FLOWING EXPERTISE

2024

CALEFFI
Hydronic Solutions

NEW ZEALAND

# GENERAL PRODUCT GUIDE

POWERED BY
WATERWARE

# WATERWARE, PROUD PARTNERS WITH CALEFFI FOR OVER 35 YEARS

Waterware has been a leading name in New Zealand for plumbing, central heating and cooling, and bathroomware since 1984. Our mission goes beyond simply providing these products – we aim to create successful environments for everyone involved, from the tradespeople who install them to the homeowners who enjoy them.

Throughout our history, we've been at the forefront of innovation. We were the first to introduce the Caleffi brand to New Zealand, raising the standards for quality and performance. Today, Waterware continues to push boundaries with hydraulic radiant heating and cooling technology, high-performance plumbing fittings, and beautiful, on-trend bathroomware.

Sustainability is a core value for Waterware. We partner with Caleffi to offer environmentally friendly solutions, including low-lead products that contribute to a greener future for New Zealand and the world. Our ultimate goal is to provide functional, beautiful, and user-friendly solutions that enhance your life and contribute to a more sustainable future.

# THE ORIGINAL PLUMBING VALVE

Original 520 series


521 series

Waterware introduced the Caleffi 520 series tempering valves in 1984, focusing on safety and basic functionality. In the 1990s, we upgraded to the more enhanced durability and precision of the 521 series design, which saw multiple developments with adjustable settings and compliance in the following years.

By the 2010s, Caleffi integrated smart technology for remote monitoring and control. Today, their valves feature advanced low-lead materials, enhanced safety features, and smart building integration, which we will see in the New Zealand market in 2025.

521AUS series


521AUS Low lead series

# THE CALEFFI & WATERWARE STORY

**1960s**

Caleffi founded by Francesco Caleffi in Gozzano, Italy in 1961. Initial focus started with manufacturing manifold and fittings and valves (made of brass).

**1970s**

Caleffi moved its head office to Fontaneto d'Agogna, where it still is today. Introduced first zone valves and balancing valves for hydronic systems.

**1980s**

Aquired Pressco, a brass hot forging company and the first foreign subsidiary, Caleffi Armaturen GmbH, was opened near Frankfurt in Germany.

**1984: Waterware began its successful partnership with Caleffi introducing the 520 series tempering valve.**

**1990s**

**1990: Waterware started supplying central heating products.**

The 1990's also saw rapid growth in Italy and on export markets. In 1996 To secure space for future expansion of manufacturing, Caleffi acquired the factory in Gattico. The factory was 13,000 m² in size at the time, and occupied grounds of 135,000 m². This site permitted extension of the factory to over 38,750 m² in several steps until 2024.

**1992: Waterware developed the first combo valve kit for the New Zealand market.**

**2000s**

New commercial initiatives ensured that the Caleffi name and trade mark are recognised throughout the world. Among the latest is the opening of sales offices in South America, China and Russia, three markets with tremendous potential.

**2009**

Caleffi continues to invest in innovations which benefit its customers. The new Automatic Vertical Warehouse (MAV), located near the existing premises in Fontaneto d'Agogna, was opened; this will improve customer service by optimising logistics processes.

**2010s**

Introduced modular hydronic systems and high-efficiency circulators. 2011 Celebrated 50 years in business and Italy's top mid-sized employer award.

**2020s**

Expanded IoT connectivity and remote control features on products. 2023 and beyond - Continued focus on sustainable and smart hydronic solutions.

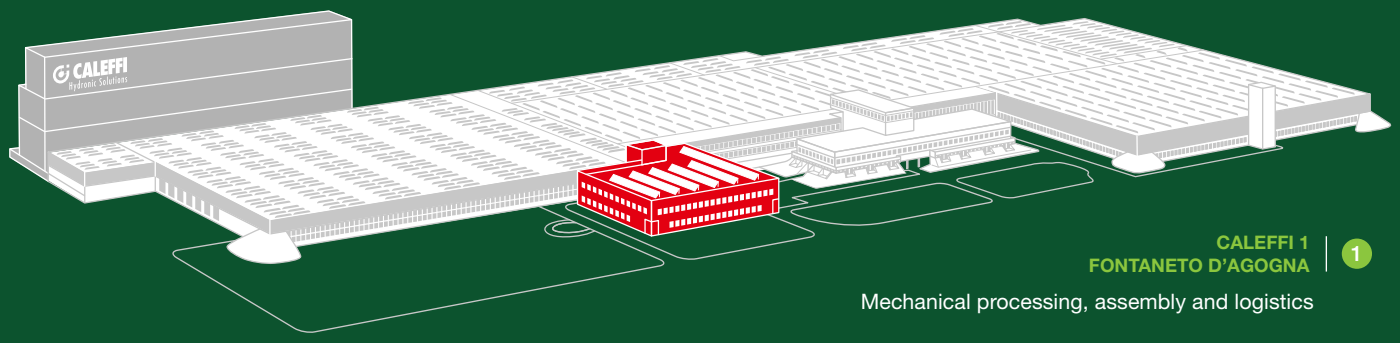
***By the end of 2025 the overall Fontaneto factory extensions will be over 50,000m².***

**2023: Waterware relaunches a consolidated Caleffi range, focusing on the highest quality product for the New Zealand market.**

CALEFFI
Hydronic Solutions

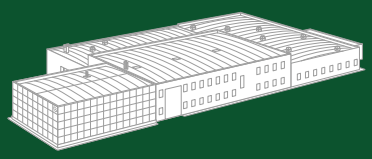
# WE ARE FLOWING EXPERTISE

Caleffi Hydronic Solutions has been redesigning comfort with its HVAC and plumbing solutions.



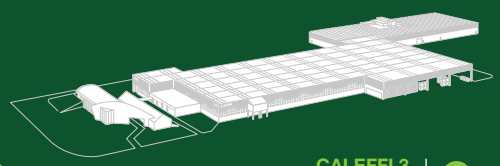

**CALEFFI 1**
**FONTANETO D'AGOGNA** | 1

Mechanical processing, assembly and logistics



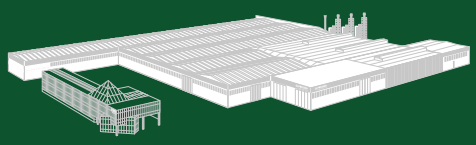
**CALEFFI 2**
**FONTANETO D'AGOGNA** | 2

Engineering



**CALEFFI 3**
**GATTICO - VERUNO** | 3

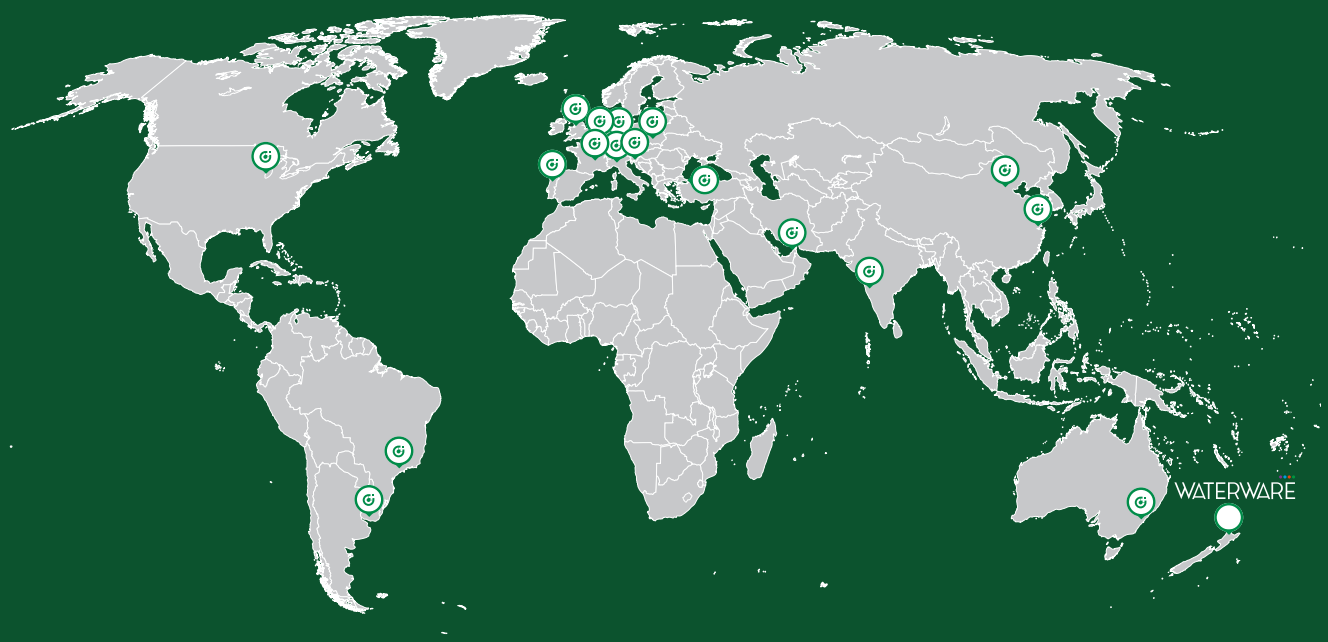
Plastics moulding



**PRESSCO**
**INVORIO** | 4

Hot forging

# WHERE WE ARE WORLDWIDE




**www.caleffi.com**

# THE CALEFFI GREEN

## OUR SUSTAINABLE COMMITMENT

The Caleffi Green means facing a future capable of sustaining the needs of today's and tomorrow's people in terms of climate, sustainable comfort, energy saving and the protection of water and people's health.

**IN OUR PRODUCTION PLANTS**

**-60%** EXPANDED POLYURETHANE FROM PRODUCT PACKAGING

**85%** RAW MATERIALS FROM ITALY

**98,7%** RAW MATERIALS FROM EUROPE

SUBSTANTIALLY **INCREASING INVESTMENTS** ON **LOW LEAD BRASS COMPONENTS** FOR PLUMBING SYSTEMS

**+90%** OF OUR **BRASS** IS FROM RECYCLED MATERIALS

**+11%** USE OF **LOW LEAD BRASS** IN 5 YEARS

**100%** BRASS SCRAP RECOVERED

**98,5%** PLASTIC SCRAP RECOVERED

**100%** POLYETHYLENE ELIMINATED FOR OUTGOING PACKAGING

DOWNLOAD OUR SUSTAINABILITY REPORT 2023

THE CALEFFI GREEN

# FOCUSING ON SYSTEMS

Our products contribute to
GREEN REVOLUTION
deliver the right climate for life.

## SUPPORTING ENERGY TRANSITION

HEAT PUMP COMPONENTS

## BETTER WATER MANAGEMENT

WATER TREATMENT DEVICES

## SMART DESIGN

CIRCUIT BALANCING DEVICES

## WE CARE FOR WATER AND PEOPLE'S HEALTH

DOMESTIC WATER DEVICES

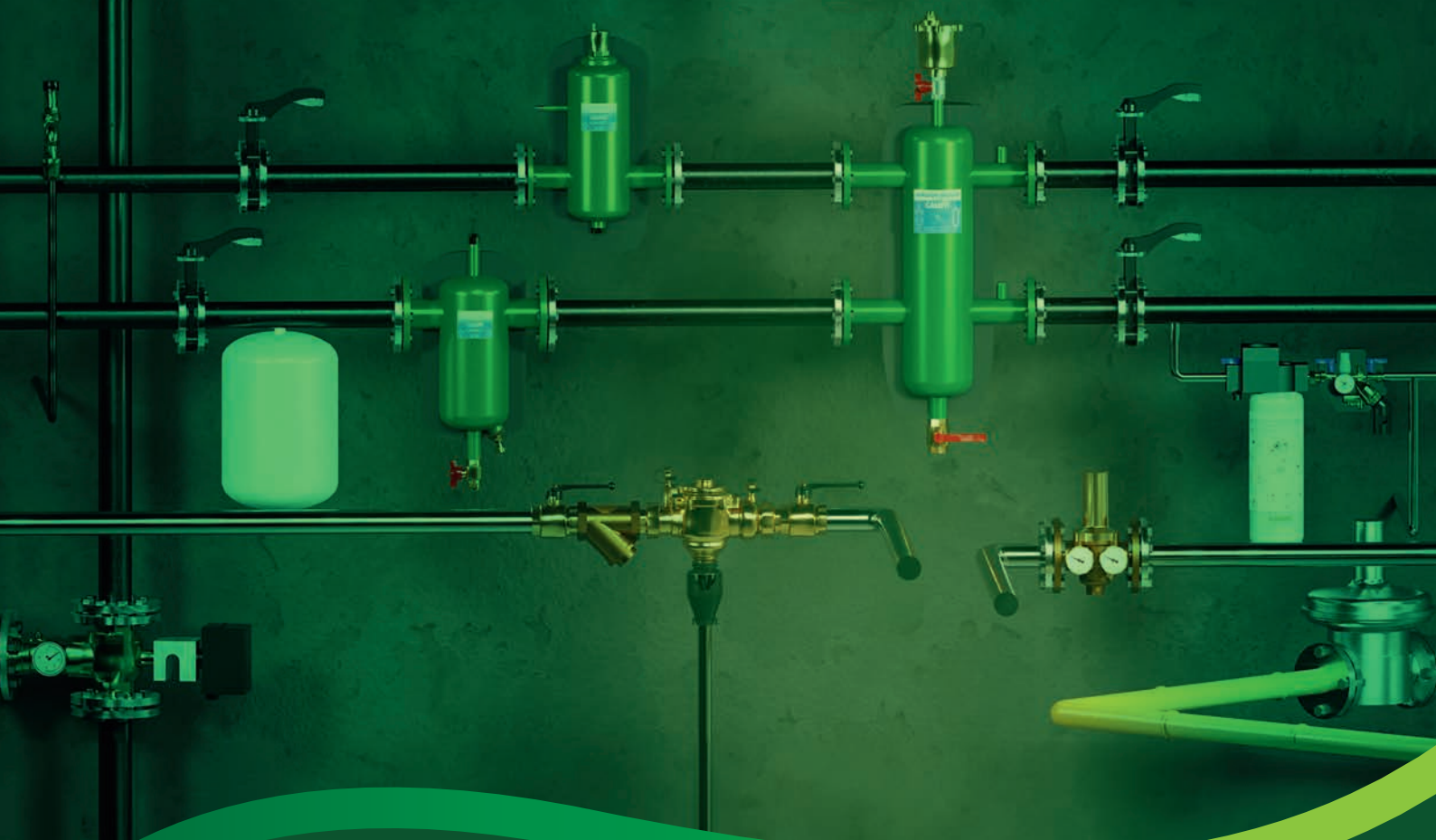
## SUSTAINABLE COMFORT

HRV AND HVAC SYSTEM COMPONENTS

bim.caleffi.com

# 100% BIM

## WE SHARE OUR EXPERTISE



**+6000** professionals registered

**+10 years** expertise

**+4000** codes

THE BETTER YOU DESIGN THE MORE YOU CARE FOR THE ENVIRONMENT

**Esplore bim.caleffi.com,** the portal for MEP design professionals. Download virtual models of our products with constantly updated essential data and parameters. Find families (RFA), projects (RVT), and templates for the MEP sector, as well as models in IFC and BOL formats. Join over 6000 professionals who have already chosen our smart design solutions.

## COMPONENTS FOR DOMESTIC WATER SYSTEMS



## COMPONENTS FOR DOMESTIC HEATING SYSTEMS



## HVAC


# 6000 SERIES LEGIOMIX

The electronic mixing valve is used in centralised systems that produce and distribute domestic hot water. Its function is to guarantee and maintain the temperature of the domestic hot water delivered to the user when there are variations in the temperature and pressure of the hot and cold water at the inlet or in the draw-off flow rate.

- PRESSURE REDUCING VALVES
- THERMOSTATIC MIXING VALVES
- ELECTRONIC MIXING VALVE WITH THERMAL DISINFECTION, LEGIOMIX
- BACKFLOW PREVENTERS
- COMPONENTS FOR DOMESTIC WATER SYSTEMS

## PRESSURE REDUCING VALVES FOR HIGH -RISE BUILDINGS

Pb LOW LEAD

### 5335..HS

Inclined pressure reducing valve.
Replaceable cartridge and strainer.
Piston operation.
CR dezincification resistant alloy body **"LOW LEAD"**.
Max. inlet pressure: 2000 kPa.
Downstream setting pressure range: 100–600 kPa.
Max. working temperature: 80 °C.
With 1/4" F pressure gauge connection.
For applications with higher pressure reduction ratio in hot and cold water distribution system.

Lead Free
AS 1357.2
WM - 02467

| Code | | | |
|---|---|---|---|
| **PR533555HS** | 3/4" | 1 | 25 |

## PRESSURE REDUCING VALVES FOR FIRST STAGE CONTROL

Pb LOW LEAD

### 5360

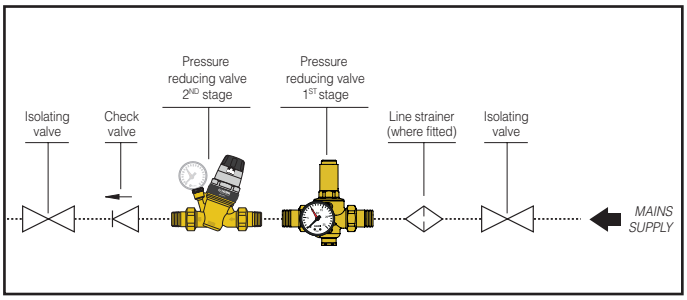
Pressure reducing valve for first stage control, with replaceable cartridge. Piston operation.
CR dezincification resistant alloy body **"LOW LEAD"**.
Male union connections.
Max. upstream pressure: 2500 kPa.
Downstream setting pressure range: 600–1000 kPa.
Pressure gauge: 0–2500 kPa.
Max. working temperature: 80 °C.

