be reinforced with an O-ring (according to the model). When used in conjunction with an air vent in distribution systems for drinkable water, this product meets the standards stipulated in EN 1074-2.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Temperature:	
Maximum working temperature (TS)	0°C (excluding ice) +110°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Seat tightness	Test P12 - EN 12266-1 (GRADE A)

DESIGN

Brass Body EN 12164 - CW614N
Separating valve in ACETAL RESIN (POM)
STAINLESS STEEL Spring EN 10088-14310 (AISI 302)
Ring washer thread in pure PTFE (Teflon)
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)

PRODUCT CODES

Product codes (yellow)

0539.012	F 3/8” x M 3/8”
0539.015	F 1/2” x M 1/2”
0539.215	F 3/8” with slip for o-ring x M 1/2” with o-ring
0539.412	F 3/8” with slip for o-ring x M 3/8”
0539.415	F 1/2” with slip for o-ring x M 1/2”
0539.512	F 3/8” with slip for o-ring x M 3/8” with o-ring (in teflon)
0539.515	F 1/2” with slip for o-ring x M 1/2” with o-ring (in teflon)

Product codes (nickel plated)

0539.112	F 3/8” x M 3/8”
0539.115	F 1/2” x M 1/2”
0539.315	F 3/8” with slip for o-ring x M 1/2” with o-ring

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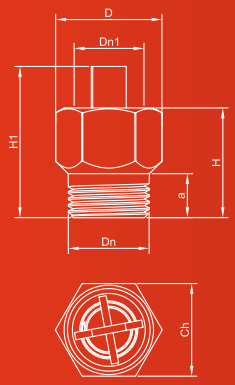
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

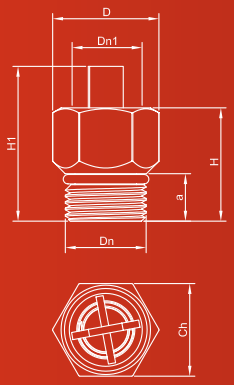
0539 • 3/8”- 1/2”

SHUT OFF VALVES FOR AUTOMATIC AIR VENTS YELLOW AND NICKEL-PLATED

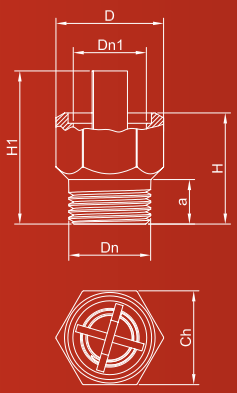
CONNECTIONS: FEMALE-MALE



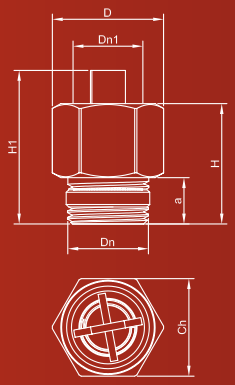
0539.0 - 0539.1



0539.2 - 0539.3



0539.4

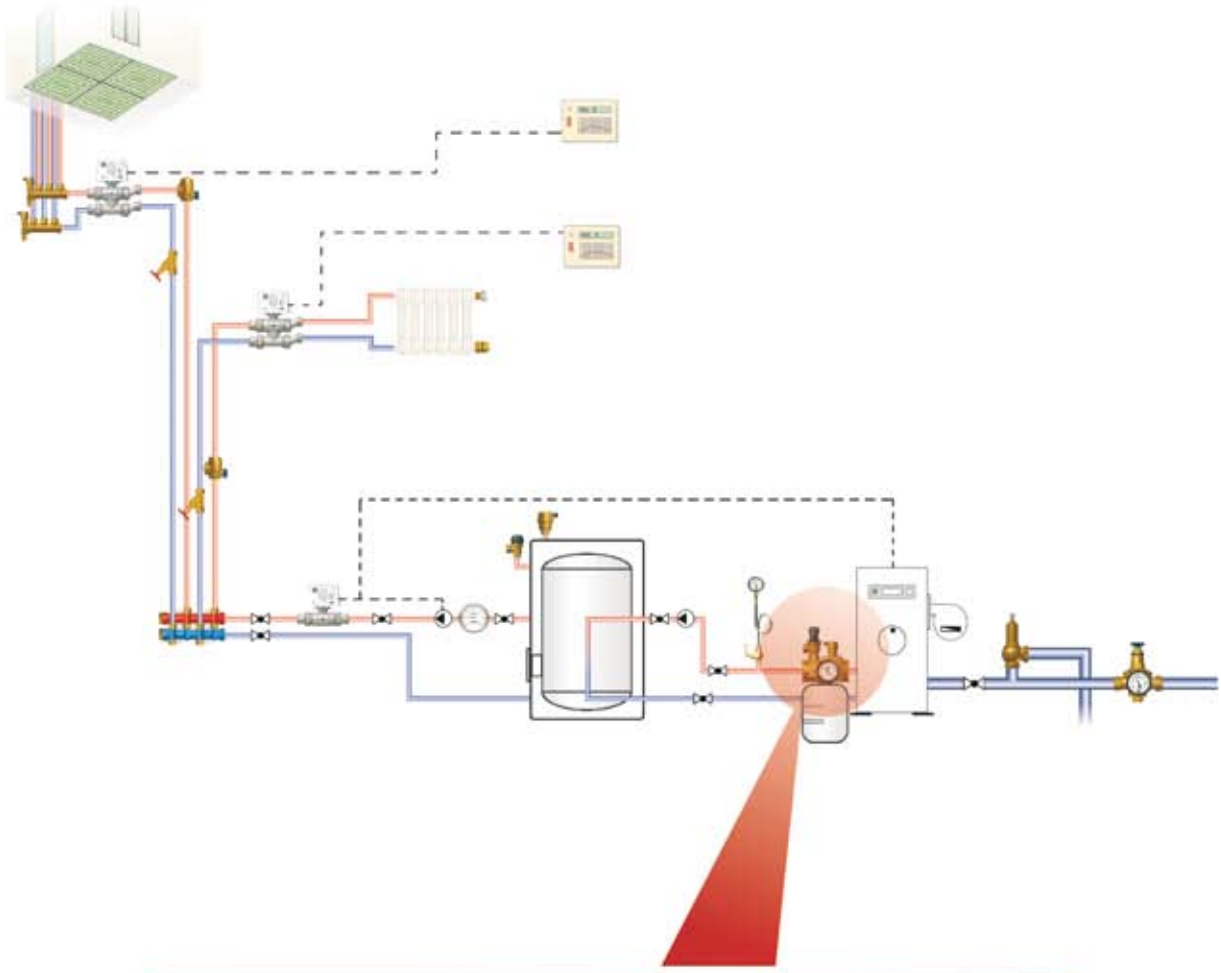


0539.5

FEATURES

Cod.	Dimensions						
	Dn	Dn1	D	H	H1	Ch	a
0539.012 - 0539.112	3/8”	3/8”	22	22,5	32,5	19	9
0539.015 - 0539.115	1/2”	1/2”	26	25	35	23	9
0539.412	3/8”	3/8”	23	23	33	20	9
0539.415	1/2”	1/2”	27,5	27	35	24	9
0539.215	1/2”	3/8”	25	23	33	22	9,5
0539.315	1/2”	3/8”	25	23	33	22	9,5
0539.512	3/8”	3/8”	23	25	32	20	9,5
0539.515	1/2”	1/2”	28	29,5	34	24	12

AIR SEPERATORS

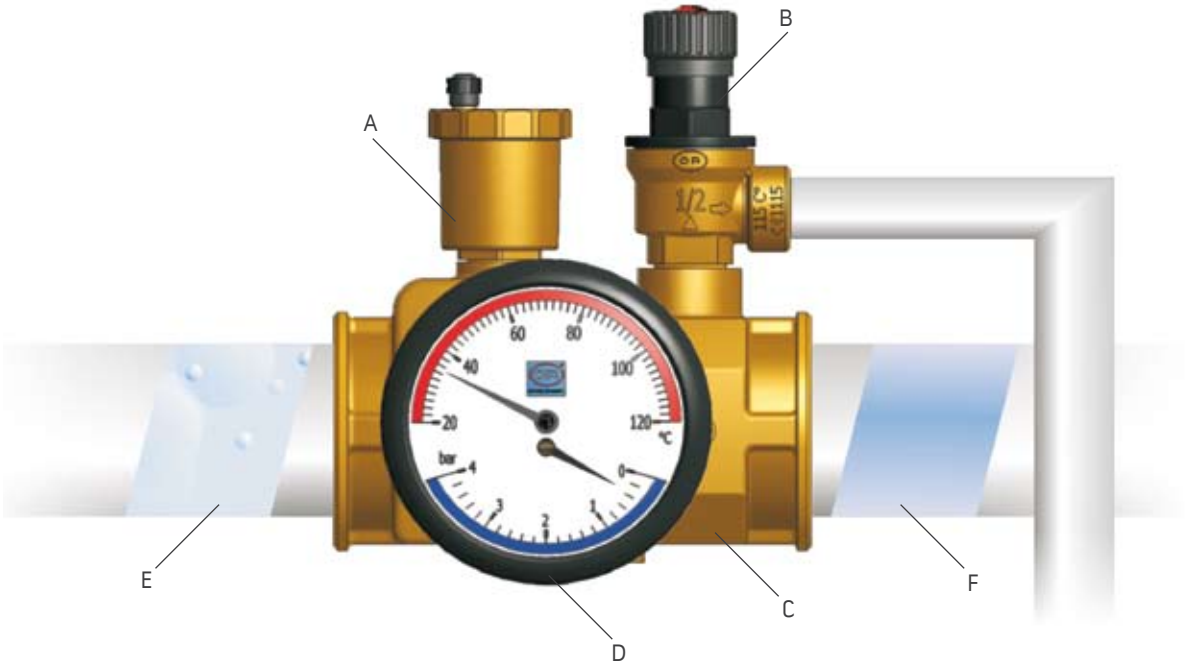


GENERAL INSTALLATION INFORMATION

An efficient separation of air from water comes best when the velocity of the water is less than 3 m/s. This depends from the diameter of the pipe, from its inclination with respect to the horizontal plane (counter slope) and from the water temperature. If the aforementioned factors are not met in the plant, the following steps could be taken:

- Increasing the passage section of the connecting pipeline to the separator (velocity reduction).
- Avoiding counter slopes of any sort (horizontal flow), providing a partial deviation upwards on a theoretical straight line formed by the deviated flow from the internal deflector.
- Reducing the temperature of the heat-transfer fluid. Consequently, the air separator should not be installed in the proximity of a heat generator.

Finally, a long tract of rectilinear pipeline of at least 1.5m leading up to the separator will improve its efficiency (laminar heat-transfer fluid motion).

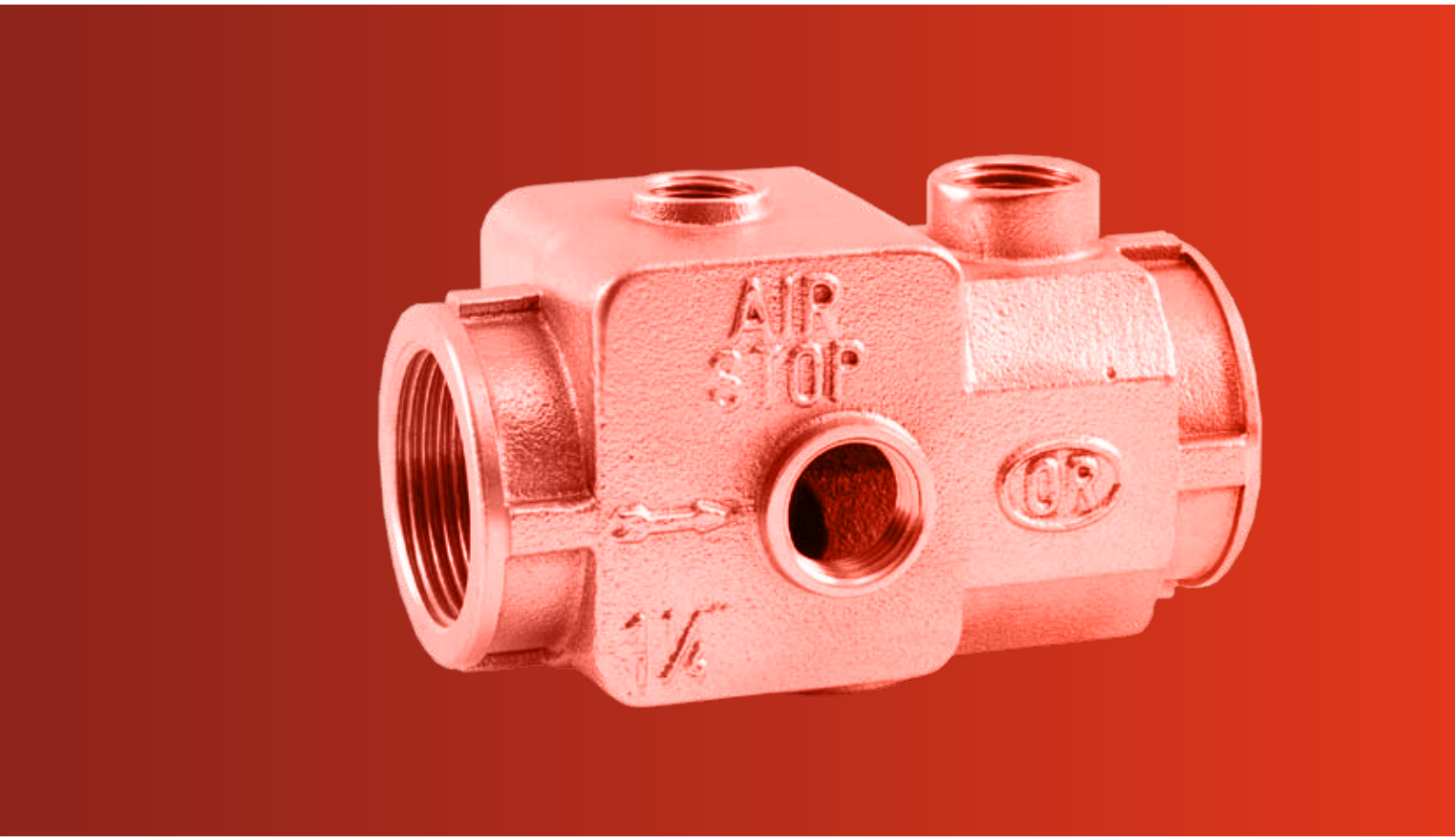


A = AIR VENT VALVE
B = SAFETY VALVE
C = AIR SEPARATOR
D = THERMOHYDROMETER
E = WATER WITH AIR
F = WATER WITHOUT AIR

0503 • 1”- 3”

AIR SEPARATORS “AIR-STOP”

CONNECTIONS: FEMALE-FEMALE



HYDRAULIC FEATURES

The AIR-STOP air separator can be used to connect numerous devices that regulate and monitor the operating conditions of the system, such as security valves, thermo-manometers, expansion tanks and air release valves. Normal air release valves permit evacuation when the air is separated from water and accumulated at the highest points of the system. The AIR-STOP air separator has an internal deflector that separates water from air and, if equipped with an air vent, permits the rapid and efficient release of air at any point of the system, thus precluding troublesome air pockets that are difficult to evacuate, as for example in exchangers present in air conditioning plants.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) +110°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1

DESIGN

Cast brass dimensions 1” - 2” EN 1982 - CB753S
Cast iron dimensions 2”1/2 - 3” EN 1561-EN-JL 1040 (EN-GJL-250)

PRODUCT CODES

0503.025 female/female 1”
0503.033 female/female 1”1/4
0503.042 female/female 1”1/2
0503.050 female/female 2”
0503.066 female/female 2”1/2
0503.080 female/female 3”

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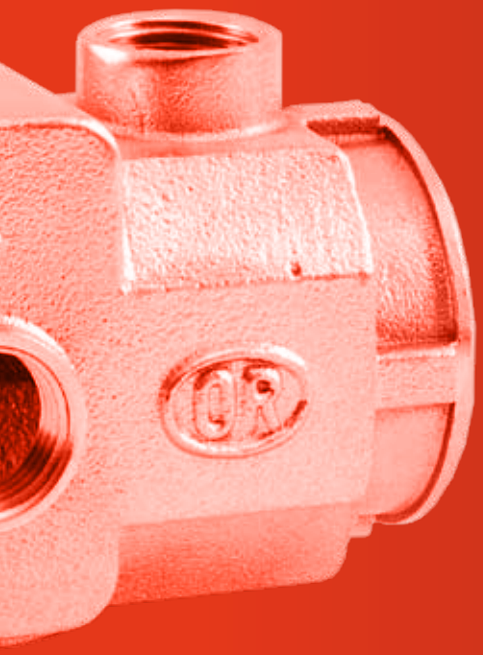
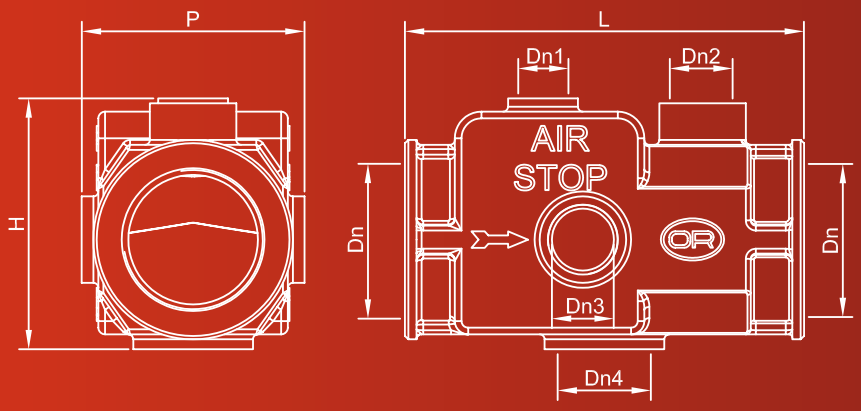
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0503 • 1”- 3”

AIR SEPARATORS “AIR-STOP”

CONNECTIONS: FEMALE-FEMALE

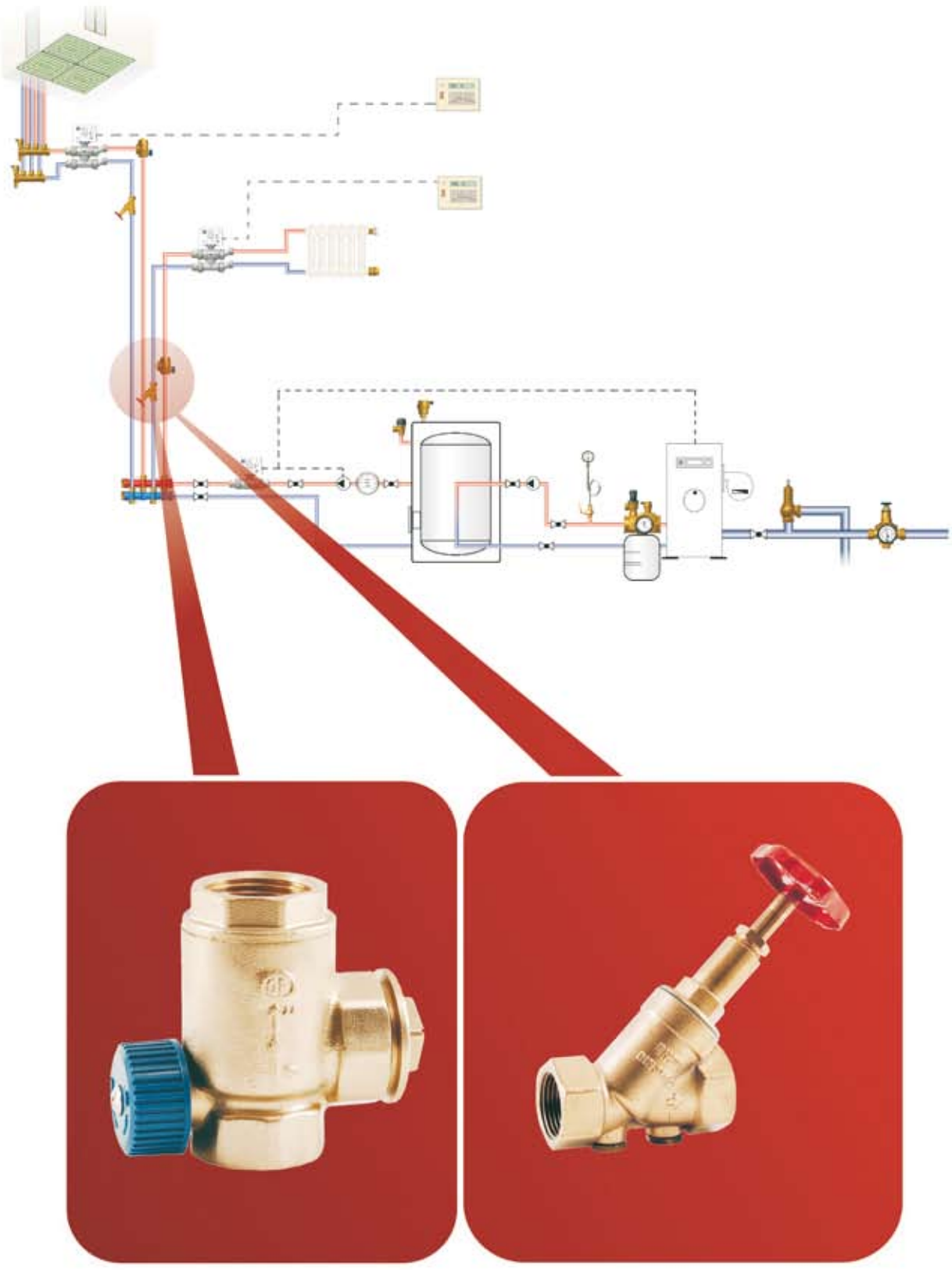




FEATURES

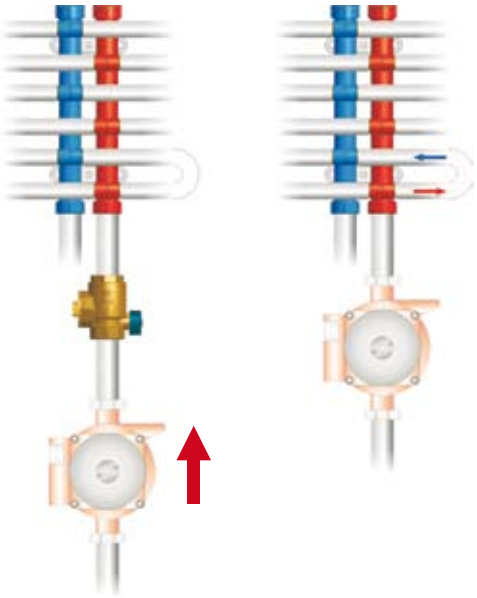
Dn	Dn1	Dn2	Dn3	Dn4	L	H	P
1”	3/8”	1/2”	1/2”	3/4”	113	72,5	59
1”1/4	3/8”	1/2”	1/2”	3/4”	120	75,5	67
1”1/2	3/8”	1/2”	1/2”	3/4”	124	86	70
2”	3/8”	3/4”	1/2”	3/4”	130	102	79
2”1/2	3/8”	1”	1/2”	1”	180,5	137	114
3”	3/8”	1”	1/2”	1”	180	151	126

KORY VALVES AND VAR VALVES

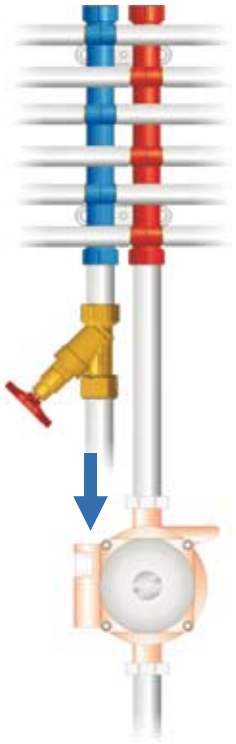


KORY VALVES AND VAR VALVES

The non-return valve KORY with spring-loaded weighted obturator, when installed just after the pump/circulator, prevents the natural phenomenon of water circulation in closed-network heating systems, where the thermostat regulates the temperature. When the pump is operating, the heat-transfer fluid raises and pushes the weighted obturator against the spring, reaching the heating vessels. When room temperature is reached, the thermostat “closes” the pump and the weighted obturator of the KORY non-return valve, assisted by the back-flow action of the spring, quickly closes, subsequently separating the heat generator from the distribution network and preventing the heat-transfer fluid from reaching the heating vessels. The intervention of the obturator can be deactivated with the lateral handle so that passage always remains open to be able to, for instance, drain the system. Without the KORY non-return valve in the system, if the pump stops, a natural circulation of heat-transfer fluid will be created, which will continue to pass heat to the heating vessels and consequently continue to heat the room uncontrollably, reaching temperatures much higher than the one set by the thermostat.



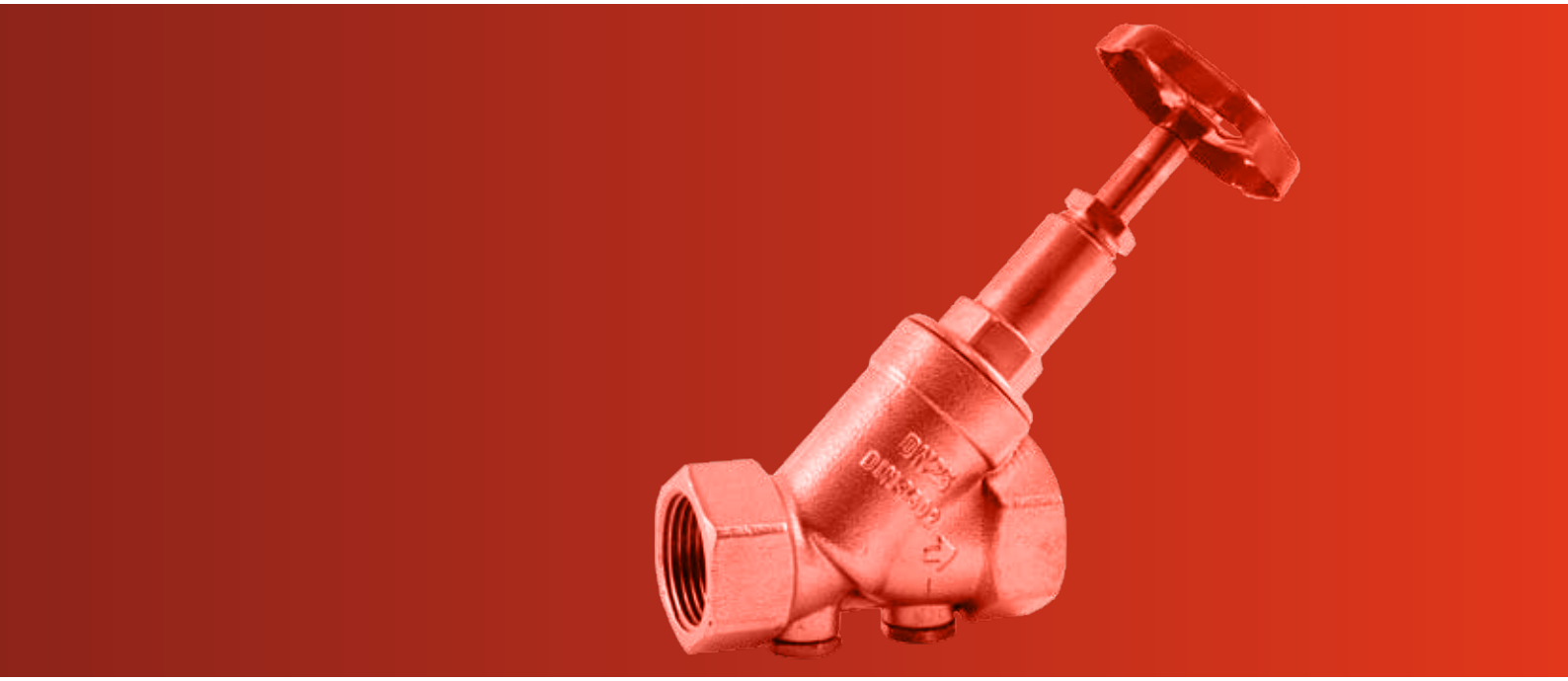
The VAR valve, positioned on the intermediate networks of hydro-thermo-sanitary plants equipped with limited pump heads, directly absorbs the excess of differential pressure, maintaining the constant flow rate necessary for optimum network operating conditions. Placed in zones of low turbulence, the two pressure intakes, allow a precise reading of the valve’s actual resistance during the passage of the fluid and consequently, the upper handwheel can be used to position the disc obturator and spring-load. If the differential pressure decreases, the stem with internal obturator plate loosens the compression of the counter-flow spring, thus reducing the fluid’s section of passage. If the differential increases, the stem will compress the spring proportionally to the flow, broadening the heat-transfer fluid’s passage section: and so this is how, by varying the opening/closure of the regulation valves (whether thermostatic or not) installed on single heating vessels, the VAR valve controls the free passage section “dynamically”. The same valve can be used to stop the fluid from passing, preventing backflow and eliminating the phenomenon of normal circulation of water in closed network heating systems where the thermostat regulates the temperature.



0506 • 1/2”- 2”

CHECK VALVES WITH SPRING “VAR”

CONNECTIONS: FEMALE-FEMALE



HYDRAULIC FEATURES

The VAR model check valve is designed for potable water supply systems and allows reduction of the flow by turning the handwheel, until a complete flow shut-off. This function, in conjunction with a controllable anti-pollutant check system, opens automatically when the upstream pressure of the valve is larger than the downstream pressure. In the event that the pressure is larger downstream or in the absence of flow, the anti-pollutant device closes in advance, actioned by a spring.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Δp closure non-return	500 Pa (0.05 bar)
Temperature:	
Working temperature (TS)	from 0°C (excluding ice) to +70°C (occasionally up to 95°C)
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Upstream anti-pollutant device holder	EN 10226- Rp1/4” (ex ISO 7/1)
Downstream system withdrawal/draining holder	EN 10226- Rp1/4” (ex ISO 7/1)
Dimensions conform to the requirements laid down in DIN 3502	
Requirements and tests as per:	
Shut off valve	EN 1213
Anti-pollutant check device	EN 13959 Family E, Type A
Flow classification	EN 1213 Vb (inclined valve)
Protection unit	EN 1717 (Anti-pollutant valve controllable and inspectionable EA)
Categories of fluids	EN1717 (Categories 1 and 2)

DESIGN

Brass body dimensions 1/2”-1” EN12165-CW617N
Cast brass body dimensions 1”1/4-2” EN1982-CB753S
Brass bonnet EN 12165 - CW617N
Other components in brass EN 12164 - CW614N
Gaskets in NBR RUBBER
STAINLESS STEEL Spring EN 10088-14310 (AISI 302)
Die cast handwheel with THERMOHARDENING RED VARNISH FINISH 3000 70

PRODUCT CODES

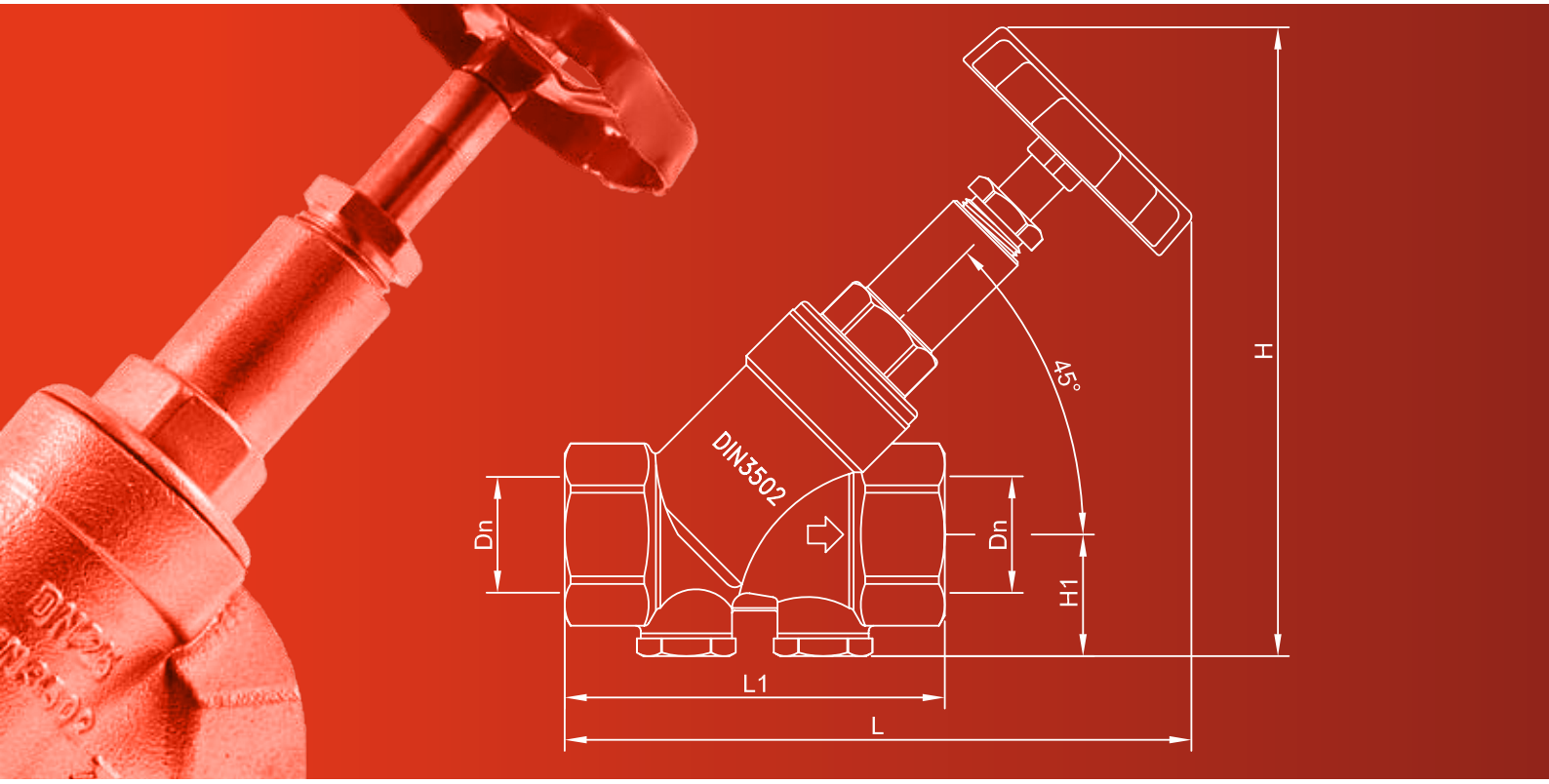
0506.015	female/female	1/2”	0506.033	female/female	1”1/4
0506.020	female/female	3/4”	0506.042	female/female	1”1/2
0506.025	female/female	1”	0506.050	female/female	2”

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0506 • 1/2”- 2”

CHECK VALVES WITH SPRING “VAR”

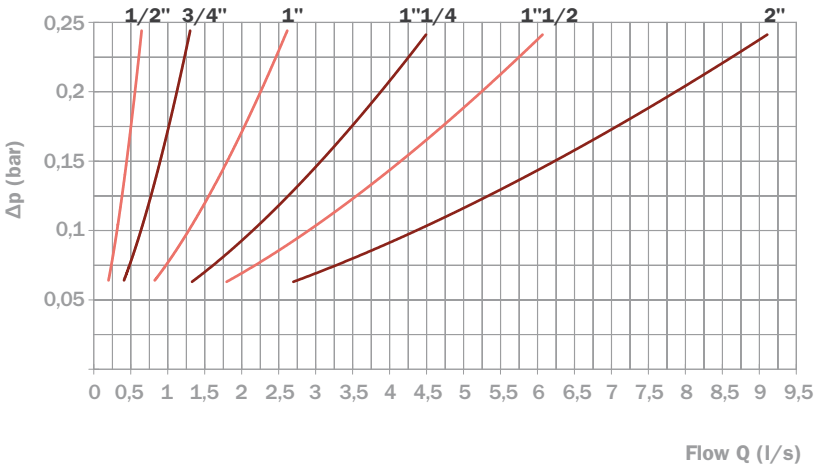
CONNECTIONS: FEMALE-FEMALE



FEATURES

Dn	L	L1	H	H1
1/2”	118	65	116	21,5
3/4”	140	75	136,5	24,5
1”	162	90,5	158	26
1”1/4	193	110	191	31,5
1”1/2	221	120	214	33,5
2”	270	150	257	40

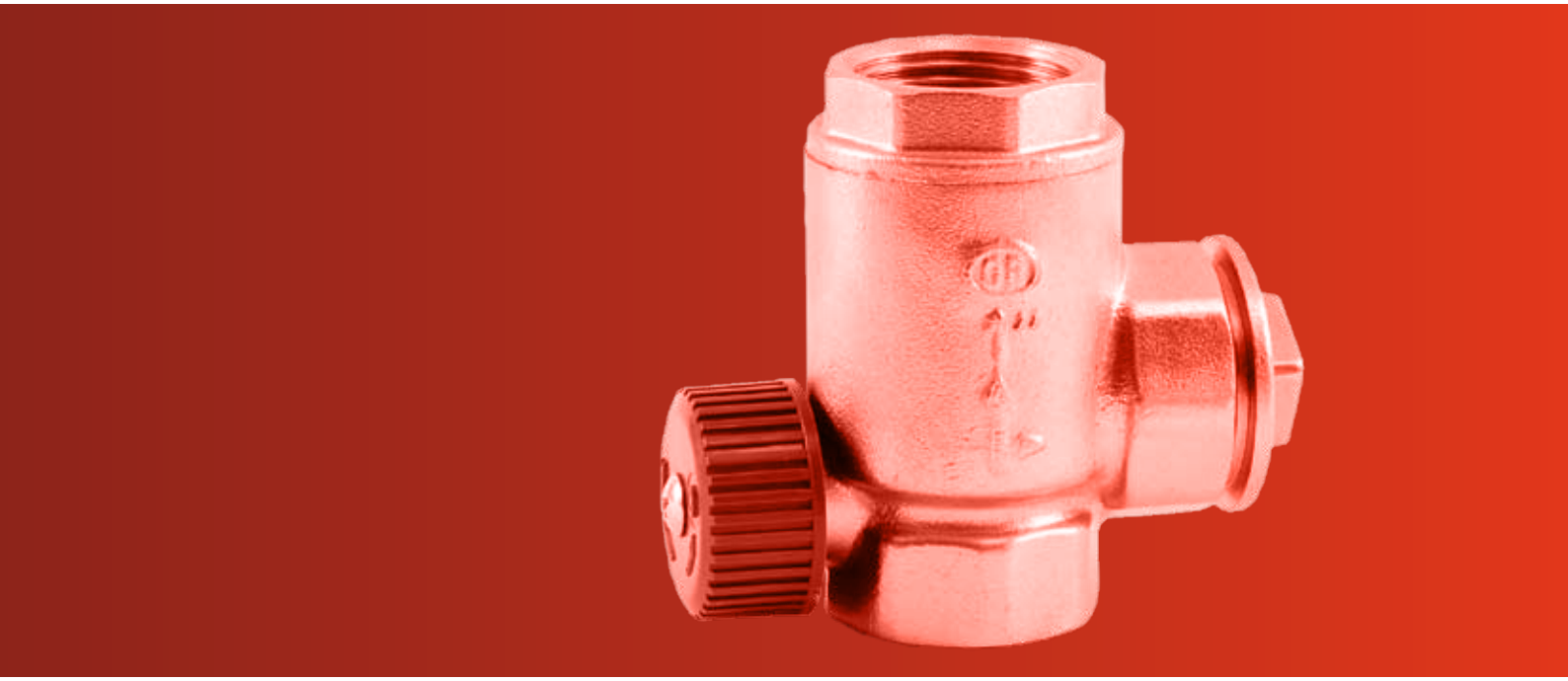
HEAD LOSS



0507 • 3/4”- 1”1/2

AUTOMATIC CHECK VALVES KORY

CONNECTIONS: FEMALE-FEMALE



HYDRAULIC FEATURES

The anti-siphon check valve Kory is used in combination with pumping systems to prevent the backflow of water in sanitary-hygienic plants or in heating systems. Equipped with a spring-loaded weighted obturator to prevent the natural water circulation phenomenon, the temperature regulation is controlled by a thermostat, which in turn controls the pump and allows the passage of water towards the heated vessels only when the pump is operating. Otherwise, it acts as a check valve and separates the system from the heat generator. In lift-device systems, this valve automatically prevents backflow of water from the discharge piping when pumping is interrupted. It is moreover furnished with a manual drainage and ventilation device, which permits to empty the discharge tube and to de-aerate the pumping device. This valve may also be used with a straight or angle connection by simply moving the appropriate plug; a high level of precision is guaranteed in any position, with rapid and silent operation as a result of the body’s internal PTFE obturator guide.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Δp closure non-return	500 Pa (0.05 bar)
Temperature:	
maximum working temperature (TS)	-15 °C +100 °C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per	EN 1074-3 and EN 13959

DESIGN

Brass Body EN 12165 - CW617N
Brass weight EN 12164 - CW614N
Other components in brass EN 12164 - CW614N
Ring weight cover in pure PTFE (Teflon)
O-rings in NBR RUBBER
STAINLESS STEEL spring EN 10088-14310 (AISI 302)

PRODUCT CODES

0507.020 female/female 3/4”
0507.025 female/female 1”
0507.033 female/female 1”1/4
0507.042 female/female 1”1/2

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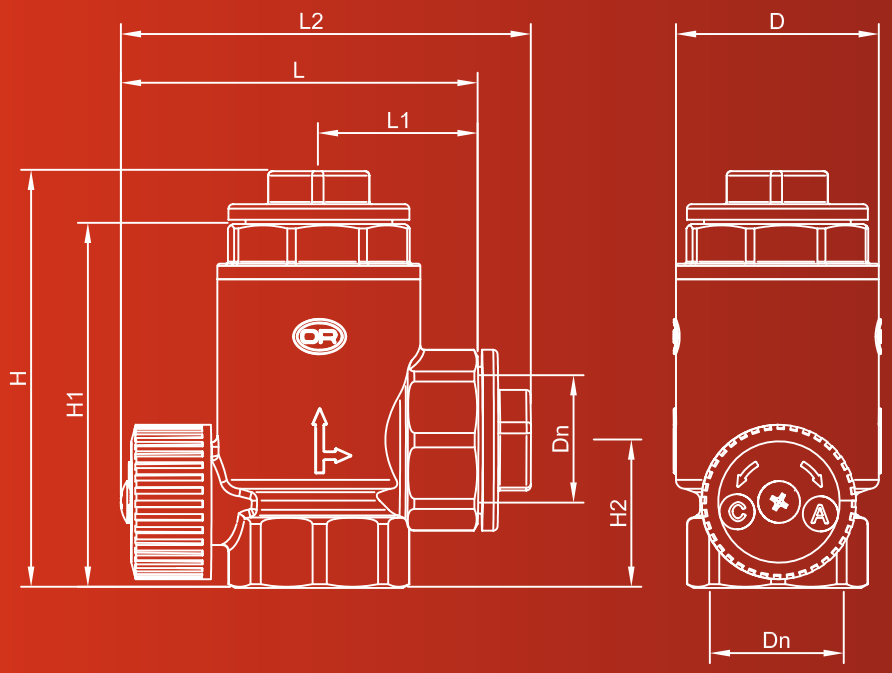
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0507 • 3/4”- 1”1/2

AUTOMATIC CHECK VALVES KORY

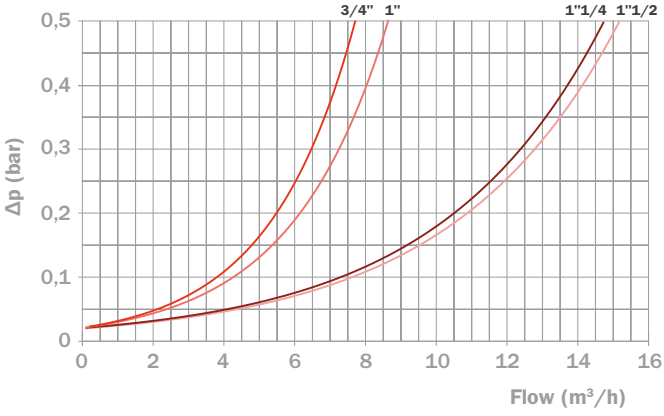
CONNECTIONS: FEMALE-FEMALE



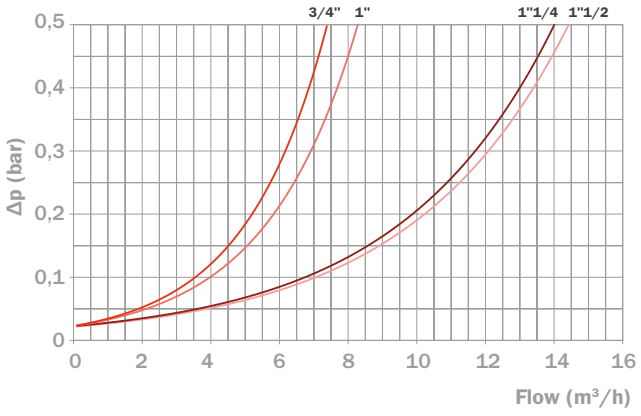
FEATURES

Dn	D	L	L1	L2	H	H1	H2
3/4”	Ø 37	75,5	31,5	87	79,5	69	30,5
1”	Ø 46	81	36	92,5	93,5	82,5	33,5
1”1/4	Ø 57	93,5	40	102	103,5	92	43
1”1/2	Ø 63	97	44,5	111	109,5	95,5	45,5

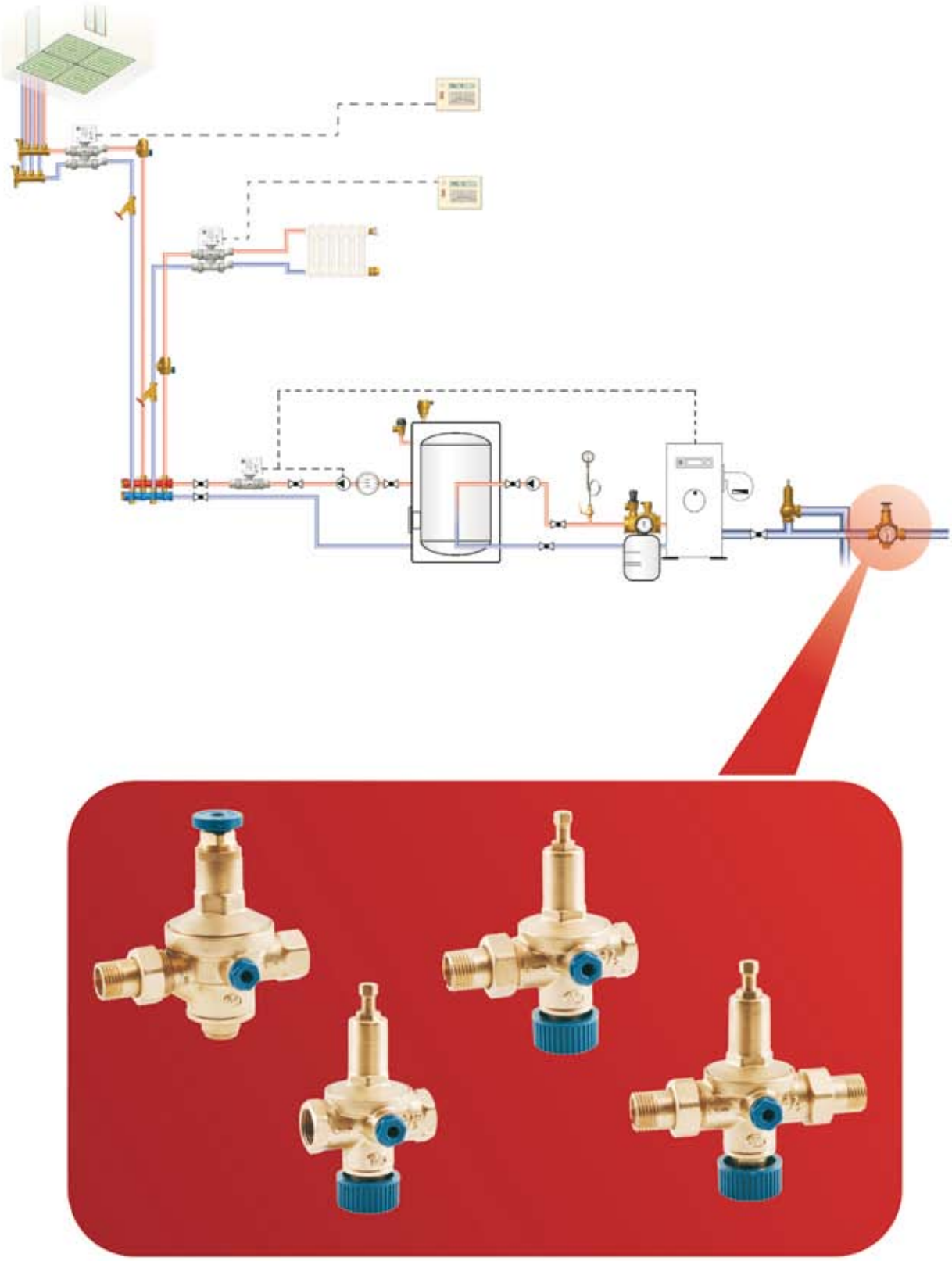
HEAD LOSS LINEAR CONNECTION



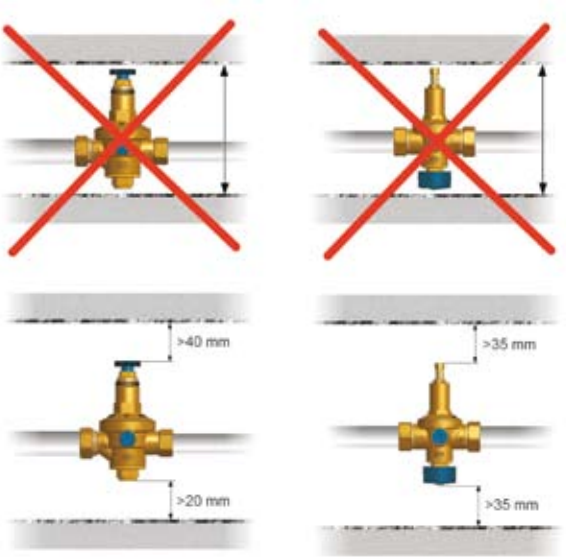
HEAD LOSS ANGLE CONNECTION

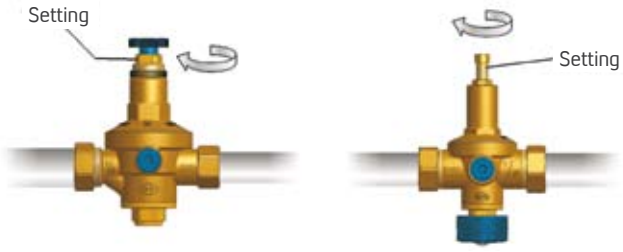


AUTOMATIC FEEDERS



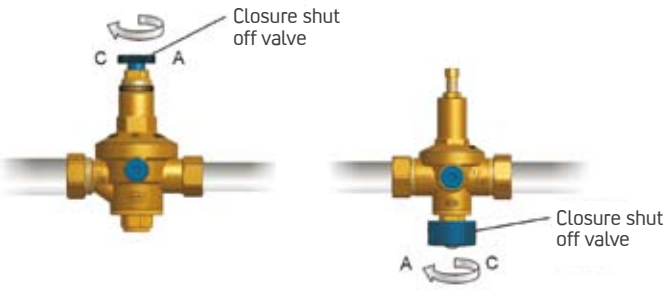
OR automatic feeders can be installed in any position. However, it is recommendable to install on piping in an area that allows easy access for setting, closure and filter cleaning.





The outlet pressure (PS) is controlled by the rotating control or the regulation screw (according to the model); both present at the upper part of the device. The outlet pressure is increased by turning the rotating control clockwise, which is conform to current European legislation.

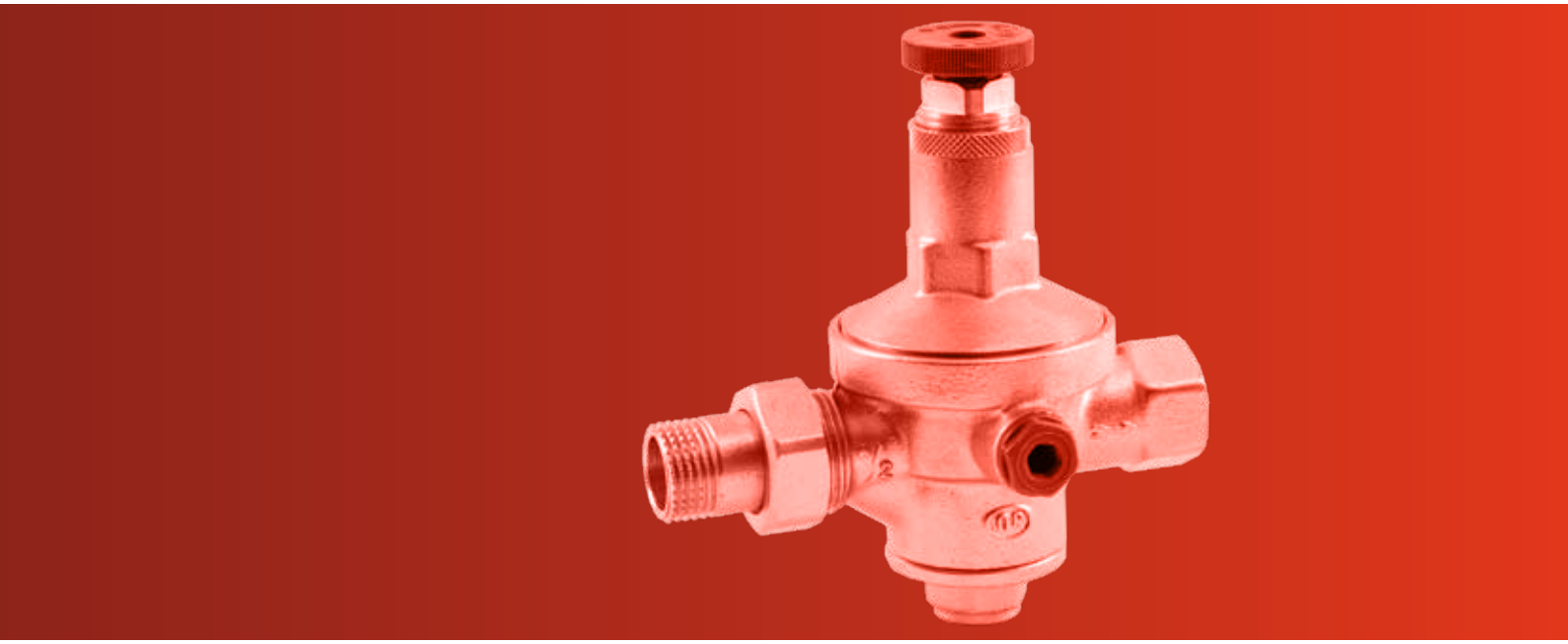
The outlet pressure (PS) is adjusted in the absence of flow and after having drained the system both upstream and downstream in order to prevent possible sediments from getting between the seat and its obturator during the reduction. Even when the system is running at capacity and the pressure is stable, it is advisable to close the shut off valve. Every OR automatic feeder has a shut off valve with a manual command to shut off the flow to the system. This valve is controlled by turning the plastic knurled handwheel either at the top or bottom of the assembly, according to the model. The turning sense is clearly indicated by arrows on the upper surface of the handwheel. To restore the automatic load conditions, simply reopen the tap using the handwheel. The pressure of the system will gradually return to the preset value. The particular inlet pressure compensation system of the OR automatic feeder permits to maintain a constant preset outlet pressure (Ps). Any significant variation in the pressure could result in an operational anomaly with respect to the device or the system itself. The filter integrated at the input of the OR automatic feeder provides an ample area for the free passage of fluid and is easily replaced by removing the lower plug.



0514 • 1/2”

AUTOMATIC FEEDERS “ALCAR-REG” WITH INCORPORATED CHECK VALVE, FILTER AND SHUT OFF VALVE

CONNECTIONS: DISMANTLING FITTING MALE-FEMALE



HYDRAULIC FEATURES

The Alcar-Reg automatic feeder installed on the feeder piping of a closed circuit heating system assures a constant preset pressure for the heat-transfer fluid in the system, by restoring automatically any missing water (e.g., after purging). During the loading or restoring phase of the system, the valve will block the flow once the preset pressure is obtained and will keep the pressure steady . The micro-stretched mesh filter in the lower part of the automatic feeder enables the distribution of clean water, free of solid impurities, that might otherwise compromise the device’s operation. The device’s downstream check cartridge prevents backflow of the water from the heating circuit into the conduit. Finally, the Alcar-Reg assembly contains two pressure connections where a gauge can be installed in order to monitor the system’s pressure and a manual shut off valve to isolate the water present in the heating plant from the water in the feeding pipe, by simply tightening the upper knurled handwheel, which is particularly useful for maintenance or in case of emergency.

TECHNICAL FEATURES

Pressure:	
Maximum allowable inlet pressure (PN)	10 bar
Setting range (PS)	0.5 - 4 bar
PS value set during testing	1.5 bar
PS tolerance set when varying the inlet pressure	±5 %
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) 110 °C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Filtration Rating:	
Reference micron rating (S)	< 400 µm
Threading:	
Pipeline connection	Threads according to ISO 228/1
Gauge connection	Threads according to EN 10226- Rp1/4” (ex ISO 7/1)
Requirements and tests as per:	
Pressure reducing device	EN 1567
Shut off valve seat tightness	Test P12 - EN 12266-1
Check cartridge	EN 13959 Family E, Type A
Acoustic group	Class I - Lmax (dBA) < 20

DESIGN

Body and bonnet in brass EN 12165 - CW617N
Other components in brass EN 12164 - CW614N
Internal check seat in pure PTFE (Teflon)
EPDM rubber diaphragm, nylon reinforced to 70 Sh
Static O-ring washers and seat gaskets in NBR RUBBER
Dynamic O-ring washers in EPDM RUBBER (peroxide-cured)
SM GALVANIZED STEEL setting spring - EN 10270-1
Other springs in STAINLESS STEEL EN 10088-14310 (AISI 302)
Handwheel in ACETAL RESIN (POM)
MICROSTRETCHED STAINLESS STEEL mesh filter EN 10088-1.4301 (AISI 304)

PRODUCT CODES

0514.015 dismantling male/female 1/2” with gauge

0514.115 dismantling male/female 1/2” without gauge

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OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0514 • 1/2”

AUTOMATIC FEEDERS “ALCAR-REG” WITH INCORPORATED CHECK VALVE, FILTER AND SHUT OFF VALVE

CONNECTIONS: DISMANTLING FITTING MALE-FEMALE

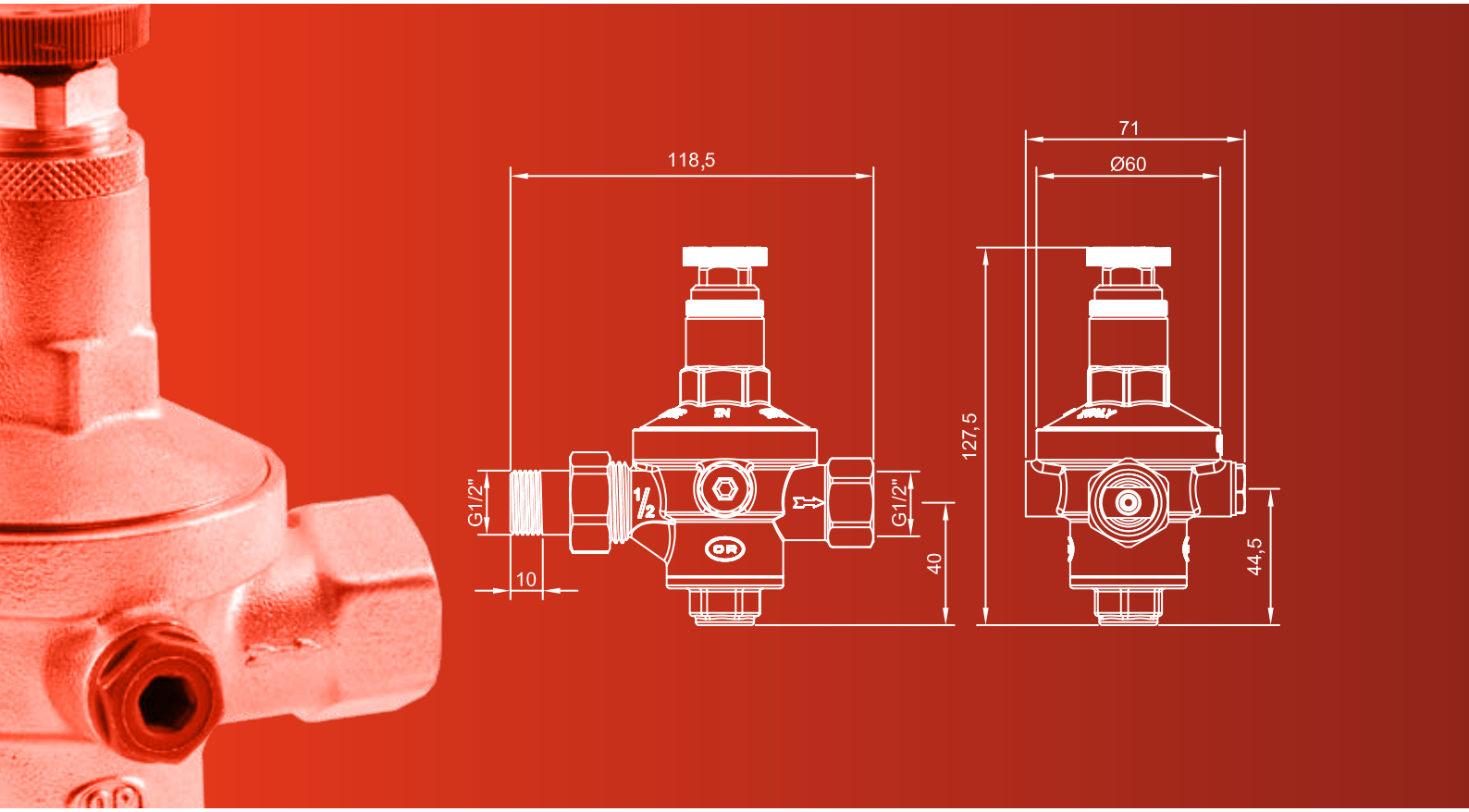
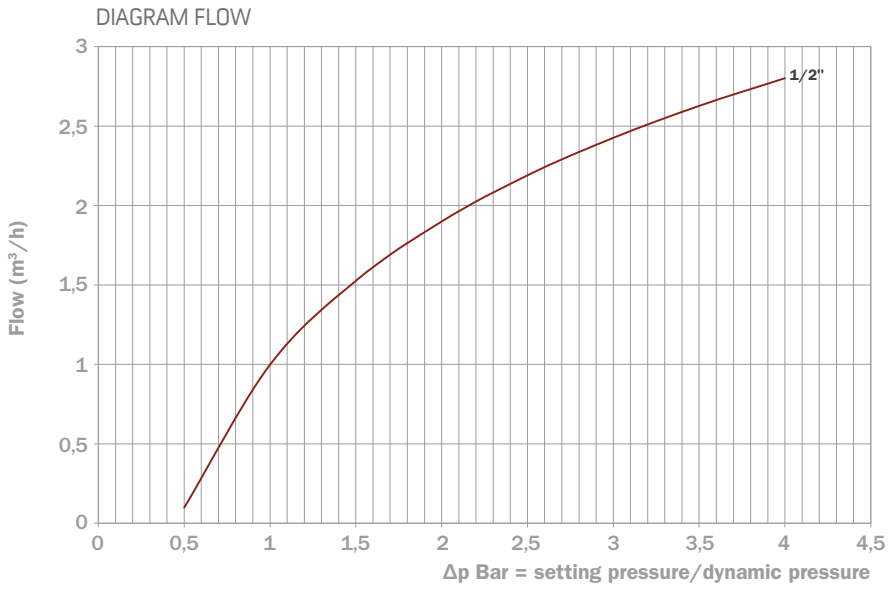


DIAGRAM FLOW



0524 • 1/2”

0525 • 1/2”

0526 • 1/2”

AUTOMATIC FEEDER “RIAL” WITH INCORPORATED CHECK VALVE, FILTER AND SHUT OFF VALVE

CONNECTIONS: DISMANTLING FITTING MALE-DISMANTLING FITTING MALE
DISMANTLING FITTING MALE-FEMALE
FEMALE-FEMALE

HYDRAULIC FEATURES

The Rial automatic feeder installed on the feeder piping of a closed circuit heating system assures a constant preset pressure for the heat-transfer fluid in the system, by restoring automatically any missing water (e.g., after purging). During the loading or restoring phase of the system, the valve will block the flow once the preset pressure is obtained and will keep the pressure steady . The micro-stretched mesh filter in the lower part of the automatic feeder enables the distribution of clean water, free of solid impurities, that might otherwise compromise the device’s operation. The device’s downstream check cartridge prevents backflow of the water from the heating circuit into the conduit. Finally, the Rial assembly contains two pressure connections where a gauge can be put in order to monitor the system’s pressure and a manual shut off valve to isolate the water present in the heating plant from the water in the feeding pipe, by simply tightening the lower knurled handwheel, which is particularly useful for maintenance or in case of emergency.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Setting range (PS)	0.5 - 4 bar
PS value set during testing	1.5 bar
PS tolerance set when varying the inlet pressure	±5 %
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) 110 °C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Filtration Rating:	
Reference micron rating (S)	< 400 µm
Threading:	
Pipeline connection	Threads according to ISO 228/1
Gauge connections	Threads according to EN 10226- Rp1/4” (ex ISO 7/1)
Requirements and tests as per:	
Pressure reducing device	EN 1567
Shut off valve seat tightness	Test P12 - EN 12266-1
Acoustic Group	Class I - Lmax (dBA) < 20

DESIGN

Body and bonnet in brass EN 12165 - CW617N
Other components in brass EN 12164 - CW614N
Internal check gasket in SILICONE 40 Sh
EPDM rubber diaphragm, nylon reinforced to 70 Sh
Static O-ring washers and seat gaskets in NBR RUBBER
Dynamic O-ring washers in EPDM RUBBER (peroxide-cured)
SM GALVANIZED STEEL calibration spring - EN 10270-1
Handwheel in ACETAL RESIN (POM)
MICROSTRETCHED STAINLESS STEEL mesh filter EN 10088-1.4301 (AISI 304)

PRODUCT CODES

0524.015	dismantling male/ dismantling male	1/2”	with gauge	0525.115	dismantling male/female	1/2”	without gauge
0524.115	dismantling male/ dismantling male	1/2”	without gauge	0526.015	female/female	1/2”	with gauge
0525.015	dismantling male/female	1/2”	with gauge	0526.115	female/female	1/2”	without gauge

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
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0524 • 1/2”

0525 • 1/2”

0526 • 1/2”

AUTOMATIC FEEDER “RIAL” WITH INCORPORATED CHECK VALVE,
FILTER AND SHUT OFF VALVE

CONNECTIONS: DISMANTLING FITTING MALE-DISMANTLING FITTING MALE
DISMANTLING FITTING MALE-FEMALE
FEMALE-FEMALE

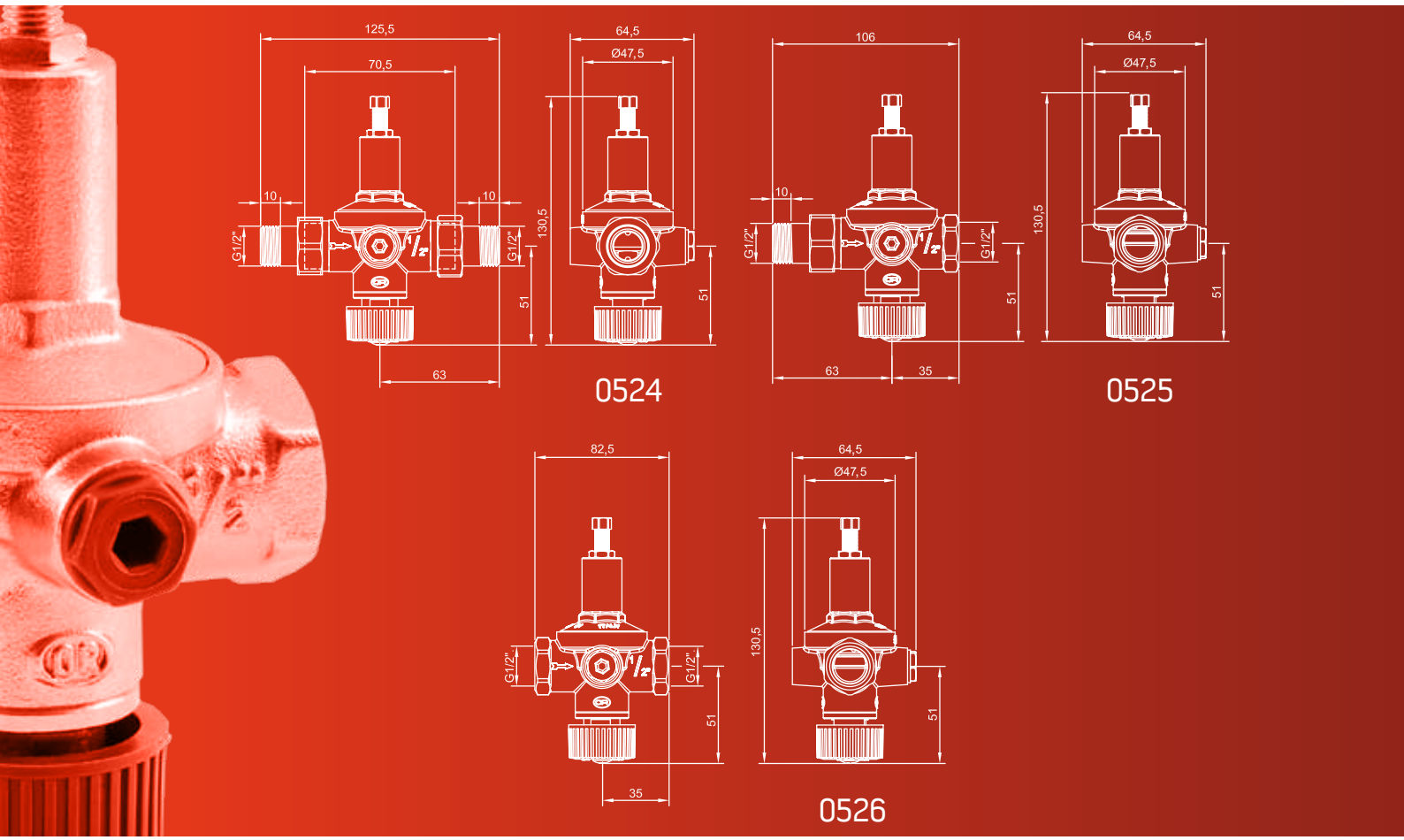
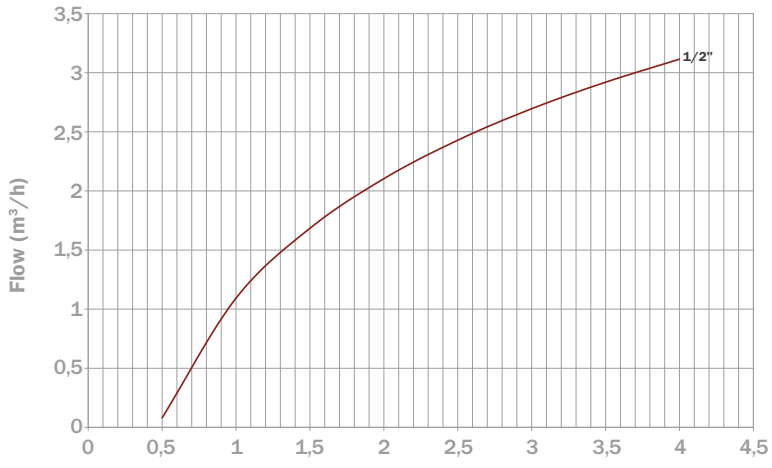
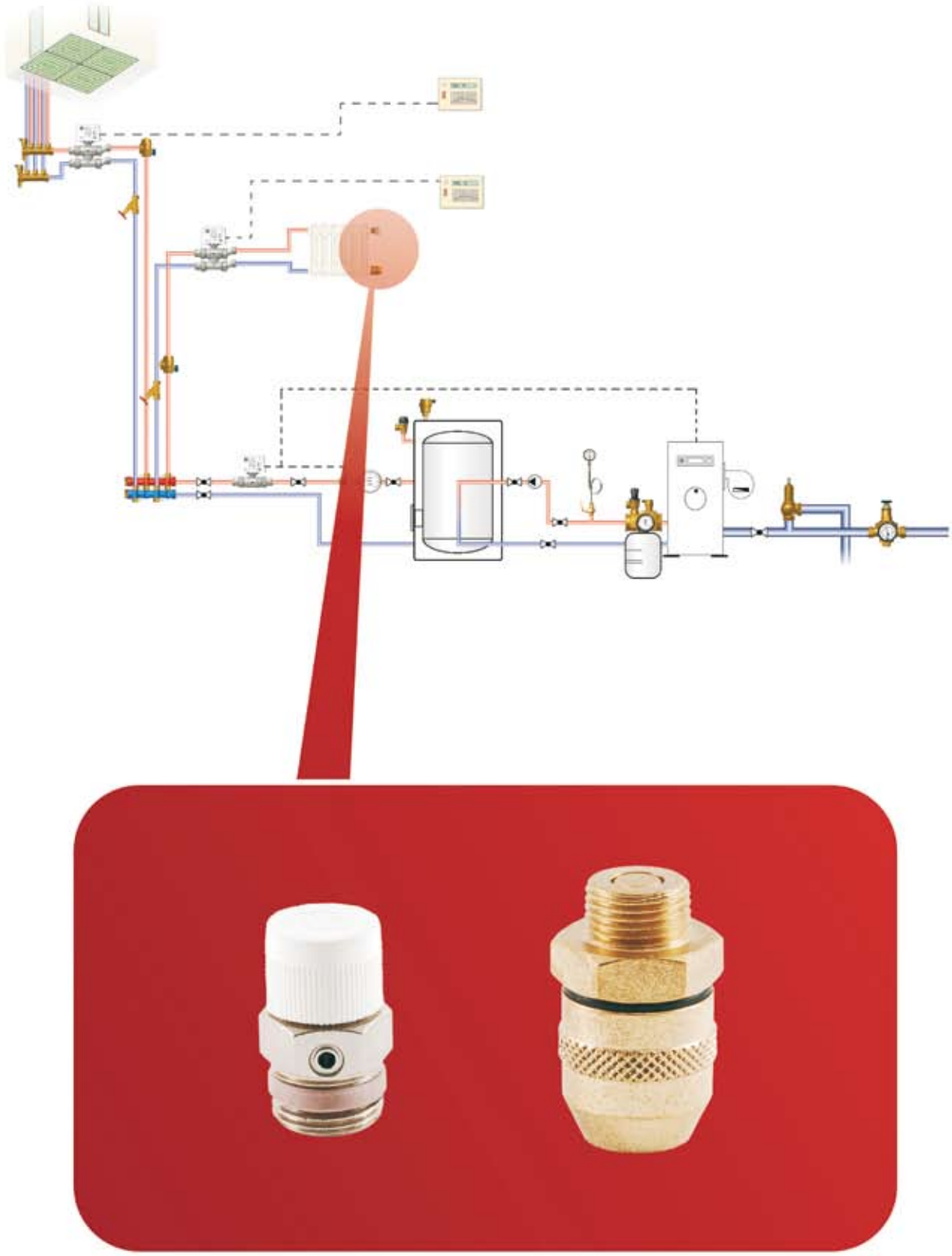


DIAGRAM FLOW



Δp Bar = setting pressure/dynamic pressure

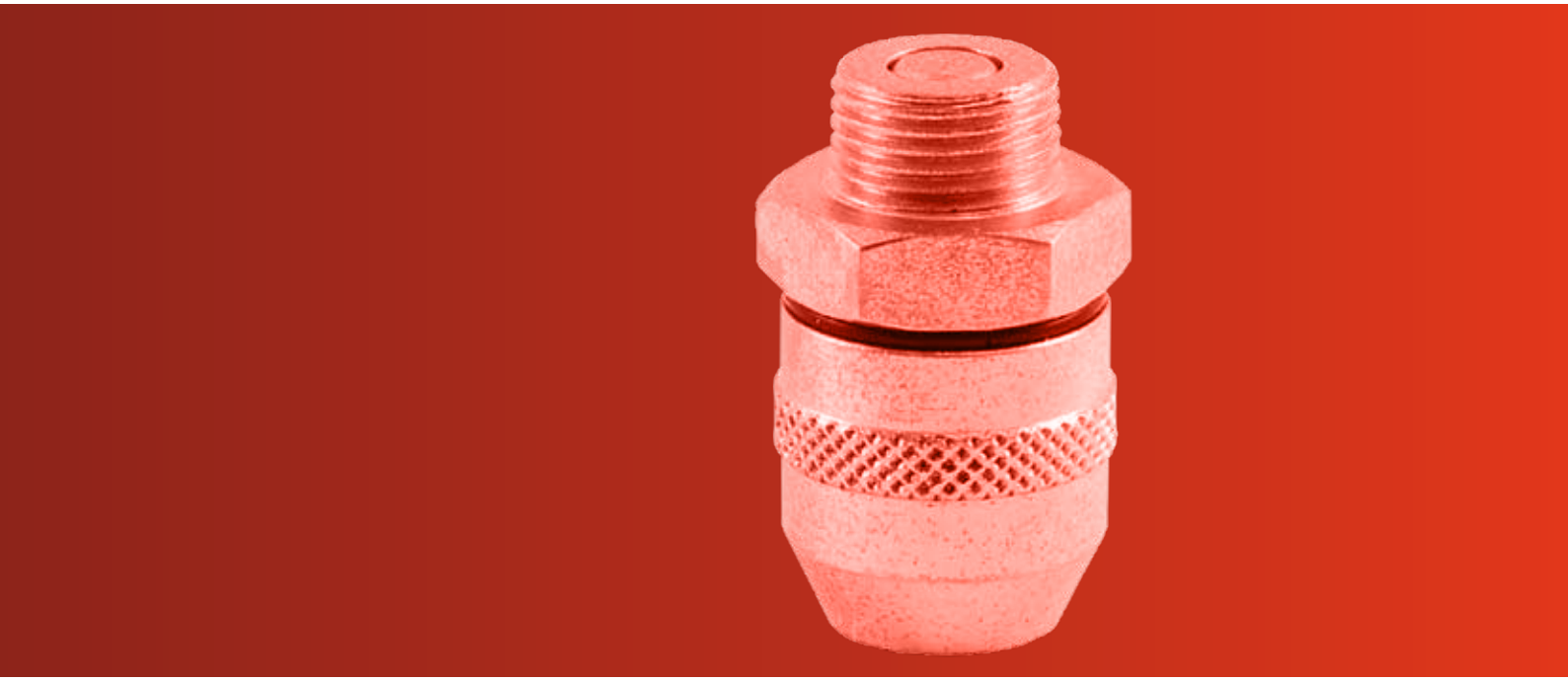
DISCHARGING FAUCETS



0600 • 3/8”-1/2”

DISCHARGING FAUCETS “VID’O”’

CONNECTION: MALE



HYDRAULIC FEATURES

The VID’O discharge tap is used to manually discharge water from radiators or heaters. This operation can be carried out by removing the small valve, on which there is a discharge hose, which has a rotational design especially for applying a water conveyor pipe, in order to make rotation unnecessary when using the small valve. The double security renders it reliable and assures a perfect seal on the rest of the tap during discharge. The knurled plug assists in achieving a tight seal, covering all of the mechanical parts of the tap.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Temperature:	
Working temperature (TS)	from 0°C (excluding ice) to +110 °C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Seat tightness	Test P12 - EN 12266-1
Shell tightness	Test P11 - EN 12266-1

DESIGN

Brass Body EN 12164 - CW614N
Other components in brass EN 12164 - CW614N
Static O-ring washers in NBR RUBBER
Dynamic O-ring washers in EPDM RUBBER (peroxide-cured)
STAINLESS STEEL Spring EN 10088-14310 (AISI 302)

PRODUCT CODES

0600.012 male 3/8”
0600.015 male 1/2”

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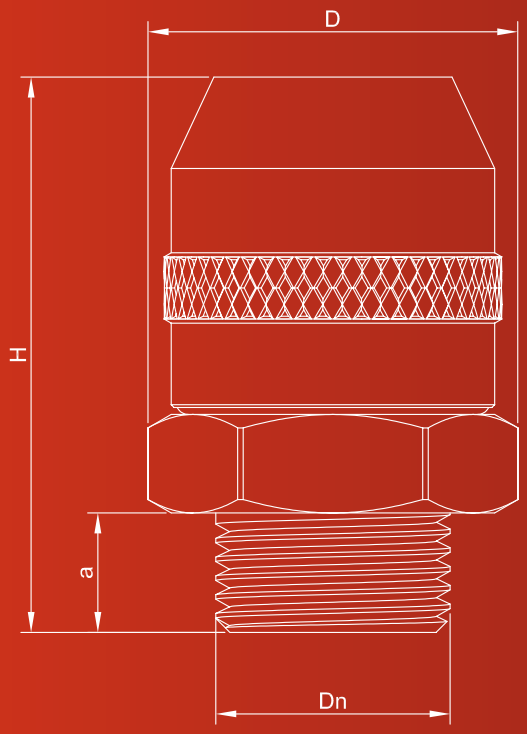
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0600 • 3/8”-1/2”

DISCHARGING FAUCETS “VID’O””

CONNECTION: MALE



FEATURES

Dn	D	H	a
3/8”	Ø26,5	39,5	8,5
1/2”	Ø26,5	39,5	8,5

0605 • 1/4”-3/8”

MANUAL AIR VENTS FOR RADIATOR NICKEL-PLATED WITH O-RING

CONNECTION: MALE

HYDRAULIC FEATURES

This discharge tap is used to purge air that forms and stagnates inside heating elements and radiators. A systematic use of this device, either during the systems loading or while functioning normally, prevents unwanted situations such as cold zones and continuous and persistent noise during the passage of heat-transfer fluids. The operation is manual: The handwheel is unscrewed until the air in the heating element is completely expulsed. The profile of the discharge nozzle has been designed to render a laminar water flow discharge to facilitate its collection. The discharge tap is hermetically sealed, even if the handwheel is only partially closed. and, when facing strong thermal shifts, thanks to a rubber o-ring on the obturator. The knurled manual handwheel has a control stop to prevent it from breaking away from the body when opening. Finally, the nickel plated body and the white molded handwheel give this device an aesthetic resemblance to the other devices on the heated vessels, and thus a full aesthetic integration.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Temperature:	
Working temperature (TS)	from 0°C (excluding ice) to +110 °C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Seat tightness	Test P12 - EN 12266-1
Shell tightness	Test P11 - EN 12266-1

DESIGN

Brass Body EN 12164 - CW614N
Other components in brass EN 12164 - CW614N
Handwheel in PA6 polyamide (nylon 6)
O-rings in NBR RUBBER
Ring washers in pure PTFE (Teflon)
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)

PRODUCT CODES

0605.208 male 1/4”
0605.212 male 3/8”

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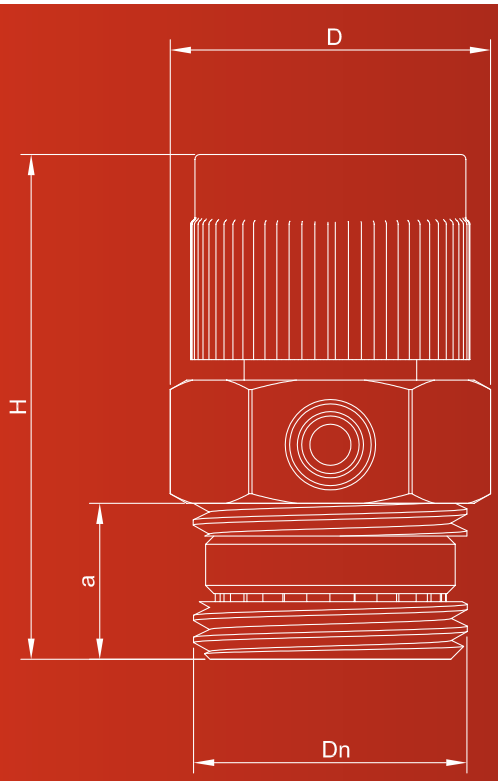
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0605 • 1/4”-3/8”

MANUAL AIR VENTS FOR RADIATOR NICKEL-PLATED WITH O-RING

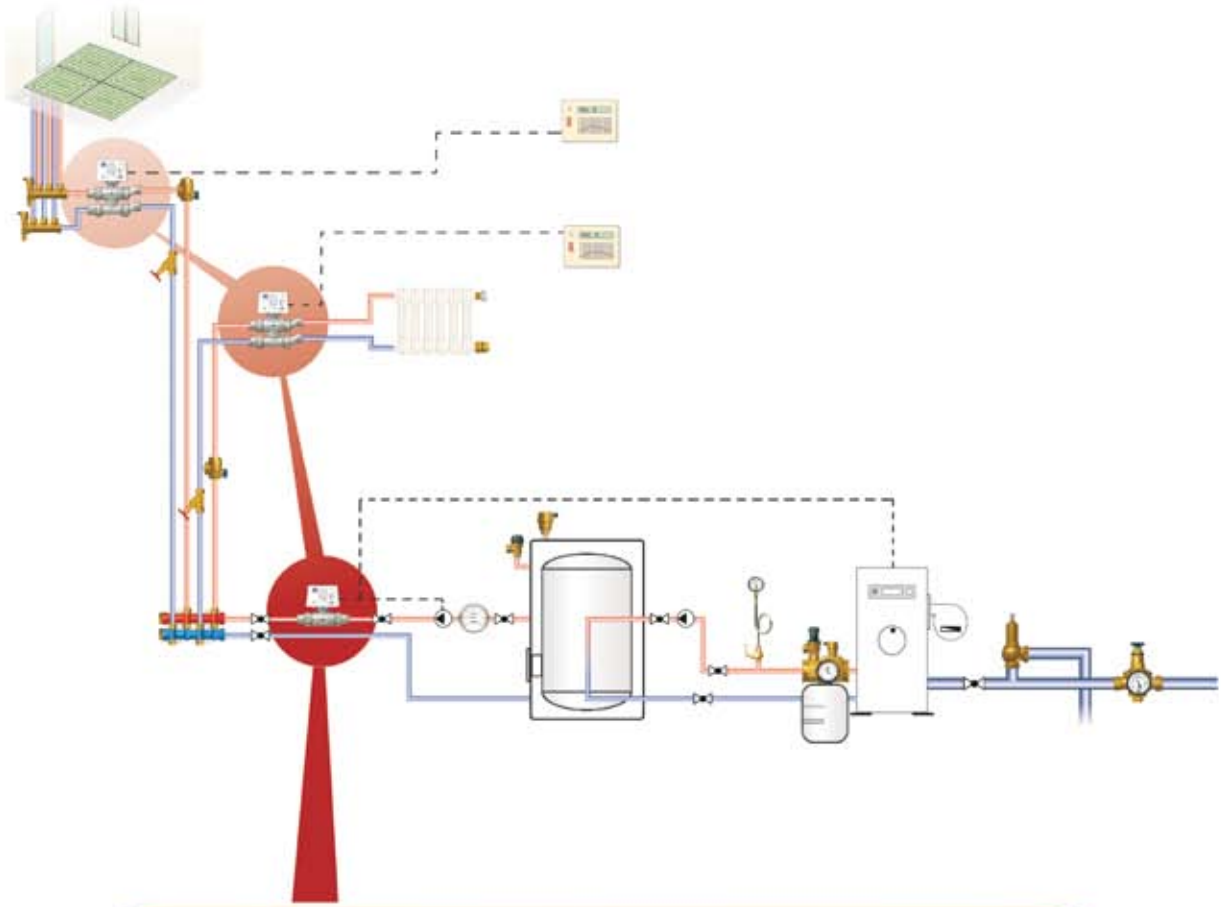
CONNECTION: MALE

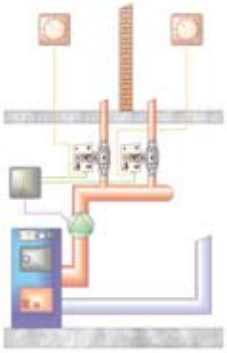


FEATURES

Dn	D	H	a
1/4”	Ø17	30	9,5
3/8”	Ø17	30	9,5

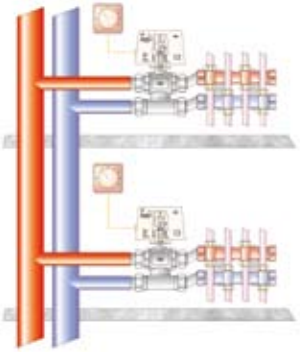
ZONE VALVES





SUBDIVISION OF A CENTRALIZED HEATING SYSTEM

2-ways and 4-ways valves can subdivide a centralized heating system into single users. In this way, each housing unit can regulate its own temperature and hours for the day/night cycle independently. The activation and deactivation of the circulator can be carried out automatically using the motorization contacts. Installing a time-of-use (TOU) meter, a proportional subdivision of the expenses for the used energy will be ensured.

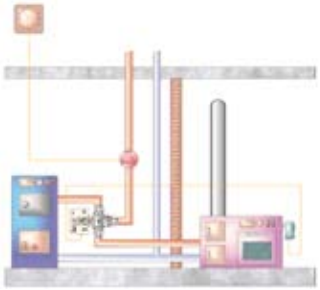


HEATING SYSTEM DEVIATION TO HOUSEHOLD HOT WATER TANK

The 3-ways valve can be used to direct hot water from the heating system to the household hot water tank automatically, through the use of a thermostat placed on the tank. Circulation is activated by a motorization contact.

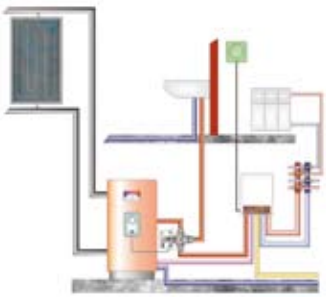
GAS/DIESEL BOILER DEVIATION TO WOOD/ THERMOKITCHEN BOILER

The 3-ways valve can be used to direct hot water from a traditional gas/diesel boiler heating system to a wood/thermokitchen boiler. A thermostat placed on the alternative fuel boiler, when reaching the required temperature, will conduct the zone valve towards the use thereof.



