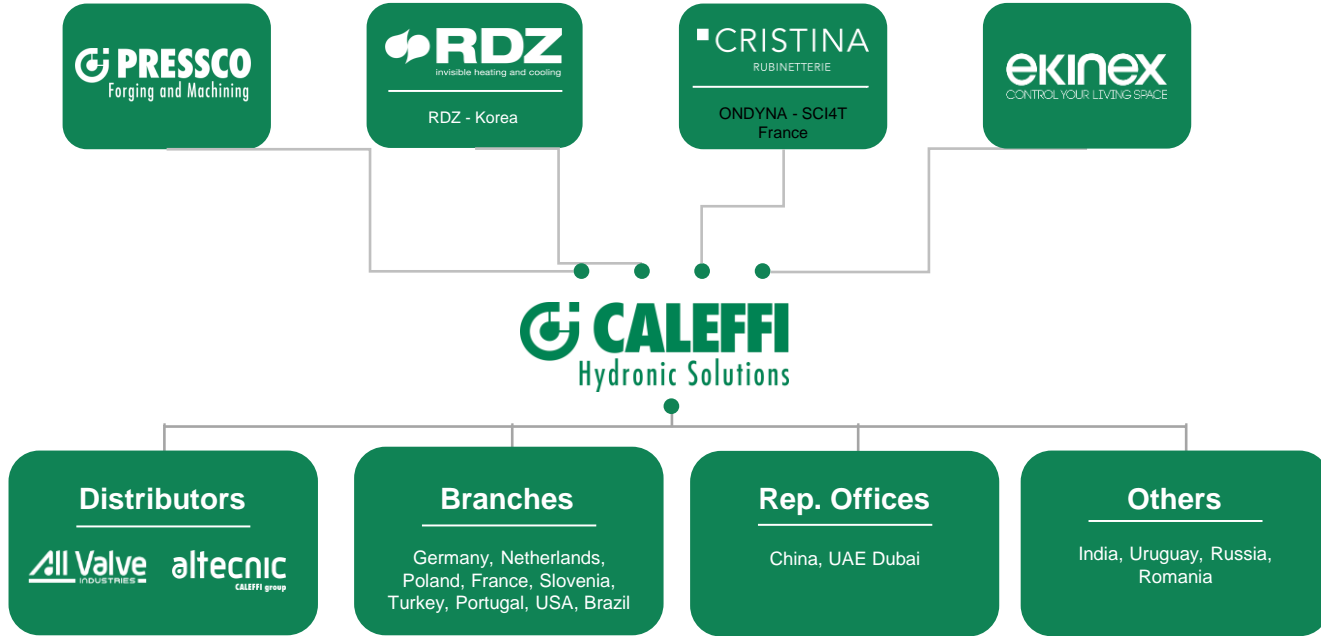




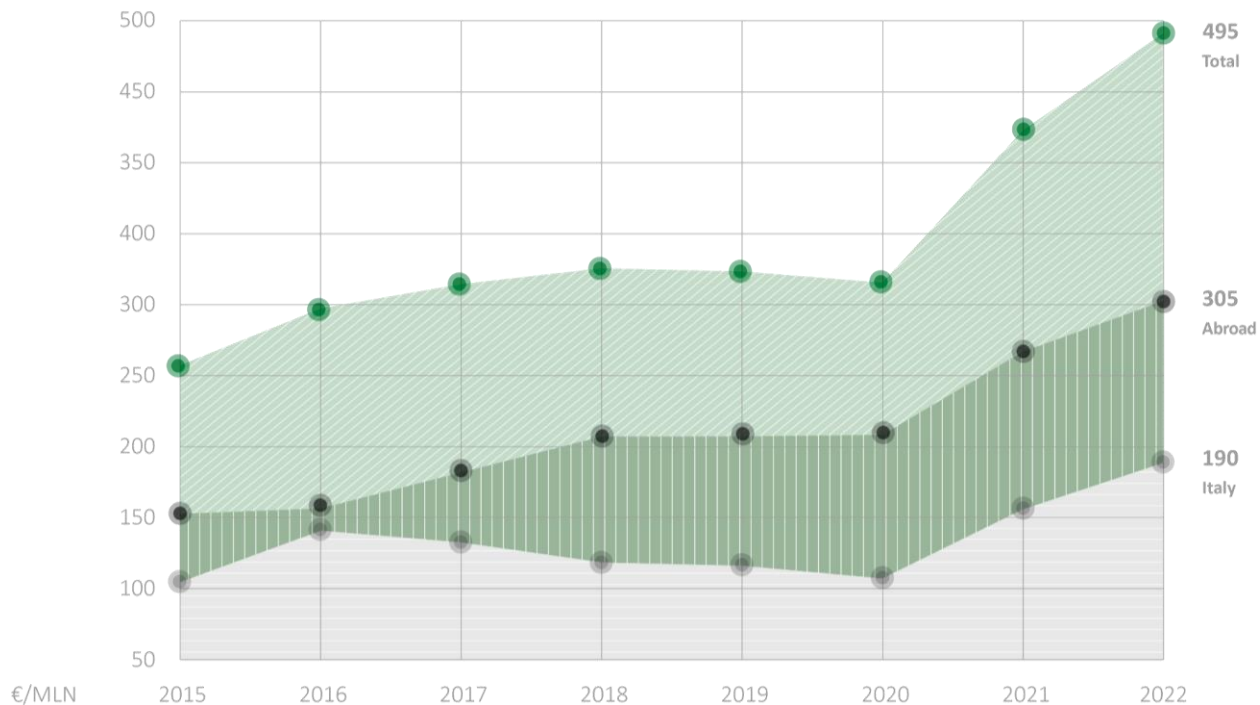
CORPORATE PRESENTATION

07/03/2023

Group Organization



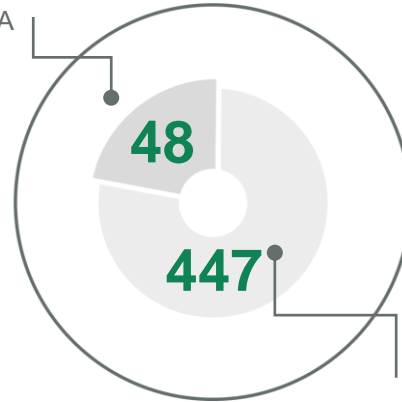
CONSOLIDATED SALES



CONSOLIDATED SALES AND SPLIT 2022 (MILLION EUROS)



KITCHEN & BATH
• CRISTINA



HVAC & PLUMBING
• CALEFFI
• PRESSCO
• RDZ

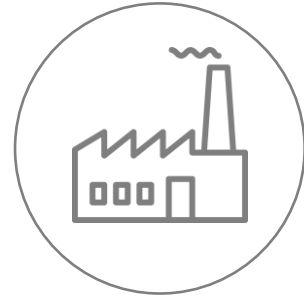
Group facts and figures



1641
employees



+90
supplied countries



10
plants
set up in Italy

The background features three thick, dark green wavy lines that curve across the page. One line starts at the top center and curves down towards the right. Another line starts on the left side and curves down towards the bottom center. A third line starts on the right side and curves down towards the bottom right.

OPENING THE DOORS
ENTERING THE COMPANY

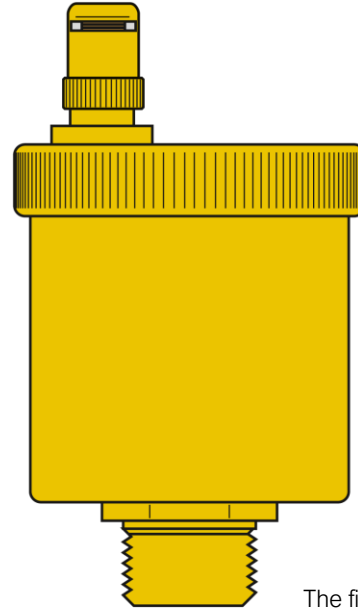
1961: THE BEGINNING

The industrial dream of Franco Caleffi takes shape.