Lead Free
AS 1357.2
WM - 40203

WRAS APPROVED PRODUCT CERTIFICATION MARK

| Code | | | |
|---|---|---|---|
| **PR5336043** | 1/2" | 1 | 5 |
| **PR5336053** | 3/4" | 1 | 5 |
| **PR5336063** | 1" | 1 | 5 |
| **PR5336073** | 1 1/4" | 1 | 4 |
| **PR5336083** | 1 1/2" | 1 | 4 |

**Application diagram of pressure reducing valve code 5360.3 AUS**




## INCLINED PRESSURE REDUCING VALVES WITH HIGH TEMPERATURE

Pb LOW LEAD

### 5335..H

Inclined pressure reducing valve.
Replaceable cartridge and strainer.
CR dezincification resistant alloy body **"LOW LEAD"**.
Max. inlet pressure: 2000 kPa.
Downstream setting pressure range: 100–600 kPa.
Max. working temperature: 80 °C.
With 1/4" F pressure gauge connection.

Lead Free
AS 1357.2
WM - 02467

| Code | | | |
|---|---|---|---|
| **CPR15** | 1/2" | 1 | 25 |
| **CPR20** | 3/4" | 1 | 25 |
| **CPR25** | 1" | 1 | 10 |

### 5330..H

Spare cartridge for pressure reducing valves 5335H series.

| Code | | | |
|---|---|---|---|
| **PR533000H** | 1/2" - 3/4" - 1" | 1 | 100 |
| **PR53300HS** | 3/4" (for code PR533555HS) | 1 | – |

## PRE-ADJUSTABLE PRESSURE REDUCING VALVES FOR HIGH TEMPERATURE

Pb LOW LEAD

### 5350..H

Pressure reducing valve
with self-contained replaceable cartridge.
For high temperature.
CR dezincification resistant alloy body **"LOW LEAD"**.
With pressure regulating scale for manual pressure adjustment. Male union connections.
**With 1/4" F pressure gauge connection.**
Max. upstream pressure: 2000 kPa.
Downstream setting pressure range: 100–600 kPa.
Max. working temperature: 80 °C.

Lead Free
AS 1357.2
WM - 040162

| Code | | | |
|---|---|---|---|
| **PR535050H** | 3/4" | 1 | 5 |
| **PR535060H** | 1" | 1 | 5 |
| **PR535070H** | 1 1/4" | 1 | 4 |
| **PR535080H** | 1 1/2" | 1 | 4 |
| **PR535090H** | 2" | 1 | 4 |

### 5350..H

Spare cartridge for pressure reducing valves 5350H series.

| Code | | | |
|---|---|---|---|
| **PR535006H** | 1/2" - 3/4" - 1" | 1 | 8 |
| **PR535009H** | 1 1/4" - 1 1/2" - 2" | 1 | – |

# COMBINED GROUP FOR PRESSURE CONTROL IN DOMESTIC WATER SYSTEMS

## 539..H

Pb LOW LEAD

Combined group for pressure control in domestic water systems with self-contained replaceable cartridge.
For high temperature.
CR dezincification resistant alloy body "**LOW LEAD**".
Shut-off valve with extended lever.
EA type check valve.

Max. upstream pressure: 16 bar.
Downstream setting pressure range: 1–5,5 bar.
Max. working temperature: 80 °C.
With G 1/4" upstream and downstream pressure test ports.
**Pressure reducing valve certified to EN 1567.**
**Check valve certified to EN 13959.**
**Complete with BNR2520 1"to 3/4" Hex nipple.**
PATENT PENDING

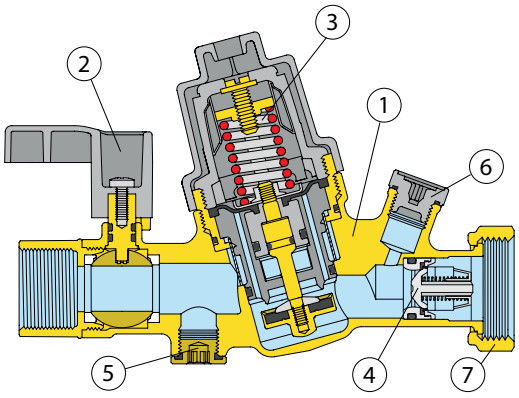
| Code | | | |
|---|---|---|---|
| **CPR4IN1** | Rp 3/4" x G 1" with captive nut | 1 | 5 |

### Function

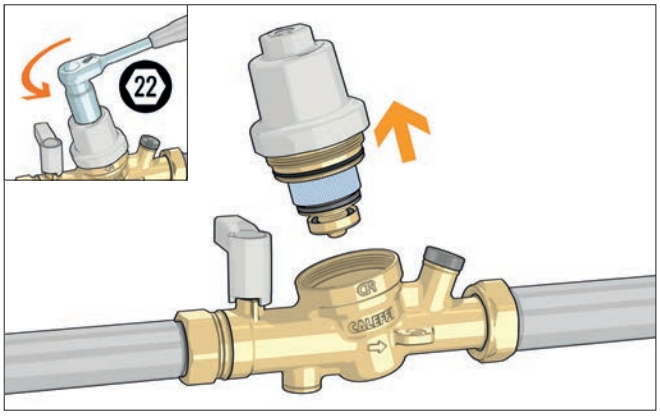
The combined group for pressure control in domestic water systems combines three different devices in a single component: a ball shut-off valve, a pressure reducing valve with filter and a EA type check valve. Installed on the pipe supplying hot or cold water to the users, it reduces the pressure of the water coming from the mains network, prevents the backflow of water into the mains system and allows users to be shut off during testing and maintenance procedures.
The cartridge containing the diaphragm, strainer, seat, obturator and compensating piston is pre-assembled as a self-contained unit with a cover. It is easy to remove, simplifying inspection and maintenance procedures. The internal strainer, cleanable, is part of the cartridge and cannot be removed.

### Characteristic components

1. Compact, self-contained body
2. Shut-off valve
3. Pressure reducing valve with filter (EN 1567)
4. Check valve, EA type (EN 13959)
5. Upstream test port
6. Downstream test port
7. Captive nut

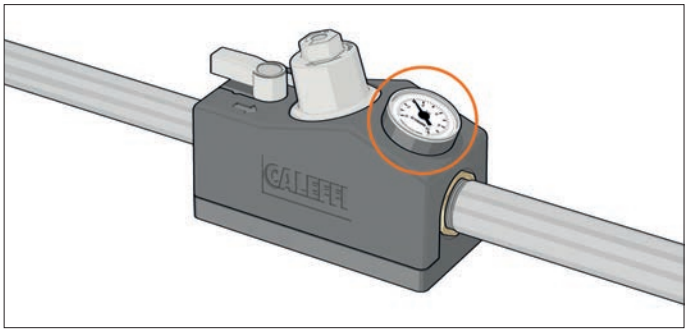



### Removable self-contained cartridge



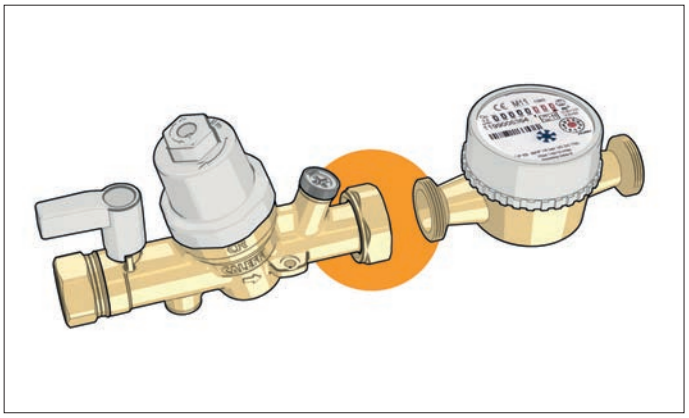

Insulation for 539H series combined group.

| Code | | |
|---|---|---|
| **CPR4IN1CLAM** | 1 | 8 |



### Component connection

The group is constructed to make installing a water meter and other downstream equipment easier.



# COMBINED GROUP FOR PRESSURE AND TEMPERATURE CONTROL IN DOMESTIC WATER SYSTEMS

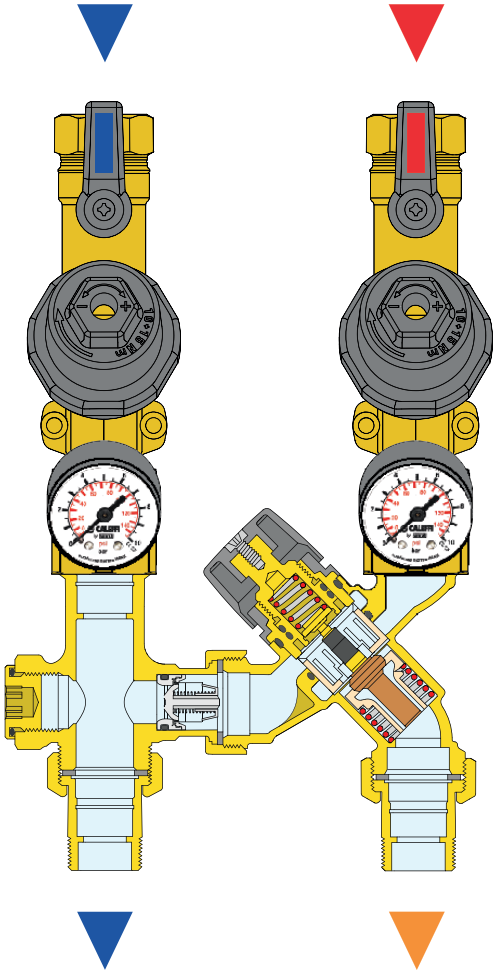
Pb LOW LEAD

## 539H

Combined group for pressure and temperature control in domestic water systems.
CR **dezincification resistant alloy body "LOW LEAD".**
Consisting of:
- 539H series combined unit, cold water circuit
- 539H series combined unit, hot water circuit
- adjustable thermostatic mixing valve with advanced thermal performance and anti-scald function

**Certified to EN 1111 and EN 1287.**
- connection tee complete with check valve
- pressure gauges (optional).

**Mixing valve performance**
Max. working pressure: 10 bar.
Inlet Tmax: 90 °C.
Temperature adjustment range: 35–65°C.
Kv: 1,7 m³/h.

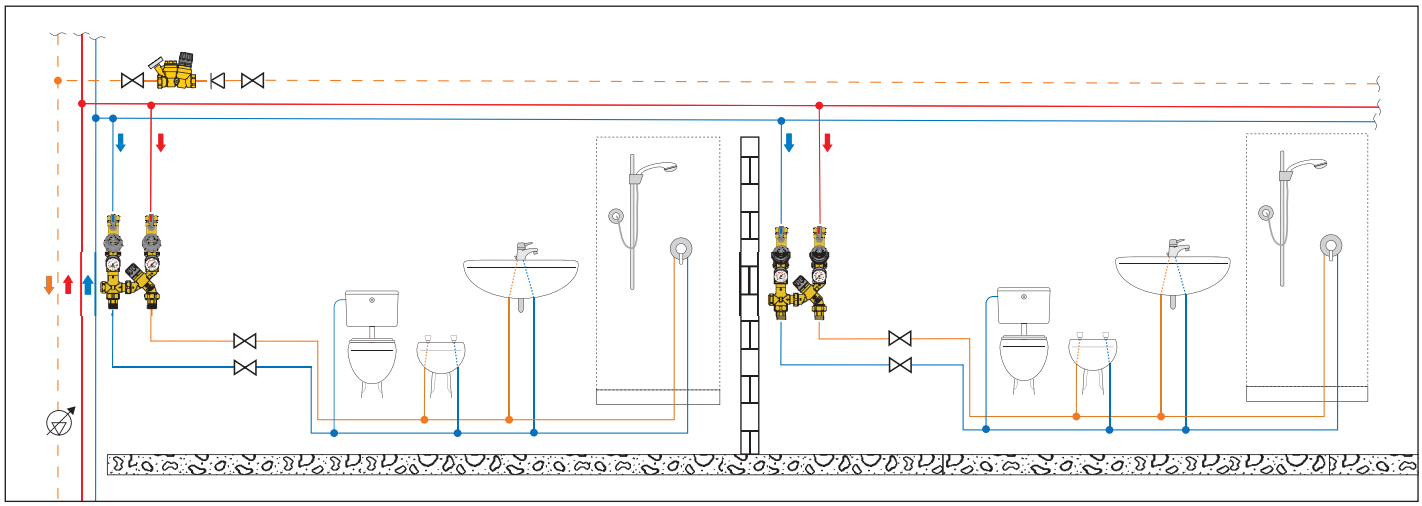


| Code | | | |
|---|---|---|---|
| **PRTV539500H** | Rp 3/4" x G 3/4" with union | 1 | – |

### Function

It is essential to install various components capable of fulfilling all the required functions at the inlet of individual housing units, hotel rooms or hospital rooms, where it is necessary to control both the pressure and the temperature. The function of the combined unit is to keep the pressure and temperature of the mixed water supplied to the user constant at the set value, in spite of variations in the hot and cold water supply conditions at the inlet, thereby making pipe connections easier.

### Application diagram of combined group



## MULTI-POINT ANTI-SCALD TEMPERING VALVES

Pb LOW LEAD

### 5213

Adjustable anti-scald tempering valve with check valves and strainers at the inlets.
CR dezincification resistant alloy body.
"**LOW LEAD**".
Male union connections.
Max. working pressure: 1400 kPa.
Max. inlet temperature: 85 °C.
**Certified to AS 4032.2.**

Lead Free AS 4032.2 WM - 02466

| Code | | Temperature adjustment | Kv (m³/h) | | |
|---|---|---|---|---|---|
| **CTV15** | DN 15 | 30–50 °C | 1,5 | 1 | 10 |
| **CTV20** | DN 20 | 30–50 °C | 1,7 | 1 | 10 |
| **CTV25** | DN 25 | 20–50 °C | 4,2 | 1 | 10 |

Pre-formed shell insulation for 1/2" and 3/4" thermostatic mixing valves 5213 series.

| Code | | | |
|---|---|---|---|
| **TV521814** | 1/2" | 1 | 25 |
| **TV521815** | 3/4" | 1 | 25 |

Pb LOW LEAD

### 5213

Adjustable anti-scald tempering valve with isolating valves, check valves and strainers at the inlets.
CR dezincification resistant alloy body. "**LOW LEAD**".
Max. working pressure: 1400 kPa.
Max. inlet temperature: 85 °C.
**Certified to AS 4032.2.**

Lead Free AS 4032.1 WM - 02466 AS 1357.1/2 WM - 25724 NSW HEALTH APPROVED DEPARTMENT

| Code | | Temperature adjustment | Kv (m³/h) | | |
|---|---|---|---|---|---|
| **TVI521319AU** | 3/4" | 30–50 °C | 1,4 | 1 | 10 |

## SINGLE POINT THERMOSTATIC MIXING VALVES

Pb LOW LEAD

### 5213

Adjustable thermostatic mixing valve with isolating valves, check valves and strainers at the inlets.
Enhanced thermal performance device with anti-scald safety function.
CR dezincification resistant alloy body. "**LOW LEAD**".
Max. working pressure: 1400 kPa.
Max. inlet temperature: 85 °C.
**Certified to AS 4032.1.**

Lead Free AS 4032.1 WM - 02466 AS 1357.1/2 WM - 25724 NSW HEALTH APPROVED DEPARTMENT

| Code | | Temperature adjustment | Kv (m³/h) | | |
|---|---|---|---|---|---|
| **TMVI521312AU** | 1/2" | 30–50 °C | 1,3 | 1 | 10 |
| **TMVI521319AU** | 3/4" | 30–50 °C | 1,4 | 1 | 10 |

Pb LOW LEAD

### 5213

Adjustable thermostatic mixing valve with check valves and strainers at the inlets.
Enhanced thermal performance device with anti-scald safety function.
CR dezincification resistant alloy body. "**LOW LEAD**".
Max. working pressure: 1400 kPa.
Max. inlet temperature: 85 °C.
**Certified to AS 4032.1**.

Lead Free AS 4032.1 WM - 02466 AS 1357.1/2 WM - 25724

| Code | | Temperature adjustment | Kv (m³/h) | | |
|---|---|---|---|---|---|
| **TMVU521312AU** | DN 15 | 30–50 °C | 1,5 | 1 | 10 |
| **TMVU521319AU** | DN 20 | 30–50 °C | 1,7 | 1 | 10 |

## THERMOSTATIC MIXING VALVES FOR MEDIUM-LARGE APPLICATIONS

### 5231

Adjustable thermostatic mixing valve, for centralised systems.
CR dezincification resistant alloy body.
Antiscale inner regulator in technopolymer.
Max. working pressure: 14 bar.
Max. inlet temperature: 90 °C.

| Code | | Temperature adjustment | Kv (m³/h) | | |
|---|---|---|---|---|---|
| **TV523150** | 3/4″ | 35–65 °C | 4,5 | 1 | 5 |
| **TV523160** | 1″ | 35–65 °C | 5,5 | 1 | – |
| **TV523170** | 1 1/4″ | 35–65 °C | 7,6 | 1 | – |
| **TV523180** | 1 1/2″ | 35–65 °C | 11,0 | 1 | – |
| **TV523190** | 2″ | 35–65 °C | 13,3 | 1 | – |

## THERMOSTATIC MIXING VALVES FOR SOLAR SYSTEM

### 2521

Adjustable thermostatic mixing valve, **with check valves**, for solar thermal systems.
CR dezincification resistant alloy body **"LOW LEAD"**. Chrome plated.
Male union connections.
Max. working pressure: 14 bar.
**Max. inlet temperature: 100 °C**.

| Code | | Temperature adjustment | Kv (m³/h) | | |
|---|---|---|---|---|---|
| **TV252150C** | 3/4″ | 30–65 °C | 2,6 | 1 | 10 |

# ELECTRONIC MIXING VALVE WITH THERMAL DISINFECTION - 24 V

## Suitable for BACS with MODBUS-RTU management

## 6000 LEGIOMIX®

Electronic mixing valve with programmable thermal disinfection and check on disinfection. Male threaded connections with union.
Consisting of:
- **three-way ball valve**,
- **actuator**,
- **regulator**,
- **flow temperature probe**,
- **return temperature probe**.