GAS HOUSEHOLD WATER BOILER DEVIATION TO SOLAR-PANEL HOUSEHOLD WATER BOILER

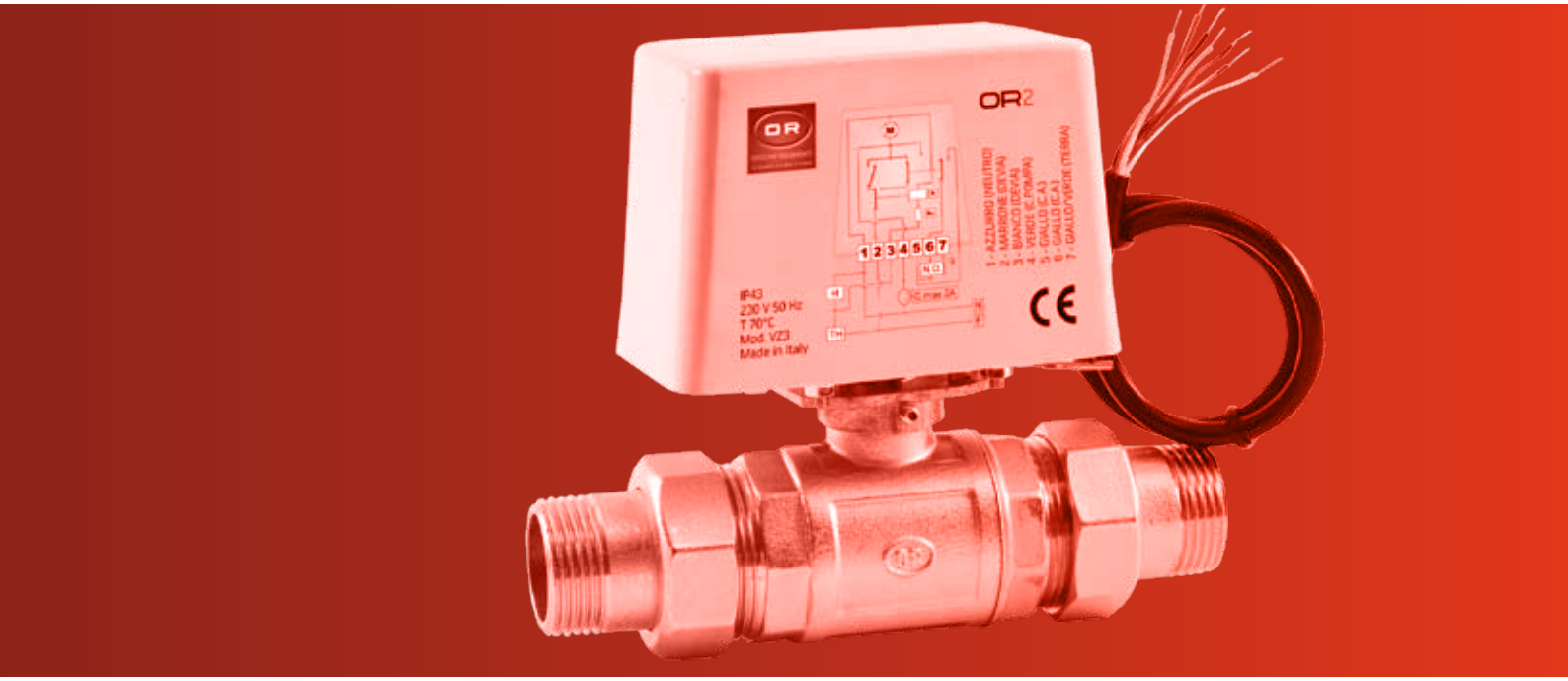
The 3-ways valve can be used to direct hot water from a traditional gas/diesel boiler heating system to a solar-panel fueled hot water boiler. Once the desired temperature is reached, the thermostat activates the motorization, permitting the use of hot water supplied by solar energy.



2094 • 1/2”- 1”

MOTORIZED ZONE VALVES TWO WAYS

CONNECTIONS: DISMANTLING FITTINGS MALE



HYDRAULIC FEATURES

The “2-WAYS” zone valve is normally used when subdividing centralized heating systems into zones.
Installed at the source of a single zone and correctly connected to a local room thermostat, this valve permits to interrupt the flow of heat-transfer fluid once the desired temperature is reached. Likewise in industrial plants (compatible with operating conditions), the valve is used where servomechanism interception is required. The activation of the circulator/pump (max. limit at 0.8 A) can be carried out using the contacts of the valve itself. The open contact (N.A.) allows control over any other device with a maximum rating of 2 A.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Differential pressure max.	16 bar
Temperature:	
Maximum allowable (TS)	0°C +110 °C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per	EN 8156

ELECTRICAL FEATURES

Supply voltage:	
Synchronous motor	
standard	220V 50Hz
upon request	24V AC
Protection class	IP 43
Input power	3.5 VA
Microswitch contact capacity	220V - 0.8A 24 V - 1.3 A
Operating temperature:	
Max. environment	+70 °C
Times:	
Opening time	30 sec.
Closure time	30 sec.
In compliance with European Directives:	89/336/EC and 73/23/EC (CE Marked)

DESIGN

Body and sleeves in nickel-plated brass EN 12165 - CW617N
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)
Ball in chrome-plated brass EN 12164 - CW614N
ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5sCrr)
Other components in brass EN 12164 - CW614N
Washer seats in pure PTFE (Teflon)
O-ring gaskets in EPDM RUBBER

PRODUCT CODES

2094.015 dismantling male 1/2”
2094.020 dismantling male 3/4”
2094.025 dismantling male 1”

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via Circonvallazione, 9
13018 Valduggia (VC), ITALY
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FAX +39 0163.47254
www.officinerigamonti.it
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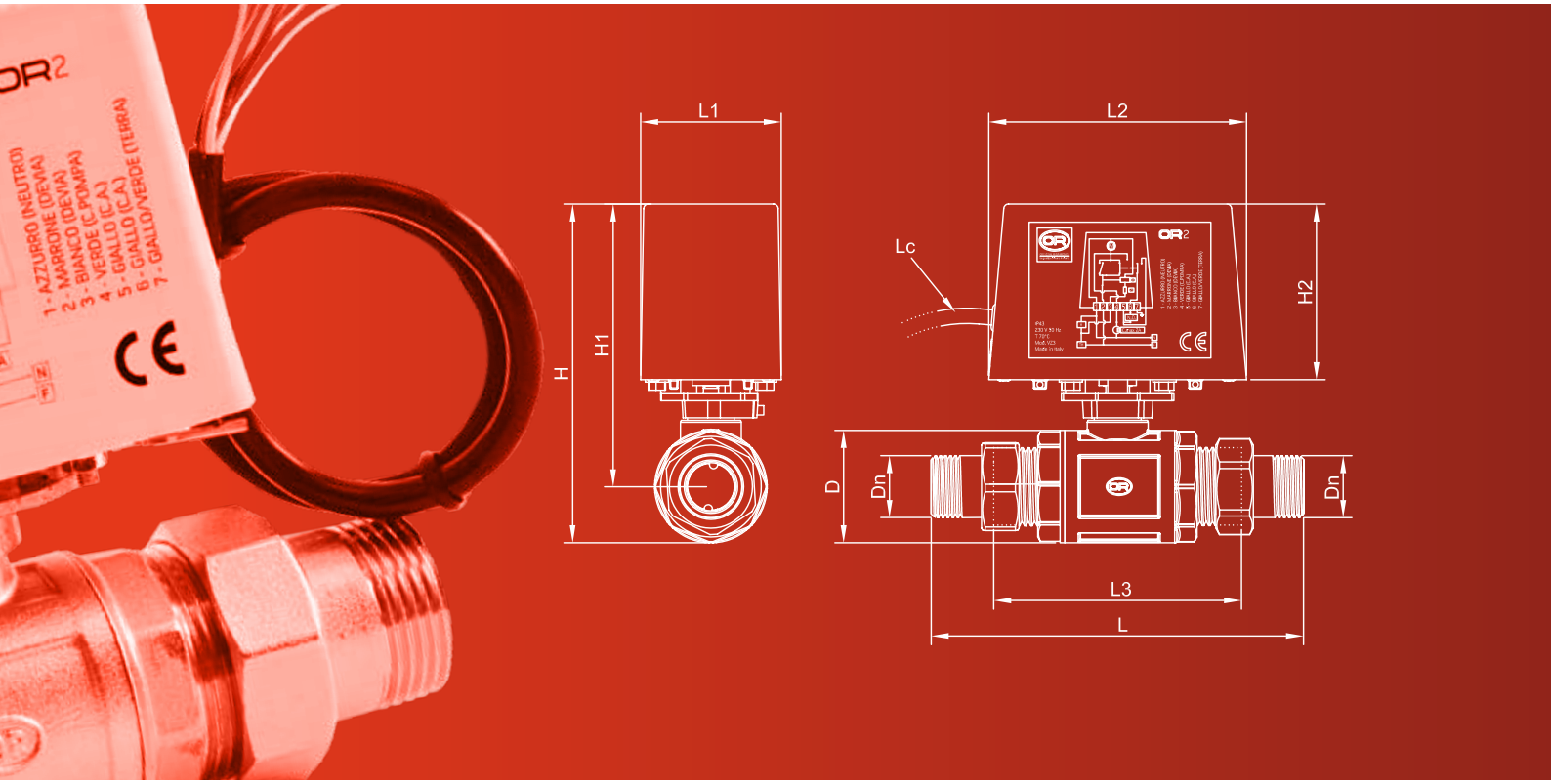
2094 • 1/2”- 1”

MOTORIZED ZONE VALVES TWO WAYS

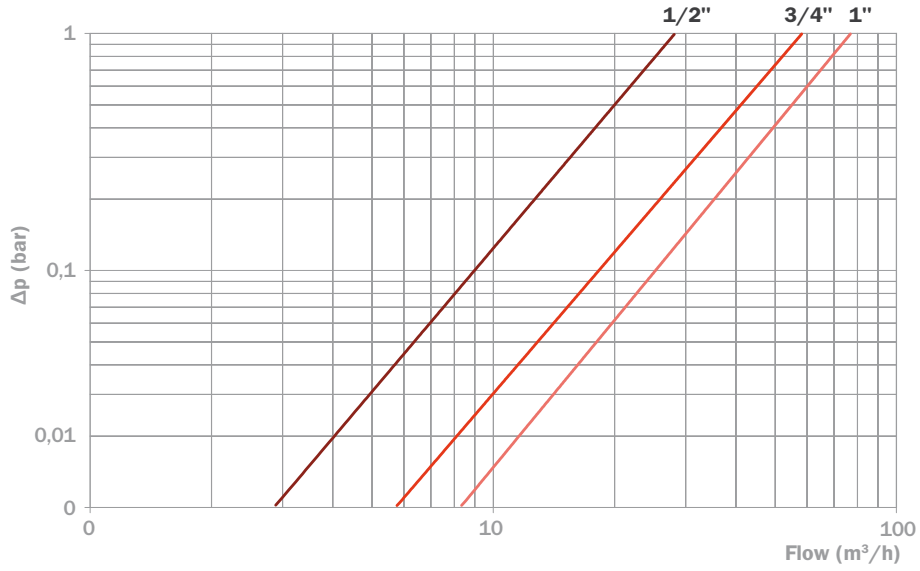
CONNECTIONS: DISMANTLING FITTINGS MALE



FEATURES

Dn	D	L	L1	L2	L3	Lc	H	H1	H2
1/2”	Ø48	153	60	110	98	~500	145	121	75
3/4”	Ø48	159	60	110	98	~500	145	121	75
1”	Ø48	168	60	110	98	~500	145	121	75

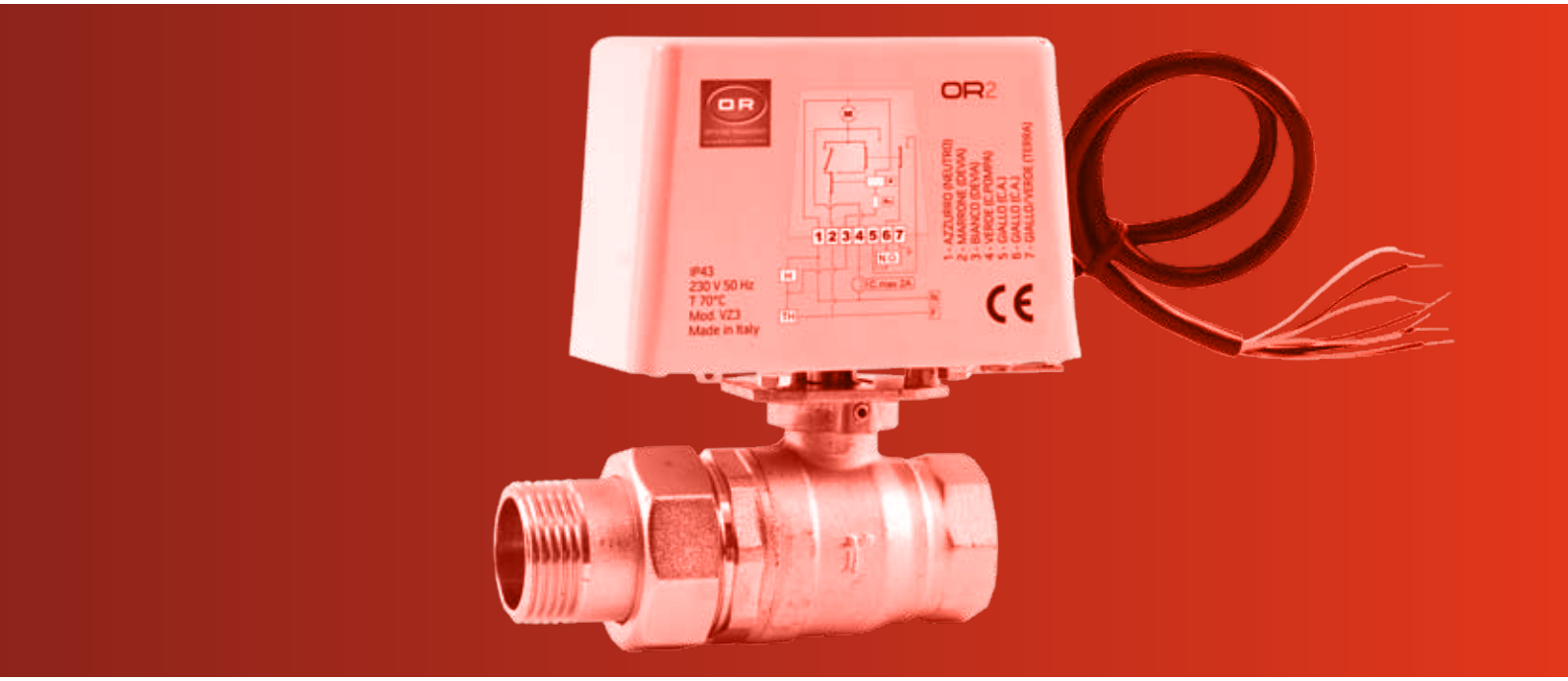
HEAD LOSS



2190 • 3/4”- 1”1/4

MOTORIZED ZONE VALVES TWO WAYS

CONNECTIONS: DISMANTLING FITTING MALE-FEMALE



HYDRAULIC FEATURES

The “2-WAYS” zone valve is normally used when subdividing centralized heating systems into zones.
Installed at the source of a single zone and correctly connected to a local room thermostat, this valve permits to interrupt the flow of heat-transfer fluid once the desired temperature is reached. Likewise in industrial plants (compatible with operating conditions), the valve is used where servomechanism interception is required. The activation of the circulator/pump (max. limit at 0.8 A) can be carried out using the contacts of the valve itself. The open contact (N.A.) allows control over any other device with a maximum rating of 2 A.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Differential pressure max.	16 bar
Temperature:	
Maximum allowable (TS)	0°C +110°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per	EN 8156

ELECTRICAL FEATURES

Supply voltage:	
Synchronous motor	
standard	220V 50Hz
upon request	24V AC
Protection class	IP 43
Input power	3.5 VA
Microswitch contact capacity	220V - 0.8A
	24 V - 1.3 A
Operating temperature:	
Max. environment	+70 °C
Times:	
Opening time	30 sec.
Closure time	30 sec.
In compliance with European Directives	89/336/EC and 73/23/EC (CE Marked)

DESIGN

Body and sleeves in nickel-plated brass EN 12165 - CW617N
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)
Ball in chrome-plated brass EN 12164 - CW614N
ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5sCrr)
Other components in brass EN 12164 - CW614N
Washer seats in pure PTFE (Teflon)
O-ring gaskets in EPDM RUBBER

PRODUCT CODES

2190.020 dismantling male /sleeve female 3/4”
2190.025 dismantling male /sleeve female 1”
2190.033 dismantling male /sleeve female 1”1/4

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via Circonvallazione, 9
13018 Valduggia (VC), ITALY
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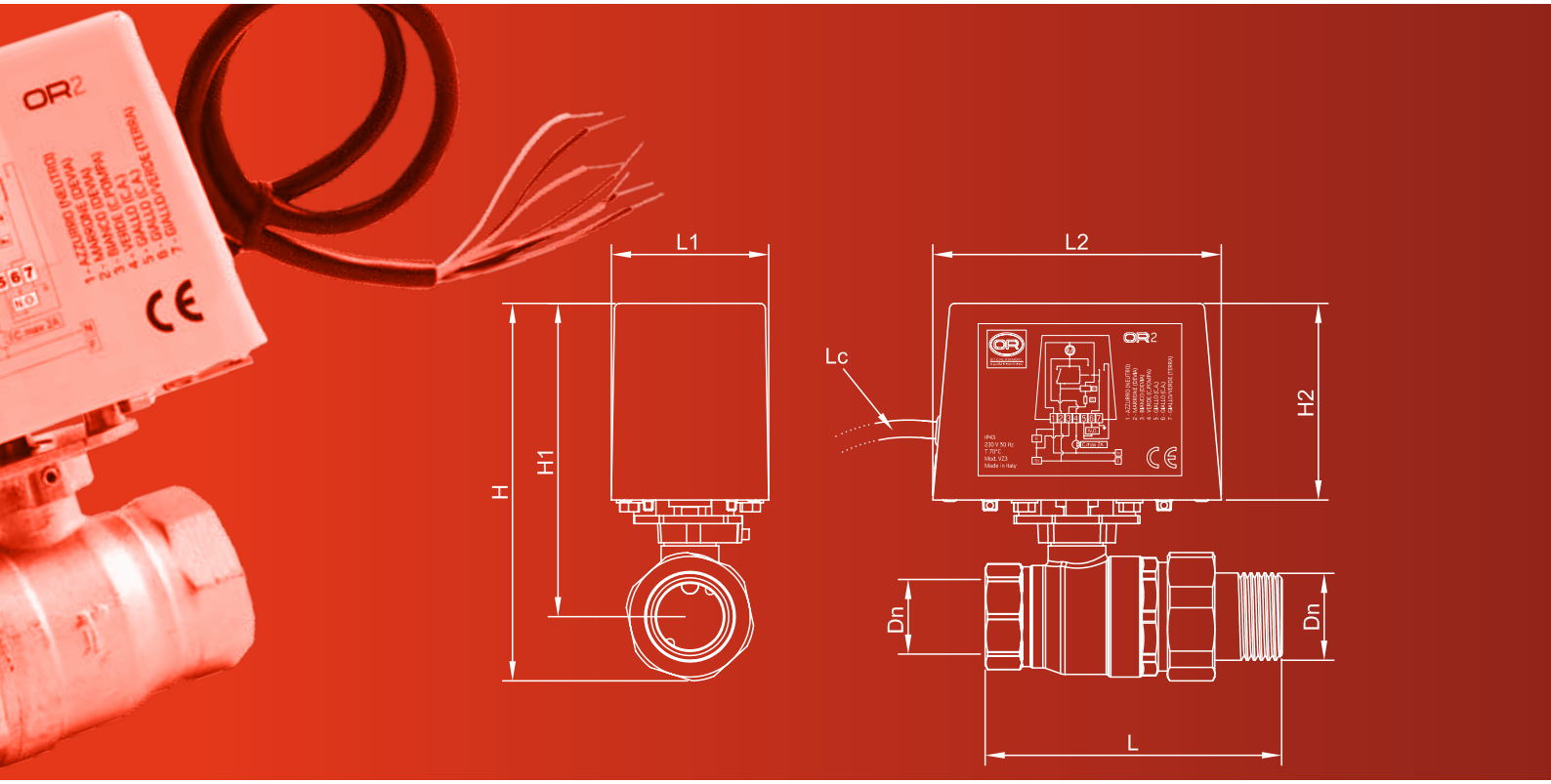
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

2190 • 3/4”- 1”1/4

MOTORIZED ZONE VALVES TWO WAYS

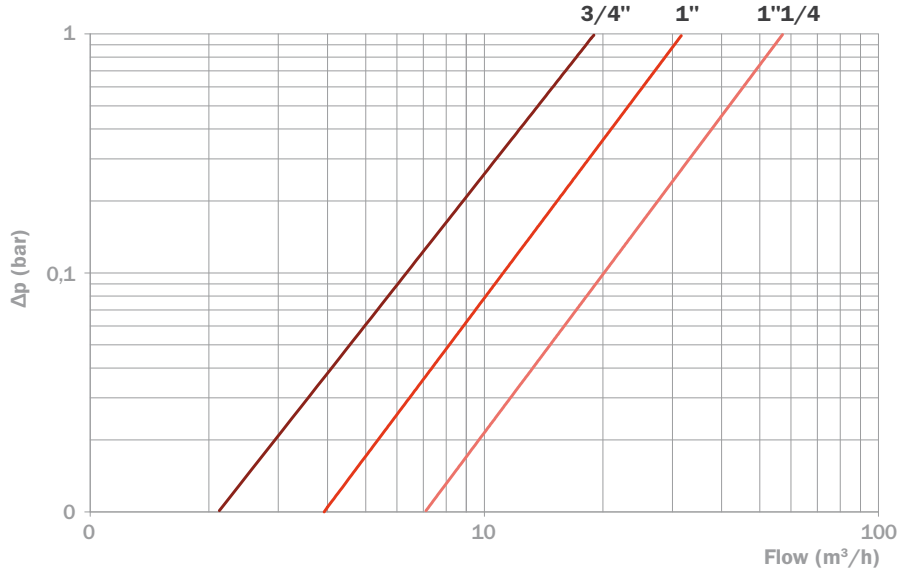
CONNECTIONS: DISMANTLING FITTING MALE-FEMALE



FEATURES

Dn	L	L1	L2	Lc	H	H1	H2
3/4”	96	60	110	~500	132	111,5	75
1”	113	60	110	~500	144	116,5	75
1”1/4	130	60	110	~500	152	123	75

HEAD LOSS



2095 • 1/2”- 1”

MOTORIZED ZONE VALVES THREE WAYS

CONNECTION: DISMANTLING FITTING MALE

HYDRAULIC FEATURES

The 3-WAYS zone valve is normally used in managing systems where a flow coming from a main conduit needs to be direct to two different destinations or vice versa. These valves are usually installed in integrated plants, where there is a need to activate one of the two energy sources differently. Likewise in industrial plants (compatible with operating conditions), the valve is used where servomechanism interception and deviation are required. The activation of the circulator/pump (max. limit at 0.8 A) can be carried out using the contacts of the valve itself. The open contact (N.A.) allows control over any other device with a maximum rating of 2 A.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Differential pressure max.	16 bar
Temperature:	
Maximum allowable (TS)	0°C +110°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	EN 8156

ELECTRICAL FEATURES

Supply voltage:	
Synchronous motor	
standard	220V 50Hz
upon request	24V AC
Protection class	IP 43
Input power	3.5 VA
Microswitch contact capacity	220V - 0.8A 24 V - 1.3 A
Operating temperature:	
Max. environment	+70 °C
Times:	
Deviation time right-to-left	60 sec.
In compliance with European Directives:	89/336/EC and 73/23/EC (CE Marked)

DESIGN

Body and sleeve in nickel-plated brass EN 12165 - CW617N
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)
Ball in chrome-plated brass EN 12164 - CW614N
ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5sCrr)
Other components in brass EN 12164 - CW614N
Washers seats in pure PTFE (Teflon)
Gaskets o-ring in EPDM RUBBER

PRODUCT CODES

2095.015 dismantling fitting male 1/2”
2095.020 dismantling fitting male 3/4”
2095.025 dismantling fitting male 1”

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via Circonvallazione, 9
13018 Valduggia (VC), ITALY
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FAX +39 0163.47254
www.officinerigamonti.it
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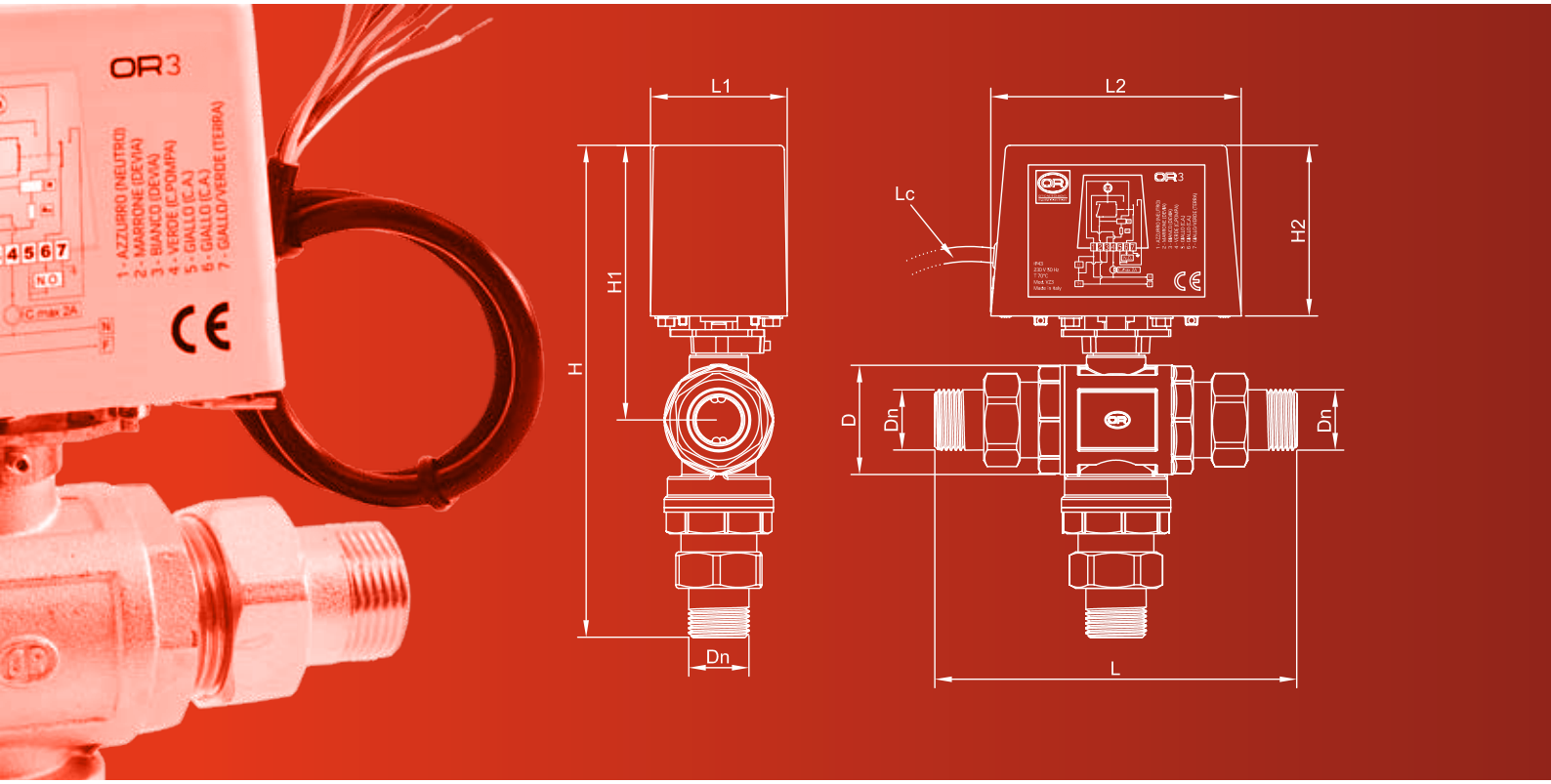
2095 • 1/2”- 1”

MOTORIZED ZONE VALVES THREE WAYS

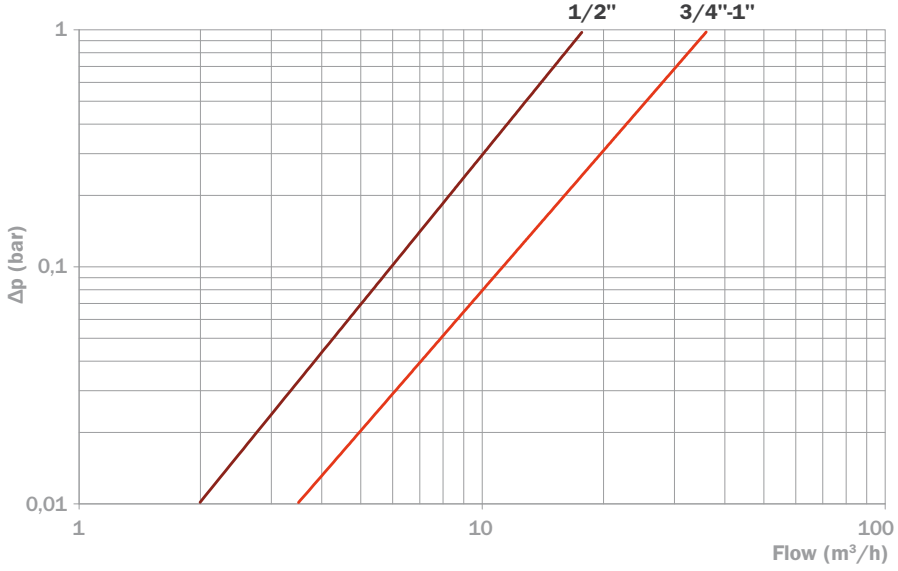
CONNECTION: DISMANTLING FITTING MALE



FEATURES

Dn	D	L	L1	L2	Lc	H	H1	H2
1/2”	Ø48	153	60	110	~500	213	121	75
3/4”	Ø48	159	60	110	~500	216	121	75
1”	Ø48	168	60	110	~500	220	121	75

HEAD LOSS



2098 • 1/2”- 1”

MOTORIZED ZONE VALVES FOUR WAYS

CONNECTIONS: DISMANTLING FITTING MALE

HYDRAULIC FEATURES

The “4-WAYS” zone valve is normally used when subdividing centralized heating systems into zones. Installed at the manifold of a single zone and correctly connected to a local room thermostat, this valve permits to interrupt the flow of heat-transfer fluid once the desired temperature is reached. The eccentric dismantling fittings allow for installations on any type of manifold with tracts between 37 and 85mm. When the valve is closed, the bypass position limits the rising of the circulator head, thus keeping the internal system’s flow practically constant. The activation of the circulator/pump (max. limit at 0.8 A) can be carried out using the contacts of the valve itself. The open contact (N.A.) allows control over any other device with a maximum rating of 2 A.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Differential pressure max.	16 bar
Temperature:	
Maximum allowable (TS)	0°C +110°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	EN 8156

ELECTRICAL FEATURES

Supply voltage:	
Synchronous motor	
standard	220V 50Hz
upon request	24V AC
Protection class	IP 43
Input power	3.5 VA
Microswitch contact capacity	220V - 0.8A
	24 V - 1.3 A
Operating temperature:	
Max. environment	+70 °C
Times:	
Opening time	30 sec.
Closure time	90 sec.
Conforms with European Directives:	89/336/EC and 73/23/EC (CE Marked)

DESIGN

Body, sleeves and TE by-pass in nickel-plated brass EN 12165 - CW617N
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)
Ball in chrome-plated brass EN 12164 - CW614N
ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5sCrr)
Other components in brass EN 12164 - CW614N
Washers seats in pure PTFE (Teflon)
Gaskets o-ring in EPDM RUBBER

PRODUCT CODES

2098.015 dismantling male 1/2”
2098.020 dismantling male 3/4”
2098.025 dismantling male 1”

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13018 Valduggia (VC), ITALY
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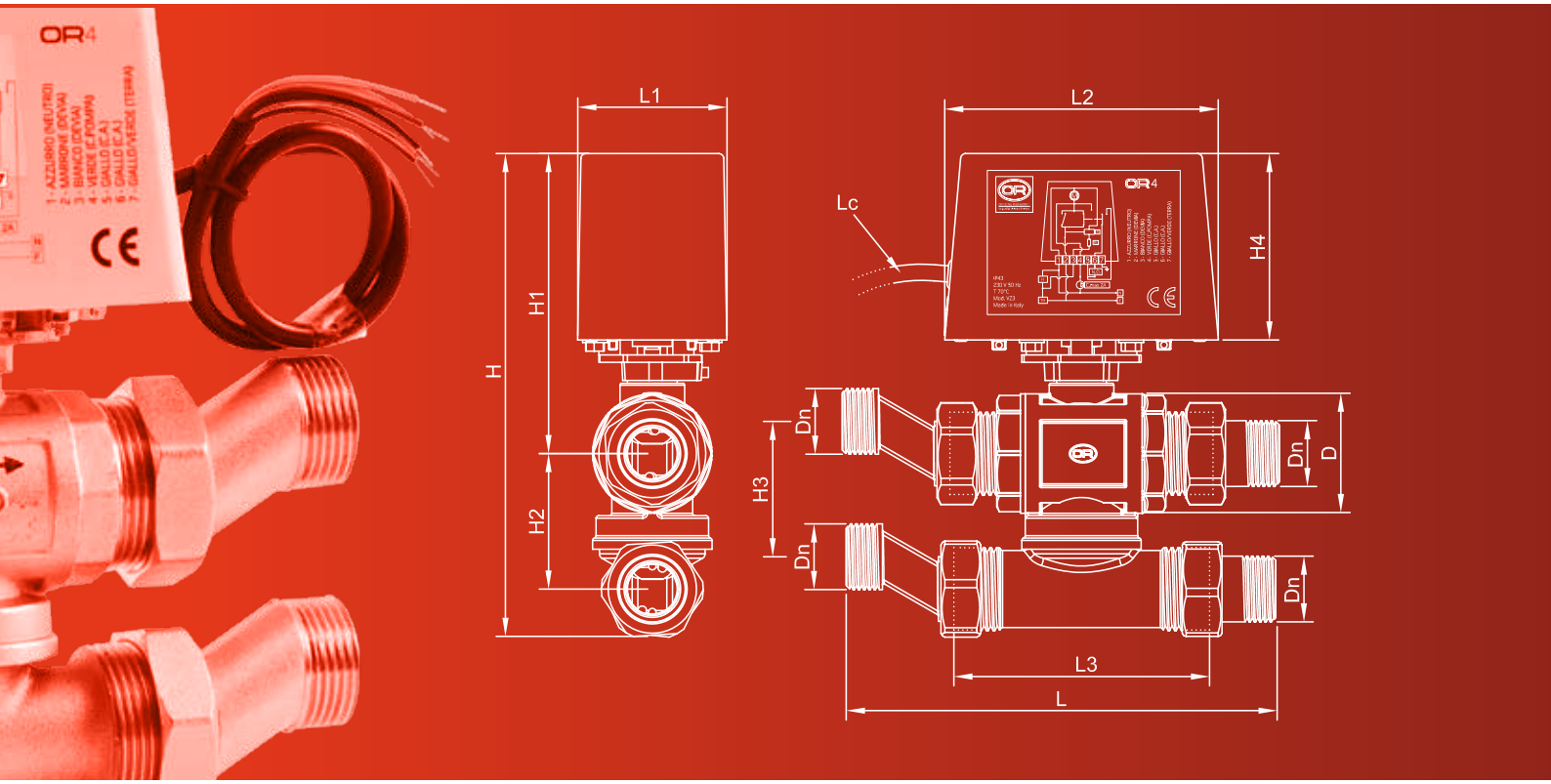
www.officinerigamonti.it
export@officinerigamonti.it

2098 • 1/2”- 1”

MOTORIZED ZONE VALVES FOUR WAYS

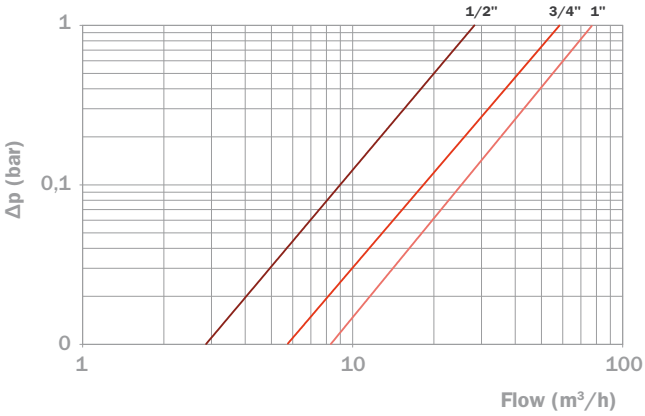
CONNECTIONS: DISMANTLING FITTING MALE



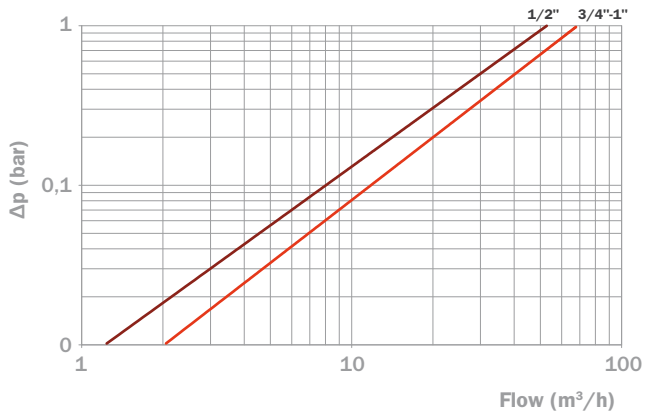
FEATURES

Dn	D	L	L1	L2	L3	Lc	H	H1	H2	H3 (min/max)	H4
1/2”	Ø 48	165	60	110	98	~ 500	191	121	54,5	54,5-78,5	75
3/4”	Ø 48	174	60	110	98	~ 500	195	121	54,5	54,5-80,5	75
1”	Ø 48	183	60	110	98	~ 500	204	121	59	59-90	75

HEAD LOSS OPENING



HEAD LOSS BY-PASS



2097

MOTORIZATIONS FOR ZONE VALVES TWO, THREE OR FOUR WAYS

ELECTRICAL FEATURES

Supply voltage:	
Synchronous motor	
standard	220V 50Hz
upon request	24V AC
Protection class	IP 43
Input power	3.5 VA
Microswitch contact capacity	220V - 0.8A
	24 V - 1.3 A
Operating temperature:	
Max. environment	+70 °C
Times:	
2 WAY	
Opening time	30 sec.
Closure time	30 sec.
3 WAY	
Deviation time right-to-left	60 sec.
4 WAY	
Opening time	30 sec.
Closure time	90 sec.
In compliance with European Directives:	89/336/EC and 73/23/EC (CE Marked)

DESIGN

Body, sleeves and TE by-pass in nickel-plated brass EN 12165 - CW617N
ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)
Ball in chrome-plated brass EN 12164 - CW614N
ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5sCrr)
Other components in brass EN 12164 - CW614N
Washers seats in pure PTFE (Teflon)
Gaskets o-ring in EPDM RUBBER

PRODUCT CODES

Product codes 220V	Product codes 24V AC
2097.002 for 2-ways valves 220V	2097.102 for 2-ways valves 24V AC
2097.003 for 3-ways valves 220V	2097.103 for 3-ways valves 24V AC
2097.004 for 4-ways valves 220V	2097.104 for 4-ways valves 24V AC

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via Circonvallazione, 9
13018 Valduggia (VC), ITALY
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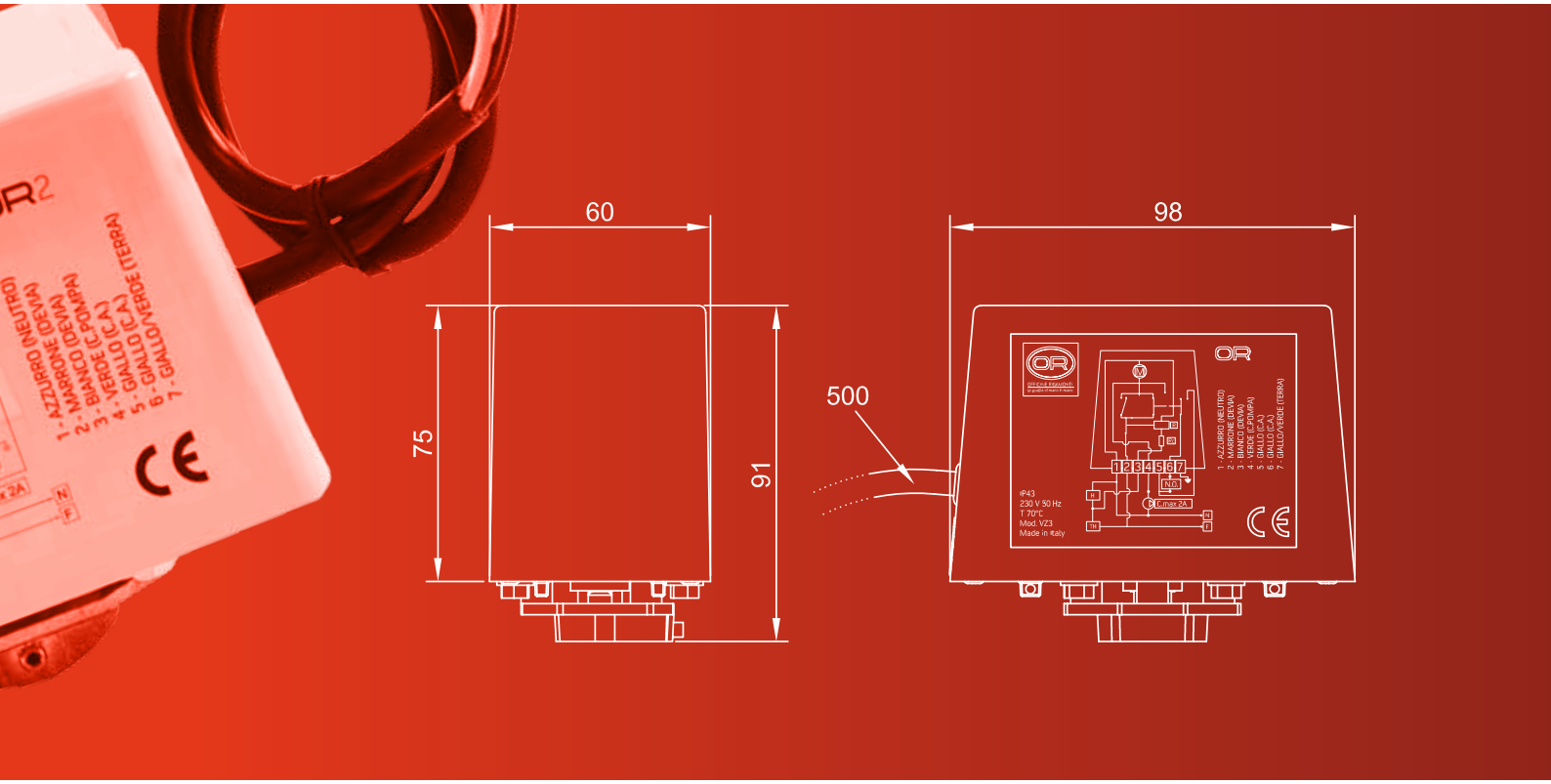
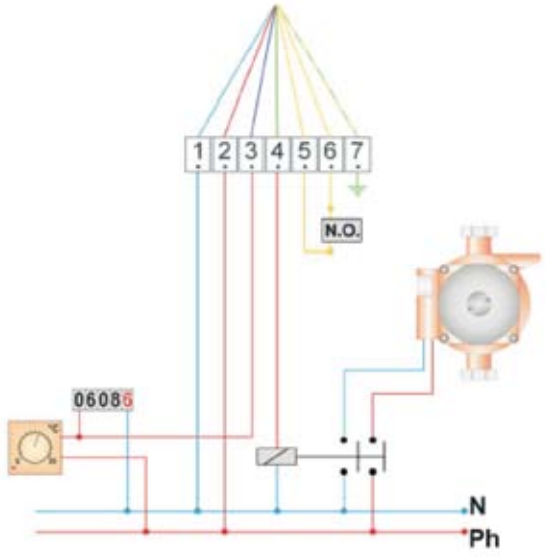
www.officinerigamonti.it
export@officinerigamonti.it

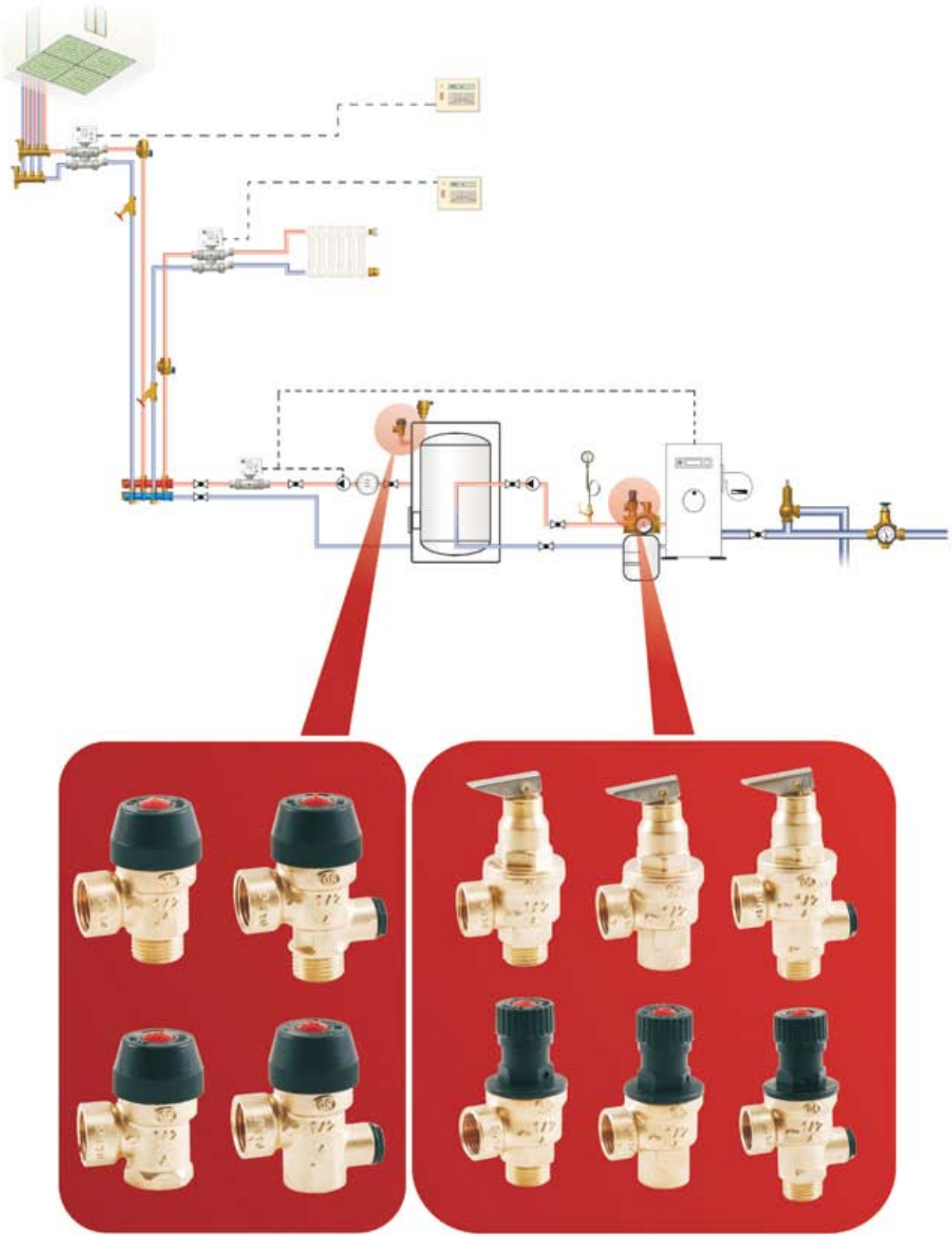
MOTORIZATIONS FOR ZONE VALVES TWO, THREE OR FOUR WAYS





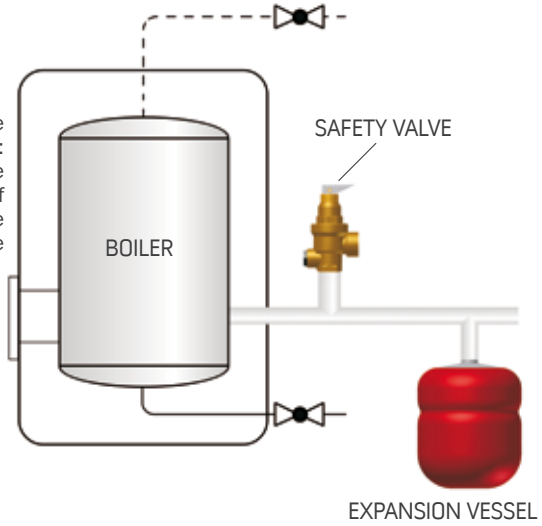
1 = Motor neutral
2 = Motor phase
3 = Contact thermostat opening/deviation
4 = Contact activation tele-commanded circulator/pump(max. 0.8 A)
5-6 = Lead connection open contact (max. 2 A)
7 = Ground

PRESET SECURITY VALVES

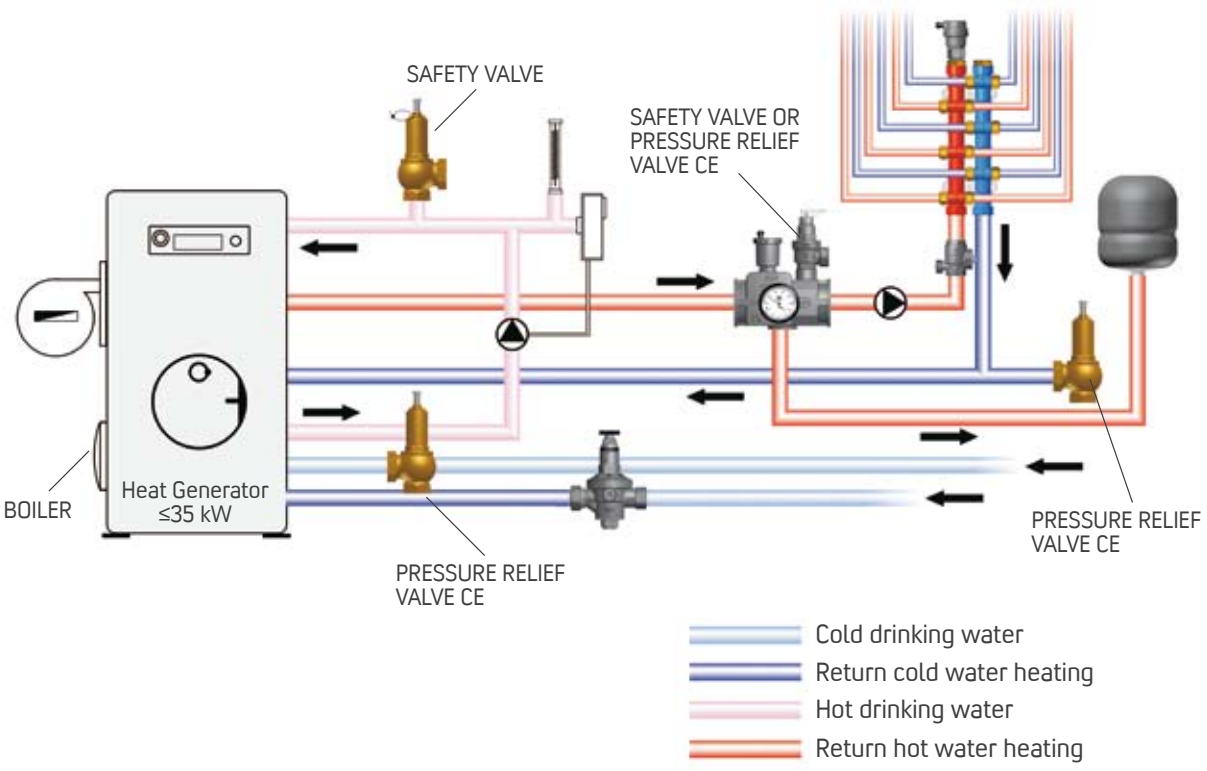


PRESET SECURITY VALVES

Ordinary pressure safety valves equipped with a manual discharge are factory set and sealed, and are used in protecting domestic hot water boilers: designed to automatically open, releasing water and/or steam in case the working pressure reaches the maximum allowable working pressure (PS) of the boiler. The OR pressure safety valves automatically restore when the internal pressure of the heat generator returns underneath the set pressure P_{nr} of the valve.



These valves may also be used in heating plants operating with heat generators with a thermal power potential below 35 kW, and in general water supply plants.
The manual discharging function by lever or handwheel is useful not only for purging or draining a system, releasing heat-transfer fluid through the valve, but also for ensuring the correct operation of the valve itself. Further, the outgoing area of the valve can be conveyed in a collector connected to the drain pipe.



The safety valves meet the requirements set out in EU Directive 97/23/EC (PED) for pressure equipment (subject to local requirements and legislation).
The valves are therefore classified as Category IV and bear CE 1115.

0490 • 1/2”- 1”

SECURITY VALVES WITH PRESET PRESSURE WITH DIAPHRAGM AND LEVER ACTIVATION CE BRAND 1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: MALE-FEMALE

HYDRAULIC FEATURES

The security valve with manual lever is an automatic safety valve designed to open in the event the internal pressure of the system reaches a predetermined maximum pressure (Preset Nominal Pressure Pnr) allowing the water to be released through it. The security valve resets automatically when the internal pressure of the system returns below the predetermined maximum pressure. All the moving parts of this safety valve, including the setting spring, are isolated from heat-transfer fluids by an industrial rubber diaphragm. The security valve with manual lever satisfies the essential safety requirements stipulated in the EU Pressure Equipment Directive (PED) 97/23/EC.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Preset nominal pressure (P_{nr})	1, 5-2, 5-3-3, 5-4-5-6-7-8 bar (factory set and sealed)
Minimum seal (Pc)	- 5% of the P_{nr}
Overpressure (Po)	10% of the P_{nr}
Reset value (Pf)	- 20% of the P_{nr}
Temperature:	
Maximum temperature	115°C (water or air - Class 1 Liquids)
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connections	Threads according to ISO 228/1
Requirements and tests as per:	EN 1489

PED TECHNICAL REQUIREMENTS

Maximum allowable temperature (TS)	115°C (water or air - Class 1 Liquids)
Maximum allowable working pressure (PS)	10 bar
Conformity assessment procedures	modules B and D
PED risk category	IV (CE 1115)

Flow Coefficient (K) = 0.05 - Classified as an “Ordinary Valve” by the ISPESL (Italian Institute for Occupational Safety Prevention)

DESIGN

Body and head valve in brass EN 12165 - CW617N
Other components in brass EN 12164 - CW614N
Single cut STAINLESS STEEL Lever AISI 304
Diaphragm in 70 Sh preshaped EPDM rubber
Obturator gasket in NBR elastomer with PTFE anti-stick and anti-incrustation
Sm GALVANIZED STEEL spring - EN 10270-1

PRODUCT CODES

Product codes 1/2“			Product codes 3/4“			Product codes 1“		
0490.115	Setting	1,5 bar M/F	0490.215	Setting	1,5 bar M/F	0490.315	Setting	1,5 bar M/F
0490.120	Setting	2 bar M/F	0490.220	Setting	2 bar M/F	0490.320	Setting	2 bar M/F
0490.125	Setting	2,5 bar M/F	0490.225	Setting	2,5 bar M/F	0490.325	Setting	2,5 bar M/F
0490.130	Setting	3 bar M/F	0490.230	Setting	3 bar M/F	0490.330	Setting	3 bar M/F
0490.135	Setting	3,5 bar M/F	0490.235	Setting	3,5 bar M/F	0490.335	Setting	3,5 bar M/F
0490.140	Setting	4 bar M/F	0490.240	Setting	4 bar M/F	0490.340	Setting	4 bar M/F
0490.150	Setting	5 bar M/F	0490.250	Setting	5 bar M/F	0490.350	Setting	5 bar M/F
0490.160	Setting	6 bar M/F	0490.260	Setting	6 bar M/F	0490.360	Setting	6 bar M/F
0490.170	Setting	7 bar M/F	0490.270	Setting	7 bar M/F	0490.370	Setting	7 bar M/F
0490.180	Setting	8 bar M/F	0490.280	Setting	8 bar M/F	0490.380	Setting	8 bar M/F

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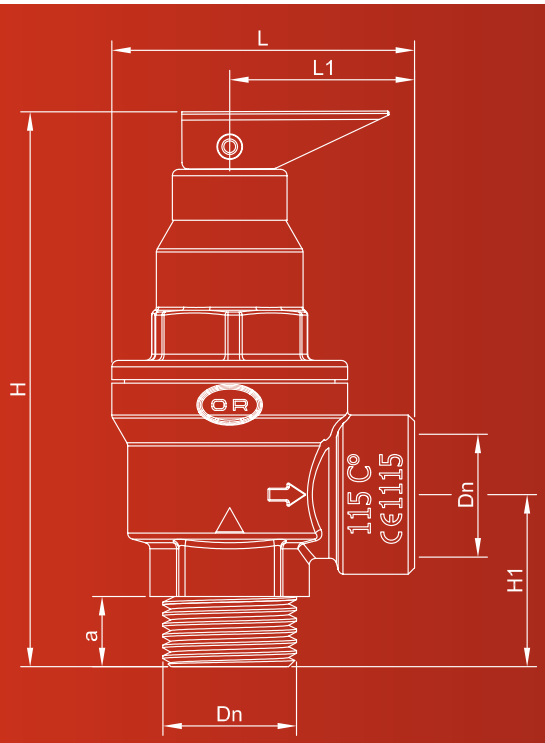
La qualità di mano in mano.

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0490 • 1/2”- 1”

SECURITY VALVES WITH PRESET PRESSURE WITH DIAPHRAGM AND LEVER ACTIVATION CE BRAND 1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: MALE-FEMALE



FEATURES

Dn	L	L1	H	H1	a
1/2”	47,5	29	87	27	11
3/4”	57	33,5	96,5	27,5	12
1”	74	44	138,5	39	14

SETTING

Valve 1/2”

	Discharging flow		
P tar	H_2O (l/h)	Steam (kg/h)	Gas (kg/h)
1,5	633,5	8,9	13,3
2	694,0	10,7	16,0
2,5	749,6	12,4	18,7
3	801,4	14,1	21,3
3,5	850	15,8	24
4	896	17,6	26,7
5	981,5	21	32
6	1060,1	24,4	37,3
7	1133,3	27,7	42,7
8	1202	31,1	48

Valve 3/4”

	Discharging flow		
P tar	H_2O (l/h)	Steam (kg/h)	Gas (kg/h)
1,5	1263,9	17,8	26,6
2	1384,4	21,4	31,9
2,5	1495,4	24,8	37,2
3	1598,7	28,2	42,5
3,5	1695,6	31,6	47,9
4	1787,4	35	53,2
5	1957,9	41,8	63,8
6	2114,8	48,6	74,5
7	2260,8	55,3	85,1
8	2398,8	62	95,7

Valve 1”

	Discharging flow		
P tar	H_2O (l/h)	Steam (kg/h)	Gas (kg/h)
1,5	1820,1	25,7	38,3
2	1993,8	30,8	46,0
2,5	2153,6	35,7	53,6
3	2302,3	40,6	61,3
3,5	2441,9	45,5	68,9
4	2574	50,4	76,6
5	2819,7	60,2	91,9
6	3045,6	70	107,2
7	3255,9	79,7	122,5
8	3453,4	89,3	137,9

0495 • 1/2”- 1”

SECURITY VALVES WITH PRESET PRESSURE WITH DIAPHRAGM AND LEVER ACTIVATION CE-1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: FEMALE-FEMALE

HYDRAULIC FEATURES

This security valve with manual lever is an automatic safety valve designed to open in the event the internal pressure of the system reaches a predetermined maximum pressure (Preset Nominal Pressure Pnr) allowing the water to be released through it. The security valve resets automatically when the internal pressure of the system returns below the predetermined maximum pressure. All the moving parts of this safety valve, including the regulating spring, are isolated from heat-transfer fluids by an industrial rubber diaphragm. The security valve with manual lever satisfies the essential safety requirements stipulated in the EU Pressure Equipment Directive (PED) 97/23/EC.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Preset nominal pressure (P_{nr})	1, 5-2, 5-3-3, 5-4-5-6-7-8 bar (factory set and sealed)
Minimum accumulation pressure (P_c)	- 5 % of the P_{nr}
Overpressure (P_o)	10% of the P_{nr}
Reset value (P_r)	- 20 % of the P_{nr}
Temperature:	
Maximum temperature	115°C (water or air - Class 1 Liquids)
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connections	Threads according to ISO 228/1
Requirements and tests as per	EN 1489

PED TECHNICAL REQUIREMENTS

Maximum allowable temperature (TS)	115°C (water or air - Class 1 Liquids)
Maximum allowable working pressure (PS)	10 bar
Conformity assessment procedures	modules B and D
PED risk category	IV (CE 1115)

Flow Coefficient (K) = 0.05 - Classified as an “Ordinary Valve” by the ISPESL (Italian Institute for Occupational Safety Prevention)

DESIGN

Body and head valve in Brass - EN 12165 - CW617N
Other components in brass EN 12164 - CW614N
Single cut STAINLESS STEEL Lever AISI 304
Diaphragm in 70 Sh preshaped EPDM rubber
Obturator gasket in NBR elastomer with PTFE anti-stick and anti-incrustation
Sm GALVANIZED STEEL spring - EN 10270-1

PRODUCT CODES

Product codes 1/2”	Product codes 3/4”	Product codes 1”
0495.115 Setting 1,5 bar F/F	0495.215 Setting 1,5 bar F/F	0495.315 Setting 1,5 bar F/F
0495.125 Setting 2,5 bar F/F	0495.225 Setting 2,5 bar F/F	0495.325 Setting 2,5 bar F/F
0495.130 Setting 3 bar F/F	0495.230 Setting 3 bar F/F	0495.330 Setting 3 bar F/F
0495.135 Setting 3,5 bar F/F	0495.235 Setting 3,5 bar F/F	0495.335 Setting 3,5 bar F/F
0495.140 Setting 4 bar F/F	0495.240 Setting 4 bar F/F	0495.340 Setting 4 bar F/F
0495.150 Setting 5 bar F/F	0495.250 Setting 5 bar F/F	0495.350 Setting 5 bar F/F
0495.160 Setting 6 bar F/F	0495.260 Setting 6 bar F/F	0495.360 Setting 6 bar F/F
0495.170 Setting 7 bar F/F	0495.270 Setting 7 bar F/F	0495.370 Setting 7 bar F/F
0495.180 Setting 8 bar F/F	0495.280 Setting 8 bar F/F	0495.380 Setting 8 bar F/F

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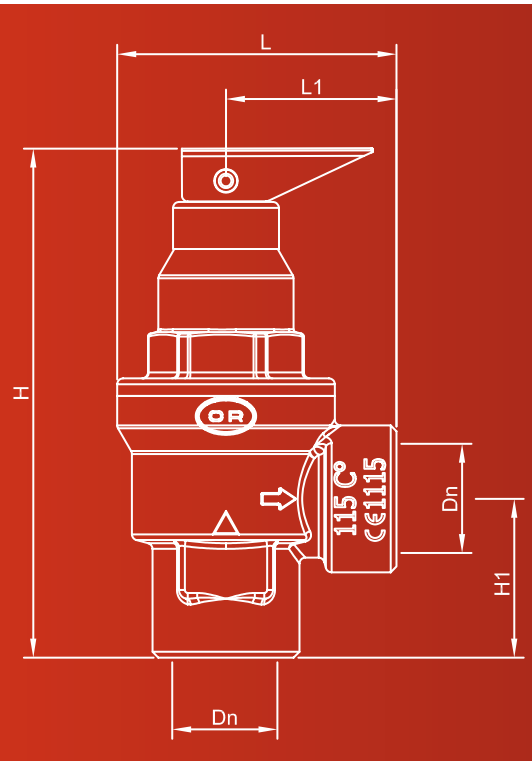
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0495 • 1/2”- 1”

SECURITY VALVES WITH PRESET PRESSURE WITH DIAPHRAGM AND LEVER ACTIVATION CE-1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: FEMALE-FEMALE



FEATURES

Dn	L	L1	H	H1
1/2”	47,5	29	87	27
3/4”	57	33,5	96,5	27,5
1”	74	44	138,5	39

SETTING

Valve 1/2”

P tar	Discharging flow H_2O (l/h)	Steam (kg/h)	Gas (kg/h)
1,5	633,5	8,9	13,3
2,5	749,6	12,4	18,7
3	801,4	14,1	21,3
3,5	850	15,8	24
4	896	17,6	26,7
5	981,5	21	32
6	1060,1	24,4	37,3
7	1133,3	27,7	42,7
8	1202	31,1	48

Valve 3/4”

P tar	Discharging flow H_2O (l/h)	Steam (kg/h)	Gas (kg/h)
1,5	1263,9	17,8	26,6
2,5	1495,4	24,8	37,2
3	1598,7	28,2	42,5
3,5	1695,6	31,6	47,9
4	1787,4	35	53,2
5	1957,9	41,8	63,8
6	2114,8	48,6	74,5
7	2260,8	55,3	85,1
8	2398,8	62	95,7

Valve 1”

P tar	Discharging flow H_2O (l/h)	Steam (kg/h)	Gas (kg/h)
1,5	1820,1	25,7	38,3
2,5	2153,6	35,7	53,6
3	2302,3	40,6	61,3
3,5	2441,9	45,5	68,9
4	2574	50,4	76,6
5	2819,7	60,2	91,9
6	3045,6	70	107,2
7	3255,9	79,7	122,5
8	3453,4	89,3	137,9

0511 • 1/2”

SECURITY VALVES WITH GAUGE CONNECTION PRESET PRESSURE WITH DIAPHRAGM AND LEVER ACTIVATION CE -1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: MALE-FEMALE

HYDRAULIC FEATURES

This security valve with manual lever is an automatic safety valve designed to open in the event the internal pressure of the system, which can be monitored by a gauge, if installed, reaches a predetermined maximum pressure (Preset Nominal Pressure Pnr) allowing the water to be released through it. The security valve resets automatically when the internal pressure of the system returns below the predetermined maximum pressure. All the moving parts of this safety valve, including the regulating spring, are isolated from heat-transfer fluids by an industrial rubber diaphragm. The security valve with manual lever satisfies the essential safety requirements stipulated in the EU Pressure Equipment Directive (PED) 97/23/EC.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Preset nominal pressure (P_{nr})	1, 5-2, 5-3-3, 5-4-5-6-7-8 bar (factory set and sealed)
Minimum accumulation pressure (P_c)	- 5 % of the P_{nr}
Overpressure (P_o)	10% of the P_{nr}
Reset value (P_r)	- 20 % of the P_{nr}
Temperature:	
Maximum temperature	115°C (water or air - Class 1 Liquids)
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connections	Threads according to ISO 228/1
Gauge connection	Threads according to EN 10226- Rp1/4” (ex ISO 7/1)
Requirements and tests as per	EN 1489

PED TECHNICAL REQUIREMENTS

Maximum allowable temperature (TS)	115°C (water or air - Class 1 Liquids)
Maximum allowable working pressure (PS)	10 bar
Conformity assessment procedures	modules B and D
PED risk category	IV (CE 1115)

Flow Coefficient (K) = 0.05 - Classified as an “Ordinary Valve” by the ISPESL (Italian Institute for Occupational Safety Prevention)

DESIGN

Body and Head Valve in Brass - EN 12165 - CW617N
Other components in brass EN 12164 - CW614N
Single cut STAINLESS STEEL Lever AISI 304
Diaphragm in 70 Sh preshaped EPDM rubber
Obturator gasket in NBR elastomer with PTFE anti-stick and anti-incrustation
Sm GALVANIZED STEEL spring - EN 10270-1

PRODUCT CODES

0511.115 Setting 1,5 bar 1/2” M/F
0511.125 Setting 2,5 bar 1/2” M/F
0511.130 Setting 3 bar 1/2” M/F
0511.135 Setting 3,5 bar 1/2” M/F
0511.140 Setting 4 bar 1/2” M/F
0511.150 Setting 5 bar 1/2” M/F
0511.160 Setting 6 bar 1/2” M/F
0511.170 Setting 7 bar 1/2” M/F
0511.180 Setting 8 bar 1/2” M/F

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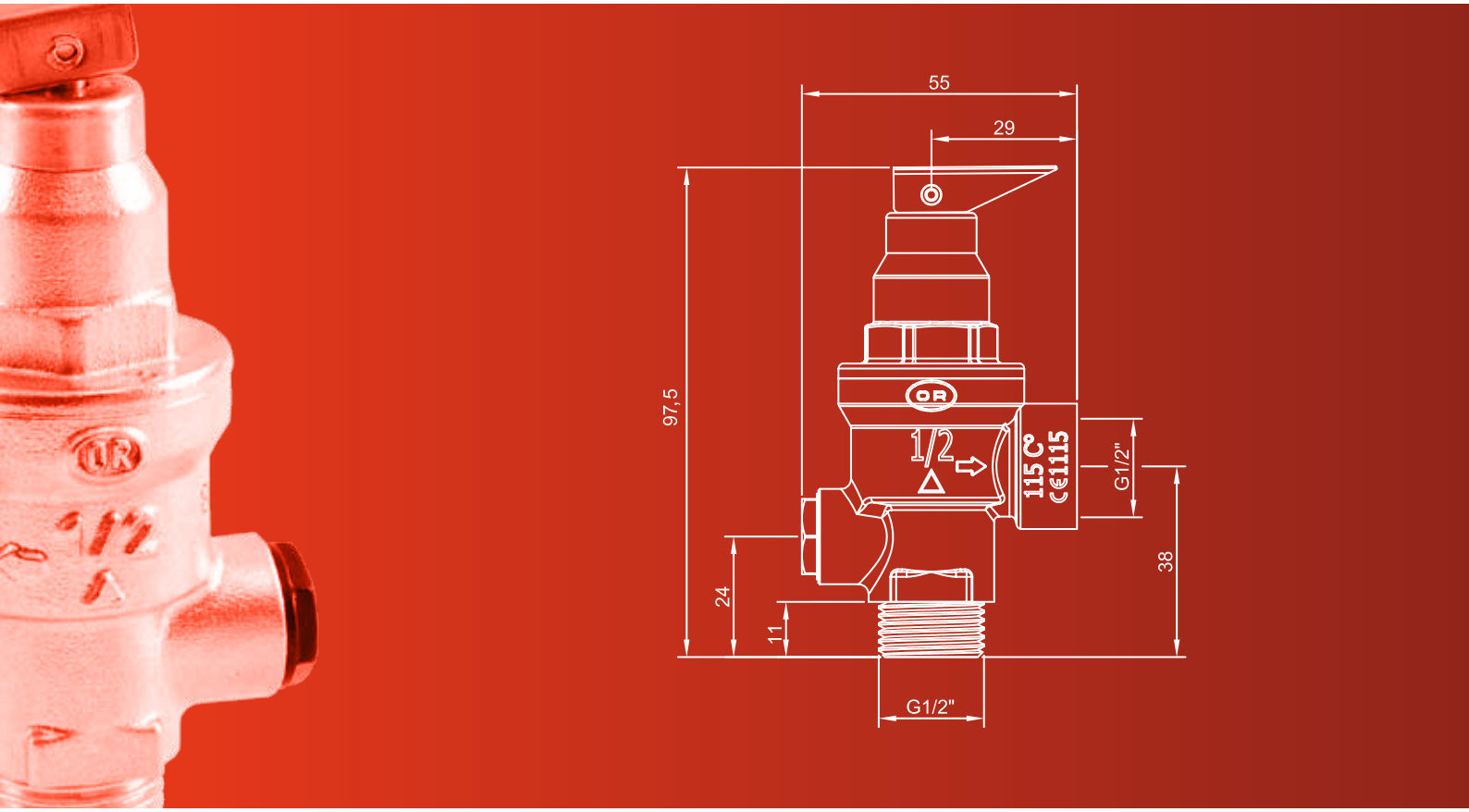
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0511 • 1/2”

SECURITY VALVES WITH GAUGE CONNECTION PRESET PRESSURE WITH DIAPHRAGM AND LEVER ACTIVATION CE -1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: MALE-FEMALE



SETTING

P tar	Discharging flow 1/2 “		
	H_2O (l/h)	Steam (kg/h)	Gas (kg/h)
1,5	633,5	8,9	13,3
2,5	749,6	12,4	18,7
3	801,4	14,1	21,3
3,5	850	15,8	24
4	896	17,6	26,7
5	981,5	21	32
6	1060,1	24,4	37,3
7	1133,3	27,7	42,7
8	1202	31,1	48

0493 • 1/2”- 3/4”

SECURITY VALVES WITH PRESET PRESSURE WITH DIAPHRAGM AND HANDWHEEL ACTIVATION CE -1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: MALE-FEMALE

HYDRAULIC FEATURES

This security valve with manual handwheel is an automatic safety valve designed to open in the event the internal pressure of the system reaches a predetermined maximum pressure (Preset Nominal Pressure Pnr) allowing the water to be released through it. The security valve resets automatically when the internal pressure of the system returns below the predetermined maximum pressure. All the moving parts of this safety valve, including the regulating spring, are isolated from heat-transfer fluids by an industrial rubber diaphragm. The security valve with manual handwheel satisfies the essential safety requirements stipulated in the EU Pressure Equipment Directive (PED) 97/23/EC.

TECHNICAL FEATURES

Pressures:	
Maximum allowable working pressure (PN)	10 bar
Preset nominal pressure (P_{nr})	1, 5-2, 5-3-3, 5-4-5-6-7 bar (factory set and sealed)
Minimum accumulation pressure (P_c)	- 5% of the P_{nr}
Overpressure (P_o)	10% of the P_{nr}
Reset value (P_r)	- 20% of the P_{nr}
Temperature:	
Maximum temperature	115°C (water or air - Class 1 Liquids)
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connections	Threads according to ISO 228/1
Requirements and tests as per	EN 1489

PED TECHNICAL REQUIREMENTS

Maximum allowable temperature (TS)	115°C (water or air - Class 1 Liquids)
Maximum allowable working pressure (PS)	10 bar
Conformity assessment procedures	modules B and D
PED risk category	IV (CE 1115)

Flow Coefficient (K) = 0.05 - Classified as an “Ordinary Valve” by the ISPESL (Italian Institute for Occupational Safety Prevention)

DESIGN

Brass Body EN 12165 - CW617N
Head valve in PA66-GF30 polyamide (nylon 66) reinforced with glass fiber
Other components in brass EN 12164 - CW617N
Handwheel in PA66 polyamide (nylon)
Diaphragm in 70 Sh preshaped EPDM rubber
Obturator gasket in NBR elastomer with PTFE anti-stick and anti-incrustation
Sm GALVANIZED STEEL spring - EN 10270-1

PRODUCT CODES

Product codes 1/2“			Product codes 3/4“		
0493.114	Setting	1,5 bar M/F	0493.214	Setting	1,5 bar M/F
0493.125	Setting	2,5 bar M/F	0493.225	Setting	2,5 bar M/F
0493.130	Setting	3 bar M/F	0493.230	Setting	3 bar M/F
0490.135	Setting	3,5 bar M/F	0490.235	Setting	3,5 bar M/F
0493.140	Setting	4 bar M/F	0493.240	Setting	4 bar M/F
0493.150	Setting	5 bar M/F	0493.250	Setting	5 bar M/F
0493.160	Setting	6 bar M/F	0493.260	Setting	6 bar M/F
0493.170	Setting	7 bar M/F	0493.270	Setting	7 bar M/F

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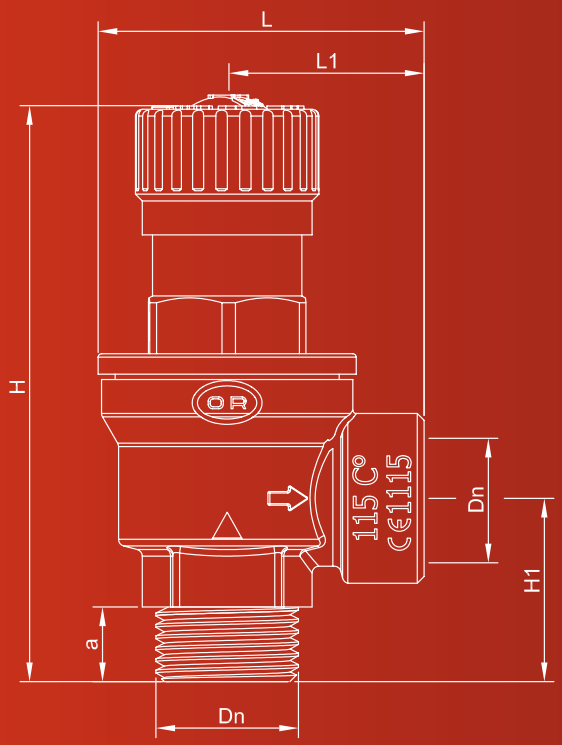
0493 • 1/2”- 3/4”

SECURITY VALVES WITH PRESET PRESSURE WITH DIAPHRAGM AND HANDWHEEL ACTIVATION CE -1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: MALE-FEMALE



FEATURES

Dn	L	L1	H	H1	a
1/2”	48	29	84,5	27	11
3/4”	48	29	94,7	34	13

SETTING

Discharging flow 1/2 “ e 3/4”

P tar	H_2O (l/h)	Steam (kg/h)	Gas (kg/h)
1,5	632,1	9,1	13,3
2,5	748,7	12,5	18,7
3	801,4	14,2	21,3
3,5	850,7	15,9	24,0
4	896,0	17,7	26,7
5	981,5	21,1	32,0
6	1060,1	24,5	37,3
7	1133,3	27,9	42,7

0496 • 1/2”- 3/4”

SECURITY VALVES WITH PRESET PRESSURE WITH DIAPHRAGM AND HANDWHEEL ACTIVATION CE-1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: FEMALE-FEMALE

HYDRAULIC FEATURES

This security valve with manual handwheel is an automatic safety valve designed to open in the event the internal pressure of the system reaches a predetermined maximum pressure (Preset Nominal Pressure Pnr) allowing the water to be released through it. The security valve resets automatically when the internal pressure of the system returns below the predetermined maximum pressure. All the moving parts of this safety valve, including the regulating spring, are isolated from heat-transfer fluids by an industrial rubber diaphragm. The security valve with manual handwheel satisfies the essential safety requirements stipulated in the EU Pressure Equipment Directive (PED) 97/23/EC.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Preset nominal pressure (Pnr)	1, 5-2, 5-3-3, 5-4-5-6-7 bar (factory set and sealed)
Minimum accumulation pressure (Pc)	- 5 % of the P_{nr}
Overpressure (Po)	10% of the P_{nr}
Reset value (Pf)	- 20 % of the P_{nr}
Temperature:	
Maximum temperature	115°C (water or air - Class 1 Liquids)
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connections	Threads according to ISO 228/1
Requirements and tests as per:	EN 1489

PED TECHNICAL REQUIREMENTS

Maximum allowable temperature (TS)	115°C (water or air - Class 1 Liquids)
Maximum allowable working pressure (PS)	10 bar
Conformity assessment procedures	modules B and D
PED risk category	IV (CE 1115)

Flow Coefficient (K) = 0.05 - Classified as an “Ordinary Valve” by the ISPESL (Italian Institute for Occupational Safety Prevention)

DESIGN

Brass Body EN 12165 - CW617N
Head valve in PA66-GF30 polyamide (nylon 66) reinforced with glass fiber
Other components in brass EN 12164 - CW617N
Handwheel in PA66 polyamide (nylon)
Diaphragm in 70 Sh preshaped EPDM rubber
Obturator gasket in NBR elastomer with PTFE anti-stick and anti-incrustation
Sm GALVANIZED STEEL spring - EN 10270-1

PRODUCT CODES

Product codes 1/2”	Product codes 3/4”
0496.115 Setting 1,5 bar F/F	0496.215 Setting 1,5 bar F/F
0496.125 Setting 2,5 bar F/F	0496.225 Setting 2,5 bar F/F
0496.130 Setting 3 bar F/F	0496.230 Setting 3 bar F/F
0496.135 Setting 3,5 bar F/F	0496.235 Setting 3,5 bar F/F
0496.140 Setting 4 bar F/F	0496.240 Setting 4 bar F/F
0496.150 Setting 5 bar F/F	0496.250 Setting 5 bar F/F
0496.160 Setting 6 bar F/F	0496.260 Setting 6 bar F/F
0496.170 Setting 7 bar F/F	0496.270 Setting 7 bar F/F

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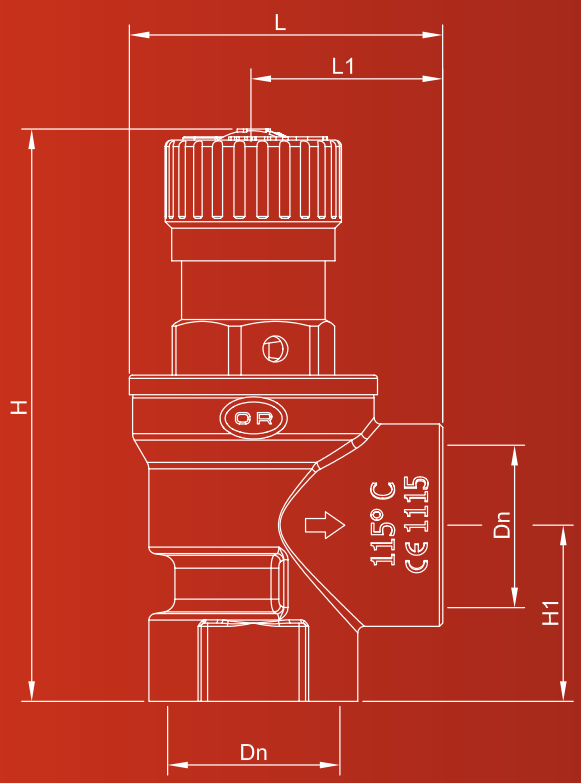
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0496 • 1/2”- 3/4”

SECURITY VALVES WITH PRESET PRESSURE WITH DIAPHRAGM
AND HANDWHEEL ACTIVATION CE-1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: FEMALE-FEMALE



FEATURES

Dn	L	L1	H	H1
1/2”	48	29	85,5	27
3/4”	48	29	87,5	27

SETTING

Discharging flow 1/2 “ e 3/4”

P tar	H_2O (l/h)	Steam (kg/h)	Gas (kg/h)
1,5	632,1	9,1	13,3
2,5	748,7	12,5	18,7
3	801,4	14,2	21,3
3,5	850,7	15,9	24,0
4	896	17,7	26,7
5	981,5	21,1	32,0
6	1060,1	24,5	37,3
7	1133,3	27,9	42,7

0510 • 1/2”

SECURITY VALVES WITH GAUGE CONNECTION WITH PRESET PRESSURE WITH DIAPHRAGM AND HANDWHEEL ACTIVATION CE- 1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: MALE-FEMALE

HYDRAULIC FEATURES

This security valve with manual handwheel is an automatic safety valve designed to open in the event the internal pressure of the system, which can be monitored by a gauge, if installed, reaches a predetermined maximum pressure (Preset Nominal Pressure Pnr) allowing the water to be released through it. The security valve resets automatically when the internal pressure of the system returns below the predetermined maximum pressure. All the moving parts of this safety valve, including the regulating spring, are isolated from heat-transfer fluids by an industrial rubber diaphragm. The security valve with manual handwheel satisfies the essential safety requirements stipulated in the EU Pressure Equipment Directive (PED) 97/23/EC.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Preset nominal pressure (P_{nr})	1, 5-2-2, 5-3-3, 5-4-5-6 bar (factory set and sealed)
Minimum accumulation pressure (P_c)	- 5 % of the P_{nr}
Overpressure (P_o)	10% of the P_{nr}
Reset value (P_r)	- 20 % of the P_{nr}
Temperature:	
Maximum temperature	115°C (water or air - Class 1 Liquids)
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connections	Threads according to ISO 228/1
Gauge Connection	Threads according to EN 10226- Rp1/4” (ex ISO 7/1)
Requirements and tests as per:	EN 1489

PED TECHNICAL REQUIREMENTS

Maximum allowable temperature (TS)	115°C (water or air - Class 1 Liquids)
Maximum allowable working pressure (PS)	10 bar
Conformity assessment procedures	modules B and D
PED risk category	IV (CE 1115)

Flow Coefficient (K) = 0.05 - Classified as an “Ordinary Valve” by the ISPESL (Italian Institute for Occupational Safety Prevention)

DESIGN

Brass Body EN 12165 - CW617N
Head valve in PA66-GF30 polyamide (nylon 66) reinforced with glass fiber
Other components in brass EN 12164 - CW617N
Handwheel in PA66 polyamide (nylon)
Diaphragm in 70 Sh preshaped EPDM rubber
Obturator gasket in NBR elastomer with PTFE anti-stick and anti-incrustation
Sm GALVANIZED STEEL spring - EN 10270-1

PRODUCT CODES

0510.115 Setting 1,5 bar 1/2” M/F
0510.120 Setting 2 bar 1/2” M/F
0510.125 Setting 2,5 bar 1/2” M/F
0510.130 Setting 3 bar 1/2” M/F
0510.135 Setting 3,5 bar 1/2” M/F
0510.140 Setting 4 bar 1/2” M/F
0510.150 Setting 5 bar 1/2” M/F
0510.160 Setting 6 bar 1/2” M/F

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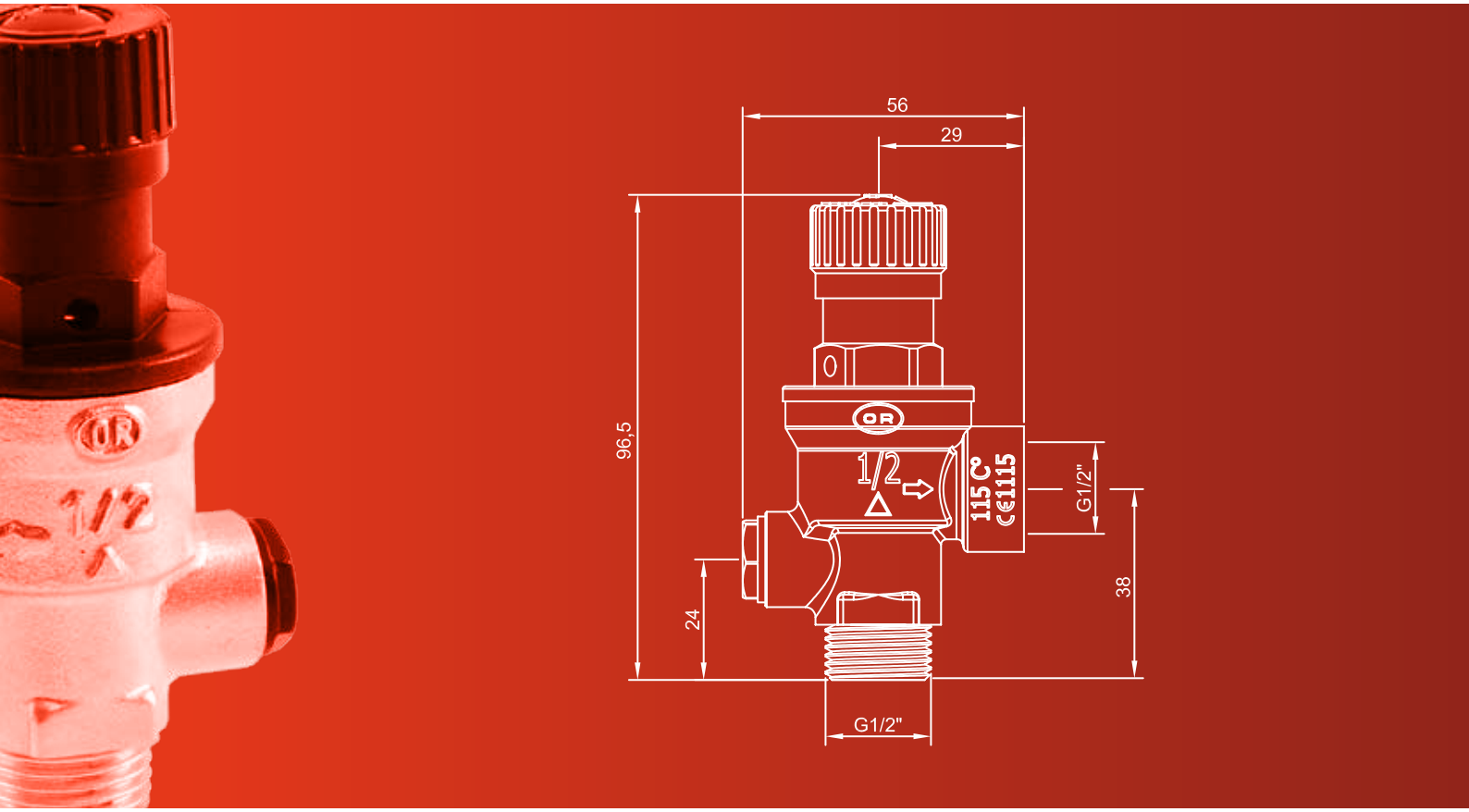
0510 • 1/2”

SECURITY VALVES WITH GAUGE CONNECTION WITH PRESET PRESSURE WITH DIAPHRAGM AND HANDWHEEL ACTIVATION CE- 1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: MALE-FEMALE



SETTING

P tar	Discharging flow 1/2 “		
	H_2O (l/h)	Steam (kg/h)	Gas (kg/h)
1,5	632,1	9,1	13,3
2	694	10,8	16,0
2,5	748,7	12,5	18,7
3	801,4	14,2	21,3
3,5	850,7	15,9	24,0
4	896	17,7	26,7
5	981,5	21,1	32,0
6	1060,1	24,5	37,3

0485 • 1/2”

0487 • 1/2”

SECURITY VALVES WITH PRESET PRESSURE WITH DIAPHRAGM AND HANDWHEEL ACTIVATION “LIGHT” MODEL CE- 1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: MALE-FEMALE
FEMALE-FEMALE


0485


0487

HYDRAULIC FEATURES

The “light” model security valve with manual handwheel is an automatic safety valve designed to open in the event the internal pressure of the system reaches a predetermined maximum pressure (Preset Nominal Pressure: Pnr) allowing the water to be released through it. The security valve resets automatically when the internal pressure of the system returns below the predetermined maximum pressure. All the moving parts of this safety valve, including the regulating spring, are isolated from heat-transfer fluids by an industrial rubber diaphragm. The “light” model security valve with manual handwheel satisfies the essential safety requirements stipulated in the EU Pressure Equipment Directive (PED) 97/23/EC.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Preset nominal pressure (P_{nr})	3-4-5-6-7-8 bar (factory set and sealed)
Minimum accumulation pressure (P_c)	- 5 % of the P_{nr}
Overpressure (P_o)	10% of the P_{nr}
Reset value (P_f)	- 20 % of the P_{nr}
Temperature:	
Maximum temperature	115°C (water or air - Class 1 Liquids)
Threading:	
Pipeline connection	Threads according to ISO 228/1
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Requirements and tests as per:	EN 1489

PED TECHNICAL REQUIREMENTS

Maximum allowable temperature (TS)	115°C (water or air - Class 1 Liquids)
Maximum allowable working pressure (PS)	10 bar
Conformity assessment procedures	modules B and D
PED risk category	IV (CE 1115)
Flow Coefficient	(K) = 0.05 - Classified as an “Ordinary Valve” by the ISPESL (Italian Institute for Occupational Safety Prevention)

DESIGN

Brass Body EN 12165 - CW617N
Head valve in PA66-GF30 polyamide (nylon 66) reinforced with glass fiber
Handwheel in PA66 polyamide (nylon)
Diaphragm in 70 Sh preshaped EPDM rubber (peroxide cured)
Sm GALVANIZED STEEL spring - EN 10270-1

PRODUCT CODES

0485.130	Setting	3 bar	1/2”	M/F	0487.130	Setting	3 bar	1/2”	F/F
0485.140	Setting	4 bar	1/2”	M/F	0487.140	Setting	4 bar	1/2”	F/F
0485.150	Setting	5 bar	1/2”	M/F	0487.150	Setting	5 bar	1/2”	F/F
0485.160	Setting	6 bar	1/2”	M/F	0487.160	Setting	6 bar	1/2”	F/F
0485.170	Setting	7 bar	1/2”	M/F	0487.170	Setting	7 bar	1/2”	F/F
0485.180	Setting	8 bar	1/2”	M/F	0487.180	Setting	8 bar	1/2”	F/F

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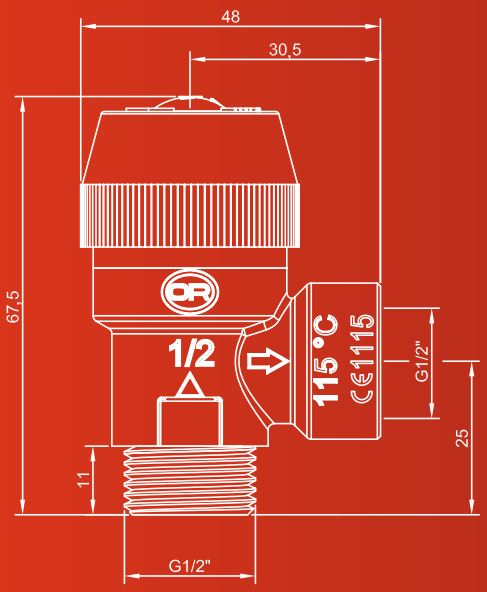
0485 • 1/2”

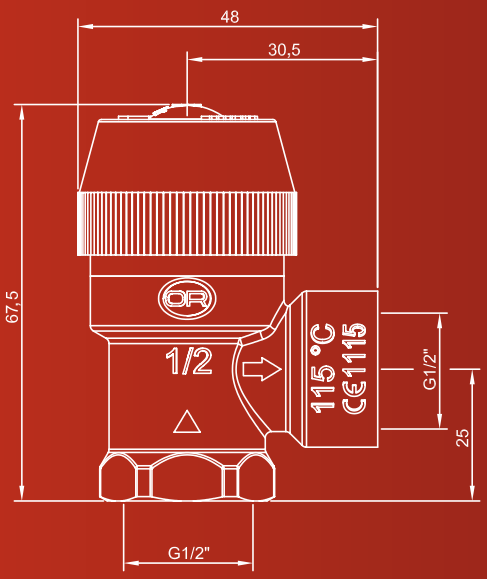
0487 • 1/2”

SECURITY VALVES WITH PRESET PRESSURE WITH DIAPHRAGM AND HANDWHEEL ACTIVATION “LIGHT” MODEL CE- 1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: MALE-FEMALE
FEMALE-FEMALE



0485



0487

SETTING

P tar	Discharging flow 1/2 “		
	H_2O (l/h)	Steam (kg/h)	Gas (kg/h)
3	801,4	14,2	21,3
4	896,0	17,7	26,7
5	981,5	21,1	32,0
6	1060,1	24,5	37,3
7	1133,3	27,9	42,7
8	1202	31,3	48,0

0488 • 1/2”

0489 • 1/2”

SECURITY VALVES WITH GAUGE CONNECTION WITH PRESET PRESSURE WITH DIAPHRAGM AND HANDWHEEL ACTIVATION “LIGHT” MODEL CE-1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: FEMALE-FEMALE
MALE-FEMALE

HYDRAULIC FEATURES

The “light” model security valve with manual handwheel is an automatic safety valve designed to open in the event the internal pressure of the system, which can be monitored by a gauge, if installed, reaches a predetermined maximum pressure (Preset Nominal Pressure Pnr) allowing the water to be released through it . The pressure safety valve resets automatically when the internal pressure of the system returns below the predetermined maximum pressure. All the moving parts of this safety valve, including the regulating spring, are isolated from heat-transfer fluids by an industrial rubber diaphragm. The “light “model security valve with manual handwheel satisfies the essential safety requirements stipulated in the EU Pressure Equipment Directive (PED) 97/23/EC.