After manufacturing fittings and accessories in brass and steel, on behalf of third parties, he chooses to make finished products **branded Caleffi**.

The wholesalers network begins selling them.

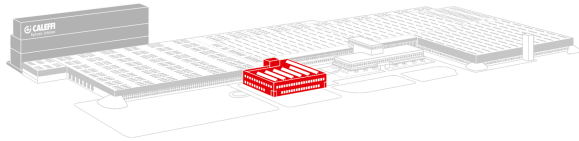
This is the beginning of the story we are proud of.



The first Caleffi valve

1975 - 2009

A PERIOD OF GROWTH AND EXPANSION



1975

- Rapid development and relocation of headquarters in **Fontaneto D'Agogna**

the 1980s

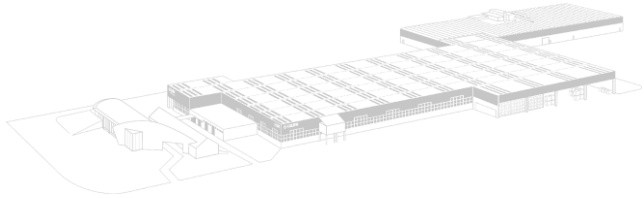
- **Opening of the first foreign branch in Germany** and former acquisitions: **Pressco is now part of Caleffi Group.**
- Complete control of each production step.

the 1980s

- Caleffi enters the **OEM market and gets great competitive advantage** by investing in processes, automation, quality and PR

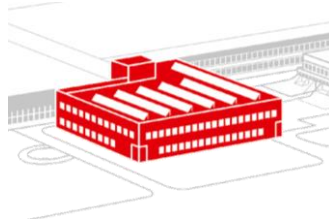
1975 - 2009

A PERIOD OF GROWTH AND EXPANSION



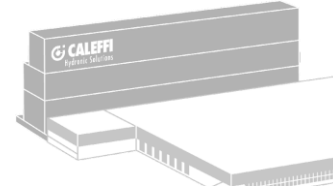
1996

- New plant in **Gattico**



2008

- **CUBOROSSO** opening



2009

- **MAV** opening

Caleffi Hydronic Solutions history

2004

A NEW GENERATION

After five decades
of far-sighted management,
Francesco Caleffi passes the reins
to his son **Marco**.

2004

A NEW GENERATION

The **transfer of powers** marks a milestone in the family's history and a new phase in the company's **management structure.**

It's now a multinational business.

Caleffi Hydronic Solutions history

2011
50TH ANNIVERSARY

50 years of hard work
and investment in **research,**
development, new ventures
and communication.