With auxiliary microswitches for disinfection management and other devices.
Fitted for remote control connection with RS-485 and MODBUS-RTU protocols.
Electric supply: 24 V - 50/60 Hz - (6,5+6) VA.
Max. working pressure: 10 bar.
Max. inlet temperature: 100 °C.
Adjustment temperature range: 20–85 °C.
Disinfection temperature range: 40–85 °C.
Protection class: IP 65 (actuator).
PATENT.

| Code | | Kv (m³/h) | | |
|---|---|---|---|---|
| **TV600051** | 3/4″ | 8,4 | 1 | – |
| **TV600061** | 1″ | 10,6 | 1 | – |
| **TV600071** | 1 1/4″ | 21,2 | 1 | – |
| **TV600081** | 1 1/2″ | 32,5 | 1 | – |
| **TV600091** | 2″ | 41,0 | 1 | – |

*Correct valve sizing to min. and Max. flowrate is require, contact Waterware or refer to the technical data sheet.*

## 6000 LEGIOMIX®

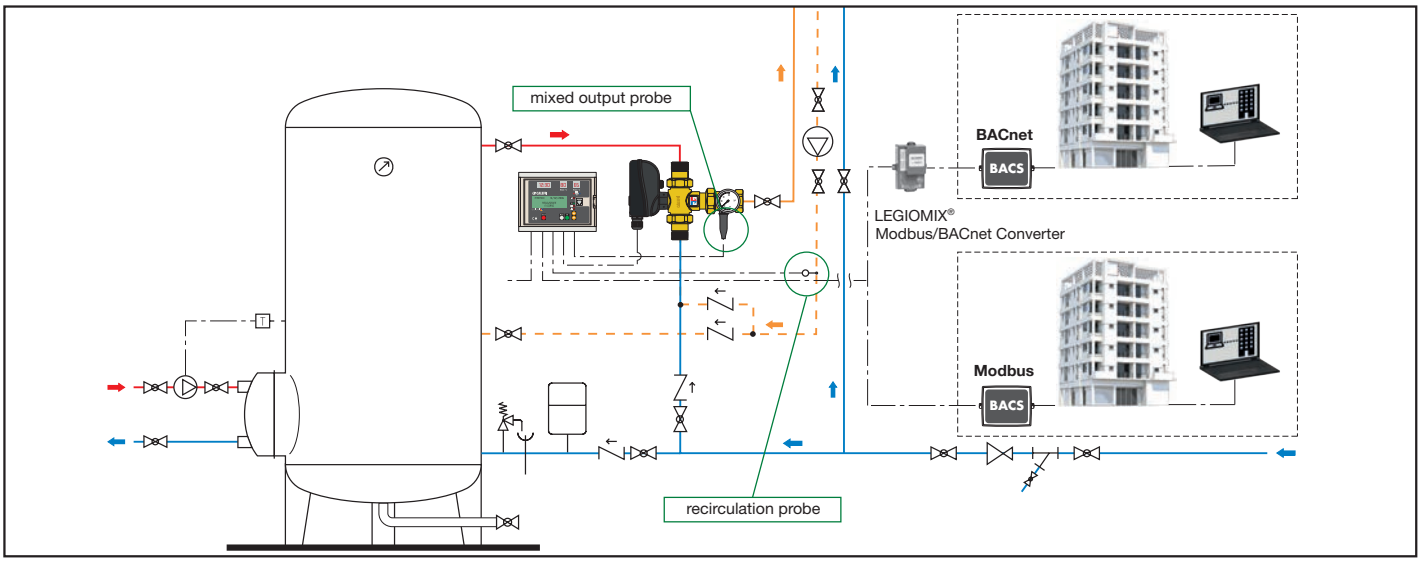
Electronic mixing valve with programmable thermal disinfection and check on disinfection. Flanged connection PN 16. Consisting of:
- **three-way ball valve**,
- **actuator**,
- **regulator**,
- **flow temperature probe**,
- **return temperature probe**.

With auxiliary microswitches for disinfection management and other devices.
Fitted for remote control connection with RS-485 and MODBUS-RTU protocols.
Electric supply: 24 V - 50/60 Hz - (6,5+10,5) VA.
Max. working pressure: 10 bar.
Max. inlet temperature: 100 °C.
Adjustment temperature range: 20–85 °C.
Disinfection temperature range: 40–85 °C.
To be coupled with counterflanges EN 1092-1.
Protection class: IP 65 (actuator).
PATENT.

| Code | | Kv (m³/h) | | |
|---|---|---|---|---|
| **TV600016FL** | DN 65 | 90,0 | 1 | – |
| **TV600018FL** | DN 80 | 105,0 | 1 | – |

*Correct valve sizing to min. and Max. flowrate is require, contact Waterware or refer to the technical data sheet.*

**Application diagram of electronic mixing valve 6000 series**



# MULTI-FUNCTION THERMOSTATIC REGULATOR

Pb LOW LEAD

## 116

Thermostatic regulator for domestic hot water recirculation circuits.
With temperature gauge for circuit temperature check.
CR dezincification resistant alloy body **"LOW LEAD"**.
Female connections.
Max. working pressure: 16 bar.

Lead Free WMTS-468 WM-40195 · WRAS APPROVED PRODUCT CERTIFICATION MARK · HY Cert · kiwa

| Code | DN | Conn. | Temperature adjustment | | |
|---|---|---|---|---|---|
| **MTR116451** | 20 | Rp 3/4" | 40–65 °C | 1 | 20 |

Pb LOW LEAD

## 116

Thermostatic regulator for domestic hot water recirculation circuits.
Fitted for automatic or controlled thermal disinfection function.
With pocket for temperature gauge.
CR dezincification resistant alloy body **"LOW LEAD"**.
Female connections.
Max. working pressure: 16 bar.

WRAS APPROVED PRODUCT CERTIFICATION MARK · DIN DVGW CERT · HY Cert

| Code | DN | Conn. | Temperature adjustment | | |
|---|---|---|---|---|---|
| **MTR116150** | 20 | Rp 3/4" | 35–65 °C | 1 | 10 |
| **MTR116160** | 25 | Rp 1" | 35–65 °C | 1 | – |
| **MTR116170** | 32 | Rp 1 1/4" | 35–65 °C | 1 | – |

Insulation
for multifunction thermostatic regulator 116 series.

| Code | Use | | |
|---|---|---|---|
| **CBN116160** | 1" - 1 1/4" | 1 | 20 |

## 116

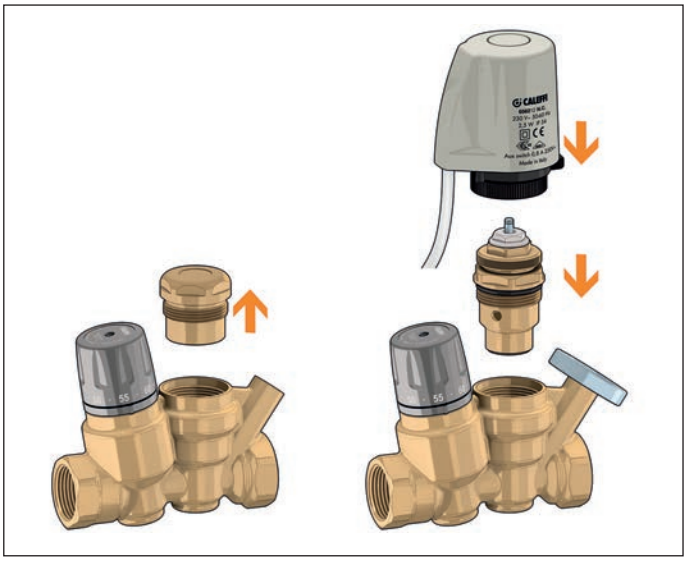
Accessory temperature gauge
for thermostatic regulators 116 series.
Temperature gauge scale: 0–80 °C.

| Code | | |
|---|---|---|
| **GA116010** | 1 | 20 |

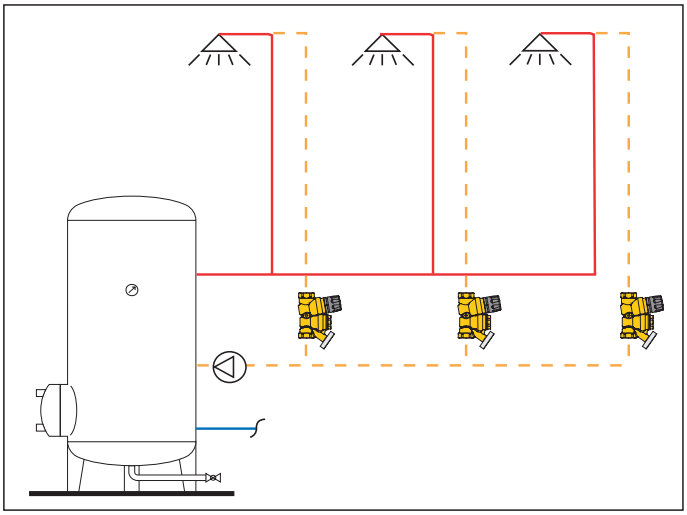
### Function

In domestic hot water distribution circuits, to respect modern plant requirements for the prevention of Legionnaires' disease, it is essential to ensure that all sections are kept at the correct temperature. The recirculation network must be balanced, to avoid non-uniform temperature distribution, with cold sections at risk of Legionella proliferation.
The thermostatic regulator, installed on each return branch of the recirculation circuit, automatically maintains the set temperature. This device modulates the medium flow rate in accordance with the water inlet temperature by means of the action of a dedicated internal thermostatic cartridge. When the water temperature approaches the set value, the obturator progressively reduces the passage. The medium flow rate supplied by the recirculation pump is thus distributed to the other network branches, resulting in effective automatic thermal balancing.
If necessary, the regulator is already equipped with a thermal disinfection function, which is useful if the system temperature is to be increased to values over 55–60 °C.
This function can be completely automatic, activated by a dedicated second thermostatic cartridge that trips at 70 °C, or controlled with a thermo-electric actuator.

### Cartridge replacement for electrically controlled disinfection



### Application diagram of thermostatic regulator 116 series



# MULTI-FUNCTION THERMOSTATIC REGULATOR

**Operating modes**
Here following the regulator's operating modes according to the variation of the water temperature of the circuit it is installed on.

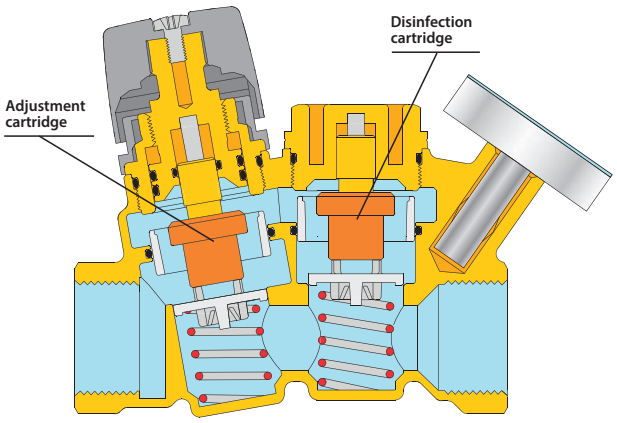
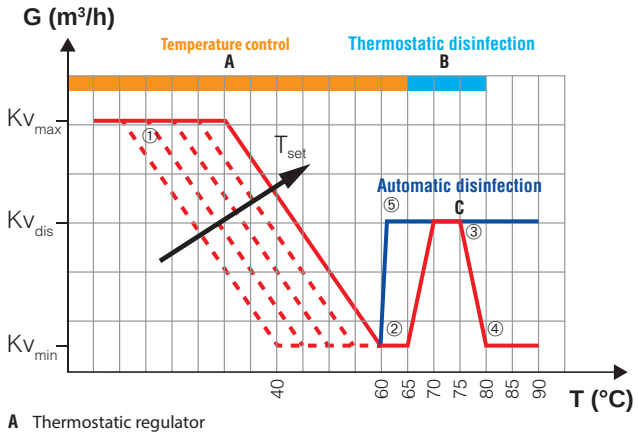
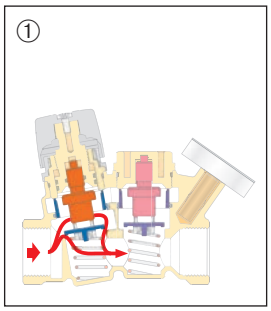



**Diagram of thermostatic regulator 116 series**

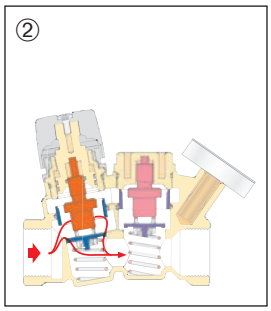



**A** Thermostatic regulator
**B** Thermostatic regulator with automatic thermostatic disinfection function
**C** Thermostatic regulator with disinfection function controlled by an actuator

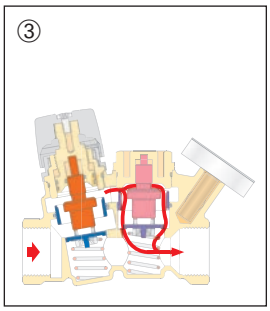
**Thermostatic adjustment**



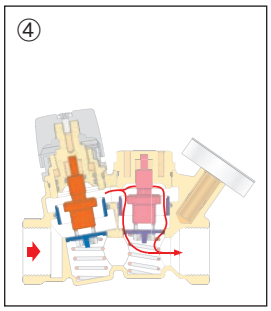

**Minimum flow rate**



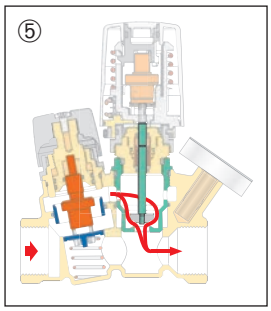

**Thermostatic disinfection**




**Thermal closing**




**Electrically controlled disinfection**



## TEMPERATURE AND PRESSURE RELIEF VALVES

### 309

Temperature and pressure relief valve.
CR dezincification resistant alloy body.
**For domestic water system,**
**to protect the hot water storage**.
Setting temperature: 90 °C.
Discharge rating: 1/2" - 3/4" x Ø 15: 10 kW.
3/4" x Ø 22: 25 kW.
Settings: 7 - 10 bar.
**Settings certified to EN 1490: 7 - 10 bar**.
**With GLC15L Copper gland.**

CE 2797

WRAS APPROVED PRODUCT CERTIFICATION MARK

| Code | | | Probe length (mm) | | |
|---|---|---|---|---|---|
| **CTPR15-10** | 1/2" M x Ø 15 | 10 bar | 100 | 1 | 20 |
| **CTPR15-7** | 1/2" M x Ø 15 | 7 bar | 100 | 1 | 20 |
| **CTPR20-10** | 3/4" M x Ø 22 | 10 bar | 100 | 1 | 20 |
| **CTPR20-7** | 3/4" M x Ø 22 | 7 bar | 100 | 1 | 20 |

## WATER HAMMER ARRESTERS

### 525 ANTISHOCK

Water hammer arrester.
Brass body.
Chrome plated.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.
PTFE seal on thread.

WRAS APPROVED PRODUCT CERTIFICATION MARK

| Code | | | |
|---|---|---|---|
| **WH525040** | 1/2" | 1 | 25 |

## EXPANSION VESSELS FOR HOT WATER SYSTEMS

### 568

Welded expansion vessel,
for hot water systems, EC certification.
Bladder membrane.
Max. working pressure: 10 bar.
System working temperature range: -10–70 °C.
Membrane working temperature range: -10–70 °C.
Conformity to EN 13831 standard.

CE 0045

| Code | Litres | Conn. | Precharge (bar) | | |
|---|---|---|---|---|---|
| **EV568012** | 12 | 3/4" | 2,5 | 1 | – |
| **EV568018** | 18 | 3/4" | 2,5 | 1 | – |
| **EV568025** | 25 | 3/4" | 2,5 | 1 | – |

### 568

Welded expansion vessel,
for hot water systems, EC certification.
Bladder membrane
(can be replaced for volumes from 60 to 500 litres).
Max. working pressure: 10 bar.
System working temperature range: -10–70 °C.
Membrane working temperature range: -10–70 °C.
Conformity to EN 13831 standard.

CE 0045

| Code | Litres | Conn. | Precharge (bar) | | |
|---|---|---|---|---|---|
| **EV568080** | 80 | 1" | 2,5 | 1 | – |
| **EV568200** | 200 | 1 1/4" | 2,5 | 1 | – |

# ANTIFREEZE SAFETY DEVICE

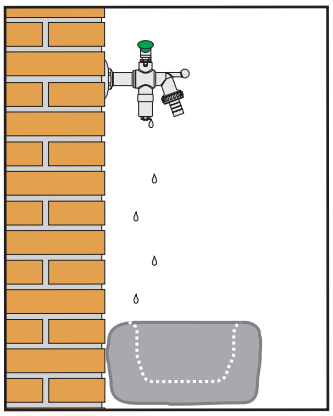
## 603
## ICECAL

Garden tap, ball type,
**with antifreeze safety device**.
Brass body. Chrome plated.
Stainless steel lever and fixing nut.
Hose connection for Ø 15 mm pipe.
Max. working pressure: 10 bar.
Ambient temperature range: -30–90 °C.
Opening temperature: 3 °C.
Closing temperature: 4 °C.

| Code | | | |
|---|---|---|---|
| **AFV603450** | 1/2″ M x 3/4″ M with hose connection | 1 | 10 |

### Function

The antifreeze safety device prevents ice build-up in domestic water circuits, avoiding possible damage to pipes in hydraulic and irrigation systems.
When the minimum intervention temperature is reached, it automatically opens so that a minimum quantity of water may flow toward the drain, enabling a small continuous inflow of water; this prevents the circuit from freezing.
A particular product has been developed by combining the antifreeze safety device with a garden tap ball type, specifically constructed for these installations.
The valve is fitted with ball with blow-out proof design, O-ring seal and packing gland; the control lever and fixing nut are made of stainless steel, for total resistance against corrosion in different climatic conditions.