TECHNICAL FEATURES

Pressure:	
Maximum allowable pressure	10 bar
Preset nominal pressure (Pnr)	3 bar (factory set and sealed)
Minimum accumulation pressure (Pc)	- 5 % of the Pnr
Overpressure (Po)	10% of the Pnr
Reset value (Pf)	- 20 % of the Pnr
Temperature:	
Maximum temperature	115°C (water or air - Class 1 Liquids)
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connections	Threads according to ISO 228/1
Gauge connection	Threads according to EN 10226- Rp1/4” (ex ISO 7/1)
Requirements and tests as per:	EN 1489

PED TECHNICAL REQUIREMENTS

Maximum allowable temperature (TS)	115°C (water or air - Class 1 Liquids)
Maximum allowable working pressure (PS)	10 bar
Conformity assessment procedures	modules B and D
PED risk category	IV (CE 1115)
Flow Coefficient	(K) = 0.05 - Classified as an “Ordinary Valve” by the ISPESL (Italian Institute for Occupational Safety Prevention)

DESIGN

Brass Body EN 12165 - CW617N
Head valve in PA66-GF30 polyamide (nylon 66) reinforced with glass fiber
Handwheel in PA66 polyamide (nylon)
Diaphragm in 70 Sh preshaped EPDM rubber (peroxide cured)
Sm GALVANIZED STEEL spring - EN 10270-1

PRODUCT CODES

0488.130 Setting 3 bar 1/2” F/F

0489.130 Setting 3 bar 1/2” M/F

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13018 Valduggia (VC), ITALY
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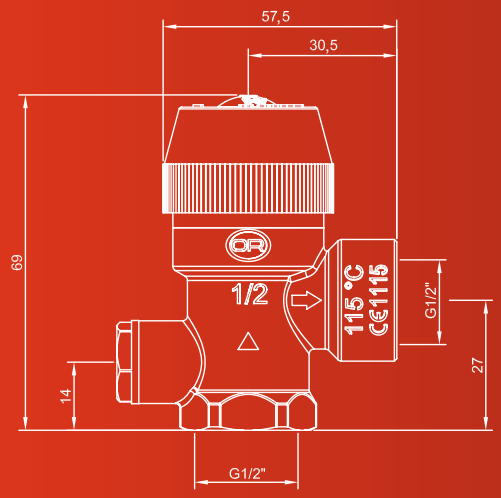
0488 • 1/2”

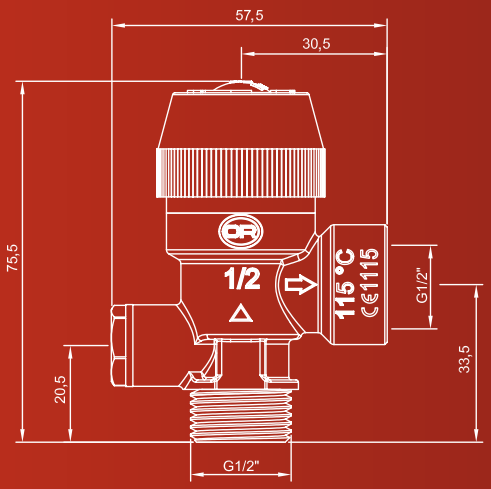
0489 • 1/2”

SECURITY VALVES WITH GAUGE CONNECTION WITH PRESET PRESSURE WITH DIAPHRAGM AND HANDWHEEL ACTIVATION “LIGHT” MODEL CE-1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: FEMALE-FEMALE
MALE-FEMALE



0488

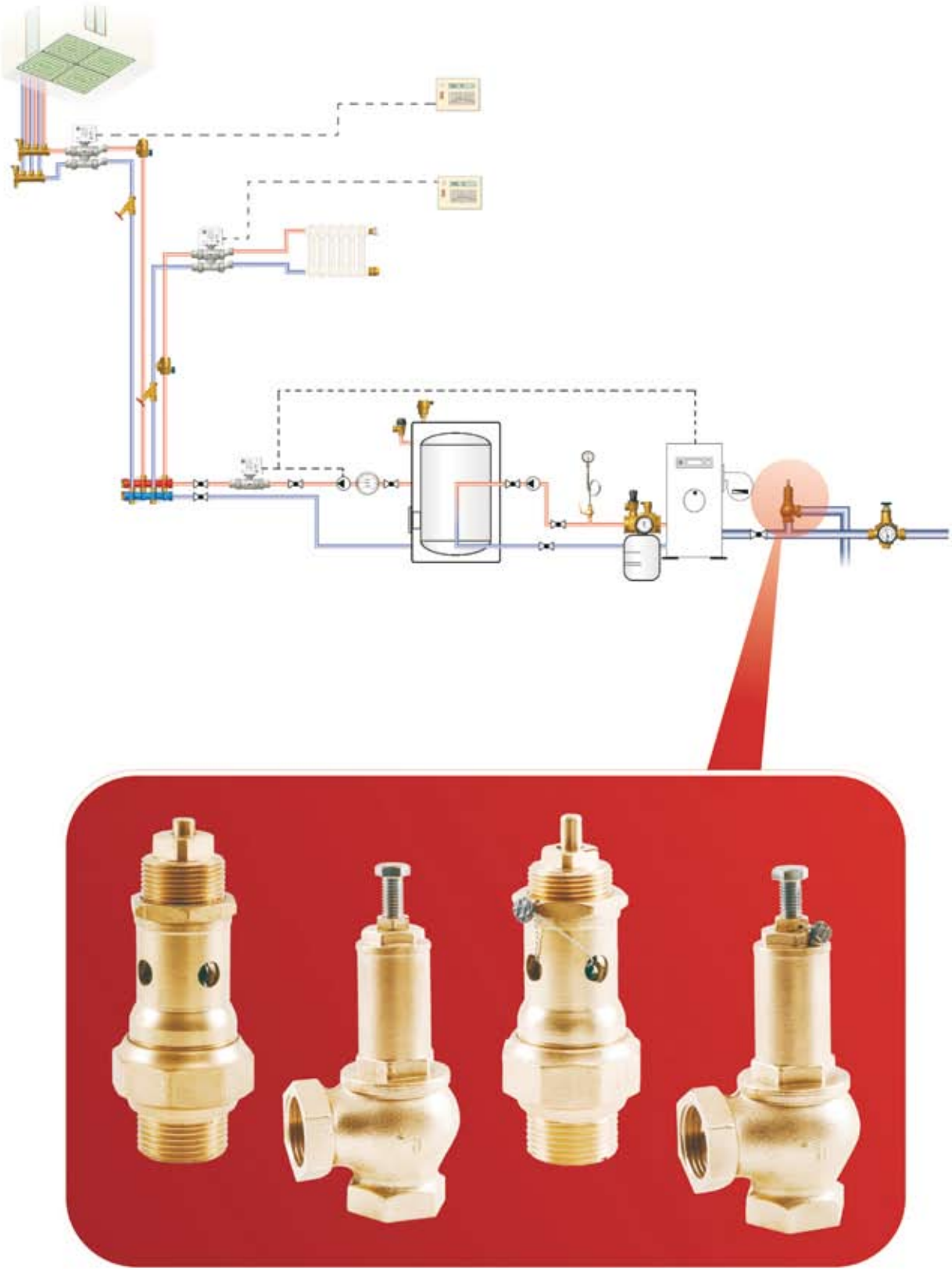


0489

SETTING

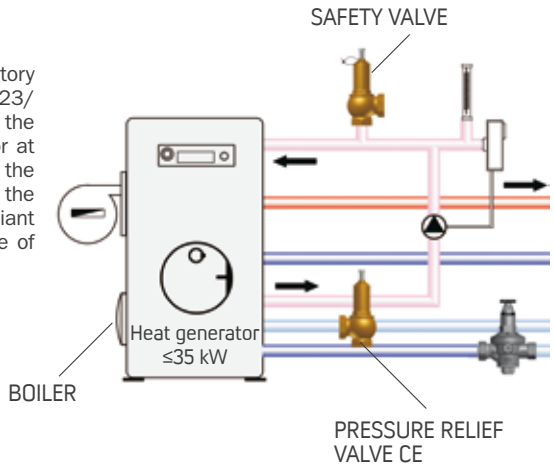
P tar	Discharging flow 1/2 “		
	H_2O (l/h)	Steam (kg/h)	Gas (kg/h)
3	801,4	14,2	21,3

ADJUSTABLE PRESSURE RELIEF VALVES WITH FREE AND CONVEYED DISCHARGE

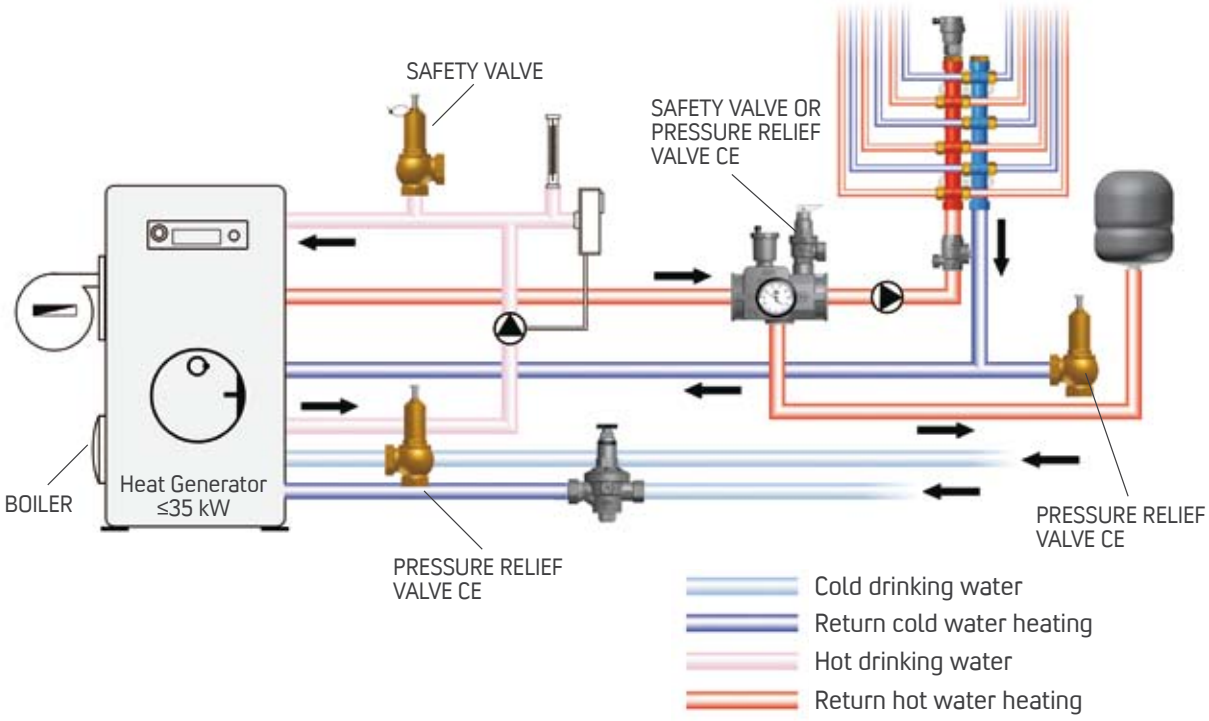


ADJUSTABLE PRESSURE RELIEF VALVES WITH FREE AND CONVEYED DISCHARGE

These preset pressure valves with conveyed and free discharge, factory preset and sealed, are certified in accordance with EU Directive 97/23/EC (PED) and constitute probably the most important safety device on the heat generator. These valves should be installed either on the top or at the outlet piping of the generator and are designed to open, releasing the water and/or steam through it, in case the working pressure reaches the maximum allowable working pressure (PS) of the generator. PED-compliant pressure safety valves automatically close when the internal pressure of the generator returns below the preset limit (Pnr) of the valve itself.



Thanks to the highly precise setting (up to ±0.1 bar), to the variety of available seat gaskets(brass, rubber and PTFE) and to the different types (free or conveyed discharge), they can be used in several systems, also systems on compressed air and steam. Free and Conveyed discharge-type safety valves are factory set and sealed; responding to the requirements laid out in EU Directive 97/23/EC (PED) for pressure equipment, and are therefore classified as Category IV and bear CE 1115.



The adjustable pressure relief valves with conveyed and free discharge are certified in accordance with EU Directive 97/23/EC. These valves may be used to discharge pressure excesses from possible backpressures in heat generator water supply systems or as an auxiliary safety device on the outlet side for hot water (or on the return, as is always advisable), releasing pressure excesses resulting from rising temperatures in heat transfer fluids or following sudden pressure changes (provided that pressures are < PS). The numerous possibilities in regulating pressure, the available seat gaskets (brass, rubber and PTFE) and the different types (free or conveyed discharge) make these valves ideal for any type of facilities using water, gas and steam. Both the free and the conveyed discharge-type adjustable pressure relief valves meet the requirements set out in EU Directive 97/23/EC (PED) for pressure equipment, as Pressure Accessories. These are classified as Category I and bear the CE marking. However, these valve types are not designed for specific safety operation as defined under Article 1.2 of EU Directive 97/23/EC.

1810.0 • 1/4”-2”

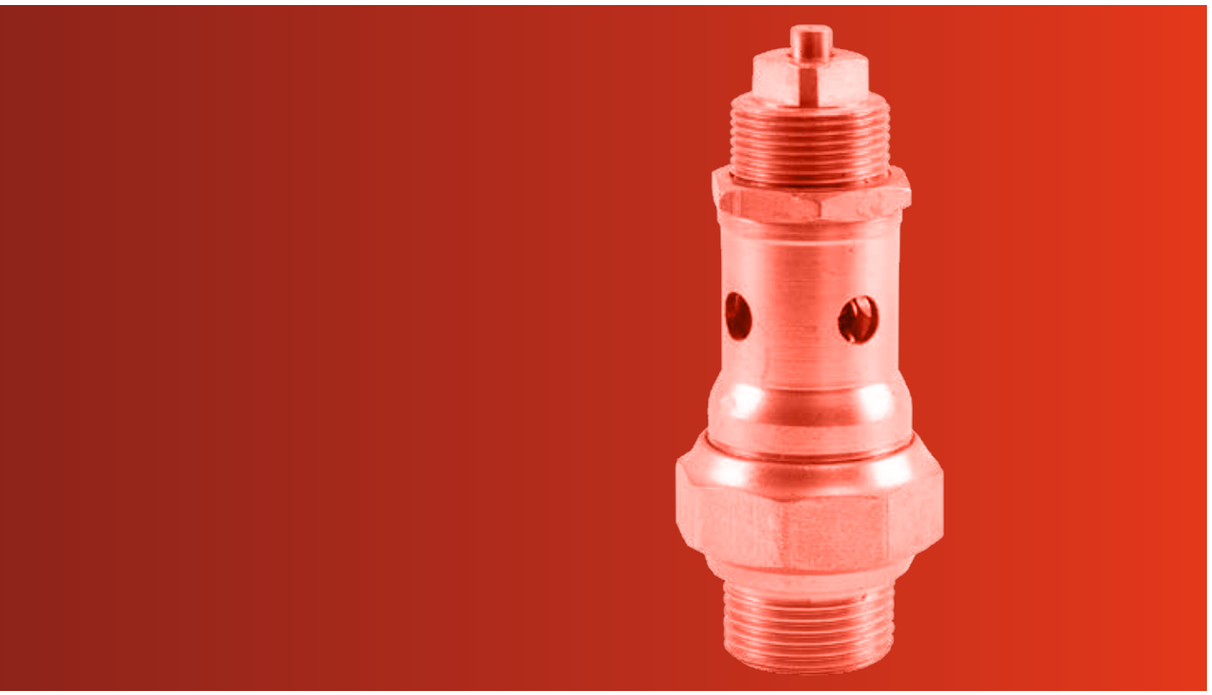
1820.0 • 1/4”-2”

1830.0 • 1/4”-2”

CE

ADJUSTABLE PRESSURE RELIEF VALVES CE
WITH FREE DISCHARGE

CONNECTION: MALE



HYDRAULIC FEATURES

The adjustable pressure relief valve with “free discharge” is a security measure against overpressure designed to open solely by the energy of the fluid in the event the internal pressure of the system reaches the valve’s predetermined maximum pressure (Preset Nominal Pressure Pnr), thus releasing the fluid through the free discharge outlet into the air. This safety valve with free discharge closes automatically when the internal pressure of the system descends below the predetermined pressure. The safety valve with automatic free discharge satisfies the essential safety requirements stipulated in the EU Pressure Equipment Directive (PED) 97/23/EC.

TECHNICAL FEATURES

Pressure:
Maximum allowable working pressure (PN) 16 bar
Preset nominal pressure (Pnr) is adjustable in the field from 0.5 to 16 bar
(When ordering, please indicate whether preset pressure surpasses 10 bar)

Minimum accumulation pressure	- 5%
Overpressure	10%
Reclosing value	20%

Threading:

Pipeline connections	Threads according to ISO 228/1

Requirements and tests as per:
Type test:

Operating performance	Test P20 - EN 12266-2

Acceptance test:

Seat tightness	Test P12 - EN 12266-1
Shell strength	Test P10 - EN 12266-1

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PED OPERATING LIMITS

Code	Obturator Material	Max. allowable Pressure PS	Max. allowable Temperature TS	PED Risk Category	PED Evaluation Procedure	PED Supervisory Body	Acceptable Fluids
1810	Brass	16 Bar	from 0° to 220 °C	I	Module A	n.a.	S Group 1 (subject to OR approval)
1820	SBR Rubber	16 Bar	from 0° to 70 °C	I	Module A	n.a.	G Group 1 (subject to OR approval)
1830	Teflon®	16 Bar	from 0° to 180 °C	I	Module A	n.a.	G-S Group 1 (subject to OR approval)

L: Liquids - G: Gas - S: Steam

This pressure release valve is not a “safety accessory”, but rather a “pressure accessory” as defined in Article 1, Section 2.1.4 of EU Directive 97/23/EC, and further specified in Article 3, Section 1.4; classified in Annex III, Section 3. Devices of this sort can in exceptional cases be used for a specific safety function, especially if the downstream system is not protected otherwise, within the limits of the relevant risk class.

DESIGN

Brass Body EN 12165 - CW617N
Brass bonnet dimensions 1/4”-1”1/2 EN 12164 - CW614N
Cast brass bonnet dimensions 2” EN 1982-CN753S
Other components in brass EN 12164 - CW614N
Metal seat: obturator in brass - EN 12165 - CW617N
Rubber seat: obturator gasket in NBR elastomer
Teflon seat: obturator gasket in pure PTFE (Teflon)
Sm GALVANIZED STEEL spring - EN 10270-1

PRODUCT CODES

Metal seat product codes			Rubber seat product codes			PTFE seat product codes		
1810.008	metal seat	1/4” M	1820.008	rubber seat	1/4” M	1830.008	PTFE seat	1/4” M
1810.012	metal seat	3/8” M	1820.012	rubber seat	3/8” M	1830.012	PTFE seat	3/8” M
1810.015	metal seat	1/2” M	1820.015	rubber seat	1/2” M	1830.015	PTFE seat	1/2” M
1810.020	metal seat	3/4” M	1820.020	rubber seat	3/4” M	1830.020	PTFE seat	3/4” M
1810.025	metal seat	1” M	1820.025	rubber seat	1” M	1830.025	PTFE seat	1” M
1810.033	metal seat	1”1/4 M	1820.033	rubber seat	1”1/4 M	1830.033	PTFE seat	1”1/4 M
1810.042	metal seat	1”1/2 M	1820.042	rubber seat	1”1/2 M	1830.042	PTFE seat	1”1/2 M
1810.050	metal seat	2” M	1820.050	rubber seat	2” M	1830.050	PTFE seat	2” M

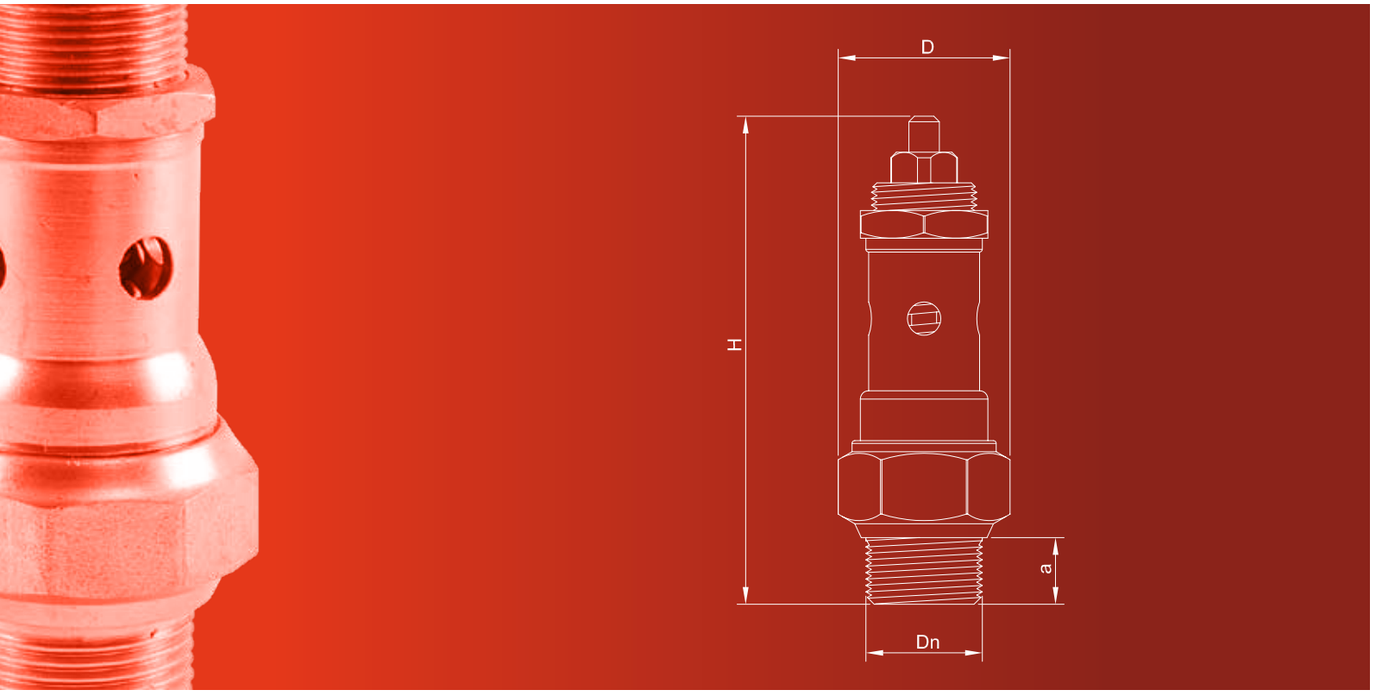
1810.0 • 1/4”-2”

1820.0 • 1/4”-2”

1830.0 • 1/4”-2”

ADJUSTABLE PRESSURE RELIEF VALVES CE
WITH FREE DISCHARGE

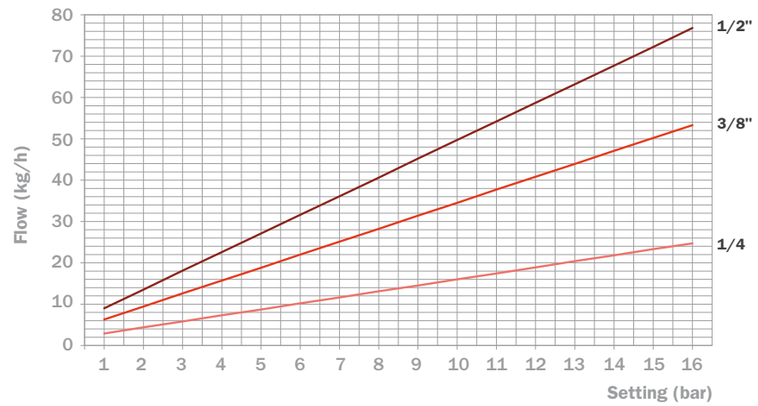
CONNECTION: MALE



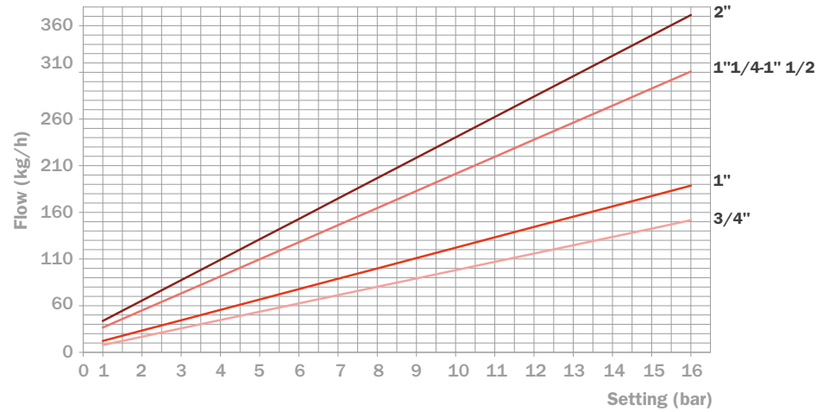
FEATURES

Dn	D	H	a
1/4”	29	88	10
3/8”	30	87	11
1/2”	31	89	12
3/4”	43	109	15
1”	52	124	17
1”1/4	66	145	23
1”1/2	74	158	23
2”	88	177	25

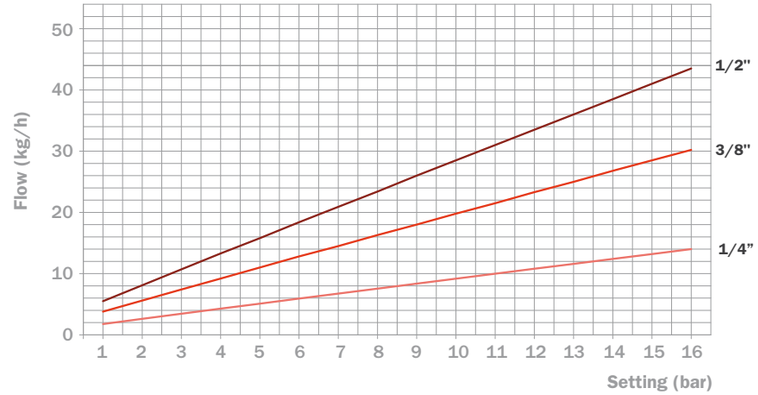
DISCHARGING FLOW GAS - 1820.0-1830.0 1/4”÷1/2”



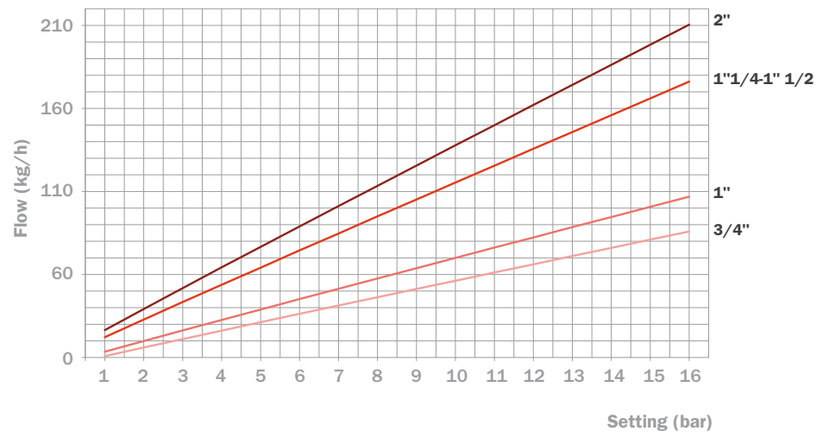
DISCHARGING FLOW GAS - 1820.0-1830.0 3/4”÷2”



DISCHARGING FLOW STEAM - 1810.0-1830.0 1/4”÷1/2”



DISCHARGING FLOW STEAM - 1810.0-1830.0 3/4”÷2”



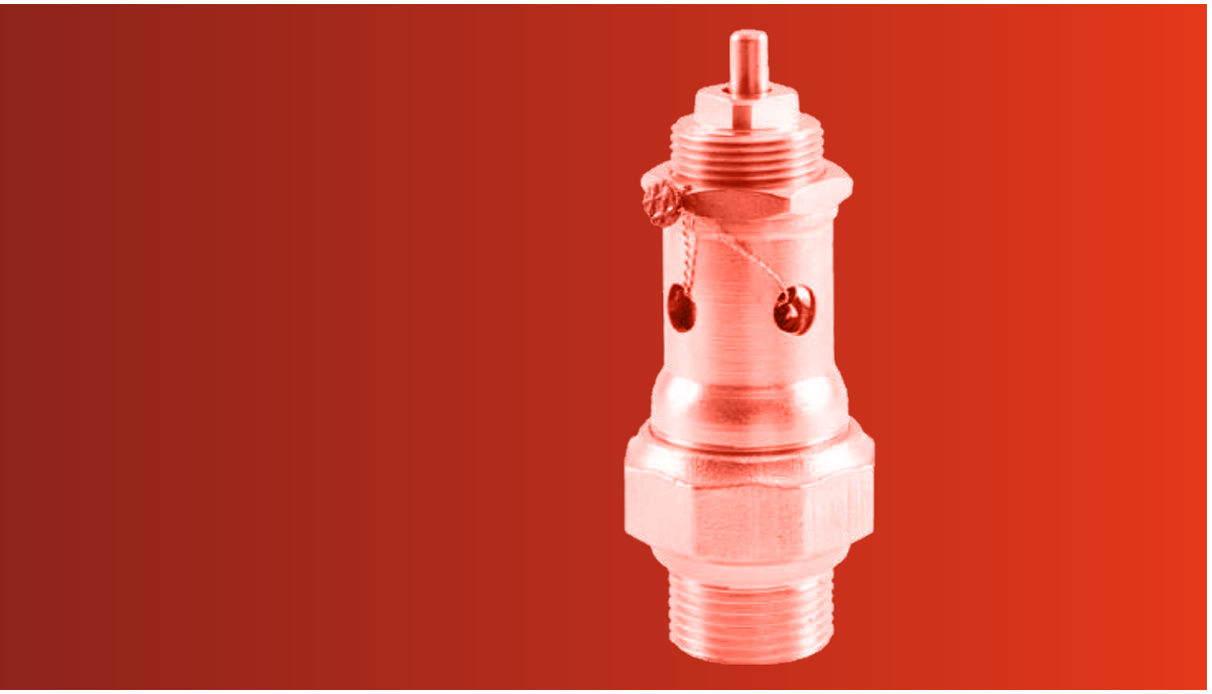
1810.1 • 1/4”-2”

1820.1 • 1/4”-2”

1830.1 • 1/4”-2”

SAFETY VALVES PRESET AND LEAD SEALED WITH FREE DISCHARGE
PURSUANT CE BRAND 1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTION: MALE



HYDRAULIC FEATURES

The automatic safety valve with “free discharge” is a security measure against overpressure designed to open solely by the energy of the fluid in the event the internal pressure of the system reaches the valve’s predetermined maximum pressure (Preset Nominal Pressure Pnr), thus releasing the fluid through the free discharge outlet into the air. This safety valve with free discharge closes automatically when the internal pressure of the system descends below the predetermined pressure. The preset pressure (Pnr) is fitted so that each external setting is sealed to prevent non-authorized adjustments. The safety valve with automatic free discharge satisfies the essential safety requirements stipulated in the EU Pressure Equipment Directive (PED) 97/23/EC.

TECHNICAL FEATURES

Pressure:
Maximum allowable working pressure (PN) 16 bar
Preset nominal pressure (Pnr) may be requested for a field adjustable from 0.5 to 16 bar
(Factory set and sealed and thus the above must be specified when ordering)

Minimum accumulation pressure	- 5%
Overpressure	10%
Reclosing value	20%
Flow coefficient	(K) = 0.05 - Classified as an “Ordinary Valve” by the ISPESL (Italian Institute for Occupational Safety Prevention)

Threading:

Pipeline connections	Threads according to ISO 228/1

Requirements and tests as per:
Type test (functional aspects) with reference to ISO 4126-1 § 7.2

Acceptance test	Preset pressure verification according to Italian national standards (UNI 10197) UNI 10197
Manufacturing test	Pressure test in line with Annex I, Section 3.2.2 of the PED Directive.

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

PED OPERATING LIMITS

Code	Obturator Material	Max. allowable Pressure PS	Max. allowable Temperature TS	PED Risk Category	PED Evaluation Procedure	PED supervisory body	Acceptable Fluids
1810	Brass	16 Bar	from 0° to 220 °C	I	Module B+D	1115	S Group 1 (subject to OR approval)
1820	SBR Rubber	16 Bar	from 0° to 70 °C	I	Module B+D	1115	G Group 1 (subject to OR approval)
1830	Teflon®	16 Bar	from 0° to 180 °C	I	Module B+D	1115	G-S Group 1 (subject to OR approval)

G: Gas – S: Steam

DESIGN

Brass Body EN 12165 - CW617N
Brass bonnet dimensions 1/4”-1”1/2 EN 12164 - CW614N
Cast brass bonnet dimensions 2” EN 1982-CB753S
Other components in brass EN 12164 - CW614N
Metal seat: obturator in brass EN 12165 - CW617N
Rubber seat: obturator gasket in NBR elastomer
Teflon seat: obturator gasket in pure PTFE (Teflon)
Sm GALVANIZED STEEL spring - EN 10270-1

PRODUCT CODES

Metal seat product codes			Rubber seat product codes			PTFE seat product codes		
1810.108	metal seat	1/4” M	1820.108	rubber seat	1/4” M	1830.108	PTFE seat	1/4” M
1810.112	metal seat	3/8” M	1820.112	rubber seat	3/8” M	1830.112	PTFE seat	3/8” M
1810.115	metal seat	1/2” M	1820.115	rubber seat	1/2” M	1830.115	PTFE seat	1/2” M
1810.120	metal seat	3/4” M	1820.120	rubber seat	3/4” M	1830.120	PTFE seat	3/4” M
1810.125	metal seat	1” M	1820.125	rubber seat	1” M	1830.125	PTFE seat	1” M
1810.133	metal seat	1”1/4 M	1820.133	rubber seat	1”1/4 M	1830.133	PTFE seat	1”1/4 M
1810.142	metal seat	1”1/2 M	1820.142	rubber seat	1”1/2 M	1830.142	PTFE seat	1”1/2 M
1810.150	metal seat	2” M	1820.150	rubber seat	2” M	1830.150	PTFE seat	2” M

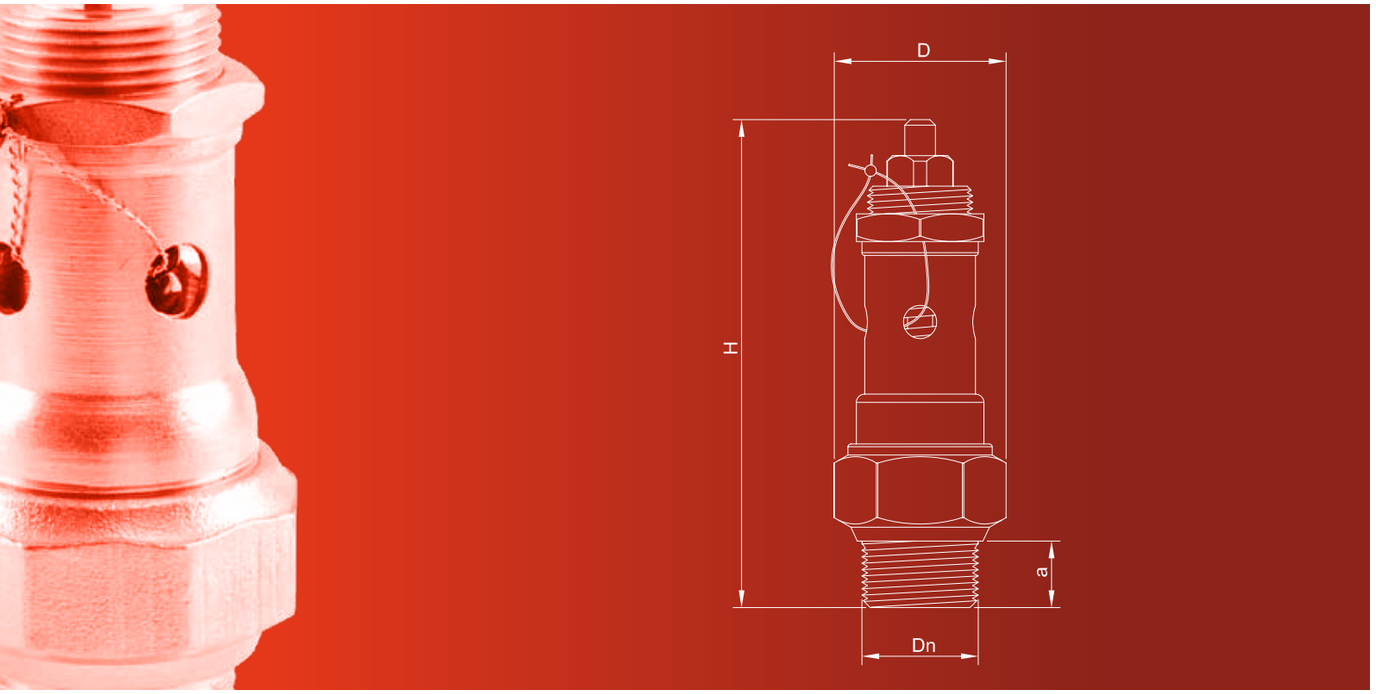
1810.1 • 1/4”-2”

1820.1 • 1/4”-2”

1830.1 • 1/4”-2”

SAFETY VALVES PRESET AND LEAD SEALED WITH FREE DISCHARGE
PURSUANT CE BRAND 1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTION: MALE



FEATURES

Dn	D	H	a
1/4”	29	88	10
3/8”	30	87	11
1/2”	31	89	12
3/4”	43	109	15
1”	52	124	17
1”1/4	66	145	23
1”1/2	74	158	23
2”	88	177	25

SETTING

DISCHARGING FLOW STEAM (kg/h) 1810.1-1830.1

P	1/4”	3/8”	1/2”	3/4”	1”	1”1/4	1”1/2	2”
1	1,77	3,8	5,5	10,8	13,5	22,2	22,2	26,5
2	2,61	5,6	8,1	16	19,9	32,8	32,8	39,2
3	3,45	7,4	10,7	21,1	26,3	43,4	43,4	51,8
4	4,28	9,2	13,3	26,2	32,6	53,8	53,8	64,3
5	5,1	11	15,8	31,3	38,9	64,1	64,1	76,6
6	5,92	12,8	18,4	36,3	45,2	74,5	74,5	88,9
7	6,74	14,5	20,9	41,3	51,4	84,7	84,7	101,2
8	7,55	16,3	23,4	46,3	57,6	95	95	113,4
9	8,36	18	26	51,3	63,8	105,2	105,2	125,6
10	9,17	19,8	28,5	56,2	70	115,4	115,4	137,8
11	9,98	21,5	31	61,2	76,2	125,5	125,5	149,9
12	10,79	23,3	33,5	66,1	82,3	135,7	135,7	162,1
13	11,59	25	36	71,1	88,5	145,8	145,8	174,2
14	12,4	26,8	38,5	76	94,6	155,9	155,9	186,3
15	13,2	28,5	41	81	100,8	166,1	166,1	198,4
16	14,01	30,2	43,5	85,9	106,9	176,2	176,2	210,5

DISCHARGING FLOW GAS (kg/h) 1820.1-1830.1

P	1/4”	3/8”	1/2”	3/4”	1”	1”1/4	1”1/2	2”
1	2,9	6,3	9	17,8	22,2	36,6	36,6	43,7
2	4,4	9,4	13,5	26,7	33,3	54,9	54,9	65,5
3	5,8	12,6	18,1	35,7	44,4	73,2	73,2	87,4
4	7,3	15,7	22,6	44,6	55,5	91,4	91,4	109,2
5	8,7	18,8	27,1	53,5	66,6	109,7	109,7	131,1
6	10,2	22	31,6	62,4	77,7	128	128	152,9
7	11,6	25,1	36,1	71,3	88,8	146,3	146,3	174,8
8	13,1	28,2	40,6	80,2	99,9	164,6	164,6	196,6
9	14,5	31,4	45,2	89,2	111	182,9	182,9	218,5
10	16	34,5	49,7	98,1	122,1	201,2	201,2	240,3
11	17,4	37,7	54,2	107	133,2	219,5	219,5	262,2
12	18,9	40,8	58,7	115,9	144,3	237,8	237,8	284
13	20,4	43,9	63,2	124,8	155,3	256,1	256,1	305,9
14	21,8	47,1	67,7	133,7	166,4	274,3	274,3	327,7
15	23,3	50,2	72,2	142,6	177,5	292,6	292,6	349,6
16	24,7	53,3	76,8	151,6	188,6	310,9	310,9	371,4

1811.0 • 3/8”-3”
1821.0 • 3/8”-3”
1831.0 • 3/8”-3”

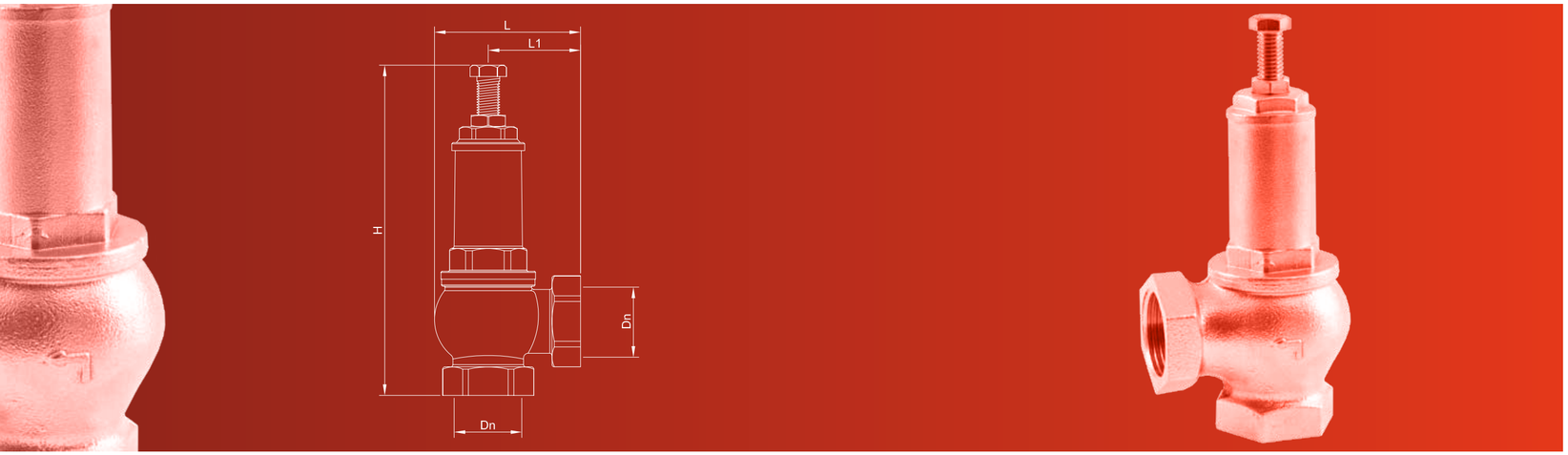
ADJUSTABLE PRESSURE RELIEF VALVES CE
WITH CONVEYED DISCHARGE

CONNECTIONS: FEMALE-FEMALE

1811.0 • 3/8”-3”
1821.0 • 3/8”-3”
1831.0 • 3/8”-3”

ADJUSTABLE PRESSURE RELIEF VALVES CE
WITH CONVEYED DISCHARGE

CONNECTIONS: FEMALE-FEMALE



FEATURES

Dn	L	L1	H
3/8”	45	24,5	115
1/2”	56	30	122
3/4”	64	32	149
1”	76	40	163
1”1/4	90	44	192
1”1/2	100	47	218
2”	124	60	247
2”1/2	147	74,5	304
3”	155	86	336

HYDRAULIC FEATURES

The CE marked pressure relief valve with conveyed discharge is a self-regulating valve capable of maintaining the pressure of the system (P) constant within a specified range, using the energy of the fluid, conveyed and discharged, and regulating the position of the obturator. Force is applied directly to the obturator by a spring (direct action). Once the reference point for pressure P is established, the pressure relief valve automatically adjusts itself by either increasing or decreasing the flow section, and thus the discharge capacity, in order to keep the system’s pressure constant. In case the system’s pressure drops below the reference pressure P, the pressure relief valve will close automatically. The discharge side of the body can not convey and therefore it is perfect for use only with gas and steam (Group I - if compatible). This valve satisfies the essential safety requirements stipulated in the EU Pressure Equipment Directive (PED) 97/23/EC.

TECHNICAL FEATURES

Pressure:
Maximum allowable working pressure (PN) 16 bar
Preset nominal pressure (Pnr) is adjustable in the field from 0.5 to 16 bar
(When ordering, please indicate whether preset pressure surpasses 10 bar)
Minimum accumulation pressure - 5%
Overpressure 10%
Reclosing value 20%
Threading:
Pipeline connections: Threads according to ISO 228/1
Requirements and tests as per:
Type test :
Operating performance Test P20 - EN 12266-2
Shell strength Test P10 - EN 12266-1
Acceptance test:
Seat tightness Test P12 - EN 12266-1

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163 48165
FAX +39 0163 47254
www.officinerigamonti.it
export@officinerigamonti.it

PED OPERATING LIMITS

Code	Obturator Material	Max. allowable Pressure PS	Max. allowable Temperature TS	PED Risk Category	PED Evaluation Procedure	PED supervisory body	Acceptable Fluids
1811	Brass	16 Bar	from 0° to 220 °C	I	Module A	n.a.	S-L Group 1 (subject to OR approval)
1821	SBR Rubber	16 Bar	from 0° to 70 °C	I	Module A	n.a.	L Group 1 (subject to OR approval)
1831	Teflon®	16 Bar	from 0° to 180 °C	I	Module A	n.a.	L-G-S Group 1 (subject to OR approval)

L: Liquids - G: Gas - S: Steam

This pressure release valve is not a “safety accessory”, but rather a “pressure accessory” as defined under Article 1, Section 2.1.4 of EU Directive 97/23/EC, and further specified in Article 3, Section 1.4; classified in Annex III, Section 3. Devices of this sort can in excepational cases be used for a specific safety function, especially if the downstream system is not protected otherwise, within the limits of the relevant risk class.

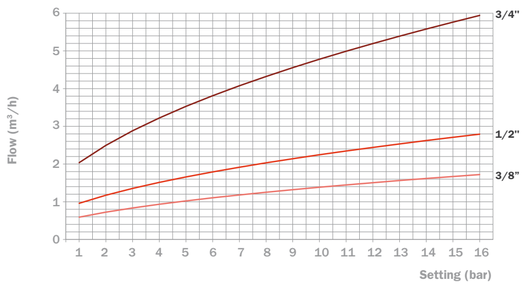
DESIGN

Cast Brass body dimensions 3/8”-2” EN1982-CB753S
Cast bronze body dimensions 2”1/2-3” EN1982-CB491K
Brass bonnet dimensions 3/8”-1”1/2 EN12165-CW617N
Cast brass bonnet dimension 2” EN 1982-CN753S
Cast bronze bonnet dimensions 2”1/2-3” EN1982-CB491K
Other components in brass EN 12164 - CW614N
Metal seat: obturator in brass EN 12165 - CW617N
Rubber seat: obturator gasket in NBR elastomer
Teflon seat: obturator gasket in pure PTFE (Teflon)
Sm GALVANIZED STEEL spring - EN 10270-1

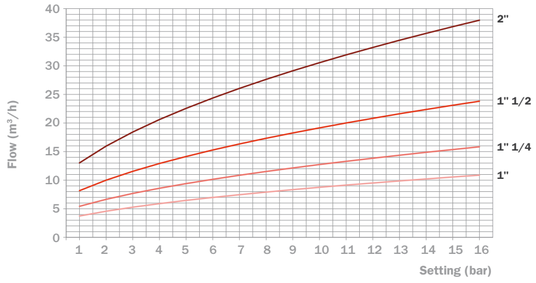
PRODUCT CODES

Metal seat product codes			Rubber seat product codes			PTFE seat product codes		
1811.012	metal seat	3/8” F/F	1821.012	rubber seat	3/8” F/F	1831.012	PTFE seat	3/8” F/F
1811.015	metal seat	1/2” F/F	1821.015	rubber seat	1/2” F/F	1831.015	PTFE seat	1/2” F/F
1811.020	metal seat	3/4” F/F	1821.020	rubber seat	3/4” F/F	1831.020	PTFE seat	3/4” F/F
1811.025	metal seat	1” F/F	1821.025	rubber seat	1” F/F	1831.025	PTFE seat	1” F/F
1811.033	metal seat	1”1/4 F/F	1821.033	rubber seat	1”1/4 F/F	1831.033	PTFE seat	1”1/4 F/F
1811.042	metal seat	1”1/2 F/F	1821.042	rubber seat	1”1/2 F/F	1831.042	PTFE seat	1”1/2 F/F
1811.050	metal seat	2” F/F	1821.050	rubber seat	2” F/F	1831.050	PTFE seat	2” F/F
1811.066	metal seat	2”1/2 F/F	1821.066	rubber seat	2”1/2 F/F	1831.066	PTFE seat	2”1/2 F/F
1811.080	metal seat	3” F/F	1821.080	rubber seat	3” F/F	1831.080	PTFE seat	3” F/F

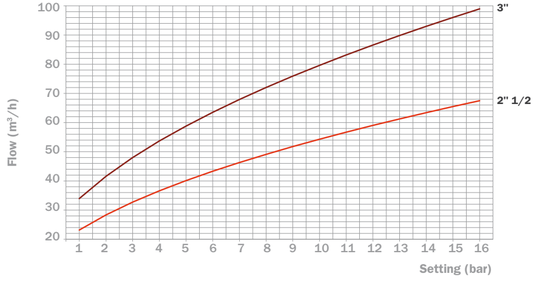
DISCHARGING FLOW H_2O - 1811.0-1821.0-1831.0 3/8"÷3/4"



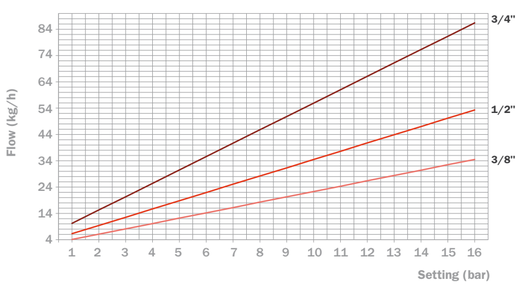
DISCHARGING FLOW H_2O - 1811.0-1821.0-1831.0 1"÷2"



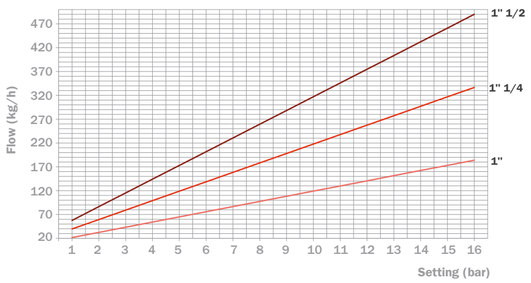
DISCHARGING FLOW H_2O - 1811.0-1821.0-1831.0 2"1/2 ÷3"



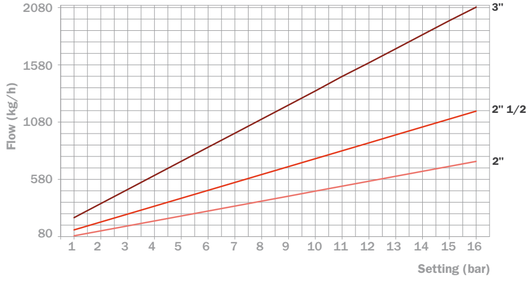
DISCHARGING FLOW GAS - 1831.0 3/8"÷3/4"



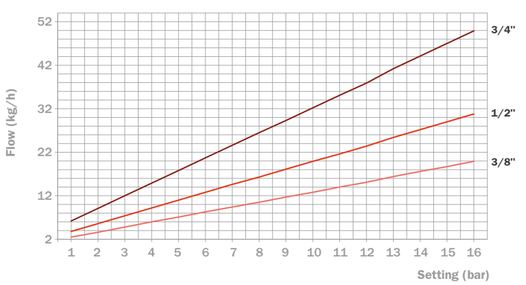
DISCHARGING FLOW GAS - 1831.0 1"÷1" 1/2



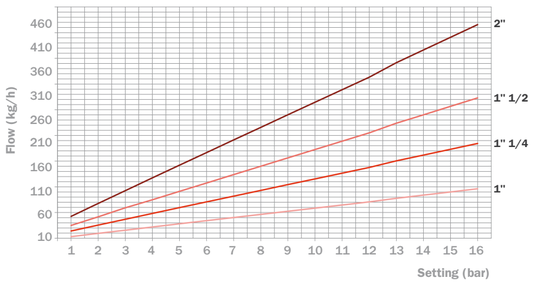
DISCHARGING FLOW GAS - 1831.0 2"÷3"



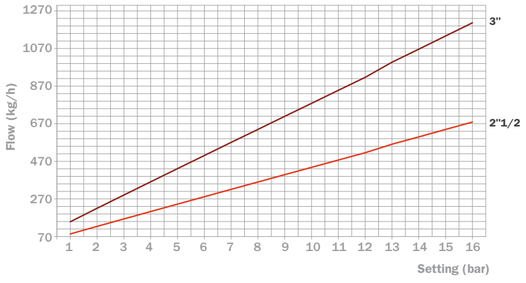
DISCHARGING FLOW STEAM - 1811.0-1831.0 3/8"÷3/4"



DISCHARGING FLOW STEAM - 1811.0-1831.0 1"÷2"



DISCHARGING FLOW STEAM - 1811.0-1831.0 2"1/2÷3"



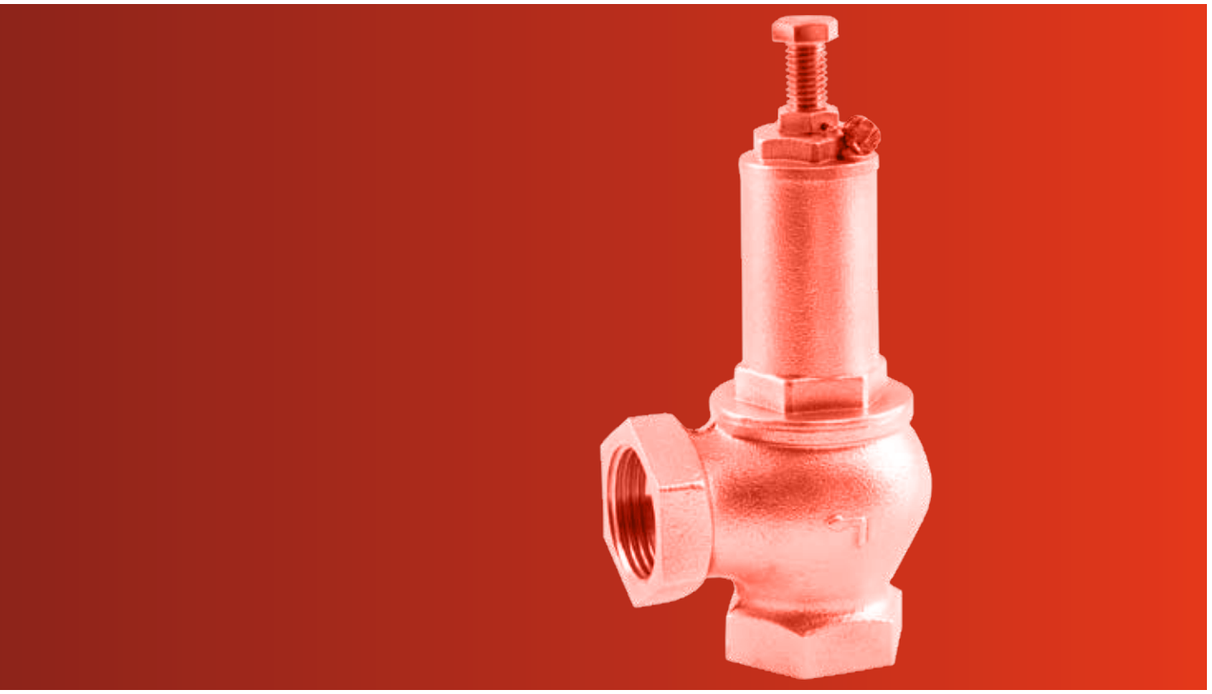
1811.1 • 3/8”-3”

1821.1 • 3/8”-3”

1831.1 • 3/8”-3”

SAFETY VALVES PRESET AND LEAD-SEALED WITH CONVEYED DISCHARGE CE BRAND 1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: FEMALE-FEMALE



HYDRAULIC FEATURES

The CE marked pressure relief valve with conveyed discharge is a self-regulating valve capable of maintaining the pressure of the system (P) constant within a specified range, using the energy of the fluid, conveyed and discharged, and regulating the position of the obturator. Force is applied directly to the obturator by a spring (direct action). Once the reference point for pressure P is established, the pressure relief valve automatically adjusts itself by either increasing or decreasing the flow section, and thus the discharge capacity, in order to keep the system’s pressure constant. In case the system’s pressure drops below the reference pressure P, the pressure relief valve will close automatically. The discharge side of the body can not convey and therefore it is perfect for use only with gas and steam (Group I - if compatible). This valve satisfies the essential safety requirements stipulated in the EU Pressure Equipment Directive (PED) 97/23/EC.

TECHNICAL FEATURES

Pressure:
Maximum allowable working pressure (PN) 16 bar
Preset nominal pressure (Pnr) may be requested for a field adjustable from 0.5 to 16 bar
(Factory set and sealed and thus the above must be specified when ordering)

Minimum accumulation pressure	- 5%
Overpressure	10%
Reclosing value	20%
Flow coefficient	(K) = 0.05 - Classified as an “Ordinary Valve” by the ISPESL (Italian Institute for Occupational Safety Prevention)

Threading:
Pipeline connections: Threads according to ISO 228/1
Requirements and tests as per:
Type test (functional aspects) with reference to ISO 4126-1 § 7.2

Acceptance test	preset pressure UNI 10197
Manufacturing test	Pressure test in line with Annex I, Section 3.2.2 of the PED Directive.

Operation limited to hot water heating systems according to Italian national standards (UNI 10412)
Flow coefficient (K) = 0.05 - Classified as an “Ordinary Valve” by EN 10412 §11.4.2
Flue capacity (or thermal flow) < 35Kw

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

PED OPERATING LIMITS

Code	Obturator Material	Max. allowable Pressure PS	Max. allowable Temperature TS	PED Risk Category	PED Evaluation Procedure	PED supervisory body	Acceptable Fluids
1811	Brass	16 Bar	from 0° to 220 °C	IV	Module B+D	1115	S-L Group 1 (subject to OR approval)
1821	SBR Rubber	16 Bar	from 0° to 70 °C	IV	Module B+D	1115	L Group 1 (subject to OR approval)
1831	Teflon®	16 Bar	from 0° to 180 °C	IV	Module B+D	1115	L-G-S Group 1 (subject OR approval)

L: Liquids G: Gas S: Steam

DESIGN

Cast Brass body dimensions 3/8”-2” EN1982-CB753S
Cast bronze body dimensions 2”1/2-3” EN1982-CB491K
Brass bonnet dimensions 3/8”-1”1/2 EN12165-CW617N
Cast brass bonnet dimensions 2” EN 1982-CN753S
Cast bronze bonnet dimensions 2”1/2-3” EN1982-CB491K
Other components in brass EN 12164 - CW614N
Metal seat: obturator in brass EN 12165 - CW617N
Rubber seat: obturator gasket in NBR elastomer
Teflon seat: obturator gasket in pure PTFE (Teflon)
Sm GALVANIZED STEEL spring - EN 10270-1

PRODUCT CODES

Metal seat product codes			Rubber seat product codes			PTFE seat product codes		
1811.112	metal seat	3/8” F/F	1821.112	rubber seat	3/8” F/F	1831.112	PTFE seat	3/8” F/F
1811.115	metal seat	1/2” F/F	1821.115	rubber seat	1/2” F/F	1831.115	PTFE seat	1/2” F/F
1811.120	metal seat	3/4” F/F	1821.120	rubber seat	3/4” F/F	1831.120	PTFE seat	3/4” F/F
1811.125	metal seat	1” F/F	1821.125	rubber seat	1” F/F	1831.125	PTFE seat	1” F/F
1811.133	metal seat	1”1/4 F/F	1821.133	rubber seat	1”1/4 F/F	1831.133	PTFE seat	1”1/4 F/F
1811.142	metal seat	1”1/2 F/F	1821.142	rubber seat	1”1/2 F/F	1831.142	PTFE seat	1”1/2 F/F
1811.150	metal seat	2” F/F	1821.150	rubber seat	2” F/F	1831.150	PTFE seat	2” F/F
1811.166	metal seat	2”1/2 F/F	1821.166	rubber seat	2”1/2 F/F	1831.166	PTFE seat	2”1/2 F/F
1811.180	metal seat	3” F/F	1821.180	rubber seat	3” F/F	1831.180	PTFE seat	3” F/F

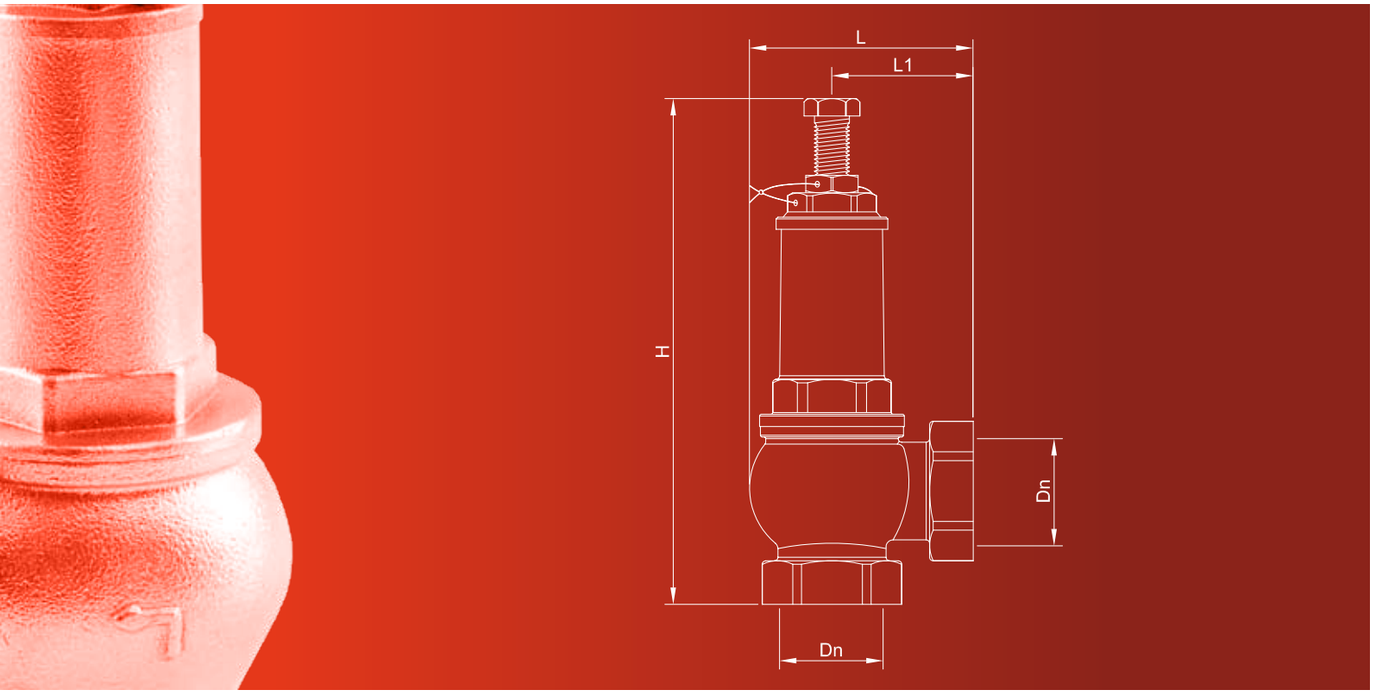
1811.1 • 3/8”-3”

1821.1 • 3/8”-3”

1831.1 • 3/8”-3”

SAFETY VALVES PRESET AND LEAD-SEALED WITH CONVEYED DISCHARGE CE
BRAND 1115 IN COMPLIANCE WITH DIRECTIVE PED 97/23/EC

CONNECTIONS: FEMALE-FEMALE



FEATURES

Dn	L	L1	H
3/8”	45	24,5	115
1/2”	56	30	122
3/4”	64	32	149
1”	76	40	163
1”1/4	90	44	192
1”1/2	100	47	218
2”	124	60	247
2”1/2	147	74,5	304
3”	155	86	336

SETTING

Discharging flow H_2O (m^3/h) cod. 1811.1-1821.1-1831.1

P tar	3/8”	1/2”	3/4”	1”	1”1/4	1”1/2	2”	2”1/2	3”
1	0,6	1	2	3,7	5,4	8,2	13	23,2	33,9
2	0,7	1,2	2,5	4,6	6,7	10	15,9	28,4	41,6
3	0,8	1,4	2,9	5,3	7,7	11,5	18,4	32,7	48
4	0,9	1,5	3,2	5,9	8,6	12,9	20,6	36,6	53,7
5	1	1,7	3,5	6,5	9,4	14,1	22,6	40,1	58,8
6	1,1	1,8	3,8	7	10,2	15,3	24,4	43,3	63,5
7	1,2	1,9	4,1	7,5	10,9	16,3	26	46,3	67,9
8	1,2	2	4,3	7,9	11,5	17,3	27,6	49,1	72
9	1,3	2,1	4,6	8,3	12,1	18,2	29,1	51,8	75,9
10	1,4	2,2	4,8	8,8	12,7	19,1	30,5	54,3	79,6
11	1,4	2,3	5	9,1	13,3	20	31,9	56,7	83,2
12	1,5	2,4	5,2	9,5	13,8	20,8	33,2	59	86,6
13	1,6	2,5	4,5	9,9	14,4	21,6	4,5	61,3	89,8
14	1,6	2,6	5,6	10,2	14,9	22,4	35,7	63,4	93
15	1,7	2,7	5,8	10,6	15,4	23,1	36,8	65,5	96
16	1,7	2,8	5,9	10,9	15,8	23,8	38	67,5	99

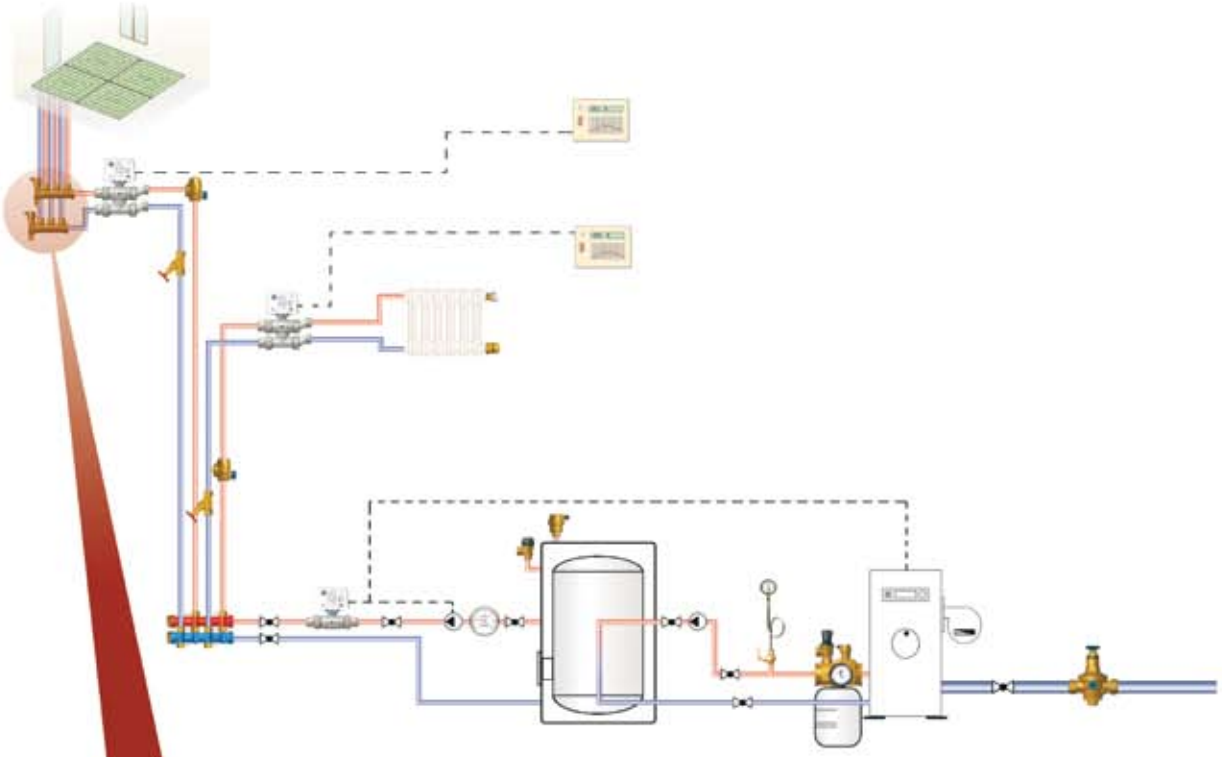
Discharging flow STEAM (kg/h) cod. 1811.1-1831.1

P tar	3/8”	1/2”	3/4”	1”	1”1/4	1”1/2	2”	2”1/2	3”
1	2,5	3,8	6,2	13,1	24	34,9	52,5	83,7	148,7
2	3,6	5,6	9,1	19,4	35,5	51,6	77,7	123,9	220,2
3	4,8	7,4	12	25,6	46,9	69,2	102,6	163,7	291
4	6	9,2	14,9	31,8	58,2	84,7	127,4	203,3	361,3
5	7,1	11	17,8	38	69,5	101,1	152,1	242,7	431,3
6	8,3	12,8	20,7	44,1	80,7	117,5	176,7	281,9	501
7	9,4	14,6	23,6	50,2	91,9	133,8	201,3	321,1	570,6
8	10,5	16,3	26,5	56,3	103,1	150,1	225,7	360,1	639,9
9	11,7	18,1	29,3	62,4	114,3	166,4	250,2	399,1	709,3
10	12,8	19,9	32,2	68,5	125,4	182,6	274,6	438	778,4
11	14	21,6	35,1	74,6	136,6	198,8	299	477	847,7
12	15,1	23,4	37,9	80,7	147,7	215	323,3	515,8	916,7
13	16,4	25,4	41,2	87,7	160,6	233,8	351,6	560,9	996,9
14	17,6	27,2	44,1	93,9	171,8	250,1	376,2	600,1	1066,5
15	18,7	29	47	100	183,1	266,6	400,9	639,5	1136,6
16	19,9	30,8	49,9	106,2	194,4	283	425,6	679	1206,7

Discharging flow GAS (kg/h) cod. 1831.1

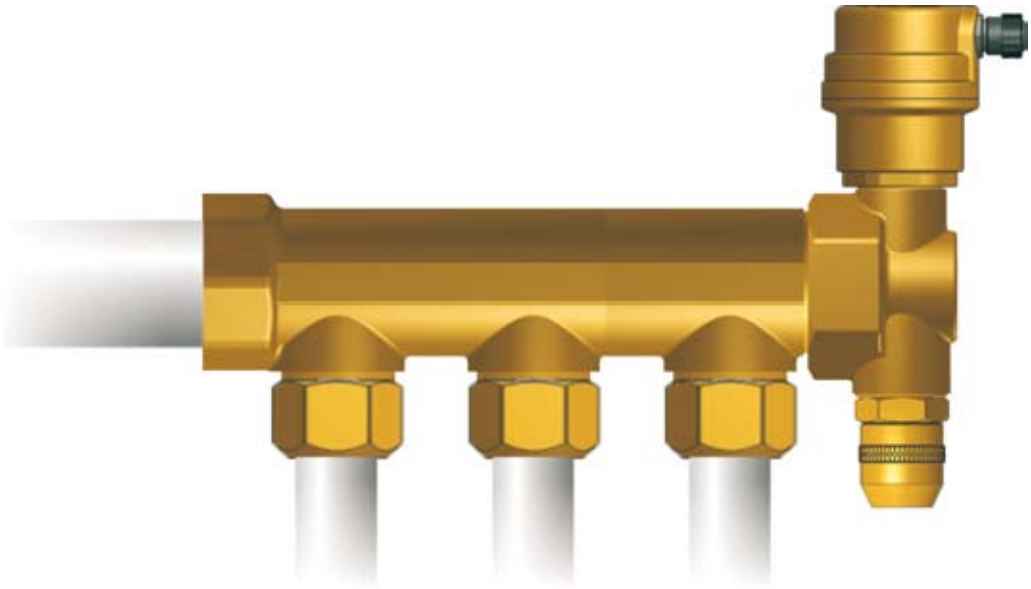
P tar	3/8”	1/2”	3/4”	1”	1”1/4	1”1/2	2”	2”1/2	3”
1	4,1	6,3	10,2	21,6	39,6	57,6	86,7	138,3	245,8
2	6,1	9,4	15,3	32,5	59,4	86,5	130,1	207,5	368,7
3	8,1	12,5	20,3	43,3	79,2	115,3	173,4	276,6	491,6
4	10,1	15,7	25,4	54,1	99	144,1	216,8	345,8	614,5
5	12,2	18,8	30,5	64,9	118,8	172,9	260,1	414,9	737,4
6	14,2	21,9	35,6	75,7	138,6	201,8	303,5	484,1	860,3
7	16,2	25,1	40,7	86,5	158,4	230,6	346,8	553,2	983,2
8	18,3	28,2	45,8	97,4	178,2	259,4	390,2	622,4	1106,1
9	20,3	31,3	50,8	108,2	198	288,2	433,5	691,5	1229
10	22,3	34,5	55,9	119	217,8	317,1	476,9	760,7	1351,9
11	24,3	37,6	61	129,8	237,6	345,9	520,2	829,9	1478,8
12	26,4	40,8	66,1	140,6	257,4	374,7	563,6	899	1597,7
13	28,4	43,9	71,2	151,5	277,2	403,5	606,9	968,2	1720,6
14	30,4	47	76,3	162,3	297	432,4	650,3	1037,3	1843,5
15	32,5	50,2	81,3	173,1	316,8	461,1	693,6	1106,5	1966,4
16	34,5	53,3	86,4	183,9	336,6	490	737	1175,6	2084

MANIFOLDS



GENERAL INSTALLATION INFORMATION

The simple manifolds made from brass bar are installed in a central position regarding to the devices (ideal in a control box) in order to obtain the best hydraulic counterbalance. These manifolds may be installed horizontally or vertically (axis of the principal conduit) without compromising the good performance; moreover, one of the manifold's head connections may be used as an additional offtake installing a reducer or an offtake head. Common double-ended spanners (wrenches) are recommended when tightening piping connections to the offtakes in order to prevent dangerous offtake pipe torsions/ movements. Non-used offtakes can be sealed with the appropriate plugs. Installing two shut off valves between the principal pipelines and the manifold(s) is recommended.