## 603
## ICECAL®

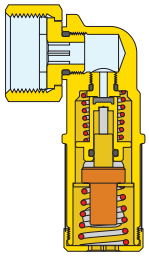
Antifreeze safety device.
**For solar thermal systems,**
**to protect the hot water storage**.
CR dezincification resistant alloy body.
Max. working pressure: 10 bar.
Ambient temperature range: -30–90 °C.
Opening temperature: 3 °C.
Closing temperature: 4 °C.

| Code | | | |
|---|---|---|---|
| **AFV603040** | 1/2″ F with nut | 1 | 50 |

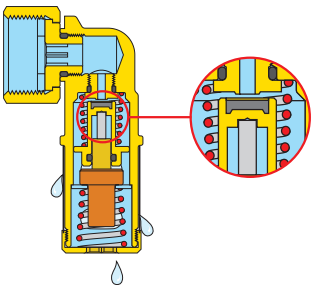
### Function

The antifreeze safety device prevents ice build-up in domestic water circuits, thereby avoiding potential damage to storage tanks and pipes
When the minimum ambient intervention temperature is reached, it automatically opens a minimum passage of water toward the drain, enabling a small continuous flow of water at the inlet; this prevents any risk of freezing.
When the ambient temperature increases or in the event of contact with warmer water, the opposite action occurs, causing the device to shut off and circuit normal operating conditions to be restored.

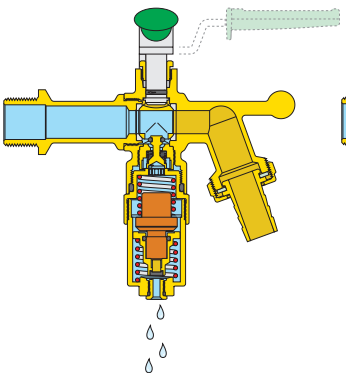
**Closed position**



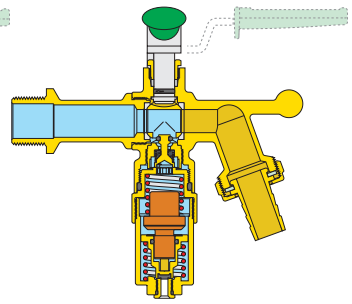
**Open position**



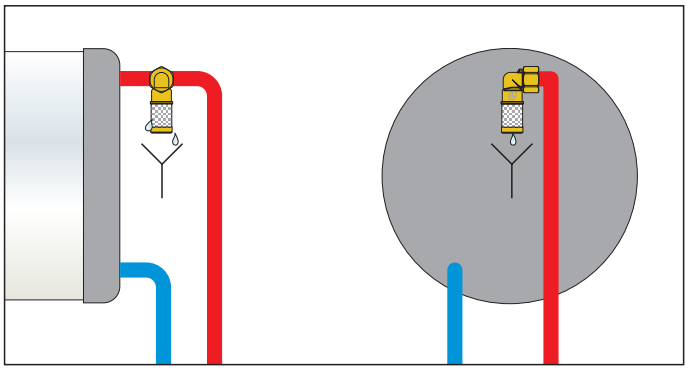
**Antifreeze safety device open**



**Antifreeze safety device closed**



**Application diagram of device 603 series on a domestic water circuit**



antifreeze group spare part,
chrome plated for code AFV603450.

| Code | | | |
|---|---|---|---|
| **AFF89046C** | | 1 | – |

## BACKFLOW PREVENTERS

Pb LOW LEAD

### 574

Controllable, reduced pressure zone backflow preventer.
**BA type**.
CR dezincification resistant alloy components "**LOW LEAD**".
PN 10. Male union connections.
Max. working temperature: 65 °C.
Discharge opening differential pressure to: 14 kPa.
**Certified to standard EN 12729**.
**Upstream of the backflow preventer is mandatory to install a strainer**.

SC0933-09

| Code | | | |
|---|---|---|---|
| **BF574600** | 1″ | 1 | – |
| **BF574700** | 1 1/4″ | 1 | – |
| **BF574800** | 1 1/2″ | 1 | – |

### 574

Controllable, reduced pressure zone backflow preventer.
**BA type**. Bronze body. PN 10. Male union connections.
Max. working temperature: 65 °C.
Discharge opening differential pressure to: 14 kPa.
**Certified to standard EN 12729**.
**Upstream of the backflow preventer is mandatory to install a strainer**.

SC0933-09

| Code | | | |
|---|---|---|---|
| **BF574900** | 2″ | 1 | – |

## BACKFLOW PREVENTERS WITH MULTIFUNCTION GEOMETRY

### 580

Backflow preventer
with multifunction geometry. **BA type**.
CR dezincification resistant alloy body.
Threaded union connections.
For linear installation on horizontal or vertical pipes.
Complete with strainer at the inlet.
Max. working pressure: 10 bar.
Max. working temperature: 65 °C.
**Certified to EN 12729 standard**.

| Code | | | |
|---|---|---|---|
| **BF580040** | 1/2″ M | 1 | 5 |
| **BF580050** | 3/4″ M | 1 | 5 |

## SAFETY RELIEF VALVES

### 312

Safety relief valve. M x Ø 15 compression end.
CR dezincification resistant alloy body.
With stainless steel seat.
Temperature range: 5–110 °C.

| Code | | | | |
|---|---|---|---|---|
| **DSV312407** | 1/2″ M x Ø 15 | 600 kPa green knob | 1 | 50 |
| **DSV312480** | 1/2″ M x Ø 15 | 8 bar | 1 | 50 |

### 314

Safety relief valve.
Male - female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
PN 10.
Temperature range: 5–110 °C.
Max. pressure gauge temperature: 90 °C.

| Code | | | | |
|---|---|---|---|---|
| **DSV314480** | 1/2″ | 8 bar | 1 | 50 |

## SAFETY RELIEF VALVES FOR SOLAR THERMAL SYSTEMS

### 253

Safety relief valve for solar thermal systems.
Brass body. Chrome plated.
Female connections. PN 10.
**Temperature range: -30–160 °C.**
**Max. percentage of glycol: 50 %.**
Oversized discharge outlet.
Discharge rating: 1/2″ - 50 kW;
3/4″ - 100 kW.
TÜV certified to TRD 721 - SV 100 § 7.7.
Settings: 2,5 - 3 - 4 - 6 - 8 - 10 bar.

www.tuv.com
ID 0000013604

| Code | | | | |
|---|---|---|---|---|
| **DSV253040** | 1/2″ F x 3/4″ F | 10 bar | 1 | 50 |
| **DSV253043** | 1/2″ F x 3/4″ F | 3 bar | 1 | 50 |
| **DSV253044** | 1/2″ F x 3/4″ F | 4 bar | 1 | 50 |
| **DSV253046** | 1/2″ F x 3/4″ F | 6 bar | 1 | 50 |
| **DSV253048** | 1/2″ F x 3/4″ F | 8 bar | 1 | 50 |

## SAFETY RELIEF VALVES FOR DOMESTIC WATER SYSTEMS

### 531

Safety relief valve
**for domestic water systems.**
Female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
Medium: water.
Temperature range: 5–95 °C.

www.tuv.com
ID 0000014996

| Code | | | | |
|---|---|---|---|---|
| **DSV531410** | 1/2″ x 3/4″ | 10 bar | 1 | 50 |
| **DSV531440** | 1/2″ x 3/4″ | 4 bar | 1 | 50 |
| **DSV531460** | 1/2″ x 3/4″ | 6 bar | 1 | 50 |
| **DSV531480** | 1/2″ x 3/4″ | 8 bar | 1 | 50 |
| **DSV531510** | 3/4″ x 1″ | 10 bar | 1 | 25 |
| **DSV531540** | 3/4″ x 1″ | 4 bar | 1 | 25 |
| **DSV531560** | 3/4″ x 1″ | 6 bar | 1 | 25 |
| **DSV531580** | 3/4″ x 1″ | 8 bar | 1 | 25 |

### 531

Safety relief valve
**for domestic water systems.**
Female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
Medium: water.
Temperature range: 5–95 °C.
Settings: 4 - 6 - 8 - 10 bar.

www.tuv.com
ID 0000014996

| Code | | | | | |
|---|---|---|---|---|---|
| **DSV531610** | 1″ | x 1 1/4″ | 10 bar | 1 | 25 |
| **DSV531640** | 1″ | x 1 1/4″ | 4 bar | 1 | 25 |
| **DSV531660** | 1″ | x 1 1/4″ | 6 bar | 1 | 25 |
| **DSV531680** | 1″ | x 1 1/4″ | 8 bar | 1 | 25 |
| **DSV531710** | 1 1/4″ | x 1 1/2″ | 10 bar | 1 | 10 |
| **DSV531740** | 1 1/4″ | x 1 1/2″ | 4 bar | 1 | 10 |
| **DSV531760** | 1 1/4″ | x 1 1/2″ | 6 bar | 1 | 10 |
| **DSV531780** | 1 1/4″ | x 1 1/2″ | 8 bar | 1 | 10 |

# TEMPERATURE AND PRESSURE GAUGES AND ACCESSORIES

## 688

**Temperature** gauge.
1/2″ central back connection.
With pocket.
Ø 80 mm.
Accuracy class: UNI 2.

| Code | Pocket length | °C | | |
|---|---|---|---|---|
| **GA688001** | 45 mm | 0–120 | 1 | 10 |

## 688

**Temperature** gauge.
1/2″ bottom connection.
With pocket.
Ø 80 mm.
Accuracy class: UNI 2.

| Code | Pocket length | °C | | |
|---|---|---|---|---|
| **GA688100** | 45 mm | 0–120 | 1 | 10 |

## 657

**Temperature** gauge fitting.
Temperature gauge 0–80 °C, Ø 40 mm.

| Code | | | |
|---|---|---|---|
| **GA657400** | 1/2″ M x 1/2″ F | 5 | – |

## 392

**Temperature** gauge fitting.
For distribution manifolds 592 and 350 series.
Temperature gauge 0–80 °C, Ø 40 mm.

| Code | | | | |
|---|---|---|---|---|
| **GA392600** | 1″ F x M | with PTFE seal | 1 | – |
| **GA392700** | 1 1/4″ F x M | without PTFE seal | 1 | – |

## 503

**Temperature/pressure** gauge.
1/2″ central back connection.
With shut-off pocket.
Ø 80 mm.
Accuracy class:
- temperature gauge UNI 2;
- pressure gauge UNI 2,5.

| Code | bar | °C | | |
|---|---|---|---|---|
| **GA503060** | 0–6 | 0–120 | 1 | 10 |

## 503

**Temperature/pressure** gauge.
1/2″ bottom connection.
With shut-off pocket.
Ø 80 mm.
Accuracy class:
- temperature gauge UNI 2;
- pressure gauge UNI 2,5.

| Code | bar | °C | | |
|---|---|---|---|---|
| **GA503160** | 0–6 | 0–120 | 1 | 20 |

## 557

**Pressure** gauge.
Bottom connection.
Accuracy class: UNI 2,5.
Temperature range: -20–90 °C.

| Code | bar | | Ø | | |
|---|---|---|---|---|---|
| **GA557706** | 0–6 | 3/8″ | 80 | 1 | – |

**Pressure** gauge.
Central back connection 1/4″.
Ø 62 mm.

| Code | | | |
|---|---|---|---|
| **GA593110** | 0–10 bar downstream | 1 | – |
| **GA593315** | 0–25 bar upstream | 1 | – |

## 689

**Flow** gauge.
3/8″ bottom connection.
Ø 80 mm.
Accuracy class: UNI 2,5.
Temperature range: -20–90 °C.

| Code | m w.g. | | |
|---|---|---|---|
| **GA689016** | 0–16 | 1 | 20 |

## 561

tech. broch. 01054

Automatic shut-off cock.
For automatic air vents 502. series.
PTFE seal on thread.
Max. working pressure: 10 bar.
Max. working temperature: 110 °C.

| Code | | | |
|---|---|---|---|
| **GA561400** | 1/2″ x 1/2″ M | 10 | – |


# 577 SERIES XF

The CALEFFI XF filter separates impurities in the system right from the first passage. Its large filtration surface and impurity separation upstream of the filter also minimises the problem of mesh clogging. System water is treated in three distinct steps: through an initial impurity separation mesh, using magnets located on the central stem and, finally, by passing through an outlet filter.CALEFFI XF continuously protects the generator and devices from any impurities that form in the hydraulic circuit. It can be adjusted for horizontal or vertical installation. Internal cleaning brushes mean that maintenance can be carried out without shutting off the device.

- • AUTOMATIC AIR VENTS
- • SAFETY RELIEF VALVES
- • FILLING GROUPS
- • EXPANSION VESSELS
- • MANIFOLDS
- • PUMPING STATION

## AUTOMATIC AIR VENTS

### 5025
### ROBOCAL

Automatic air vent.
In hot-stamped brass.
With automatic shut-off cock.
Max. working pressure: 10 bar.
Max. discharge pressure: 4 bar.
Max. working temperature: 110 °C.

WRAS APPROVED PRODUCT CERTIFICATION MARK

| Code | | | | |
|---|---|---|---|---|
| **AV502530** | 3/8″ M | | 10 | 50 |

### 5026
### ROBOCAL

Automatic air vent.
In hot-stamped brass.
Max. working pressure: 10 bar.
Max. discharge pressure: 6 bar.
Max. working temperature: 115 °C.

WRAS APPROVED PRODUCT CERTIFICATION MARK

| Code | | | | |
|---|---|---|---|---|
| **AV502630** | 3/8″ M | | 10 | 50 |
| **AV502640** | 1/2″ M | Without O-Ring seal | 10 | 100 |

### 5027
### ROBOCAL

Automatic air vent.
In hot-stamped brass.
With automatic shut-off cock.
Max. working pressure: 10 bar.
Max. discharge pressure: 6 bar.
Max. working temperature: 110 C.

WRAS APPROVED PRODUCT CERTIFICATION MARK

| Code | | | | |
|---|---|---|---|---|
| **AV502730** | 3/8″ M | | 10 | 100 |

### 5622

Anti-vacuum cap.
For automatic air vents
5026 and 5027 series.

| Code | | | | |
|---|---|---|---|---|
| **AV562200** | | | 100 | – |

## BALLSTOP

### 327
### BALLSTOP

Ball valve with built-in check valve
for heating systems.
Low head losses.
Max. working pressure: 16 bar.
Temperature range: 5–110 °C.

| Code | | | | |
|---|---|---|---|---|
| **BSV327400** | 1/2″ | butterfly handle | 10 | – |
| **BSV327500** | 3/4″ | butterfly handle | 10 | – |
| **BSV327600** | 1″ | lever handle | 4 | – |
| **BSV327700** | 1 1/4″ | lever handle | 4 | – |
| **BSV327800** | 1 1/2″ | lever handle | 2 | – |
| **BSV327900** | 2″ | lever handle | 1 | – |

# AUTOMATIC AIR VENTS

## 250

Consisting of:

- Automatic air vent for solar thermal systems.

Brass body. Chrome plated.
Max. working pressure: 10 bar.
Max. discharge pressure: 5 bar.
**Temperature range: -30–180 °C.**
**Max. percentage of glycol: 50 %.**

- Shut-off cock complete with seal.

Brass body. Chrome plated.
Max. working pressure: 10 bar.
**Temperature range: -30–200 °C.**
**Max. percentage of glycol: 50 %.**

WRAS APPROVED PRODUCT CERTIFICATION MARK

| Code | | | |
|---|---|---|---|
| **AV250031** | 3/8″ M without cock | 1 | 25 |

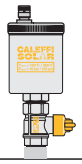
## 250

Shut-off cock complete with seal.
Brass body. Chrome plated.
Max. working pressure: 10 bar.
**Temperature range: -30–200 °C.**
**Max. percentage of glycol: 50 %.**

WRAS APPROVED PRODUCT CERTIFICATION MARK

| Code | | | |
|---|---|---|---|
| **AV250300** | 3/8″ M x 3/8″ F - batterfly handle | 1 | 10 |

**The automatic air vent must be shut off after the system has been filled.**



## 251 DISCALAIR®

High-performance automatic air vent for solar thermal systems.
Brass body. Chrome plated.
Female connections.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
**Temperature range: -30–160 °C.**
**Max. percentage of glycol: 50 %.**

| Code | | | |
|---|---|---|---|
| **AV251004** | 1/2″ F | 1 | 10 |

## 504 AERCAL

Automatic air vent for radiators.
In hot-stamped brass.
Chrome plated.
With hygroscopic safety cap.
Max. working pressure: 10 bar.
Max. discharge pressure: 2,5 bar.
Max. working temperature: 100 °C.

| Code | | | |
|---|---|---|---|
| **AV504401** | 1/2″ M | 1 | 25 |

## 501 MAXCAL

Automatic air vent for heating, cooling and refrigeration.
High discharge capacity.
Brass body and cover,
stainless steel internal components.
Max. working pressure: 16 bar.
Max. discharge pressure: 6 bar.
Temperature range: -20–120 °C.

WRAS APPROVED PRODUCT CERTIFICATION MARK

| Code | | | |
|---|---|---|---|
| **AV501500** | 3/4″ F x 3/8″ F | 1 | 5 |

## 5022 VALCAL

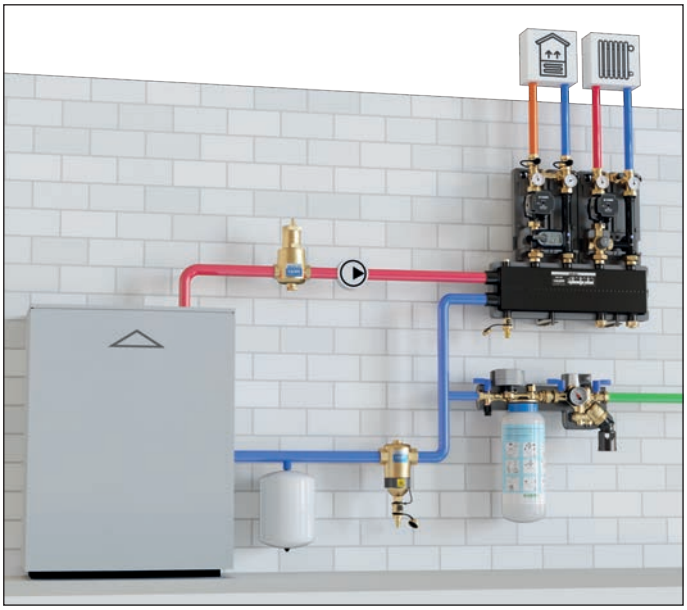
Automatic air vent.
In hot-stamped brass.
Chrome plated.
Max. working pressure: 10 bar.
Max. discharge pressure: 4 bar.
Max. working temperature: 120 °C.

| Code | | | |
|---|---|---|---|
| **AV502241** | 1/2″ M | 1 | 25 |

# DEAERATORS FOR MEDIUM SYSTEMS

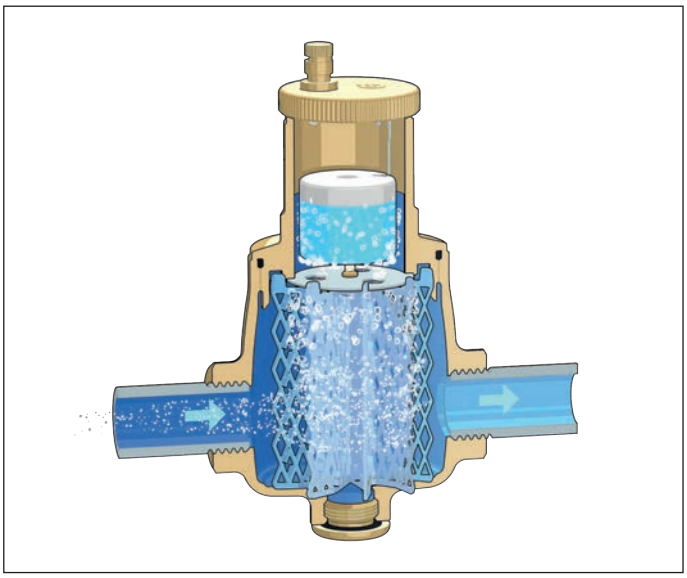
## 551
## DISCAL®

Deaerator. Brass body.
**Female connections**.
**With drain**.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: 0–110 °C.



| Code | | | |
|---|---|---|---|
| **AV551005** | 3/4″ F | 1 | 6 |
| **AV551006** | 1″ F | 1 | 6 |
| **AV551007** | 1 1/4″ F | 1 | 6 |
| **AV551008** | 1 1/2″ F | 1 | 6 |
| **AV551009** | 2″ F | 1 | – |

Insulation for deaerators
DISCAL® 551 series.



| Code | Use | | |
|---|---|---|---|
| **CBN551005** | AV551005-AV551006 | 1 | – |
| **CBN551007** | AV551007-AV551008 | 1 | – |
| **CBN551009** | AV551009 | 1 | – |

## 551
## DISCAL*SLIM*®

Deaerator. Technopolymer body.
**Female connections**.
**Adjustable for horizontal and vertical pipes**.
With hygroscopic safety cap.
Max. working pressure: 3 bar.
Max. working temperature: 110 °C.
PATENT PENDING.

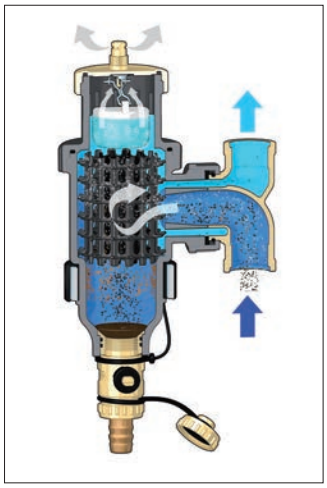
| Code | | | |
|---|---|---|---|
| **AV551805** | 3/4″ F | 1 | 10 |
| **AV551806** | 1″ F | 1 | 10 |

# Deaerators-Dirt separators

These are made by assembling, in a single product, a deaerator and a dirt separator. A single product can therefore be used both to separate air and to separate the impurities present in the system water.

**Operating principle**

The device makes use of the combined action of the deaerator and the dirt separator. The internal element creates swirling movements that facilitate the release of micro-bubbles and the subsequent creation of bubbles that then rise to the top of the device, from which they are evacuated by means of an automatic air vent with float. Moreover, the impurities in the water, striking against the surfaces of the internal element, are separated and fall to the bottom of the valve body.
Deaerators-dirt separators fitted with a magnet offer greater efficiency in the separation and collection of ferrous impurities. The impurities are captured inside the dirt separator body by the strong magnetic field created by the magnets inserted in the special outer ring.
With respect to the solutions that call for the installation of separate deaerators and dirt separators, the deaerators-dirt separators present the following advantages: they take up less space and require a smaller number of connections, and are therefore ideal for systems where it is not possible to install the two separate components. Nevertheless, two separate devices will always guarantee a higher performance level.



**Sizing**

Sizing a deaerator-dirt separator mainly depends on the speed at which the medium flows through the device, since an excessive speed would not allow correct separation of air and impurities.

As is known, the medium flow speed depends on the flow rate and the cross section. Remaining within the speed limits therefore means not exceeding certain **maximum** permissible **flow rates** for each size.

## DEAERATORS-DIRT SEPARATORS WITH MAGNET

### 5464
### DISCALDIRTMAG

Deaerator-dirt separator **with magnet**.
Technopolymer body.
**Female connections**.
**Adjustable for horizontal and vertical pipes**.
With hygroscopic safety cap.
Drain cock with hose connection.
Max. working pressure: 3 bar.
Temperature range: 0–90 °C.

PCT INTERNATIONAL APPLICATION PENDING

| Code | | | |
|---|---|---|---|
| **ADV546405** | 3/4″ | 1 | 5 |
| **ADV546406** | 1″ | 1 | 5 |
| **ADV546407** | 1 1/4″ | 1 | 5 |

Insulation
for deaerators-dirt separators 5461 series.

| Code | Use | | |
|---|---|---|---|
| **ADVCBN546002** | ADV546005-ADV546006-ADV546105-ADV546106 | 1 | – |
| **ADVCBN546007** | ADV546007-ADV546107 | 1 | – |

### 5461
### DISCALDIRTMAG

Deaerator-dirt separator **with magnet**.
Brass body.
**Female connections**.
Drain cock with hose connection.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: 0–110 °C.
Particle separation rating down to 5 µm.

PCT INTERNATIONAL APPLICATION PENDING

| Code | | | |
|---|---|---|---|
| **ADV546105** | 3/4″ | 1 | – |
| **ADV546106** | 1″ | 1 | – |
| **ADV546107** | 1 1/4″ | 1 | – |

### 5461
### DISCALDIRTMAG

Deaerator-dirt separator **with magnet**.
Epoxy resin coated steel body.
**Female union connections**.
**With insulation**.
Drain cock with hose connection.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: 0–100 °C.
Particle separation rating down to 5 µm.

PCT INTERNATIONAL APPLICATION PENDING

| Code | | | |
|---|---|---|---|
| **ADV546118** | 1 1/2″ | 1 | – |
| **ADV546119** | 2″ | 1 | – |

## SAFETY RELIEF VALVES

### 311

Safety relief valve.
Female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
PN 10.
Temperature range: 5–110 °C.

| Code | | | | |
|---|---|---|---|---|
| **DSV311430** | 1/2″ | 3 bar | 1 | 50 |
| **DSV311440** | 1/2″ | 4 bar | 1 | 50 |
| **DSV311460** | 1/2″ | 6 bar | 1 | 50 |
| **DSV311470** | 1/2″ | 7 bar | 1 | 50 |
| **DSV311480** | 1/2″ | 8 bar | 1 | 50 |
| **DSV311530** | 3/4″ | 3 bar | 1 | 50 |

### 312

Safety relief valve.
Male - female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
PN 10.
Temperature range: 5–110 °C.

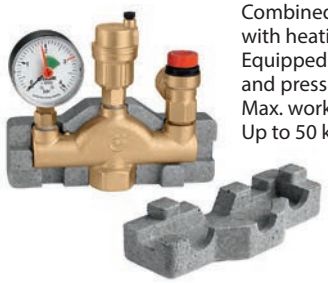
| Code | | | | |
|---|---|---|---|---|
| **DSV312430** | 1/2″ | 3 bar | 1 | 50 |

### 527 EST

Safety relief valve.
Female connections.
Discharge overpressure 10 %.
Closing differential 20 %.
PN 10.
Temperature range: 5–110 °C.

| Code | | | | |
|---|---|---|---|---|
| **DSV527630** | 1″ x 1 1/4″ | 3 bar | 1 | 10 |
| **DSV527730** | 1 1/4″ x 1 1/2″ | 3 bar | 1 | 10 |

## INSTRUMENT HOLDER



### 302

Combined air separator
with heating system accessories.
Equipped with air vent, safety relief valve
and pressure gauge.
Max. working temperature: 110 °C.
Up to 50 kW.

| Code | | | |
|---|---|---|---|
| **HS302631** | 1″ 3 bar with pre-formed insulation | 1 | 10 |

### 336

Assembled instrument holder for
heating systems.
Equipped with air vent, safety
relief valve, pressure gauge
and automatic shut-off cock for
expansion vessel.
Max. working temperature: 110 °C.
Up to 50 kW.

| Code | | | |
|---|---|---|---|
| **HS336630** | 3/4″ 3 bar with automatic shut-off cock | 1 | 5 |

## BOILER FILLING LOOP

### 3006

filling loop set, manual.
Complete with:
- n. 2 **Cod. BV15M**
- n. 1 **Cod. FW882**

| Code | | |
|---|---|---|
| **HS300600** | 1 | 10 |

### 3006

filling loop set, automatic.
Complete with:
- n. 1 **Cod. 553540**
- n. 1 **Cod. FW8822**
- n. 1 **Cod. BV15M**

| Code | | |
|---|---|---|
| **HS301600** | 1 | 10 |

## AUTOMATIC COMPACT CHARGING UNIT

### 580011

Automatic compact charging unit to EN 1717 standard with **BA type** backflow preventer, shut-off valve, strainer, pressure test ports for controlling the backflow preventer, pressure reducing valve.
For horizontal or vertical installations.
Brass body.

**With insulation**.
Filling unit setting pressure range: 0,8–4 bar.
Max. working pressure: 10 bar.
Max. working temperature: 65 °C.
Backflow preventer certified to EN 12729 standard.
Pressure reducing valve certified to EN 1567 standard.
PATENT.

| Code | | | |
|---|---|---|---|
| **HS580011** | 1/2″ | 1 | 5 |

## AUTOMATIC FILLING UNITS

### 553

Pre-adjustable automatic filling unit, anti-scale, inspectionable, with pressure setting indicator, manual cock, strainer, check valve.
Setting pressure range: 0,2–4 bar.
Max. inlet pressure: 16 bar.
Max. working temperature: 65 °C.

| Code | | | |
|---|---|---|---|
| **HS553540** | 1/2″ with pressure gauge connection | 1 | 10 |
| **GA557306** | 1/2″ with pressure gauge | 1 | 10 |

## ACCESSORIES FOR BOILERS

### 538

Drain cock with hose connection and cap.
Max. working pressure: 10 bar.
Max. working temperature: 110 °C.

| Code | | | |
|---|---|---|---|
| **MA538400** | 1/2″ M | 1 | 100 |

### 337

Drain cock.
**Adjustable outlet**.
PTFE seal on thread.
Max. working pressure: 6 bar.
Max. working temperature: 85 °C.
Medium: water, glycol solutions.
Max. percentage of glycol: 30 %.

| Code | | | |
|---|---|---|---|
| **AV337**121 | 1/4″ | 50 | 200 |

## EXPANSION VESSELS FOR HEATING SYSTEMS

### 556

Welded expansion vessel,
for heating systems, EC certification.
Diaphragm membrane.
Max. working pressure: 6 bar.
System working temperature range: -10–120 °C.
Membrane working temperature range: -10–70 °C.
Max. percentage of glycol: 50 %.
Conformity to EN 13831 standard.

CE 0045

| Code | Litres | Conn. | Precharge (bar) | | |
|---|---|---|---|---|---|
| **EV556008** | 8 | 3/4″ | 1,5 | 1 | – |
| **EV556012** | 12 | 3/4″ | 1,5 | 1 | – |
| **EV556018** | 18 | 3/4″ | 1,5 | 1 | – |
| **EV556025** | 25 | 3/4″ | 1,5 | 1 | – |

### 556

Welded expansion vessel,
for heating systems, EC certification.
Diaphragm membrane.
Max. working pressure: 6 bar.
System working temperature range: -10–120 °C.
Membrane working temperature range: -10–70 °C.
Max. percentage of glycol: 50 %.
Conformity to EN 13831 standard.

CE 0045

| Code | Litres | Conn. | Precharge (bar) | | |
|---|---|---|---|---|---|
| **EV556050** | 50 | 3/4″ | 1,5 | 1 | – |
| **EV556080** | 80 | 1″ | 1,5 | 1 | – |
| **EV556140** | 140 | 1″ | 1,5 | 1 | – |
| **EV556200** | 200 | 1″ | 1,5 | 1 | – |
| **EV556500** | 500 | 1″ | 1,5 | 1 | – |

## SHUT-OFF COCK FOR EXPANSION VESSELS

### 558

Automatic shut-off cock,
for expansion vessels.
**For domestic water circuit**.
Max. working pressure: 10 bar.
Max. working temperature: 110 °C.

| Code | | | |
|---|---|---|---|
| **EV558500** | 3/4″ | 1 | 50 |

## FLOW SWITCHES

### 626

Flow switch.
Suitable for 1″ to 8″ pipes.
250 V (AC) - 15 (5) A.
Max. working pressure: 10 bar.
Temperature range: -30–120 °C.
Protection class: IP 54.

| Code | | | |
|---|---|---|---|
| **HS626600** | 1″ | 1 | 5 |
| **HS626009** | set of blades | 1 | – |

## THERMOSTATS

### 621

Adjustable contact thermostat.
Temperature range: 20–90 °C.
Protection class: IP 20.

| Code | | |
|---|---|---|
| **TH621000** | 1 | 10 |

### 622

Adjustable immersion thermostat.
Temperature range: 0–90 °C.
With 1/2″ connection pocket.
Protection class: IP 40.

| Code | | |
|---|---|---|
| **TH622000** | 1 | 10 |

## HYDRAULIC SEPARATOR

### 548

Hydraulic separator.
Epoxy resin coated steel body.
**With pre-formed insulation**.
Female union connections.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.
Complete with:
air vent with automatic shut-off cock,
drain cock.

| Code | | Max. recommended flow rate m³/h | | |
|---|---|---|---|---|
| **HS548006** | 1″ | 2,5 | 1 | – |
| **HS548007** | 1 1/4″ | 4 | 1 | – |
| **HS548008** | 1 1/2″ | 6 | 1 | – |
| **HS548009** | 2″ | 8,5 | 1 | – |

## MANIFOLD FOR CENTRAL HEATING SYSTEM

### 550 2

Manifold for heating and cooling systems.
Steel body. **With pre-formed insulation**.
1 1/4″ M main connections.
Outlet connections:
1 1/2″ F with captive nut.
Max. working pressure: 10 bar.
Temperature range: 5–110 °C.

| Code | Outlet centre distance | | |
|---|---|---|---|
| **HS550020** | 125 mm | 1 | – |

### 550 3

Manifold for heating and cooling systems.
Steel body. **With pre-formed insulation**.
1 1/2″ M main connections.
Outlet connections:
1 1/2″ F with captive nut.
Max. working pressure:
10 bar.
Temperature range:
5–110 °C.

| Code | Outlet centre distance | | |
|---|---|---|---|
| **HS550030** | 125 mm | 1 | – |

Insulation for manifolds
for central heating system 550 series.
For heating and cooling systems.

| Code | | | |
|---|---|---|---|
| **HSCBN550020** | for manifold 2 | 1 | – |
| **HSCBN550030** | for manifold 3 | 1 | – |

# DIRECT SUPPLY, THERMOSTATIC AND MOTORISED REGULATING UNITS

## DN 25

### 165

Direct supply unit for **heating and cooling systems**.
With pre-formed insulation.
Max. working pressure: 10 bar.
Primary inlet temperature range: 5–100 °C.
Supply: 230 V - 50/60 Hz.
System side connection: 1″ F.
Boiler side connection: 1 1/2″ M.
**Outlet centre distance: 125 mm**

**RH to LH convertible**

| Code | Pump | Flow rate with residual head 4 m w.g. | | |
|---|---|---|---|---|
| **HS165640HE3** | PARA 25/7 | 1,6 m³/h | 1 | – |

### 166

Thermostatic regulating unit for **heating systems.**
With pre-formed insulation.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C
Supply: 230 V - 50/60 Hz.
System side connection: 1″ F.
Boiler side connection: 1 1/2″ M.
**Outlet centre distance: 125 mm**

**RH to LH convertible**

| Code | Pump | Temperature adjustment range | Flow rate with residual head 4 m w.g. | | |
|---|---|---|---|---|---|
| **HS166600HE3** | PARA 25/7 | 25–50 °C | 1,4 m³/h | 1 | – |

### 167

Motorised regulating unit for **heating and cooling systems**.
With pre-formed insulation.
Regulation with sector three-way valve.
Max. working pressure: 10 bar.
Primary inlet temperature range: 5–100 °C.
System side connection: 1″ F.
Boiler side connection: 1 1/2″ M.
**Outlet centre distance: 125 mm**

**RH to LH convertible**

**Actuator with 0(2)–10 V control signal**
Supply: 24 V.
Operating time: 75 s (90° rotation).
Feedback signal: 0–10 V.
Can be connected to digital regulators code 161010 (for actuator electric supply use 230 V / 24 V transformer).

| Code | Pump | Flow rate with residual head 4 m w.g. | | |
|---|---|---|---|---|
| **HS167654HE3** | PARA 25/7 | 1,4 m³/h | 1 | – |

## DN 32

### 165

Direct supply unit for **heating and cooling systems**.
With pre-formed insulation.
Max. working pressure: 10 bar.
Primary inlet temperature range: 5–100 °C.
Supply: 230 V - 50/60 Hz.
System side connection: 1 1/4″ F.
Boiler side connection: 1 1/2″ M.
**Outlet centre distance: 125 mm**