2000 • 3/4”- 1” 2 OFFTAKES MALE 1/2”

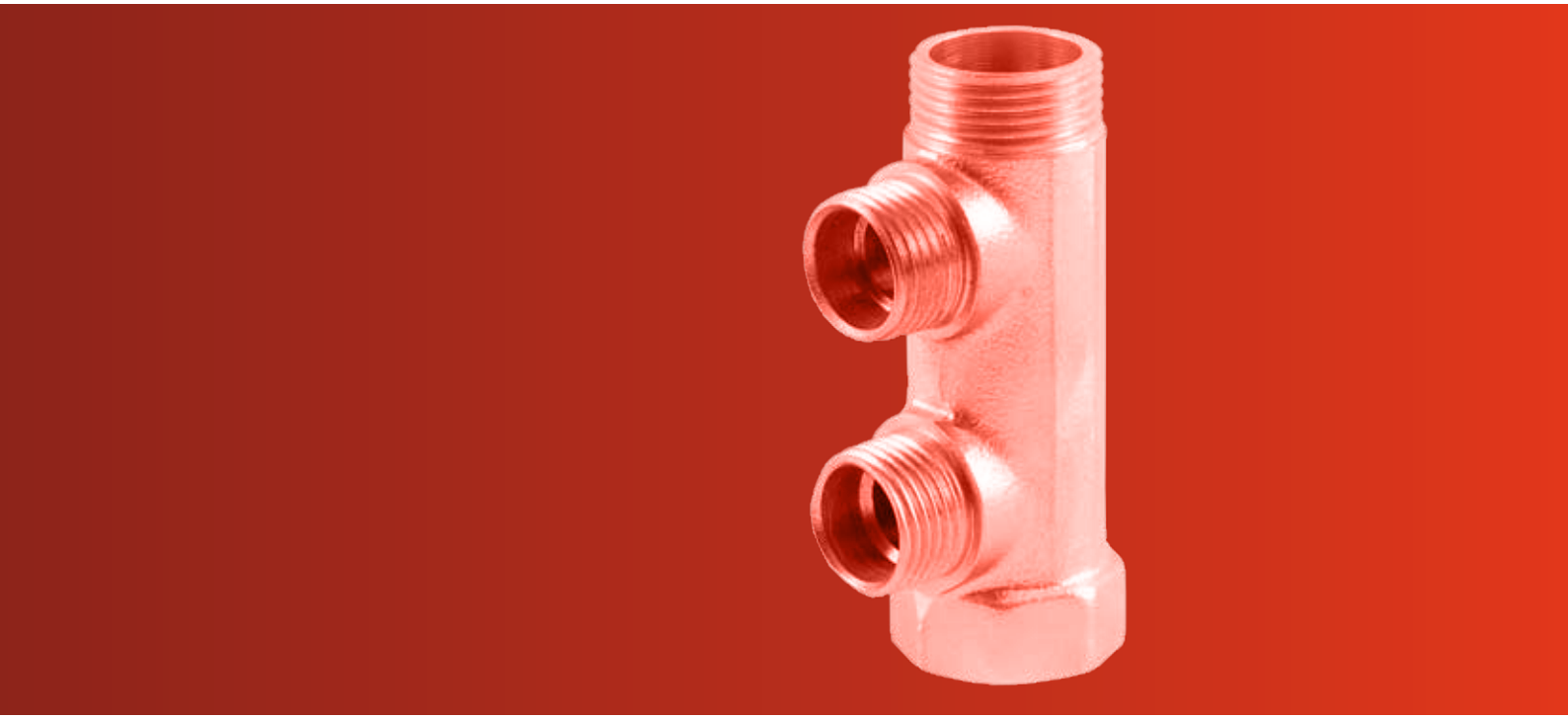
2001 • 3/4”- 1” 3 OFFTAKES MALE 1/2”

2002 • 3/4”- 1” 4 OFFTAKES MALE 1/2”

2003 • 3/4”- 1” 5 OFFTAKES MALE 1/2”

SIMPLE OPEN MANIFOLDS

CONNECTIONS: MALE-FEMALE/OFFTAKE MALE



HYDRAULIC FEATURES

The simple manifold with lateral offtakes is used to distribute heat-transfer fluid in climatisation systems of all sorts. Its reduced horizontal space requirement, which makes it even possible to be installed in a control box, renders it particularly ideal for simple hydraulic networks feeding single terminal units. The manifold is fed by the general distribution and disposes of a variable number of offtakes, which feed as many pipes as necessary for each terminal in a system comprising diverse sanitary devices, thus avoiding dangerous subsurface or conduit junctions. Each manifold offtake is attached to the respective copper pipe or, with the proper adaptation setup, to a PEX or multilayer tube, by means of a compression fitting equipped with a sealing ogive, which allows to dismantle and reuse if necessary; and to assure a perfect hydraulic seal for years as well as noteworthy time savings in setup. The broader dimensions of principal conduits permit an elevated flow capacity which gives the manifolds a wide scope of applications: heating systems, fan-coils and radiant panel heating.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Temperature:	
Working temperature (TS)	from 0°C (excluding ice) to +110°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Offtake threads according to	ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1

DESIGN

Cast brass body EN 1982 - CB753S

PRODUCT CODES

2000.020	3/4”	M/F	2	offtakes male	1/2”	2002.020	3/4”	M/F	4	offtakes male	1/2”
2000.025	1”	M/F	2	offtakes male	1/2”	2002.025	1”	M/F	4	offtakes male	1/2”
2001.020	3/4”	M/F	3	offtakes male	1/2”	2003.020	3/4”	M/F	5	offtakes male	1/2”
2001.025	1”	M/F	3	offtakes male	1/2”	2003.025	1”	M/F	5	offtakes male	1/2”

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

2000 • 3/4”- 1” 2 OFFTAKES MALE 1/2”

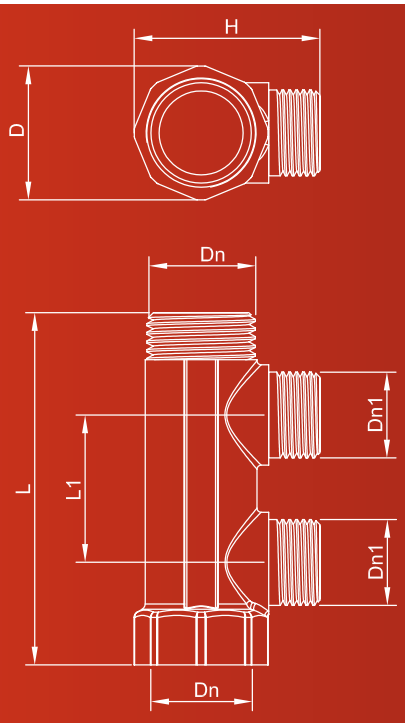
2001 • 3/4”- 1” 3 OFFTAKES MALE 1/2”

2002 • 3/4”- 1” 4 OFFTAKES MALE 1/2”

2003 • 3/4”- 1” 5 OFFTAKES MALE 1/2”

SIMPLE OPEN MANIFOLDS

CONNECTIONS: MALE-FEMALE/OFFTAKE MALE



FEATURES

Cod.	n° Offtakes	Dn	Dn1	D	L	L1	H
2000	2	3/4”	1/2”	33	86	36	43
2000	2	1”	1/2”	42	86	36	51
2001	3	3/4”	1/2”	33	122	36	43
2001	3	1”	1/2”	42	122	36	51
2002	4	3/4”	1/2”	33	158	36	43
2002	4	1”	1/2”	42	158	36	51
2003	5	3/4”	1/2”	33	194	36	43
2003	5	1”	1/2”	42	194	36	51

2010 • 3/4”- 1” 2 OFFTAKES FEMALE 1/2”

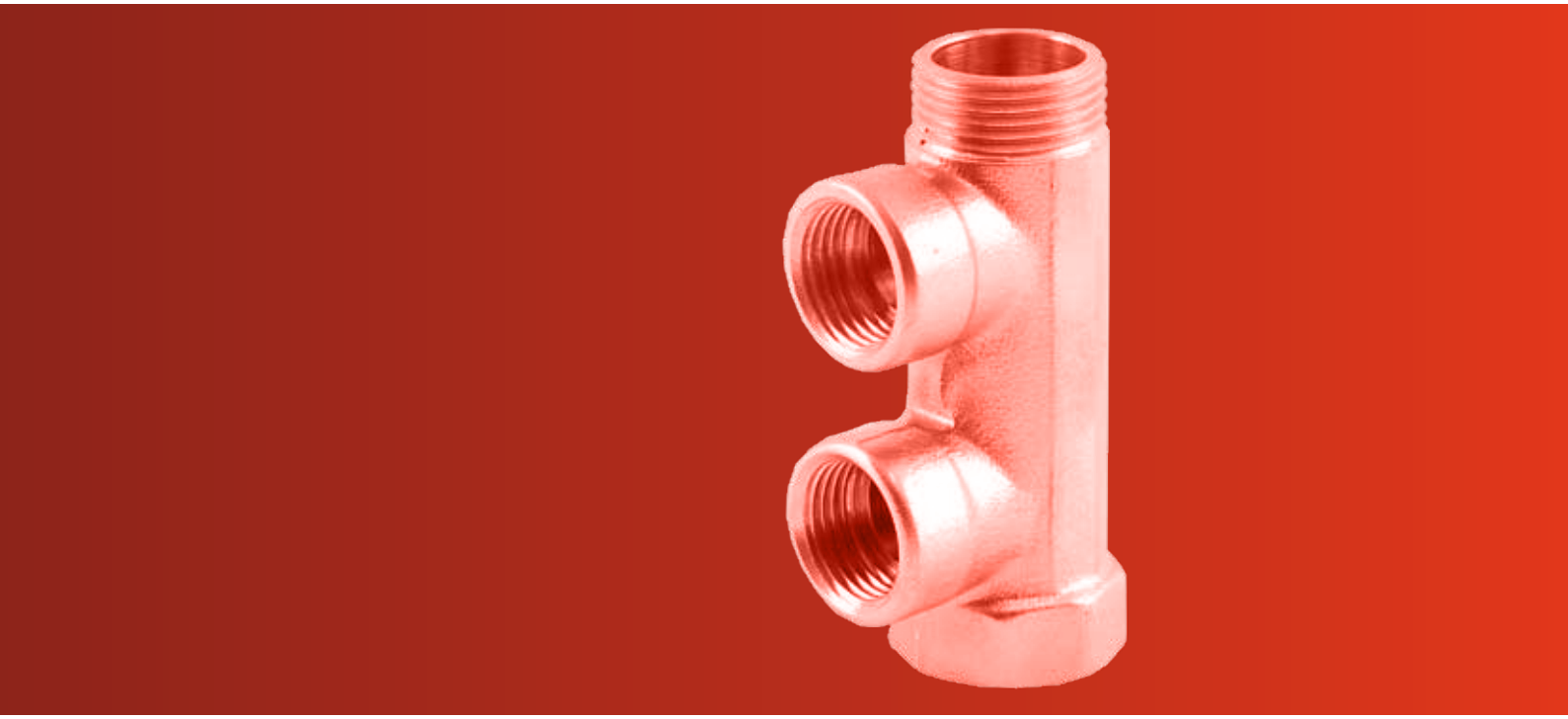
2011 • 3/4”- 1” 3 OFFTAKES FEMALE 1/2”

2012 • 3/4”- 1” 4 OFFTAKES FEMALE 1/2”

2013 • 3/4”- 1” 5 OFFTAKES FEMALE 1/2”

SIMPLE OPEN MANIFOLDS

CONNECTIONS: MALE-FEMALE/OFFTAKE FEMALE



HYDRAULIC FEATURES

The simple manifold with lateral offtakes is used to distribute heat-transfer fluid in climatisation systems of all sorts. Its reduced horizontal space requirement, which makes it even possible to be installed in a control box, renders it particularly ideal for simple hydraulic networks feeding single terminal units. The manifold is fed by the general distribution and disposes of a variable number of offtakes, which feed as many pipes as necessary for each terminal in a system comprising diverse sanitary devices, thus avoiding dangerous subsurface or conduit junctions. Each manifold offtake is attached to the respective copper pipe or, with the proper adaptation setup, to a PEX or multilayer tube, by means of a compression fitting equipped with a sealing ogive, which allows to dismantle and reuse if necessary; and to assure a perfect hydraulic seal for years as well as noteworthy time savings in setup. The broader dimensions of principal conduits permit an elevated flow capacity which gives the manifolds a wide scope of applications: heating systems, fan-coils and radiant panel heating.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Temperature:	
Working temperature (TS)	from 0°C (excluding ice) to +110°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Offtake threads according to	ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1

DESIGN

Cast brass body EN 1982 - CW753S

PRODUCT CODES

2010.020	3/4”	M/F	2	offtakes female	1/2”	2012.020	3/4”	M/F	4	offtakes female	1/2”
2010.025	1”	M/F	2	offtakes female	1/2”	2012.025	1”	M/F	4	offtakes female	1/2”
2011.020	3/4”	M/F	3	offtakes female	1/2”	2013.020	3/4”	M/F	5	offtakes female	1/2”
2011.025	1”	M/F	3	offtakes female	1/2”	2013.025	1”	M/F	5	offtakes female	1/2”

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
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FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

2010 • 3/4”- 1” 2 OFFTAKES FEMALE 1/2”

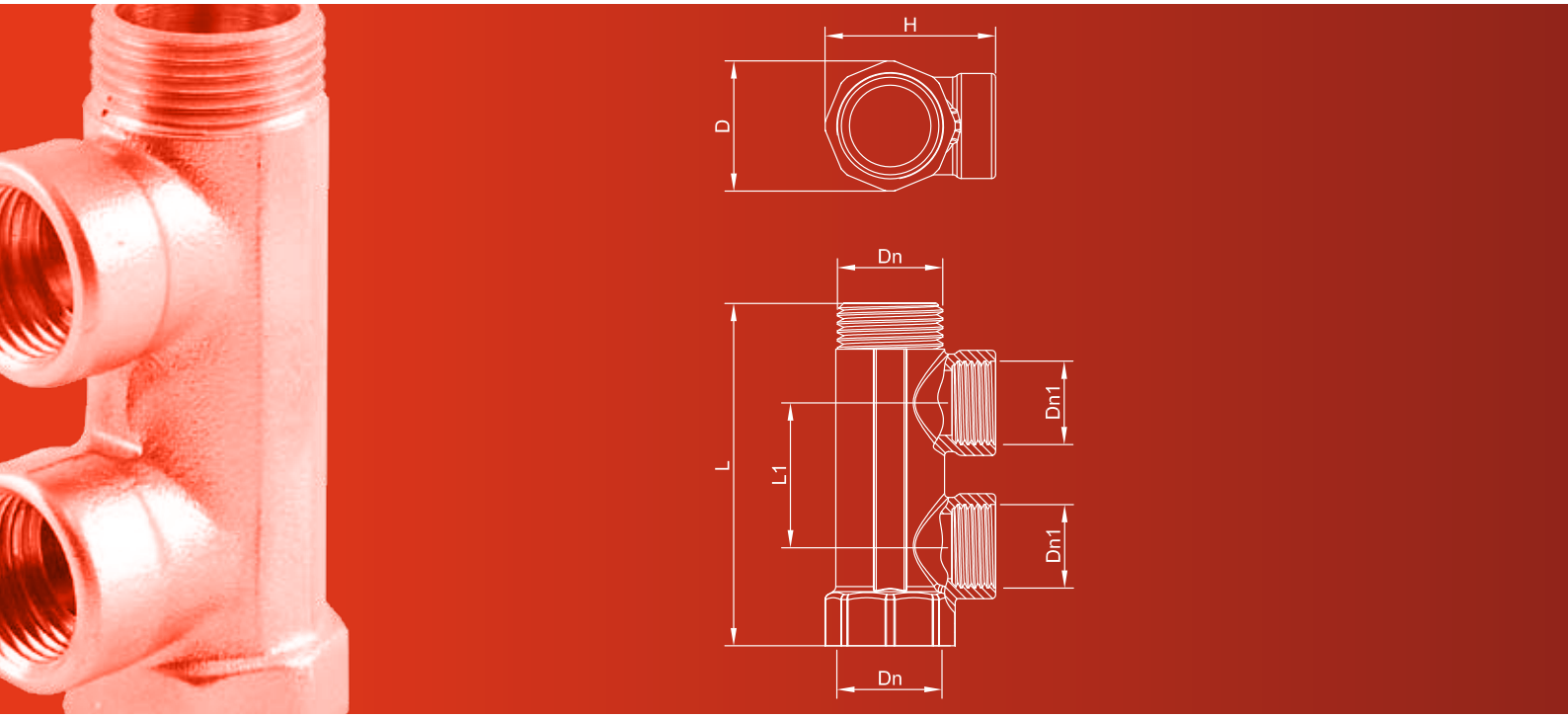
2011 • 3/4”- 1” 3 OFFTAKES FEMALE 1/2”

2012 • 3/4”- 1” 4 OFFTAKES FEMALE 1/2”

2013 • 3/4”- 1” 5 OFFTAKES FEMALE 1/2”

SIMPLE OPEN MANIFOLDS

CONNECTIONS: MALE-FEMALE/OFFTAKE FEMALE



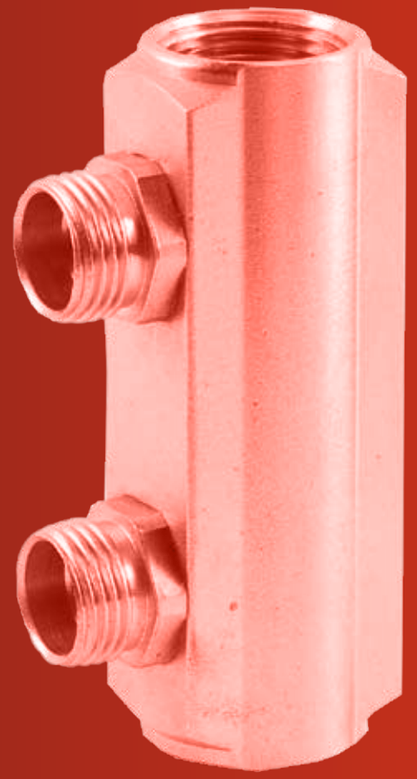
FEATURES

Cod.	n° Offtakes	Dn	Dn1	D	L	L1	H
2010	2	3/4”	1/2”	33	86	36	45
2010	2	1”	1/2”	42	86	36	53
2011	3	3/4”	1/2”	33	122	36	45
2011	3	1”	1/2”	42	122	36	53
2012	4	3/4”	1/2”	33	158	36	45
2012	4	1”	1/2”	42	158	36	53
2013	5	3/4”	1/2”	33	194	36	45
2013	5	1”	1/2”	42	194	36	53

2020 • 3/4”- 1”1/4 2 OFFTAKES MALE 1/2”
2021 • 3/4”- 1”1/4 3 OFFTAKES MALE 1/2”
2022 • 3/4”- 1”1/4 4 OFFTAKES MALE 1/2”
2023 • 3/4”- 1”1/4 5 OFFTAKES MALE 1/2”
2024 • 3/4”- 1”1/4 6 OFFTAKES MALE 1/2”
2025 • 3/4”- 1”1/4 7 OFFTAKES MALE 1/2”
2026 • 3/4”- 1”1/4 8 OFFTAKES MALE 1/2”
2027 • 3/4”- 1”1/4 9 OFFTAKES MALE 1/2”
2028 • 3/4”- 1”1/4 10 OFFTAKES MALE 1/2”

SIMPLE OPEN MANIFOLDS FROM BRASS BAR

CONNECTIONS: FEMALE-FEMALE/OFFTAKE MALE



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TEL. +39 0163.48165
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www.officinerigamonti.it
export@officinerigamonti.it

HYDRAULIC FEATURES

The simple open manifold made from brass bar with off takes is used to distribute heat-transfer fluid in climatisation systems of all sorts. Its reduced horizontal space requirement, which makes it even possible to be installed in a control box, renders it particularly ideal for track hydraulic networks feeding single terminal units. The simple manifolds are installed in pairs, one for hot and the other for cold water, which are fed directly from the general distribution pipeline. The available dimensions and offtakes permit numerous system solutions and distribution networks of all dimensions and sorts, thus avoiding dangerous subsurface or conduit junctions. These are also used in distribution systems with parallel feeds (double pipeline). Placing 2 or 3 way zone valves upstream from manifolds will supply the systems with an automatic regulation for the subdivision of operating costs. Each manifold offtake is attached to the respective copper pipe by means of a compression fitting equipped with sealing ogive in PTFE or rubber, allowing dismantling and reuse if necessary; and rending a perfect hydraulic seal for years as well as noteworthy time savings in setup. There are also available adaptations for PEX and multilayer tubes. The high precision of the internal working of the simple open manifold made from brass bar, together with the broader dimensions, together with the broader dimensions of the principal conduits, create a highly modest flow resistance that renders this manifold ideal for various applications: heating systems, fan-coils and radiant panel heating. The simple open manifolds are installed in a central position regarding to the devices (ideal in a control box) in order to obtain the best hydraulic counterbalance. These manifolds may be installed horizontally or vertically (axis of the principal conduit) without compromising its performance; moreover, one of the manifold’s head connections may be used as an additional offtake, e.g., as a reducer or offtake head. Common double-ended spanners (wrenches) are recommended when tightening piping connections to the offtakes in order to prevent offtake pipe torsions/movements. Non-used offtakes can be sealed with the appropriate plugs. Installing two shut off valves between the principal pipelines and the manifold(s) is recommended.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Temperature:	
Working temperature (TS)	from 0°C (excluding ice) to +110°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Offtake	Threads according to ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1

DESIGN

Brass Body EN 12164 - CW614N

PRODUCT CODES

2020.020	3/4”	F/F	2	offtakes male	1/2”	2024.033	1”1/4	F/F	6	offtakes male	1/2”
2020.025	1”	F/F	2	offtakes male	1/2”	2025.020	3/4”	F/F	7	offtakes male	1/2”
2020.033	1”1/4	F/F	2	offtakes male	1/2”	2025.025	1”	F/F	7	offtakes male	1/2”
2021.020	3/4”	F/F	3	offtakes male	1/2”	2025.033	1”1/4	F/F	7	offtakes male	1/2”
2021.025	1”	F/F	3	offtakes male	1/2”	2026.020	3/4”	F/F	8	offtakes male	1/2”
2021.033	1”1/4	F/F	3	offtakes male	1/2”	2026.025	1”	F/F	8	offtakes male	1/2”
2022.020	3/4”	F/F	4	offtakes male	1/2”	2026.033	1”1/4	F/F	8	offtakes male	1/2”
2022.025	1”	F/F	4	offtakes male	1/2”	2027.020	3/4”	F/F	9	offtakes male	1/2”
2022.033	1”1/4	F/F	4	offtakes male	1/2”	2027.025	1”	F/F	9	offtakes male	1/2”
2023.020	3/4”	F/F	5	offtakes male	1/2”	2027.033	1”1/4	F/F	9	offtakes male	1/2”
2023.025	1”	F/F	5	offtakes male	1/2”	2028.020	3/4”	F/F	10	offtakes male	1/2”
2023.033	1”1/4	F/F	5	offtakes male	1/2”	2028.025	1”	F/F	10	offtakes male	1/2”
2024.020	3/4”	F/F	6	offtakes male	1/2”	2028.033	1”1/4	F/F	10	offtakes male	1/2”
2024.025	1”	F/F	6	offtakes male	1/2”						

2020 • 3/4”- 1”1/4 2 OFFTAKES MALE 1/2”

2021 • 3/4”- 1”1/4 3 OFFTAKES MALE 1/2”

2022 • 3/4”- 1”1/4 4 OFFTAKES MALE 1/2”

2023 • 3/4”- 1”1/4 5 OFFTAKES MALE 1/2”

2024 • 3/4”- 1”1/4 6 OFFTAKES MALE 1/2”

2025 • 3/4”- 1”1/4 7 OFFTAKES MALE 1/2”

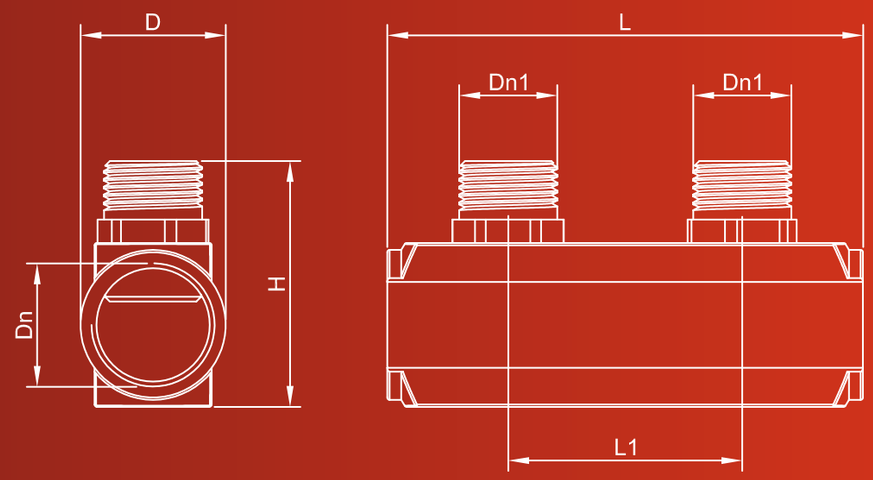
2026 • 3/4”- 1”1/4 8 OFFTAKES MALE 1/2”

2027 • 3/4”- 1”1/4 9 OFFTAKES MALE 1/2”

2028 • 3/4”- 1”1/4 10 OFFTAKES MALE 1/2”

SIMPLE OPEN MANIFOLDS FROM BRASS BAR

CONNECTIONS: FEMALE-FEMALE/OFFTAKE MALE



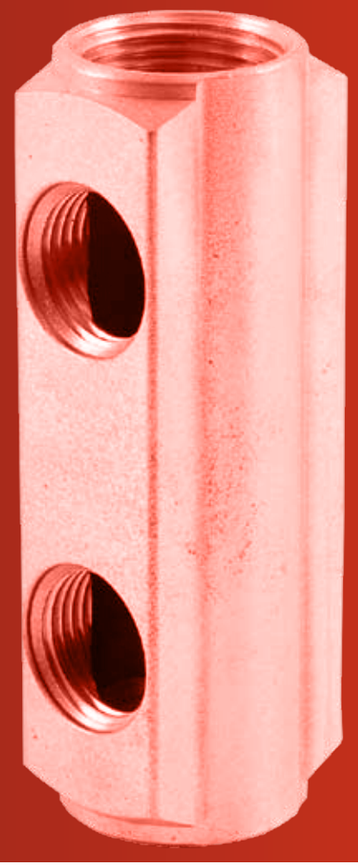
FEATURES

Cod.	n° Offtakes	Dn	Dn1	D	L	L1	H
2020	2	3/4”	1/2”	31	102	50	50
2020	2	1”	1/2”	33	102	50	56
2020	2	1”1/4	1/2”	39	102	50	66
2021	3	3/4”	1/2”	31	152	50	50
2021	3	1”	1/2”	33	152	50	56
2021	3	1”1/4	1/2”	39	152	50	66
2022	4	3/4”	1/2”	31	202	50	50
2022	4	1”	1/2”	33	202	50	56
2022	4	1”1/4	1/2”	39	202	50	66
2023	5	3/4”	1/2”	31	252	50	50
2023	5	1”	1/2”	33	252	50	56
2023	5	1”1/4	1/2”	39	252	50	66
2024	6	3/4”	1/2”	31	302	50	50
2024	6	1”	1/2”	33	302	50	56
2024	6	1”1/4	1/2”	39	302	50	66
2025	7	3/4”	1/2”	31	352	50	50
2025	7	1”	1/2”	33	352	50	56
2025	7	1”1/4	1/2”	39	352	50	66
2026	8	3/4”	1/2”	31	402	50	50
2026	8	1”	1/2”	33	402	50	56
2026	8	1”1/4	1/2”	39	402	50	66
2027	9	3/4”	1/2”	31	452	50	50
2027	9	1”	1/2”	33	452	50	56
2027	9	1”1/4	1/2”	39	452	50	66
2028	10	3/4”	1/2”	31	502	50	50
2028	10	1”	1/2”	33	502	50	56
2028	10	1”1/4	1/2”	39	502	50	66

2030 • 3/4”- 1”1/4 2 OFFTAKES FEMALE 1/2”
2031 • 3/4”- 1”1/4 3 OFFTAKES FEMALE 1/2”
2032 • 3/4”- 1”1/4 4 OFFTAKES FEMALE 1/2”
2033 • 3/4”- 1”1/4 5 OFFTAKES FEMALE 1/2”
2034 • 3/4”- 1”1/4 6 OFFTAKES FEMALE 1/2”
2035 • 3/4”- 1”1/4 7 OFFTAKES FEMALE 1/2”
2036 • 3/4”- 1”1/4 8 OFFTAKES FEMALE 1/2”
2037 • 3/4”- 1”1/4 9 OFFTAKES FEMALE 1/2”
2038 • 3/4”- 1”1/4 10 OFFTAKES FEMALE 1/2”

SIMPLE OPEN MANIFOLDS FROM BRASS BAR

CONNECTIONS: FEMALE-FEMALE/OFFTAKE FEMALE



OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

HYDRAULIC FEATURES

The simple open manifold made from brass bar with off takes is used to distribute heat-transfer fluid in climatisation systems of all sorts. Its reduced horizontal space requirement, which makes it even possible to be installed in a control box, renders it particularly ideal for track hydraulic networks feeding single terminal units. The simple manifolds are installed in pairs, one for hot and the other for cold water, which are fed directly from the general distribution pipeline. The available dimensions and offtakes permit numerous system solutions and distribution networks of all dimensions and sorts, thus avoiding dangerous subsurface or conduit junctions. These are also used in distribution systems with parallel feeds (double pipeline). Placing 2 or 3 way zone valves upstream from manifolds will supply the systems with an automatic regulation for the subdivision of operating costs. Each manifold offtake is attached to the respective copper pipe by means of a compression fitting equipped with sealing ogive in PTFE or rubber, allowing dismantling and reuse if necessary; and rending a perfect hydraulic seal for years as well as noteworthy time savings in setup. There are also available adaptations for PEX and multilayer tubes. The high precision of the internal working of the simple open manifold made from brass bar, together with the broader dimensions of the principal conduits, create a highly modest flow resistance that renders this manifold ideal for various applications: heating systems, fan-coils and radiant panel heating. The simple open manifolds are installed in a central position regarding to the devices (ideal in a control box) in order to obtain the best hydraulic counterbalance. These manifolds may be installed horizontally or vertically (axis of the principal conduit) without compromising its performance; moreover, one of the manifold’s head connections may be used as an additional offtake, e.g., as a reducer or offtake head. Common double-ended spanners (wrenches) are recommended when tightening piping connections to the offtakes in order to prevent offtake pipe torsions/movements. Non-used offtakes can be sealed with the appropriate plugs. Installing two shut off valves between the principal pipelines and the manifold(s) is recommended.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Temperature:	
Working temperature (TS)	from 0°C (excluding ice) to +110 °C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Offtake threads according to	ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1

DESIGN

Brass Body EN 12164 - CW614N

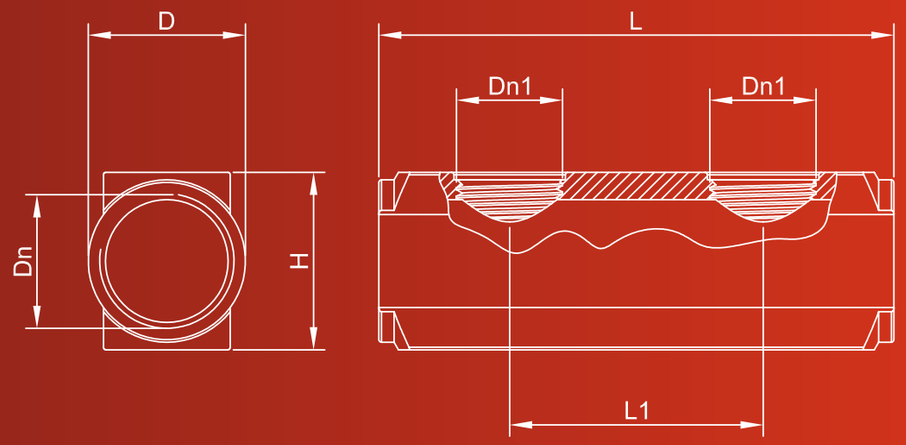
PRODUCT CODES

2030.020	3/4”	F/F	2	offtakes female	1/2”	2034.033	1”1/4	F/F	6	offtakes female	1/2”
2030.025	1”	F/F	2	offtakes female	1/2”	2035.020	3/4”	F/F	7	offtakes female	1/2”
2030.033	1”1/4	F/F	2	offtakes female	1/2”	2035.025	1”	F/F	7	offtakes female	1/2”
2031.020	3/4”	F/F	3	offtakes female	1/2”	2035.033	1”1/4	F/F	7	offtakes female	1/2”
2031.025	1”	F/F	3	offtakes female	1/2”	2036.020	3/4”	F/F	8	offtakes female	1/2”
2031.033	1”1/4	F/F	3	offtakes female	1/2”	2036.025	1”	F/F	8	offtakes female	1/2”
2032.020	3/4”	F/F	4	offtakes female	1/2”	2036.033	1”1/4	F/F	8	offtakes female	1/2”
2032.025	1”	F/F	4	offtakes female	1/2”	2037.020	3/4”	F/F	9	offtakes female	1/2”
2032.033	1”1/4	F/F	4	offtakes female	1/2”	2037.025	1”	F/F	9	offtakes female	1/2”
2033.020	3/4”	F/F	5	offtakes female	1/2”	2037.033	1”1/4	F/F	9	offtakes female	1/2”
2033.025	1”	F/F	5	offtakes female	1/2”	2038.020	3/4”	F/F	10	offtakes female	1/2”
2033.033	1”1/4	F/F	5	offtakes female	1/2”	2038.025	1”	F/F	10	offtakes female	1/2”
2034.020	3/4”	F/F	6	offtakes female	1/2”	2038.033	1”1/4	F/F	10	offtakes female	1/2”
2034.025	1”	F/F	6	offtakes female	1/2”						

2030 • 3/4”- 1”1/4 2 OFFTAKES FEMALE 1/2”
2031 • 3/4”- 1”1/4 3 OFFTAKES FEMALE 1/2”
2032 • 3/4”- 1”1/4 4 OFFTAKES FEMALE 1/2”
2033 • 3/4”- 1”1/4 5 OFFTAKES FEMALE 1/2”
2034 • 3/4”- 1”1/4 6 OFFTAKES FEMALE 1/2”
2035 • 3/4”- 1”1/4 7 OFFTAKES FEMALE 1/2”
2036 • 3/4”- 1”1/4 8 OFFTAKES FEMALE 1/2”
2037 • 3/4”- 1”1/4 9 OFFTAKES FEMALE 1/2”
2038 • 3/4”- 1”1/4 10 OFFTAKES FEMALE 1/2”

SIMPLE OPEN MANIFOLDS FROM BRASS BAR

CONNECTIONS: FEMALE-FEMALE/OFFTAKE FEMALE



FEATURES

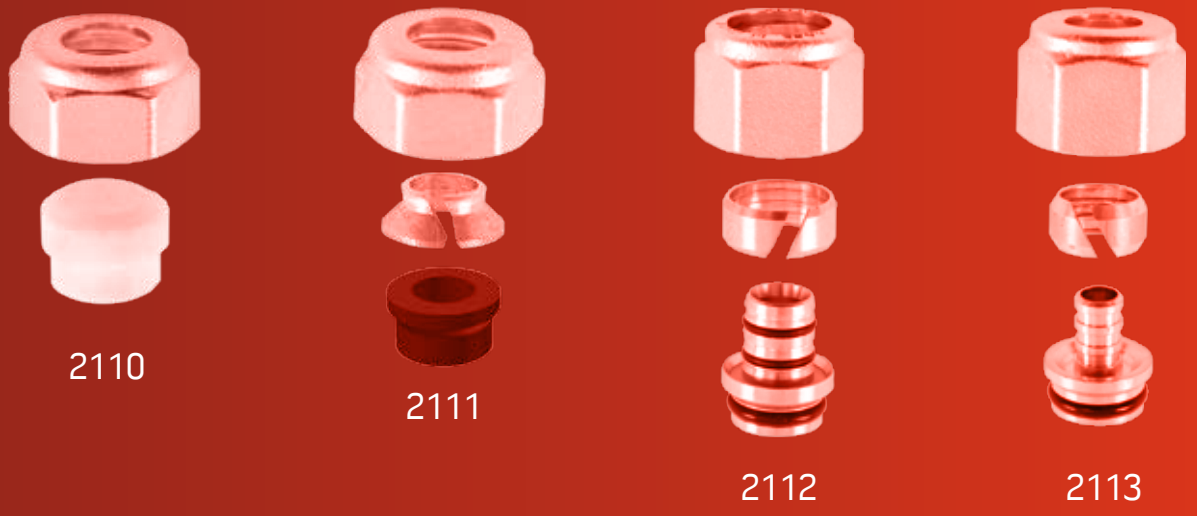
Cod.	n° Offtakes	Dn	Dn1	D	L	L1	H
2030	2	3/4”	1/2”	31	102	50	35
2030	2	1”	1/2”	33	102	50	40
2030	2	1”1/4	1/2”	39	102	50	51
2031	3	3/4”	1/2”	31	152	50	35
2031	3	1”	1/2”	33	152	50	40
2031	3	1”1/4	1/2”	39	152	50	51
2032	4	3/4”	1/2”	31	202	50	35
2032	4	1”	1/2”	33	202	50	40
2032	4	1”1/4	1/2”	39	202	50	51
2033	5	3/4”	1/2”	31	252	50	35
2033	5	1”	1/2”	33	252	50	40
2033	5	1”1/4	1/2”	39	252	50	51
2034	6	3/4”	1/2”	31	302	50	35
2034	6	1”	1/2”	33	302	50	40
2034	6	1”1/4	1/2”	39	302	50	51
2035	7	3/4”	1/2”	31	352	50	35
2035	7	1”	1/2”	33	352	50	40
2035	7	1”1/4	1/2”	39	352	50	51
2036	8	3/4”	1/2”	31	402	50	35
2036	8	1”	1/2”	33	402	50	40
2036	8	1”1/4	1/2”	39	402	50	51
2037	9	3/4”	1/2”	31	452	50	35
2037	9	1”	1/2”	33	452	50	40
2037	9	1”1/4	1/2”	39	452	50	51
2038	10	3/4”	1/2”	31	502	50	35
2038	10	1”	1/2”	33	502	50	40
2038	10	1”1/4	1/2”	39	502	50	51

2110 • 1/2” 10-16 NUT WITH BICONE IN P.T.F.E

2111 • 1/2” 10-14 NUT WITH BICONE IN RUBBER

2112 • 1/2” 12-16 PEX PIPE ADAPTOR

2113 • 1/2” 14-16 MULTILAYER PIPE ADAPTOR



DESIGN

Nuts in brass EN 12165-CW617N
Other components in brass EN 12164-CW614N
rubber NBR
pure PTFE (teflon)

PRODUCT CODES

2110.010	nut with ogive PTFE	1/2” x 10
2110.012	nut with ogive PTFE	1/2” x 12
2110.014	nut with ogive PTFE	1/2” x 14
2110.015	nut with ogive PTFE	1/2” x 15
2110.016	nut with ogive PTFE	1/2” x 16
2111.010	nut with ogive rubber	1/2” x 10
2111.012	nut with ogive rubber	1/2” x 12
2111.014	nut with ogive rubber	1/2” x 14
2112.012	plastic pipe adaptor	1/2” x 12
2112.015	plastic pipe adaptor	1/2” x 15
2112.016	plastic pipe adaptor	1/2” x 16
2113.014	multilayer pipe adaptor	1/2” x 14x2
2113.016	multilayer pipe adaptor	1/2” x 16x2
2113.116	multilayer pipe adaptor	1/2” x 16x2,25

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La qualità di mano in mano.

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via Circonvallazione, 9
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TEL. +39 0163.48165
FAX +39 0163.47254
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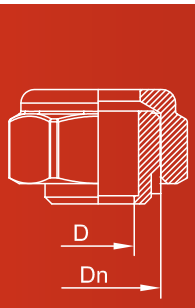
2110 • 1/2” 10-16 NUT WITH BICONE IN P.T.F.E

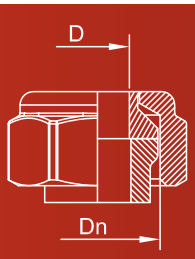
2111 • 1/2” 10-14 NUT WITH BICONE IN RUBBER

2112 • 1/2” 12-16 PEX PIPE ADAPTOR

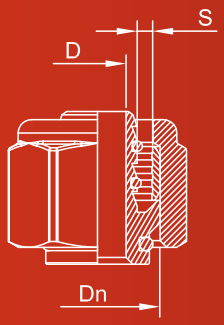
2113 • 1/2” 14-16 MULTILAYER PIPE ADAPTOR



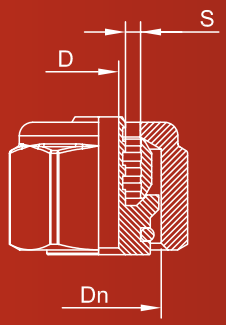
2110



2111



2112



2113

FEATURES

Cod.	Dn	Ø (tube)	S (tube)
2110	1/2”	10	\
2110	1/2”	12	\
2110	1/2”	14	\
2110	1/2”	15	\
2110	1/2”	16	\
2111	1/2”	10	\
2111	1/2”	12	\
2111	1/2”	14	\
2112	1/2”	10	\
2112	1/2”	15	\
2112	1/2”	16	\
2113	1/2”	14	2
2113	1/2”	16	2
2113	1/2”	16	2,25

2115 • 3/4”- 1” REDUCTION FOR MANIFOLD FEMALE-FEMALE

2116 • 3/4”- 1” REDUCTION FOR MANIFOLD MALE- FEMALE

2118 • 3/4”- 1” FEMALE T HEAD FOR MANIFOLD

2119 • 3/4”- 1” MALE T HEAD FOR MANIFOLD

0113 • 1/2”-1”1/4 THREADED PLUG FEMALE

0537 • 1/2”-1”1/4 THREADED PLUG MALE

2115

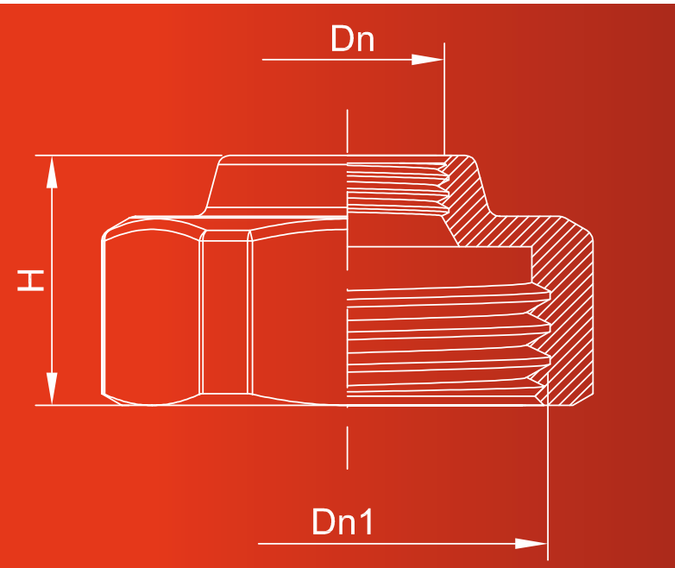
2116

0113

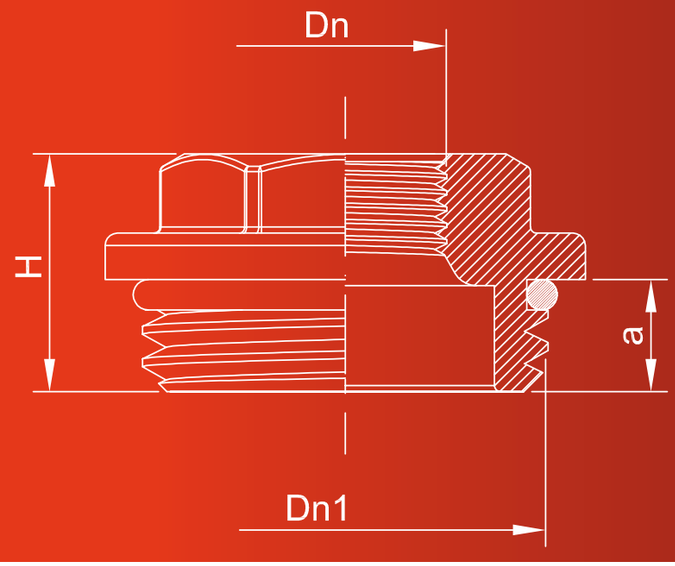
2118

2119

0537



2115



2116

DESIGN

In brass EN 12165-CW617N
In brass EN 12164 – CW614N

PRODUCT CODES

2115.020	reduction F/F	3/4” x3/8”		for manifolds
2115.025	reduction F/F	1” x3/8”		for manifolds
2116.020	reduction M/F	3/4” x3/8”		for manifolds
2116.025	reduction M/F	1” x3/8”		for manifolds
2118.020	T HEAD F	3/4” x offtake male 1/2”	x offtake female 3/8”	for manifolds
2118.025	T HEAD F	1” x offtake male 1/2”	x offtake female 3/8”	for manifolds
2119.020	T HEAD M	3/4” x offtake male 1/2”	x offtake female 3/8”	for manifolds
2119.025	T HEAD M	1” x offtake male 1/2”	x offtake female 3/8”	for manifolds

0113.015	plug female	1/2”
0113.020	plug female	3/4”
0113.025	plug female	1”
0113.033	plug female	1“1/4
0537.015	plug male	1/2”
0537.020	plug male	3/4”
0537.025	plug male	1”
0537.033	plug male	1“1/4

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
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FEATURES

2115

Dn	Dn1	H
3/8”	3/4”	17
3/8”	1”	19

2116

Dn	Dn1	H	a
3/8”	3/4”	19	10
3/8”	1”	20	10

2115 • 3/4”- 1” REDUCTION FOR MANIFOLD FEMALE-FEMALE

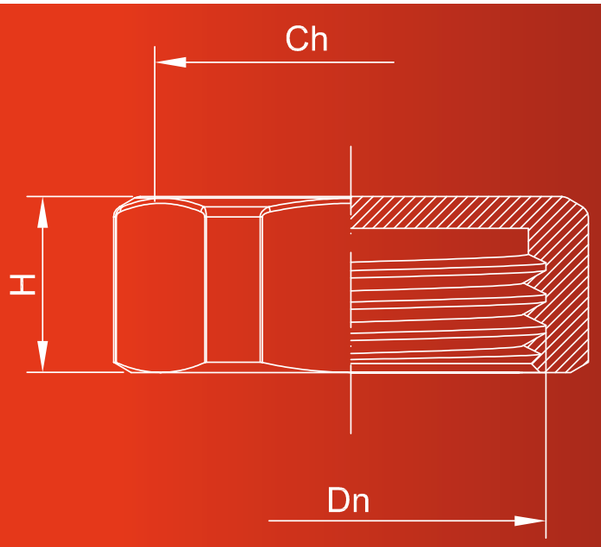
2116 • 3/4”- 1” REDUCTION FOR MANIFOLD MALE- FEMALE

2118 • 3/4”- 1” FEMALE T HEAD FOR MANIFOLD

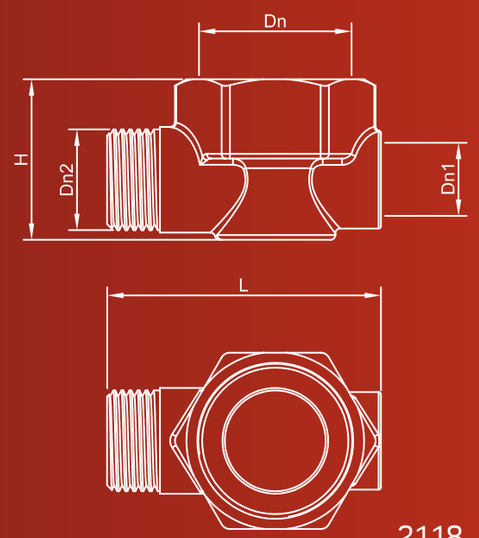
2119 • 3/4”- 1” MALE T HEAD FOR MANIFOLD

0113 • 1/2”-1”1/4 THREADED PLUG FEMALE

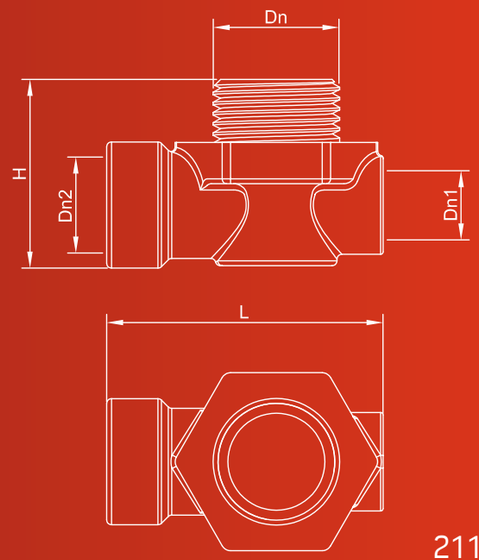
0537 • 1/2”-1”1/4 THREADED PLUG MALE



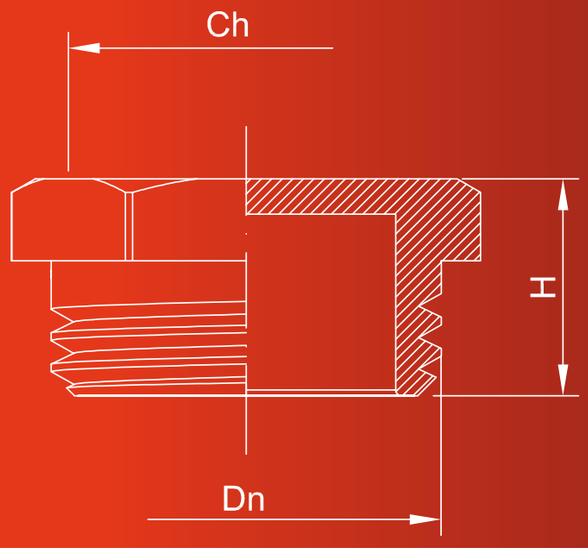
0113



2118



2119



0537

FEATURES

2118	Dn	Dn1	Dn2	L	H
	3/4”	3/8”	1/2”	57	35
	1”	3/8”	1/2”	57	35

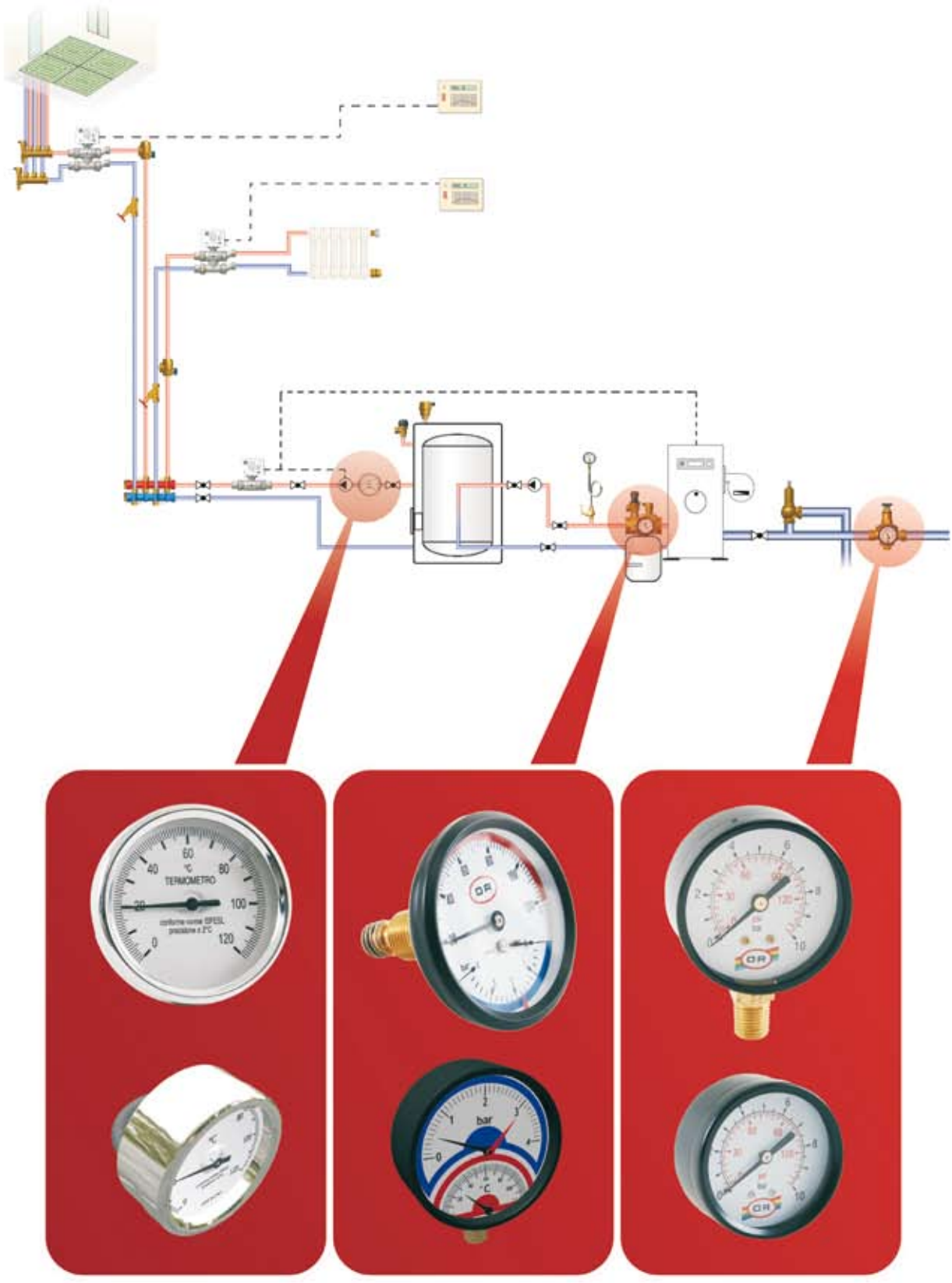
2119	Dn	Dn1	Dn2	L	H
	3/4”	3/8”	1/2”	57	40
	1”	3/8”	1/2”	57	40

FEATURES

0113	Dn	H	Ch
	1/2”	13	24
	3/4”	14	29
	1”	16	36
	1”1/4	16	46

0537	Dn	H	Ch
	1/2”	15	22
	3/4”	18	28
	1”	18	35
	1”1/4	25	40

GAUGES AND THERMOMETER-GAUGES



0240 • DIAMETER 63

0240 • DIAMETER 40

GAUGES BACK CONNECTION

CONNECTION: MALE

DIAMETER 63

TECHNICAL FEATURES

Pressure:

Maximum continuous pressure	3/4 of the value of the scale range
Maximum fluctuating pressure	2/3 of the value of the scale range
Scale range	0-4, 0-6, 0-10, 0-16, 0-25 bar
Accuracy	Cl. 2,5 EN 837-1
Protection	IP 31

Temperature:

Environment	from -20°C to +90°C
maximum temperature liquid	60°C

Threading/Connection:
Central back in brass according to EN 10226- Rp1/4" (ex ISO 7/1)

DESIGN

Construction: Varnished steel
Threaded connection: in brass EN 12164 – CW614N
Display: glass
Mono-metric element: tubular spring in copper alloy
Welding: In tin alloy

PRODUCT CODES

0240.004 scale 0-4
0240.006 scale 0-6
0240.010 scale 0-10
0240.016 scale 0-16
0240.025 scale 0-25

DIAMETER 40

TECHNICAL FEATURES

Pressure:

Maximum continuous pressure	3/4 of the value of the scale range
Maximum fluctuating pressure	2/3 of the value of the scale range
Scale range	0-6 bar
Accuracy	Cl. 2,5 EN 837-1
Protection	IP 31

Temperature:

Environment	from -20°C to +90°C
maximum temperature liquid	60°C

Threading/Connection:
Central back in brass according to EN 10226- Rp1/4" (ex ISO 7/1)

DESIGN

Construction: Varnished steel
Threaded connection: in brass EN 12164 – CW614N
Display: glass
Mono-metric element: tubular spring in copper alloy
Welding: In tin alloy

PRODUCT CODES

0240.000 scale 0-6

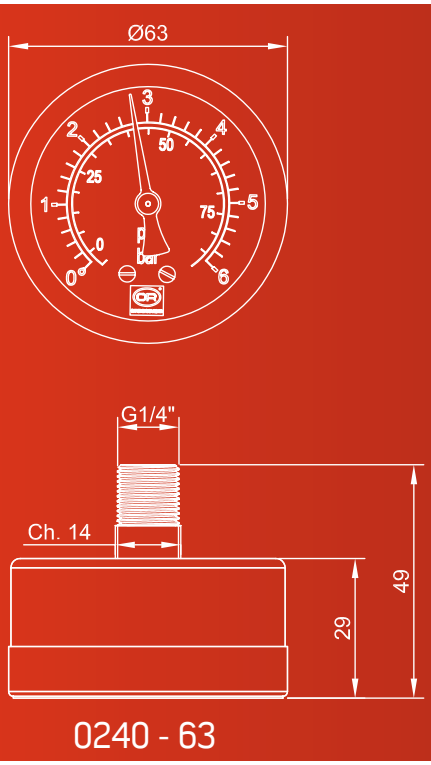
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0240 • DIAMETER 63

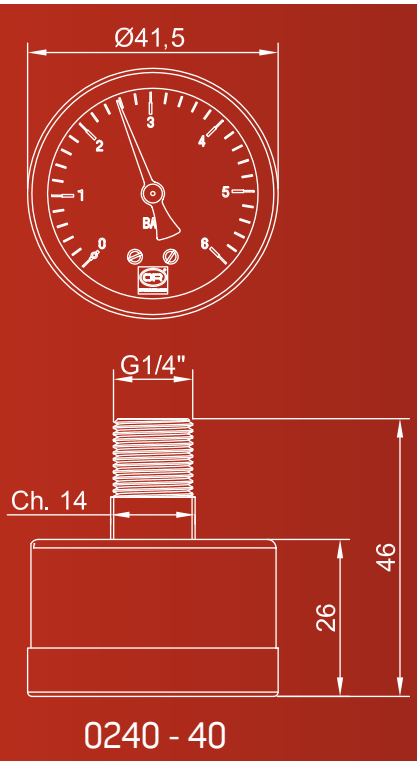
0240 • DIAMETER 40

GAUGES BACK CONNECTION

CONNECTION: MALE



0240 - 63



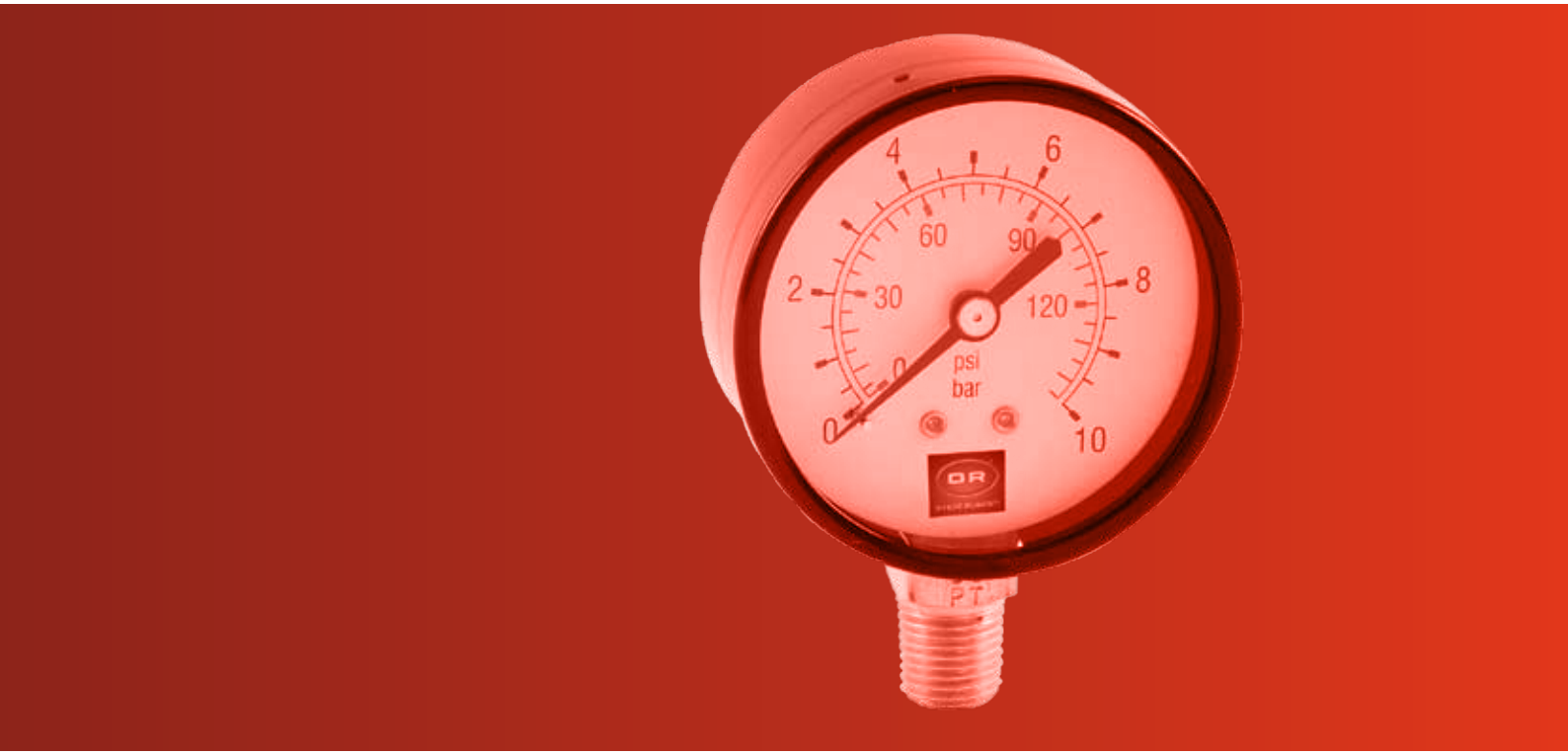
0240 - 40

0301 • DIAMETER 63

0300 • DIAMETER 40

GAUGES BOTTOM CONNECTION

CONNECTION: MALE



DIAMETER 63

TECHNICAL FEATURES

Pressure:

Maximum continuous pressure	3/4 of the value of the scale range
Maximum fluctuating pressure	2/3 of the value of the scale range
Scale range	0-4, 0-6, 0-10, 0-16, 0-25 bar
Accuracy	Cl. 2,5 EN 837-1
Protection	IP 31

Temperature:

Environment	from -20°C to +90°C
maximum temperature liquid	60°C

Threading/Connection:
Bottom in brass according to EN 10226- Rp1/4" (ex ISO 7/1)

DESIGN

Construction: Varnished steel
Threaded connection: in brass EN 12164 – CW614N
Display: glass
Mono-metric element: tubular spring in copper alloy
Welding: In tin alloy

PRODUCT CODES

0301.004 scale 0-4
0301.006 scale 0-6
0301.010 scale 0-10
0301.016 scale 0-16
0301.025 scale 0-25

DIAMETER 40

TECHNICAL FEATURES

Pressure:

Maximum continuous pressure	3/4 of the value of the scale range
Maximum fluctuating pressure	2/3 of the value of the scale range
Scale range	0-6 bar
Accuracy	Cl. 2,5 EN 837-1
Protection	IP 31

Temperature:

Environment	from -20°C to +90°C
maximum temperature liquid	60°C

Threading/Connection:
Bottom in brass according to EN 10226- Rp1/4" (ex ISO 7/1)

DESIGN

Construction: Varnished steel
Threaded connection: in brass EN 12164 – CW614N
Display: Kostil
Mono-metric element: tubular spring in copper alloy
Welding: In tin alloy

PRODUCT CODES

0300.006 scale 0-6

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
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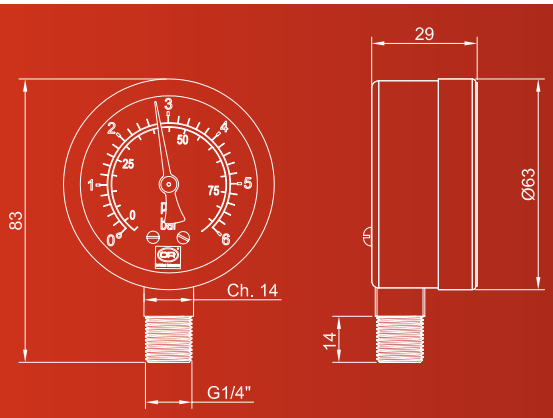
www.officinerigamonti.it
export@officinerigamonti.it

0301 • DIAMETER 63

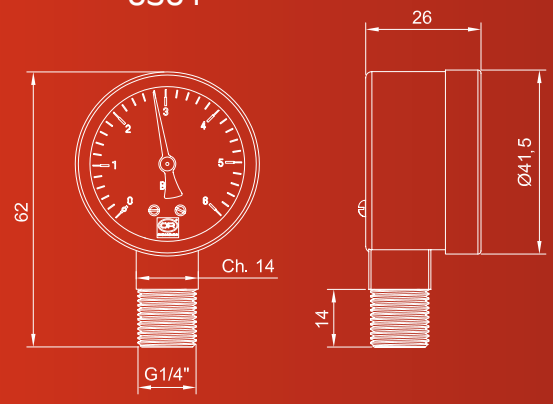
0300 • DIAMETER 40

GAUGES BOTTOM CONNECTION

CONNECTION: MALE



0301



0300

0508.0 • 1/2”

THERMOMETER-GAUGE BACK CONNECTION WITH SHUT OFF VALVE

0508.1 • 1/2”

THERMOMETER-GAUGE BOTTOM CONNECTION WITH SHUT OFF VALVE

BACK CONNECTION

TECHNICAL FEATURES

Pressure:	
Scale range	0-4 bar
Temperature:	
Scale range	from 0°C to +120°C
Accuracy	Cl. 2,5 EN 837-1
Protection	IP 31
Threading/Connection:	
Thermometer-gauge	central back in brass Diam. 18 P.1
Threading shut off valve	Threading according to ISO 228/1 1/2” male

DESIGN

Construction: Varnished steel
Display: glass
Mono-metric element: tubular spring in copper alloy
Thermometric element: bi-metallic spiral spring
Welding: In tin alloy

PRODUCT CODE

0508.001 back connection

BOTTOM CONNECTION

TECHNICAL FEATURES

Pressure:	
Scale range	0-4 bar
Temperature:	
Scale range	from 0°C to +120°C
Accuracy	Cl. 2,5 EN 837-1
Protection	IP 31
Threading/Connection:	
Thermometer-gauge	BOTTOM in brass 7/1 Rp 1/4”
Threading shut off valve	EN 10226-Rp 1/4” (ex ISO7/1 x 1/2” male)

DESIGN

Construction: black ABS
Display: Kostil with red pointer
Mono-metric element: tubular spring in copper alloy
Thermometric element: bi-metallic spiral spring
Welding: In tin alloy

PRODUCT CODE

0508.101 bottom connection

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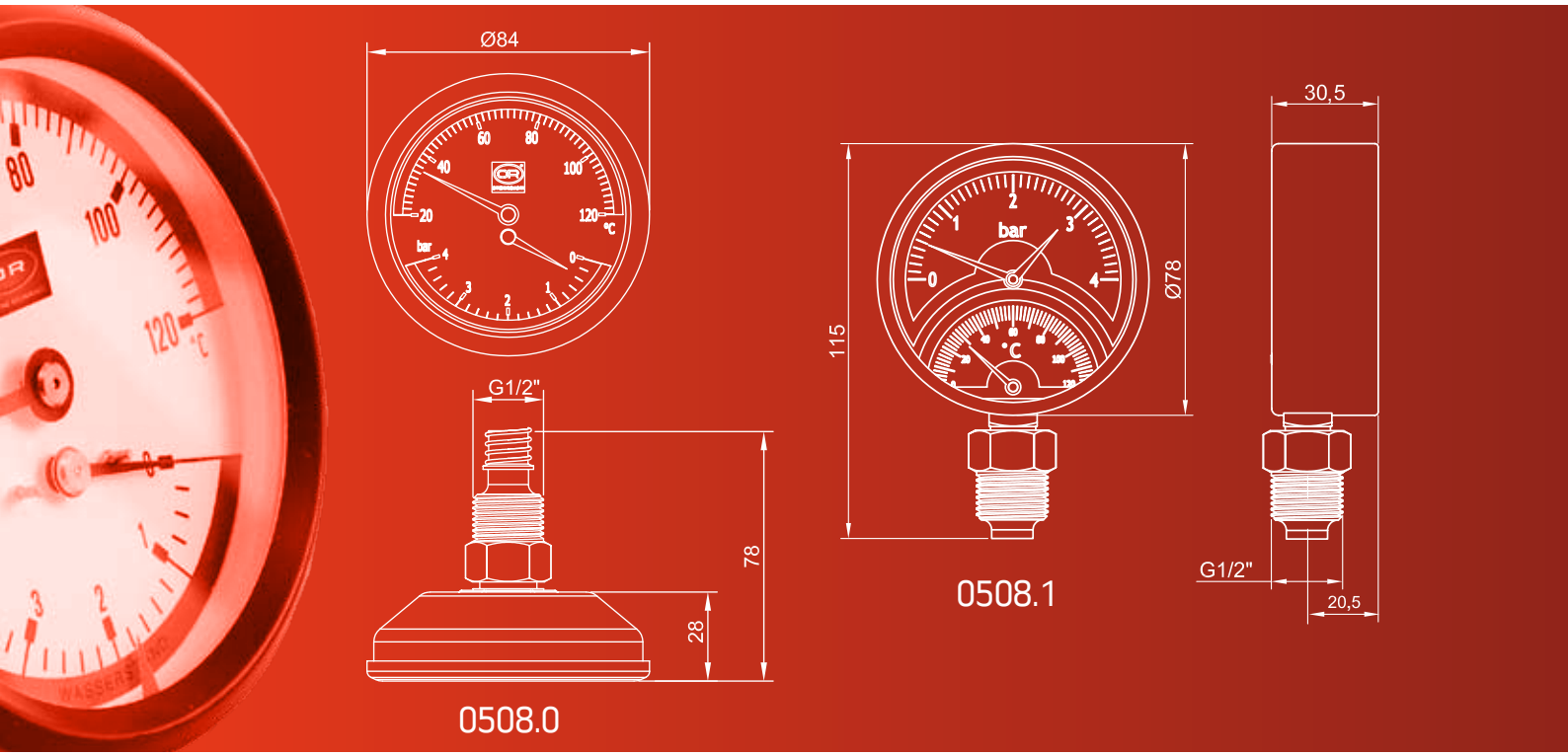
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0508.0 • 1/2”

THERMOMETER-GAUGE BACK CONNECTION WITH SHUT OFF VALVE

0508.1 • 1/2”

THERMOMETER-GAUGE BOTTOM CONNECTION WITH SHUT OFF VALVE



0550

THERMOMETER DIAMETER 80-100 BACK CONNECTION WITH JACKET

0551

JACKET FOR THERMOMETER APPLICATION

0558

CONTACT THERMOMETERS WITH SPRING CONNECTION

0550

0551

0558

0550

TECHNICAL FEATURES

Temperature:

Scale range	from 0°C to +120°C
Accuracy	Cl. 2
Protection	IP 31

Threading/Connection:

central back in galvanized steel 9 mm

Threading jacket	in brass 1/2" with screw

DESIGN

Construction:Galvanized steel
Ring: chrome-plated steel
Design Display: glass
Thermometric element: bi-metallic spiral spring

PRODUCT CODES

0550.080 diameter 80
0550.100 diameter 100

0551

TECHNICAL FEATURES

Pressure:

Maximum allowable working pressure (PN)	16 Bar

DESIGN

Brass UNI EN CW614N

PRODUCT CODES

0551.010 1/2" x 10

0558

TECHNICAL FEATURES

Temperature:

Scale range	from 0°C to +120°C
Accuracy	Cl. 2
Protection	IP 31
Clamp:	copper
Spring	galvanized steel

DESIGN

Construction:Black varnished steel
Ring: chrome-plated steel
Design Display: Kostil
Thermometric element: bi-metallic spiral spring

PRODUCT CODES

0558.001 with bracelet

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via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
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0550

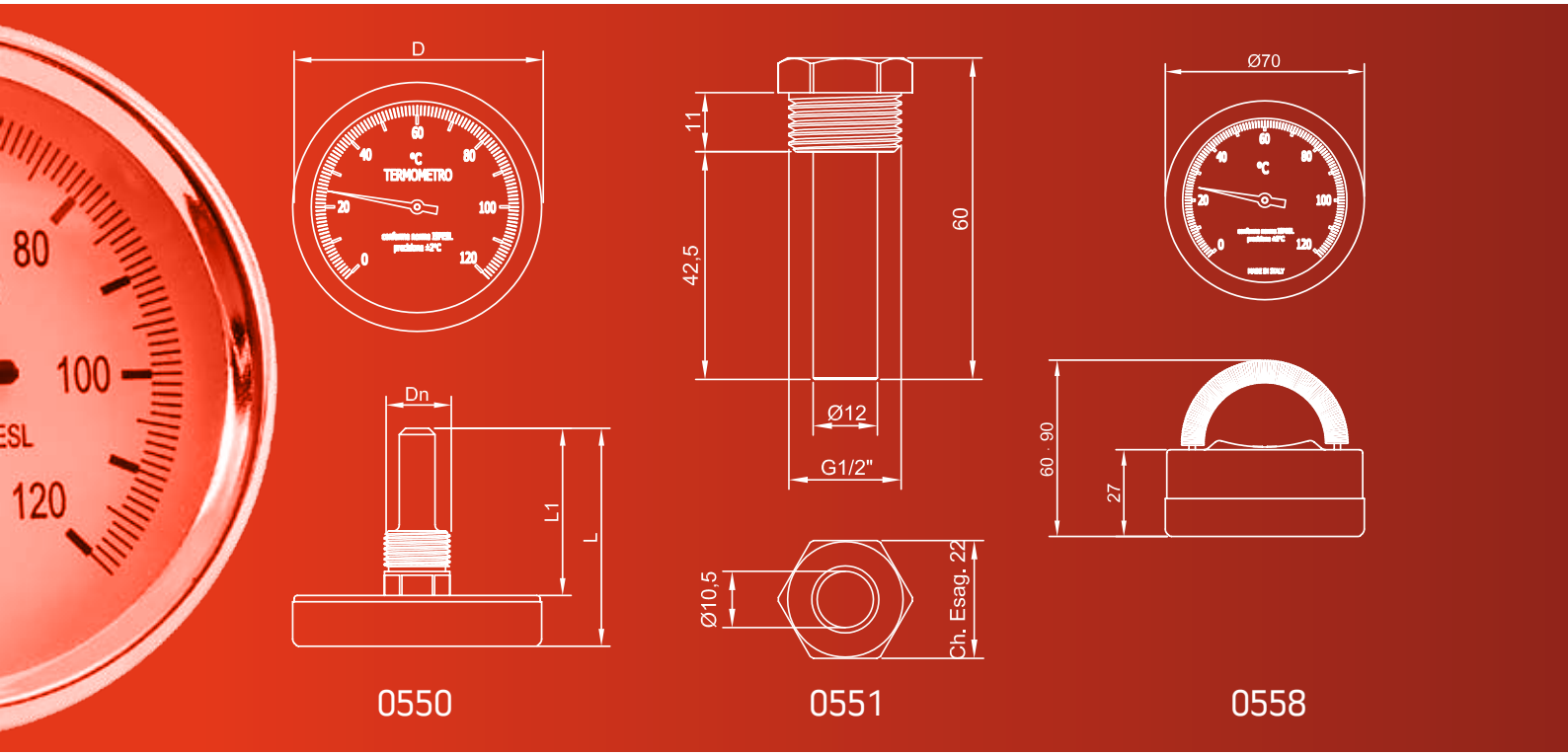
THERMOMETER DIAMETER 80-100 BACK CONNECTION WITH JACKET

0551

JACKET FOR THERMOMETER APPLICATION

0558

CONTACT THERMOMETERS WITH SPRING CONNECTION



FEATURES 0550

Dn	D	L	L1
G1/2”	Ø 80	68	43
G1/2”	Ø 100	68	43

FILTERS/ACCESSORIES FOR PUMPS AND WATER PIPELINES

FILTERS ACCESSORIES

OR

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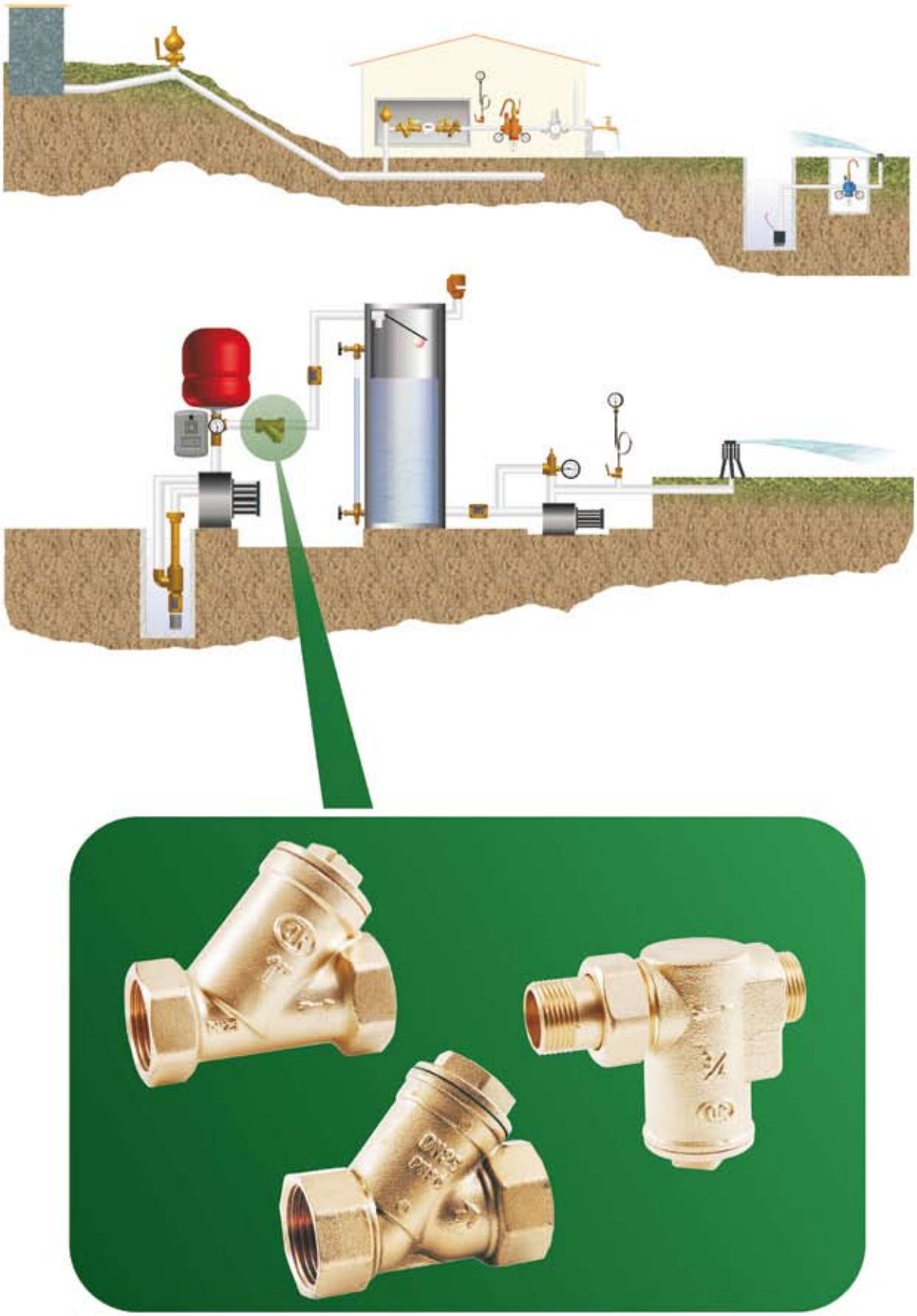
La qualità di mano in mano.

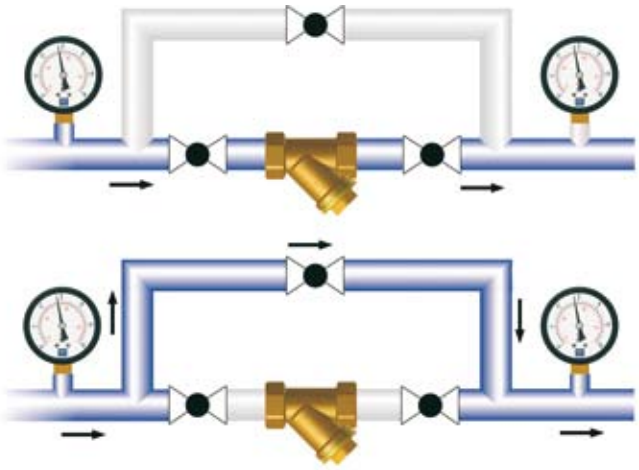
FILTERS
ACCESSORIES

Y STRAINERS AND VERTICAL STRAINERS

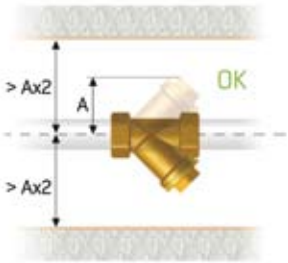


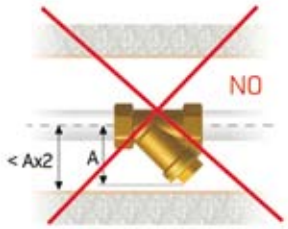
Y STRAINERS AND VERTICAL STRAINERS

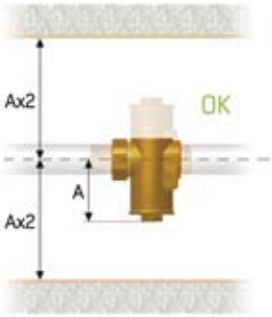
The Y strainers and vertical strainers are manual strainers installed at the beginning of the water system (just after the water meter if used in potable water distribution systems) or in any other piping in need of filtration. They should be equipped with shut off valves installed before and after the strainer. Moreover, a by-pass is advisable in order to preclude water flow interruptions during maintenance procedures.

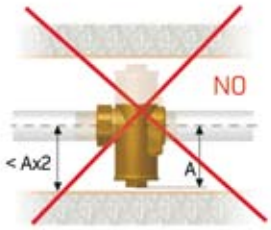


The installation of manual strainers is best carried out with gauges placed at the upstream and downstream sides of the strainer and in addition it is useful, in the case of water pipelines, to install drawing taps. The gauges allow to control the filtration function and indicate blockage of the filtering cartridge while the drawing taps permit to control the purity of the filtered liquid. The manual strainers can be equally installed on either horizontal or vertical pipelines.









The strainer should be installed following the arrow indicator and with the plug facing downwards so that, upon opening, the flow of the fluid carries along the impurities trapped by the filtering element thus avoiding its return into the piping. The area where the strainer is installed should be verified, beforehand, to be spacious enough to allow the extraction of the filtering cartridge.

Concerning the ordinary maintenance, it is enough to regenerate the filtering cartridge when verifying a drop in pressure Δp through this device. It is advisable to carry out this maintenance at least once every three (3) months. Regenerating the filtering cartridge is incredibly simple, as you can see below: When the shut off valves connected before and after the strainer have been closed, simply remove the cover plug and take out the cartridge, wash it by letting water run through the cartridge in the opposite way. When placing the device in service for a new system, it is advisable to open and clean the installed strainer after a few hours of operation in order to clean out the typical residue from new piping installations. After cleaning the strainer, carefully observe the plug's sealing gasket, substituting it in case of any doubt. Prolonged inactivity of the strainer could cause dangerous bacterial growth. Thus, should inactivity last for longer than four (4) days, the strainer should be disinfected according to EN 805 §12.

0246 • 1/4”- 3”

Y STRAINER IN BRASS PN 20 FILTRATION 500 µm

CONNECTIONS: FEMALE-FEMALE

HYDRAULIC FEATURES

The mechanical brass Y strainer is ideal for installations outside of buildings and is designed to separate foreign particles in suspension such as sand, rust flakes, calcareous fragments, etc.; by means of a physical steel mesh barrier. The dirt transported by water might cause local corrosion in the water pipeline of the water system and damage important system components such as pressure reducing valves or other devices installed downstream. Manufactured in material suitable for transporting potable water, it withstands the system’s pressure and water hammers. It is easy to remove the internal filter cartridge, with its broad passage section, and it can be replaced after simply cleaning it or it can be substituted. Y strainers can also be installed in conditioning plants, sanitary installations for external water supply, according to EN 805, irrigation systems and compressed air distribution systems. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure 1/4” - -2” (PN)	20 bar
Maximum allowable working pressure 2”1/2 -3” (PN)	10 bar
Temperature:	
Working temperature (TS)	from 0°C (excluding ice) to +120°C
Compatible fluids for the exclusive technological use of water:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Filtration Rating:	
Referenced micron rating (S)	< 500 µm
Threading:	
Pipeline connections	Threads according to ISO 228/1
Requirements and tests as per	
Shell tightness	Test P11 - EN 12266-1
General Type tests for mechanical filters	EN 13443-1 (applicable parts)
Acoustic group Class	I – Lap [dB (A)] < 20

DESIGN

Brass body dimensions 1/4”-1” EN12165-CW617N
Cast brass body dimensions 1”1/4-3” EN1982-CB753S
Brass plug dimensions 1/4”-1” EN12165-CW617N
Cast brass plug dimensions 1”1/4-3” EN1982-CB753S
PRESSED FIBER gaskets
MICROSTRETCHED STAINLESS STEEL mesh filtering cartridge EN 10088-1.4301 (AISI 304)

PRODUCT CODES

0246.008	female/female	1/4”	0246.033	female/female	1”1/4
0246.012	female/female	3/8”	0246.042	female/female	1”1/2
0246.015	female/female	1/2”	0246.050	female/female	2”
0246.020	female/female	3/4”	0246.066	female/female	2”1/2
0246.025	female/female	1”	0246.080	female/female	3”

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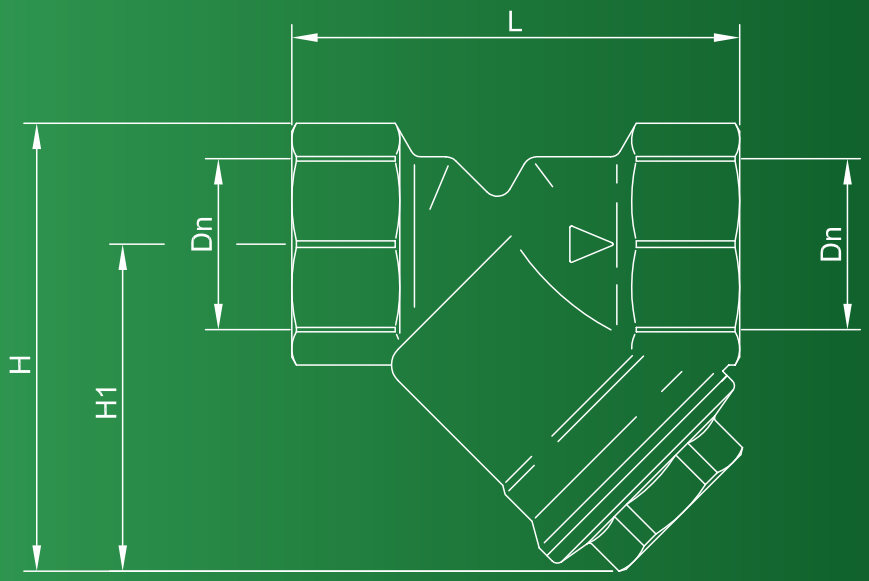
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0246 • 1/4”- 3”

Y STRAINER IN BRASS PN 20 FILTRATION 500 µm

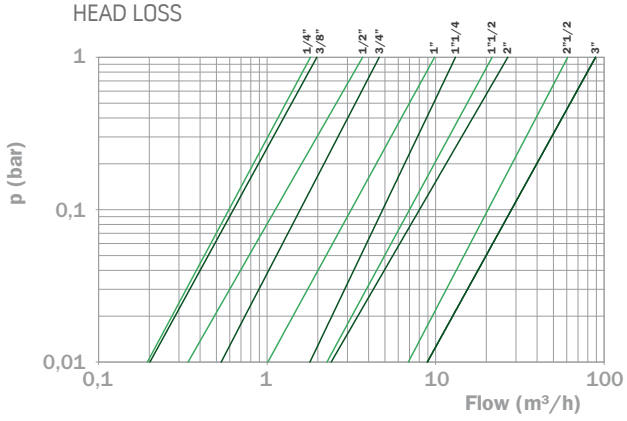
CONNECTIONS: FEMALE-FEMALE



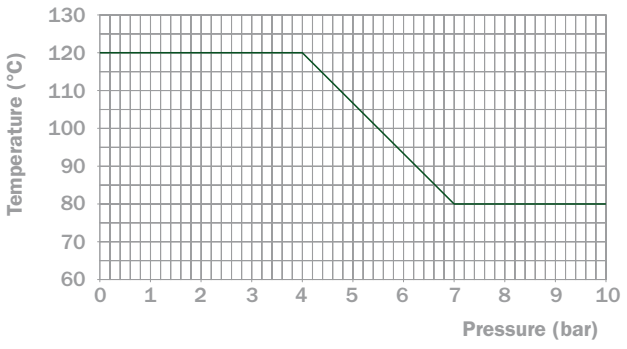
FEATURES

Dn	L	H	H1
1/4”	55	52	40
3/8”	55	52	40
1/2”	58	54	40
3/4”	70	60	50
1”	87	81	60
1”1/4	96	90	68
1”1/2	106	105	75
2”	126	130	90
2”1/2	145	145	100
3”	165	165	118

HEAD LOSS



PRESSURE - TEMPERATURE



0249 • 1/4”- 4”

Y STRAINERS IN BRASS PN 25 FILTRATION 500 µm
CONNECTIONS: FEMALE-FEMALE

HYDRAULIC FEATURES

The heavy mechanical brass Y strainer is ideal for installations outside of buildings and is designed to separate foreign particles in suspension such as sand, rust flakes, calcareous fragments, etc.; by means of a physical steel mesh barrier. The dirt transported by water might cause local corrosion in the water pipeline of the water system and damage important system components such as pressure reducing valves or other devices installed downstream. Manufactured in material suitable for transporting potable water, it withstands the system’s pressure and water hammers. It is easy to remove the internal filter cartridge, with its broad passage section, and it can be replaced after simply cleaning it or it can be substituted. Y strainers can also be installed in conditioning plants, sanitary installations for external water supply, according to EN 805, irrigation systems and compressed air distribution systems. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure 1/4” - -2” (PN)	25 bar
Maximum allowable working pressure 2”1/2 - -4” (PN)	16 bar
Temperature:	
Working temperature (TS)	from 0°C (excluding ice) to +120°C
Compatible Fluids for the exclusive technological use of water:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Filtration Rating:	
Referenced micron rating (S)	< 500 µm
Threading:	
Pipeline connections	Threads according to ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1
General Type tests for mechanical filters	EN 13443-1 (applicable parts)
Acoustic group Class	I – Lap [dB (A)] < 20

DESIGN

Brass body dimensions 1/4”-1” EN12165-CW617N
Cast brass body dimensions 1”1/4-2” EN1982-CB753S
Cast bronze body dimensions 2”1/2-4” EN1982-CB491K
Brass Plug EN 12165 - CW617N
PRESSED FIBER gaskets
MICROSTRETCHED STAINLESS STEEL mesh filtering cartridge 1/4”-2” EN 10088-1.4301 (AISI 304) 500µm
MICROSTRETCHED STAINLESS STEEL mesh filtering cartridge 2”1/2 - 4” EN 10088-1.4301 (AISI 304) 700µm

PRODUCT CODES

0249.008	female/female	1/4”	0249.033	female/female	1”1/4
0249.012	female/female	3/8”	0249.042	female/female	1”1/2
0249.015	female/female	1/2”	0249.050	female/female	2”
0249.020	female/female	3/4”	0249.066	female/female	2”1/2
0249.025	female/female	1”	0249.080	female/female	3”
			0249.100	female/female	4”

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via Circonvallazione, 9
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TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
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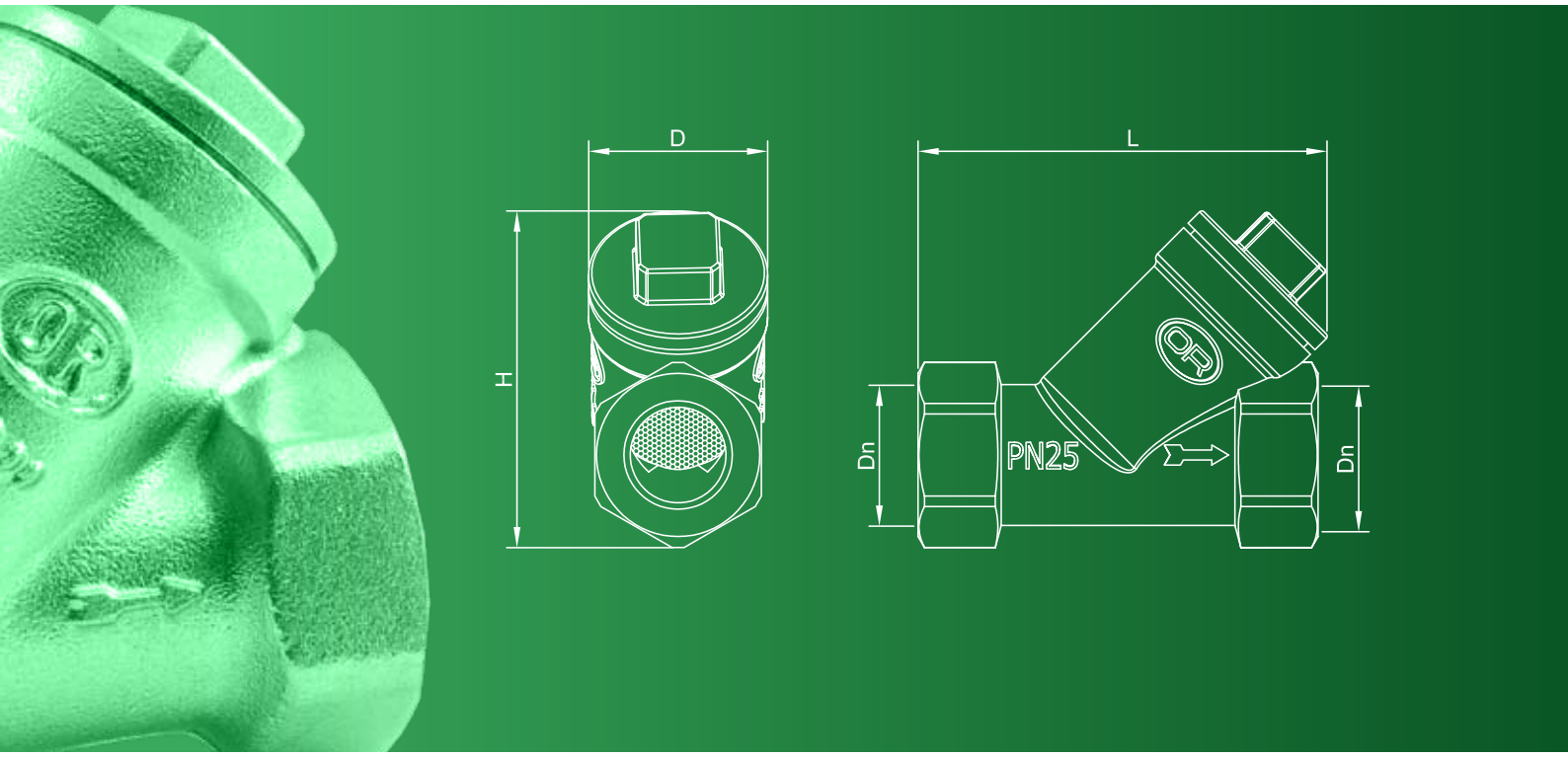
0249 • 1/4”- 4”

Y STRAINERS IN BRASS PN 25 FILTRATION 500 µm

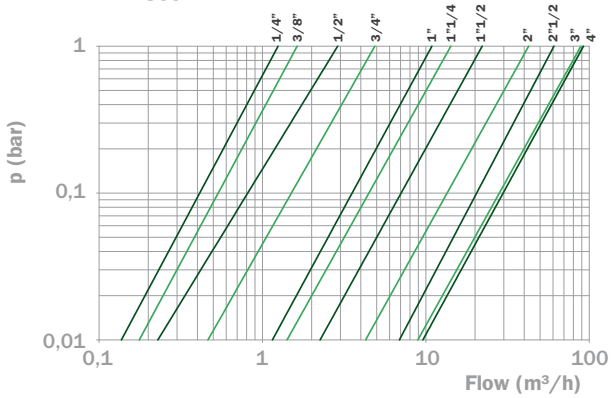
CONNECTIONS: FEMALE-FEMALE



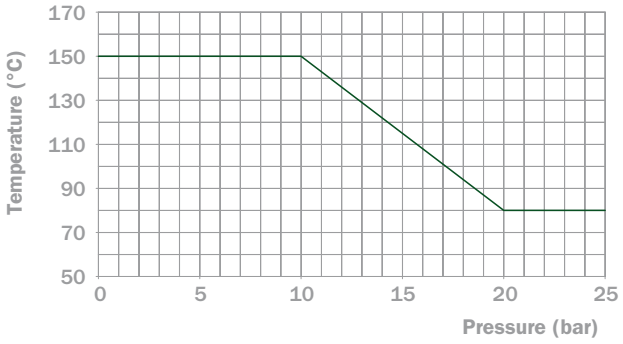
FEATURES

Dn	D	L	H
1/4”	Ø28	64,5	53,5
3/8”	Ø28	64,5	53,5
1/2”	Ø28	64,5	53,5
3/4”	Ø33	69	63
1”	Ø41	87	79
1”1/4	Ø53	105	93
1”1/2	Ø60	117	106
2”	Ø74	147	132
2”1/2	Ø90	151	162
3”	Ø105	172	182
4”	Ø133	219	239

HEAD LOSS



PRESSURE - TEMPERATURE



0250 • 1/2”- 2”

VERTICAL STRAINERS IN BRASS PN 40 FILTRATION 500 µm
CONNECTIONS: DISMANTLING FITTING MALE-MALE

HYDRAULIC FEATURES

The mechanical brass vertical strainer PN 40 is ideal for installations outside of buildings and is designed to separate foreign particles in suspension such as sand, rust flakes, calcareous fragments, etc.; by means of a physical steel mesh barrier. The dirt transported by water might cause local corrosion in the water pipeline of the water system and damage important system components such as pressure reducing valves or other devices installed downstream. Manufactured in material suitable for transporting potable water, it withstands the system's pressure and water hammers. It is easy to remove the internal filter cartridge, with its broad passage section, and it can be replaced after simply cleaning it or it can be substituted. The vertical strainers can also be installed in conditioning plants, sanitary installations for external water supply, according to EN 805, irrigation systems and compressed air distribution systems. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	40 bar
Temperature:	
Working temperature (TS)	from 0°C (excluding ice) to +120°C
Compatible fluids for the exclusive technological use of water:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Filtration Rating:	
Referenced micron rating (S)	< 500µm
Threading:	
Pipeline connections	Threads according to ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1
General Type tests for mechanical filters	EN 13443-1 (applicable parts)
Acoustic group Class	I – Lap [dB (A)] < 20

DESIGN

Cast brass body EN 1982 - CW753S
Brass Plug EN 12165 - CW617N
PRESSED FIBER gaskets
MICROSTRETCHED STAINLESS STEEL mesh filtering cartridge EN 10088-1.4301 (AISI 304)

PRODUCT CODES

0250.015	dismantling male/male	1/2”	0250.033	dismantling male/male	1”1/4
0250.020	dismantling male/male	3/4”	0250.042	dismantling male/male	1”1/2
0250.025	dismantling male/male	1”	0250.050	dismantling male/male	2”

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
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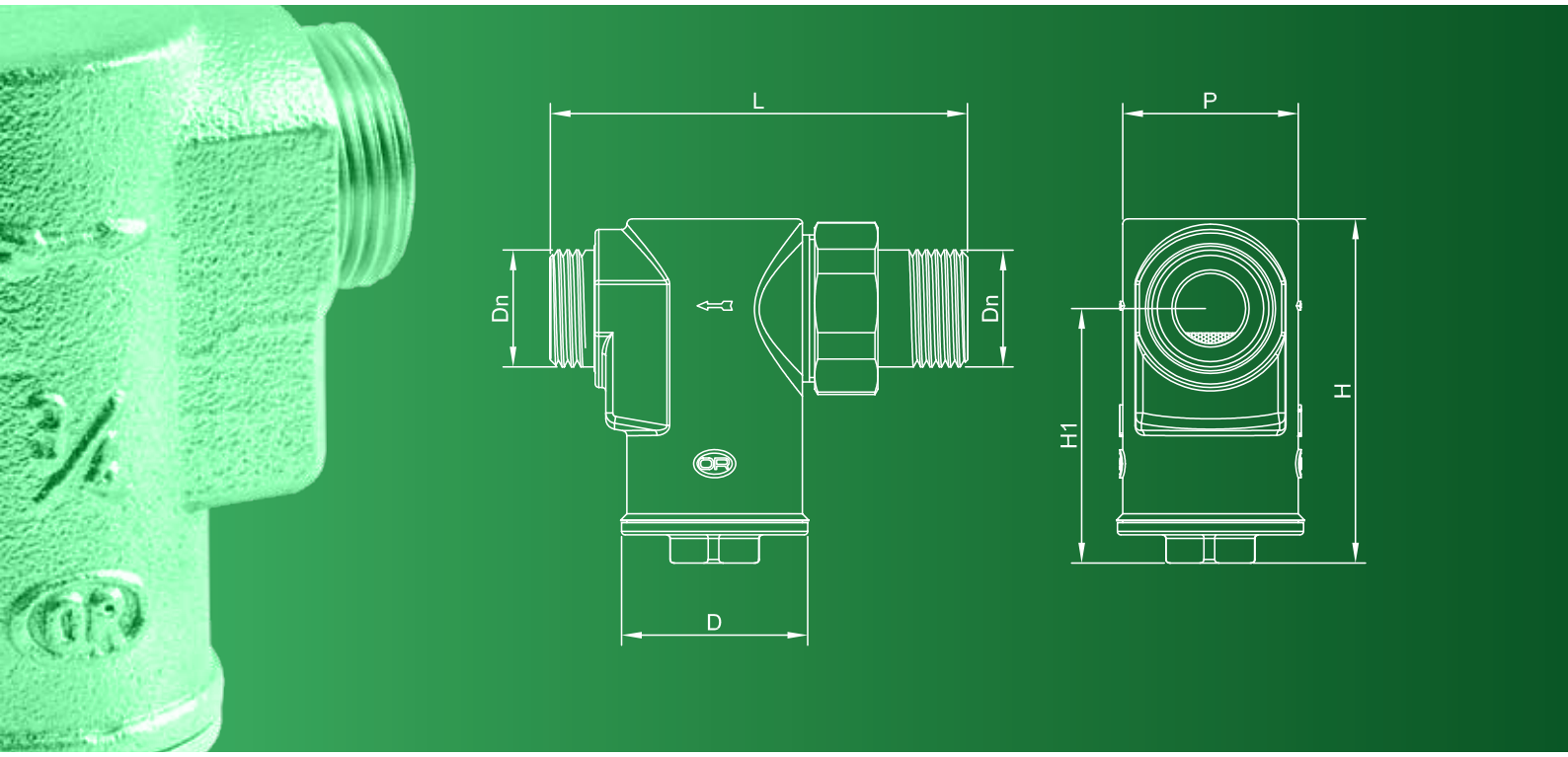
0250 • 1/2”- 2”

VERTICAL STRAINERS IN BRASS PN 40 FILTRATION 500 µm

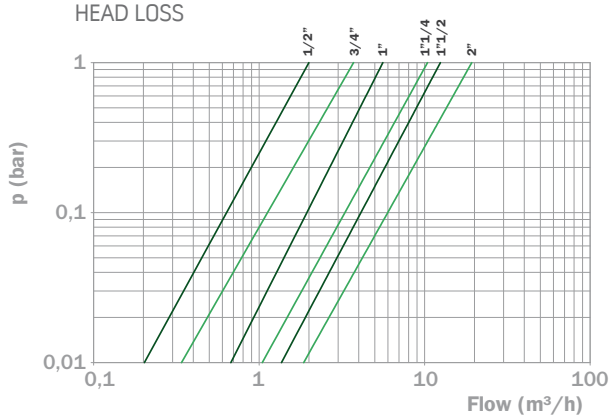
CONNECTIONS: DISMANTLING FITTING MALE-MALE



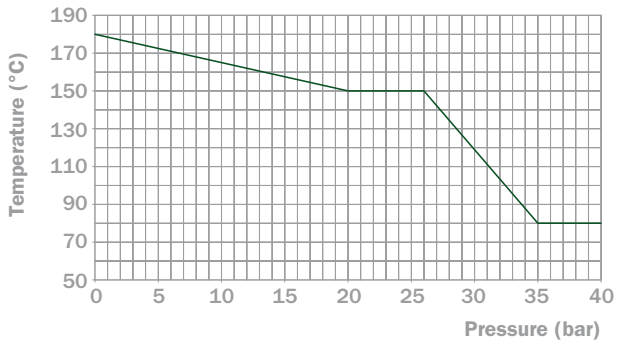
FEATURES

Dn	D	L	H	H1	P
1/2”	Ø39	88	70	53	32
3/4”	Ø41,5	99	84	64	39
1”	Ø53,5	119	99,5	77,5	50
1”1/4	Ø60	140	117	89	58
1”1/2	Ø69	160	138	102	69
2”	Ø69	172	144	103	69

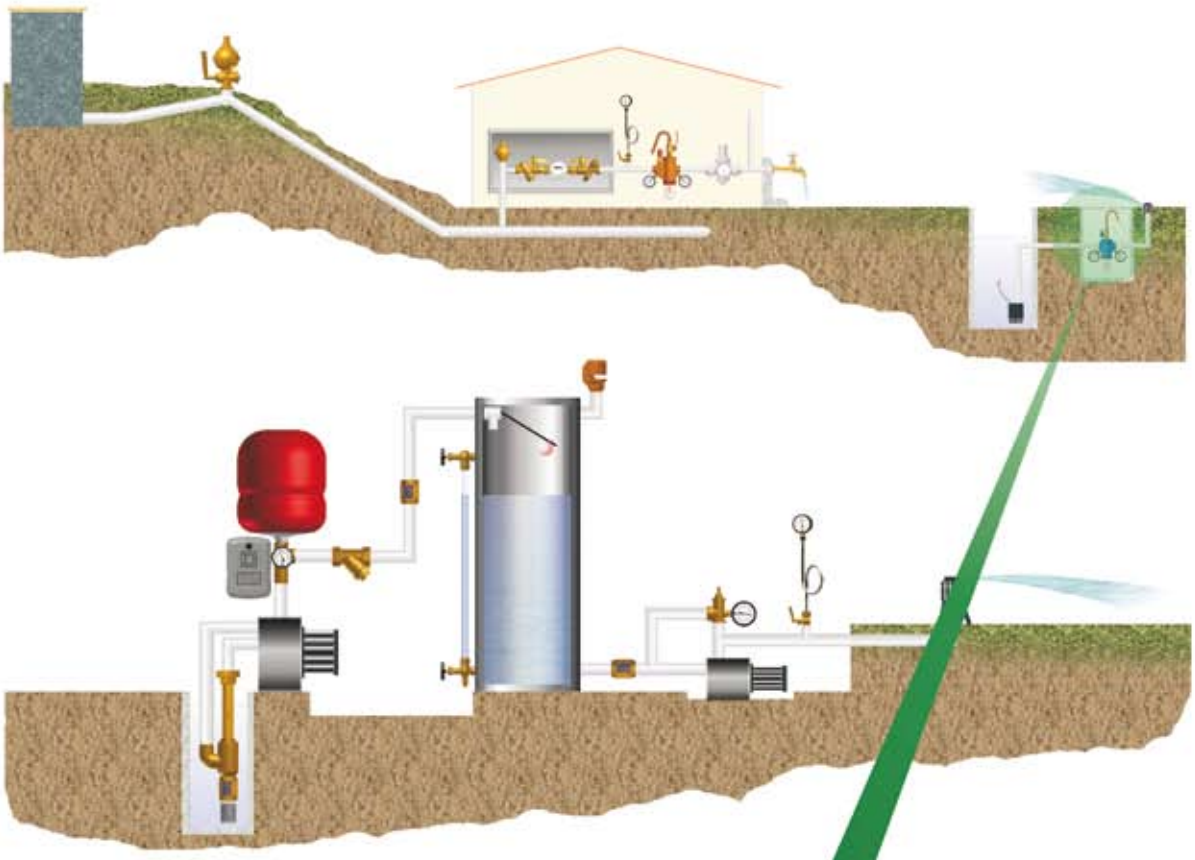
HEAD LOSS



PRESSURE - TEMPERATURE

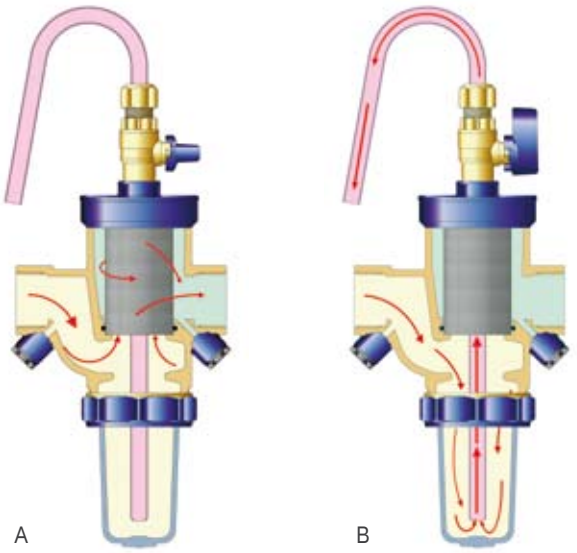


“ARION®” SELF-CLEANING STRAINER



“ARION®” SELF-CLEANING STRAINER

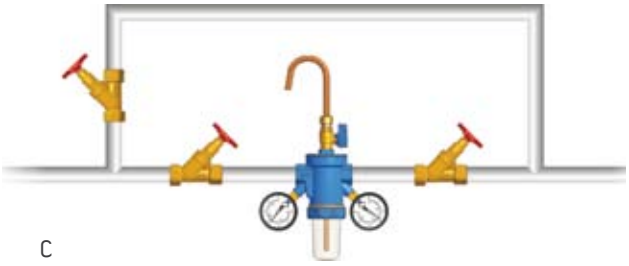
The Arion® strainer should be installed at the beginning of the water system (just after the water meters, if used in potable water distribution systems) and equipped with shut off valves installed before and after the strainer. Moreover, a by-pass is advisable in order to preclude water flow interruptions during maintenance procedures. Besides being self-cleaning and having a large filtration surface, the Arion® is setup to install gauges before and after the filtering cartridge which permits to control whether the cartridge is blocked and has to be cleaned.