**RH to LH convertible**

| Code | Pump | Flow rate with residual head 4 m w.g. | | |
|---|---|---|---|---|
| **HS165641HE4** | PARA 25/9 | 2,7 m³/h | 1 | – |

### 166

Thermostatic regulating unit for **heating systems.**
With pre-formed insulation.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C
Supply: 230 V - 50/60 Hz.
System side connection: 1 1/4″ F.
Boiler side connection: 1 1/2″ M.
**Outlet centre distance: 125 mm**

**RH to LH convertible**

| Code | Pump | Temperature adjustment range | Flow rate with residual head 4 m w.g. | | |
|---|---|---|---|---|---|
| **HS166601UPM** | UPML 25-105 | 25–50 °C | 2,4 m³/h | 1 | – |

### 167

Motorised regulating unit for **heating and cooling systems**.
With pre-formed insulation.
Regulation with sector three-way valve.
Max. working pressure: 10 bar.
Primary inlet temperature range: 5–100 °C.
System side connection: 1 1/4″ F.
Boiler side connection: 1 1/2″ M.
**Outlet centre distance: 125 mm**

**RH to LH convertible**

**Actuator with 0(2)–10 V control signal (see code 167**654HE3)

| Code | Pump | Flow rate with residual head 4 m w.g. | | |
|---|---|---|---|---|
| **HS167664HE4** | PARA 25/9 | 2,2 m³/h | 1 | – |

## ACCESSORIES FOR DIRECT SUPPLY UNIT

### 165

Mounting bracket in stainless steel for units 165, 166 and 167 series.

| Code | | |
|---|---|---|
| **HS165**001 | 1 | – |

### 6370

Actuator for unit 167 series.
Supply: 230 V - 50 Hz or 24 V.
Control signal:
637042: 3 points,
637044: 0(2)–10 V, 0(4)–20 mA, 0–5 V, 5–10 V.
Power consumption: 637042: 3 VA, 637044: 2 W.
Protection class: IP 44.
Rotation 90°.
Operating time: 150 s (code 637044 - 75 s).
Ambient temperature range: 0–55 °C.
Storage temperature range: -10–70 °C.
Supply cable length: 1,5 m.

| Code | Tension V | Control signal | Actuator torque (N·m) | | |
|---|---|---|---|---|---|
| **HS637042** | 230 | 3 points | 5 | 1 | – |

Bag with insulating inserts for air conditioning operating mode.

| Code | | |
|---|---|---|
| **F0001773** | 1 | – |

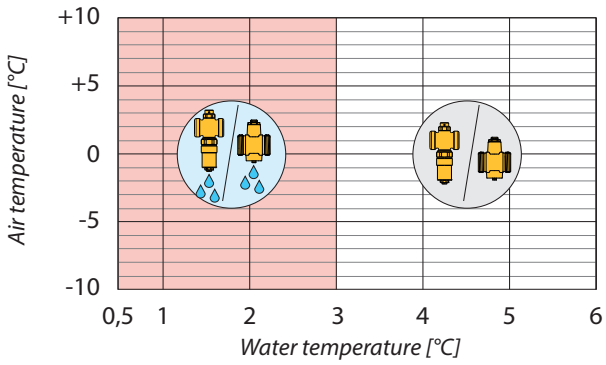
## ANTIFREEZE PROTECTION

### 108 iStop®

Antifreeze valve. Brass body.
Max. working pressure: 10 bar.
Ambient temperature range: -30–60 °C.
Opening temperature: 3 °C.
Closing temperature: 4 °C.

| Code | | Working temperature range | | |
|---|---|---|---|---|
| **HS108602** | 1″ | 0–90 °C | 1 | 25 |
| **HS108702** | 1 1/4″ | 0–90 °C | 1 | 20 |

**Function**
The antifreeze valve 108 series allows drainage of the medium in the circuit when the circuit temperature reaches an average value of 3 °C.




## MOTORISED THREE-WAY BALL VALVES

### 6443

Motorised three-way diverter valve.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5–110 °C.

**Equipped with actuator with 3-contact control**.
**With auxiliary microswitch**.
Supply: 230 V (AC) or 24 V (AC).
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–55 °C.
Protection class: IP 54.
**Operating time: 10 s (rotation 90°)**.
Cable length: 100 cm.
PATENT.

| Code | | Supply voltage V | Kv (m³/h) | Power consumption (VA) | | |
|---|---|---|---|---|---|---|
| **ZV644366** | 1″ | 230 | 9,0 | 4 | 1 | 5 |

### 638

Motorised three-way ball valve for high flow rates.
**With auxiliary microswitch**.
Supply: 230 V (AC) or 24 V (AC).
Max. working pressure: 16 bar.
Max. Δp: 10 bar.
Temperature range: -10–110 °C.
Ambient temperature range: -10–55 °C.
Power consumption: 6 VA.
Auxiliary microswitch contact rating: 6 (2) A - 230 V (AC).
Protection class: IP 65.
Operating time: 50 s (90° rotation).
(**90° rotation - with "T" drilling - reduced bore**).

| Code | | Actuator torque (N·m) | Supply voltage V | Kv (m³/h) | | |
|---|---|---|---|---|---|---|
| **ZV638173** | 1 1/4″ | 15 | 230 | 24,7 | 1 | – |

## BALANCING VALVE WITH FLOW METER

### 132

Balancing valve with flow meter.
Direct reading of flow rate.
Brass valve body and flow meter.
Ball valve for flow rate adjustment.
Graduated scale flow meter with magnetic movement flow rate indicator.

**With insulation**.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.
Max. percentage of glycol: 50 %.
PATENT.

| Code | | Flow rate range (l/min) | | |
|---|---|---|---|---|
| **HS132402** | 1/2″ | 2– 7 | 1 | 5 |
| **HS132512** | 3/4″ | 5– 13 | 1 | 5 |
| **HS132522** | 3/4″ | 7– 28 | 1 | 5 |
| **HS132602** | 1″ | 10– 40 | 1 | 5 |
| **HS132702** | 1 1/4″ | 20– 70 | 1 | 5 |
| **HS132802** | 1 1/2″ | 30–120 | 1 | 5 |
| **HS132902** | 2″ | 50–200 | 1 | 5 |

## DIFFERENTIAL BY-PASS VALVES

### 519

Differential by-pass valve, adjustable with graduated scale.
Max. working pressure: 10 bar.
Temperature range: 0–110 °C.
Max. percentage of glycol: 30 %.

| Code | | Setting range m w.g. | | |
|---|---|---|---|---|
| **DBV519500** | 3/4″ | 1–6 | 1 | 50 |
| **DBV519700** | 1 1/4″ | 1–6 | 1 | 10 |

## DIRT SEPARATOR IN TECHNOPOLYMER WITH MAGNET

### 5453
### DIRTMAG®

Dirt separator with **shut-off valves and magnet**.
Technopolymer body.
**Female connections**.
**Adjustable for horizontal, vertical or 45° pipes**.
Drain cock with hose connection.
Max. working pressure: 3 bar.
Temperature range: 0–90 °C.

| Code | | Max recommended flow rate m³/h | | |
|---|---|---|---|---|
| **HS545346** | 1″ | 1,3 | 1 | 5 |

## SEMI-AUTOMATIC SELF-CLEANING MAGNETIC FILTER

### 577
### CALEFFI XF

Semi-automatic self-cleaning magnetic filter.
Technopolymer body.
**Female connections.**
**Adjustable for horizontal and vertical pipes**.
Drain cock with hose connection.

Max. working pressure: 3 bar.
Temperature range: 0–90 °C.
Mesh sized Ø = 0,16 mm.

| Code | | | |
|---|---|---|---|
| **HS577700** | 1 1/4″ | 1 | - |

### 577
### CALEFFI XF

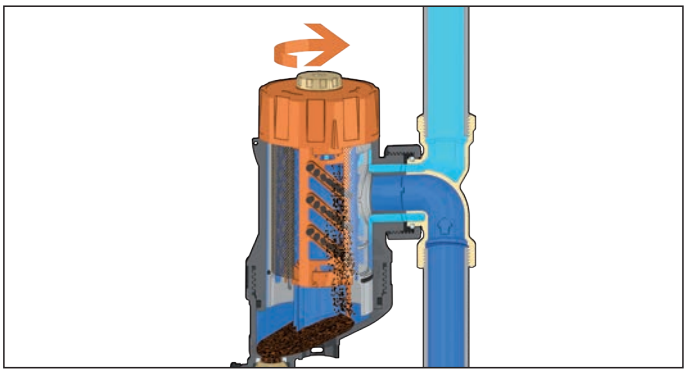
Semi-automatic self-cleaning magnetic filter **complete with by-pass**.
Technopolymer body.
**Female connections.**
**Adjustable for horizontal and vertical pipes**.
Drain cock with hose connection.

Max. working pressure: 3 bar.
Temperature range: 0–90 °C.
Mesh sized Ø = 0,16 mm.

| Code | | | |
|---|---|---|---|
| **HS577800** | 1 1/2″ | 1 | - |
| **HS577900** | 2″ | 1 | - |

**Cleaning the filter mesh**

To clean the CALEFFI XF filter with the circulator stationary, there is no need to disassemble the component because it contains a mechanism with brushes to clean the filter mesh.



# HIGH-EFFICIENCY DEAERATOR FOR HEAT PUMP SYSTEMS

## 5516
## CALEFFI HED®

High-efficiency deaerator.
Technopolymer body.
**Adjustable for horizontal, vertical and angled installations.**
With hygroscopic safety cap.
Max. working pressure: 3 bar.
Temperature range: 0–90 °C.
PATENT PENDING.

PCT INTERNATIONAL APPLICATION PENDING

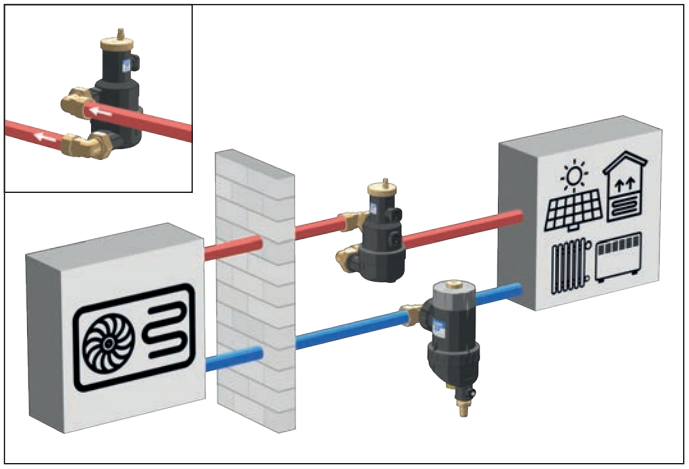
### Threaded connections

| Code | | | |
|---|---|---|---|
| **AV5516**06 | 1″ F | 1 | - |
| **AV5516**07 | 1 1/4″ F | 1 | - |
| **AV5516**17 | 1 1/4″ M | 1 | - |

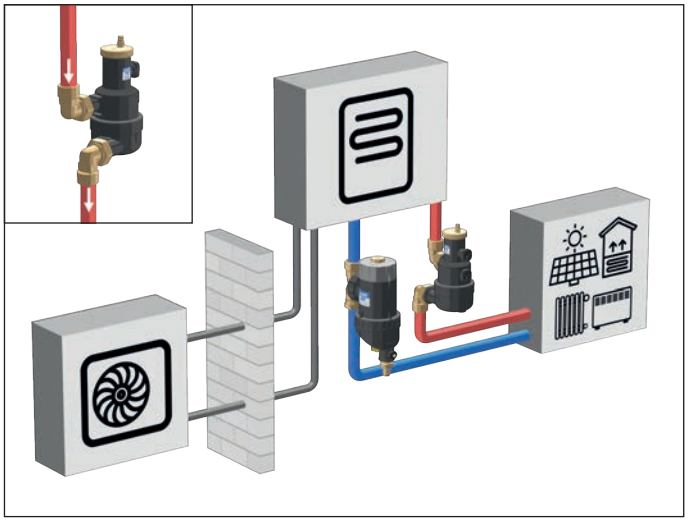
Insulation
for high-efficiency deaerators.

| Code | Use | | |
|---|---|---|---|
| **CBN551602** | 551606/607 | 1 | – |

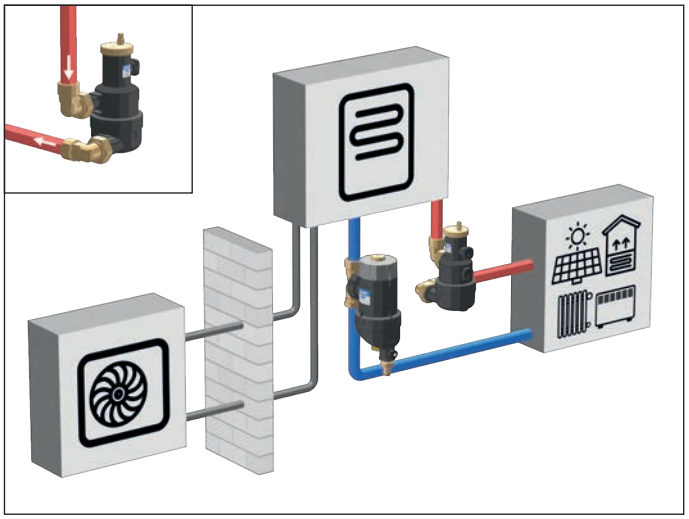
### Horizontal installation



### Vertical installation



### Angled installation



## THERMOSTATIC CONTROL HEADS

### 200

Thermostatic control head
for designer heating system valves.
Built-in sensor with liquid-filled element.
For valves 4001, 4003, 4004 and 3380 series.
**High chrome finish**.
Graduated scale from ❄ to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C.
With adapter.

| Code | | |
|---|---|---|
| **RV200013** | 1 | 10 |

### 203

Thermostatic control head for thermostatic and convertible radiator valves;
with contact probe,
for medium temperature limiting.
For valves 220, 221, 222, 223, 224, 225, 226, 227, 338, 339, 401, 402 and 455 series.
Pre-set temperature scale.
Capillary length: 2 m.
With adapter.

| Code | Temperature range | | |
|---|---|---|---|
| **RV203502** | 20–50 °C | 1 | 25 |
| **RV203702** | 40–90 °C | 1 | – |

### 205

Thermostatic control head
for designer heating system valves.
Built-in sensor with liquid-filled element.
For valves 4001, 4003, 4004 and 3380 series.
**White colour**.
Graduated scale from ❄ to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C.
With adapter.

| Code | | |
|---|---|---|
| **RV205000** | 1 | 10 |

### 209

Tamper-proof anti-theft cap for use in public places.
For thermostatic control heads 200 series.
**High chrome colour**.
To be used with special allen key code RV209T.

| Code | | |
|---|---|---|
| **RV209000** | 1 | 10 |

### 209

Special allen key for tamper-proof anti-theft cap.
To be used with tamperproof cap 209 series.

| Code | | |
|---|---|---|
| **RV2**09T | 1 | 10 |

## THERMOSTATIC RADIATOR VALVES

### 224

Reverse thermostatic radiator valve
fitted for thermostatic and electronic control heads, thermo-electric actuators.
Chrome plated. For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

| Code | | Kvs (m³/h)* | | |
|---|---|---|---|---|
| **RV224402** | 1/2″ | 1,39 | 1 | 20 |

### 401

Angled convertible radiator valve
fitted for thermostatic control heads and thermo-electric actuators.
Chrome plated. For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

| Code | | | Kv (m³/h) | | |
|---|---|---|---|---|---|
| **RV401402** | 1/2″ | | 2,70 | 10 | 50 |
| **RV401500** | 3/4″ | without rubber seal | 3,36 | 5 | 25 |

### 402

Straight convertible radiator valve
fitted for thermostatic control heads and thermo-electric actuators.
Chrome plated. For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

| Code | | | Kv (m³/h) | | |
|---|---|---|---|---|---|
| **RV402402** | 1/2″ | | 1,79 | 10 | 50 |
| **RV402500** | 3/4″ | | 2,58 | 5 | 25 |
| **RV402603** | 1″ | without rubber seal | 4,43 | 5 | 25 |

### 431

Angled lockshield valve.
Chrome plated. For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

| Code | | | Kv (m³/h) fully open | | |
|---|---|---|---|---|---|
| **RV431402** | 1/2″ | | 3,99 | 10 | 50 |
| **RV431503** | 3/4″ | without rubber seal | 4,52 | 5 | 25 |

### 432

Straight lockshield valve.
Chrome plated. For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

| Code | | | Kv (m³/h) fully open | | |
|---|---|---|---|---|---|
| **RV432402** | 1/2″ | | 2,17 | 10 | 50 |
| **RV432503** | 3/4″ | without rubber seal | 2,58 | 5 | 25 |
| **RV432603** | 1″ | without rubber seal | 4,81 | 5 | 25 |

# RADIATOR VALVE SET

## 338

Angled convertible radiator valve
fitted for thermostatic control heads
and thermo-electric actuators.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

## 339

Straight convertible radiator valve
fitted for thermostatic control heads
and thermo-electric actuators.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Caleffi project valve kit, chrome **(Cu)**.
Complete with:
- **Cod. RV200013**
- **Cod. RV339402**
- **Cod. RV437115**

| Code | | |
|---|---|---|
| **RV338040C** | 1 | – |

Caleffi radiator valve, straight **(Cu)**.
Complete with:
- **Cod. RV339402**
- **Cod. RV447015**

| Code | | |
|---|---|---|
| **RV339402C** | 1 | – |

Caleffi project valve kit, chrome **(PeX)**.
Complete with:
- **Cod. RV200013**
- **Cod. RV338040**
- **Cod. RV681124**

| Code | | |
|---|---|---|
| **RV338040P** | 1 | – |

Caleffi radiator valve, straight **(PeX)**.
Complete with:
- **Cod. RV339402**
- **Cod. RV681024**

| Code | | |
|---|---|---|
| | 1 | – |

# RADIATOR VALVE SET

## 227

Reverse thermostatic radiator valve
fitted for thermostatic and electronic control heads, thermo-electric actuators.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Caleffi radiator valve, reverse angle **(Cu)**.
Complete with:
- **Cod. RV227402**
- **Cod. RV447015**

| Code | | |
|---|---|---|
| **RV227402C** | 1 | – |

Caleffi radiator valve, reverse angle **(PeX)**.
Complete with:
- **Cod. RV227402**
- **Cod. RV681024**

| Code | | |
|---|---|---|
| **RV227402P** | 1 | – |

Caleffi radiator valve set, reverse angle **(Cu)**.
Complete with:
- **Cod. RV205000**
- **Cod. RV227402**
- **Cod. RV342402**
- **Cod. RV447015**
- **Cod. *RV449800**
- **Cod. *RVP**

| Code | | |
|---|---|---|
| **RAVKCR** | 1 | – |

Caleffi radiator valve set, reverse angle **(PeX)**.
Complete with:
- **Cod. RV205000**
- **Cod. RV227402**
- **Cod. RV342402**
- **Cod. RV681024**
- **Cod. *RV449800**
- **Cod. *RVP**

| Code | | |
|---|---|---|
| **RAVKPR** | 1 | – |

## 224

Reverse thermostatic radiator valve
fitted for thermostatic and electronic control heads, thermo-electric actuators.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Caleffi radiator valve set, 15mm reverse angle.
Complete with:
- **Cod. RV205000**
- **Cod. RV224402**
- **Cod. RV431402**
- **Cod. *RV449800**
- **Cod. *RVP**

| Code | | |
|---|---|---|
| **RAVKSR** | 1 | – |

## 342

Angled lockshield valve.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Caleffi lockshield valve, angle m/m **(Cu)**.
Complete with:
- **Cod. RV342402**
- **Cod. RV447015**

| Code | | |
|---|---|---|
| **RV342402C** | 1 | – |

Caleffi lockshield valve, angle m/m **(PeX)**.
Complete with:
- **Cod. RV342402**
- **Cod. RV681024**

| Code | | |
|---|---|---|
| **RV342402P** | 1 | – |

## 343

Straight lockshield valve.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Caleffi lockshield valve, straight **(Cu)**.
Complete with:
- **Cod. RV342402**
- **Cod. RV447015**

| Code | | |
|---|---|---|
| **RV343402C** | 1 | – |

Caleffi lockshield valve, straight **(PeX)**.
Complete with:
- **Cod. RV342402**
- **Cod. RV681024**

| Code | | |
|---|---|---|
| **RV343402P** | 1 | – |

# RADIATOR VALVE SET

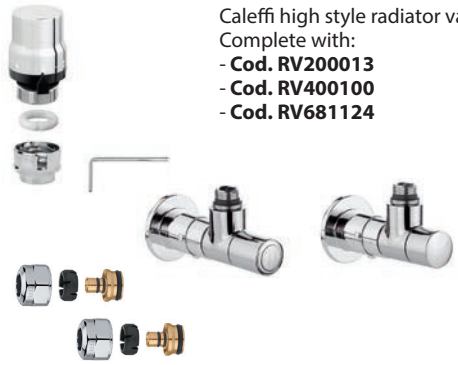
## 4001

Pair consisting of:
- angled-convertible radiator valve fitted for thermostatic control head code 200015;
- angled lockshield valve;
- two pipe-covering/wall-covering shells and allen key.

**High chrome finish**.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Caleffi high style radiator valve set **(Cu) chrome**.
Complete with:
- **Cod. RV200013**
- **Cod. RV400100**
- **Cod. RV437115**

| Code | | |
|---|---|---|
| **RV400100C** | 1 | – |



Caleffi high style radiator valve set **(PeX) chrome**.
Complete with:
- **Cod. RV200013**
- **Cod. RV400100**
- **Cod. RV681124**

| Code | | |
|---|---|---|
| **RV400100P** | 1 | – |

## 4003

Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
- lockshield valve, double-angled connections;
- pipe-covering/wall-covering shell, connections: 50 mm centre distance.

**Central connections**.
**Right-hand version**.

To be used with fittings 437, 447, 681 and 679 series.

**High chrome finish**.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Caleffi rad/lockshield bottom entry combo **(Cu) chrome**.
Complete with:
- **Cod. RV200013**
- **Cod. RV400310**
- **Cod. RV437115**
- **Cod. RV963**

| Code | | |
|---|---|---|
| **RV400310C** | 1 | – |

Caleffi rad/lockshield bottom entry combo **(PeX) chrome**.
Complete with:
- **Cod. RV200013**
- **Cod. RV400310**
- **Cod. RV681124**
- **Cod. RV963**

| Code | | |
|---|---|---|
| **RV400310P** | 1 | – |

Caleffi rad/lockshield bottom entry combo, white **(Cu)**.
Complete with:
- **Cod. RV205000**
- **Cod. RV400311**
- **Cod. RV437115**
- **Cod. RV963**

| Code | | |
|---|---|---|
| **RV400311C** | 1 | – |

Caleffi rad/lockshield bottom entry combo, white **(PeX)**.
Complete with:
- **Cod. RV205000**
- **Cod. RV400311**
- **Cod. RV681124**
- **Cod. RV963**

| Code | | |
|---|---|---|
| **RV400311P** | 1 | – |

# RADIATOR VALVE SET

## 3010

Valve for panel radiators
with built-in thermostatic valve unit.
Single valve straight version
(floor connections)
with 3/4" M radiator connections.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

## 3011

Valve for panel radiators
with built-in thermostatic valve unit.
Single valve angled version
(wall connections)
with 3/4" M radiator connections.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Caleffi radiator valve set, bottom entry, straight **(Cu)**.
Complete with:
- **Cod. RV205000**
- **Cod. RV301050**
- **Cod. RV437515**
- **Cod. RV449740**
- **Cod. *RSBVTI**

| Code | | |
|---|---|---|
| **RAVK6SC** | 1 | – |

Caleffi radiator valve set, bottom entry, angle **(Cu)**.
Complete with:
- **Cod. RV205000**
- **Cod. RV301150**
- **Cod. RV437515**
- **Cod. RV449740**
- **Cod. *RSBVTI**

| Code | | |
|---|---|---|
| **RAVK6AC** | 1 | – |

Caleffi radiator valve set, bottom entry, angle **(PeX)**.
Complete with:
- **Cod. RV205000**
- **Cod. RV301050**
- **Cod. RV681524**
- **Cod. RV449740**
- **Cod. *RSBVTI**

| Code | | |
|---|---|---|
| **RAVK6SP** | 1 | – |

Caleffi radiator valve set, bottom entry, angle **(PeX)**.
Complete with:
- **Cod. RV205000**
- **Cod. RV301150**
- **Cod. RV681524**
- **Cod. RV449740**
- **Cod. *RSBVTI**

| Code | | |
|---|---|---|
| **RAVK6AP** | 1 | – |

Caleffi radiator valve set, bottom entry, angle **(PeX) chrome**.
Complete with:
- **Cod. RV200013**
- **Cod. RV301050**
- **Cod. RV681524**
- **Cod. RV449740**

| Code | | |
|---|---|---|
| **RAVK6SPCP** | 1 | – |

Caleffi radiator valve set, bottom entry, angle **(PeX) chrome**.
Complete with:
- **Cod. RV200013**
- **Cod. RV301150**
- **Cod. RV681524**
- **Cod. RV449740**

| Code | | |
|---|---|---|
| **RAVK6APCP** | 1 | – |

## FITTINGS

### 437

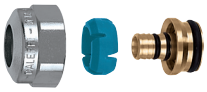
Compression fitting, for annealed copper, hard copper, brass, mild and stainless steel pipes.
With O-Ring seal. **High chrome finish**.
Max. working pressure: 10 bar.
Temperature range : -25–120 °C.

| Code | | | |
|---|---|---|---|
| **RV437115** | 23 p.1,5 - Ø 15 | 1 | 50 |

### 447

Pre-assembled compression fitting, for soft annealed copper, hard copper, brass, mild and stainless steel pipes.
With O-Ring seal.
Max. working pressure: 10 bar.
Temperature range: -25–120 °C.
Chrome plated.

| Code | | | |
|---|---|---|---|
| **RV447015** | 23 p.1,5 - Ø 15 | 100 | – |



### 681
### DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range:
5–80 °C (PE-X)
5–75 °C (Multilayer marked 95 °C).
Chrome plated.

| Code | | $Ø_{inside}$ | $Ø_{outside}$ | | |
|---|---|---|---|---|---|
| **RV681024** | 23 p.1,5 | 11,5–12 | 14–16 | 10 | 100 |

### 681
### DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.
**High chrome finish**.
Max. working pressure: 10 bar.
Temperature range:
5–80 °C (PE-X)
5–75 °C (Multilayer marked 95 °C).

| Code | | $Ø_{inside}$ | $Ø_{outside}$ | | |
|---|---|---|---|---|---|
| **RV681124** | 23 p.1,5 | 11,5–12 | 14–16 | 1 | 50 |

## WALL-COVERING PLATES

### 4499

Single wall-covering plate.
White colour RAL 9010.
For pipes with external diameter from 12 to 20 mm.

| Code | | |
|---|---|---|
| **RV449900** | – | 40 |

### 4497

Double wall-covering plate.
In white ABS.
Outlet centre distance: 40–50 mm.

| Code | | |
|---|---|---|
| **RV449740** | – | 40 |

## DISTRIBUTION MANIFOLD SET

### 671

tech. broch. 01405

Pre-assembled distribution manifold.
Max. working pressure: 6 bar.
Temperature range: 5–60 °C.
Connections: 1" F x 3/4" M.

Equipped with:
- technopolymer flow manifold with built-in flow meters and flow rate balancing valves;
- technopolymer return manifold with built-in shut-off valves fitted for thermo-electric actuator;
- technopolymer end fittings with automatic air vent with hygroscopic cap, discharge valve and fill/drain cock;
- pair of ball shut-off valves;
- LCD thermometers on flow and return manifolds;
- adhesive labels indicating the rooms;
- pair of mounting brackets for box or wall mounting;
- coupling adapter with clip for manifold outlets (in package);
- template for cutting pipe (in package).

Distribution manifold, **4 circ**, no box
Complete with:
- **Cod. UF6716D1**
- n. 8 **Cod. HS680524**

| Code | | |
|---|---|---|
| **UF6716D1** | 1 | – |

Distribution manifold, **6 circ**, no box
Complete with:
- **Cod. UF6716F1**
- n. 12 **Cod. HS680524**

| Code | | |
|---|---|---|
| **UF6716F1** | 1 | – |

Distribution manifold, **8 circ**, no box
Complete with:
- **Cod. UF6716H1**
- n. 16 **Cod. HS680524**

| Code | | |
|---|---|---|
| **UF6716H1** | 1 | – |

Distribution manifold, **10 circ**, no box
Complete with:
- **Cod. UF6716L1**
- n. 20 **Cod. HS680524**

| Code | | |
|---|---|---|
| **UF6716L1** | 1 | – |

Distribution manifold, **12 circ**, no box
Complete with:
- **Cod. UF6716N1**
- n. 24 **Cod. HS680524**

| Code | | |
|---|---|---|
| **UF6716N1** | 1 | – |

Distribution manifold, **14 circ**, no box
Complete with:
- **Cod. UF6716O1**
- n. 28 **Cod. HS680524**

| Code | | |
|---|---|---|
| **UF6716O1** | 1 | – |

## ACCESSORIES FOR DISTRIBUTION MANIFOLD SET

### 182

Differential by-pass kit with fixed setting 25 kPa (2.500 mm w.g.) complete with flexible hose.
For regulating units and manifolds 671 series.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.

| Code | | | |
|---|---|---|---|
| **UF182**000 | 3/4" | 1 | 5 |

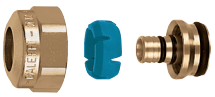
### 6561

tech. broch. 01042

Thermo-electric actuator.
Normally closed. **With auxiliary microswitch**.
Supply: 230 V (AC) or 24 V (AC)/(DC).
Auxiliary microswitch contact rating: 0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Ambient temperature range: 0–50 °C.
Protection class: IP 44 (vertical stem).
Cable length: 80 cm.

CE

| Code | Supply voltage V | | |
|---|---|---|---|
| **EA656112** | 230 | 1 | 10 |



### 680
### DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range:
5–80 °C (PE-X)
5–75 °C (Multilayer marked 95 °C).

| Code | | $Ø_{inside}$ | $Ø_{outside}$ | | |
|---|---|---|---|---|---|
| **HS680**524 | 3/4" | 11,5–12 | 14 –16 | 10 | 100 |
| **HS680**564 | 3/4" | 15,5–16 | 18 –20 | 10 | 100 |

# 149 SERIES

The pre-assembled kit for terminal units is compact and able to shut off, adjust and filter the secondary circuit of the terminal unit. It also allows to perform maintenance and setting operations of the system. It allows the connection of fan-coils, cooling beams or ceiling-mounted air-conditioning systems to the main distribution system.

- STATIC BALANCING DEVICES
- DYNAMIC BALANCING AND CONTROL DEVICES

## BALANCING VALVES

### 130

Balancing valve for hydraulic systems.
Flow rate measurement with Venturi device.
CR dezincification resistant alloy body, stainless steel obturator.
Complete with pressure ports.
Max. working pressure: 16 bar.
Temperature range: -20–120 °C.
Max. percentage of glycol: 50 %.

WRAS APPROVED PRODUCT CERTIFICATION MARK

| Code | | | |
|---|---|---|---|
| **HV130400** | 1/2″ | 1 | 5 |
| **HV130500** | 3/4″ | 1 | 5 |
| **HV130600** | 1″ | 1 | 5 |
| **HV130700** | 1 1/4″ | 1 | 5 |
| **HV130800** | 1 1/2″ | 1 | 5 |
| **HV130900** | 2″ | 1 | 5 |

Pre-formed insulation for balancing valves with threaded connections 130 series.
For heating and cooling system.

| Code | | | |
|---|---|---|---|
| **HVCBN130400** | 1/2″ | 1 | – |
| **HVCBN130500** | 3/4″ | 1 | – |
| **HVCBN130600** | 1″ | 1 | – |
| **HVCBN130700** | 1 1/4″ | 1 | – |
| **HVCBN130800** | 1 1/2″ | 1 | – |
| **HVCBN130900** | 2″ | 1 | – |

## BALANCING VALVE WITH FLOW METER

### 132

Balancing valve with flow meter.
Direct reading of flow rate.
Brass valve body and flow meter.
Ball valve for flow rate adjustment.
Graduated scale flow meter with magnetic movement flow rate indicator.

**With insulation**.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.
Max. percentage of glycol: 50 %.
PATENT.

ACS

| Code | | Flow rate range (l/min) | | |
|---|---|---|---|---|
| **HS132402** | 1/2″ | 2– 7 | 1 | 5 |
| **HS132512** | 3/4″ | 5– 13 | 1 | 5 |
| **HS132522** | 3/4″ | 7– 28 | 1 | 5 |
| **HS132602** | 1″ | 10– 40 | 1 | 5 |
| **HS132702** | 1 1/4″ | 20– 70 | 1 | 5 |
| **HS132802** | 1 1/2″ | 30–120 | 1 | 5 |
| **HS132902** | 2″ | 50–200 | 1 | 5 |

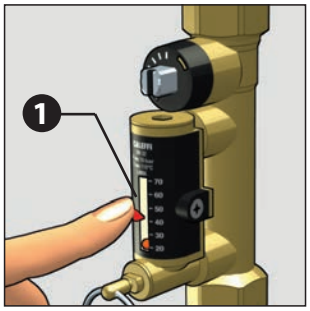
## BALANCING VALVE WITH FLOW METER

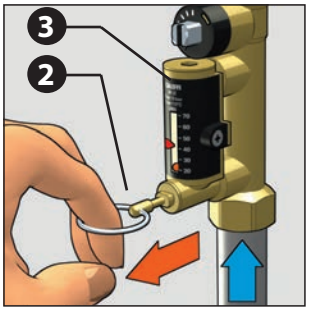
**Flow rate adjustment**

The flow rate is adjusted by carrying out the following operations:

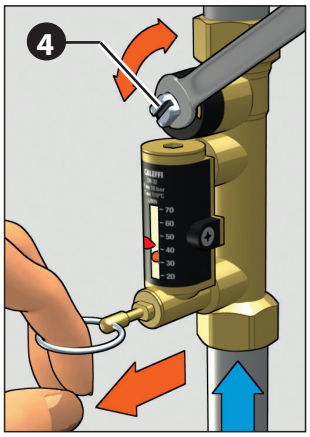
**1**. With the aid of the indicator (1), mark the reference flow rate at which the valve has to be set.

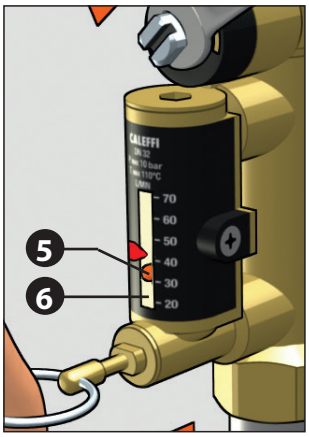
**2**. Use the ring (2) to open the obturator that shuts off the flow of medium in the flow meter (3) under normal operating conditions.




**3**. Keeping the obturator open, apply a wrench on the control stem of the valve (4) to adjust the flow rate. It is indicated by a metal ball (5) that runs inside a transparent guide (6) marked by a graduated scale in l/min.



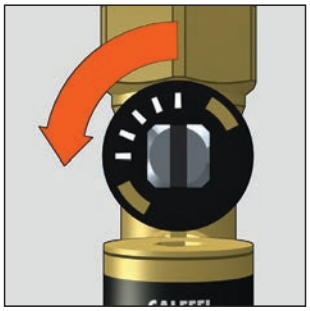




**4**. After completing the balancing, release the ring (2) of the flow meter obturator that, thanks to an internal spring, will automatically go back into the closed position.

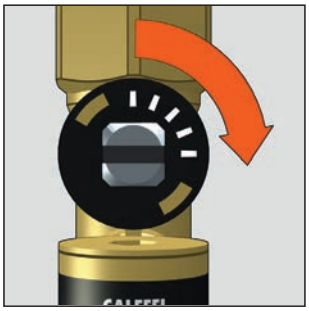
**5**. After completing the balancing, the indicator (1) can be used to keep in memory the selected setting in case of future inspections.