A B

Figure A displays the Arion® strainer during normal operation. The water, which runs in the direction of the arrow, reaches the filtering cartridge and crosses it from the inside towards the outside. In this way, all impurities carried by the fluid are trapped in an efficient way. Once the water draw has ceased, the impurities trapped in the mesh fall into the cup through two diaphragms which prevent the sediments from returning into circulation. Figure B illustrates the operating principle that allows the expulsion of the impurities present at the bottom of the cup (functional draining). This operation is carried out by simply opening the discharging ball valve on the top plug of the Arion® strainer. The water which flows in the direction of the arrow, gets out through the copper tube whilst carrying out all the impurities present at the bottom of the cup. This operation is concluded by closing the same ball valve on the top plug of the Arion® strainer.

Due to its particular functioning, the Arion® strainer can only be installed vertically and only on horizontal piping whose fluid follows the sense indicated by the arrow. The cup must be facing down (Fig. C). Contrariwise, when opening the ball valve, the water flow would carry all of the impurities present in the cup into the piping again. It is recommended to ensure that at the point of installation there is sufficient space for removing the filtering cartridge (upper part) and for a possible replacement of the receptacle cup (lower part).



C

Concerning the ordinary maintenance, it is enough to regenerate the filtering cartridge when verifying a drop in pressure Δp through this device. It is advisable to carry out this maintenance at least once every three (3) months. Regenerating the filtering cartridge is incredibly simple, as you can see below: When the shut off valves connected before and after the strainer have been closed, simply remove the cover plug on the upper part of the Arion® strainer and take out the cartridge, wash it by letting water run through the cartridge in the opposite way.
The Arion® strainer should be cleaned regularly, especially for the brass cup model, since there is no way to visually perceive accumulation.
When placing the device in service for a new system, it is advisable to open and clean the installed strainer after a few hours of operation in order to clean out the typical residue from new piping installations. After cleaning the strainer, carefully observe the plug’s sealing gasket, substituting it in case of any doubt. Prolonged inactivity of the strainer could cause dangerous bacterial growth. Thus, should inactivity last for longer than four (4) days, the strainer should be disinfected according to EN 805 §12.

0295 • 1/2”- 2”

0297 • 1/2”- 2”

SELF CLEANING STRAINERS “ARION” PN 16 300 µm CUP IN TROGAMID-T
SELF CLEANING STRAINERS “ARION” PN 16 300 µm CUP IN BRASS

CONNECTIONS: FEMALE-FEMALE
FEMALE-FEMALE

0295

0297

HYDRAULIC FEATURES

The mechanical ARION® strainer for domestic use for drinking water treatment, is designed to separate foreign particles in suspension such as sand, rust flakes, calcareous fragments, etc., by means of a steel mesh barrier in order to prevent them from corroding the water pipeline or damaging important system components such as pressure reducing valves. The broad surface of the filtering cartridge guarantees a steady and optimal filtration for a long period of time. The impurity accumulation cup has a high mechanical strength and its transparency enables visual monitoring of impurity accumulation; the cup in brass renders it ideal for use even with industrial fluids at elevated temperatures (contact technical dept. for additional information) The ARION® strainer is also equipped with a system which permits by simple actions to flush away the dirt caught in the cup semi-automatically, without interrupting the passage of water. The regeneration or substitution of the filtering cartridge is easy: simply unscrew the upper plug. ARION® strainers are finished with a protective BLU epoxy varnish and can be used in conditioning plants, sanitary installations for water supply outside buildings according to EN 805, irrigation systems, compressed air distribution, and sanitary installations for water distribution inside buildings following EN 13443-1 (cartridge of 50 µm). This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Temperature:	
Allowable working temperature for the trogamid-t cup (TS)	from 0°C (excluding ice) to +40°C
Allowable working temperature for the brass cup (TS)	from 0°C (excluding ice) to +80°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Filtration Rating:	
Referenced micron rating (S)	< 300 µm (50 µm upon request)
Threading:	
Pipeline connection	Threads according to ISO 228/1
Manometer connection	Threads according to EN 10226- Rp1/4” (ex ISO 7/1)
Requirements and tests as per:	
Mechanical filter	EN 13443-1
Acoustic group Class	I – Lap [dB (A)] < 20

DESIGN

Cast brass body EN 1982 - CB753S
Brass Plug EN 12165 - CW617N
Transparent Cup in TROGAMID-T
Varnished cup in Brass EN 12165 - CW617N
O-rings in NBR RUBBER
MICROSTRETCHED STAINLESS STEEL double-mesh filtering cartridge EN 10088-1.4301 (AISI 304)
Surface treated with THERMOHARDENING BLUE VARNISH FINISH 5200 70

PRODUCT CODES

0295.015	trogamid-t cup model	1/2”	0297.015	brass cup model	1/2”
0295.020	trogamid-t cup model	3/4”	0297.020	brass cup model	3/4”
0295.025	trogamid-t cup model	1”	0297.025	brass cup model	1”
0295.033	trogamid-t cup model	1”1/4	0297.033	brass cup model	1”1/4
0295.042	trogamid-t cup model	1”1/2	0297.042	brass cup model	1”1/2
0295.050	trogamid-t cup model	2”	0297.050	brass cup model	2”

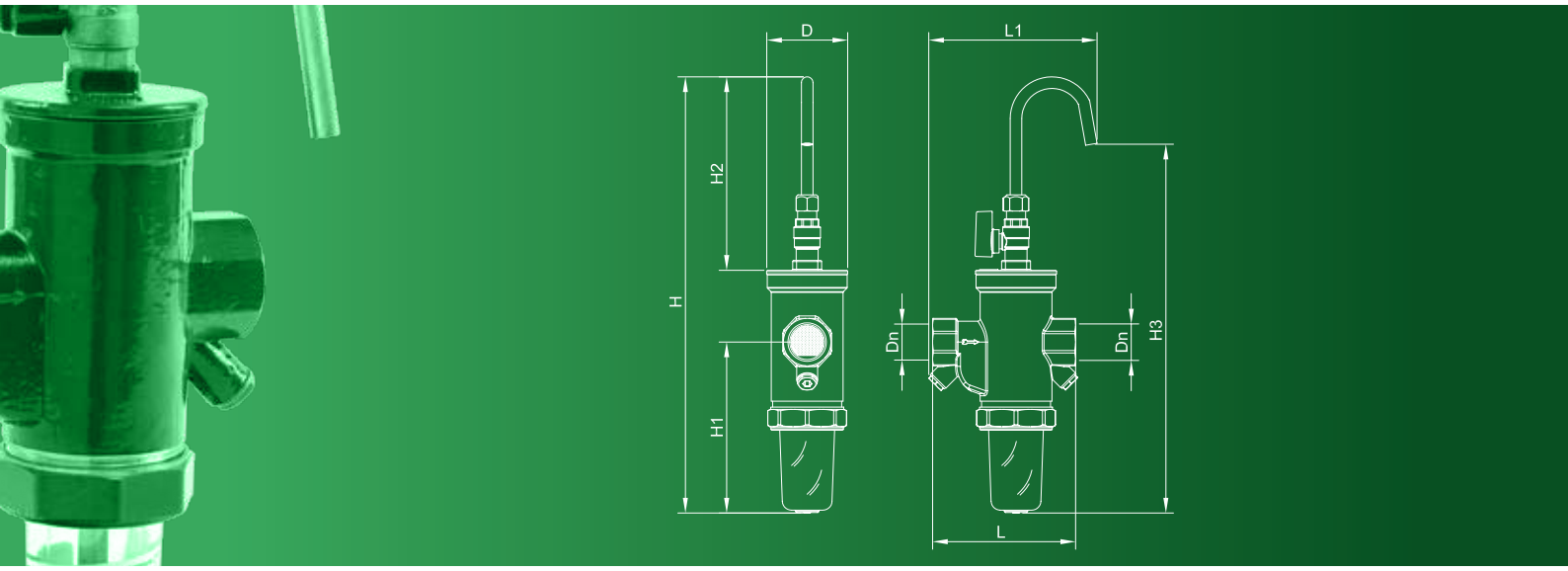
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0295 • 1/2”- 2”

0297 • 1/2”- 2”

SELF CLEANING STRAINERS “ARION” PN 16 300 µm CUP IN TROGAMID-T
SELF CLEANING STRAINERS “ARION” PN 16 300 µm CUP IN BRASS

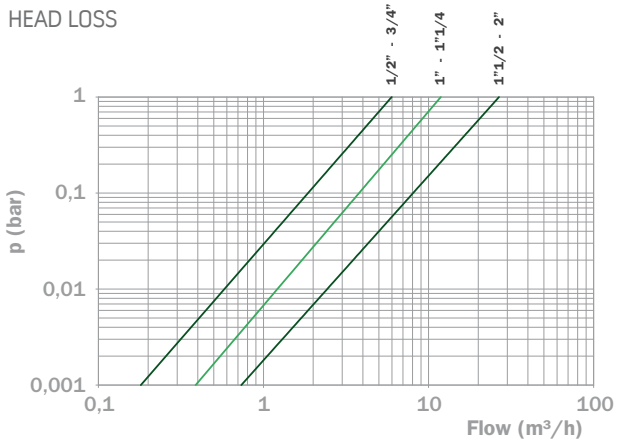
CONNECTIONS: FEMALE-FEMALE
FEMALE-FEMALE



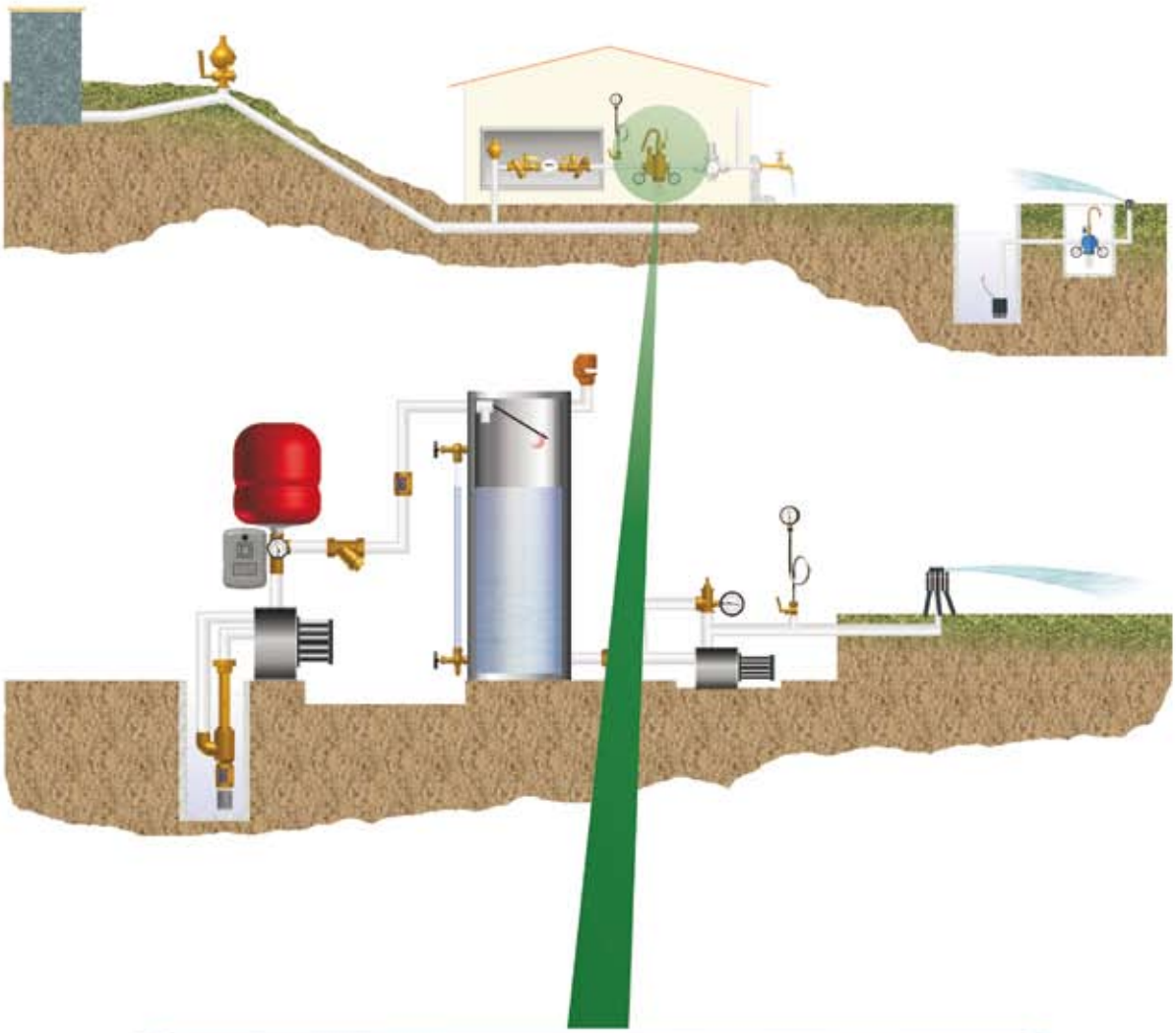
FEATURES

Dn	D	L	L1	H	H1	H2	H3
1/2”	Ø70	95,5	113,5	366	145	167	288
3/4”	Ø70	95	119	377	145	167	288
1”	Ø70	123,5	141,5	377	145	167	318
1”1/4	Ø70	121,5	141,5	377	145	167	318
1”1/2	Ø70	145,5	156,5	433	188	167	375
2”	Ø70	145,5	156,5	433	188	167	375

HEAD LOSS



“FILTOR” SELF-CLEANING STRAINERS



“FILTOR” SELF-CLEANING STRAINERS

The Filt-OR® strainer should be installed at the beginning of the water system (just after the water meters, if used in potable water distribution systems) and equipped with shut off valves installed before and after the strainer. Moreover, a by-pass is advisable in order to preclude water flow interruptions during maintenance procedures. Besides being self-cleaning and having a large filtration surface, . Filt-OR® , has a backwashing system and is setup to install gauges before and after the filtering cartridge which permits to control whether the cartridge is blocked and has to be cleaned.

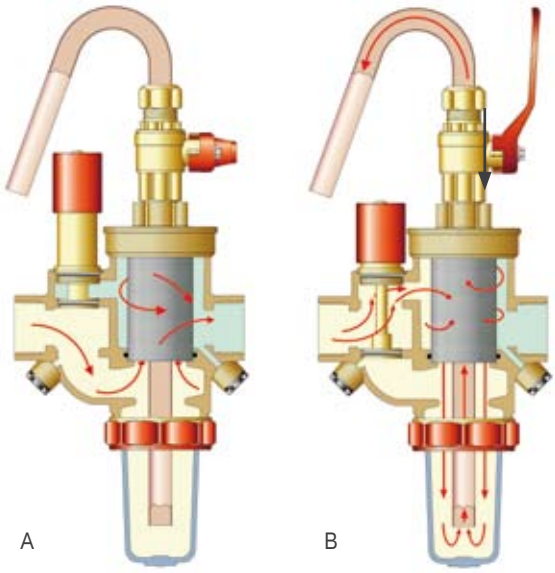
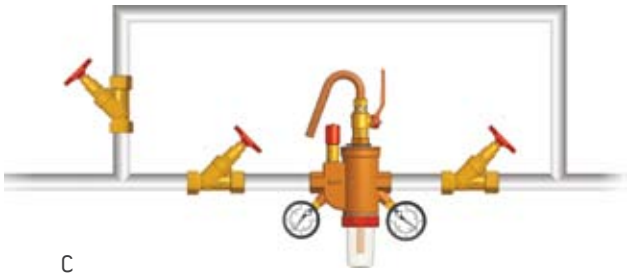


Figure A displays the Filt-OR® strainer during normal operation. The water, which runs in the direction of the arrow, reaches the filtering cartridge and crosses it from the inside towards the outside. In this way, all impurities carried by the fluid are trapped in an efficient way. Once the water draw has ceased, the impurities trapped in the mesh fall into the cup through two diaphragms which prevent the sediments from returning into circulation.
Figure B illustrates the operating principle that allows the regeneration of the filtering cartridge and the expulsion of the impurities present at the bottom of the cup (functional counter-cleaning). This operation is carried out by simply opening the discharging ball valve on the top plug of the Filt-OR® strainer and push and hold down the red button completely for approximately 15-20 seconds. That way, the water which flows in the direction of the arrow, reaches the filtering cartridge and crosses through it from the outside to the inside, eliminating the residue in suspension and cleaning the cartridge. Part of the water gets out from the copper tube carrying with it all the impurities present at the bottom of the cup. The operation is concluded by letting go of the red button and closing the discharging ball valve on the top plug of the Filt-OR® strainer.

Due to its particular operation, the Filt-OR® strainer can only be installed vertically and only on horizontal piping whose fluid follows the sense indicated by the arrow. The cup must be facing down (Fig. C). Contrariwise, when opening the ball valve, the water flow would carry all of the impurities present in the cup into the piping again. It is recommended to ensure that at the point of installation there is sufficient space for removing the filtering cartridge (upper part) and for a possible replacement of the receptacle cup (lower part).
Concerning the ordinary maintenance, it is enough to regenerate the filtering cartridge when verifying a drop in pressure Δp through this device. It is advisable to carry out this maintenance at least once every three (3) months. Regenerating the filtering cartridge is incredibly simple, as you can see below: When the shut off valves connected before and after the strainer have been closed, simply remove the cover plug on the upper part of the Filt-OR® strainer strainer and take out the cartridge, wash it by letting water run through the cartridge in the opposite way.
The Filt-OR® strainer should be cleaned regularly, especially for the brass cup model, since there is no way to visually perceive accumulation.
When placing the device in service for a new system, it is advisable to open and clean the installed strainer after a few hours of operation in order to clean out the typical residue from new piping installations. After cleaning the strainer, carefully observe the plug’s sealing gasket, substituting it in case of any doubt. Prolonged inactivity of the strainer could cause dangerous bacterial growth. Thus, should inactivity last for longer than four (4) days, the strainer should be disinfected according to EN 805 §12.



0298 • 1/2”- 1”

0299 • 1/2”- 1”

SELF CLEANING STRAINERS IN BRONZE CR WITH COUNTER CLEANING “FILT-OR” PN 16
FILTRATION 300 µm AND TRANSPARENT CUP IN TROGAMID-T

SELF CLEANING STRAINERS IN BRONZE CR WITH COUNTER CLEANING “FILT-OR”PN 16
FILTRATION 300 µm AND BRASS CUP

CONNECTIONS: FEMALE-FEMALE
FEMALE-FEMALE

0298

0299

HYDRAULIC FEATURES

The mechanical Filt-OR® strainers for domestic use for drinking water treatment, is designed to separate foreign particles in suspension such as sand, rust flakes, calcareous fragments, etc., by means of a steel mesh barrier in order to prevent them from corroding the water pipeline or damaging important system components such as pressure reducing valves. The broad surface of the filtering cartridge guarantees a steady and optimal filtration for a long period of time. The impurity accumulation cup has a high mechanical strength and its transparency enables visual monitoring of impurity accumulation; the cup in brass renders it ideal for use even with industrial fluids at elevated temperatures (contact technical dept. for additional information) The Filt-OR® strainer is equipped with a system which permits by simple actions to flush away semi-automatically the dirt caught in the cup and with a cleaning system for the internal cartridge through water recirculation: foreign particles present in the water deposit themselves on the filtering cartridge, thus isolated from the water itself, and are then expulsed by the upper tap; without the need to interrupt the water flow during these processes. The regeneration or substitution of the filtering cartridge is easy: simply unscrew the upper plug. Filt-OR® strainers are made entirely of CR material, which is resistant to dezincification. This strainer can be used in conditioning plants, sanitary installations for water supply outside buildings according to EN 805, irrigation systems, compressed air distribution, and sanitary installations for water distribution inside buildings following EN 13443-1 (cartridge of 50 µm). This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Temperature:	
Allowable working temperature for the trogamid-t cup (TS)	from 0°C (excluding ice) to +40°C
Allowable working temperature for the brass cup (TS)	from 0°C (excluding ice) to +80°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Filtration Rating:	
Referenced micron rating (S)	< 300 µm (50 µm upon request)
Threading:	
Pipeline connection	Threads according to ISO 228/1
Manometer connection	Threads according to EN 10226- Rp1/4” (ex ISO 7/1)
Requirements and tests as per:	
Mechanical filter	EN 13443-1
Acoustic group Class	I – Lap [dB (A)] < 20

DESIGN

Body and plug fused in bronze EN 1982-CB491K
Transparent Cup in TROGAMID-T
Varnished cup in Brass EN 12165 - CW617N
Other components in brass EN 12164 - CW614N
Static O-ring washers in NBR RUBBER
Dynamic O-ring washers in EPDM RUBBER (peroxide-cured)
MICROSTRETCHED STAINLESS STEEL double-mesh filtering cartridge EN 10088-1.4301 (AISI 304)

PRODUCT CODES

0298.015	trogamid-t cup model	1/2”	0299.015	brass cup model	1/2”
0298.020	trogamid-t cup model	3/4”	0299.020	brass cup model	3/4”
0298.025	trogamid-t cup model	1”	0299.025	brass cup model	1”

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

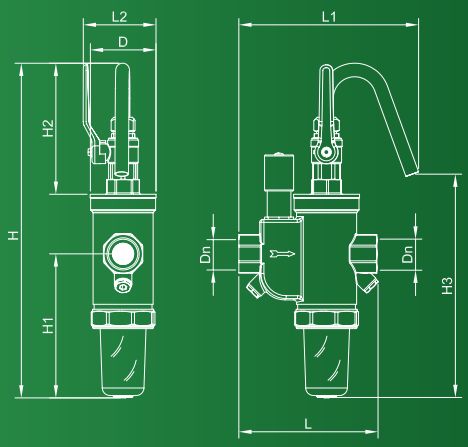
0298 • 1/2”- 1”

0299 • 1/2”- 1”

SELF CLEANING STRAINERS IN BRONZE CR WITH COUNTER CLEANING “FILT-OR” PN 16
FILTRATION 300 µm AND TRANSPARENT CUP IN TROGAMID-T

SELF CLEANING STRAINERS IN BRONZE CR WITH COUNTER CLEANING “FILT-OR”PN 16
FILTRATION 300 µm AND BRASS CUP

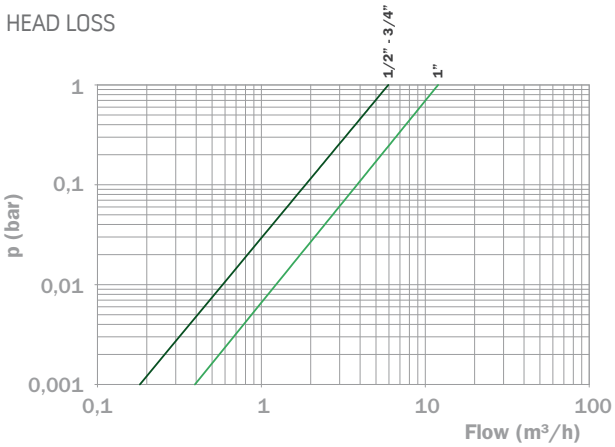
CONNECTIONS: FEMALE-FEMALE
FEMALE-FEMALE



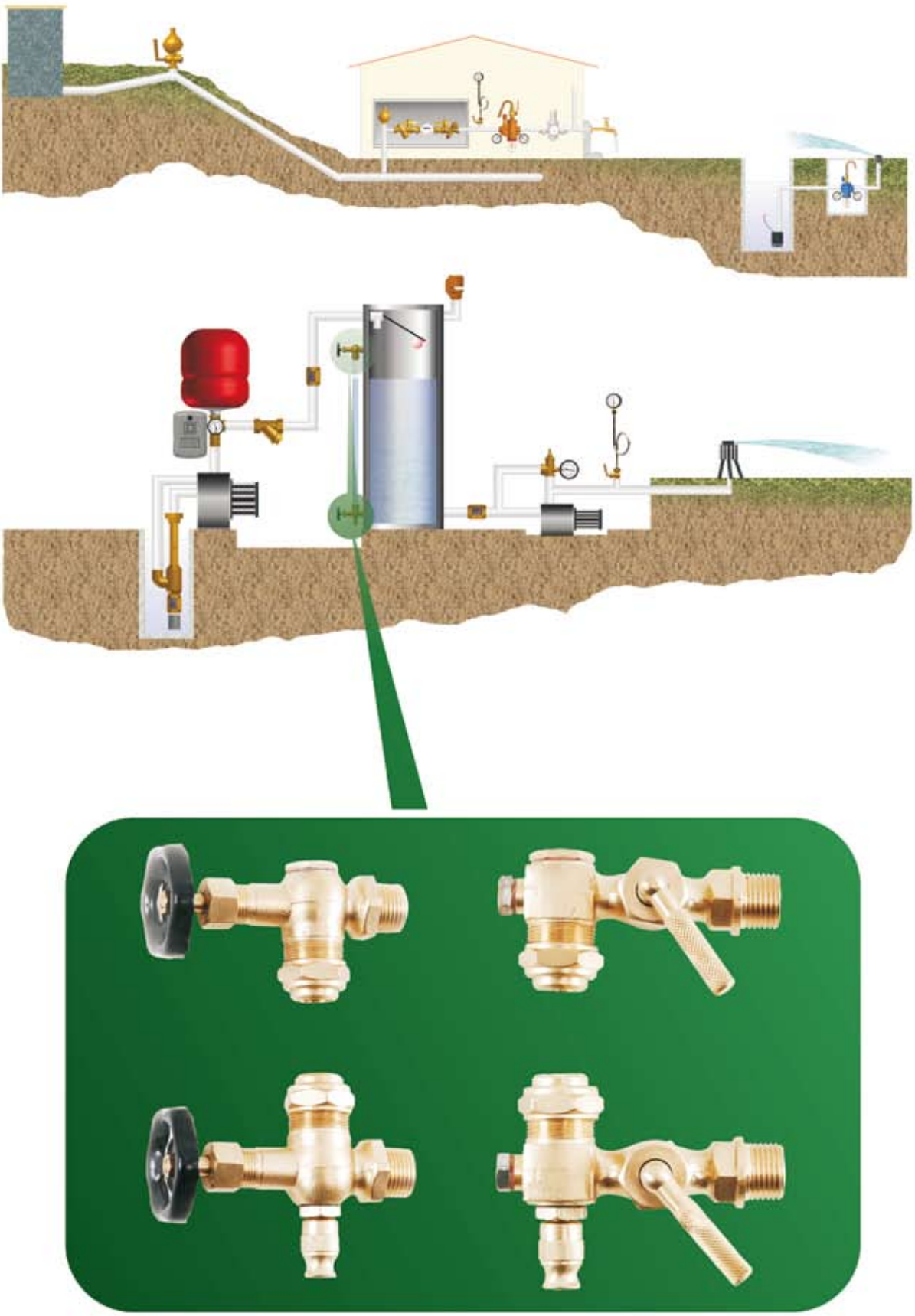
FEATURES

Dn	D	L	L1	L2	H	H1	H2	H3
1/2”	Ø68	154,5	197,5	75	345	148,5	135,2	230
3/4”	Ø68	142,5	185,5	75	345	148,5	135,2	230
1”	Ø68	142,5	185,5	75	345	148,5	135,2	230

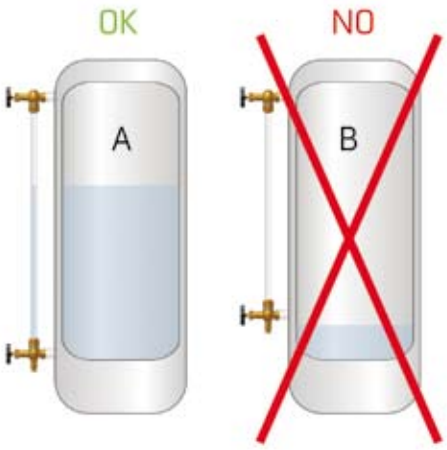
HEAD LOSS

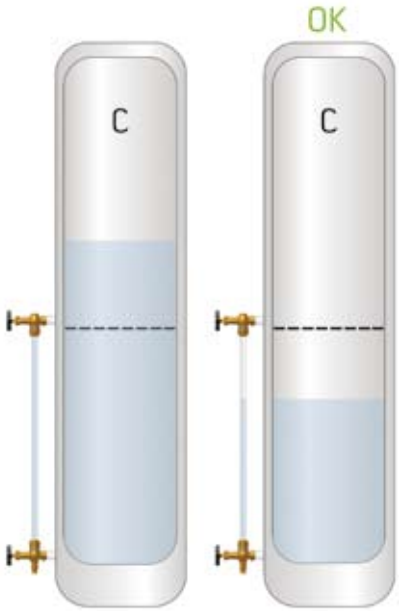


LEVEL INDICATORS

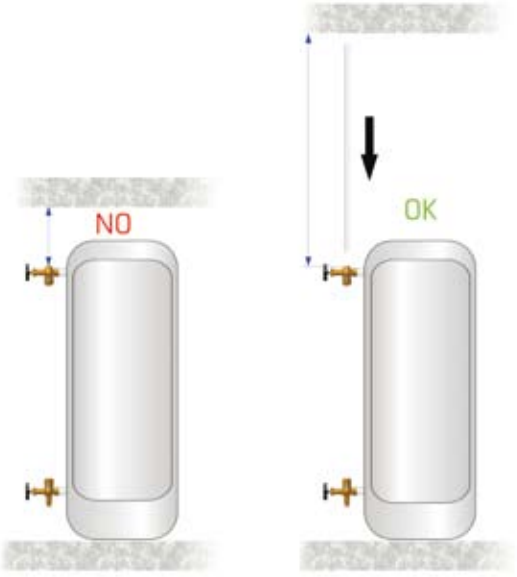


The installation should be carried out in such a way that the level can be read under any tank condition: In example “A” (correctly installed), the level will always be read in the transparent tube, whether at minimum or maximum. In example “B” (installed above the minimum level), the reading will not be exact, and since the tube is transparent, the tank might read “full” even when the water level is below the lower connection.

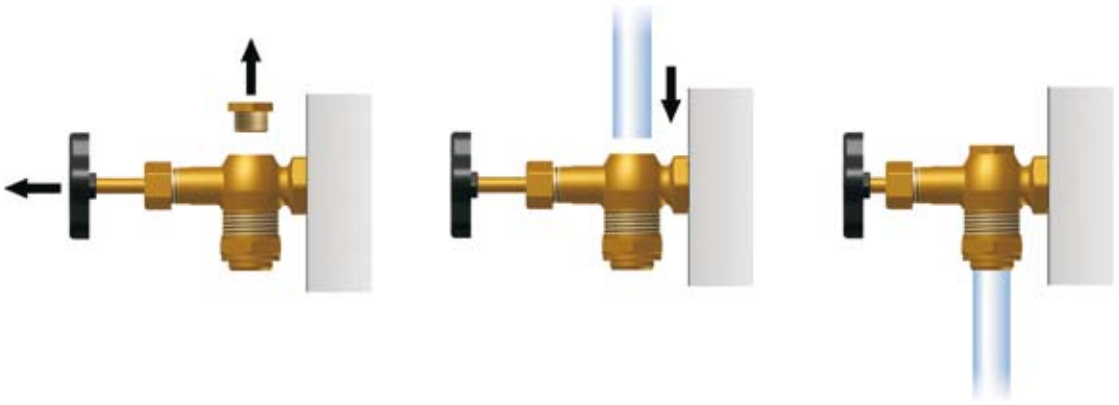




The installation illustrated in example “C” (installed below the maximum level), is not advisable for recipients whose full maximum and minimum volumes need to be monitored (see preceding example “A”). However, there is an application for this setup with very tall vessels, for which liquid monitoring is restricted solely to volumes below a certain level.



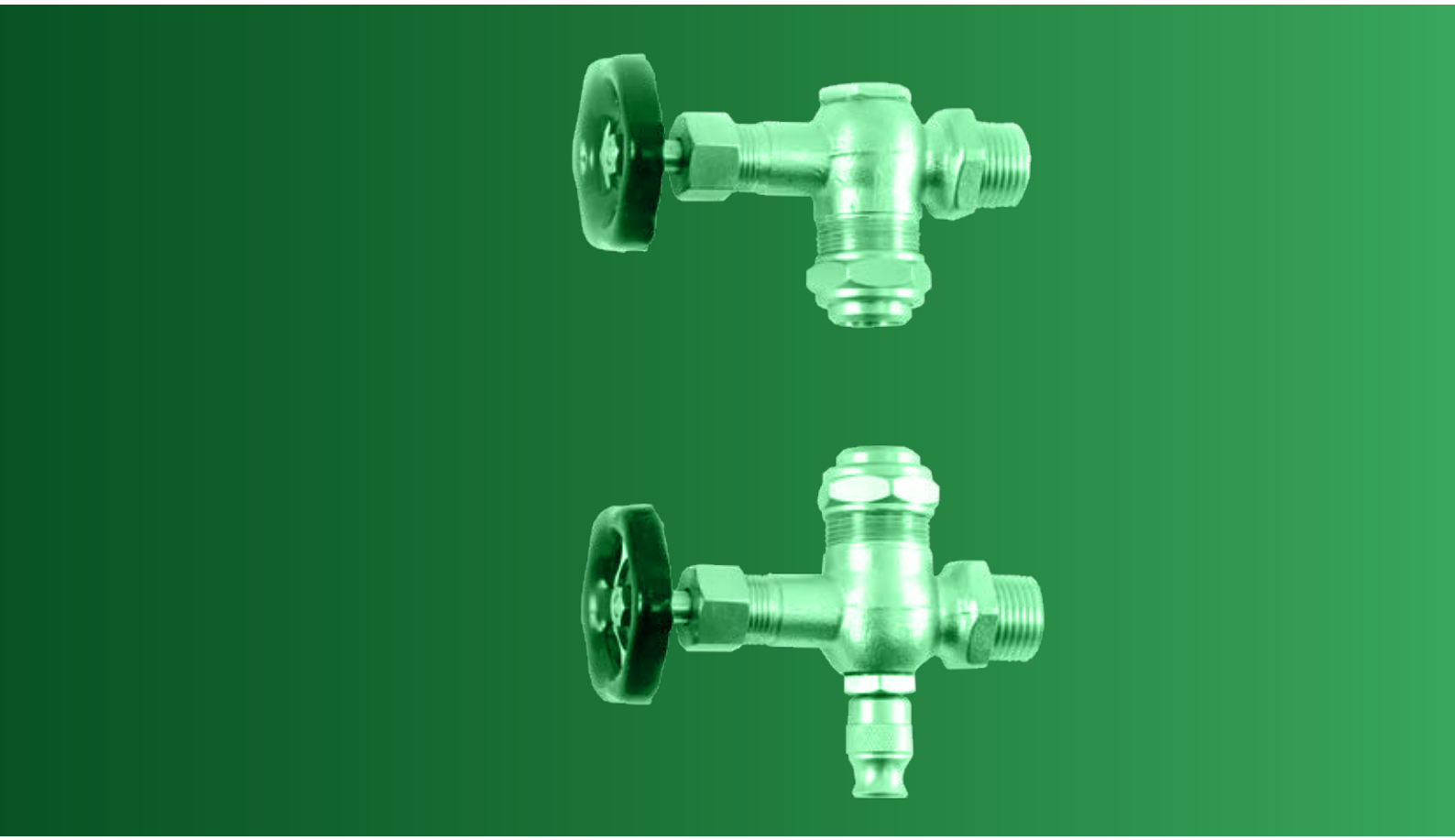
Before installation, it should be borne in mind that the transparent tube (sold separately) must be inserted from above, passing through the upper tap until it reaches the lower tap. For this reason, the area where the level indicator is to be installed must have sufficient height for at least double the length of the transparent tube.



1801 • 1/4”- 1/2”

LEVEL INDICATOR GROUPS WITH PIN CLOSURE PN 10

CONNECTION: MALE



HYDRAULIC FEATURES

Level indicators are generally installed on the external side of tanks or vessels whose liquid content requires inspection for possible intervention with a needed replenishment. Their operation is very simple and exploits the law of communicating vessels; hence the level displayed is absolutely true to the actual level of the liquid present in the tank. Obviously, in order to accomplish this task, the level indicator requires a transparent tube to observe the level of the liquid. The level indicator with pin closure consists of two parts: the upper part, which receives the intercepted liquid, is connected by a transparent tube to the lower part, which, besides receiving the intercepted liquid and connecting with the aforementioned pipe, has a tap for discharging the liquid in the tube. The pin closure isolates the transparent tube, which enables a rapid substitution in case of need for replacement, while the tap located at the lower part of the indicator couple permits the discharge of the liquid in the transparent tube (connected with the tank closed).

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Temperature:	
maximum working temperature (TS)	80 °C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1
Obturator seat tightness	Test P12 - EN 12266-1

DESIGN

Brass Body EN 12165 - CW617N
Other components in brass EN 12164 - CW614N

PRODUCT CODES

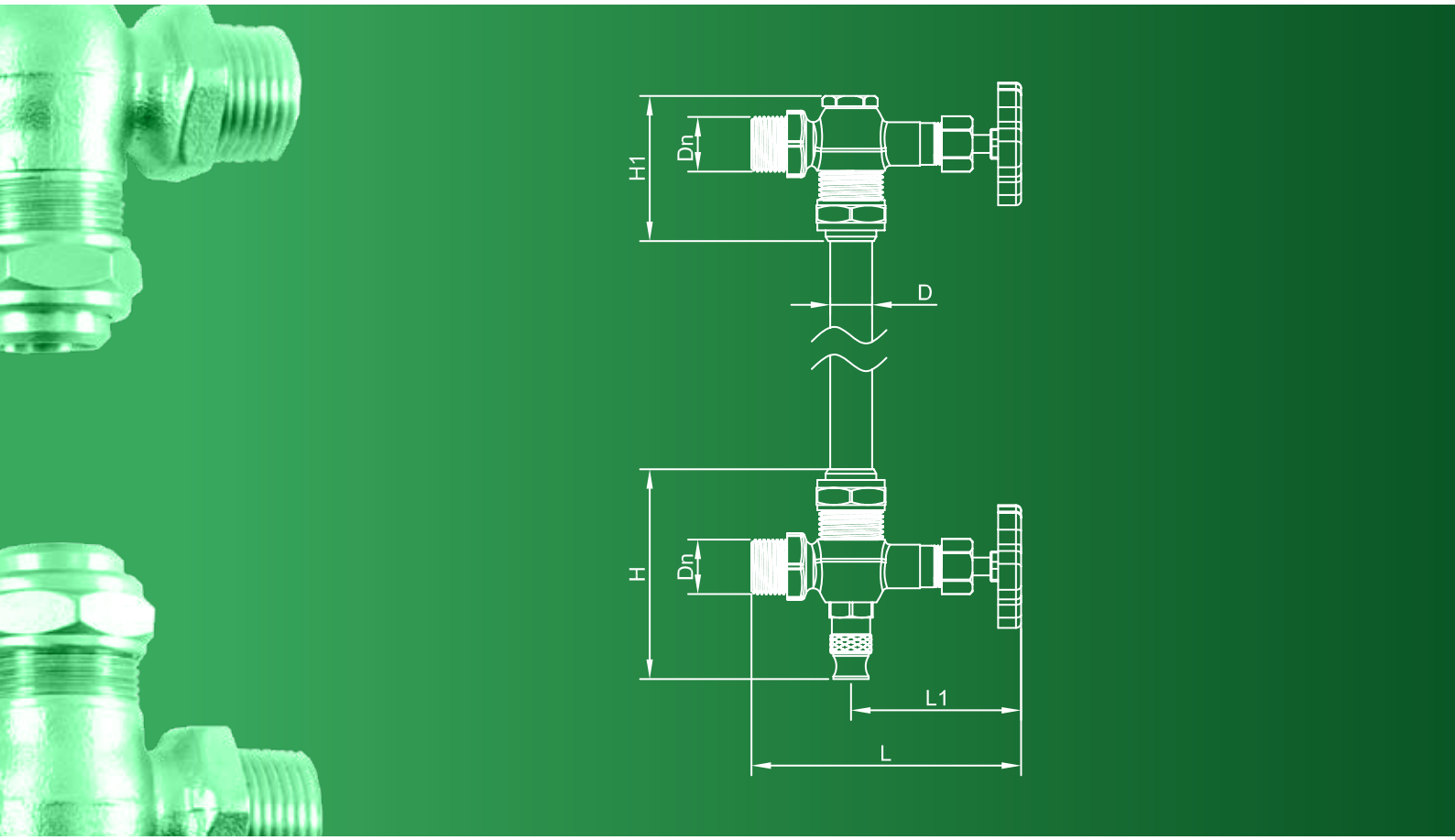
1801.010	connection male	1/4” tube Ø10
1801.013	connection male	3/8” tube Ø13
1801.016	connection male	1/2” tube Ø16

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

1801 • 1/4”- 1/2”

LEVEL INDICATOR GROUPS WITH PIN CLOSURE PN 10

CONNECTION: MALE



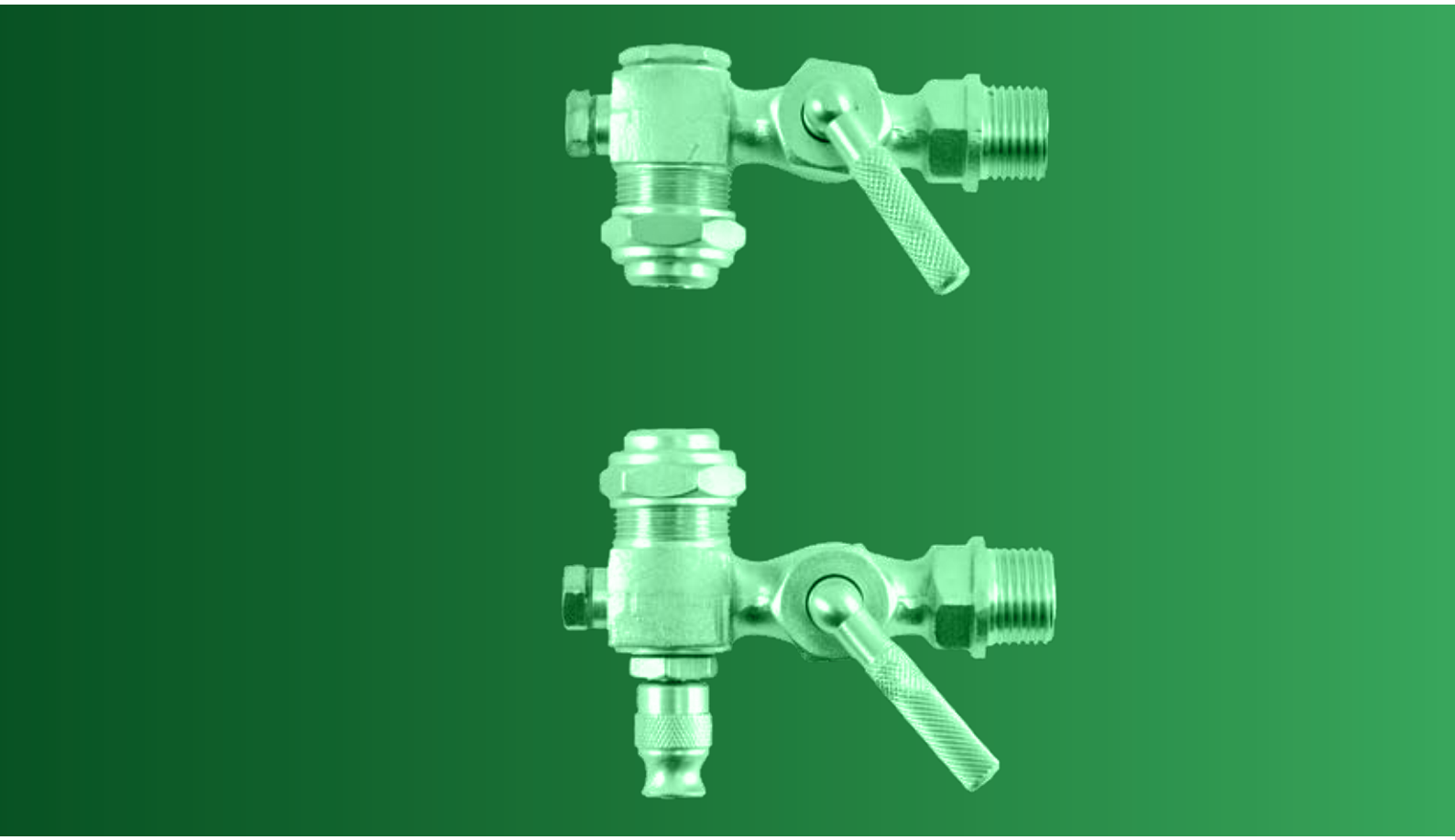
FEATURES

Dn	D	L	L1	H	H1
1/4”	10	100	65	75	48
3/8”	13	104	69	78	50
1/2”	16	108	69	81	53

1804 • 3/8”- 1/2”

LEVEL INDICATOR GROUPS WITH MALE STUFFING BOX CLOSURE COMPLETE WITH GASKETS FOR TRANSPARENT PIPE

CONNECTION: MALE



HYDRAULIC FEATURES

Level indicators are generally installed on the external side of tanks or vessels whose liquid content requires inspection for possible intervention with a needed replenishment. Their operation is very simple and exploits the law of communicating vessels; hence the level displayed is absolutely true to the actual level of the liquid present in the tank. Obviously, in order to accomplish this task, the level indicator requires a transparent tube to observe the level of the liquid. The level indicator with stuffing box closure consists of two parts: the upper part, which receives the intercepted liquid, is connected by a transparent tube to the lower part, which, besides receiving the intercepted liquid and connecting with the aforementioned pipe, has a tap for discharging the liquid in the tube. The male closure isolates the transparent tube, which enables a rapid substitution in case of need for replacement, while the tap located at the lower part of the indicator couple permits the discharge of the liquid in the transparent tube (connected with the tank closed).

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Temperature:	
maximum working temperature (TS)	80 °C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1
Obturator seat tightness	Test P12 - EN 12266-1
Tap device	EN 1074-2

DESIGN

Body and male closure in brass EN 12165 - CW617N
Other components in brass EN 12164 - CW614N

PRODUCT CODES

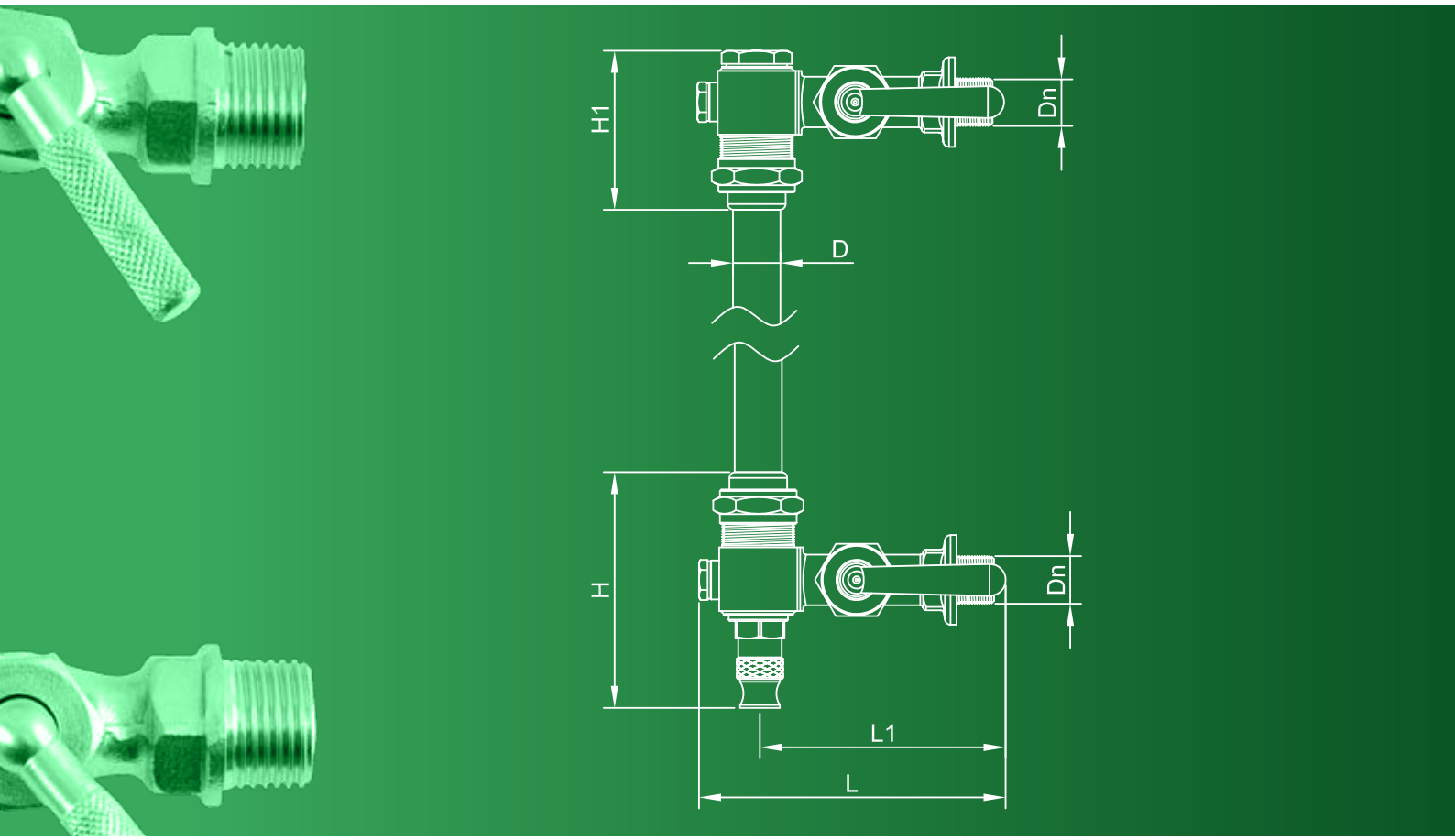
1804.010	connection male	3/8” tube Ø10
1804.013	connection male	1/2” tube Ø13

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

1804 • 3/8”- 1/2”

LEVEL INDICATOR GROUPS WITH MALE STUFFING BOX CLOSURE COMPLETE WITH GASKETS FOR TRANSPARENT PIPE

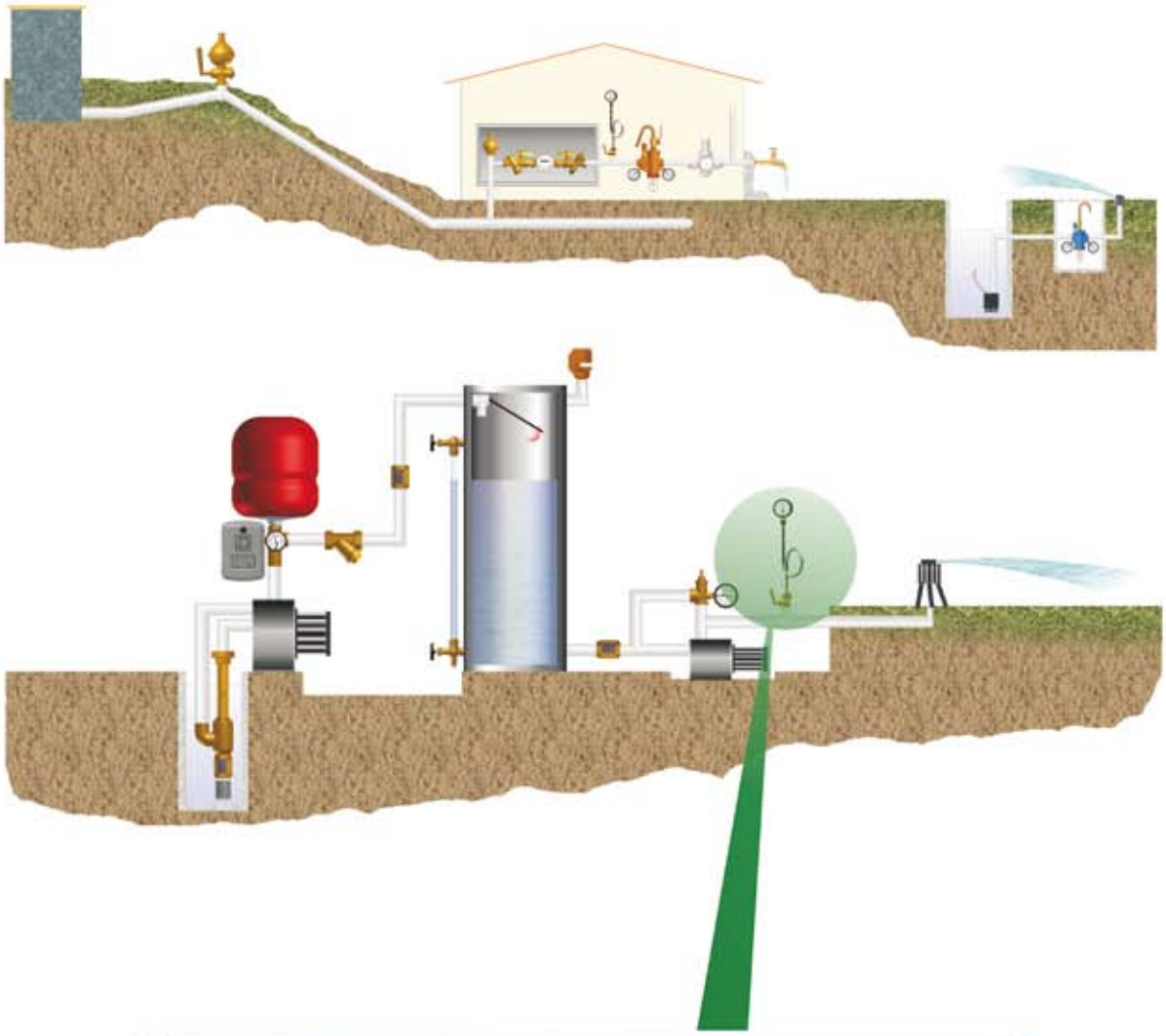
CONNECTION: MALE



FEATURES

Dn	D	L	L1	H	H1
3/8”	13	102	86	82	55
1/2”	16	106	86	84	56

GAUGE HOLDER COCKS



1807 • 1/4”- 1/2”

GAUGE HOLDER COCKS WITH MALE SEAL AND STUFFING BOX PN 16

CONNECTIONS: MALE-FEMALE

HYDRAULIC FEATURES

The gauge-holder cock is used to connect any pressure-measuring instrument to the water system. This device sections the fluid from the conduit into the measuring device, allowing its possible substitution. Once the cock is closed, the remaining fluid in the measuring instrument is discharged through the hole of its body, thus preventing both accidental pressure ebbs of the water while unscrewing the instrument and the freezing of liquid when the temperature drops down to zero, resulting in damage to the measuring instrument.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Temperature:	
maximum working temperature (TS)	80 °C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1
Stop device	EN 1074-2

DESIGN

Body and male closure in brass EN 12165 - CW617N
Other components in brass EN 12164 - CW614N

PRODUCT CODES

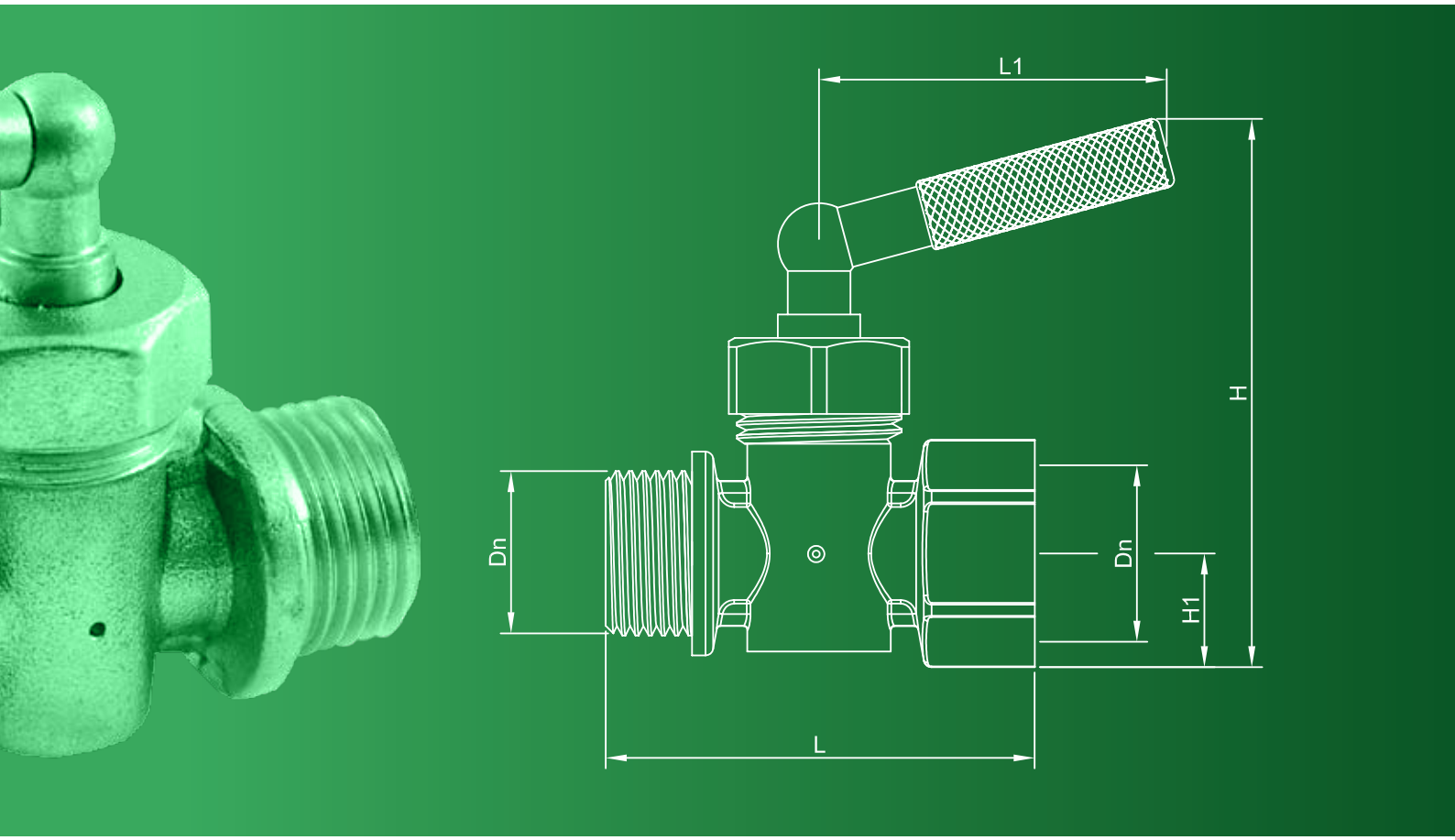
1807.008	male/female	1/4”
1807.012	male/female	3/8”
1807.015	male/female	1/2”

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

1807 • 1/4”- 1/2”

GAUGE HOLDER COCKS WITH MALE SEAL AND STUFFING BOX PN 16

CONNECTIONS: MALE-FEMALE



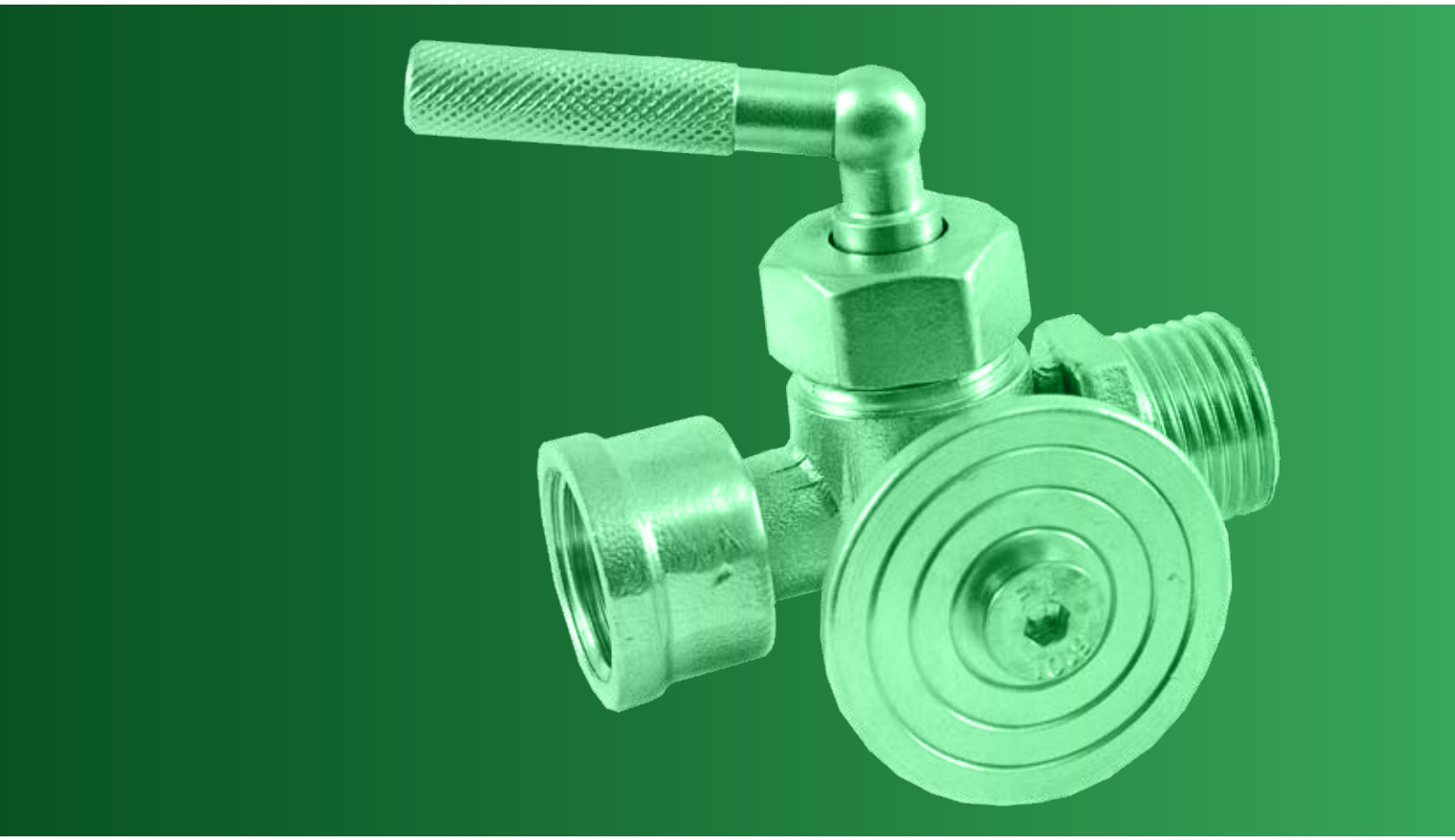
FEATURES

Dn	L	L1	H	H1
1/4”	68	43	68	15
3/8”	74	51	71	17
1/2”	75	51	71	17

1808 • 1/4”- 1/2”

GAUGE HOLDER COCKS WITH MALE SEAL, CONTROL FLANGE AND STUFFING BOX PN 16

CONNECTIONS: MALE-FEMALE



HYDRAULIC FEATURES

The gauge-holder cock with control flange is used to connect any pressure-measuring instrument to the water system. This device sections the fluid from the conduit into the measuring device, allowing its possible substitution. Once the cock is closed, the remaining fluid in the measuring instrument is discharged through the hole of its body, thus preventing both accidental pressure ebbs of the water while unscrewing the instrument and the freezing of liquid when the temperature drops down to zero, resulting in damage to the measuring instrument. The scope of the flange renders pressure readings possible, and also readings effectuated by measuring equipment from the ISPESL (Italian Institute for Occupational Safety and Prevention), as the dimensions of this flange are conform to those required by this institute for their standardized pressure testing gauge.

ISPESL STANDARDIZATION REQUIREMENTS REFERENCE CODE R SECTION R3

The gauge must be applied directly on the generator or on the inlet or outlet pipes of the same, provided that there are no devices in between, by means of a pressure inlet equipped with a valve petticoat for the application of the measuring instrument. This petticoat (flange) must be a flat disc type model of 40mm in diameter and 4mm in thickness. The gauge-holder cock with control flange is intended for heating plants with either closed or open expansion vessels.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Temperature:	
Maximum working temperature (TS)	80 °C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1
Tap device	EN 1074-2

DESIGN

Body and male closure in brass EN 12165 - CW617N
Other components in brass EN 12164 - CW614N

PRODUCT CODES

1808.008	male/female	1/4”
1808.012	male/female	3/8”
1808.015	male/female	1/2”

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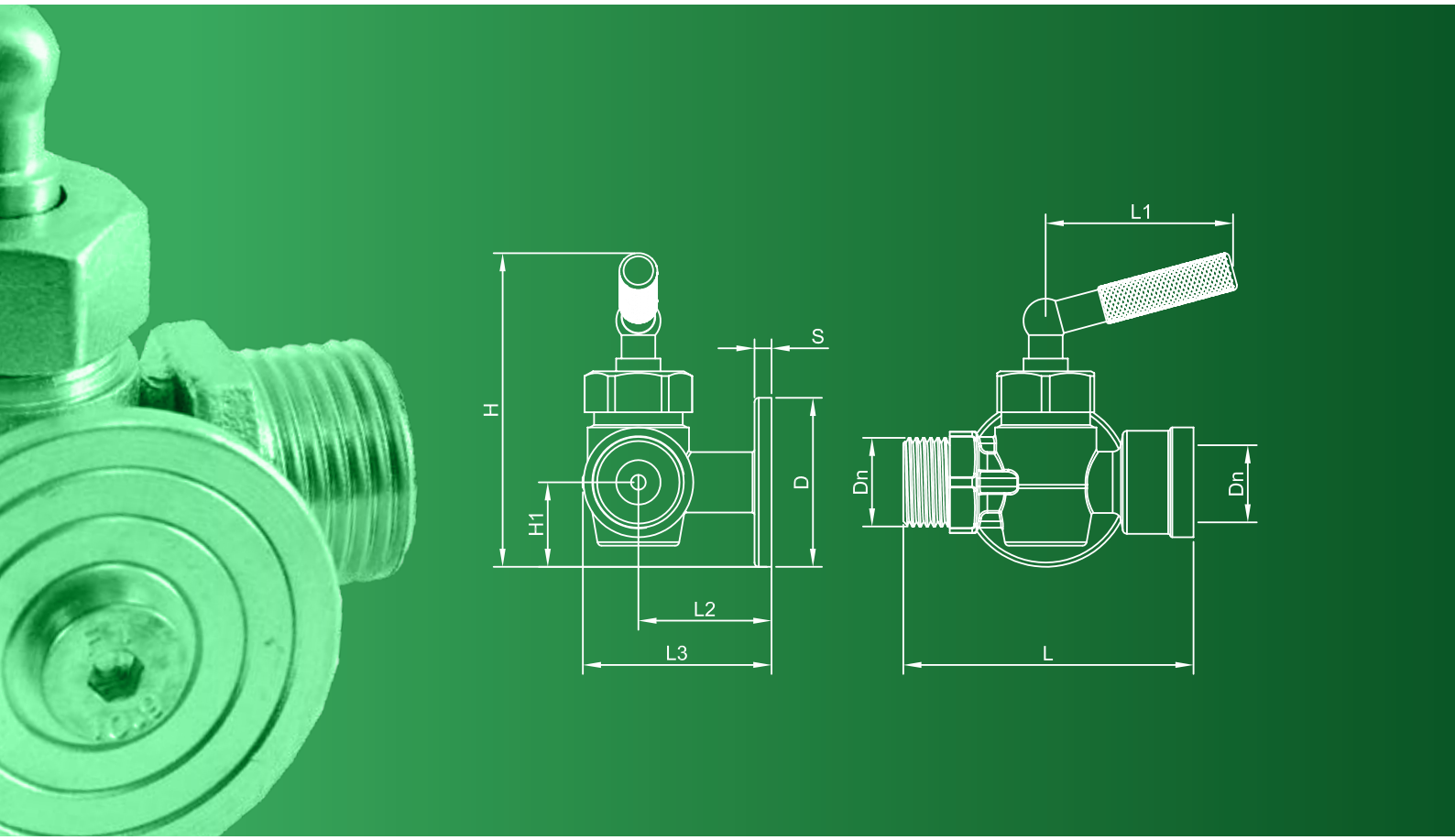
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

1808 • 1/4”- 1/2”

GAUGE HOLDER COCKS WITH MALE SEAL, CONTROL FLANGE AND STUFFING BOX PN 16

CONNECTIONS: MALE-FEMALE

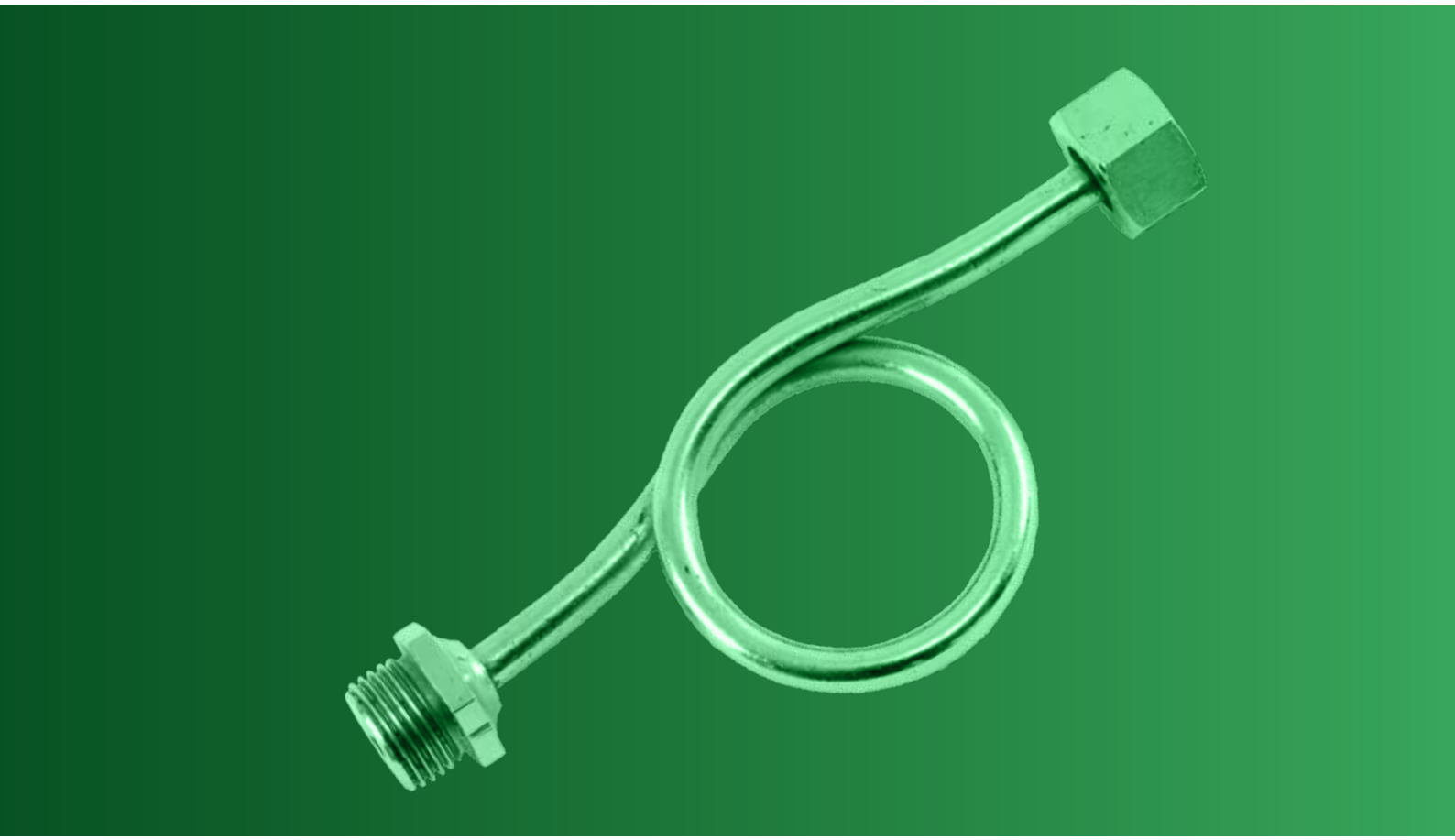


FEATURES

Dn	D	L	L1	L2	L3	H	H1	S
1/4”	Ø40	60	51	33	45	70	19	4
3/8”	Ø40	62	51	33	45	74	19	4
1/2”	Ø40	70	51	33	45	74	19	4

1809 • 1/4”- 1/2”

NICKEL-PLATED COPPER COILS PN 16
CONNECTIONS: MALE-FEMALE



HYDRAULIC FEATURES

The coil is normally installed between the gauge holder cock and the manometer itself in order to prevent possible water hammering that might damage the measuring instrument. The particular looped form, deforming itself, minimizes the potential of water hammers and limits their damaging effect on the manometer.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Temperature:	
Maximum working temperature (TS)	100 °C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1

DESIGN

Copper tube
Other components in brass EN 12164 - CW614N
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)

PRODUCT CODES

1809.008	male/female	1/4”
1809.012	male/female	3/8”
1809.015	male/female	1/2”

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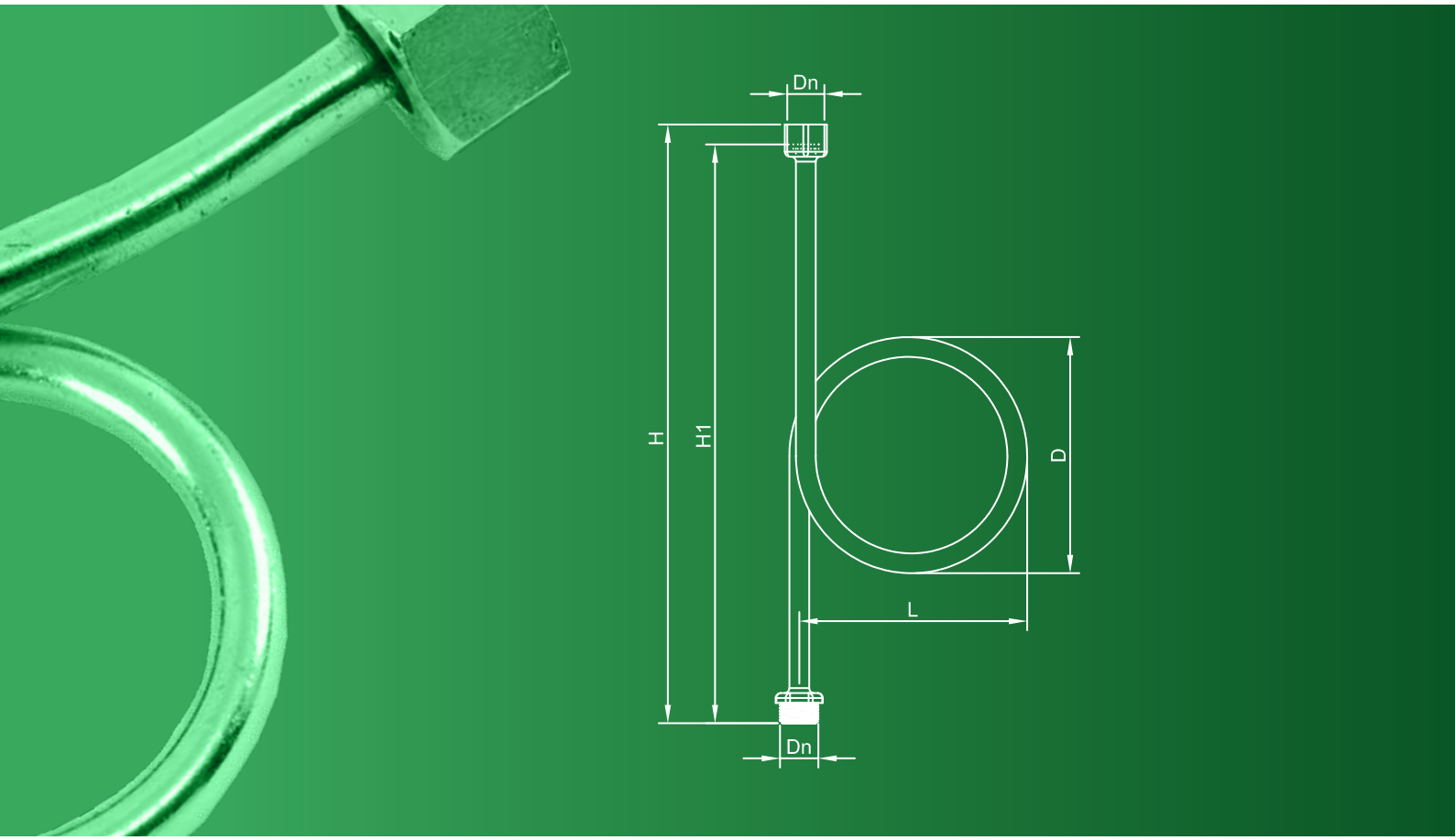
1809 • 1/4”- 1/2”

NICKEL-PLATED COPPER COILS PN 16

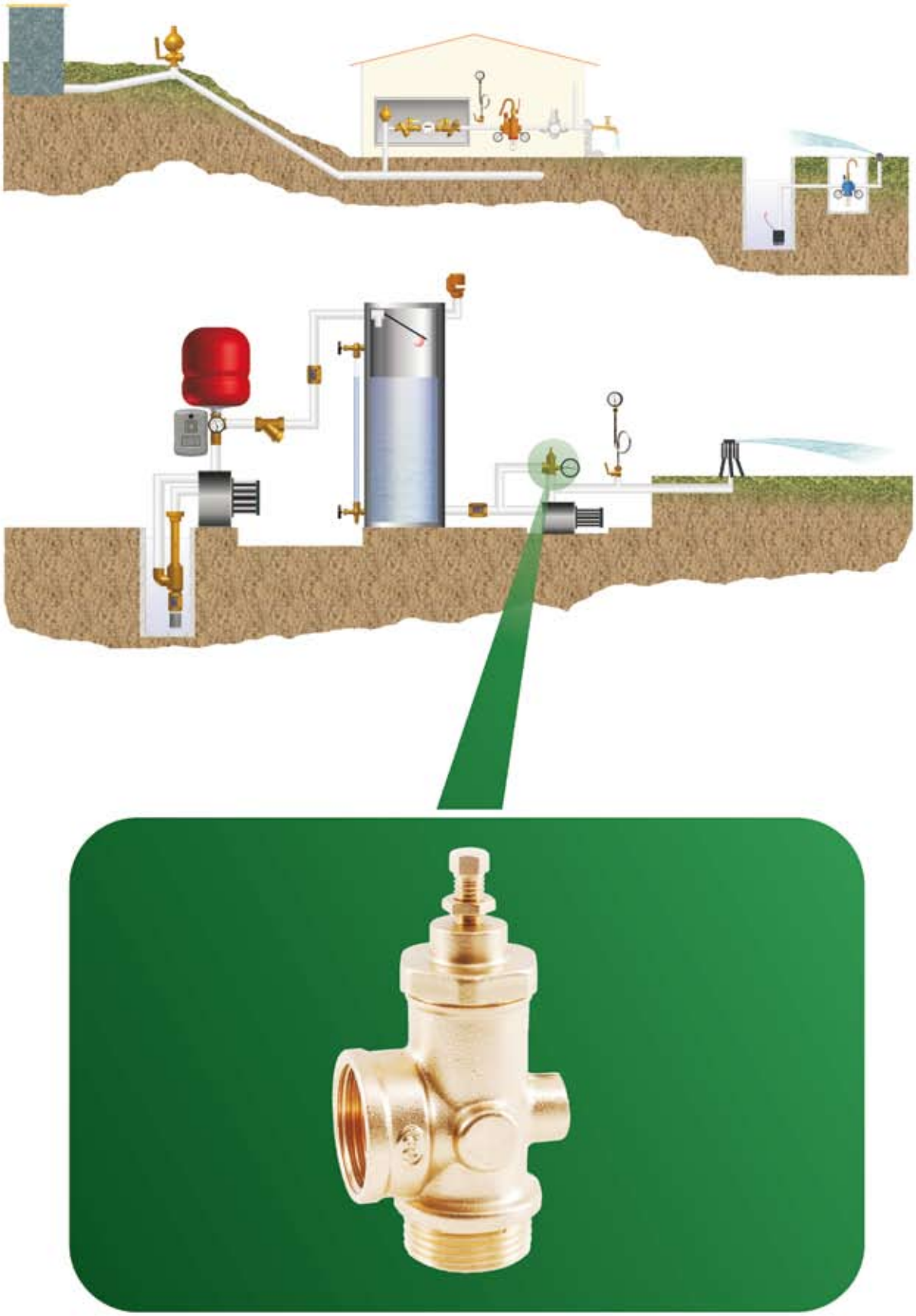
CONNECTIONS: MALE-FEMALE



FEATURES

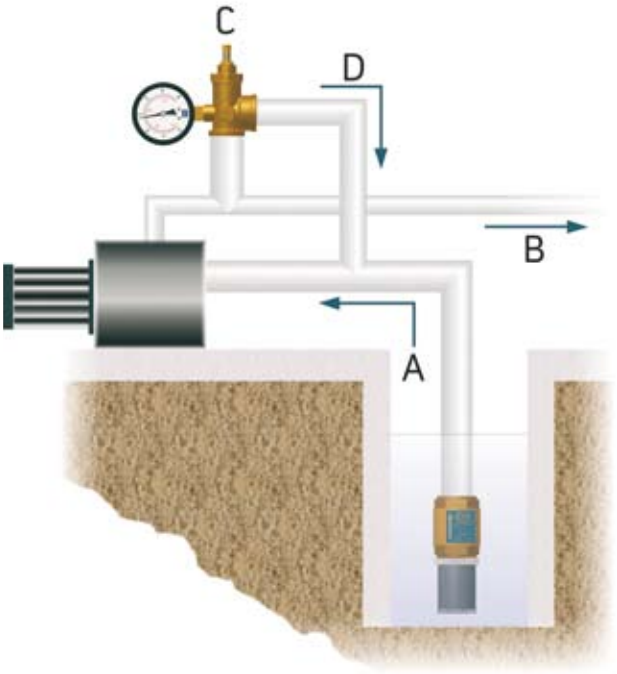
Dn	D	L	H	H1
1/4”	Ø62	41	157	150
3/8”	Ø62	41	164	154
1/2”	Ø62	41	167	157

FLOW REGULATION VALVE



FLOW REGULATION VALVE

The flow regulation valve is used, for instance, when it is impossible to act directly on the pump while there is the necessity to reduce the flow (f.i. in case the filling capacity of the well or vessel is lower than the flow rate of the pump) or the pressure (f.i. if the system on which it is installed requires a lower pressure).



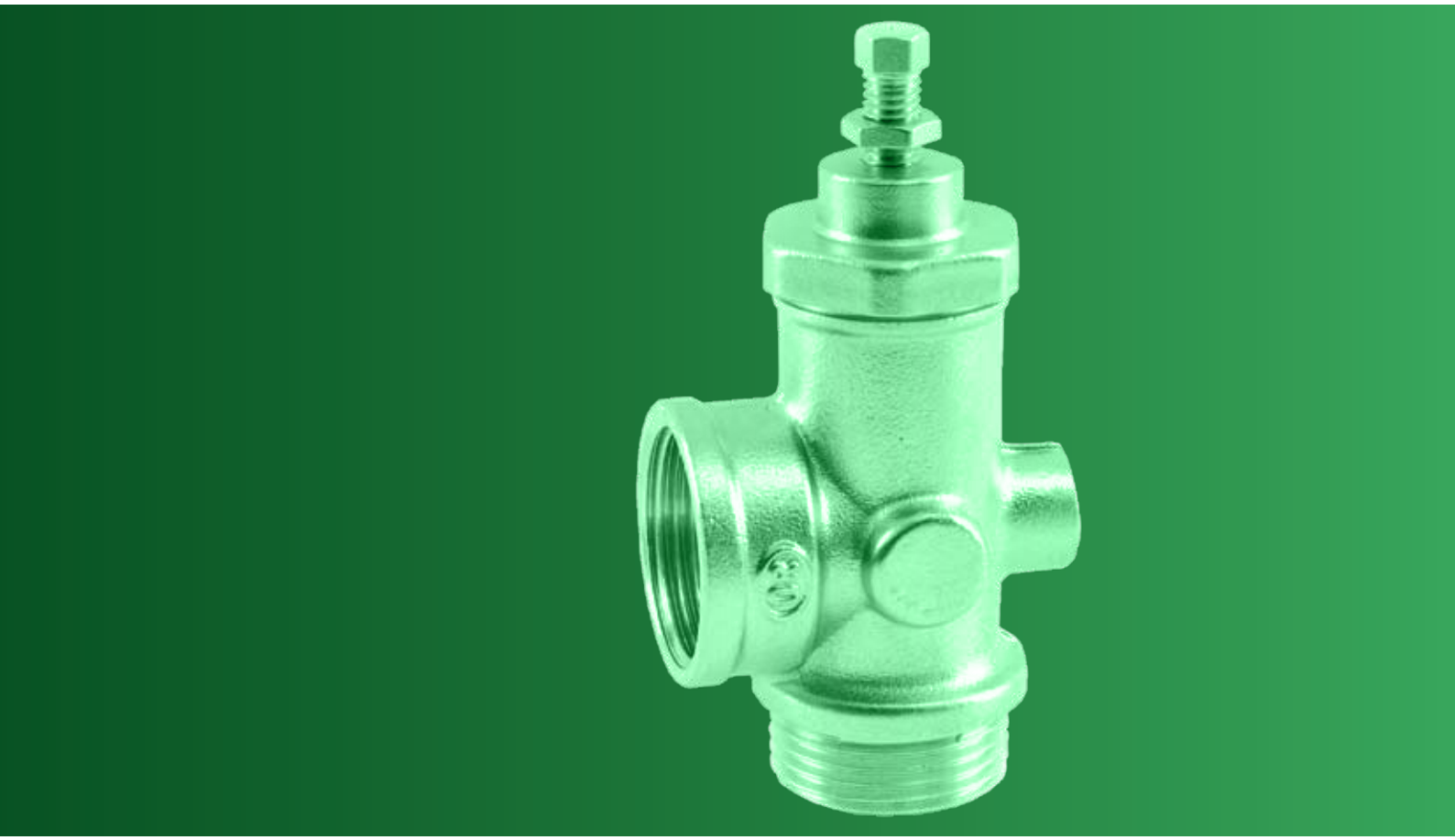
The figure shows the connection system for the flow regulation valve. The water is drawn by the pump (A) and pushed into the plant (B). The flow regulation valve (C) is installed on this pipe and its outlet is in bypass (D) with the inlet pipe drawing the water. The quantity of water that returns to the inlet pipe can be increased or decreased with the regulator on the valve, thus diminishing the pressure and the flow rate of the lead pipe.