**Complete opening and closing of the valve**

Complete opening of the valve



Complete closing of the valve



# PRESSURE INDEPENDENT CONTROL VALVE (PICV)

## 145
## FLOWMATIC®

Pressure independent control valve FLOWMATIC®.
CR dezincification resistant alloy body.
Male connections. Flow rate regulator in polymer with membrane in EPDM.
Graduated scale indicator.
Max. working pressure: 25 bar.
Temperature range: -20–120 °C.
Max. percentage of glycol: 50 %.
Δp range: 25–400 kPa. With pressure test ports.
**Fitted for 145 series actuator and 6565/6566 series thermo-electric actuator**.

| Code | DN | Conn. | Flow rate range (m³/h) | | |
|---|---|---|---|---|---|
| **HV145437 H20** | 15 | 1/2″ | 0,02–0,20 | 1 | 10 |
| **HV145447 H40** | 15 | 3/4″ | 0,08–0,40 | 1 | 10 |
| **HV145447 H80** | 15 | 3/4″ | 0,08–0,80 | 1 | 10 |
| **HV145557 H40** | 20 | 1″ | 0,08–0,40 | 1 | 10 |
| **HV145557 H80** | 20 | 1″ | 0,08–0,80 | 1 | 10 |
| **HV145557 1H2** | 20 | 1″ | 0,12–1,20 | 1 | 10 |
| **HV145667 1H8** | 25 | 1 1/4″ | 0,18–1,80 | 1 | 10 |
| **HV145667 3H0** | 25 | 1 1/4″ | 0,30–3,00 | 1 | 10 |
| **HV145667 3H7** | 25 | 1 1/4″ | 0,37–3,70 | 1 | 10 |

Union with gasket.

| Code | | | |
|---|---|---|---|
| **HV145001** | 1/2″ F x 3/8″ M | 1 | – |
| **HV145003** | 3/4″ F x 1/2″ M | 1 | – |
| **HV145005** | 1″ F x 3/4″ M | 1 | – |
| **HV145006** | 1″ F x 1″ M | 1 | – |
| **HV145007** | 1 1/4″ F x 1″ M | 1 | – |
| **HV145008** | 1 1/4″ F x 1 1/4″ M | 1 | – |

Insulation for FLOWMATIC® 145 series.

| Code | Use | | |
|---|---|---|---|
| **HVCBN145437** | DN 15 - DN 20 | 1 | – |

Insulation for FLOWMATIC® 145 series.

| Code | Use | | |
|---|---|---|---|
| **HVCBN145667** | DN 25 | 1 | – |

# ACTUATORS FOR KITS AND CONTROL VALVES (PICV)

## 145

Proportional linear actuator
for FLOWMATIC® 145 series control valve and 149 series kit.
Supply: 24 V (AC)/(DC).
Control signal:
2 points, 3 points, 0–10 V.
Feedback signal: 0–10 V.
With manual override.
Ambient temperature range: 0–50 °C.
Protection class: IP 54.
Connection: M 30 p.1,5.
Supply cable length: 1,5 m.

| Code | Tension V | | |
|---|---|---|---|
| **HV145019** | 24 | 1 | – |

## 6565/6566

Thermo-electric actuator
for FLOWMATIC® 145 series control valve and 149 series kit.
**Quick-coupling installation, with a clip adapter**.
Supply: 230 V (AC) o 24 V (AC)/(DC).
Control signal: ON/OFF.
Power consumption: 1 W.
Ambient temperature range: 0–60 °C.
Protection class: IP 54.
Connection: M 30 p.1,5.
Supply cable length: 1 m.

| Code | Tension V | Control signal | | | |
|---|---|---|---|---|---|
| **HV656502** | 230 | ON/OFF | normally closed | 100 | – |
| **HV656504** | 24 | ON/OFF | normally closed | 100 | – |
| **HV656602** | 230 | ON/OFF | normally open | 100 | – |
| **HV656604** | 24 | ON/OFF | normally open | 100 | – |

# CONNECTION AND REGULATION KIT FOR HVAC TERMINAL UNITS

## 149

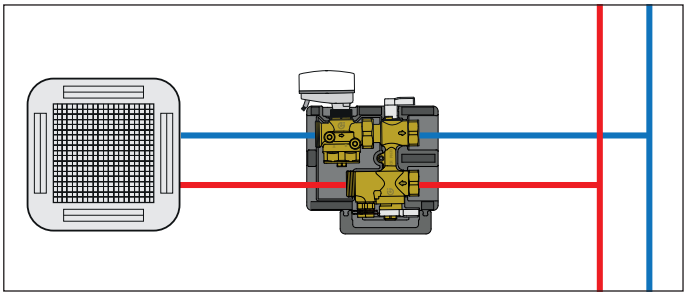
Connection and regulation kit
for HVAC terminal units.
CR dezincification resistant alloy body.
Complete with:
- pressure independent control valve,
- three-way shut-off valve,
- integrated by-pass,
- Venturi device with pressure test ports (only in codes 149.00 **...**),
- filtering cartridge,
- fill/drain cock.
- pre-formed shell insulation.

Max. working pressure: 25 bar.
Temperature range: -10–120 °C.
Max. percentage of glycol: 50 %.
Δp range (PICV): 25–400 kPa.
Centre distance: **80 mm**.
**Fitted for 145 series actuator and 6565/6566 series thermo-electric actuator**.
PATENT PENDING.

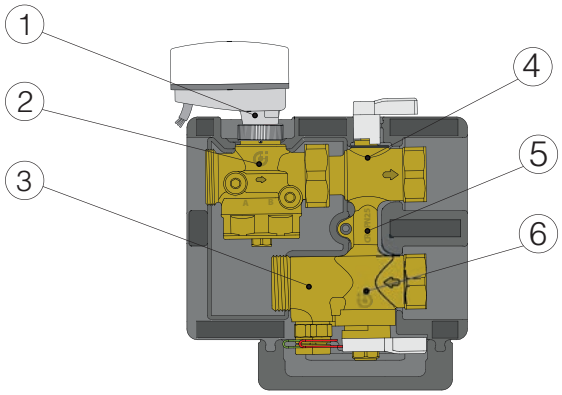
**With Venturi device**

| Code | DN | Kv Venturi (m³/h) | Flow rates range (m³/h) | | |
|---|---|---|---|---|---|
| **HV149400 H10** | 15 | 0,25 | 0,02–0,10 | 1 | – |
| **HV149400 H20** | 15 | 0,50 | 0,10–0,20 | 1 | – |
| **HV149400 H40** | 15 | 1,10 | 0,20–0,40 | 1 | – |
| **HV149400 H80** | 15 | 2,35 | 0,40–0,80 | 1 | – |
| **HV149500 H10** | 20 | 0,25 | 0,02–0,10 | 1 | – |
| **HV149500 H20** | 20 | 0,50 | 0,10–0,20 | 1 | – |
| **HV149500 H40** | 20 | 1,10 | 0,20–0,40 | 1 | – |
| **HV149500 H80** | 20 | 2,35 | 0,40–0,80 | 1 | – |
| **HV149500 1H2** | 20 | 5,00 | 0,80–1,20 | 1 | – |
| **HV149600 1H8** | 25 | 5,00 | 1,20–1,80 | 1 | – |
| **HV149600 3H0** | 25 | 9,60 | 1,80–3,00 | 1 | – |
| **HV149600 3H7** | 25 | 9,60 | 1,85–3,70 | 1 | – |

**Application diagram of 149 series**



**Characteristics components**




1. Actuator (optional)
2. Pressure independent control valve (PICV)
3. Venturi device for flow rate measurement with connections for pressure test ports (in 149.00 codes only)
4. Three-way shut-off valve
5. By-pass
6. Three-way shut-off valve with built-in strainer

# ACTUATORS FOR KITS AND CONTROL VALVES (PICV)

## 145

Proportional linear actuator
for FLOWMATIC® 145 series control valve
and 149 series kit.
Supply: 24 V (AC)/(DC).
Control signal:
2 points, 3 points, 0–10 V.
Feedback signal: 0–10 V.
With manual override.
Ambient temperature range: 0–50 °C.
Protection class: IP 54.
Connection: M 30 p.1,5.
Supply cable length: 1,5 m.

| Code | Tension V | | |
|---|---|---|---|
| **HV145019** | 24 | 1 | – |

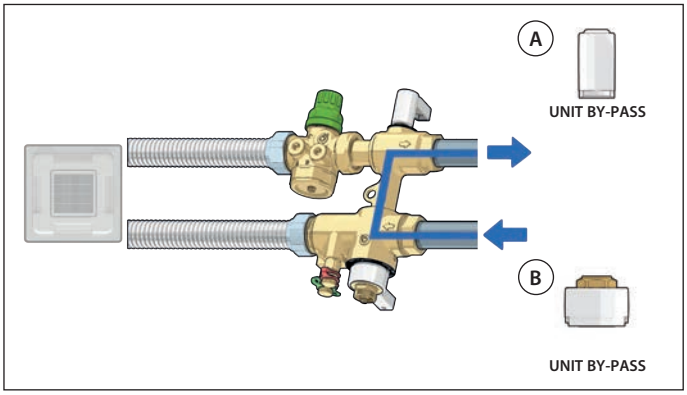
## 6565/6566

Thermo-electric actuator
for FLOWMATIC® 145 series control valve
and 149 series kit.
**Quick-coupling installation, with a clip adapter**.
Supply: 230 V (AC) o 24 V (AC)/(DC).
Control signal: ON/OFF.
Power consumption: 1 W.
Ambient temperature range: 0–60 °C.
Protection class: IP 54.
Connection: M 30 p.1,5.
Supply cable length: 1 m.

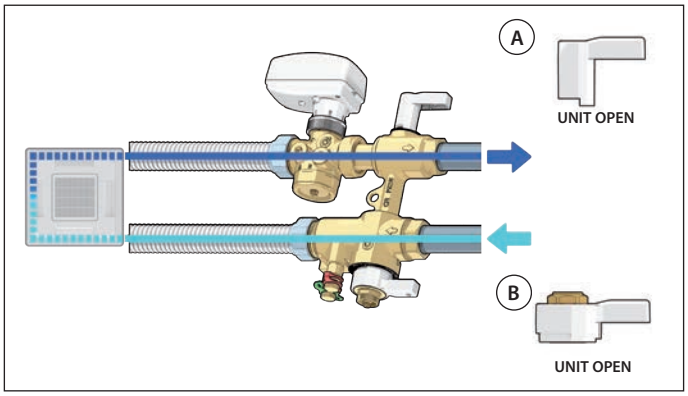
| Code | Tension V | Control signal | | | |
|---|---|---|---|---|---|
| **HV656502** | 230 | ON/OFF | normally closed | 100 | – |
| **HV656504** | 24 | ON/OFF | normally closed | 100 | – |
| **HV656602** | 230 | ON/OFF | normally open | 100 | – |
| **HV656604** | 24 | ON/OFF | normally open | 100 | – |

# CONNECTION AND REGULATION KIT FOR HVAC TERMINAL UNITS

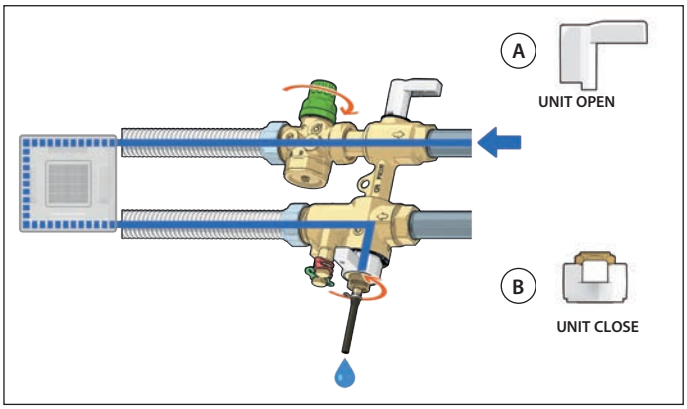
**Washing in by-pass**



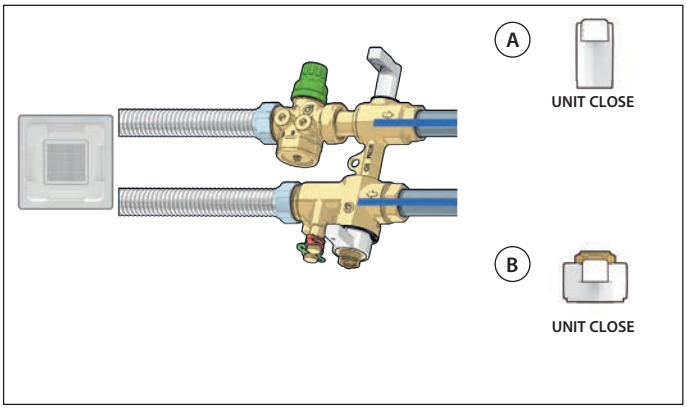

**Normal operation**



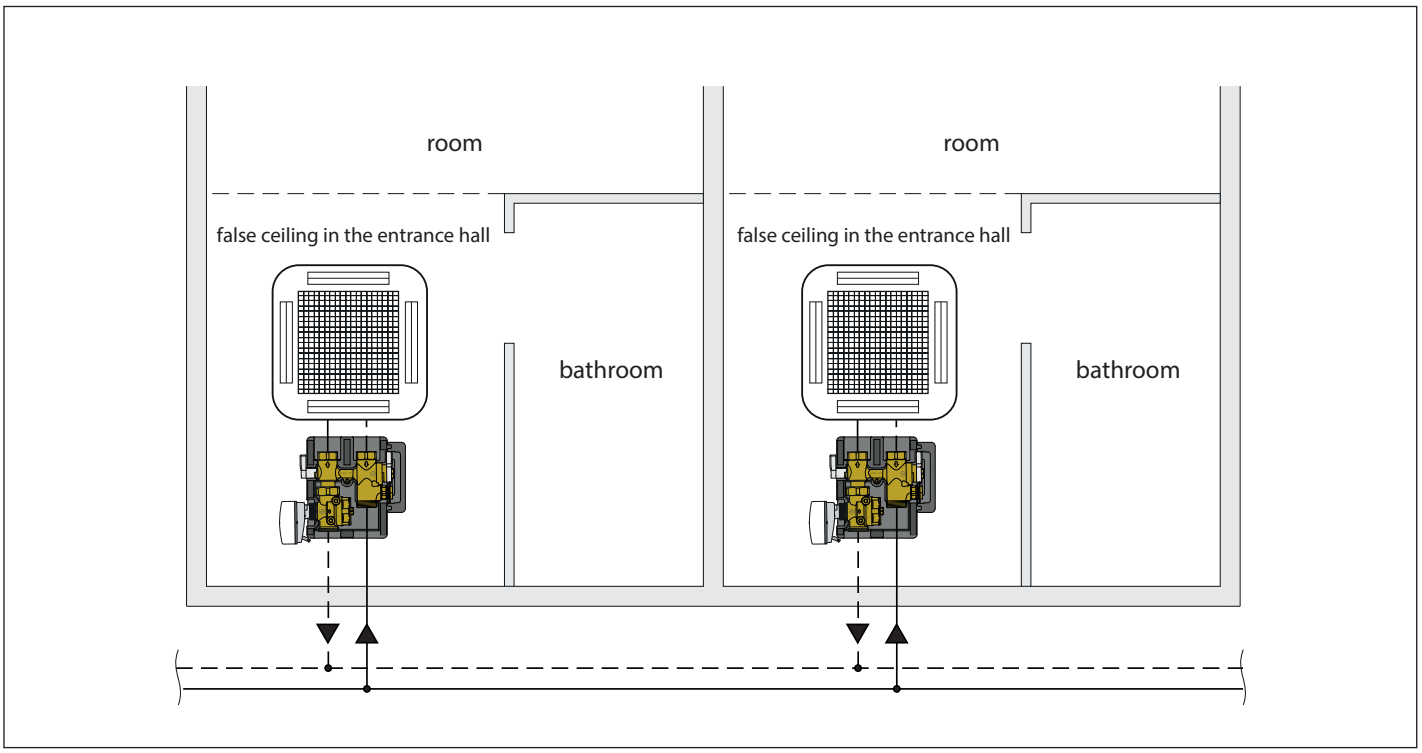

**Terminal unit washing**




**Strainer cleaning/Isolate the line**



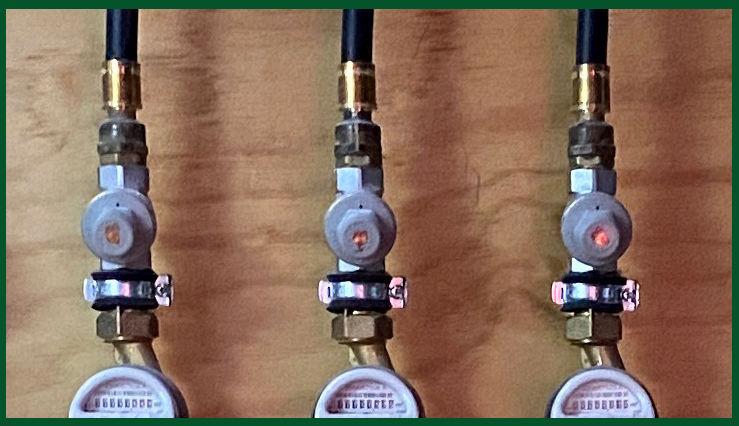

**Installation in false ceiling for fan-coil service**



# CASE STUDIES: REAL-WORLD APPLICATIONS

The following case studies, delve into the practical applications of Caleffi applications across two different complexes. Through real-world examples, we aim to illustrate the potential of Caleffi product to address challenges, drive innovation, and create positive outcomes.

**Client: Kainga ora:** Greys Ave (Te Mātāwai), installation of 300 apartments, Caleffi combo kits and PR533555HS



**Client: Ninety Four feet:** Indigo Hotel Auckland.
**Product: Caleffi Legiomix** TV600071,TV600091
**Caleffi PRV 533 Series:** PR533555HS

**PRV**
PR533555HS

**Legiomix**
TV600071,TV600091

**SCAN FOR MORE CASE STUDIES**