Adjustments of the device must be made during the flow phase. By tightening or loosening the upper regulation screw, the quantity of fluid in recirculation can be increased or decreased, and consequently the pressure in the lead conduit. The adjusted regulation screw can be blocked by tightening the hexagonal lock nut. The valve shell is completely sealed towards the exterior. An O-ring installed on the obturator piston separates the fluid from the regulation assembly (spring and screw). The dynamic pressure of the fluid in recirculation can be monitored by installing a gauge on the rear pressure connection. The position of the obturator is regulated in proportion to the quantity of the fluid and is a “direct” action effected by a single spring permitting all of the requested adjustments.

0111 • 1”

FLOW REGULATION VALVES FOR PUMPS PN 16

CONNECTIONS: MALE-FEMALE



HYDRAULIC FEATURES

The flow regulation valve is an automatic and autonomous valve that regulates the position of the obturator by using exclusively the energy of the conveyed fluid. This is useful in all cases where the devices are all simultaneously excluded from the circuit. Installed between the inlet and outlet pipeline, this device assures a recirculation proportional to the number of valves that are closed, thus avoiding pump overload. The flow regulation valve, equipped with a regulation system that allows the setting of a flow rate reference point, may be installed in any position, provided that the flow direction of the incoming fluid follows the inlet male connections of the valve. This valve can also be installed in conditioning plants, sanitary installations for water supply outside buildings according to EN 805, irrigation systems and compressed air distribution systems. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Flow regulation range between	0.5 - 8 bar
Temperature:	
Working temperature (TS)	from 0°C (excluding ice) to +80°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Manometer Joint	Threads according to EN 10226- Rp1/4” (ex ISO 7/1)
Requirements and tests as per:	
Regulating valves	EN 1074-5
Shell tightness	Test P11 - EN 12266-1

DESIGN

Body and bonnet in brass EN 12165 - CW617N
Other components in brass EN 12164 - CW614N
Obturator gasket in NBR elastomer with PTFE anti-stick and anti-incrustation
SM GALVANIZED STEEL calibration spring - EN 10270-1
O-ring washers in EPDM RUBBER (peroxide-cured)

PRODUCT CODE

0111.025	male/female	1”

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
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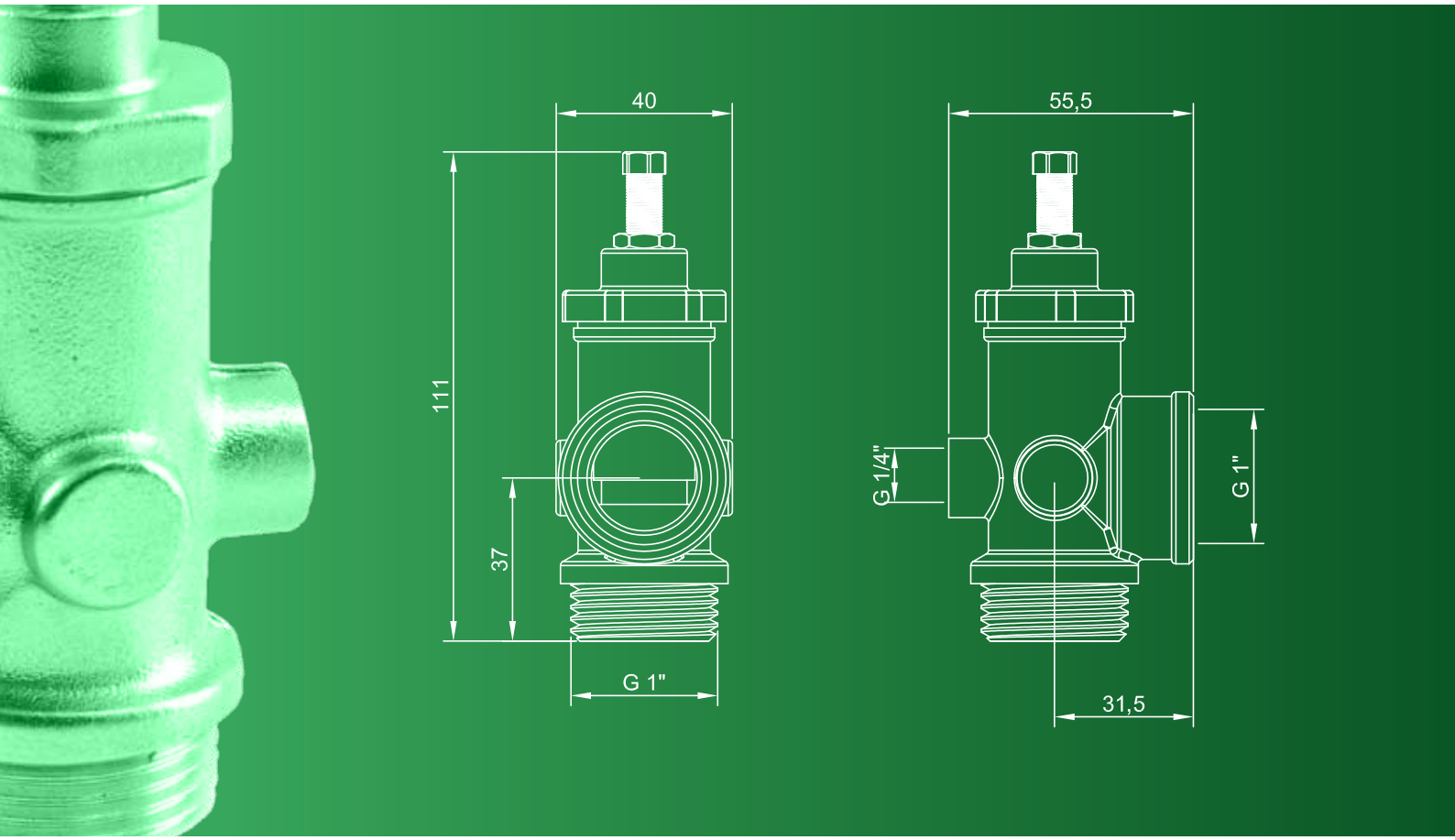
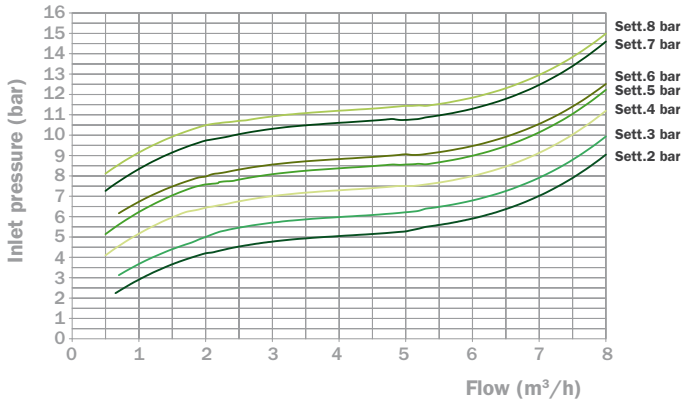
0111 • 1”

FLOW REGULATION VALVES FOR PUMPS PN 16

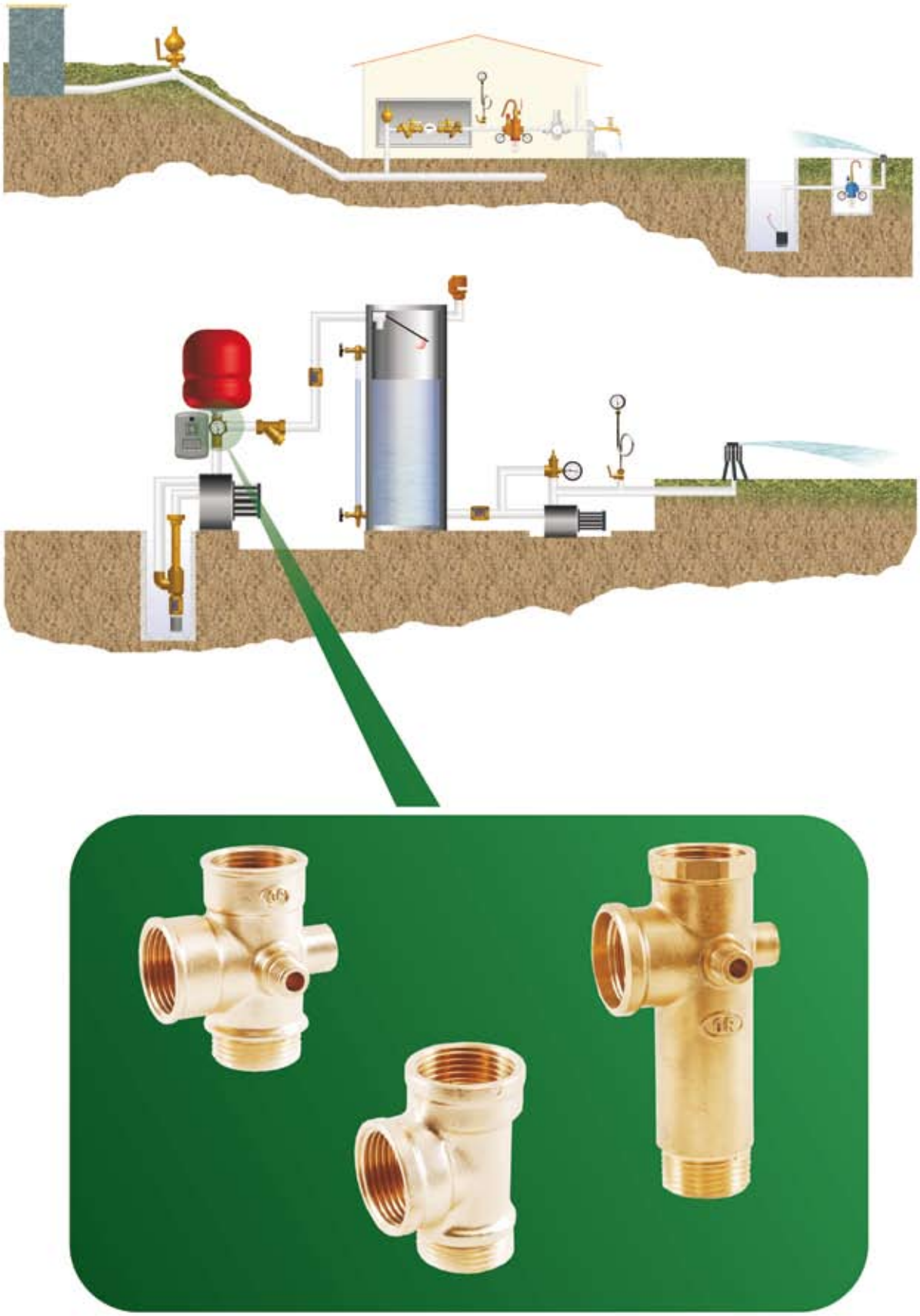
CONNECTIONS: MALE-FEMALE



FLOW REGULATION VALVES FOR PUMPS



ACCESSORIES FOR PUMPS



2060 • 1”

FITTINGS FOR PUMPS 3 AND 5 WAYS

CONNECTIONS: MALE-FEMALE

HYDRAULIC FEATURES

3 and 5-ways pump fittings are normally used as manifolds to regroup components in pumping systems and are installed above pumps/autoclaves. The three offtakes of the 3-ways fitting connect: - the lower two offtakes, the outlet of the pump/autoclave and the water return; - the upper offtake, the expansion tank. The 5-way fitting have, besides the aforementioned connections, have 2 additional offtakes for the connection of a pressure switch and a gauge.

TECHNICAL FEATURES

Pressure:
Maximum allowable working pressure (PN) 16 bar
Temperature:
maximum working temperature (TS) 150 °C
Compatible fluids:
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)
Threading:
Pipeline connection Threads according to ISO 228/1
Requirements and tests as per:
Shell tightness Test P11 - EN 12266-1

DESIGN

Brass Body EN 12165 - CW617N

PRODUCT CODES

		Height	Pump Connection		Tank Connection		Outlet Connection		Gauge Connection		Pressure Switch Connection
2060.004	5 WAYS ex. D	76 mm	1” male	1”	female	1”	female	1/4”	female	1/4”	male
2060.008	5 WAYS ex. H	69 mm	1” male	1”	female	1”	female	1/4”	female	1/4”	male
2060.009	5 WAYS ex. I	88 mm	1” male	1”	female	1”	female	1/4”	female	1/4”	male
2060.012	3 WAYS ex. N	69 mm	1” male	1”	female	1”	female				
2060.017	5 WAYS ex. M	125 mm	1” male	1”	female	1”	female	1/4”	female	1/4”	male

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via Circonvallazione, 9
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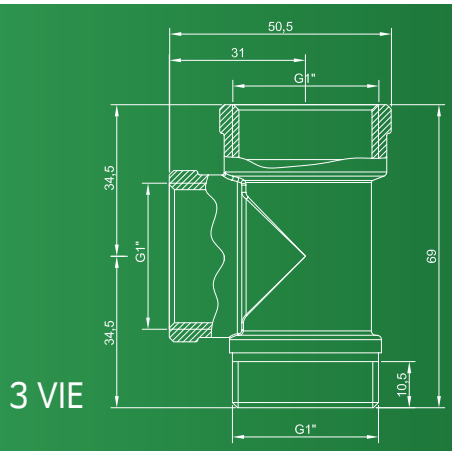
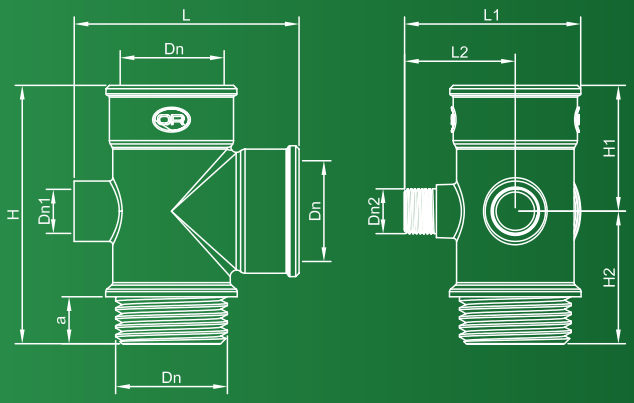
2060 • 1”

FITTINGS FOR PUMPS 3 AND 5 WAYS

CONNECTIONS: MALE-FEMALE



3 VIE



5 VIE

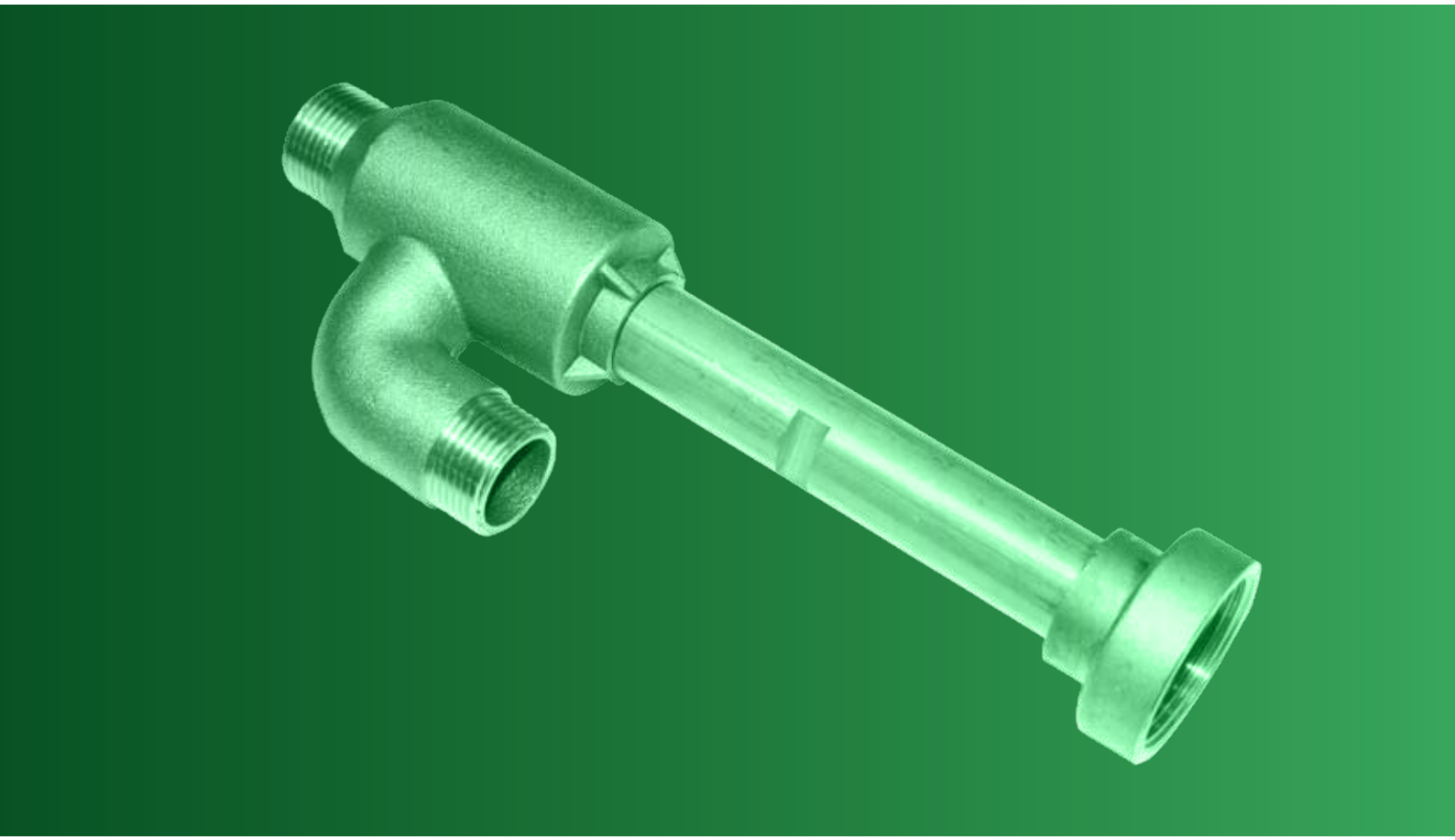
FEATURES

Cod.	Dimensions									
	Dn	Dn1	Dn2	L	L1	L2	H	H1	H2	a
2060.004	1”	1/4”	1/4”	67	52,5	33	76	37,5	38,5	13
2060.008	1”	1/4”	1/4”	56,5	48,5	29	69	24,5	44,5	12
2060.009	1”	1/4”	1/4”	65	54	32	88	38,6	49,5	17
2060.017	1”	1/4”	1/4”	65	51	31	125	51	36	18

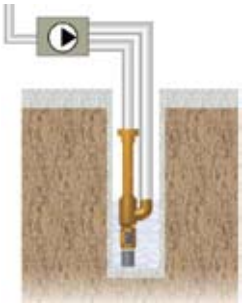
2067 • 1”

EJECTORS FOR PUMPS WITH VENTURI EFFECT

CONNECTIONS: MALE-FEMALE



HYDRAULIC FEATURES



The ejector is a device that sucks the water from a well when immersed completely in the deepest part of the well and attached to a pump at the surface. The particular internal geometric form of the device’s body, together with its double contrasted cone, allows it to take advantage of the principle of the “Venturi effect”. Water velocity increases inside the body creating a depression at the ejector’s inlet, creating suction and consequently bringing the water to the pump. Footvalves are recommended at the end of the ejector’s suction in order to avoid the device’s discharge when the pump is not functioning which would cause the introduction of particles that may damage the mechanical parts.
The ejector has the following features:
1) Facilitates maintenance of centrifugal pumps as it will be at the surface.
2) Avoids the need for electric devices in the well’s proximity.
3) Allows the use of an electric or internal combustion engine pump.
4) The same pump can be removed and transported to another facility without altering the plant.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Temperature:	
maximum working temperature (TS)	80 °C
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1

DESIGN

Cast brass body EN 1982 - CW753S
Venturi pipe and seat in brass EN 12164 – CW614N
Brass Nut EN 12165 - CW617N

PRODUCT CODES

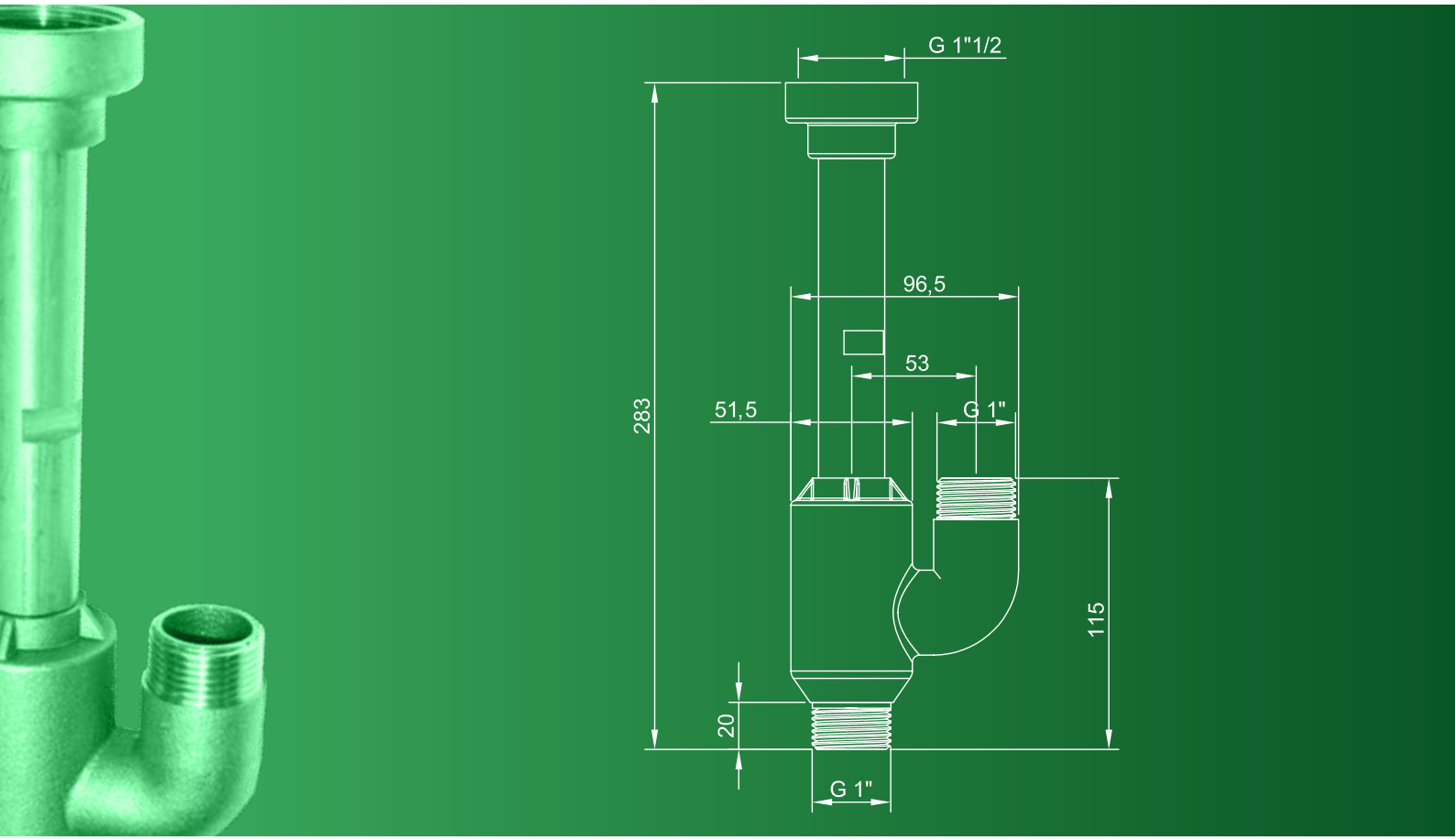
2067.025	male	1”

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

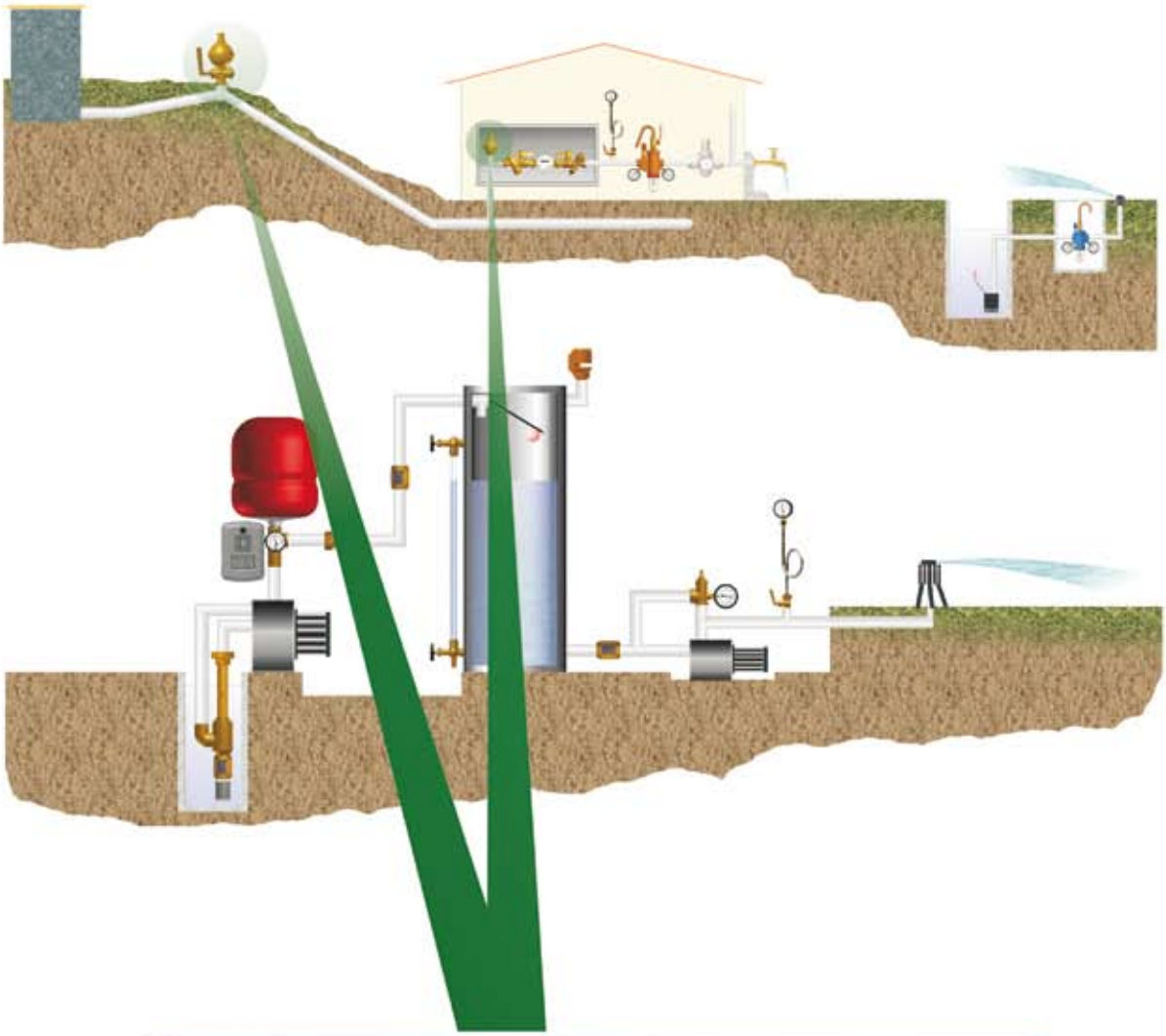
2067 • 1”

EJECTORS FOR PUMPS WITH VENTURI EFFECT

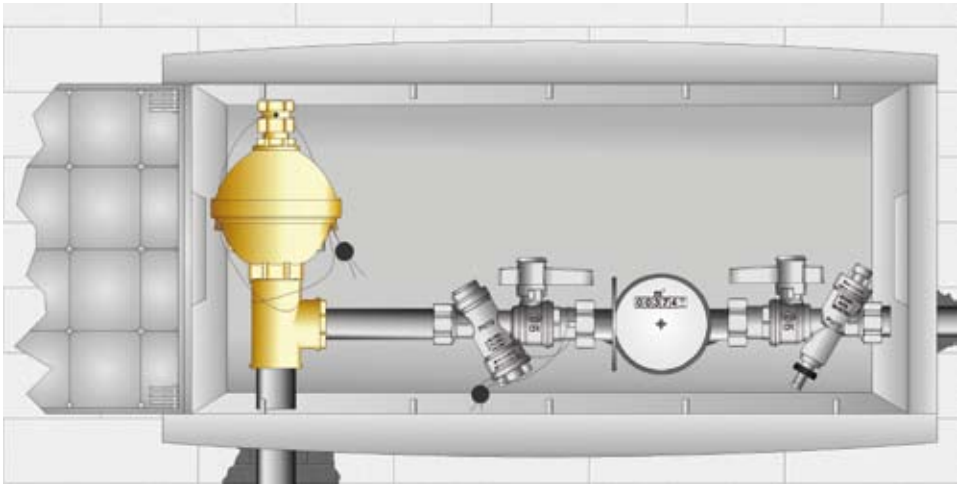
CONNECTIONS: MALE-FEMALE



AIR VENTS
FOR HIGH CAPACITY EVACUATION

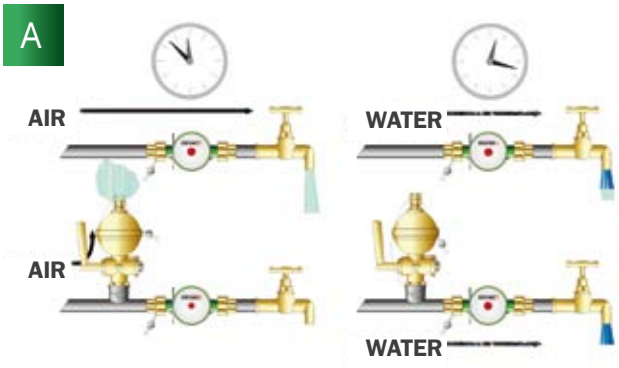


AIR VENTS
FOR HIGH CAPACITY EVACUATION

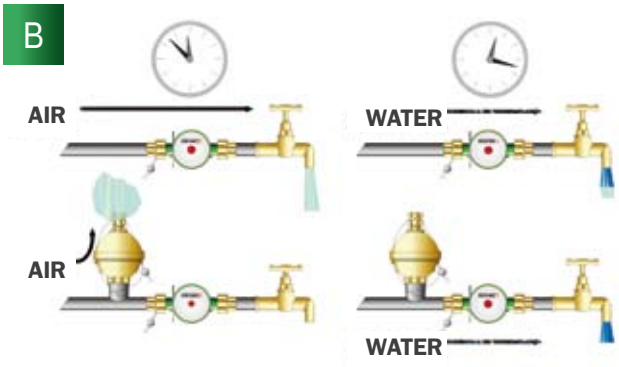


The water connection system with water meter at home, consists of valves before and after the water meter and of a valve for evacuating large volumes of air at a high flow capacity. All the above mentioned devices are conform with the most recent local regulations and with EU standard EN 805 concerning systems and components for buildings. For major security, the meter assembly can be enclosed in a modular control box, for which both the user and the pertinent authorized bodies shall have access keys to monitor water flow or consumption.

A



B



The “ROMA” (A) and the “High Flow Capacity” (B) air vents are used in areas where there are frequent suspensions in the water supply from the distribution main. In fact, after suspending the water supply, the pipes normally fill with air, which exits through the taps until normal flow returns. The meter counts this air in m3 as if it were water. Installing a “High Flow Capacity” or “ROMA” air vent will guarantee that when water enters the system, the air present in the tube will first escape before passing through the meter, thus preventing the need to leave the tap open. The internal floater will close the hole of the air vent upon the water’s return, keeping the water from escaping. Once the piping is full, only water will pass through the meter when the tap is opened. The “High Flow Capacity” and “ROMA” air vents do not have a degassing function.

0498 • 3/4”- 1”

AUTOMATIC AIR VENTS “HIGH FLOW CAPACITY” PN 16

CONNECTION: MALE

HYDRAULIC FEATURES

The “High Flow Capacity” model automatic air vent is an automatic valve with single float, used for the evacuation and discharge of large volumes of air from water supply pipes. This sort of air vent may only be installed vertically. In order to maximize the efficiency of the discharge, it should be installed at the highest points in the system or, if this is not possible, a TE fitting should be installed at the inlet, as in figure A. When installing at the top of an ascension pipe, a conveyable discharge hose can be installed (option available only on request). The particular spherical profile of the internal floater-obturator in special thermoplastic rubber forestalls water spatter during the sealing phase, in closure. The absence of sliding guides, hence drag, allows the spherical floater an elevated velocity and precision in closing besides avoiding dangerous incrustations. At the discharge outlet there is a protective catch for dust and lint, which, over time, could deposit upon the opening of the cap, obstructing it; moreover, being perforated, anti-tampering seals may be used in compliance with legislation currently in force. The lower anti-spray guard allows the even distribution of hydraulic thrust across the entire surface of the sphere, limiting the turbulence to a minimum and guaranteeing a highly precise closure. The “High Flow Capacity” automatic air vent is used in conditioning plants, sanitary installations for water distribution destined for human consumption outside buildings under EN 805, and irrigation plants. The simplicity of the High Flow Capacity air vent renders maintenance usually unnecessary. However, in the event of water outflow from the upper seat of the air vent, substitute the internal sphere-obturator, which is easily accessible by dismounting the body cap. In case of prolonged inactivity, the device should be disinfected according to EN 805 §12. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
minimum accumulation	0.5 bar (Grade A according to EN 12266-1)
range of operation air evacuation	from 0.5 bar to 16 bar (tolerance ± 10% max. detected)
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) +110°C
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Air vents	EN 1074-4
Seat tightness	EN 1074-4 §5.2.2
Pressure resistance	EN 1074-4 §5.1.1

DESIGN

Body and cap in Brass - EN 12165 - CW617N
O-ring in: NBR Rubber
Spherical floater in: THERMOPLASTIC ELASTOMER
Sphere guard in ACETAL RESIN (POM)

PRODUCT CODES

0498.120	male	3/4”
0498.125	male	1”

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via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
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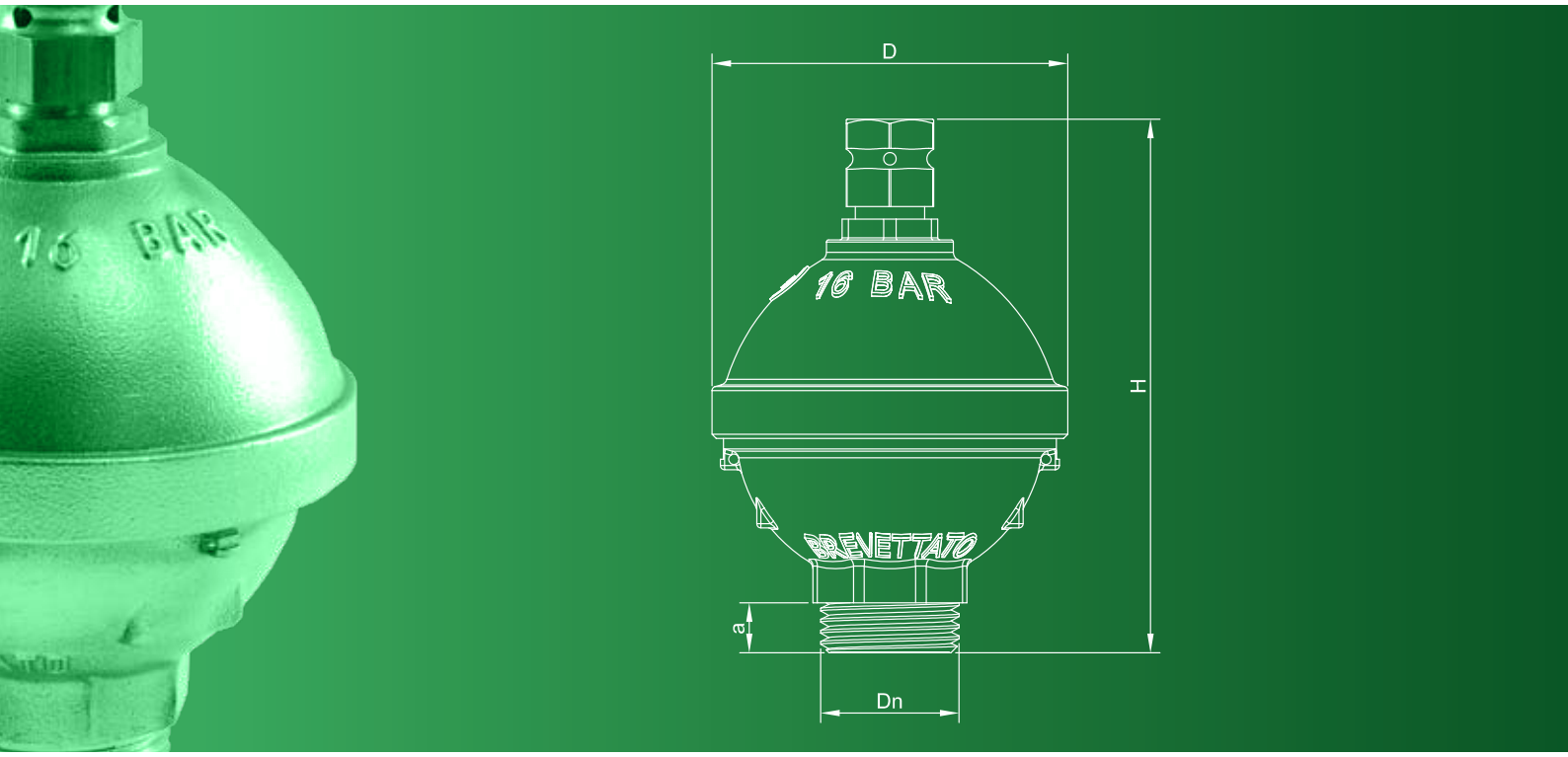
0498 • 3/4”- 1”

AUTOMATIC AIR VENTS “HIGH FLOW CAPACITY” PN 16

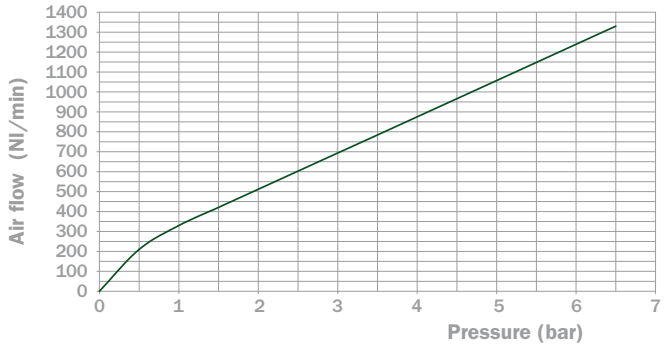
CONNECTION: MALE



FEATURES

Dn	D	H	a
3/4”	85,5	126	12
1”	85,5	126	12

FUNCTION CURVE “HIGH FLOW CAPACITY” AIR VENT



3161 • 3/4”- 1”1/4

AUTOMATIC AIR VENTS “ROMA” PN 16

CONNECTION: MALE

HYDRAULIC FEATURES

The “ROMA” model automatic air vent is an automatic valve with single float, used for the evacuation and discharge of large volumes of air from water supply pipes. The integrated tap device is equipped with a dual-position 90° male seal. Position “A” communicates the system with the upper air discharge recess while position “B” bypasses the system discharge recess and permits its draining through the front slot. This renders it particularly ideal for installation in zones outside buildings where there is a high risk of freezing. The “ROMA” air vent valve may only be installed vertically. In order to maximize the efficiency of the discharge, it should be installed at the highest points in the system or, if this is not possible, a TE fitting should be installed at the input, as in figure “C”. When installing it at the top of an ascension pipe, a conveyable discharge hose can be installed (option available only on request). The particular spherical profile of the internal floater-obturator in special thermoplastic rubber forestalls water spatter during the sealing phase, in closure. The absence of sliding guides, hence drag, allows the spherical floater an elevated velocity and precision in closing besides avoiding dangerous incrustations. At the discharge outlet there is a protective catch for dust and lint, which, over time, could deposit upon the opening of the cap, obstructing it; moreover, being perforated, anti-tampering seals may be used in compliance with legislation currently in force.
The lower anti-spray guard allows the hydraulic thrust to be distributed evenly across the entire surface of the sphere, limiting the turbulence to a minimum and guaranteeing a highly precise closure. The “ROMA” model air vent is used in conditioning plants, sanitary installations for water distribution destined for human consumption outside buildings under EN 805, and irrigation plants. Maintenance of the “ROMA” model air vent consists in the periodic verification of the closure of the integrated stop device. The male obturator can be checked by tightening the front hexagonal nut while moving the lever from position “A” to position “B” and vice versa. The lever should only be actioned manually and not with the help of any tools. In the event of water outflow from the upper seat of the air vent, substitute the internal sphere-obturator, which is easily accessible by dismounting the body cap. In case of prolonged inactivity, the device should be disinfected according to EN 805 §12. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

A

B

C

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
minimum accumulation	0.5 bar (Grade A according to EN 12266-1)
range of operation air evacuation	from 0.5 bar to 16 bar (tolerance ± 10% max. detected)
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) +110°C
minimum plant storage	-20°C (with recess fluid discharged)
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Air vents	EN 1074-4
Seat tightness	EN 1074-4 §5.2.2
Stop device	EN 1074-2
Pressure tightness	EN 1982 B.7
Pressure resistance	EN 1074-4 §5.1.1

DESIGN

Cast brass body and male EN 1982 - CB753S
Cap in brass EN 12165 - CW617N
O-ring in NBR RUBBER
Spherical floater in THERMOPLASTIC ELASTOMER
Sphere guard in ACETAL RESIN (POM)

PRODUCT CODES

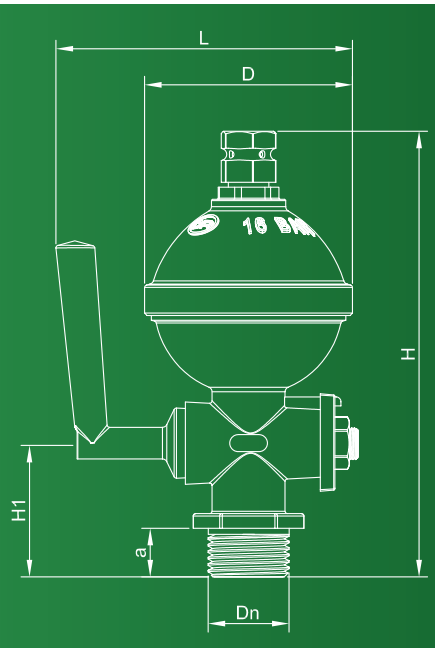
3161.020	male	3/4”
3161.025	male	1”
3161.033	male	1” 1/4

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

3161 • 3/4”- 1”1/4

AUTOMATIC AIR VENTS “ROMA” PN 16

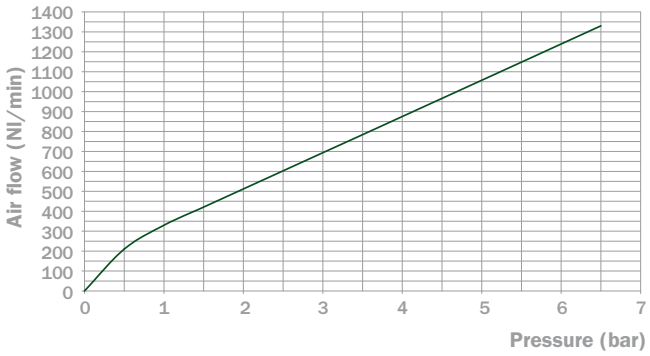
CONNECTION: MALE



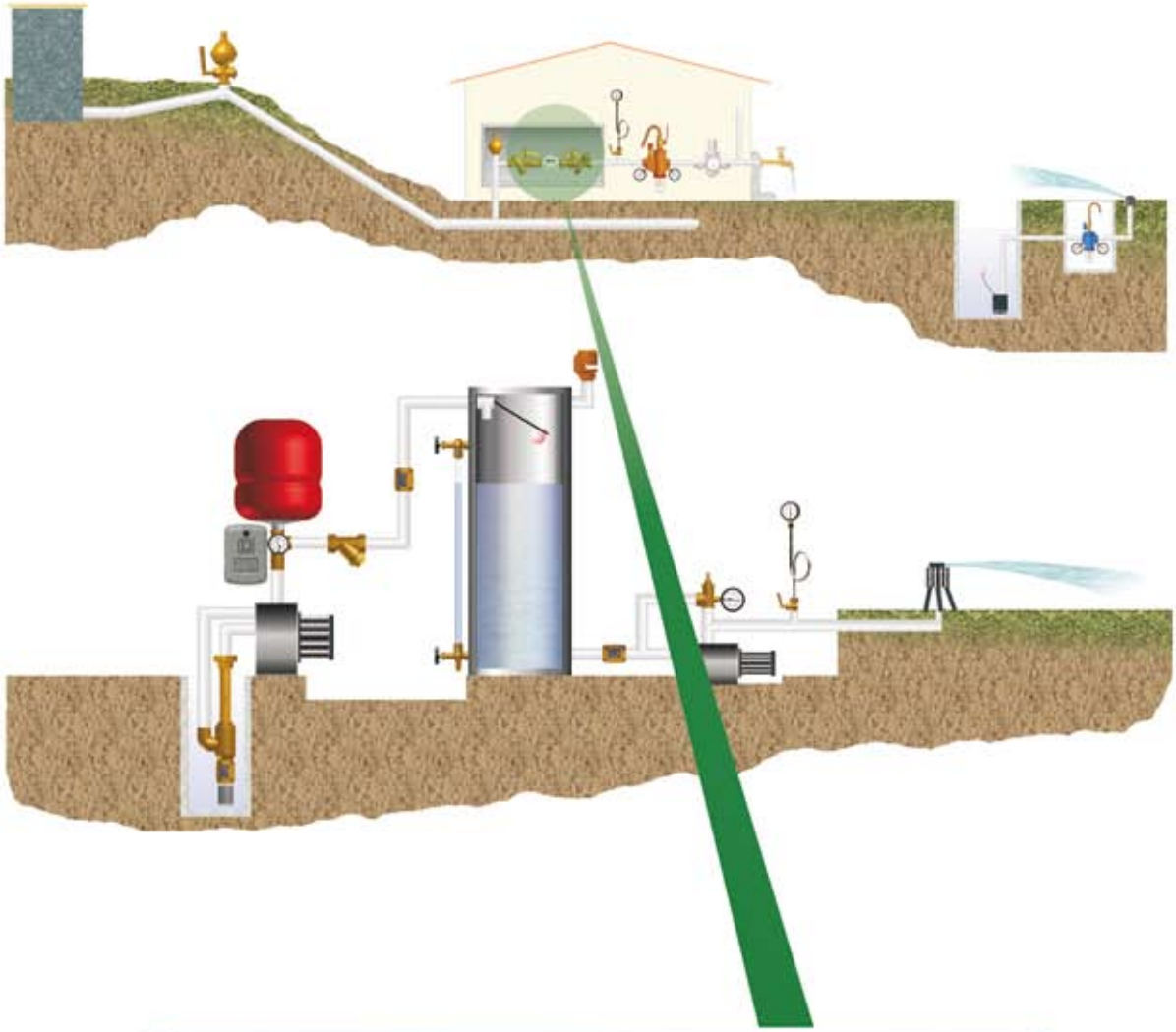
FEATURES

Dn	D	L	H	H1	a
3/4”	Ø 85,5	123,5	183,5	55	20
1”	Ø 85,5	123,5	183,5	55	20
1”1/4	Ø 85,5	123,5	183,5	55	20

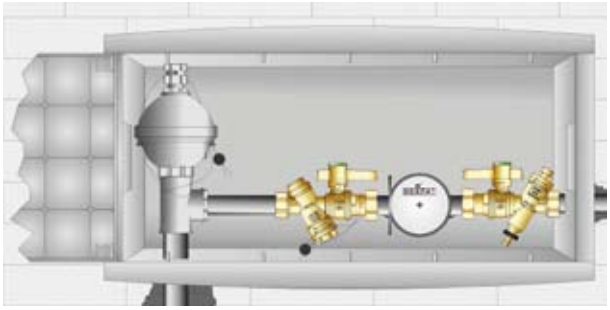
FUNCTION CURVE AIRVENT “ROMA”



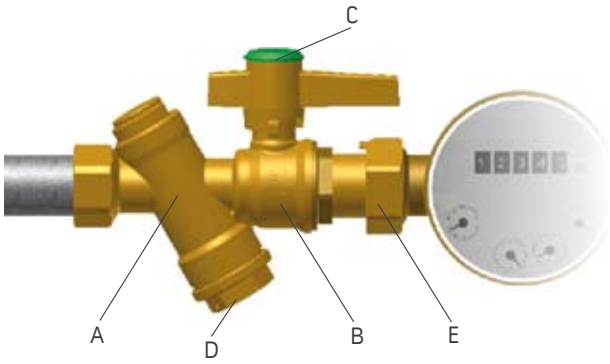
WATER METER ACCESSORIES



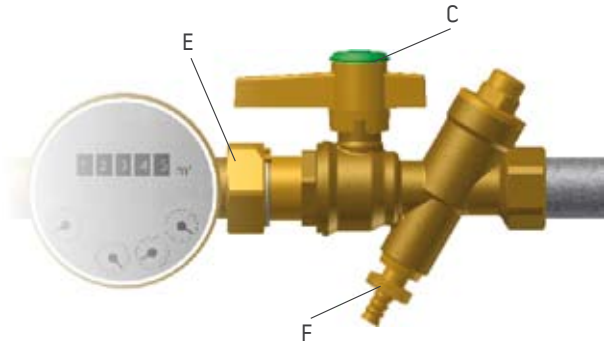
WATER METER ACCESSORIES



The water connection system with water meter at home, consists of valves before and after the water meter and of a valve for evacuating large volumes of air at a high flow capacity. All the above mentioned devices are conform with the most recent local regulations and with EU standard EN 805 concerning systems and components for buildings. For major security, the meter assembly can be enclosed in a modular control box, for which both the user and the pertinent authorized bodies shall have access keys to monitor water flow or consumption.



The Inlet Water Meter System Assembly can be installed on piping either vertically or horizontally, with the direction of the flow indicated by the arrow. The nut (E), the cap (D) and the lever (C) are all designed to allow anti-tampering seals. The filtering unit (A) separates foreign particles suspended in the water, thus preventing damage to the function of the shut off ball valve (B), which is situated immediately behind it. The shut off system, included in the filtering unit, promptly blocks passage of water during regeneration tasks for the filtering cartridge, without the need to place another shut off valve at the inlet of the supply system.



The Outlet Water Meter System Assembly can be installed on piping either vertically or horizontally, with the direction of the flow indicated by the arrow. The nut (E) and the lever (C) are all designed to allow anti-tampering seals. In the case of installation with piping close to pavement or walls, the distance between the center line of the piping and the pavement (or wall) must be taken into consideration to facilitate the task of drawing water from the appropriate tap.

The safety unit, integrated in the outlet water meter assembly, prevents backflow by the countersiphoning of a contaminant fluid in a Category 1 drinking water system, in line with European Standard EN 1717. Its functioning is controllable through the draw-off tap. The inlet and outlet meter valves both have a “union” to connect them at one end to the water meter, which allows a rapid and direct connection. The shut off function is obtained by means of a “total passage” spherical obturator in polished and chrome finished brass, which renders an enhanced durability and reliability even after prolonged use. The PTFE seats are impervious to calcareous incrustation and permit low torque; the perfect sealing towards the external parts of the lower outer “anti-bursting” stem is reinforced by toroidal rings. All threaded connections necessary for the assemblies are factory sealed. The control lever has the following positions: locked open, locked closed and free.

0497.415 • 1/2”X 3/4”

INLET WATER METER SYSTEMS COMPLETE WITH STRAINER PN 16

CONNECTION: FEMALE-NUT FEMALE

HYDRAULIC FEATURES

The “inlet water meter” assembly is a compact valve consisting in, from upstream to downstream, a filtering unit that eliminates/separates water-suspended particles and a shut off ball valve that permits a complete water cut-off to the user.
The regeneration or substitution of the filtering cartridge is rendered extremely simple by means of the shut off valve with disc system, which automatically interrupts water flow before the water in the conduit can come out of the plug-strainer, permitting an absolutely professional maintenance intervention that is visually manageable and in a dry environment.
The inlet water meter assembly is made of “CR” brass, which is resistant to dezincification, reducing corrosion in the system to a minimum, even if the local water supply should cause such a phenomenon (likewise it can also be used under the conditions described in EN 806-2 A.1). The inlet water meter assembly is designed mainly to be connected to the water network, installing it before the water meter, in line with the prescriptions regarding sanitary installations for water distribution destined for human consumption as laid out in EN 805. With this in mind, it is important to underline the possibility to put an anti-tampering seal, in order to be able to control possible tampering with this device. Moreover, the assembly design permits locking it in either an “open” or “closed” position. The assembly may also be used in applications such as irrigation systems, conditioning plants, etc. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Flow coefficient	Kv 2m3/h
Temperature:	
Working temperature (TS)	from 0°C (excluding ice) to +95°C
Compatible fluids for the exclusive technological use of water:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Filtration Rating:	
Referenced micron rating (S)	< 400 µm
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Test of flow resistance compliant to	EN 1267
Device tests for shut off ball valves according to	EN 13828
Determination of dezincification resistance compliant to	EN 6509
Ball tightness	Test P1 - EN 13828 § 7.4.1.3
Disc obturator seat tightness	Test P12 - EN 12266-1
Shell tightness	Test P11 - EN 12266 - 1
Acoustic group Class	I – Lap[dB(A)] < 20
Maximum depth of dezincification	200 m - Grade A -

DESIGN

Body, sleeve and nut in brass EN12165-CW602N (DZR)
Die cast brass handle EN 1982-CB754S
Other components in brass EN 12164 - CW614N
Brass ball EN 12164 - CW614N
Ball chromium ELECTRODEPOSITED COATING EN 12540 (CuNi5 SCrr)
O-ring in NBR RUBBER
MICROSTRETCHED STAINLESS STEEL mesh strainer EN 10088-1.4301 (AISI 304)
STAINLESS STEEL spring EN 10088-14310 (AISI 302)

PRODUCT CODES

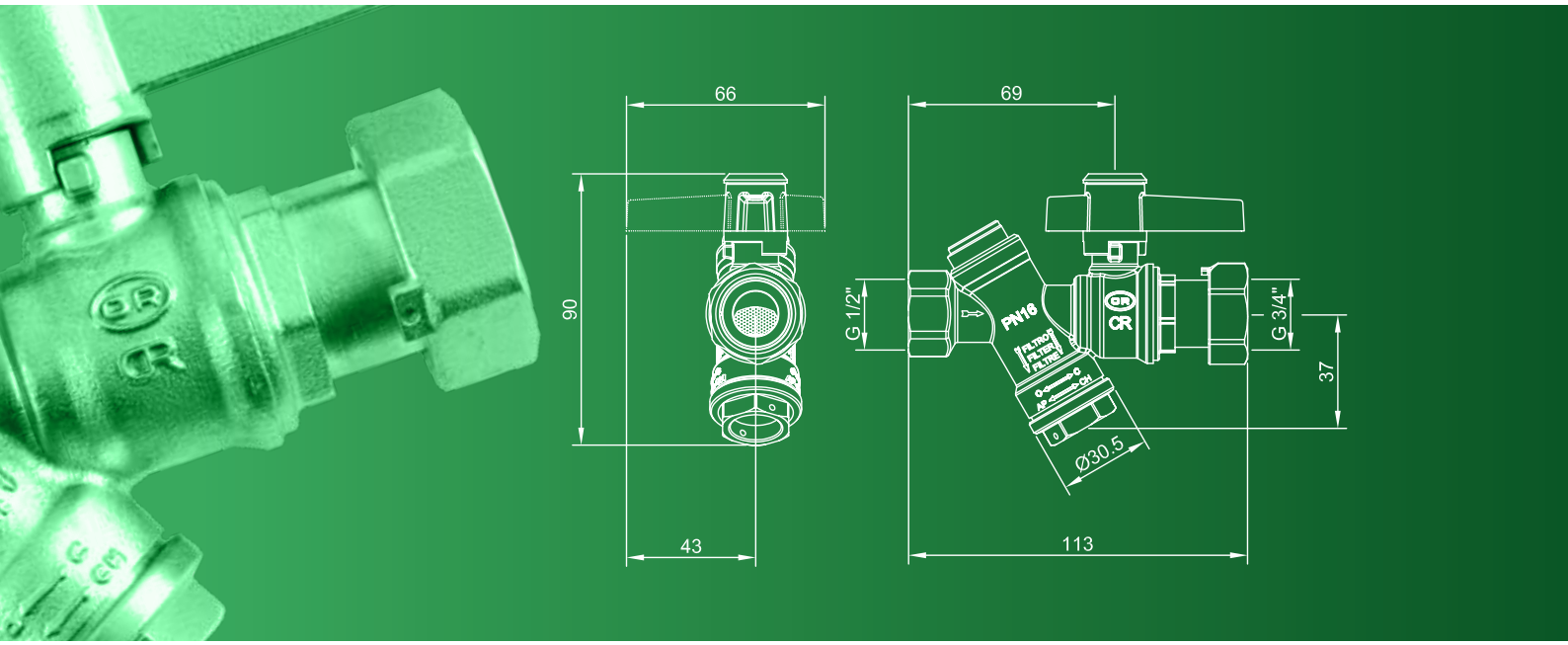
0497.415	female	1/2” / nut female	3/4”

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0497.415 • 1/2”X 3/4”

INLET WATER METER SYSTEMS COMPLETE WITH STRAINER PN 16

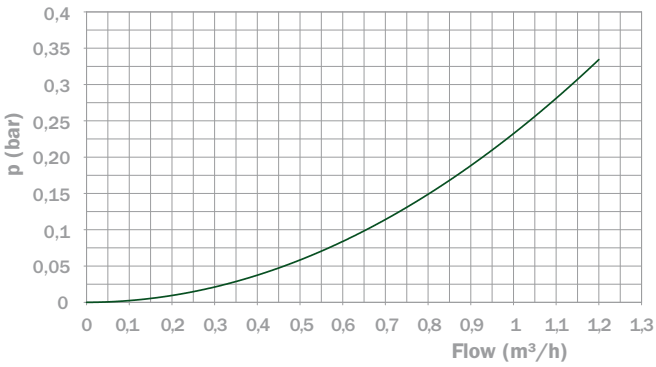
CONNECTION: FEMALE-NUT FEMALE



MAINTENANCE

Cleaning and/or substitution of the filtering cartridge can be carried out without cutting off the water supply: The shut off system automatically interrupts water flow during this maintenance task. The water flow will begin again once the lower strainer/plug is completely screwed tight. The cleaning of the strainer must be scheduled periodically (at least once a month), since there is no way to visually perceive accumulation of dirt. When placing the device in service for a new system, it is advisable to clean the strainer after a few hours in order to clean away the typical residues due to new piping installations. After cleaning the strainer, carefully observe the plug’s sealing O-Ring, near the hydraulic closing, substituting it in case of any doubt. The “inlet water meter” assembly can be disinfected, in line with the recommendations relative to the products, to the maximum concentration, to the limitations of use and to the neutralizing agents described under the relevant European legislation, EN 805 §12.

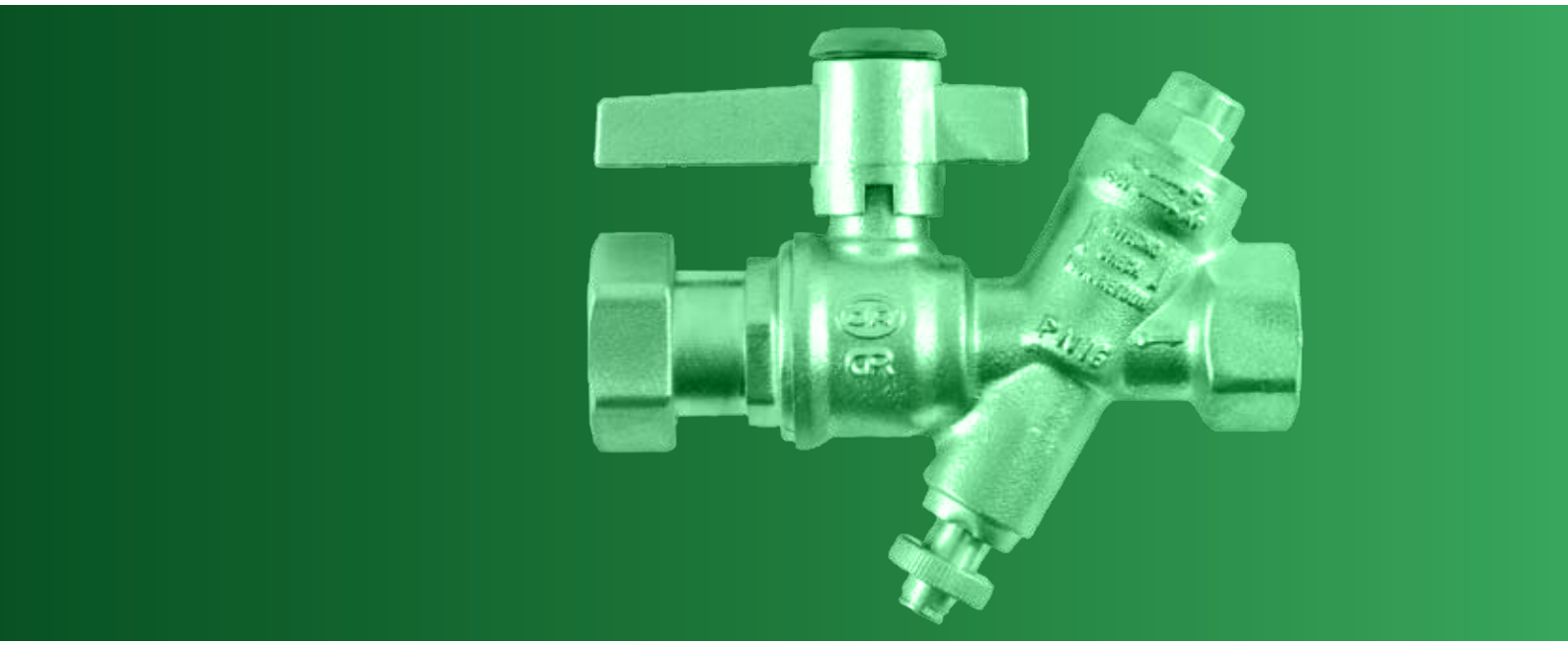
HEAD LOSS INLET WATER METER



0497.515 • 3/4”X 1/2”

OUTLET WATER METER WITH CHECK AND DISCHARGE PN 16

CONNECTION: NUT FEMALE-FEMALE



HYDRAULIC FEATURES

The “outlet water meter” system is a compact valve consisting in, from upstream to downstream, a shut off ball valve that permits complete user water cut-off, an inspectional (EA) non-return cartridge in line with European Standard EN 1717, preventing backflow of water present in sanitary installations in the absence of water flow from the distribution main, and a draw-off tap to test the quality of the water in the system. The outlet water meter assembly is made of “**CR**” brass, which is resistant to dezincification, reducing corrosion in the system to a minimum, even if the local water supply should cause such a phenomenon (likewise it can also be used under the conditions described in EN 806-2 A.1). The outlet meter assembly is designed mainly to be connected to the water network, installing it after the water meter, in line with the prescriptions regarding sanitary installations for water distribution destined for human consumption as laid out in EN 805. With this in mind, it is important to underline the possibility to put an anti-tampering seal, in order to be able to control possible tampering with this device. Moreover, the assembly design permits locking it in either an “open” or “closed” position. The assembly may also be used in applications such as irrigation systems, conditioning plants, etc. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Flow coefficient	Kv 2.9 m3/h
Δp closure non-return	500 Pa (0.05 bar)
Flow rate from the draw-off tap	2 l/min
Temperature:	
Working temperature (TS)	from 0°C (excluding ice) to +95°C
Compatible fluids for the exclusive technological use of water:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
est of flow resistance compliant to	EN 1267
Device tests for shut off ball valves according to	EN 13828
Determination of dezincification resistance compliant to EN 6509	
Check valve device Family E, Type A	Test EN 13959
Ball tightness	Test P1 - EN 13828 § 7.4.1.3
Check valve seat tightness	Test P12 - EN 12266-1
Shell tightness	Test P11 - EN 12266 - 1
Acoustic group Class	I – Lap[dB(A)] < 20
Maximum depth of dezincification	200 µm - Grade A -

DESIGN

Body, sleeve and nut in brass EN12165-CW602N (DZR)
Die cast brass handle EN 1982-CB754S
Other components in brass EN 12164 - CW614N
Brass ball EN 12164 - CW614N
Ball chromium ELECTRODEPOSITED COATING EN 12540 (CuNi5 SCrr)
O-ring in NBR RUBBER
STAINLESS STEEL spring EN 10088-14310 (AISI 302)

PRODUCT CODE

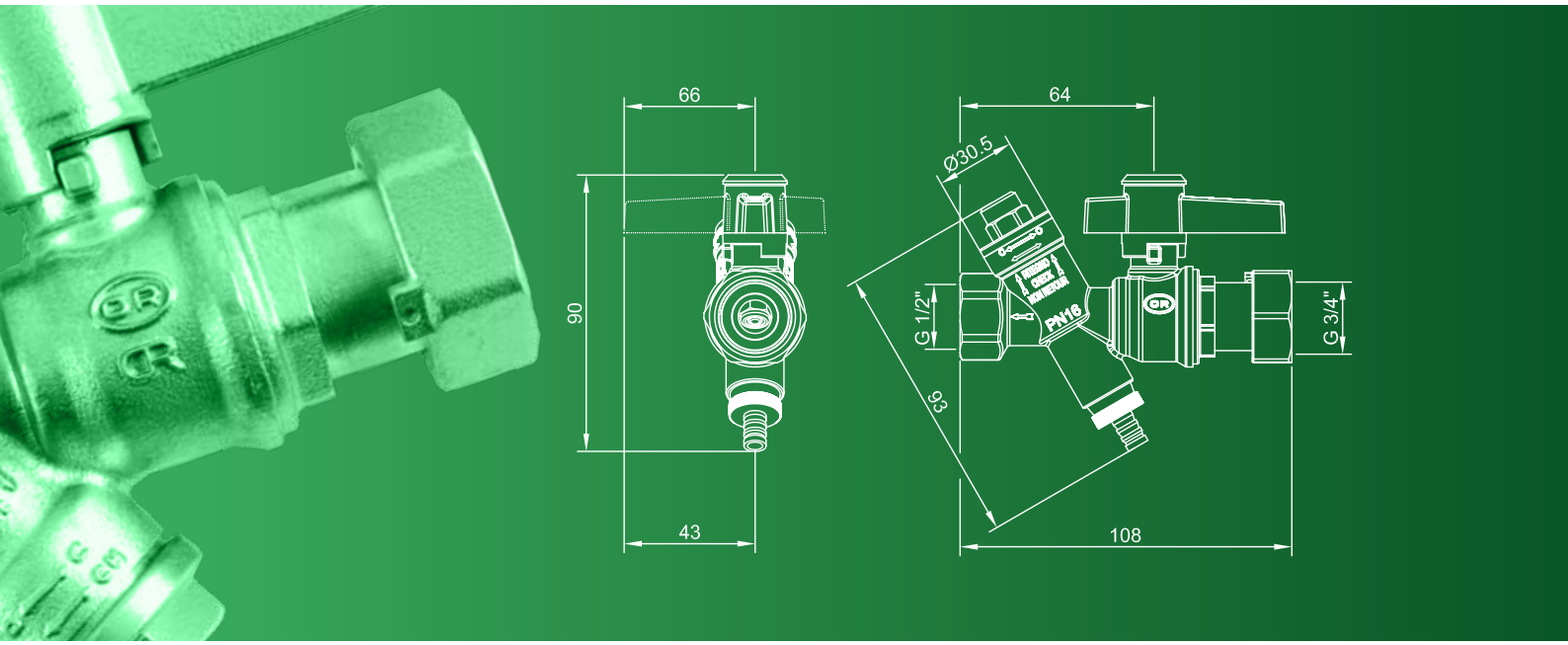
0497.515	nut female	3/4” / female	1/2”

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0497.515 • 3/4”X 1/2”

OUTLET WATER METER WITH CHECK AND DISCHARGE PN 16

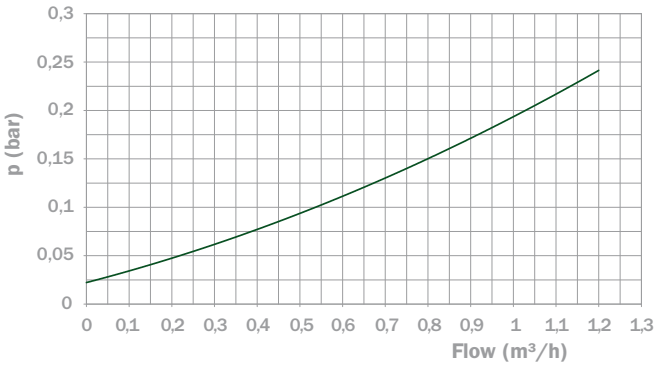
CONNECTION: NUT FEMALE-FEMALE

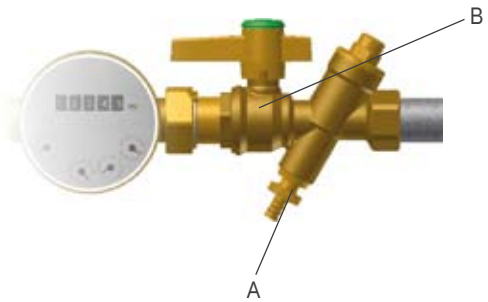


MAINTENANCE

The outlet water meter assembly in its simplicity does not require any particular maintenance: it is sufficient to control periodically the proper functioning of the check valve by first closing the tap valve (B) and then opening the draw-off tap (A). The obturator of the check valve unit consists of a disc which moves linearly. The reduced friction of the obturator and the precision of the internal works permit a minimum head loss. The draw-off tap, easy to action thanks to its knurled handle, is equipped with a practical Ø7 mm hose, useful for collection tasks. The “outlet water meter” assembly can be disinfected, in line with the recommendations relative to the products, to the maximum concentration, to the limitations of use and to the neutralizing agents described under the relevant European legislation, EN 805 §12.

HEAD LOSS OUTLET WATER METER





0498.950

0498.955

MODULAR BOXES FOR WATER METER SYSTEM KIT
BOX ADD-ON MODULE

0498.950 0498.955

GENERAL FEATURES

The modular box is made of shock absorbing and scratch resistant plastic especially designed for water meter assembly kits. The box is shipped unassembled for space reduction in transport and stocking. Assembly is simple and no tools are needed. The box is shipped with a thorough instruction manual. The base of the box has a height of 250 mm and can be enlarged with one or more add-on modules (part number. 0498.955) and may reach a height of 500, 750 or 1,000 mm. The door is hinged to the body and can open completely (180°) to either the left or right side. The opening side is decided when mounted by the installer or by simply rotating the box. The door comes with an anti-corrosion locking kit, furnished with a triangle-shaped key for locking and unlocking. Once installed, the door cannot be removed. For wall mounting, the box is furnished with ribs on the base to ensure a sound anchoring to the wall and perimeter trimming to guarantee perfect wall positioning. The elegant design and paintable surface make it perfect for placement even in historical and residential areas.

TECHNICAL FEATURES

The particular moulding of the body guarantees a maximum security against burglary, with a total maximum breakpoint pressure resistance superior to 60 kg. The enhanced strength and the durability of the construction materials, limit the penetration of solid foreign bodies with diameters of 2.5 mm and more and protects the internal devices against water sprays and dust. The door offers an elevated mechanical strength against static charges (up to 10kg of thrust applied vertically to the door open at 90°) and a heightened resistance to sudden charges (weight of 5 kg dropped freely from 10 cm before bearing down on the door). The hinges resist well under force wresting them out from their lodging.

Temperature:
Climate from -20°C to +90°C
Chemical-physical strength:
Resistance to low temperatures, surface durability and excellent mechanical strength.
Resistance to water-based solutions of acidic and alkali salts.
Resistance to chemical and atmospheric agents.

DESIGN

Box body, door, lock and hinges in grey SPECIAL POLYPROPYLENE
Anchoring kit for add on module in grey SPECIAL POLYPROPYLENE.

PRODUCT CODES

0498.950	basic box	dimensions 500 x 250 x 150
0498.955	add-on module	dimensions 500 x 250 x 150

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La qualità di mano in mano.

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
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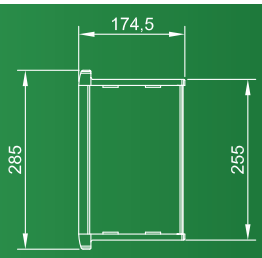
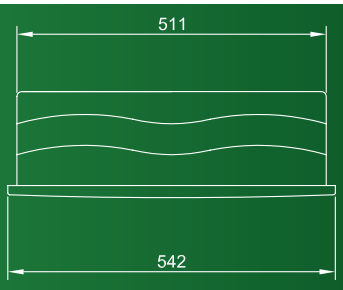
0498.950

0498.955

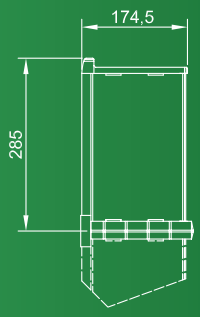
MODULAR BOXES FOR WATER METER SYSTEM KIT
BOX ADD-ON MODULE

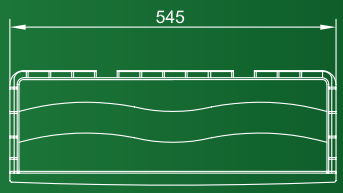
0498.950



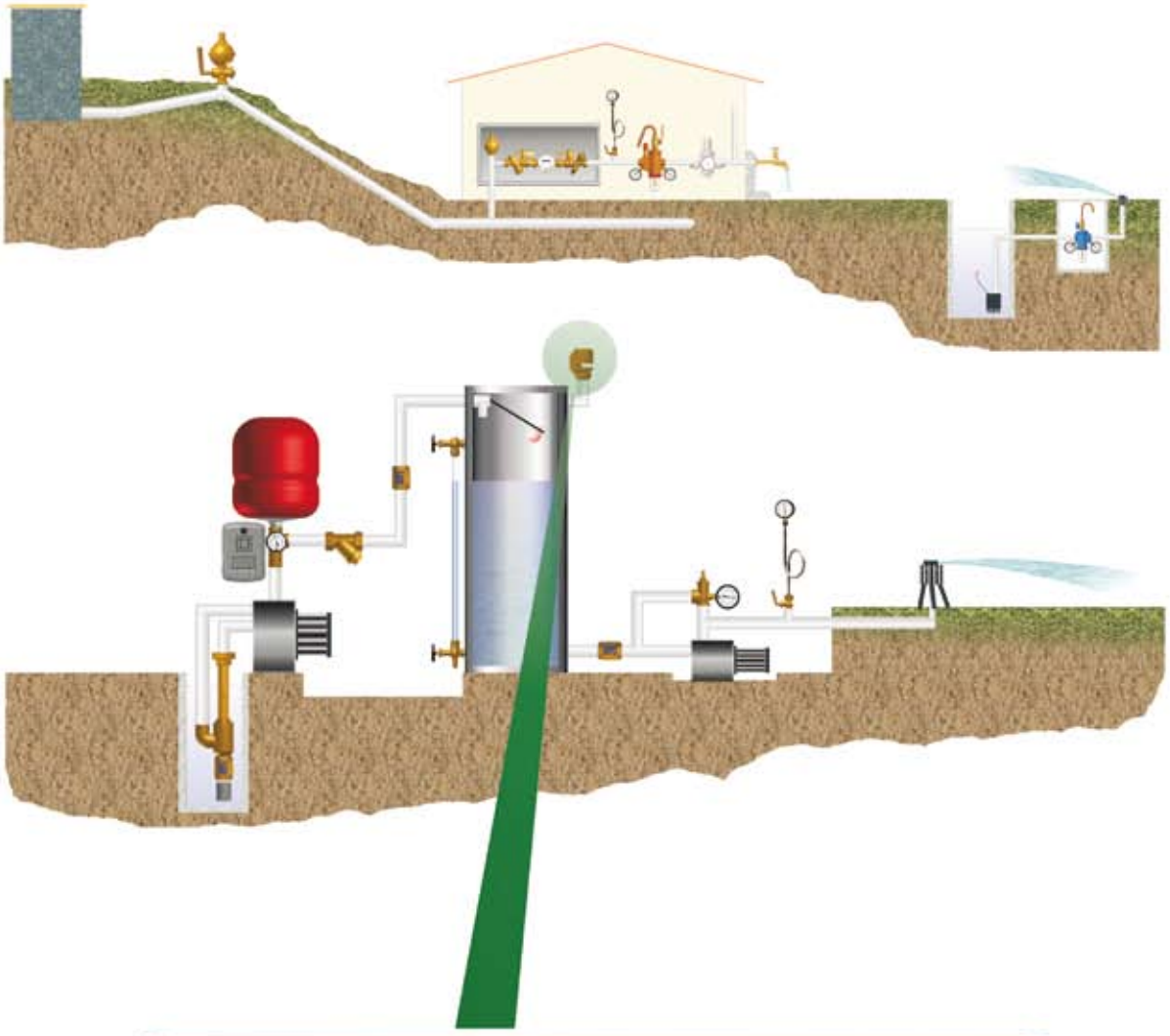


0498.955



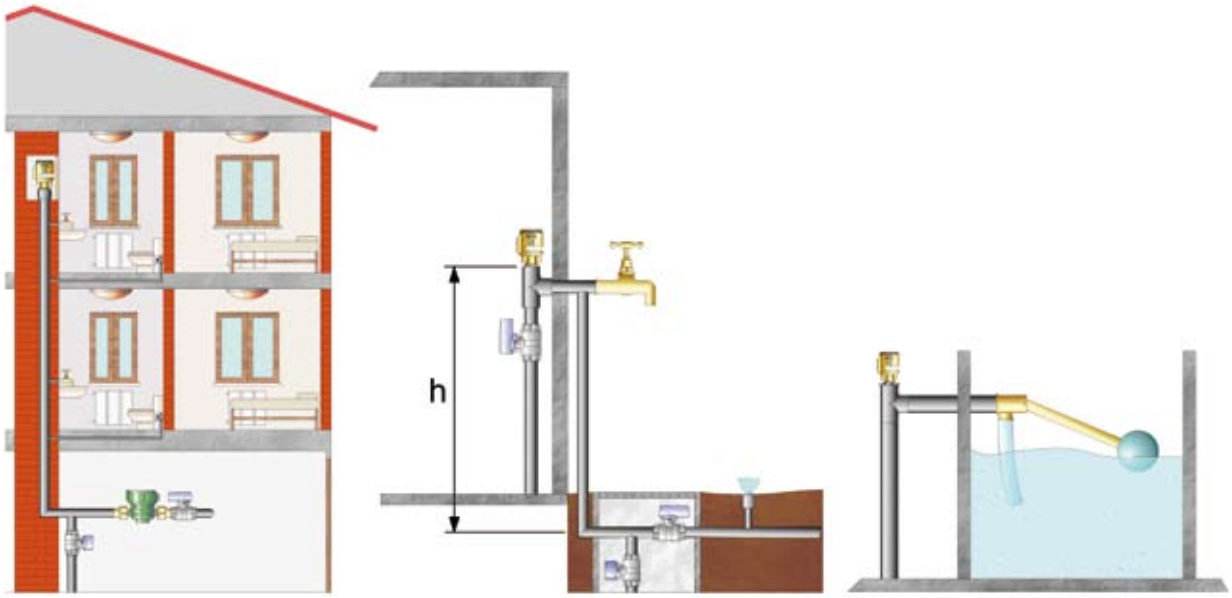


ANTI-SIPHON VACUUM BREAKER



ANTI-SIPHON VACUUM BREAKER

The anti-siphon vacuum breaker has numerous applications. Among the more common: (1) installation at the top of an ascension pipe as a vacuum breaker (in a plant conforming to EN 806 and meeting the essential anti-pollution requirements under EN 1717; (2) in a water distribution plant in case of freezing or maintenance; (3) in a filling plant for receiving vessels as an anti-siphoning device in order to avoid the suction of water into the feeding tube.



1 2 3

The functioning principle behind the anti-siphon vacuum breaker assembly is very simple: in the presence of a water flow, the pressure closes the obturator plate, which interrupts the interface with the outside environment with watertight integrity. In the event of a drop in pressure in the feed system, the obturator opens and the system thus returns to interface with the outside environment. The valve prevents the siphoning phenomenon, allowing the downstream water to flow without ebbing towards the water main.

In whatever application, the valve must always be installed in a vertical position at a height (h) equal or greater than 300 mm from the downstream fluid (fig. 2), in a position that is easily accessible and in a ventilated area (not polluted).

0197 • 1/2”

ANTI-SIPHON VACUUM BREAKERS

CONNECTION: MALE

HYDRAULIC FEATURES

The anti-siphon vacuum breaker is an inlet air-logged pressurized valve which opens when there is a pressure drop. The internal obturator disc is normally closed when the water in the valve is at a pressure equal or greater than the atmospheric pressure. The valve opens to permit air to enter, in case the water inlet pressure is lower than the atmospheric pressure and closes completely when the water flow returns to normal pressure. This device is used to avoid siphoning during draining phases in hydraulic plants. In systems that are not permanently connected to the water main, such as water distribution plants, this device keeps contaminated water from returning to the drinking water supply system. The CR brass body renders this device inert to the dezincification phenomenon. This device can be used in conditioning plants, sanitary installations for water supply outside buildings, according to EN 805, sanitary installations for water distribution inside buildings following EN 806-1, and irrigation systems. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
minimum sealing	0.2 bar (Grade A according to EN 12266-1)
Temperature:	
Working temperature (TS)	from 0°C (excluding ice) to +110°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Air vents, air return function	EN 1074-4
Body pressure tightness	EN 1982 B7
Seat tightness	EN 1074-4 §5.2.2
Pressure resistance	EN 1074-4 §5.1.1
Protection against pollution	EN 1717
Protection unit	family L type A
Categories of fluids	EN1717 list 2

DESIGN

Design Cast bronze body EN 1982 - CB491K
Plug and valve in brass - EN 12164 - CW614N
Seat gaskets in SILICONE 40 Sh
O-ring in NBR RUBBER

PRODUCT CODE

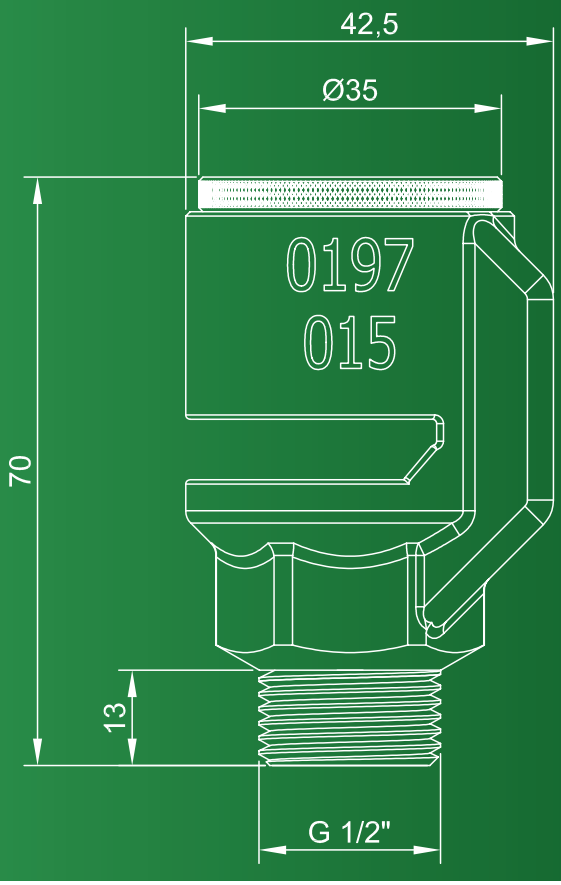
0197.015	male	1/2”

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

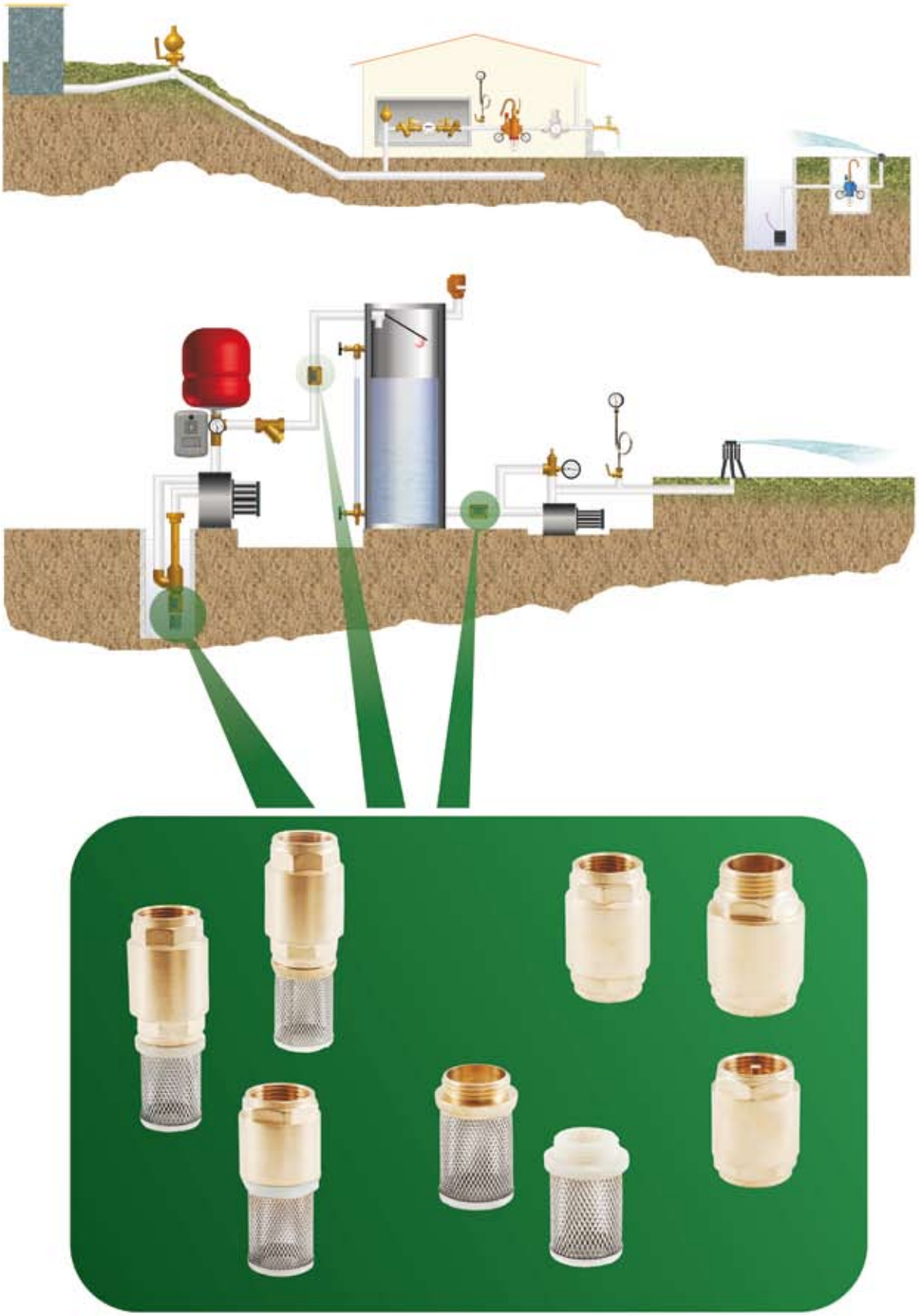
0197 • 1/2”

ANTI-SIPHON VACUUM BREAKERS

CONNECTION: MALE



CHECK VALVES AND FOOT VALVES



2150.1 • 3/8”- 4”

NORMAL CHECK VALVES WITH METAL OBTURATOR AND SEAT IN VITON

CONNECTIONS: INLET FEMALE - OUTLET FEMALE

HYDRAULIC FEATURES

The uncontrollable check valve with seat gasket in VITON, unlike other check valves, is particularly adapted for use with fluids and steam at high temperatures, hydrocarbons and mineral oils, where there is a need for a device to prevent a backflow. It is still a security device which operates automatically to prevent backflow into the main networks, thus avoiding contamination in a water distribution system. This phenomenon presents itself after suspending the water supply in the water distribution system, which creates a flow inversion. The check valve, when installed between the public main water supply and that of the user in a water distribution system, precludes contact between the water in both networks by closing automatically whenever a backflow is detected. This same valve is likewise utilized in heating plants for that same reason: that is to prevent backflow. Passage of fluids flowing in a single direction separates the obturator from its own seat, thus opening the valve. Inversely, if the fluid should flow back, it would force the obturator against the seat and consequently the valve would remain closed, preventing any passage. The obturator is made of a disc which moves linearly, which is guided by two pins forming a single body with the disc itself, upon which is assembled a sealing gasket. The reduced friction of the obturator and the precision of the internal works minimize the head loss. The check valve can be installed at any point on conditioning plants, heating systems, sanitary installations for water supply outside buildings, according to EN 805, irrigation systems and compressed air distribution systems. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

TECHNICAL FEATURES

Pressure:	
Maximum allowed working pressure 3/8” - 1” (PN)	35 bar
Maximum allowed working pressure 1”1/4 - 2” (PN)	25 bar
Maximum allowed working pressure 2”1/2 - 4” (PN)	16 bar
Δp closure non-return	200 Pa (0.02bar)
Temperature:	
maximum working temperature for water and steam (TS)	0°C (excluding ice) 150°C
maximum working temperature for hydrocarbons and mineral oils (TS)	70 °C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Hydrocarbons and mineral oils	
Threading:	
Pipeline connections	Threads according to ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1

DESIGN

Brass Body EN 12165 - CW617N
Seat gaskets in FLUORINATED RUBBER (VITON - FPM)
Obturator in brass EN 12164 – CW614N and STAINLESS STEEL EN 10088-1.4301 (AISI 304)
STAINLESS STEEL Spring EN 10088-14310 (AISI 302)

PRODUCT CODES

2150.112	inlet/outlet female	3/8”
2150.115	inlet/outlet female	1/2”
2150.120	inlet/outlet female	3/4”
2150.125	inlet/outlet female	1”
2150.133	inlet/outlet female	1”1/4
2150.142	inlet/outlet female	1”1/2
2150.150	inlet/outlet female	2”
2150.166	inlet/outlet female	2”1/2
2150.180	inlet/outlet female	3”
2150.200	inlet/outlet female	4”

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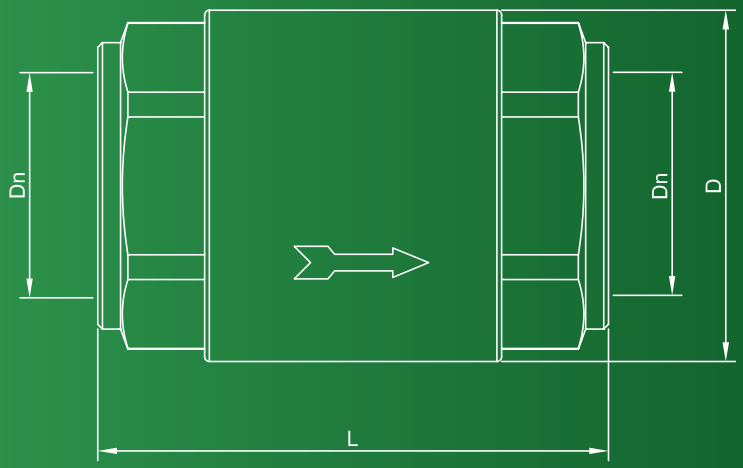
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

2150.1 • 3/8”- 4”

NORMAL CHECK VALVES WITH METAL OBTURATOR AND SEAT IN VITON

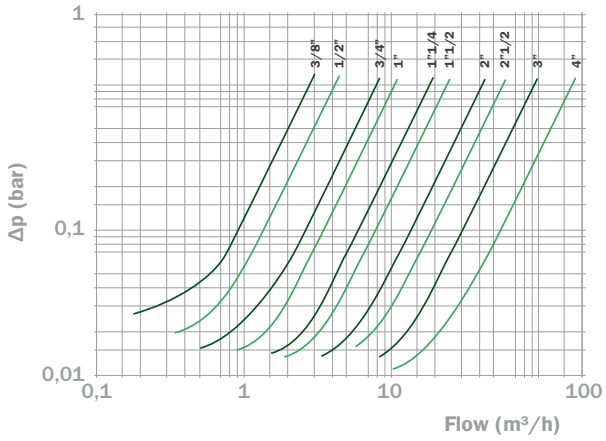
CONNECTIONS: INLET FEMALE - OUTLET FEMALE



FEATURES

Dn	D	L	Pn
3/8”	29	45	35
1/2”	30	48	35
3/4”	37	53	35
1”	44	59	35
1”1/4	56	66	25
1”1/2	63	71	25
2”	78	80	25
2”1/2	103	93	16
3”	120	104	16
4”	155	119	16

HEAD LOSS



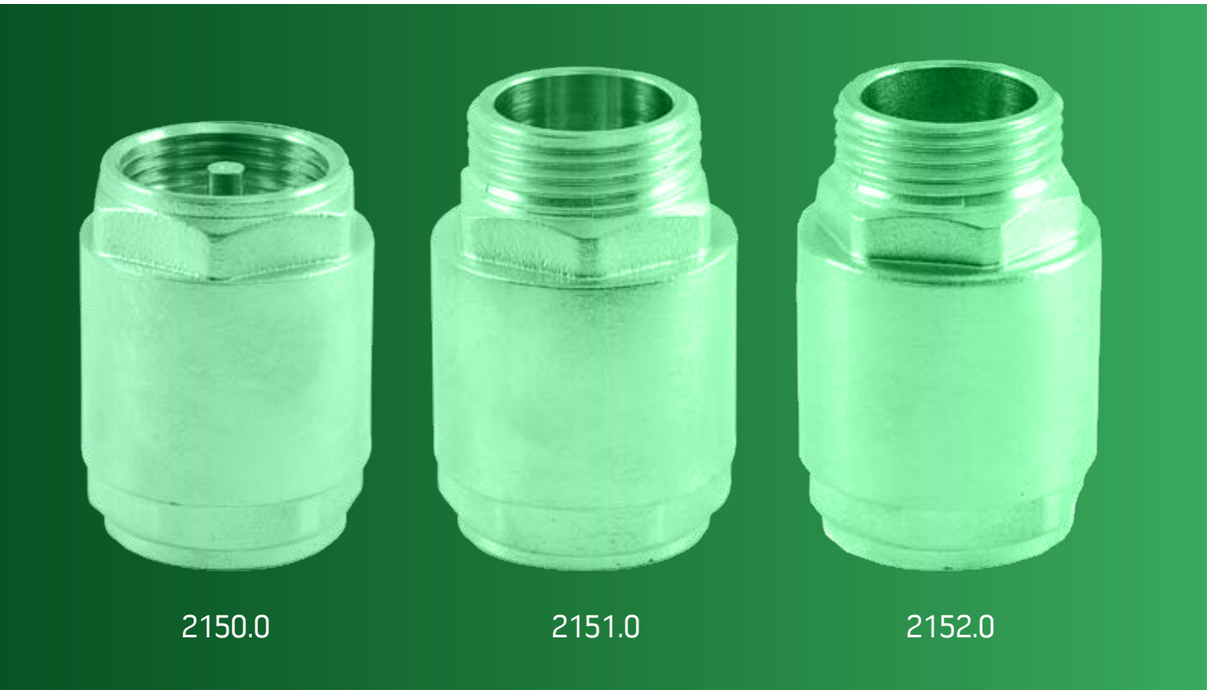
2150.0 • 1/4”- 4”

2151.0 • 3/8”- 2”

2152.0 • 3/8”- 2”

NORMAL CHECK VALVES

CONNECTIONS: INLET FEMALE - OUTLET FEMALE
INLET FEMALE - OUTLET MALE
INLET MALE - OUTLET FEMALE



HYDRAULIC FEATURES

This uncontrollable check valve is a security device which operates automatically to prevent back flow into the main networks, thus avoiding contamination in a water distribution system. This phenomenon presents itself after suspending the water supply in the water distribution system, which creates a flow inversion. The check valve, when installed between the public main water supply and that of the user in a water distribution system, precludes contact between the water in both networks by closing automatically whenever a backflow is detected. This same valve is likewise utilized in heating plants for that same reason: that is to prevent backflow. Passage of fluids flowing in a single direction separates the obturator from its own seat, thus opening the valve. Inversely, if the fluid should flow back, it would force the obturator against the seat and consequently the valve would remain closed, preventing any passage. The obturator is made of a disc which moves linearly, which is guided by two pins forming a single body with the disc itself, upon which is assembled a sealing gasket. The reduced friction of the obturator and the precision of the internal works minimize the head loss. The check valve can be installed at any point on conditioning plants, heating systems, sanitary installations for water supply outside buildings, according to EN 805, irrigation systems and compressed air distribution systems. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

TECHNICAL FEATURES

Pressure:	
Maximum allowed working pressure 1/4” - 1” (PN)	16 bar
Maximum allowed working pressure 1”1/4 - 2” (PN)	10 bar
Maximum allowed working pressure 2”1/2 - 4” (PN)	8 bar
Δp closure non-return	200 Pa (0.02bar)
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) 110°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connections	Threads according to ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1

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via Circonvallazione, 9
13018 Valduggia (VC), ITALY
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FAX +39 0163.47254
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export@officinerigamonti.it

DESIGN

Brass Body EN 12165 - CW617N
Seat gaskets in NBR RUBBER
Obturator in ACETAL RESIN (POM)
STAINLESS STEEL Spring EN 10088-14310 (AISI 302)

PRODUCT CODES

2150.008	inlet/outlet female	1/4”
2150.012	inlet/outlet female	3/8”
2150.015	inlet/outlet female	1/2”
2150.020	inlet/outlet female	3/4”
2150.025	inlet/outlet female	1”
2150.033	inlet/outlet female	1”1/4
2150.042	inlet/outlet female	1”1/2
2150.050	inlet/outlet female	2”
2150.066	inlet/outlet female	2”1/2
2150.080	inlet/outlet female	3”
2150.100	inlet/outlet female	4”

2151.012	inlet female/outlet male	3/8”
2151.015	inlet female/outlet male	1/2”
2151.020	inlet female/outlet male	3/4”
2151.025	inlet female/outlet male	1”
2151.033	inlet female/outlet male	1”1/4
2151.042	inlet female/outlet male	1”1/2
2151.050	inlet female/outlet male	2”

2152.012	inlet male /outlet female	3/8”
2152.015	inlet male /outlet female	1/2”
2152.020	inlet male /outlet female	3/4”
2152.025	inlet male /outlet female	1”
2152.033	inlet male /outlet female	1”1/4
2152.042	inlet male /outlet female	1”1/2
2152.050	inlet male /outlet female	2”

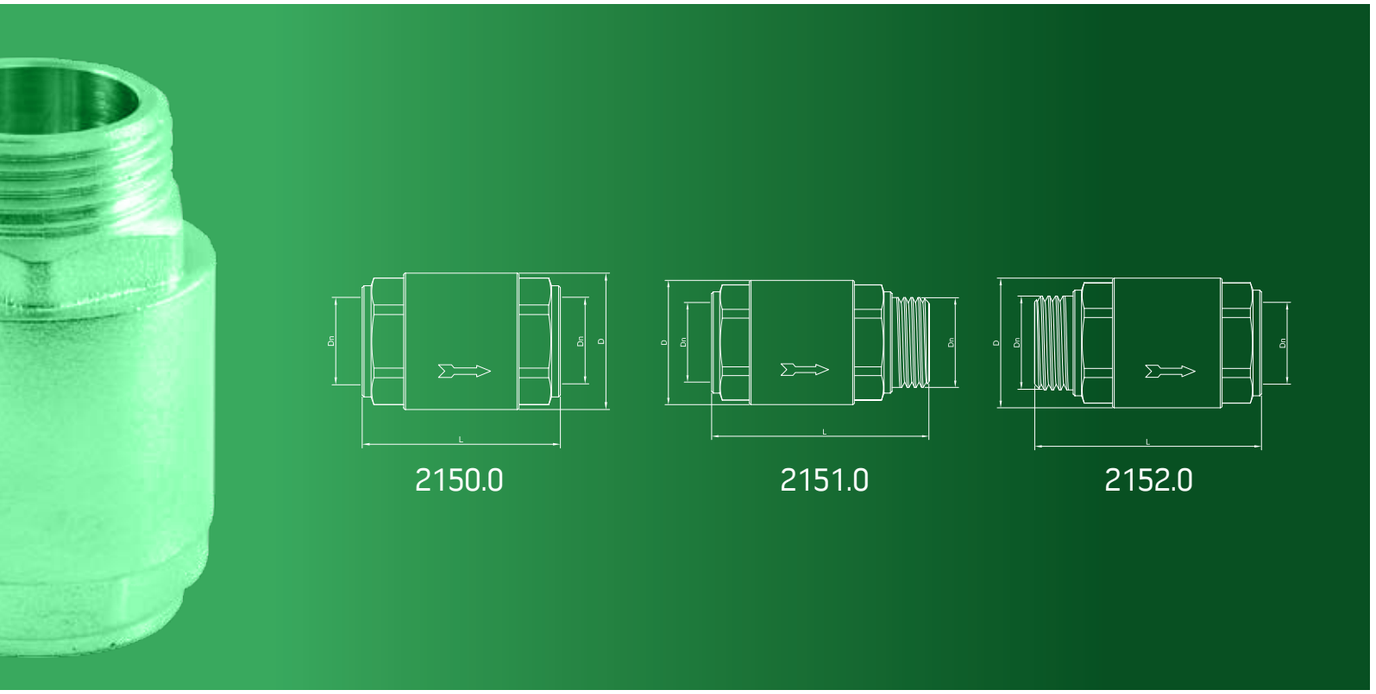
2150.0 • 1/4”- 4”

2151.0 • 3/8”- 2”

2152.0 • 3/8”- 2”

NORMAL CHECK VALVES

CONNECTIONS: INLET FEMALE - OUTLET FEMALE
INLET FEMALE - OUTLET MALE
INLET MALE - OUTLET FEMALE



FEATURES

2150.0

Dn	D	L	Pn
1/4”	29	45	16
3/8”	29	45	16
1/2”	30	48	16
3/4”	37	53	16
1”	44	59	16
1”1/4	56	66	10
1”1/2	63	71	10
2”	78	80	10
2”1/2	103	93	8
3”	120	104	8
4”	155	119	8

2151.0

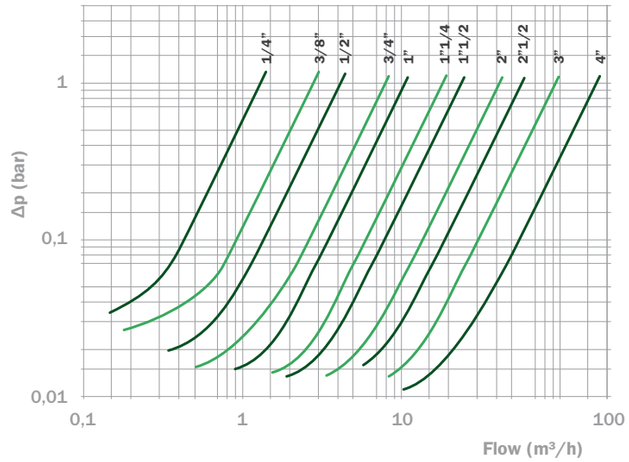
Dn	D	L	Pn
3/8”	29	52	16
1/2”	30	52	16
3/4”	37	58	16
1”	44	65	16
1”1/4	56	73	10
1”1/2	63	78	10
2”	78	89	10

2152.0

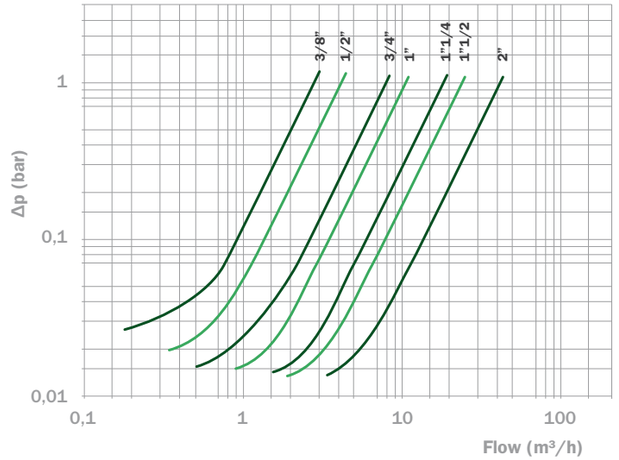
Dn	D	L	Pn
3/8”	29	52	16
1/2”	30	52	16
3/4”	37	58	16
1”	44	65	16
1”1/4	56	73	10
1”1/2	63	78	10
2”	78	89	10

HEAD LOSS

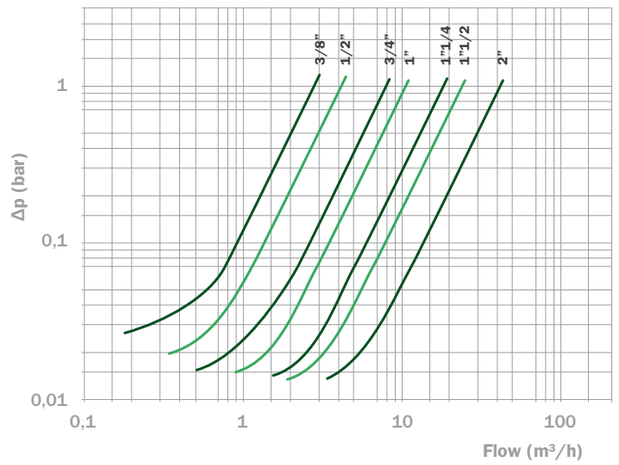
2150.0



2151.0



2152.0



2154 • 3/8”- 2”

HEAVY CHECK VALVES

CONNECTIONS: INLET FEMALE - OUTLET FEMALE

HYDRAULIC FEATURES

This uncontrollable check valve is a security device which operates automatically to prevent back flow into the main networks, thus avoiding contamination in a water distribution system. This phenomenon presents itself after suspending the water supply in the water distribution system, which creates a flow inversion. The check valve, when installed between the public main water supply and that of the user in a water distribution system, precludes contact between the water in both networks by closing automatically whenever a backflow is detected. This same valve is likewise utilized in heating plants for that same reason: that is to prevent backflow. Passage of fluids flowing in a single direction separates the obturator from its own seat, thus opening the valve. Inversely, if the fluid should flow back, it would force the obturator against the seat and consequently the valve would remain closed, preventing any passage. The obturator is made of a disc which moves linearly, which is guided by two pins forming a single body with the disc itself, upon which is assembled a sealing gasket. The reduced friction of the obturator and the precision of the internal works minimize the head loss. The check valve can be installed at any point on conditioning plants, heating systems, sanitary installations for water supply outside buildings, according to EN 805, irrigation systems and compressed air distribution systems. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water.

TECHNICAL FEATURES

Pressure:	
Maximum allowed working pressure 3/8” - 1” (PN)	25 bar
Maximum allowed working pressure 1”1/4 - 2” (PN)	16 bar
Δp closure non-return	200 Pa (0.02 bar)
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) 110°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connections	Threads according to ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1

DESIGN

Brass Body EN 12165 - CW617N
Seat gaskets in NBR RUBBER
Obturator in ACETAL RESIN (POM)
STAINLESS STEEL Spring EN 10088-14310 (AISI 302)

PRODUCT CODES

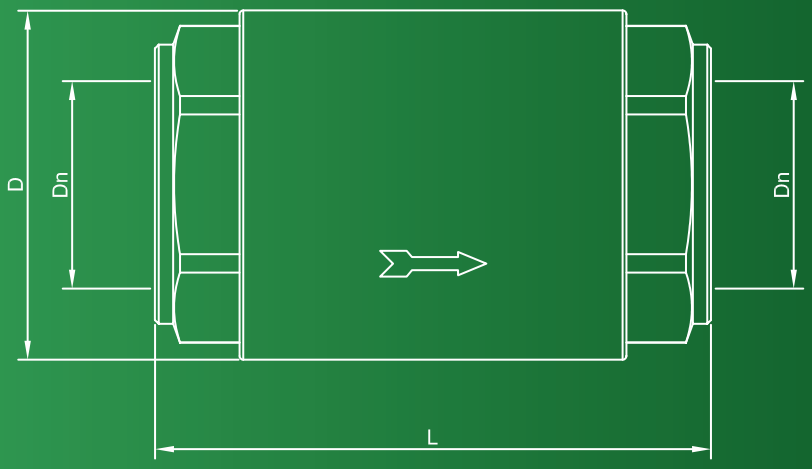
2154.012 inlet/outlet female 3/8”	2154.033 inlet/outlet female 1”1/4
2154.015 inlet/outlet female 1/2”	2154.042 inlet/outlet female 1”1/2
2154.020 inlet/outlet female 3/4”	2154.050 inlet/outlet female 2”
2154.025 inlet/outlet female 1”	

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

2154 • 3/8”- 2”

HEAVY CHECK VALVES

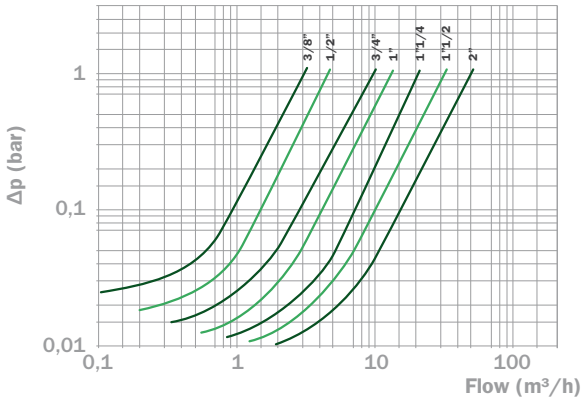
CONNECTIONS: INLET FEMALE - OUTLET FEMALE



FEATURES

Dn	D	L	Pn
3/8”	Ø29	52	25
1/2”	Ø32	58	25
3/4”	Ø39	65	25
1”	Ø47	75	25
1”1/4	Ø60	80	18
1”1/2	Ø67	86	18
2”	Ø83	94	18

HEAD LOSS



2160 • 1/2”- 4”

FOOT VALVES WITH INCORPORATED INOX FILTER

CONNECTION: OUTLET FEMALE

HYDRAULIC FEATURES

The foot valve is an automatic device that is generally installed at the intake point of a pump to prevent the emptying of the system’s pump pipeline during rest phases. The obturator is made of a disc which moves linearly, which is guided by two pins forming a single body with the disc itself, upon which is assembled a sealing gasket. A light spring keeps the obturator closed. The reduced friction of the obturator and the precision of the internal works minimize the head loss. In the functioning phase, the pressure drop generated by the pump on intake overcomes the force of the spring, thus opening the device and allowing the passage of the fluid. When the pump stops working, the valve also closes, keeping the system (and consequently the impeller) from emptying. The filter forestalls the passage of impurities that might be harmful to the impeller or compromise the operational integrity of the valve itself. Foot valves can be installed at any point in pumping plants and autoclaves of up to 110°C.

TECHNICAL FEATURES

Pressure:	
Maximum allowed working pressure 1/2” - 1” (PN)	10 bar
Maximum allowed working pressure 1”1/4 - 2” (PN)	8 bar
Maximum allowed working pressure 2”1/2 - 4” (PN)	6 bar
Δp closure non-return	200 Pa (0.02bar)
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) 110°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Filtration Rating:	
Referenced micron rating (S)	< 800 µm
Threading:	
Pipeline connections	Threads according to ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1

DESIGN

Brass Body EN 12165 - CW617N
Seat gaskets in NBR RUBBER
Obturator in ACETAL RESIN (POM)
STAINLESS STEEL Spring EN 10088-14310 (AISI 302)
MICROSTRETCHED STAINLESS STEEL mesh filter EN 10088-1.4301 (AISI 304)
STAINLESS STEEL MESH end filter EN 10088 - Design 1.4310 (AISI 302)

PRODUCT CODES

2160.015	outlet female 1/2”
2160.020	outlet female 3/4”
2160.025	outlet female 1”
2160.033	outlet female 1”1/4
2160.042	outlet female 1”1/2
2160.050	outlet female 2”
2160.066	outlet female 2”1/2
2160.080	outlet female 3”
2160.100	outlet female 4”

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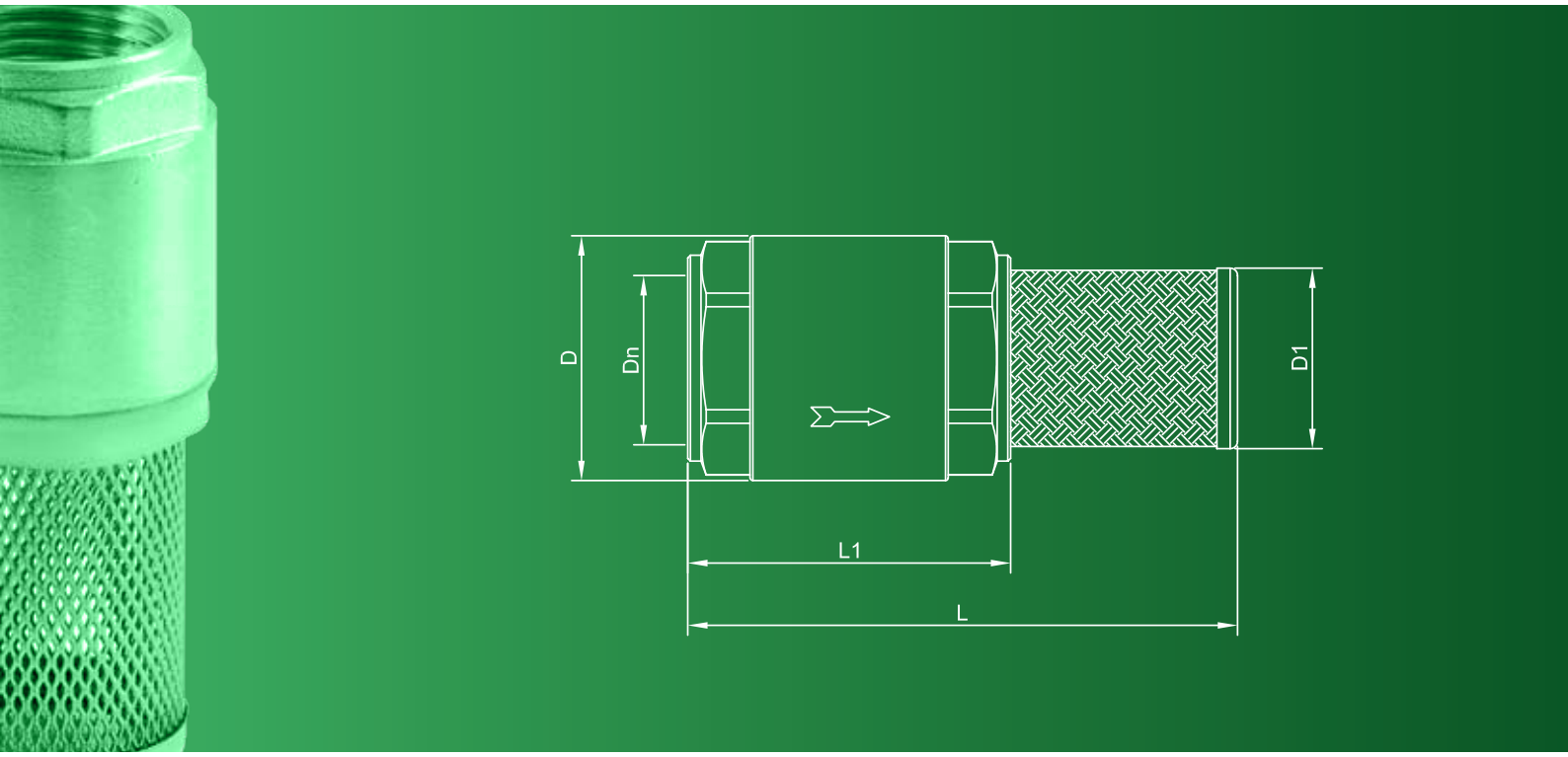
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

2160 • 1/2”- 4”

FOOT VALVES WITH INCORPORATED INOX FILTER

CONNECTION: OUTLET FEMALE



FEATURES

Dn	D	D1	L	L1	Pn
1/2”	Ø29	Ø23	80	48	10
3/4”	Ø37	Ø29	90	53	10
1”	Ø44	Ø37	100	59	10
1”1/4	Ø56	Ø44	110	66	8
1”1/2	Ø63	Ø49	126	71	8
2”	Ø78	Ø61	146	80	8
2”1/2	Ø103	Ø80	162	93	6
3”	Ø120	Ø126	188	104	6
4”	Ø155	Ø144	214	119	6

2161 • 3/8”- 4”

2162 • 3/8”- 4”

FOOT VALVES WITH UNSCREWABLE INOX FILTER FITTING IN BRASS
FOOT VALVES WITH UNSCREWABLE INOX FILTER FITTING IN NYLON

CONNECTION: OUTLET FEMALE
OUTLET FEMALE

2161

2162

HYDRAULIC FEATURES

The foot valve is an automatic device that is generally installed at the intake point of a pump to prevent the emptying of the system’s pump pipeline during rest phases. The obturator is made of a disc which moves linearly, which is guided by two pins forming a single body with the disc itself, upon which is assembled a sealing gasket. A light spring keeps the obturator closed. The reduced friction of the obturator and the precision of the internal works minimize the head loss. In the functioning phase, the pressure drop generated by the pump on intake overcomes the force of the spring, thus opening the device and allowing the passage of the fluid. When the pump stops working, the valve also closes, keeping the system (and consequently the impeller) from emptying. The filter forestalls the passage of impurities that might be harmful to the impeller or compromise the operational integrity of the valve itself. Foot valves can be installed at any point in pumping plants and autoclaves of up to 110°C.

TECHNICAL FEATURES

Pressure:	
Maximum allowed working pressure 3/8” - 1” (PN)	16 bar
Maximum allowed working pressure 1”1/4 - 2” (PN)	10 bar
Maximum allowed working pressure 2”1/2 - 4” (PN)	8 bar
Δp closure non-return	200 Pa (0.02bar)
Temperature:	
Maximum working temperature (TS)	0°C (excluding ice) 110°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Filtration Rating:	
Referenced micron rating (S)	< 800 µm
Threading:	
Pipeline connections	Threads according to ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1

DESIGN

Brass Body EN 12165 - CW617N
Seat gaskets in NBR RUBBER
Obturator in ACETAL RESIN (POM)
STAINLESS STEEL Spring EN 10088-14310 (AISI 302)
MICROSTRETCHED STAINLESS STEEL mesh filter EN 10088-1.4301 (AISI 304)
STAINLESS STEEL SHEET blind end filter EN 10088-1.4310 (AISI 302)

COD.2161 BRASS FILTER FITTING EN 12164 - CW 614N
COD.2162 PA6 POLYAMIDE (NYLON 6) FILTER FITTING

PRODUCT CODES

2161.012	brass fitting outlet female	3/8”	2162.012	nylon fitting outlet female	3/8”
2161.015	brass fitting outlet female	1/2”	2162.015	nylon fitting outlet female	1/2”
2161.020	brass fitting outlet female	3/4”	2162.020	nylon fitting outlet female	3/4”
2161.025	brass fitting outlet female	1”	2162.025	nylon fitting outlet female	1”
2161.033	brass fitting outlet female	1”1/4	2162.033	nylon fitting outlet female	1”1/4
2161.042	brass fitting outlet female	1”1/2	2162.042	nylon fitting outlet female	1”1/2
2161.050	brass fitting outlet female	2”	2162.050	nylon fitting outlet female	2”
2161.066	brass fitting outlet female	2”1/2	2162.066	nylon fitting outlet female	2”1/2
2161.080	brass fitting outlet female	3”	2162.080	nylon fitting outlet female	3”
2161.100	brass fitting outlet female	4”	2162.100	nylon fitting outlet female	4”

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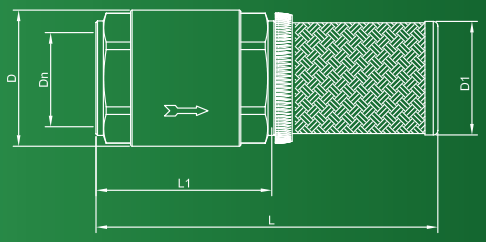
2161 • 3/8”- 4”

2162 • 3/8”- 4”

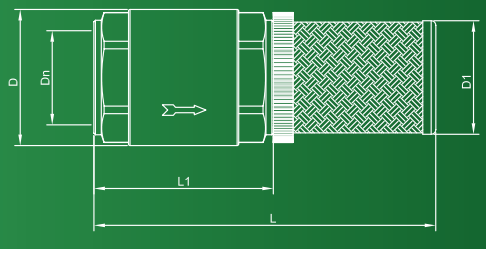
FOOT VALVES WITH UNSCREWABLE INOX FILTER FITTING IN BRASS
FOOT VALVES WITH UNSCREWABLE INOX FILTER FITTING IN NYLON

CONNECTION: OUTLET FEMALE
OUTLET FEMALE

2161



2162



FEATURES

Dn	D	D1	L	L1	Pn
3/8”	Ø29	Ø21	88	45	16
1/2”	Ø30	Ø23	90	48	16
3/4”	Ø37	Ø29	100	53	16
1”	Ø44	Ø37	111	59	16
1”1/4	Ø56	Ø44	123	66	10
1”1/2	Ø63	Ø49	139	71	10
2”	Ø78	Ø61	163	80	10
2”1/2	Ø103	Ø80	176	93	8
3”	Ø120	Ø126	203	104	8
4”	Ø155	Ø144	233	119	8

2165 • 3/8”- 2”

2166 • 3/8”- 2”

HEAVY FOOT VALVES WITH INOX FILTER BRASS FITTING
HEAVY FOOT VALVES WITH INOX FILTER NYLON FITTING

CONNECTION: OUTLET FEMALE
OUTLET FEMALE

2165

2166

HYDRAULIC FEATURES

The foot valve is an automatic device that is generally installed at the intake point of a pump to prevent the emptying of the system’s pump pipeline during rest phases. The obturator is made of a disc which moves linearly, which is guided by two pins forming a single body with the disc itself, upon which is assembled a sealing gasket. A light spring keeps the obturator closed. The reduced friction of the obturator and the precision of the internal works minimize the head loss. In the functioning phase, the pressure drop generated by the pump on intake overcomes the force of the spring, thus opening the device and allowing the passage of the fluid. When the pump stops working, the valve also closes, keeping the system (and consequently the impeller) from emptying. The filter forestalls the passage of impurities that might be harmful to the impeller or compromise the operational integrity of the valve itself. Foot valves can be installed at any point in pumping plants and autoclaves of up to 110°C.

TECHNICAL FEATURES

Pressure:	
Maximum allowed working pressure 3/8” - 1” (PN)	25 bar
Maximum allowed working pressure 1”1/4 - 2” (PN)	16 bar
Δp closure non-return	200 Pa (0.02bar)
Temperature:	
maximum working temperature (TS)	0°C (excluding ice) 110°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Filtration Rating:	
Reference micron rating (S)	< 800 µm
Threading:	
Pipeline connections	Threads according to ISO 228/1
Requirements and tests as per:	
Shell tightness	Test P11 - EN 12266-1

DESIGN

Brass Body EN 12165 - CW617N
Seat gaskets in NBR RUBBER
Obturator in ACETAL RESIN (POM)
STAINLESS STEEL Spring EN 10088-14310 (AISI 302)
MICROSTRETCHED STAINLESS STEEL mesh filter EN 10088-1.4301 (AISI 304)
STAINLESS STEEL MESH blind end filter EN 10088 - Design spring 1.4310 (AISI 302)

COD.2165 BRASS FILTER FITTING EN 12164 - CW 614N
COD.2166 PA6 POLYAMIDE (NYLON 6) FILTER FITTING

PRODUCT CODES

2165.012	brass fitting outlet female	3/8”	2166.012	nylon fitting outlet female	3/8”
2165.015	brass fitting outlet female	1/2”	2166.015	nylon fitting outlet female	1/2”
2165.020	brass fitting outlet female	3/4”	2166.020	nylon fitting outlet female	3/4”
2165.025	brass fitting outlet female	1”	2166.025	nylon fitting outlet female	1”
2165.033	brass fitting outlet female	1”1/4	2166.033	nylon fitting outlet female	1”1/4
2165.042	brass fitting outlet female	1”1/2	2166.042	nylon fitting outlet female	1”1/2
2165.050	brass fitting outlet female	2”	2166.050	nylon fitting outlet female	2”

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OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

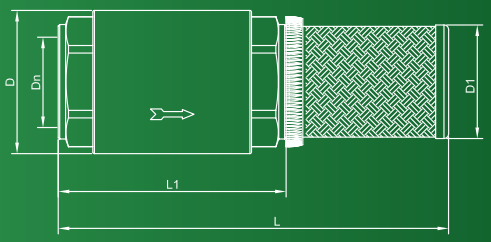
2165 • 3/8”- 2”

2166 • 3/8”- 2”

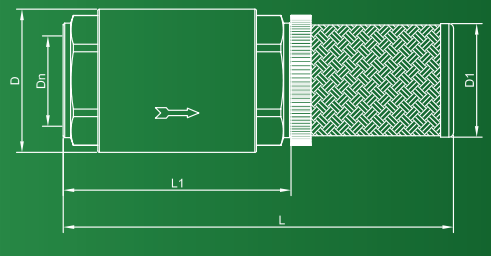
HEAVY FOOT VALVES WITH INOX FILTER BRASS FITTING
HEAVY FOOT VALVES WITH INOX FILTER NYLON FITTING

CONNECTION: OUTLET FEMALE
OUTLET FEMALE

2165



2166



FEATURES

Dn	D	D1	L	L1	Pn
3/8”	Ø29	Ø21	95	52	25
1/2”	Ø32	Ø23	100	58	25
3/4”	Ø39	Ø29	112	65	25
1”	Ø47	Ø37	127	75	25
1”1/4	Ø60	Ø44	137	80	18
1”1/2	Ø67	Ø49	154	86	18
2”	Ø83	Ø61	177	94	18

2170 • 3/8”- 4”

2171 • 3/8”- 4”

INOX FILTER NYLON FITTINGS FOR FOOT VALVES
INOX FILTER BRASS FITTINGS FOR FOOT VALVES

CONNECTION: MALE
MALE

2170

2171

HYDRAULIC FEATURES

Filters prevent the passage of impurities that could damage components of the downstream system. They can be installed in any position.

TECHNICAL FEATURES

Pressure:	
Maximum allowed working pressure 3/8” - 1” (PN)	25 bar
Maximum allowed working pressure 1”1/4 - 2” (PN)	16 bar
Maximum allowed working pressure 2”1/2 - 4” (PN)	8 bar
Temperature:	
Code 2170: maximum working temperature (TS)	110 °C (Fluid: water)
Code 2171: maximum working temperature (TS)	150 °C (Fluid: water)
Filtration Rating:	
Reference micron rating (S)	< 800 µm
Threading:	
Pipeline connections	Threads according to ISO 228/1

DESIGN

MICROSTRETCHED STAINLESS STEEL mesh filter EN 10088-1.4301 (AISI 304)
STAINLESS STEEL MESH blind end filter EN 10088-1.4310 (AISI 302)

COD.2170 PA6 POLYAMIDE (NYLON 6) FILTER FITTING
COD.2171 BRASS FILTER FITTING EN 12164 - CW 614N

PRODUCT CODES

2170.012	nylon fitting male	3/8”	2171.012	brass fitting male	3/8”
2170.015	nylon fitting male	1/2”	2171.015	brass fitting male	1/2”
2170.020	nylon fitting male	3/4”	2171.020	brass fitting male	3/4”
2170.025	nylon fitting male	1”	2171.025	brass fitting male	1”
2170.033	nylon fitting male	1”1/4	2171.033	brass fitting male	1”1/4
2170.042	nylon fitting male	1”1/2	2171.042	brass fitting male	1”1/2
2170.050	nylon fitting male	2”	2171.050	brass fitting male	2”
2170.066	nylon fitting male	2”1/2	2171.066	brass fitting male	2”1/2
2170.080	nylon fitting male	3”	2171.080	brass fitting male	3”
2170.100	nylon fitting male	4”	2171.100	brass fitting male	4”

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OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
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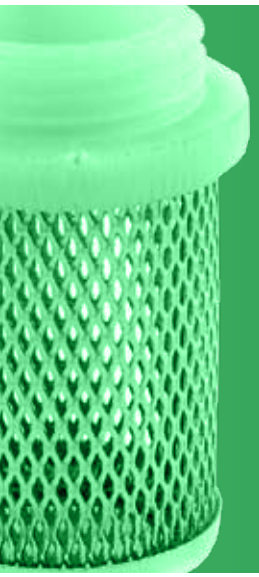
www.officinerigamonti.it
export@officinerigamonti.it

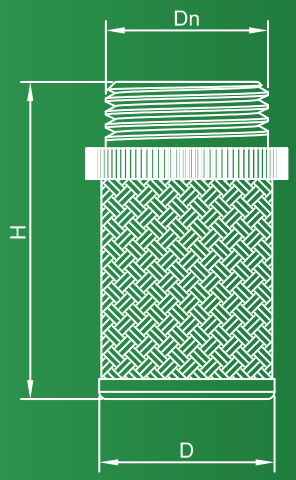
2170 • 3/8”- 4”

2171 • 3/8”- 4”

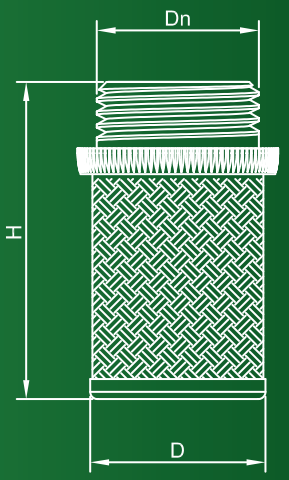
INOX FILTER NYLON FITTINGS FOR FOOT VALVES
INOX FILTER BRASS FITTINGS FOR FOOT VALVES

CONNECTION: MALE
MALE





2170

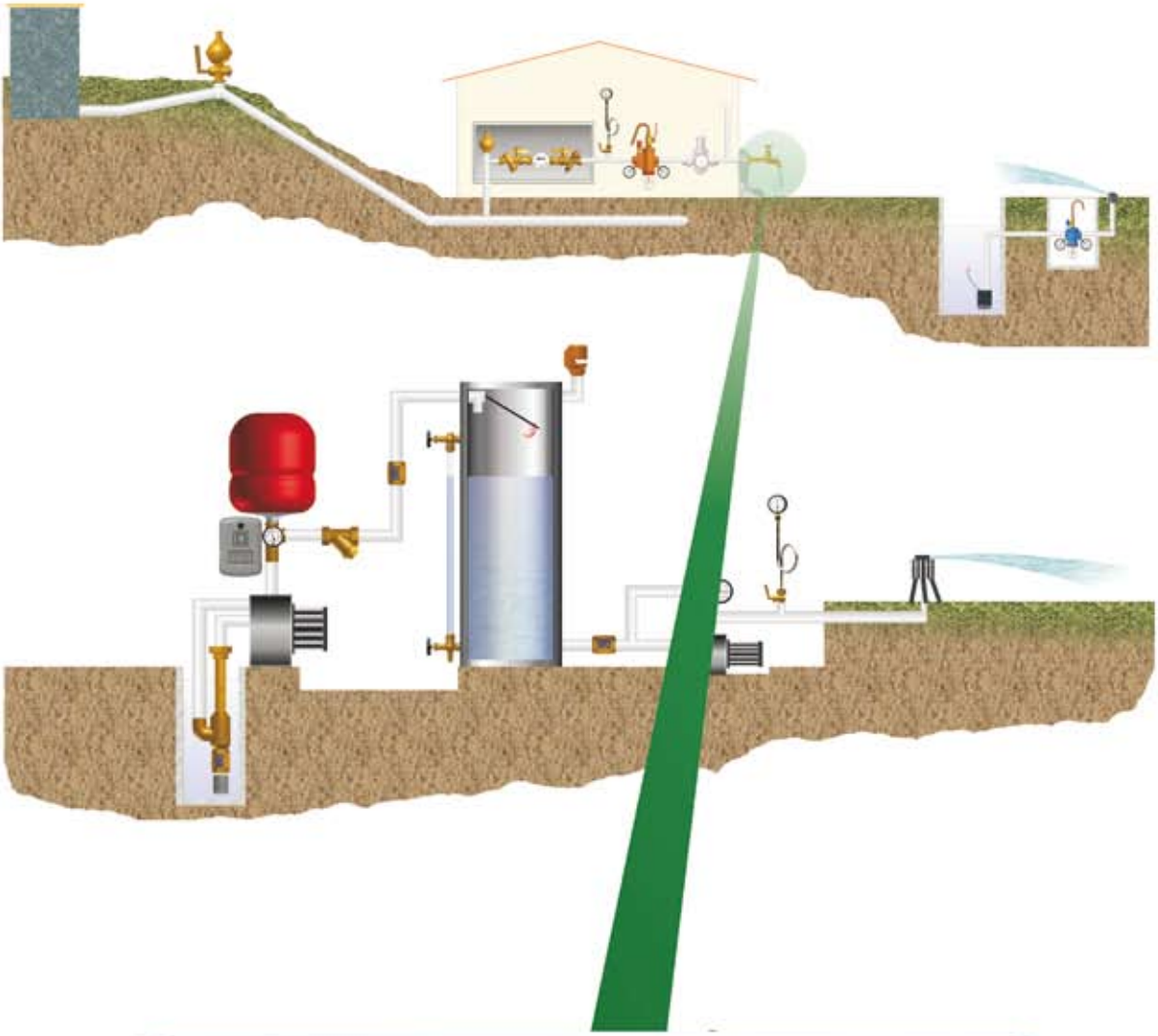


2171

FEATURES

Dn	D	H
3/8”	Ø21	50
1/2”	Ø23	49
3/4”	Ø29	55
1”	Ø37	63
1”1/4	Ø44	69
1”1/2	Ø49	79
2”	Ø61	94
2”1/2	Ø80	96
3”	Ø96	110
4”	Ø116	128

DISTRIBUTION TAPS



0001.119 • 1/2”

0001.147 • 1/2”

ARTISTIC TAPS FOR FOUNTAINS WITH HANDWHEEL CLOSURE
ARTISTIC TAPS FOR FOUNTAINS WITH LEVER CLOSURE

CONNECTION: MALE
MALE

0001.119

0001.147

HYDRAULIC FEATURES

The artistic fountain taps are especially used on fountains installed outdoor, in gardens, parks or any location suitable for water supply where the user needs to be able to shut off the water flow. Their design is particularly sought- after aesthetically, since it can be associated with the sort of fountain which is not as aesthetically smooth. These taps are in many cases used as regular water taps, installed directly to the wall. The rosette piece gives a finishing touch to the wall tap, thus hiding any imperfection in the pipe outlet hole. The two taps differ essentially in their flow-stopping mechanisms. The handwheel-equipped tap has a slower closure, which avoids possible water hammers and allows a precise control over increasing or decreasing water flow. The lever-equipped tap has a quicker closure that nevertheless makes the system vulnerable to possible water hammers and is less precise in regulating the water flow.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Temperature:	
Working temperature limits (TS)	from 0°C (excluding ice) to +80°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Stop cock	EN 1213
Obturator seat tightness	Test P12 - EN 12266-1

SURFACE FINISH

Yellow brass with chemical burnishing

DESIGN

Cast brass body EN 1982 - CB753S
Handwheel and lever closures in brass EN 12165 - CW617N
Other components in brass EN 12164 - CW614N
Gaskets in NBR RUBBER

PRODUCT CODES

0001.119	handwheel model connection male	1/2”
0001.147	lever model connection male	1/2”

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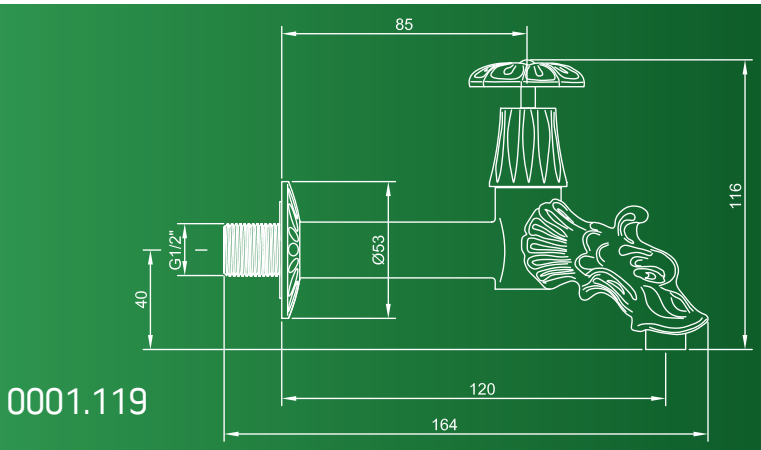
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

0001.119 • 1/2”

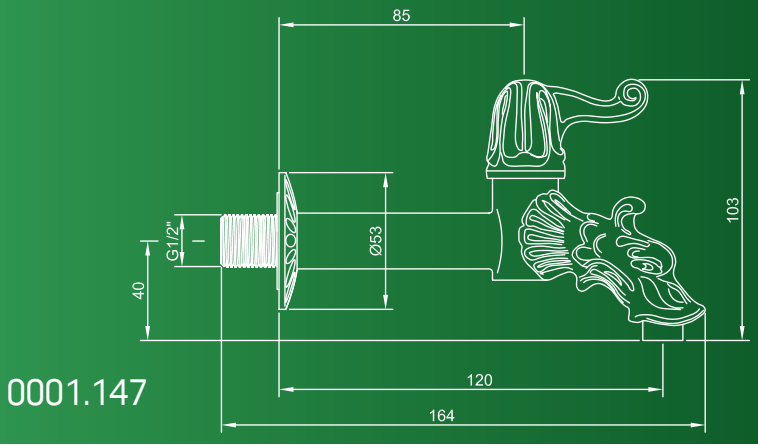
0001.147 • 1/2”

ARTISTIC TAPS FOR FOUNTAINS WITH HANDWHEEL CLOSURE
ARTISTIC TAPS FOR FOUNTAINS WITH LEVER CLOSURE

CONNECTION: MALE
MALE



0001.119



0001.147

2322 • 3/8”- 1”

DISTRIBUTION TAPS YELLOW WITH HOSE FITTING

CONNECTIONS: MALE

HYDRAULIC FEATURES

The distribution taps are especially used on fountains installed outdoor, in gardens, parks or any location suitable for water supply where the user needs to be able to shut off the water flow. These taps are in many cases used as regular water distribution taps, installed directly to the wall. The distribution tap has a slow closure, which avoids possible water hammers and allows a precise control when increasing or decreasing water flow.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Temperature:	
Working temperature limits (TS)	from 0°C (excluding ice) to +80°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Stop cock	EN 1213
Obturator seat tightness	Test P12 - EN 12266-1

SURFACE FINISH

Yellow brass sandblasted with steel microspheres

DESIGN

Cast brass body EN 1982 - CB753S
Brass bonnet EN 12164 - CW614N
Other components in brass EN 12164 - CW614N
Gaskets in NBR RUBBER

PRODUCT CODES

2322.012	male	3/8”
2322.015	male	1/2”
2322.020	male	3/4”
2322.025	male	1”

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
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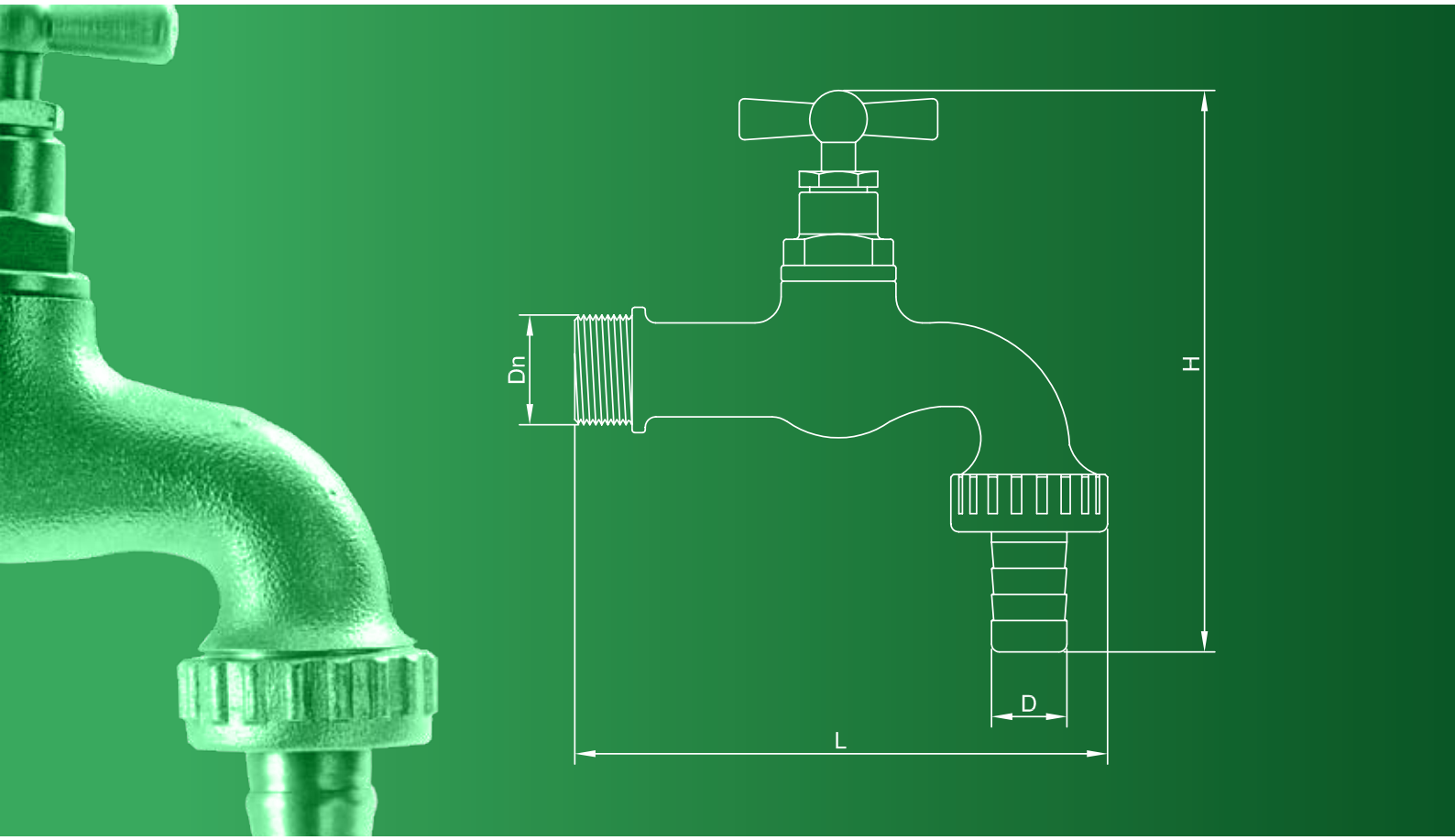
2322 • 3/8”- 1”

DISTRIBUTION TAPS YELLOW WITH HOSE FITTING

CONNECTIONS: MALE



FEATURES

Dn	L	D	H
3/8”	97	Ø13	46
1/2”	111	Ø14	46
3/4”	138	Ø20	51
1”	154	Ø25	51

4412 • 1/2”

DISTRIBUTION TAPS WITH BUTTON AND ANTI-WATERHAMMER DISPOSAL

CONNECTIONS: MALE

HYDRAULIC FEATURES

The button-type distribution taps are especially used on fountains installed outdoor, in gardens, parks or any location location suitable for water supply where the user needs to be able to shut off the water flow. Their aesthetic design is particularly sought- after, since it can be associated with the sort of fountain which is not as aesthetically smooth. These taps are frequently used as regular water-distribution taps, installed directly to the wall. The rosette piece gives a finishing touch to the wall tap, thus hiding any imperfections in the pipe outlet hole. The button tap with “anti-water hammer” device prevents this phenomenon in the conduit, even when closed rapidly, without having though any control over the flow rate, since water is only drawn by pushing the button.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Temperature:	
Working temperature limits (TS)	from 0°C (excluding ice) to +80°C
Compatible fluids:	
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Stop valve	EN 1213
Obturator seat tightness	Test P12 - EN 12266-1

SURFACE FINISH

Mechanically polished yellow brass

DESIGN

Cast brass body EN 1982 - CB753S
Brass button EN 12164 - CW614N
Other components in brass EN 12164 - CW614N
STAINLESS STEEL spring EN 10088-14310 (AISI 302)
Gaskets in NBR RUBBER

PRODUCT CODE

4412.015 male 1/2”x 3/8 female

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
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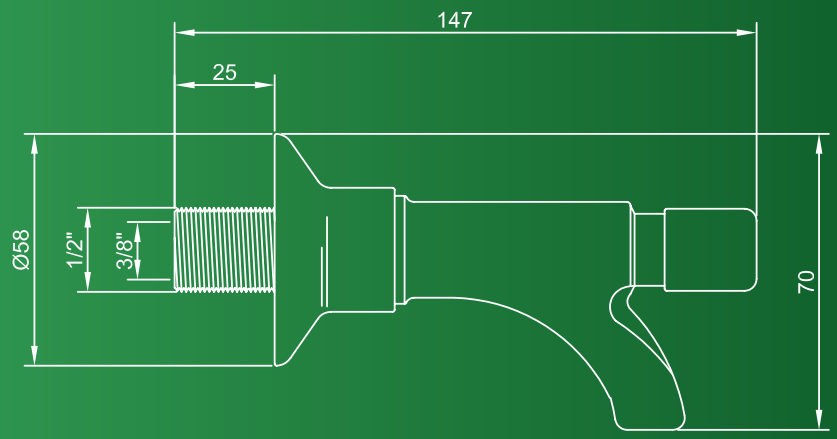
4412 • 1/2”

DISTRIBUTION TAPS WITH BUTTON AND ANTI-WATERHAMMER DISPOSAL

CONNECTIONS: MALE



CONNECTIONS

OR
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La qualità di mano in mano.

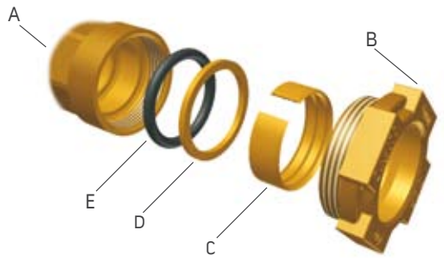
0900.5

IRECO® FITTINGS IN BRASS DZR "CR" - 900 SERIES FOR PLASTIC PIPES FOR ISO PIPES FROM DIAMETER 20 TO DIAMETER 63

GENERAL FEATURES

The Ireco® 900 series compression fittings in DZR "CR" brass with EPDM elastomer ring washer have been conceived, designed and manufactured for plastic piping used for transporting fluids under pressure. These fittings are suitable for pipes in polyethylene (PE80, PE100 and PEx) as defined under EN 1555-2 and DIN8074 for gas distribution and EN 12201-2 for water distribution, and are used in conduits under pressure (distribution mains, irrigation and thermo-hydraulic plants, also combined types, cold and hot water, compressed air plants) as well as for draining conduits (sewage and drain systems inside and outside buildings).
The connection of the fitting is guaranteed by the compression of a cut ring against the external wall of the pipe, and does not require any prior preparation of the extremities of the tube, besides having a squared-off cut with sharp and de-burred edges. The whole range (except for the repair coupling) has en internal seat for the pipe, in order to limit the length of the coupling and to hold the internal support, if used. The locking nuts and straight connecting bodies have ideal surfaces to transmit the twisting moments while tightening. The fittings are made of dezincification-resistant "CR" brass, which renders them particularly suitable for pipes transporting potable water, brackish water, and water rich in dissolved carbon dioxide, even in underground conduits.
This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water. If used with an internal tube support (reinforcing insert), these valves are perfect for use in non-combustible gas systems and in combustible gas system if installed above ground or in inspection posts.
These fittings may also be used with piping in PEld, PE-X, PP and PVC.

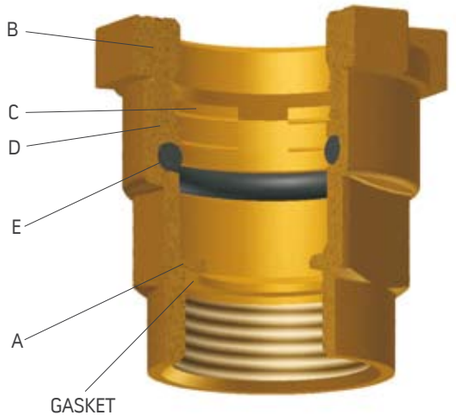
DESIGN



A - Brass Body EN 12165 - CW602N (DZR)
B - Brass locking nut EN 12165 - CW602N (DZR)
C - Brass compression ring EN 12164 - CW614N
D - Sealing Ring dimensions DN20-DN32 in brass EN 12164 -CW614N
Sealing Ring dimensions DN40-DN63 STAINLESS STEEL EN 10088-1.4301 (AISI 304)
E - O-ring washer in EPDM elastomer

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

The Ireco® 900 series DZR brass fittings are designed in such a way that once the locking nut (B), is tightened, it is automatically screwed against the body of the fitting (A), which ensures the correct closure of the compression ring (C) on the tube and the squashing of the sealing o-ring (E). The Ireco® 900 series DZR brass fittings with female-threaded offtakes have a plane seat where a gaskets can be put in order to guarantee the seal after connecting it to the piping.



TECHNICAL FEATURES

Pressures and Temperatures:
If used with
Pipelines for water distribution:
- Maximum working pressure 16 bar at 20°C (2.5 bar at 60°C)
Pipelines for non-combustible gas distribution:
- Maximum working pressure 10 bar at 20°C
Pipelines for combustible gas distribution:
- Maximum working pressure 4 bar at 20°C

**PLEASE NOTE: The maximum temperatures and pressures for installed fittings , depend on the characteristics of the material of which the plastic tube is made; the detailed particularities are specified in the corresponding norms regarding plastic pipeline systems.*

Threading and terminal connections (according to the model):

Pipe connection	Threads according to ISO 228/1
Compression fittings for PE tubes	Conforming with EN 1254-3, Type A

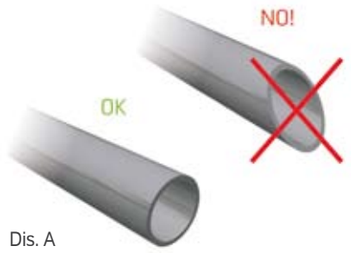
Requirements and tests as per:
Type Test performed according to the working sheet VP 600 (German Certification Institute DVGW) DIN 8076
EN 1254-3 (in function of the type of pipe/use – see appendix B)
Resistance test anti detachment under dynamic traction with internal support of the pipe (reinforcing insert) according to Working sheet VP 600 §3.7
Tests on dezincification resistance performed according to the test method reported in EN ISO 6509

Max. dezincification depth	200 µm – degree A –

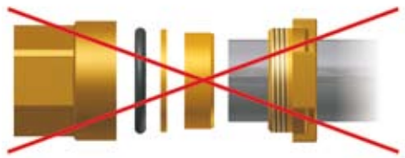
IRECO® FITTINGS IN BRASS DZR "CR" - 900 SERIES FOR PLASTIC PIPES
FOR ISO PIPES FROM DIAMETER 20 TO DIAMETER 63

INSTALLATION INSTRUCTIONS

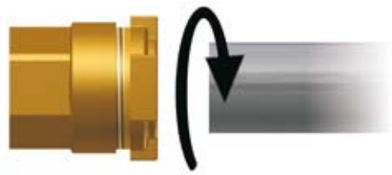
After cutting the tubes (see drawing "A") and eliminating the burrs, clean the external and internal extremities which have to be united, ensuring that they are free of grains, sand, grease, dirt, etc.



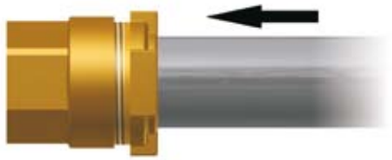
PLEASE NOTE: Do not dismantle the fitting.



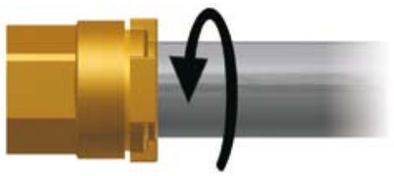
1 Unscrew the locking nut without removing it from the fitting



2 Insert the tube against the body of the fitting



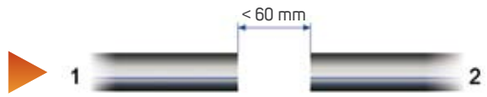
3 Tighten the locking nut



PARTICULAR FEATURES AND METHOD FOR MOUNTING THE REPAIR COUPLING

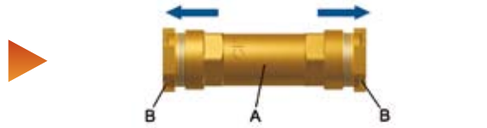
The repair coupling allows the connection of the pipeline with a maximum space between the extremities of the tube equivalent to 60 mm for all dimensions. The absence of a mechanical seat, the enlarged internal diameter of passage and the special internal guides allow the full flow from the inside of the tube through the fitting in both directions. These particularities likewise enable its use even with highly oval-shaped, damaged or tubes supplied in rolls.

1 Control if the distance between the two extremities of the pipes to be connected is less than or equal to 60 mm.



2 Bring the fitting to the tube and put a reference and control mark on the tube.

3 Completely loosen both locking nuts (B) mounted on the repair coupling without dismounting them from the body of the fitting (A).



4 Lift tube 2 and insert the fitting, sliding it along the entire lifted tube.

5 Lower tube 2 until it is on the same axis as tube 1. Then, insert tube 1 into the free end of the repair coupling.

6 Position the repair coupling correctly; ensuring that the reference mark made earlier on the tube coincides with the extreme limit of the locking nut.

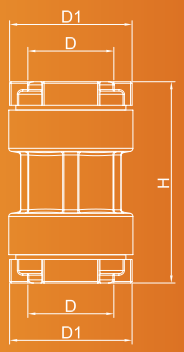
7 Tighten the two locking nuts.

0900.5

IRECO® FITTINGS IN BRASS DZR "CR" - 900 SERIES FOR PLASTIC PIPES
FOR ISO PIPES FROM DIAMETER 20 TO DIAMETER 63

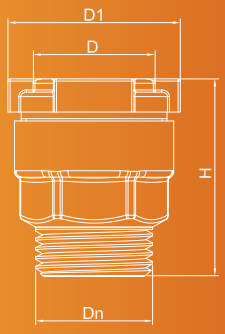
0900.5 SLEEVE

Code	Dimensions		
	D	D1	H
0900.520	Ø20	Ø33	41,5
0900.525	Ø25	Ø39	67
0900.532	Ø32	Ø46	76
0900.540	Ø40	Ø58	97
0900.550	Ø50	Ø70	105
0900.563	Ø63	Ø82	110



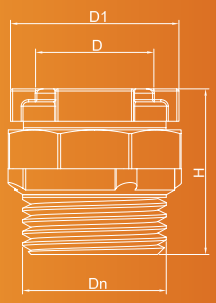
0910.5 MALE

Code	Dimensions			
	Dn	D	D1	H
0910.520	1/2"	Ø20	Ø33	41,5
0910.525	3/4"	Ø25	Ø39	45,5
0910.532	1"	Ø32	Ø46	51
0910.540	1"1/4	Ø40	Ø58	64
0910.550	1"1/2	Ø50	Ø70	66
0910.563	2"	Ø63	Ø82	73,5



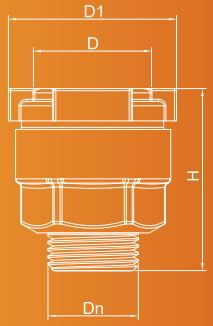
0910.5 SPECIAL INCREASED MALE

Code	Dimensions			
	Dn	D	D1	H
0910.521	3/4"	Ø20	Ø33	35
0910.526	1"	Ø25	Ø39	44,5
0910.533	1"1/4	Ø32	Ø46	52
0910.541	1"1/2	Ø40	Ø58	65
0910.551	2"	Ø50	Ø70	68



0910.5 SPECIAL REDUCED MALE

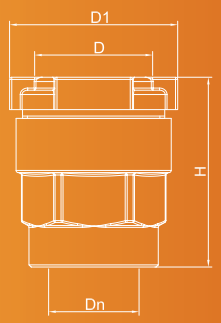
Code	Dimensions			
	Dn	D	D1	H
0910.524	1/2"	Ø25	Ø39	39,5
0910.530	3/4"	Ø32	Ø46	43
0910.539	1"	Ø40	Ø58	52
0910.549	1"1/4	Ø50	Ø70	54



IRECO® FITTINGS IN BRASS DZR "CR" - 900 SERIES FOR PLASTIC PIPES
FOR ISO PIPES FROM DIAMETER 20 TO DIAMETER 63

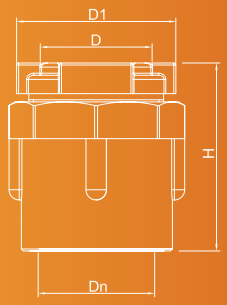
0916.5 FEMALE

Code	Dimensions			
	Dn	D	D1	H
0916.520	1/2"	Ø20	Ø33	41,5
0916.525	3/4"	Ø25	Ø39	45,5
0916.532	1"	Ø32	Ø46	51
0916.540	1"1/4	Ø40	Ø58	64
0916.550	1"1/2	Ø50	Ø70	66
0916.563	2"	Ø63	Ø82	73,5



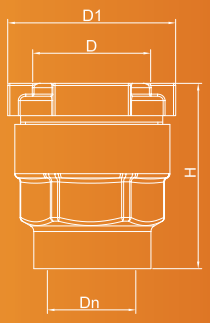
0916.5 SPECIAL INCREASED FEMALE

Code	Dimensions			
	Dn	D	D1	H
0916.521	3/4"	Ø20	Ø33	35
0916.526	1"	Ø25	Ø39	44,5
0916.533	1"1/4	Ø32	Ø46	52
0916.541	1"1/2	Ø40	Ø58	65
0916.551	2"	Ø50	Ø70	68



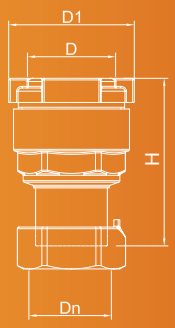
0916.5 SPECIAL REDUCED FEMALE

Code	Dimensions			
	Dn	D	D1	H
0916.524	1/2"	Ø25	Ø39	39,5
0916.530	3/4"	Ø32	Ø46	43
0916.539	1"	Ø40	Ø58	52
0916.549	1"1/4	Ø50	Ø70	54



0918.5 STRAIGHT WITH REVOLVING DISMANTLING FITTING

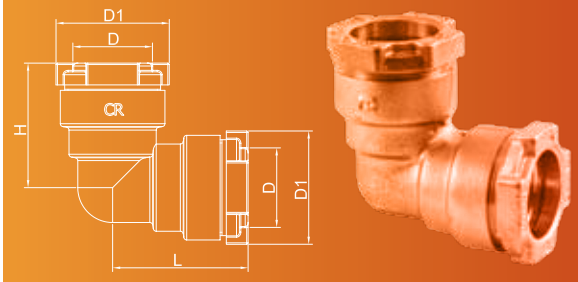
Code	Dimensions			
	Dn	D	D1	H
0918.521	3/4"	Ø20	Ø33	56
0918.525	3/4"	Ø25	Ø39	52
0918.526	1"	Ø25	Ø39	54
0918.531	3/4"	Ø32	Ø46	62
0918.532	1"	Ø32	Ø46	61
0918.534	1"1/4	Ø32	Ø46	70,5
0918.542	1"1/2	Ø40	Ø58	86,5
0918.550	1"1/2	Ø50	Ø70	91
0918.551	2"	Ø50	Ø70	89,5



IRECO® FITTINGS IN BRASS DZR "CR" - 900 SERIES FOR PLASTIC PIPES
FOR ISO PIPES FROM DIAMETER 20 TO DIAMETER 63

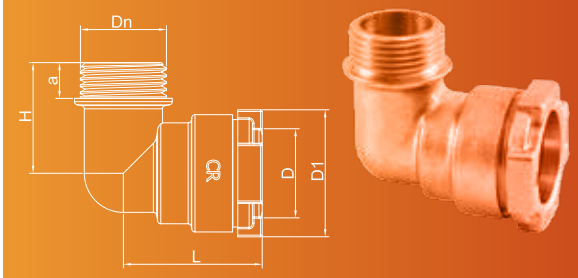
0920.5 ELBOW 90° PIPE- PIPE

Code	Dimensions			
	D	D1	L	H
0920.520	Ø20	Ø33	39,5	37
0920.525	Ø25	Ø39	46,5	43
0920.532	Ø32	Ø46	56,5	49,5
0920.540	Ø40	Ø58	69	64
0920.550	Ø50	Ø70	76	71
0920.563	Ø63	Ø82	86,5	78,5



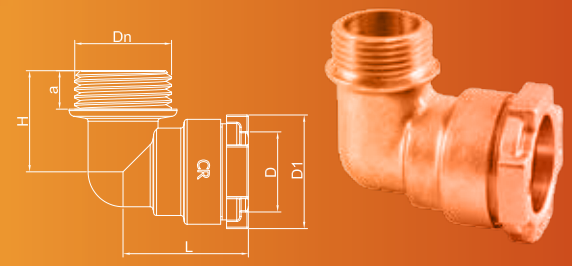
0921.5 ELBOW 90° MALE

Code	Dimensions					
	Dn	D	D1	L	H	a
0921.520	1/2"	Ø20	Ø33	39	29,5	10
0921.525	3/4"	Ø25	Ø39	45	34,5	11,5
0921.532	1"	Ø32	Ø46	51,5	40	13
0921.540	1"1/4	Ø40	Ø58	56,5	44.5	14
0921.550	1"1/2	Ø50	Ø70	73,3	53,5	14
0921.563	2"	Ø63	Ø82	88,5	62	16



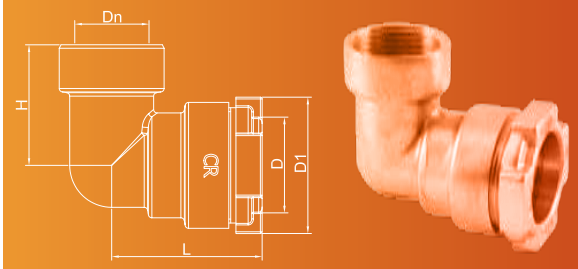
0921.5 ELBOW 90° INCREASED MALE

Code	Dimensions					
	Dn	D	D1	L	H	a
0921.526	1"	Ø25	Ø39	45	34,5	13



0922.5 ELBOW 90° FEMALE

Code	Dimensions				
	Dn	D	D1	L	H
0922.520	1/2"	Ø20	Ø33	37	29,5
0922.525	3/4"	Ø25	Ø39	43	34,5
0922.532	1"	Ø32	Ø46	49,5	39
0922.540	1"1/4	Ø40	Ø58	64	42
0922.550	1"1/2	Ø50	Ø70	71	49,5
0922.563	2"	Ø63	Ø82	86,5	62

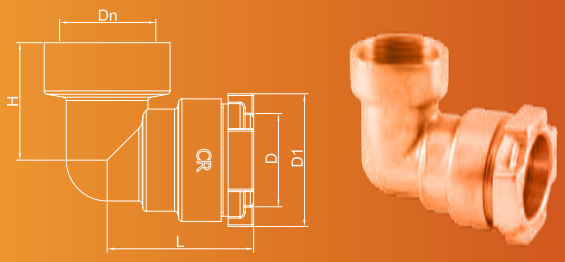


0900.5

IRECO® FITTINGS IN BRASS DZR "CR" - 900 SERIES FOR PLASTIC PIPES
FOR ISO PIPES FROM DIAMETER 20 TO DIAMETER 63

0922.5 ELBOW 90° INCREASED FEMALE

Code	Dimensions				
	Dn	D	D1	L	H
0922.526	1"	Ø25	Ø39	44	34,5

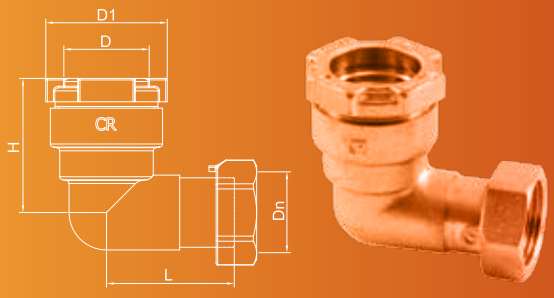


0922.5 ELBOW 90° REDUCED FEMALE

Code	Dimensions				
	Dn	D	D1	L	H
0922.524	1/2"	Ø25	Ø39	44	25,5

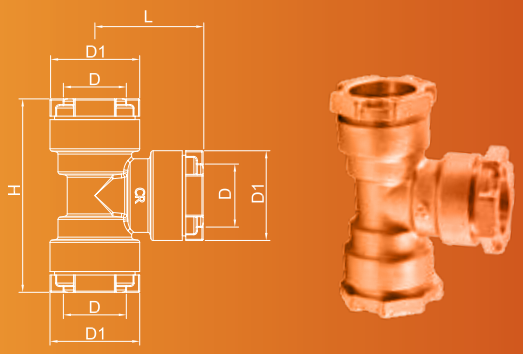
0924.5 ELBOW 90° REVOLVING DISMANTLING FITTING

Code	Dimensions				
	Dn	D	D1	H	L
0924.520	3/4"	Ø20	Ø33	35,5	45
0924.525	3/4"	Ø25	Ø39	45	41
0924.526	1"	Ø25	Ø39	45	41
0924.531	3/4"	Ø32	Ø46	50	56,5
0924.532	1"	Ø32	Ø46	51,5	46,5
0924.534	1"1/4	Ø32	Ø46	50	58
0924.542	1"1/2	Ø40	Ø58	64	66
0924.550	1"1/2	Ø50	Ø70	71,5	82
0924.551	2"	Ø50	Ø70	71,5	74



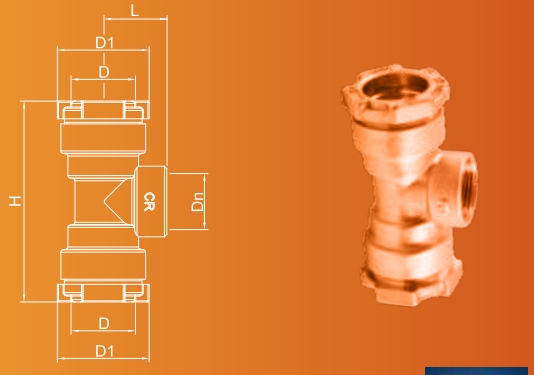
0925.5 TE PIPE-PIPE-PIPE

Code	Dimensions			
	D	D1	H	L
0925.520	Ø20	Ø33	76	39,5
0925.525	Ø25	Ø39	87	46
0925.532	Ø32	Ø46	102	54,5
0925.540	Ø40	Ø58	131	69
0925.550	Ø50	Ø70	146,5	76
0925.563	Ø63	Ø82	163	86,5



0931.5 TE FEMALE

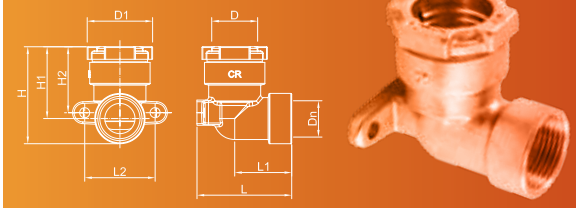
Code	Dimensions				
	Dn	D	D1	H	L
0931.520	1/2"	Ø20	Ø33	76	22,5
0931.525	3/4"	Ø25	Ø39	87	27
0931.532	1"	Ø32	Ø46	102	34
0931.540	1"1/4	Ø40	Ø58	131	38
0931.550	1"1/2	Ø50	Ø70	146,5	41,5
0931.563	2"	Ø63	Ø82	163	50,5



IRECO® FITTINGS IN BRASS DZR "CR" - 900 SERIES FOR PLASTIC PIPES
FOR ISO PIPES FROM DIAMETER 20 TO DIAMETER 63

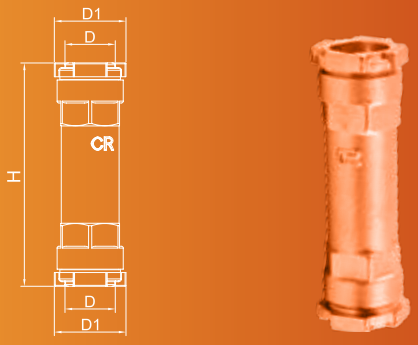
0950.5 ELBOW 90° WALL CONNECTION

Code	Dimensions								
	Dn	D	D1	L	L1	L2	H	H1	H2
0950.520	1/2"	Ø20	Ø33	49	30,5	42	42	40,5	27,5
0950.525	3/4"	Ø25	Ø39	56,5	34	42	60	45	41,5



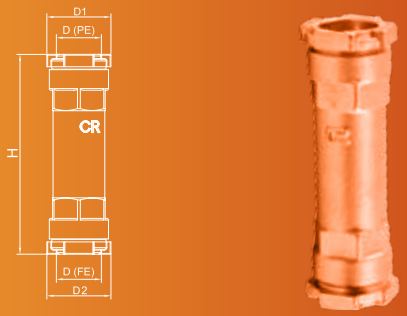
0975.5 REPAIR COUPLING PE-PE

Code	Dimensions		
	D	D1	H
0975.520	Ø20	Ø35	115
0975.525	Ø25	Ø41	122
0975.532	Ø32	Ø49	130
0975.540	Ø40	Ø62	150,5
0975.550	Ø50	Ø74	147,5
0975.563	Ø63	Ø87	151,5



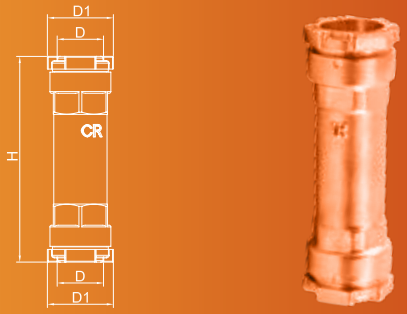
0975.5 REPAIR COUPLING PE-FE

Code	Dimensions				
	D (PE)	D (FE)	D1	D2	H
0975.527	Ø25	Ø27	Ø41	Ø39	122
0975.534	Ø32	Ø34	Ø49	Ø46	130
0975.542	Ø40	Ø42	Ø62	Ø58	150,5
0975.552	Ø50	Ø49	Ø74	Ø70	147,5
0975.565	Ø63	Ø60	Ø87	Ø82	151,5



0975.6 REPAIR COUPLING FE-FE

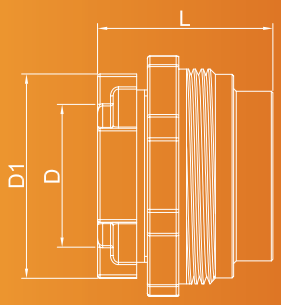
Code	Dimensions		
	D	D1	H
0975.625	Ø27	Ø39	122
0975.632	Ø34	Ø46	130
0975.640	Ø42	Ø58	150,5
0975.650	Ø49	Ø70	147,5
0975.663	Ø60	Ø82	151,5



IRECO® FITTINGS IN BRASS DZR "CR" - 900 SERIES FOR PLASTIC PIPES
FOR ISO PIPES FROM DIAMETER 20 TO DIAMETER 63

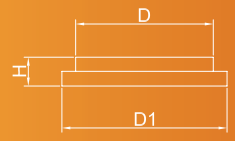
0997.5 REDUCTION

Code	Dimensions			
	D	for tube Ø	D1	L
0997.520	Ø20	Ø25	Ø33	31
0997.525	Ø25	Ø32	Ø39	33
0997.532	Ø32	Ø40	Ø46	38
0997.540	Ø40	Ø50	Ø58	47
0997.545	Ø40	Ø63	Ø70	52
0997.550	Ø50	Ø63	Ø70	52



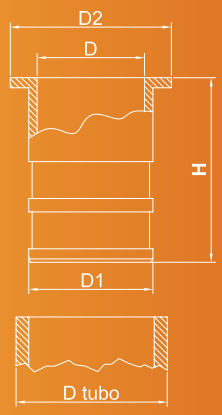
0998.0 PLUG

Code	Dimensions		
	D	D1	H
0998.020	Ø20	Ø27	4,5
0998.025	Ø25	Ø31	5
0998.032	Ø32	Ø39	5
0998.040	Ø40	Ø50	6
0998.050	Ø50	Ø60	5
0998.063	Ø63	Ø72	5,5



1299 INSERT iso 4437

Code	Dimensions				
	D	D1	D2	for tube Ø	H
1299.020	Ø12	Ø14	19	Ø20	24
1299.025	Ø16	Ø18,5	24	Ø25	27,5
1299.032	Ø23	Ø25,5	30	Ø32	31,5
1299.040	Ø28	Ø32	36	Ø40	33
1299.050	Ø36	Ø40	45	Ø50	39
1299.063	Ø47,5	Ø50,5	55	Ø63	44,5



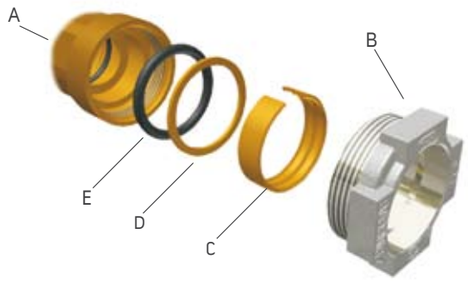
0900.1

IRECO® FITTINGS IN BRASS - 900 SERIES BSR - FOR IRON PIPES
FOR IRON PIPES FROM DIAMETER 21 (1/2") TO DIAMETER 60 (2")

GENERAL FEATURES

The Ireco® 900 series BSR compression fittings for iron pipes with EPDM elastomer ring washer have been conceived, designed and manufactured for metal piping used for transporting fluids under pressure. These fittings are in fact compatible with steel piping as defined in EN 10255 (Ex DIN 2440/2441), DIN 2442 e DIN 2448/DIN 2458 Series 1, ISO 65.
These fittings are used in conduits under pressure (distribution mains, irrigation and thermo-hydraulic plants, also combined types, cold and hot water, compressed air plants) as well as for draining conduits (sewage and drain systems inside and outside buildings). The nickel-plated locking nut makes it easy to identify them.
The connection of the fitting is guaranteed by the compression of a cut ring against the external wall of the pipe, and does not require any prior preparation of the extremities of the tube, besides having a squared-off cut with sharp and de-burred edges. The whole range (except for the repair coupling) has an internal seat for the pipe, in order to limit the length of the coupling and to hold the internal support, if used. The locking nuts and straight connecting bodies have ideal surfaces to transmit the twisting moments while tightening. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water. Besides that these fittings can also be used for the distribution of non-combustible and combustible gas, if they are installed above ground or in inspection posts.
These fittings can perfectly be used in non-combustible gas systems and in combustible gas system if installed above ground or in inspection posts.

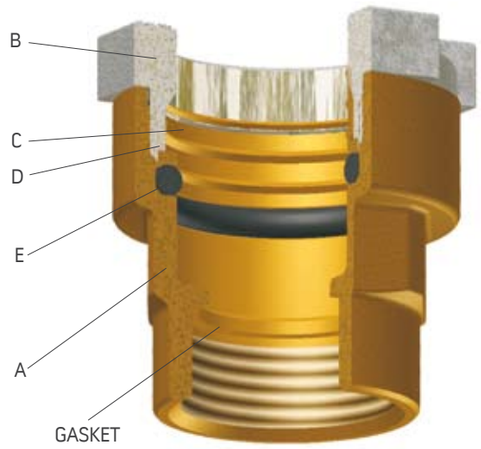
DESIGN



A - Brass Body EN 12165 - CW617N
B - Brass locking nut EN 12165 - CW617N
C - Brass compression ring EN 12164 - CW614N
D - Sealing Ring dimensions DN20-DN32 in brass EN 12164 -CW614N
Sealing Ring dimensions DN40-DN63 STAINLESS STEEL EN 10088-1.4301 (AISI 304)
E - O-ring washer in EPDM elastomer

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

The Ireco® 900 series BSR brass fittings for iron pipes are designed in such a way that once the locking nut (B), is tightened, it is automatically screwed against the body of the fitting (A), which ensures the correct closure of the compression ring (C) on the tube and the squashing of the sealing o-ring (E).
The Ireco® 900 series BSR brass fittings for iron pipes with female-threaded offtakes have a plane seat where a gasket can be put in order to guarantee the seal after connecting it to the piping.



TECHNICAL FEATURES

Pressures and Temperatures:
If used with:
Pipelines for water distribution:
- Maximum working pressure 16 bar at 70°C
Pipelines for non-combustible gas distribution:
- Maximum working pressure 10 bar at 20°C
Pipelines for combustible gas distribution:
- Maximum working pressure 1 bar at 23°C

Alignment:	+/- 1°
Torsion angle (ß):	these fittings have not been designed specifically to bear torsion angles.

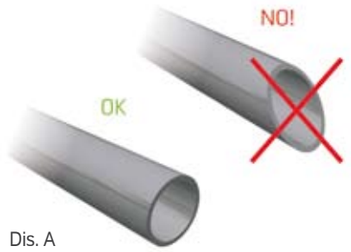
Axial mobility: up to 1 bar there is no axial mobility. For pressures superior to 1 bar the steel pipe might undergo an axial deformation (up to 3 mm) due to the normal bond of the seal and stopping elements.
Threading and terminal connections (according to the model):

Pipe connection	Threads according to ISO 228/1
Compression fittings for IRON pipes	Conforming with DIN 3387-1
Requirements and tests as per:	tests are effectuated according to the German norms DIN 3387-1

IRECO® FITTINGS IN BRASS - 900 SERIES BSR - FOR IRON PIPES
FOR IRON PIPES FROM DIAMETER 21 (1/2") TO DIAMETER 60 (2")

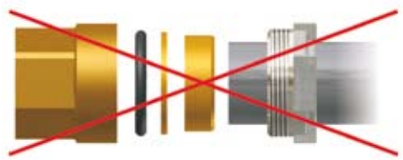
INSTALLATION INSTRUCTIONS

After cutting the tubes (see drawing A) and eliminating the burrs, clean the external and internal extremities which have to be united, ensuring that they are free of grains, sand, grease, dirt, etc.

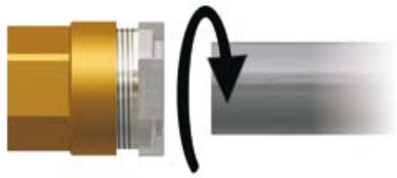


Dis. A

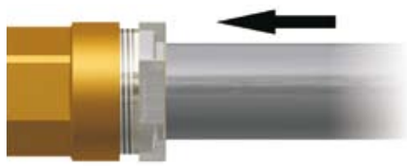
PLEASE NOTE: Do not dismantle the fitting.



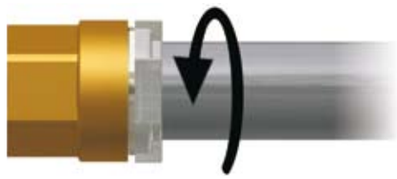
1 Unscrew the locking nut without removing it from the fitting.



2 Insert the tube against the body of the fitting.

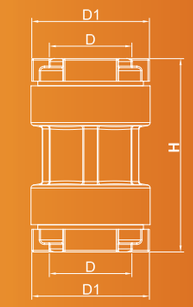


3 Tighten the locking nut.



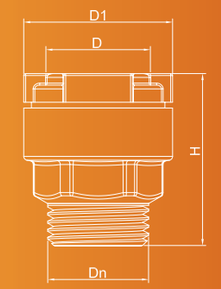
0900.1 SLEEVE

Code	Dimensions		
	D	D1	H
0900.120	Ø21	Ø33	57
0900.125	Ø27	Ø39	67
0900.132	Ø34	Ø46	79
0900.140	Ø42	Ø58	95
0900.150	Ø49	Ø70	105
0900.160	Ø60	Ø82	110



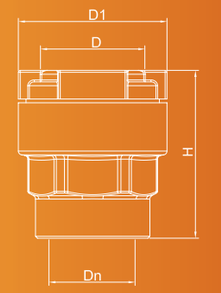
0910.1 MALE

Code	Dimensions			
	Dn	D	D1	H
0910.120	1/2"	Ø21	Ø33	41,5
0910.125	3/4"	Ø27	Ø39	44,5
0910.132	1"	Ø34	Ø46	51
0910.140	1"1/4	Ø42	Ø58	64
0910.150	1"1/2	Ø49	Ø70	66
0910.160	2"	Ø60	Ø82	73,5



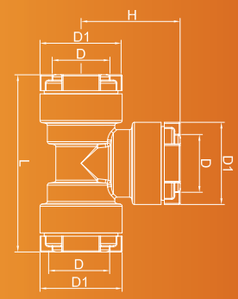
0916.1 FEMALE

Code	Dimensions			
	Dn	D	D1	H
0916.120	1/2"	Ø21	Ø33	41
0916.125	3/4"	Ø27	Ø39	46
0916.132	1"	Ø34	Ø46	52
0916.140	1"1/4	Ø42	Ø58	64
0916.150	1"1/2	Ø49	Ø70	65
0916.160	2"	Ø60	Ø82	72



0925.1 TE TUBE-TUBE-TUBE

Code	Dimensions			
	D	D1	L	H
0925.120	Ø21	Ø33	76	40,5
0925.125	Ø27	Ø39	87	46,5
0925.132	Ø34	Ø46	102	55



0900.2

IRECO® FITTINGS IN BRASS - 900 SERIES BSN - FOR PIPES IN POLYETHYLENE-32 NORMAL GAUGE I.S. 134:1977 (IRISH NATIONAL STANDARD)

FOR BSN PIPES FROM DIAMETER 17 (1/2") TO DIAMETER 60 (2")

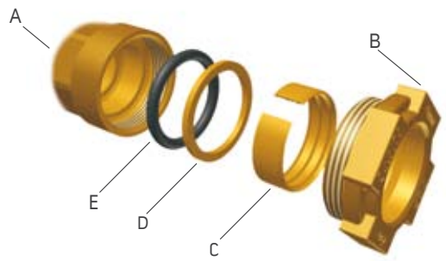
GENERAL FEATURES

The Ireco® 900 series BSN brass compression fittings with EPDM elastomer ring washers have been conceived, designed and manufactured for the connection and various junctions that are not directly possible with normal gauge polyethylene-32 tubes (according to Irish National Standard IS 134:1977) for cold water. These fittings are used in conduits under pressure (distribution mains, irrigation and pumping systems). The connection of the fitting is guaranteed by the compression of a cut ring against the external wall of the pipe, and does not require any prior preparation of the extremities of the tube, besides having a squared-off cut with sharp and de-burred edges. The whole range (except for the repair coupling) has an internal seat for the pipe, in order to limit the length of the coupling and to hold the internal support, if used. The locking nuts and straight connecting bodies have ideal surfaces to transmit the twisting moments while tightening. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable.

POLYETHYLENE-32 TUBE DIMENSIONS - NORMAL GAUGE AS PER I.S. 134:1977 (Irish National Standard)

Nominal dimension	External diameter mm		Thickness mm	
	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
1/2"	16,95	17,30	2,30	2,60
3/4"	24,95	25,40	3,10	3,50
1"	31,25	31,75	3,10	3,50
1"1/4	37,50	38,10	3,10	3,50
1"1/2	43,80	44,45	3,50	3,90
2"	60,00	60,85	4,65	5,20

DESIGN



A - Brass Body EN 12165 - CW617N
B - Brass locking nut EN 12165 - CW617N
C - Brass compression ring EN 12164 - CW614N
D - Sealing Ring dimensions DN20-DN32 in brass EN 12164 -CW614N
Sealing Ring dimensions DN40-DN63 STAINLESS STEEL EN 10088-1.4301 (AISI 304)
E - O-ring washer in EPDM elastomer

TECHNICAL FEATURES

Pressures and Temperatures:

Maximum working pressure	16 bar at 20°C
Fixed maximum working temperature	up to 60 °C at 2.5 bar

PLEASE NOTE: The maximum temperatures and pressures for installed fittings , depend on the characteristics of the material of which the plastic tube is made; the detailed particularities are specified in the corresponding norms regarding plastic pipeline systems.

Threading:
Pipe connection — Threads according to ISO 228/1

Requirements and tests as per:
Type Tests are effectuated according to the working sheet VP 600 (German Certification DVGW) and the European Standard EN 1254-3.

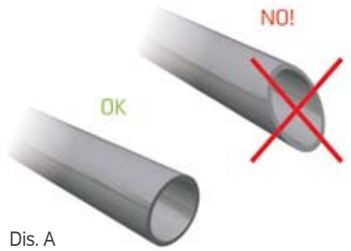
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

IRECO® FITTINGS IN BRASS - 900 SERIES BSN - FOR PIPES IN POLYETHYLENE-32 NORMAL GAUGE I.S. 134:1977 (IRISH NATIONAL STANDARD)

FOR BSN PIPES FROM DIAMETER 17 (1/2") TO DIAMETER 60 (2")

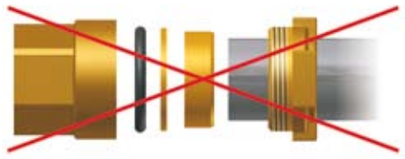
INSTALLATION INSTRUCTIONS

After cutting the tubes (see drawing "A") and eliminating the burrs, clean the external and internal extremities which have to be united, ensuring that they are free of grains, sand, grease, dirt, etc.



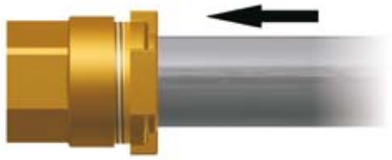
Dis. A

PLEASE NOTE: Do not dismantle the fitting.

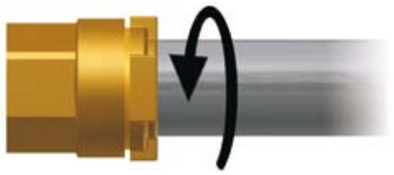


1 Unscrew the locking nut without removing it from the fitting.

2 Insert the tube against the body of the fitting.

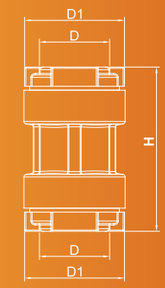


3 Tighten the locking nut.



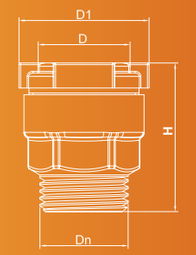
0900.2 SLEEVE

Code	Dimensions		
	D	D1	H
0900.220	Ø17	Ø33	41,5
0900.225	Ø25	Ø39	67
0900.232	Ø31	Ø46	76
0900.240	Ø38	Ø58	97
0900.250	Ø45	Ø70	105
0900.263	Ø60	Ø82	110



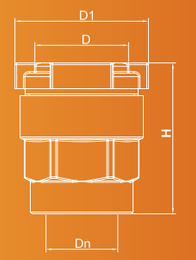
0910.2 MALE

Code	Dimensions			
	Dn	D	D1	H
0910.220	1/2"	Ø17	Ø33	41,5
0910.225	3/4"	Ø25	Ø39	45,5
0910.232	1"	Ø31	Ø46	51
0910.240	1"1/4	Ø38	Ø58	64
0910.250	1"1/2	Ø45	Ø70	66
0910.263	2"	Ø60	Ø82	73,5



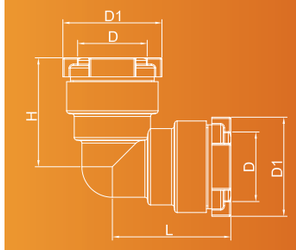
0916.2 FEMALE

Code	Dimensions			
	Dn	D	D1	H
0916.220	1/2"	Ø17	Ø33	41,5
0916.225	3/4"	Ø25	Ø39	45,5
0916.232	1"	Ø31	Ø46	51
0916.240	1"1/4	Ø38	Ø58	64
0916.250	1"1/2	Ø45	Ø70	66
0916.263	2"	Ø60	Ø82	73,5



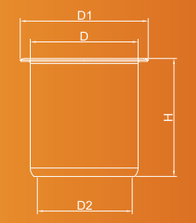
0920.2 ELBOW 90° PIPE-PIPE

Code	Dimensions			
	D	D1	L	H
0920.220	Ø17	Ø33	39,5	37
0920.225	Ø25	Ø39	46,5	43
0920.232	Ø31	Ø46	56,5	49,5
0920.240	Ø38	Ø58	69	64
0920.250	Ø45	Ø70	76	71
0920.263	Ø60	Ø82	86,5	78,5



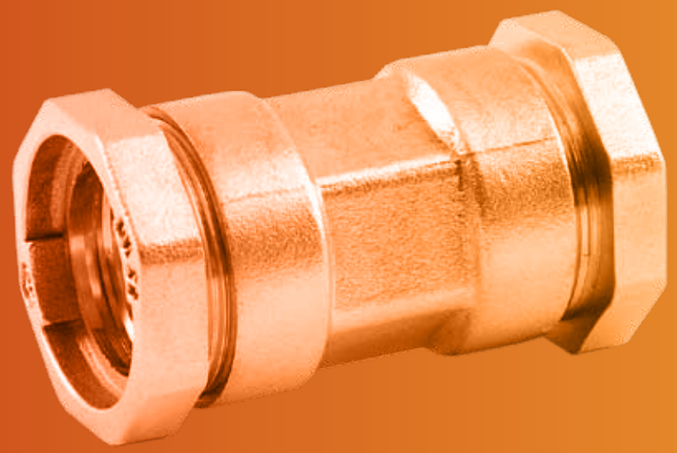
0999.2 REINFORCEMENT INSERT

Code	Dimensions			
	D	D1	D2	H
0999.232	Ø32	Ø38	Ø31	35
0999.237	Ø37	Ø42	Ø36	42
0999.250	Ø50	Ø60	Ø48	46,5



0800

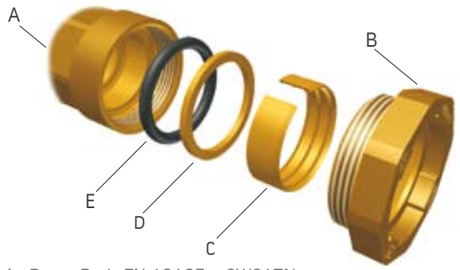
IRECO® FITTINGS IN BRASS - 800 SERIES - FOR PLASTIC PIPES
FOR ISO PIPES FROM DIAMETER 20 TO DIAMETER 63



GENERAL FEATURES

The Ireco® 800 series compression fittings with EPDM elastomer ring washer have been conceived, designed and manufactured for plastic piping used for transporting fluids under pressure. These fittings are suitable for pipes in polyethylene (PE80, PE100 and PEx) as defined under EN 1555-2 and DIN8074 for gas distribution and EN 12201-2 for water distribution, and are used in conduits under pressure (distribution mains, irrigation and thermo-hydraulic plants, also combined types, cold and hot, compressed air plants) as well as for draining conduits (sewage and drain systems inside and outside buildings).
The connection of the fitting is guaranteed by the compression of a cut ring against the external wall of the pipe, and does not require any prior preparation of the extremities of the tube, besides having a squared-off cut with sharp and de-burred edges. The whole range (except for the repair coupling) have an internal seat for the tube, in order to limit the length of the coupling and to hold the internal support, if used. The locking nuts and straight connecting bodies have ideal surfaces to transmit the twisting moments while tightening. This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and potable water. If used with an internal tube support (reinforcing insert), these valves are perfect for use in non-combustible gas systems and in combustible gas system if installed above ground or in inspection posts.
These fittings may also be used with piping in PEld, PE-X, PP and PVC.

DESIGN



A - Brass Body EN 12165 – CW617N
B - Brass locking nut EN 12165 - CW617N
C - Brass compression ring EN 12164 - CW614N
D - Sealing Ring dimensions DN20-DN32 in brass EN 12164 -CW614N
Sealing Ring dimensions DN40-DN63 STAINLESS STEEL EN 10088-1.4301 (AISI 304)
E - O-ring washer in EPDM elastomer

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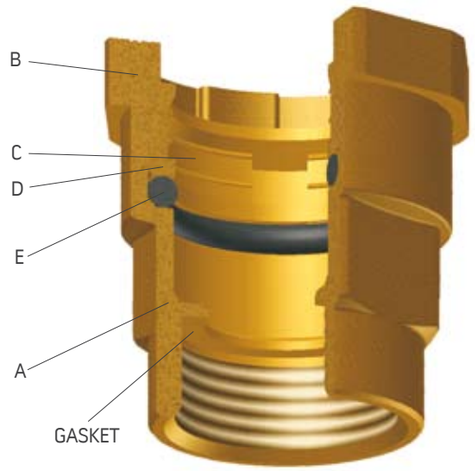
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

The Ireco® 800 series brass fittings are designed in such a way that once the locking nut (B), is tightened, it is automatically screwed against the body of the fitting (A), which ensures the correct closure of the compression ring (C) on the tube and the squashing of the sealing o-ring (E).The Ireco® 800 series brass fittings with female-threaded offtakes have a a plane seat where a gaskets can be put in order to guarantee the seal after connecting it to the piping.



TECHNICAL FEATURES

Pressures and Temperatures:
If used with
Pipelines for water distribution:
- Maximum working pressure 16 bar at 20°C (2.5 bar at 60°C)
Pipelines for non-combustible gas distribution:
- Maximum working pressure 10 bar at 20°C
Pipelines for combustible gas distribution:
- Maximum working pressure 4 bar at 20°C

**PLEASE NOTE: The maximum temperatures and pressures for installed fittings , depend on the characteristics of the material of which the plastic tube is made; the detailed particularities are specified in the corresponding norms regarding plastic pipeline systems.*

Threading and terminal connections (according to the model):

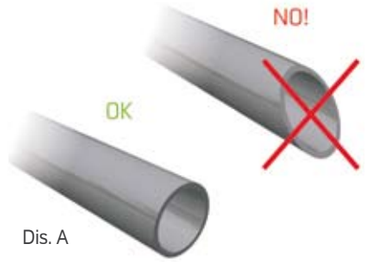
Pipe connection	Threads according to ISO 228/1
Compression fittings for PE tubes	Conf. EN 1254-3, Type A

Requirements and tests as per:
Type Test performed according to
the working sheet VP 600 (German Certification Institute DVGW) DIN 8076
EN 1254-3 (in function of the type of pipe/use – see appendix B)
Resistance test anti detachment under dynamic traction with internal support of the pipe (reinforcing insert) according to Working sheet VP 600 §3.7

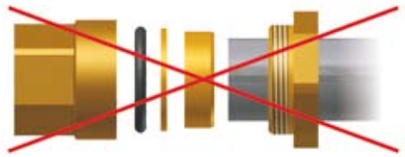
IRECO® FITTINGS IN BRASS - 800 SERIES - FOR PLASTIC PIPES
FOR ISO PIPES FROM DIAMETER 20 TO DIAMETER 63

INSTALLATION INSTRUCTIONS

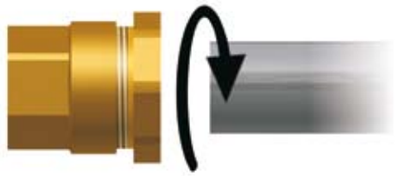
After cutting the tubes (see drawing “A”) and eliminating the burrs, clean the external and internal extremities which have to be united, ensuring that they are free of grains, sand, grease, dirt, etc.



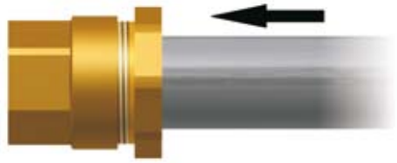
PLEASE NOTE: Do not dismantle the fitting.



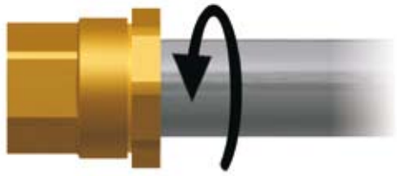
1 Unscrew the locking nut without removing it from the fitting.



2 Insert the tube against the body of the fitting.



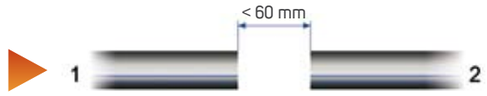
3 Tighten the locking nut.



PARTICULAR FEATURES AND METHOD FOR MOUNTING THE REPAIR COUPLING

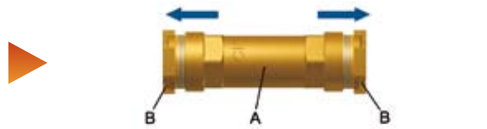
The repair coupling allows the connection of the pipeline with a maximum space between the extremities of the tube equivalent to 60 mm for all dimensions. The absence of a mechanical seat, the enlarged internal diameter of passage and the special internal guides allow the full flow from the inside of the tube through the fitting in both directions. These particularities likewise enable its use even with highly oval-shaped, damaged or tubes supplied in rolls.

1 Control if the distance between the two extremities of the pipes to be connected is less than or equal to 60 mm.



2 Bring the fitting to the tube and put a reference and control mark on the tube.

3 Completely loosen both locking nuts (B) mounted on the repair coupling without dismounting them from the body of the fitting (A).



4 Lift tube 2 and insert the fitting, sliding it along the entire lifted tube.

5 Lower tube 2 until it is on the same axis as tube 1. Then, insert tube 1 into the free end of the repair coupling.

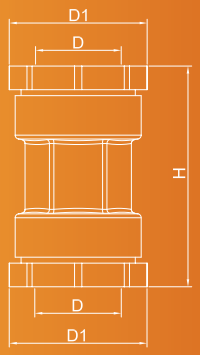
6 Position the repair coupling correctly; ensuring that the reference mark made earlier on the tube coincides with the extreme limit of the locking nut.

7 Tighten the two locking nuts.

IRECO® FITTINGS IN BRASS - 800 SERIES - FOR PLASTIC PIPES
FOR ISO PIPES FROM DIAMETER 20 TO DIAMETER 63

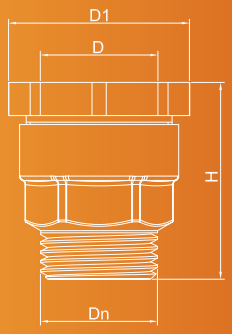
0800 SLEEVE

Code	Dimensions		
	D	D1	H
0800.020	Ø20	Ø35	56
0800.025	Ø25	Ø41	63
0800.032	Ø32	Ø49	72
0800.040	Ø40	Ø62	92
0800.050	Ø50	Ø74	100
0800.063	Ø63	Ø87	115



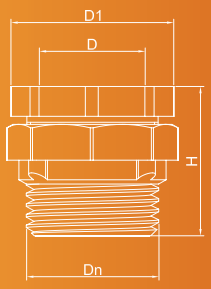
0810 MALE

Code	Dimensions			
	Dn	D	D1	H
0810.020	1/2"	Ø20	Ø35	41,5
0810.025	3/4"	Ø25	Ø41	44,5
0810.032	1"	Ø32	Ø49	50
0810.040	1"1/4	Ø40	Ø62	63
0810.050	1"1/2	Ø50	Ø74	65
0810.063	2"	Ø63	Ø87	73



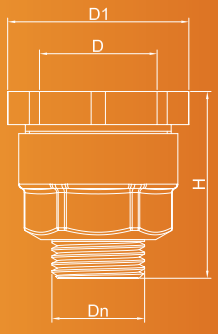
0810 SPECIAL INCREASED MALE

Code	Dimensions			
	Dn	D	D1	H
0810.021	3/4"	Ø20	Ø38,5	32,5
0810.026	1"	Ø25	Ø43	37,5
0810.033	1"1/4	Ø32	Ø51,5	41,5
0810.041	1"1/2	Ø40	Ø63	51
0810.051	2"	Ø50	Ø74	52



0810 SPECIAL REDUCED MALE

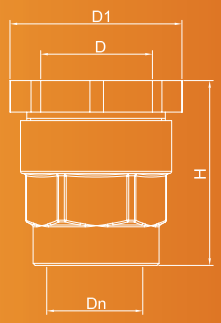
Code	Dimensions			
	Dn	D	D1	H
0810.024	1/2"	Ø25	Ø41	43,5
0810.030	3/4"	Ø32	Ø49	50
0810.039	1"	Ø40	Ø62	64
0810.049	1"1/4	Ø50	Ø74	72



IRECO® FITTINGS IN BRASS - 800 SERIES - FOR PLASTIC PIPES
FOR ISO PIPES FROM DIAMETER 20 TO DIAMETER 63

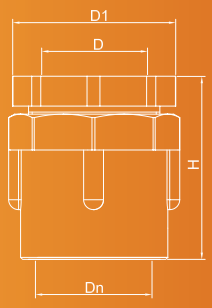
0816 FEMALE

Code	Dimensions			
	Dn	D	D1	H
0816.020	1/2”	Ø20	Ø35	38,5
0816.025	3/4”	Ø25	Ø41	44
0816.032	1”	Ø32	Ø49	50
0816.040	1”1/4	Ø40	Ø62	62
0816.050	1”1/2	Ø50	Ø74	65
0816.063	2”	Ø63	Ø87	69,5



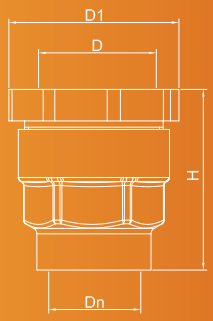
0816 SPECIAL INCREASED FEMALE

Code	Dimensions			
	Dn	D	D1	H
0816.021	3/4”	Ø20	Ø38,5	41
0816.026	1”	Ø25	Ø43	46
0816.033	1”1/4	Ø32	Ø51,5	51
0816.041	1”1/2	Ø40	Ø63	62
0816.051	2”	Ø50	Ø74	72



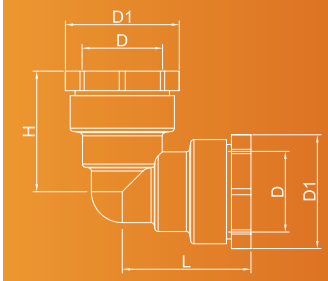
0816 SPECIAL REDUCED FEMALE

Code	Dimensions			
	Dn	D	D1	H
0816.024	1/2”	Ø25	Ø41	43
0816.030	3/4”	Ø32	Ø49	49,5
0816.039	1”	Ø40	Ø62	63
0816.049	1”1/4	Ø50	Ø74	64



0820 ELBOW 90° PIPE- PIPE

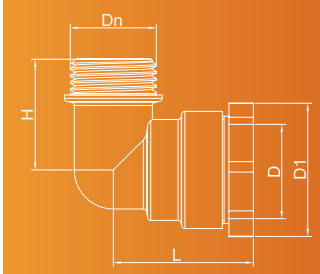
Code	Dimensions			
	D	D1	L	H
0820.020	Ø20	Ø35	39,5	37
0820.025	Ø25	Ø41	46,5	43
0820.032	Ø32	Ø49	56,5	49,5
0820.040	Ø40	Ø62	69	64
0820.050	Ø50	Ø74	76	71
0820.063	Ø63	Ø87	86,5	78,5



IRECO® FITTINGS IN BRASS - 800 SERIES - FOR PLASTIC PIPES
FOR ISO PIPES FROM DIAMETER 20 TO DIAMETER 63

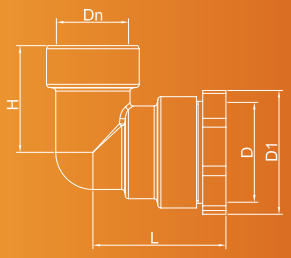
0821 ELBOW 90° MALE

Code	Dimensions					
	Dn	D	D1	L	H	a
0821.020	1/2"	Ø20	Ø35	37	29,5	10
0821.025	3/4"	Ø25	Ø41	43	34,5	11,5
0821.032	1"	Ø32	Ø49	49,5	40	13
0821.040	1"1/4	Ø40	Ø62	64	53.5	14
0821.050	1"1/2	Ø50	Ø74	71	44,5	14
0821.063	2"	Ø63	Ø87	86,5	62	16



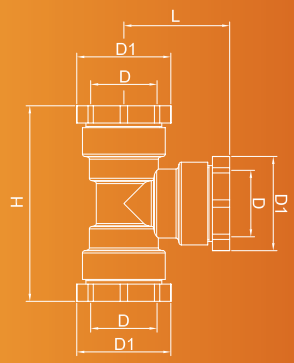
0822 ELBOW 90° FEMALE

Code	Dimensions				
	Dn	D	D1	L	H
0822.020	1/2"	Ø20	Ø35	37	29,5
0822.025	3/4"	Ø25	Ø41	43	34,5
0822.032	1"	Ø32	Ø49	49,5	39
0822.040	1"1/4	Ø40	Ø62	64	42
0822.050	1"1/2	Ø50	Ø74	71	49,5
0822.063	2"	Ø63	Ø87	86,5	62



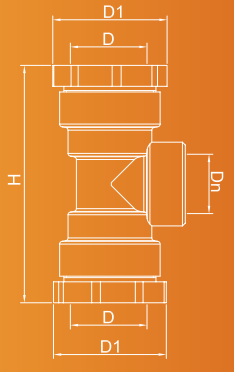
0825 TE PIPE-PIPE-PIPE

Code	Dimensions			
	D	D1	H	L
0825.020	Ø20	Ø35	74	39,5
0825.025	Ø25	Ø41	85	46
0825.032	Ø32	Ø49	100	54,5
0825.040	Ø40	Ø62	128	69
0825.050	Ø50	Ø74	142,5	76
0825.063	Ø63	Ø87	157	86,5



0831 TE FEMALE

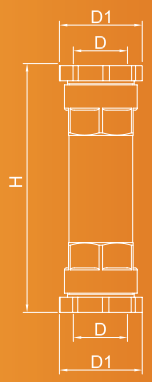
Code	Dimensions				
	Dn	D	D1	H	L
0831.020	1/2"	Ø20	Ø35	74	22,5
0831.025	3/4"	Ø25	Ø41	85	27
0831.032	1"	Ø32	Ø49	100	34
0831.040	1"1/4	Ø40	Ø62	128	38
0831.050	1"1/2	Ø50	Ø74	142,5	41,5
0831.063	2"	Ø63	Ø87	157	50,5



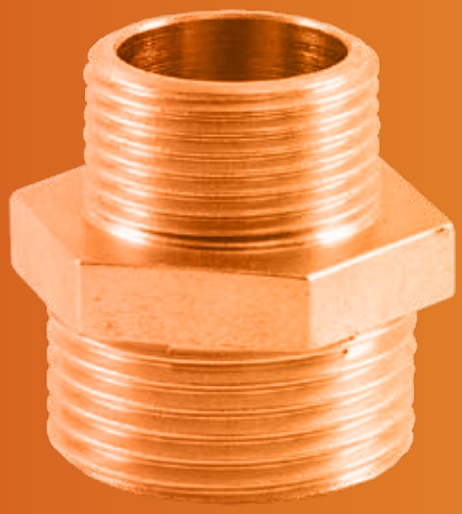
IRECO® FITTINGS IN BRASS - 800 SERIES - FOR PLASTIC PIPES
FOR ISO PIPES FROM DIAMETER 20 TO DIAMETER 63

0875 REPAIR COUPLING PE-PE

Code	Dimensions		
	D	D1	H
0875.020	Ø20	Ø35	115
0875.025	Ø25	Ø41	122
0875.032	Ø32	Ø49	130
0875.040	Ø40	Ø62	150,5
0875.050	Ø50	Ø74	147,5
0875.063	Ø63	Ø87	151,5



BRASS FITTINGS FOR THREADED PIPES



GENERAL FEATURES

The brass fittings for threaded pipes are used as junctions for pipelines with threaded connection UNI ISO 228/1. The thread dimensions are subdivided in various types of configurations which makes the realization of the systems easier and more secure. These fittings are manufactured completely in brass, and are suitable for professional use. They are highly resistant to prolonged exposure to the sun, atmospheric agents and light.

DESIGN

According to the different types and dimensions:
in forged brass N 12165 - CW617N
in turned brass EN 12164 - CW614N
in cast brass EN 1982-CB753S

Chrome-plated ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5sCrr)

TECHNICAL FEATURES

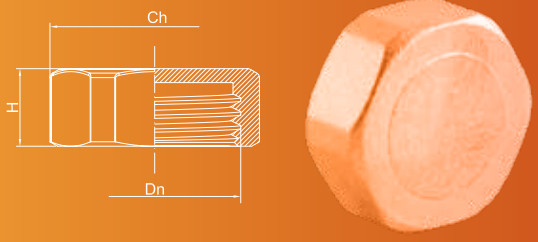
Pressure:	
Maximum allowable working pressure (PN)	10 bar
Temperature:	
Maximum working temperature (TS):	
for products without elastomer constituents	from 0 °C (excluding ice) to +110 °C
for products with elastomer constituents	from 0 °C (excluding ice) to + 80 °C
Threading:	
Pipe connection	Threads according to ISO 228/1
Requirements and tests as per:	
Shell Tightness	Test P11 - EN 12266-1

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

BRASS FITTINGS FOR THREADED PIPES

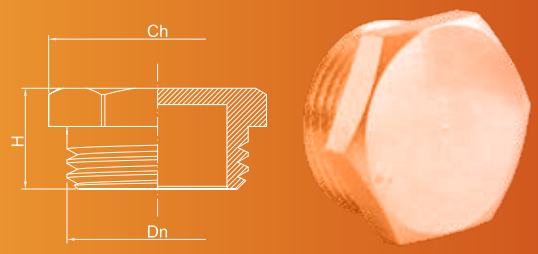
0113 THREADED PLUGS FEMALE - YELLOW AND CHROME PLATED

Code	Dimensions			Finishing
	Dn	H	Ch.	
0113.008	1/4”	10	15	Yellow
0113.012	3/8”	10	18	Yellow
0113.015	1/2”	13	24	Yellow
0113.020	3/4”	14	29	Yellow
0113.025	1”	16	36	Yellow
0113.033	1”1/4	16	46	Yellow
0113.042	1”1/2	18	51	Yellow
0113.050	2”	22	65	Yellow
0113.108	1/4”	10	15	Chrome plated
0113.112	3/8”	10	24	Chrome plated
0113.115	1/2”	13	24	Chrome plated
0113.120	3/4”	14	29	Chrome plated
0113.125	1”	16	36	Chrome plated



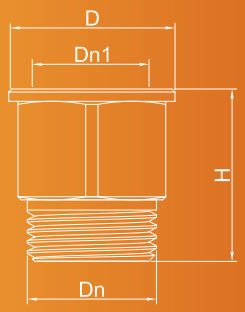
0537 THREADED PLUGS MALE - YELLOW AND CHROME PLATED

Code	Dimensions			Finishing
	Dn	H	Ch.	
0537.008	1/4”	14	15	Yellow
0537.012	3/8”	15	18	Yellow
0537.015	1/2”	15	22	Yellow
0537.020	3/4”	18	28	Yellow
0537.025	1”	18	35	Yellow
0537.033	1”1/4	25	40	Yellow
0537.042	1”1/2	26	21	Yellow
0537.050	2”	31	23	Yellow
0537.108	1/4”	14	15	Chrome plated
0537.112	3/8”	15	18	Chrome plated
0537.115	1/2”	15	22	Chrome plated
0537.120	3/4”	18	28	Chrome plated
0537.125	1”	18	35	Chrome plated



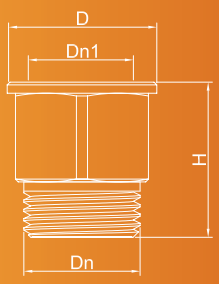
BRASS FITTINGS FOR THREADED PIPES

0535 DOUBLE NIPPLES MALE-FEMALE YELLOW



Code	Dimensions		
	Dn	D	H
0535.001	1/4"	-	18
0535.005	3/8"	Ø23	25
0535.010	1/2"	Ø27	25
0535.015	3/4"	Ø33	25
0535.021	1"	Ø41	34
0535.025	1"1/4	Ø53	36
0535.028	1"1/2	Ø61	39
0535.030	2"	Ø76	43

0535 DOUBLE NIPPLES REDUCED MALE-FEMALE YELLOW

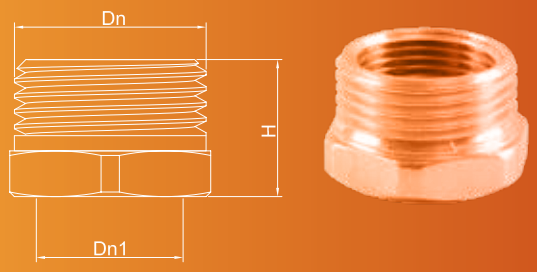


Code	Dimensions			
	Dn	Dn1	D	H
0535.002	1/8"	1/4"	-	19
0535.007	1/4"	3/8"	Ø22	24
0535.014	3/8"	1/2"	Ø26	20
0535.009	1/2"	3/8"	Ø24	22
0535.011	1/2"	3/4"	Ø34	24
0535.012	1/2"	1"	Ø42	26
0535.013	3/4"	1/2"	Ø30	26
0535.016	3/4"	1"	Ø42	29
0535.022	1"	1"1/4	Ø53	33
0535.023	1"	1"1/2	Ø61	34
0535.026	1"1/4	1"1/2	Ø61	36
0535.029	1"1/2	2"	Ø76	41

BRASS FITTINGS FOR THREADED PIPES

0538 REDUCTIONS WITH HEXAGONE MALE-FEMALE YELLOW AND CHROME PLATED

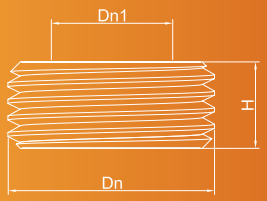
Code	Dimensions			Finishing
	Dn	Dn1	H	
0538.001	1/4”	1/8”	14	Yellow
0538.021	3/8”	1/8”	15	Yellow
0538.002	3/8”	1/4”	15	Yellow
0538.022	1/2”	1/8”	16	Yellow
0538.099	1/2”	1/4”	16	Yellow
0538.003	1/2”	3/8”	16	Yellow
0538.023	3/4”	1/4”	18	Yellow
0538.010	3/4”	3/8”	18	Yellow
0538.004	3/4”	1/2”	18	Yellow
0538.024	1”	3/8”	21	Yellow
0538.011	1”	1/2”	21	Yellow
0538.005	1”	3/4”	21	Yellow
0538.014	1”1/4	1/2”	24	Yellow
0538.013	1”1/4	3/4”	24	Yellow
0538.006	1”1/4	1”	26	Yellow
0538.019	1”1/2	1/2”	35	Yellow
0538.018	1”1/2	3/4”	35	Yellow
0538.012	1”1/2	1”	35	Yellow
0538.007	1”1/2	1”1/4	35	Yellow
0538.016	2”	1”	25	Yellow
0538.015	2”	1”1/4	25	Yellow
0538.008	2”	1”1/2	25	Yellow
0538.101	1/4”	1/8”	14	Chrome plated
0538.121	3/8”	1/8”	15	Chrome plated
0538.102	3/8”	1/4”	15	Chrome plated
0538.122	1/2”	1/8”	16	Chrome plated
0538.199	1/2”	1/4”	16	Chrome plated
0538.103	1/2”	3/8”	16	Chrome plated
0538.123	3/4”	1/4”	18	Chrome plated
0538.110	3/4”	3/8”	18	Chrome plated
0538.104	3/4”	1/2”	18	Chrome plated
0538.124	1”	3/8”	21	Chrome plated
0538.111	1”	1/2”	21	Chrome plated
0538.105	1”	3/4”	21	Chrome plated
0538.129	1”1/4	1/2”	24	Chrome plated
0538.113	1”1/4	3/4”	24	Chrome plated
0538.106	1”1/4	1”	26	Chrome plated
0538.119	1”1/2	1/2”	35	Chrome plated
0538.114	1”1/2	3/4”	35	Chrome plated
0538.112	1”1/2	1”	35	Chrome plated
0538.107	1”1/2	1”1/4	35	Chrome plated



BRASS FITTINGS FOR THREADED PIPES

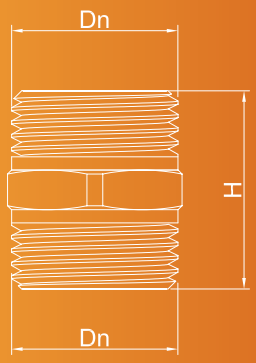
0750 REDUCTIONS WITHOUT HEXAGONE MALE-FEMALE

Code	Dimensions		
	Dn	Dn1	H
0750.015	1/2”	3/8”	10
0750.020	3/4”	1/2”	10
0750.025	1”	3/4”	12
0750.033	1” 1/4	1”	14
0750.042	1” 1/2	1” 1/4	16



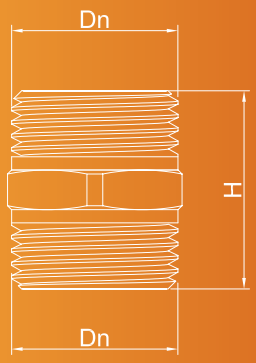
0738 DOUBLE NIPPLES CHROME PLATED MALE-MALE

Code	Dimensions	
	Dn	H
0738.005	1/8”	18
0738.008	1/4”	23
0738.012	3/8”	26
0738.015	1/2”	28
0738.020	3/4”	30
0738.025	1”	35



0740 DOUBLE NIPPLES YELLOW MALE-MALE

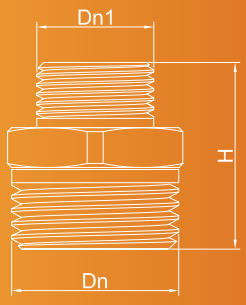
Code	Dimensions	
	Dn	H
0740.005	1/8”	18
0740.008	1/4”	23
0740.012	3/8”	26
0740.015	1/2”	28
0740.020	3/4”	30
0740.025	1”	35
0740.033	1” 1/4	45
0740.042	1” 1/2	59
0740.050	2”	61
0740.066	2” 1/2	48
0740.080	3”	57
0740.100	4”	76



BRASS FITTINGS FOR THREADED PIPES

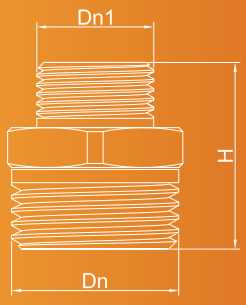
0739 DOUBLE NIPPLES REDUCED CHROME PLATED MALE-MALE

Code	Dimensions		
	Dn	Dn1	H
0739.001	1/4”	1/8”	18
0739.012	3/8”	1/8”	21
0739.002	3/8”	1/4”	25
0739.013	1/2”	1/4”	25
0739.003	1/2”	3/8”	29
0739.004	3/4”	1/2”	28
0739.010	1”	1/2”	32
0739.005	1”	3/4”	33
0739.015	1”1/4	3/4”	36
0739.006	1”1/4	1”	43



0741 DOUBLE NIPPLES REDUCED YELLOW MALE-MALE

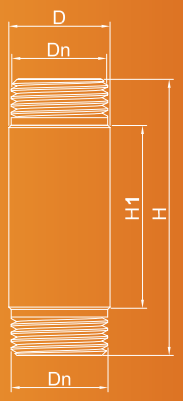
Code	Dimensions		
	Dn	Dn1	H
0741.001	1/4”	1/8”	18
0741.012	3/8”	1/8”	21
0741.002	3/8”	1/4”	25
0741.013	1/2”	1/4”	25
0741.003	1/2”	3/8”	29
0741.004	3/4”	1/2”	28
0741.010	1”	1/2”	32
0741.005	1”	3/4”	33
0741.015	1”1/4	3/4”	36
0741.006	1”1/4	1”	43
0741.018	1”1/2	1”	36
0741.007	1”1/2	1”1/4	54
0741.022	2”	1”1/4	48
0741.008	2”	1”1/2	44
0741.011	2”1/2	2”	48



BRASS FITTINGS FOR THREADED PIPES

0744 EXTENSIONS YELLOW MALE-MALE

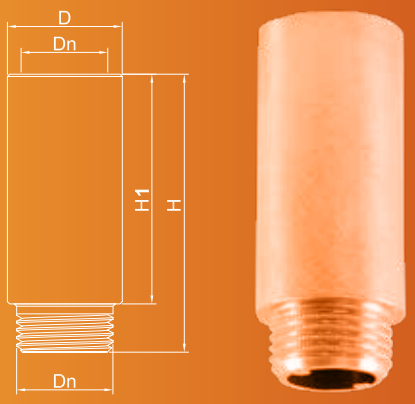
Code	Dimensions			
	Dn	D	H	H1
0744.006	1/2”	Ø 21	60	34
0744.008	1/2”	Ø 21	80	52
0744.010	1/2”	Ø 21	100	72
0744.012	1/2”	Ø 21	120	92
0744.015	1/2”	Ø 21	150	122
0744.106	3/4”	Ø 26	60	34
0744.108	3/4”	Ø 26	80	52
0744.110	3/4”	Ø 26	100	72
0744.112	3/4”	Ø 26	120	92
0744.150	3/4”	Ø 26	150	122
0744.206	1”	Ø 33	60	34
0744.208	1”	Ø 33	80	52
0744.210	1”	Ø 33	100	72
0744.220	1”	Ø 33	120	92
0744.250	1”	Ø 33	150	122



BRASS FITTINGS FOR THREADED PIPES

0745 EXTENSIONS YELLOW MALE-FEMALE

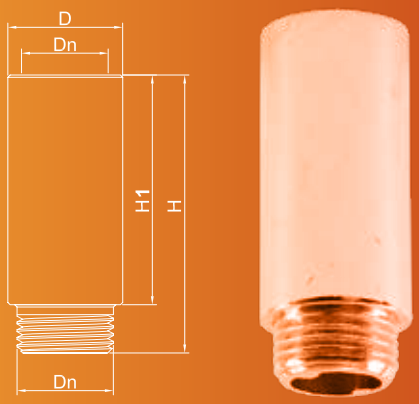
Code	Dimensions			
	Dn	D	H	H1
0745.010	3/8”	Ø 21	21	12
0745.015	3/8”	Ø 21	24	15
0745.020	3/8”	Ø 21	29	20
0745.030	3/8”	Ø 21	39	30
0745.040	3/8”	Ø 21	49	40
0745.050	3/8”	Ø 21	59	50
0745.110	1/2”	Ø 25	22	12
0745.115	1/2”	Ø 25	25	15
0745.120	1/2”	Ø 25	30	20
0745.125	1/2”	Ø 25	35	25
0745.130	1/2”	Ø 25	40	30
0745.140	1/2”	Ø 25	50	40
0745.150	1/2”	Ø 25	60	50
0745.160	1/2”	Ø 25	70	60
0745.180	1/2”	Ø 25	90	80
0745.200	1/2”	Ø 25	110	100
0745.210	3/4”	Ø 32	22	12
0745.215	3/4”	Ø 32	25	15
0745.220	3/4”	Ø 32	30	20
0745.230	3/4”	Ø 32	40	30
0745.240	3/4”	Ø 32	50	40
0745.250	3/4”	Ø 32	60	50
0745.310	1”	Ø 38	26	12
0745.315	1”	Ø 38	29	15
0745.320	1”	Ø 38	34	20
0745.330	1”	Ø 38	44	30
0745.340	1”	Ø 38	54	40
0745.350	1”	Ø 38	64	50



BRASS FITTINGS FOR THREADED PIPES

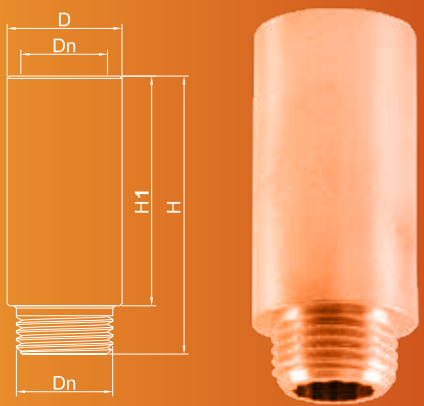
0746 CHROME PLATED EXTENSIONS MALE-FEMALE

Code	Dimensions			
	Dn	D	H	H1
0746.010	3/8”	Ø 21	21	12
0746.015	3/8”	Ø 21	24	15
0746.020	3/8”	Ø 21	29	20
0746.030	3/8”	Ø 21	39	30
0746.040	3/8”	Ø 21	49	40
0746.050	3/8”	Ø 21	59	50
0746.110	1/2”	Ø 25	22	12
0746.115	1/2”	Ø 25	25	15
0746.120	1/2”	Ø 25	30	20
0746.125	1/2”	Ø 25	35	25
0746.130	1/2”	Ø 25	40	30
0746.140	1/2”	Ø 25	50	40
0746.150	1/2”	Ø 25	60	50
0746.160	1/2”	Ø 25	70	60
0746.180	1/2”	Ø 25	90	80
0746.200	1/2”	Ø 25	110	100
0746.210	3/4”	Ø 32	22	12
0746.215	3/4”	Ø 32	25	15
0746.220	3/4”	Ø 32	30	20
0746.230	3/4”	Ø 32	40	30
0746.240	3/4”	Ø 32	50	40
0746.250	3/4”	Ø 32	60	50



0745.5 HEAVY EXTENSIONS YELLOW MALE-FEMALE

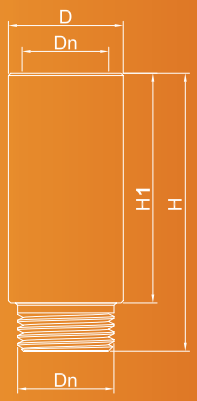
Code	Dimensions			
	Dn	D	H	H1
0745.510	1/2”	Ø 27	20	12
0745.515	1/2”	Ø 27	25	15
0745.520	1/2”	Ø 27	30	20
0745.530	1/2”	Ø 27	40	30
0745.540	1/2”	Ø 27	50	40
0745.550	1/2”	Ø 27	60	50



BRASS FITTINGS FOR THREADED PIPES

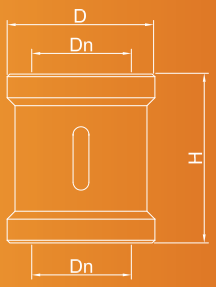
0746.5 HEAVY EXTENSIONS CHROME PLATED MALE - FEMALE

Code	Dimensions			
	Dn	D	H	H1
0746.510	1/2”	Ø 27	20	12
0746.515	1/2”	Ø 27	25	15
0746.520	1/2”	Ø 27	30	20
0746.530	1/2”	Ø 27	40	30
0746.540	1/2”	Ø 27	50	40
0746.550	1/2”	Ø 27	60	50



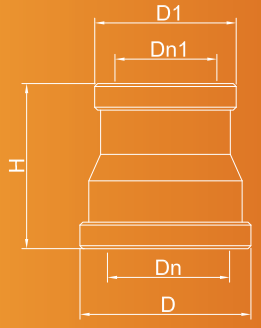
2070 SLEEVES FEMALE-FEMALE YELLOW AND CHROME PLATED

Code	Dimensions			Finishing
	Dn	D	H	
2070.008	1/4”	Ø18	24	Yellow
2070.012	3/8”	Ø23	28	Yellow
2070.015	1/2”	Ø28	32	Yellow
2070.020	3/4”	Ø34	34	Yellow
2070.025	1”	Ø40	42	Yellow
2070.033	1”1/4	Ø52	44	Yellow
2070.042	1”1/2	Ø58	52	Yellow
2070.050	2”	Ø70	63	Yellow
2070.108	1/4”	Ø18	24	Chrome plated
2070.112	3/8”	Ø23	28	Chrome plated
2070.115	1/2”	Ø28	32	Chrome plated
2070.120	3/4”	Ø34	34	Chrome plated
2070.125	1”	Ø40	42	Chrome plated



2079 REDUCED SLEEVES FEMALE - FEMALE YELLOW AND CHROME PLATED

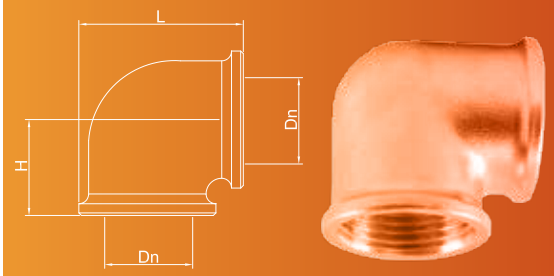
Code	Dimensions					Finishing
	Dn	Dn1	D	D1	H	
2079.012	3/8”	1/4”	Ø24	Ø20	23	Yellow
2079.015	1/2”	3/8”	Ø29	Ø25	28	Yellow
2079.020	3/4”	1/2”	Ø34	Ø29	30	Yellow
2079.025	1”	3/4”	Ø42	Ø36	38	Yellow
2079.033	1”1/4	1”	Ø50	Ø45	38	Yellow
2079.034	1”1/2	1”1/4	Ø56	Ø48	48	Yellow
2079.043	2”	1”1/2	Ø68	Ø48	49	Yellow
2079.112	3/8”	1/4”	Ø24	Ø20	23	Chrome plated
2079.115	1/2”	3/8”	Ø29	Ø25	28	Chrome plated
2079.120	3/4”	1/2”	Ø34	Ø29	30	Chrome plated
2079.125	1”	3/4”	Ø42	Ø36	38	Chrome plated



BRASS FITTINGS FOR THREADED PIPES

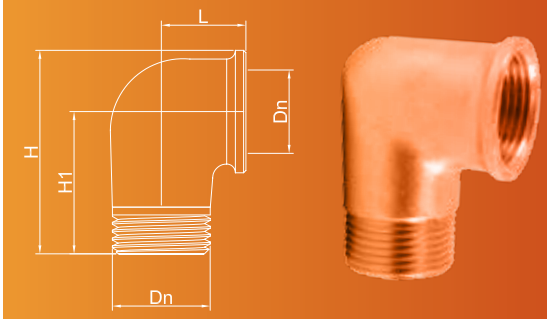
2071 ELBOWS 90° FEMALE-FEMALE YELLOW AND CHROME PLATED

Code	Dimensione			Finishing
	Dn	L	H	
2071.008	1/4"	30	21	Yellow
2071.012	3/8"	35	23	Yellow
2071.015	1/2"	40	27	Yellow
2071.020	3/4"	40	23	Yellow
2071.025	1"	53	33	Yellow
2071.033	1"1/4	68	43	Yellow
2071.042	1"1/2	76	47	Yellow
2071.050	2"	91	56	Yellow
2071.108	1/4"	30	21	Chrome plated
2071.112	3/8"	35	23	Chrome plated
2071.115	1/2"	40	27	Chrome plated
2071.120	3/4"	40	23	Chrome plated
2071.125	1"	53	33	Chrome plated



2072 ELBOWS 90° MALE-FEMALE YELLOW AND CHROME PLATED

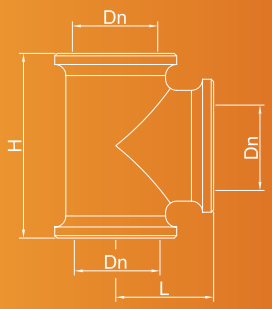
Code	Dimensions				Finishing
	Dn	L	H	H.1	
2072.008	1/4"	18	38	29	Yellow
2072.012	3/8"	20	45	33	Yellow
2072.015	1/2"	24	48	34	Yellow
2072.020	3/4"	23	58	41	Yellow
2072.025	1"	36	72	51	Yellow
2072.033	1"1/4	40	82	57	Yellow
2072.042	1"1/2	47	92	64	Yellow
2072.050	2"	56	104	69	Yellow
2072.108	1/4"	18	38	29	Chrome plated
2072.112	3/8"	20	45	33	Chrome plated
2072.115	1/2"	24	48	34	Chrome plated
2072.120	3/4"	23	58	41	Chrome plated
2072.125	1"	36	72	51	Chrome plated



BRASS FITTINGS FOR THREADED PIPES

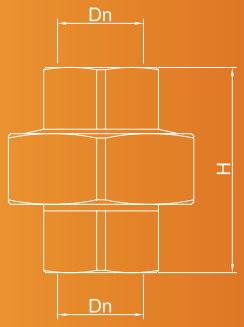
2073 TE 90° FEMALE-FEMALE-FEMALE YELLOW AND CHROME PLATED

Code	Dimensions			Finishing
	Dn	L	H	
2073.008	1/4”	23	38	Yellow
2073.012	3/8”	25	43	Yellow
2073.015	1/2”	26	43	Yellow
2073.020	3/4”	30	51	Yellow
2073.025	1”	38	65	Yellow
2073.033	1”1/4	49	87	Yellow
2073.042	1”1/2	55	97	Yellow
2073.050	2”	56	117	Yellow
2073.108	1/4”	23	38	Chrome plated
2073.112	3/8”	25	43	Chrome plated
2073.115	1/2”	26	43	Chrome plated
2073.120	3/4”	30	51	Chrome plated
2073.125	1”	38	65	Chrome plated



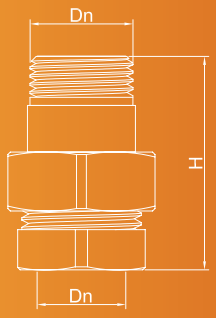
2074 STRAIGHT UNIONS TAPERED SEAT IN BRASS 3 PIECES FEMALE-FEMALE YELLOW AND CHROME PLATED

Code	Dimensions		Finishing
	Dn	H	
2074.015	1/2”	45	Yellow
2074.020	3/4”	45	Yellow
2074.025	1”	45	Yellow
2074.115	1/2”	45	Chrome plated
2074.120	3/4”	45	Chrome plated
2074.125	1”	45	Chrome plated



2075 STRAIGHT UNIONS TAPERED SEAT IN BRASS 3 PIECES MALE-FEMALE YELLOW AND CHROME PLATED

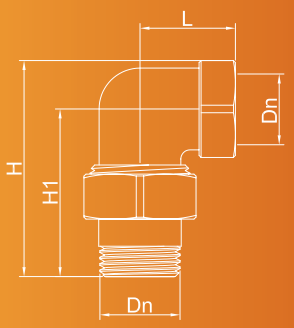
Code	Dimensions		Finishing
	Dn	H	
2075.012	3/8”	41	Yellow
2075.015	1/2”	45	Yellow
2075.020	3/4”	52	Yellow
2075.025	1”	58	Yellow
2075.033	1”1/4	69	Yellow
2075.112	3/8”	41	Chrome plated
2075.115	1/2”	45	Chrome plated
2075.120	3/4”	52	Chrome plated
2075.125	1”	58	Chrome plated



BRASS FITTINGS FOR THREADED PIPES

2078 CURVED UNIONS 90° TAPERED SEAT IN BRASS 3 PIECES MALE-FEMALE YELLOW AND CHROME PLATED

Code	Dimensions				Finishing
	Dn	L	H	H1	
2078.012	3/8"	22	57	47	Yellow
2078.015	1/2"	24	63	51	Yellow
2078.020	3/4"	29	76	60	Yellow
2078.025	1"	34	89	68	Yellow
2078.033	1"1/4	39	110	85	Yellow
2078.112	3/8"	22	57	47	Chrome plated
2078.115	1/2"	24	63	51	Chrome plated
2078.120	3/4"	29	76	60	Chrome plated
2078.125	1"	34	89	68	Chrome plated
2078.133	1"1/4	39	110	85	Chrome plated

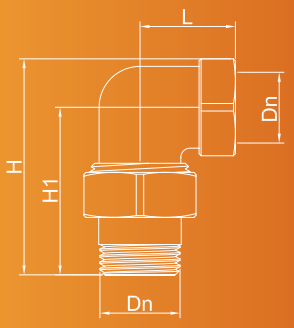


2175 STRAIGHT UNIONS SEAT WITH O-RING 3 PIECES MALE-FEMALE YELLOW AND CHROME PLATED

Code	Dimensions		Finishing
	Dn	H	
2175.012	3/8"	41	Yellow
2175.015	1/2"	45	Yellow
2175.020	3/4"	52	Yellow
2175.025	1"	58	Yellow
2175.033	1"1/4	69	Yellow
2175.112	3/8"	41	Chrome plated
2175.115	1/2"	45	Chrome plated
2175.120	3/4"	52	Chrome plated
2175.125	1"	58	Chrome plated
2175.133	1"1/4	69	Chrome plated

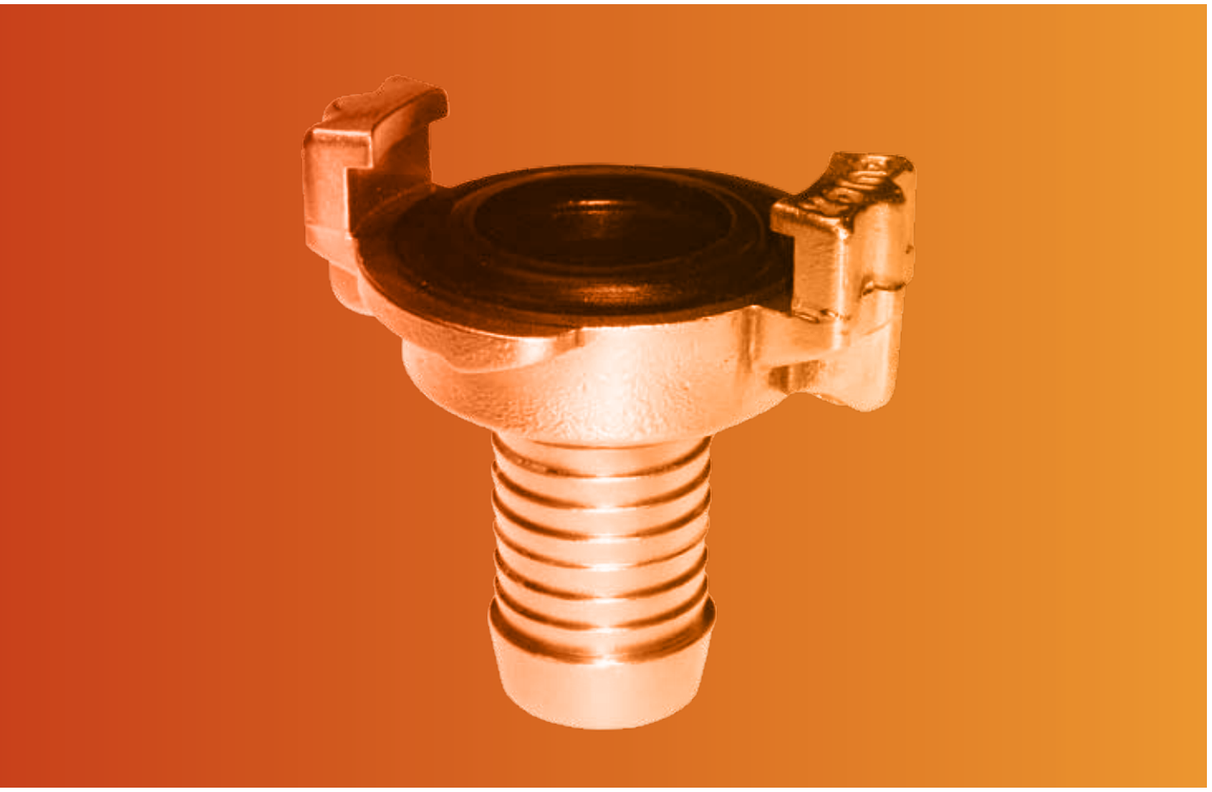
2178 CURVED UNIONS 90° SEAT WITH O-RING 3 PIECES MALE-FEMALE YELLOW AND CHROME PLATED

Code	Dimensions				Finishing
	Dn	L	H	H1	
2178.012	3/8"	22	57	47	Yellow
2178.015	1/2"	24	63	51	Yellow
2178.020	3/4"	29	76	60	Yellow
2178.025	1"	34	89	68	Yellow
2178.033	1"1/4	39	110	85	Yellow
2178.112	3/8"	22	57	47	Chrome plated
2178.115	1/2"	24	63	51	Chrome plated
2178.120	3/4"	29	76	60	Chrome plated
2178.125	1"	34	89	68	Chrome plated
2178.133	1"1/4	39	110	85	Chrome plated



1700

BRASS FITTINGS QUICK®



GENERAL FEATURES

The Quick® fittings for watering and irrigation can be used for cold and hot water transport in irrigation and sprinkling systems. These fittings are completely in brass and thus suitable for professional use, in agricultural facilities, greenhouses, nurseries and industrial plants. They are highly resistant to prolonged exposure to the sun, atmospheric agents and light. The bayonet-type connection of the Quick® fittings, common to the various types and dimensions, is the particular factor that renders couplings with different rubber tube sizes and/or threaded tubes simple and secure. The connection between various fittings requires no tools, as these fittings are agile and rapid to connect even in the most problematic conditions.

DESIGN

Brass Body EN 12165 - CW617N
Gasket in EPDM 60Sh rubber
Female fitting gasket in NBR elastomer

TECHNICAL FEATURES

Pressures and Temperatures:

Maximum working pressure	6 bar
Maximum working temperature (TS)	from -30 °C (excluding ice) to +60 °C

Threading:

Pipe connection	Threads according to ISO 228/1

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

OPERATING PRINCIPLE

The bayonet-type connection allows Quick® fittings to be connected in only 1/4 of a turn. Once hooked up, the two winglets on the underside of the fitting make accidental detachment of the fitting itself impossible.

1

2

3

MAINTENANCE

Thanks to the design of the fittings in principal they do not need any maintenance. The only part subject to wear from use could be the washer of the bayonet connection. If the substitution of this washer should be necessary, it is simple and rapid, and tools or other gluing systems are unnecessary. The fitting does not have to be uninstalled , and the task can be carried out, even under difficult circumstances. Further, being the same washer for all the Quick® fittings, substitution is even more easy. How to replace the gasket is shown in the figures below.

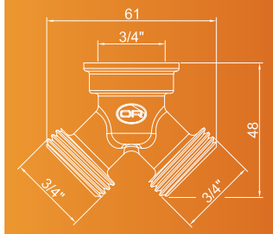
1

2

3

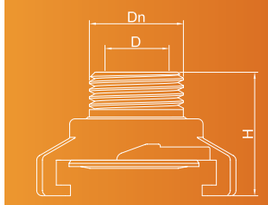
In order to avoid the complete draining of the rubber hose upon which the Quick® fitting is attached, a Quick® fitting plug can be placed after the detachment or, in any case, as a tight seal. The plug has a hole for a small chain so that it may be attached to the tube to avoid the loss of the fitting.

1704.020 Quick® FITTINGS Y - BRANCH



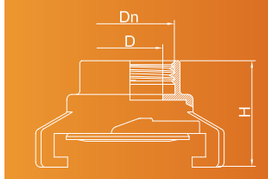
1705 Quick® FITTINGS MALE

Code	Dimensions		
	Dn	D	H
1705.008	1/4"	Ø8	29,9
1705.012	3/8"	Ø10	31
1705.015	1/2"	Ø15	31,5
1705.020	3/4"	Ø20	31,5
1705.025	1"	Ø25	32,5
1705.033	1"1/4	Ø25	37,5
1705.042	1"1/2	Ø25	38,5



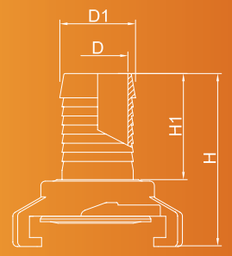
1706 Quick® FITTINGS FEMALE

Code	Dimensions		
	Dn	D	H
1706.012	3/8"	Ø10	31
1706.015	1/2"	Ø15	31,5
1706.020	3/4"	Ø20	31,5
1706.025	1"	Ø25	32,5
1706.033	1"1/4	Ø25	37,5
1706.042	1"1/2	Ø25	38,5

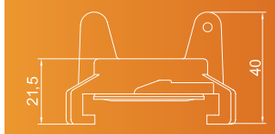


1707 Quick® FITTINGS HOSE FITTING

Code	Dimensions			
	D	D1	H	H1
1707.012	Ø7	Ø12	49	27,5
1707.015	Ø10,5	Ø15	51	29,5
1707.018	Ø13,5	Ø18	52,5	31
1707.020	Ø15,5	Ø20	53	31,5
1707.022	Ø16	Ø22	54	32,5
1707.025	Ø20	Ø25	57	35,5
1707.027	Ø21	Ø27	58	36,5
1707.030	Ø24	Ø30	61	39,5
1707.034	Ø28	Ø34	67,5	46
1707.042	Ø34,5	Ø42	76	50



1708.001 Quick® FITTINGS PLUG



1709.001 Quick® FITTINGS WASHER

1710 Quick® FITTINGS PLANE WASHER for FEMALE FITTINGS

Code	Dimensions		For thread
	D	H	
1710.012	Ø10,5	2	3/8" F
1710.015	Ø14,5	2	1/2" F
1710.020	Ø20	2	3/4" F
1710.025	Ø24	2	1" F
1710.033	Ø32,5	2	1"1/4 F
1710.042	Ø32,5	2	1"1/2 F

FITTINGS “EXCELSIOR AND ROMA”

BRASS FITTINGS FOR PUMPS TYPE “EXCELSIOR” AND “ROMA”

GENERAL FEATURES

The brass fittings for pumps “Excelsior” and “Roma” are used as junctions for pipelines or pumps with threaded connection UNI ISO 228/1, such as offtake hoses fixed to pumps or conduits using detachable fittings. The thread dimensions are subdivided in various types of configurations which makes the realization of the systems easier and more secure. These fittings are manufactured completely in brass, and are suitable for professional use. They are highly resistant to prolonged exposure to the sun, atmospheric agents and light.

DESIGN

According to the different types and dimensions	in forged brass EN 12165 – CW617N in turned brass EN 12164 – CW614N in cast brass EN 1982-CB753S

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	16 bar
Temperature:	
Maximum working temperature (TS):	
for products without elastomer constituents	from 0 °C (excluding ice) to +110 °C
for products with elastomer constituents	from 0 °C (excluding ice) to + 80 °C
Threading:	
Pipe connection	Threads according to ISO 228/1
Requirements and tests as per:	
Shell Tightness	Test P11 - EN 12266-1

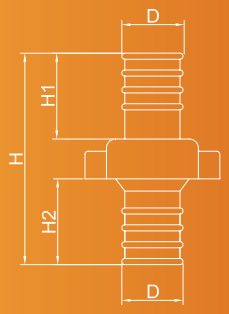
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

FITTINGS “EXCELSIOR AND ROMA”

BRASS FITTINGS FOR PUMPS TYPE “EXCELSIOR” AND “ROMA”

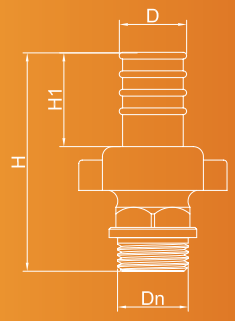
1604 “EXCELSIOR” STRAIGHT FITTINGS WITH TAPERED SEAT 3 PIECES HOSE FITTING-HOSE FITTING

Code	Dimensions			
	D	H	H1	H2
1604.015	Ø15	65	25	29
1604.018	Ø18	73	28	32
1604.020	Ø20	73	28	32
1604.025	Ø25	88	34	40
1604.030	Ø30	103	43	45



1607 “EXCELSIOR” STRAIGHT FITTINGS WITH TAPERED SEAT 3 PIECES MALE-HOSE FITTING

Code	Dimensions			
	Dn	D	H	H1
1607.015	3/8”	Ø15	59	25
1607.115	1/2”	Ø15	62	25
1607.118	1/2”	Ø18	65	28
1607.120	1/2”	Ø20	65	28
1607.220	3/4”	Ø20	67	28
1607.225	3/4”	Ø25	75	34
1607.325	1”	Ø25	82	34
1607.330	1”	Ø30	93	43
1607.332	1”	Ø32	93	43
1607.430	1”1/4	Ø30	93	43
1607.432	1”1/4	Ø32	93	43
1607.435	1”1/4	Ø35	100	46
1607.440	1”1/4	Ø40	108	48
1607.540	1”1/2	Ø40	108	48
1607.650	2”	Ø50	124	61
1607.660	2”	Ø60	134	68
1607.860	2”1/2	Ø60	134	68

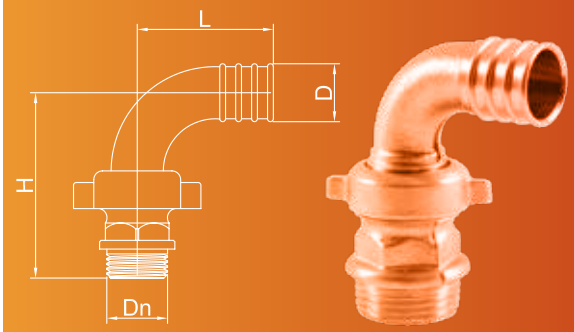


FITTINGS “EXCELSIOR AND ROMA”

BRASS FITTINGS FOR PUMPS TYPE “EXCELSIOR” AND “ROMA”

1608 “EXCELSIOR” CURVED FITTINGS TAPERED SEAT 3 PIECES MALE-HOSE FITTING

Code	Dimensions			
	Dn	D	L	H
1608.005	3/8”	Ø15	37	52,5
1608.115	1/2”	Ø15	38	56,5
1608.118	1/2”	Ø18	48	58
1608.120	1/2”	Ø20	48	62
1608.220	3/4”	Ø20	49	65
1608.225	3/4”	Ø25	49	68,5
1608.325	1”	Ø25	49	77,5
1608.330	1”	Ø30	62	86
1608.430	1”1/4	Ø30	61	85
1608.435	1”1/4	Ø35	60	94,5
1608.440	1”1/4	Ø40	77	98
1608.540	1”1/2	Ø40	77	90
1608.650	2”	Ø50	103	119
1608.660	2”	Ø60	103	125
1608.860	2”1/2	Ø60	103	125



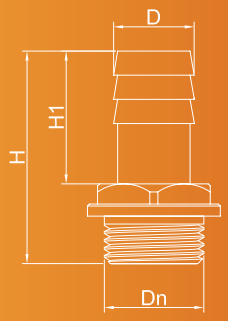
1610 CLAMPING RING FOR “EXCELSIOR” FITTINGS FEMALE

Code	Dimensions	
	Dn	H
1610.015	1/2”	11
1610.020	3/4”	13
1610.025	1”	14
1610.033	1”1/4	17
1610.042	1”1/2	17
1610.049	1”3/4	22
1610.055	2”1/4	22
1610.066	2”1/2	23

FITTINGS “EXCELSIOR AND ROMA”

BRASS FITTINGS FOR PUMPS TYPE “EXCELSIOR” AND “ROMA”

1609 FITTINGS TYPE “ROMA” MALE-HOSE FITTING



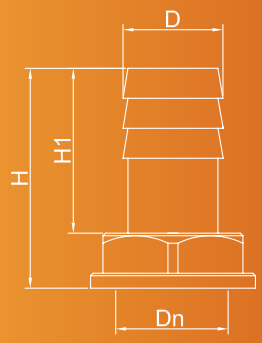
Code	Dimensions			
	Dn	D	H	H1
1609.006	1/8”	Ø6	31	20
1609.008	1/8”	Ø8	33	22
1609.010	1/8”	Ø10	33	22
1609.106	1/4”	Ø6	34	22
1609.108	1/4”	Ø8	34	22
1609.110	1/4”	Ø10	35	22
1609.113	1/4”	Ø13	35	22
1609.210	3/8”	Ø10	35	22
1609.213	3/8”	Ø13	39	27
1609.215	3/8”	Ø15	39	27
1609.310	1/2”	Ø10	40	25
1609.313	1/2”	Ø13	42	27
1609.315	1/2”	Ø15	42	27
1609.316	1/2”	Ø16	42	27
1609.318	1/2”	Ø18	42	27
1609.320	1/2”	Ø20	42	27
1609.413	3/4”	Ø13	46	28
1609.416	3/4”	Ø16	48	29
1609.418	3/4”	Ø18	48	29
1609.420	3/4”	Ø20	48	29
1609.422	3/4”	Ø22	48	29
1609.425	3/4”	Ø25	52	32
1609.520	1”	Ø20	49	36
1609.525	1”	Ø25	55	34
1609.527	1”	Ø27	55	34
1609.530	1”	Ø30	59	37
1609.532	1”	Ø32	58	36
1609.630	1”1/4	Ø30	59	37
1609.632	1”1/4	Ø32	59	37
1609.635	1”1/4	Ø35	60	37
1609.639	1”1/4	Ø39	66	43
1609.640	1”1/4	Ø40	66	43
1609.738	1”1/2	Ø38	68	43
1609.740	1”1/2	Ø40	68	43
1609.745	1”1/2	Ø45	73	46
1609.750	1”1/2	Ø50	73	46
1609.850	2”	Ø50	75	48
1609.851	2”	Ø51	75	48
1609.860	2”	Ø60	84	55
1609.960	2”1/2	Ø60	84	63
1609.963	2”1/2	Ø63	95	63
1609.970	2”1/2	Ø70	100	67
1609.980	3”	Ø76	100	64
1609.990	3”	Ø80	103	63
1609.995	4”	Ø100	122	82
1609.997	4”	Ø102	122	82

FITTINGS “EXCELSIOR AND ROMA”

BRASS FITTINGS FOR PUMPS TYPE “EXCELSIOR” AND “ROMA”

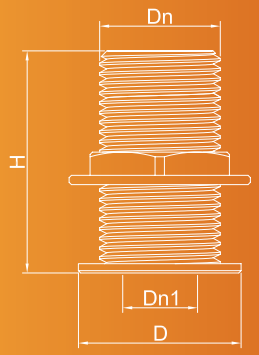
1611 FITTINGS TYPE “ROMA” FEMALE- HOSE FITTING

Code	Dimensions			
	Dn	D	H	H1
1611.008	1/8”	Ø8	32	22
1611.010	1/8”	Ø10	32	22
1611.110	1/4”	Ø10	33	22
1611.113	1/4”	Ø13	33	22
1611.210	3/8”	Ø10	37	24
1611.213	3/8”	Ø13	37	24
1611.215	3/8”	Ø15	37	24
1611.310	1/2”	Ø10	39	24
1611.313	1/2”	Ø13	39	24
1611.315	1/2”	Ø15	39	24
1611.318	1/2”	Ø18	39	24
1611.420	3/4”	Ø20	44	32
1611.425	3/4”	Ø25	44	32
1611.525	1”	Ø25	51	36
1611.530	1”	Ø30	51	36
1611.630	1”1/4	Ø30	56	39
1611.632	1”1/4	Ø32	56	39
1611.635	1”1/4	Ø35	56	39
1611.740	1”1/2	Ø40	60	42
1611.850	2”	Ø50	75	49



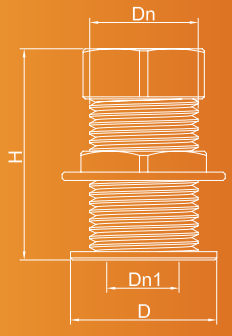
1614 DRAINS FOR TANK ONLY WITH LOCK NUT INTERNAL AND EXTERNAL THREAD

Code	Dimensions			
	Dn	Dn1	D	H
1614.015	1/2”	3/8”	Ø36	48
1614.020	3/4”	1/2”	Ø43	53
1614.025	1”	3/4”	Ø49	51



1615 DRAINS FOR TANK WITH LOCK NUT AND THREADED PLUG INTERNAL AND EXTERNAL THREAD

Code	Dimensions			
	Dn	Dn1	D	H
1615.015	1/2”	3/8”	Ø36	51
1615.020	3/4”	1/2”	Ø43	56
1615.025	1”	3/4”	Ø49	54

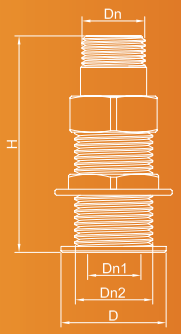


FITTINGS “EXCELSIOR AND ROMA”

BRASS FITTINGS FOR PUMPS TYPE “EXCELSIOR” AND “ROMA”

1616 DRAINS FOR TANK COMPLETE INTERNAL AND EXTERNAL THREAD

Code	Dimensions			
	Dn	Dn1	D	H
1616.015	1/2”	3/8”	Ø36	51
1616.020	3/4”	1/2”	Ø43	56
1616.025	1”	3/4”	Ø49	54

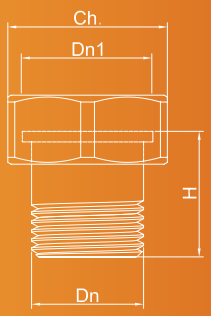


1617.0 FITTINGS FOR TANK STRAIGHT

Code	Dimensions		
	Dn	D	H
1617.015	1/2”	Ø39	71
1617.020	3/4”	Ø47	75
1617.025	1”	Ø50	86
1617.033	1”1/4	Ø59	95
1617.042	1”1/2	Ø66	104
1617.050	2”	Ø64	115

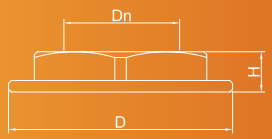
1617.1 DISMANTLING FITTINGS PLANE THREADED SEAT WITH NUT

Code	Dimensions			
	Dn	Dn1	Ch.	H
1617.115	1/2”	3/4”	30	25,5
1617.120	3/4”	1”	37	30,5
1617.125	1”	1”1/4	46	33



1618 LOCKING NUTS WITH FLANGE

Code	Dimensions		
	Dn	D	H
1618.015	1/2”	Ø39	8
1618.020	3/4”	Ø47	8
1618.025	1”	Ø50	9
1618.033	1”1/4	Ø59	8
1618.042	1”1/2	Ø66	9
1618.050	2”	Ø64	10



“SUNSHINE” LINE

OFFICINE RIGAMONTI
La qualità di mano in mano.

SUNSHINE

SUNSHINE

SUNSHINE 0402 • 3/8”-1/2”

AUTOMATIC AIR VENTS FOR SOLAR SYSTEMS

CONNECTION: MALE

HYDRAULIC FEATURES

This automatic air vent valve is a single float valve designed for solar thermal energy plants, and carries out two main functions: the evacuation of a consistent air flow through the system (e.g. during loading/pressurization of the plant), and degassing which discharges air trapped in the pipeline, while functioning, in particular in the solar collectors. This valve has a paramount importance in solar thermal energy plants, evacuating and discharging trapped air in the pipelines and in the solar collectors. As a matter of fact, the presence of oxygen in the system can provoke numerous negative phenomena such as anodic corrosion, localized noise, air pockets, obstructions, etc., which may significantly compromise the performance and integrity of the systems. These valves are usually installed at the summit of the primary circuit in a solar thermal energy plant, and are resistant to the high temperatures that the heat-transfer fluids can reach, even in stagnation phases. Their suitability for application in solar thermal energy plants conforms to EN 12976 and EN 12977.

TECHNICAL FEATURES

Pressure:	
Maximum allowable pressure (PN)	10 bar
Minimum sealing pressure	0.2 bar (Grade A according to EN 12266-1)
Range of operation air evacuation	from 0.5 bar to 5 bar (tolerance ± 10% max. detected)
Temperature:	
Maximum allowable working temperature (TS)	180°C (200°C for brief periods)
Compatible fluids:	
Generic Fluids	water and fluids Group 2
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
EN 1074-4 (in conjunction with the requirements laid down under FL.GQ.11)	

DESIGN

Body and Plug in brass - EN 12165 - CW617N
Seat and internal mechanisms in brass EN 12164 - CW614N
Gaskets and o-ring in FLUORINATED RUBBER (VITON - FPM)
Spring and counterweight in STAINLESS STEEL EN 10088-14310 (AISI 302)
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)

PRODUCT CODE

0402.012 male 3/8” 0402.015 male 1/2”

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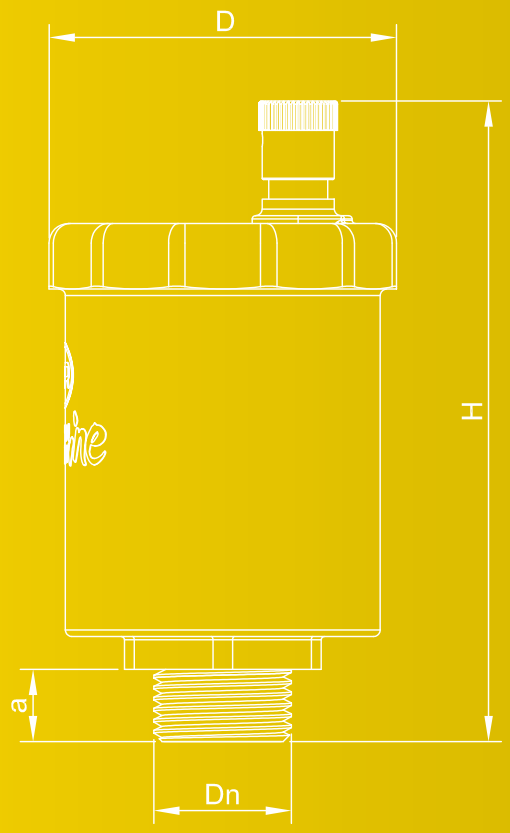
OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

SUNSHINE 0402 • 3/8”-1/2”

AUTOMATIC AIR VENTS FOR SOLAR SYSTEMS

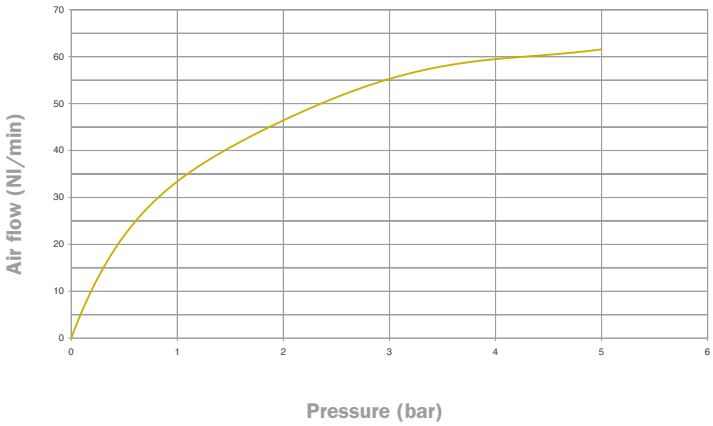
CONNECTION: MALE



FEATURES

Code	Dimensions			
	Dn	D	H	a
402.012	3/8”	Ø 54	94,5	10,5
402.015	1/2”	Ø 54	94,5	10,5

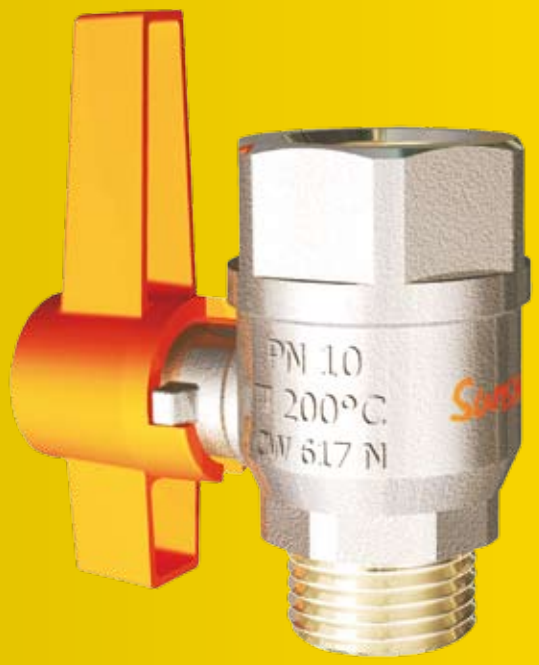
OPERATIONAL CURVE AIR VENTS



SUNSHINE 0439 • 3/8”-1/2”

SHUT OFF BALL VALVES FOR AIR VENTS FOR SOLAR SYSTEMS

CONNECTIONS: FEMALE-MALE



HYDRAULIC FEATURES

The shutoff ball valve is useful for tasks of substitution or inspection of air vents for solar systems, blocking the water flow by closing manually the lever on the valve. This valve is used together with the air vent for solar systems in order to exclude the air vent once the circuit has been filled up.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PN)	10 bar
Temperature:	
maximum working temperature	+200°C
Compatible fluids:	
General fluids	water and fluids from group 2
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Threading:	
Pipeline connection	Threads according to ISO 228/1
Requirements and tests as per:	
Ball tightness	conf. UNI 8858 §7.1 (and additional requirements acc. FL.GQ.11)
Body tightness	Test P11 - EN 12266-1 (GRADE A)

DESIGN

Brass body and sleeve EN 12165 - CW617N
Lever in Aluminium AlSi9Cu die casted with surface treatment of varnish coating Thermo-Harding RAL 2008
Other components in brass EN 12164 – CW614N
Ball in brass EN12164- CW614N
Chrome plating ball ELECTRODEPOSITED COATING EN12540 Cu/Ni5sCrr
O-ring in FLUORINATED RUBBER FPM (VITON)
Seat gaskets in PTFE reinforced with CARBOGRAPHITE
Nickel plating ELECTRODEPOSITED COATING EN12540 Cu/Ni5s

PRODUCT CODES

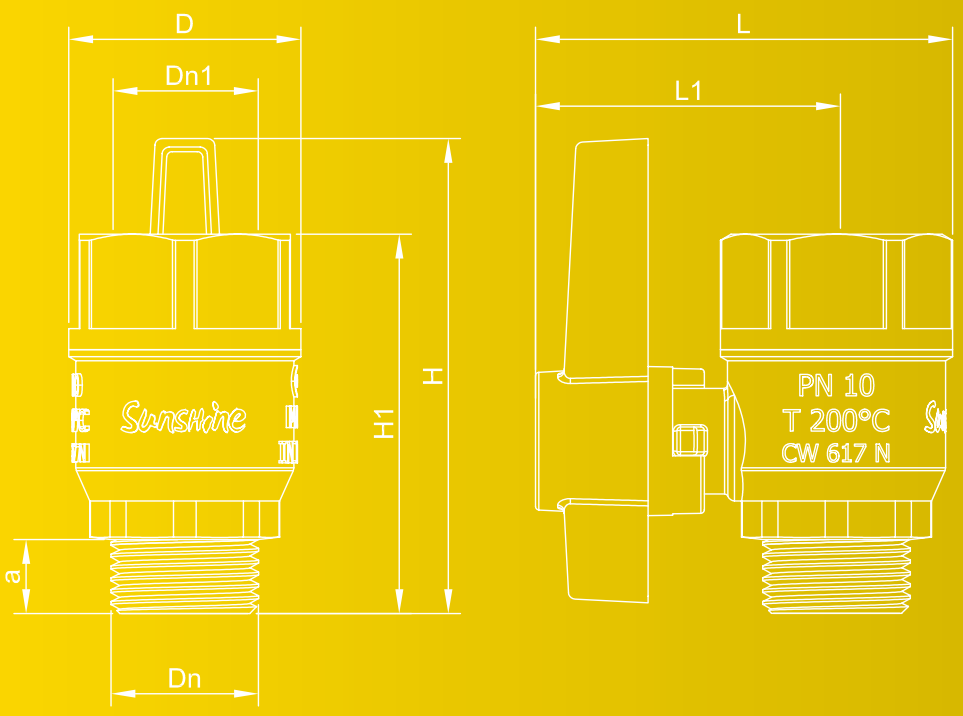
0439.012 F 3/8”xM 3/8”	0439.015 F 1/2”xM 1/2”

OFFICINE RIGAMONTI S.p.A.
via Circonvallazione, 9
13018 Valduggia (VC), ITALY
TEL. +39 0163.48165
FAX +39 0163.47254
www.officinerigamonti.it
export@officinerigamonti.it

SUNSHINE 0439 • 3/8”-1/2”

SHUT OFF BALL VALVES FOR AIR VENTS FOR SOLAR SYSTEMS

CONNECTIONS: FEMALE-MALE



FEATURES

Code	Dimensions							
	Dn	Dn1	D	L	L1	H	H1	a
0439.012	3/8”	3/8”	Ø 33	60	43	68	54,5	11
0439.015	1/2”	1/2”	Ø 33	60	43	68	54,5	11

SUNSHINE 0480 • 1/2”

SUNSHINE 0482 • 1/2”

SUNSHINE 0482 • 1/2” X 3/4”

PRESET SAFETY VALVES WITH DIAPHRAGM AND HANDWHEEL ACTIVATION
FOR SOLAR SYSTEMS CE-1115 DIRECTIVE PED 97/23/EC

CONNECTIONS: MALE-FEMALE
FEMALE-FEMALE
FEMALE-FEMALE


0480 - 1/2”


0482 - 1/2”


0482 - 1/2”x3/4”

HYDRAULIC FEATURES

The “Sunshine” safety valve with manual handwheel is an automatic safety valve designed to open in the event the internal pressure of the system reaches a predetermined maximum pressure (Preset Nominal Pressure Pnr)allowing the water to be released through it. The safety valve resets automatically when the internal pressure of the system returns below the predetermined maximum pressure. All the moving parts of this safety valve, including the regulating spring, are isolated from heat-transfer fluids by an industrial rubber diaphragm. The “Sunshine” safety valve with manual handwheel satisfies the essential safety requirements stipulated in the EU Pressure Equipment Directive (PED) 97/23/EC.

TECHNICAL FEATURES

Pressure:	
Maximum allowable working pressure (PS)	10 bar
Preset nominal pressure (P_{nr})	2, 5-3-4-6-8 bar (factory set and sealed)
Minimum sealing pressure (P_c)	- 5 % of the P_{nr}
Overpressure (P_o)	10% of the P_{nr}
Reset value (P_f)	- 20 % of the P_{nr}
Temperature:	
maximum allowable	160 °C
Threading:	
Pipeline connection	Threads according to ISO 228/1
Compatible fluids:	
Generic fluids	water and Group 2 fluids
Heat transfer fluids in compliance with Italian national standards (UNI 8065 § 6)	
Glycolate solutions (glycol)	50%
Requirements and tests as per:	
Type Test (functional aspects) with reference to	ISO 4126-1 § 7.2
Solar thermal energy	EN 12976-2 Annex D par. 5.6.1.
Pressure test according to Annex I, Section 3.2.2 of the PED directive.	
PED operating limits:	
Maximum allowable temperature (TS)	160°C
Maximum allowable working pressure (PS)	10 bar
Conformity assessment procedures	modules B and D
PED risk category	IV (CE 1115)
Flow Coefficient (K) = 0.05 - Classified as an “Ordinary Valve” under EN 10412 § 11.4.2	

DESIGN

Brass Body EN 12165 - CW617N
Head valve in PA66-GF30 polyamide (nylon 66) reinforced with glass fibre
Handwheel in PA66 polyamide (nylon)
Diaphragm in 70 Sh preshaped EPDM rubber (peroxide cured)
Sm GALVANIZED STEEL spring - EN 10270-1
Nickel plating ELECTRODEPOSITED COATING EN 12540 (Cu/Ni5s)

PRODUCT CODES

0480.125 setting 2,5 bar 1/2” M/F	0482.125 setting 2,5 bar 1/2” F/F	0482.127 setting 2,5 bar 1/2” - 3/4” F/F
0480.130 setting 3 bar 1/2” M/F	0482.130 setting 3 bar 1/2” F/F	0482.132 setting 3 bar 1/2” - 3/4” F/F
0480.140 setting 4 bar 1/2” M/F	0482.140 setting 4 bar 1/2” F/F	0482.142 setting 4 bar 1/2” - 3/4” F/F
0480.160 setting 6 bar 1/2” M/F	0482.160 setting 6 bar 1/2” F/F	0482.162 setting 6 bar 1/2” - 3/4” F/F
0480.180 setting 8 bar 1/2” M/F	0482.180 setting 8 bar 1/2” F/F	0482.182 setting 8 bar 1/2” - 3/4” F/F

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13018 Valduggia (VC), ITALY
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FAX +39 0163.47254
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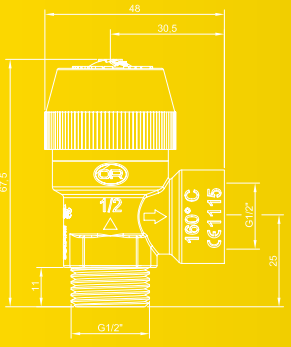
SUNSHINE 0480 • 1/2”

SUNSHINE 0482 • 1/2”

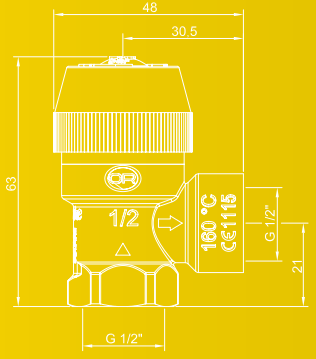
SUNSHINE 0482 • 1/2” X 3/4”

PRESET SAFETY VALVES WITH DIAPHRAGM AND HANDWHEEL ACTIVATION
FOR SOLAR SYSTEMS CE-1115 DIRECTIVE PED 97/23/EC

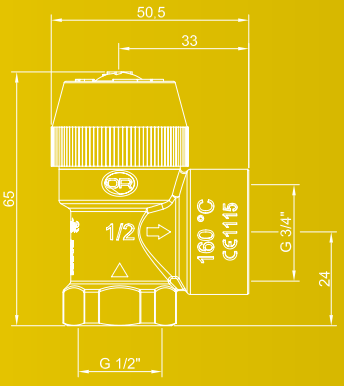
CONNECTIONS: MALE-FEMALE
FEMALE-FEMALE
FEMALE-FEMALE



0480 - 1/2”



0482 - 1/2”



0482 - 1/2”x3/4”

SETTINGS

	Discharging flow		
P tar	H_2O(l/h)	Steam (kg/h)	Gas (kg/h)
2,5	748,6	12,5	18,7
3	801,3	14,2	21,3
4	897	17,6	26,7
6	1059,7	24,5	37,3
8	1202,59	31,3	48