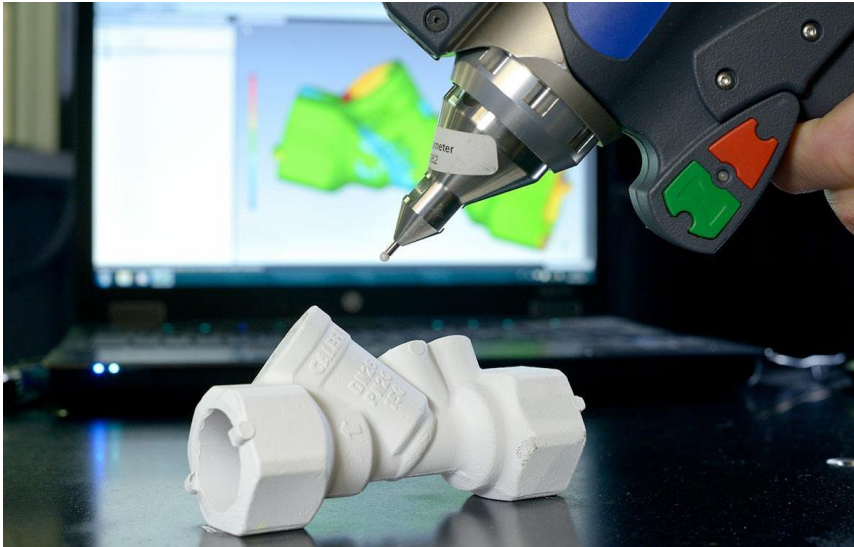
2014 CALEFFI EXPERIENCE

The CALEFFI EXPERIENCE concept brings together everything that adds value to the product and to the company's sector know-how.

It is embodied in Caleffi's **showroom and training centre**.



2018 SMART FACTORY



Caleffi Hydronic Solutions history

2021
60 YEARS OF FLOWING EXPERTISE



CALEFFI 60TH
Hydronic Solutions

1 9 6 1 / 2 0 2 1



CALEFFI
Hydronic Solutions

2023

PRODUCTION PLANT EXPANSION

NEW 16,000 sqm PLANT IN C3 - ready from Jan. 2024

Intended purpose:

1,000 smq plastic moulding

15,000 smq mechanical production and logistics

5,000 smq C1 expansion under evaluation

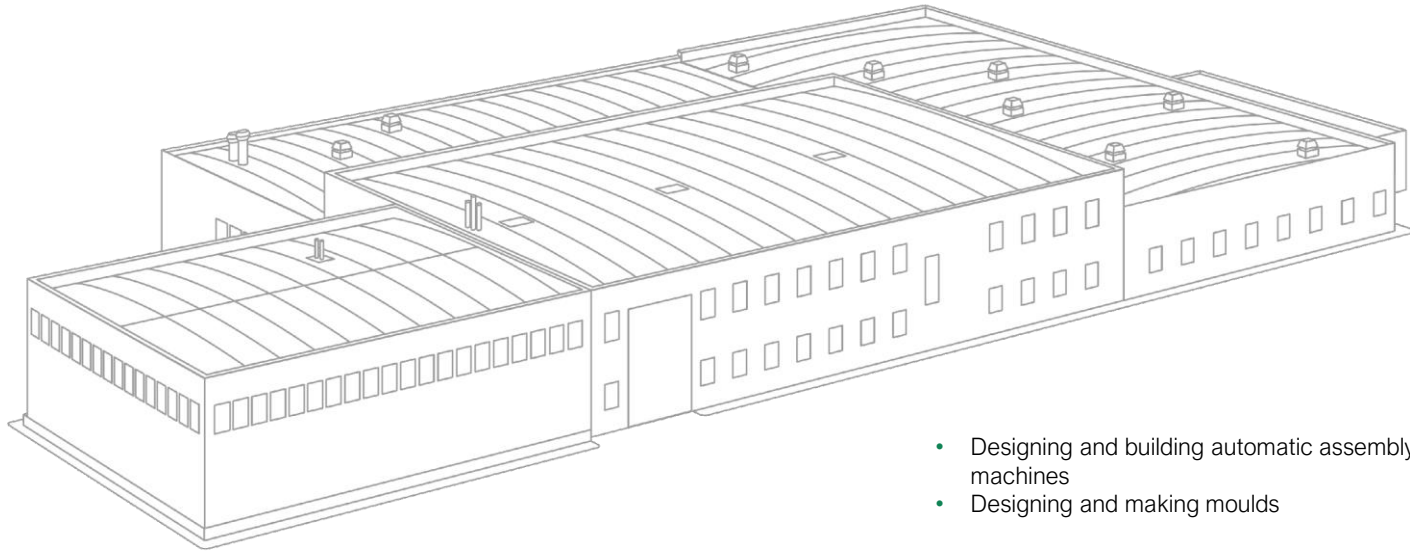
Caleffi Hydronic Solutions production

THE WAY WE DO IT



ENGINEERING OF MOULDS AND MACHINERY

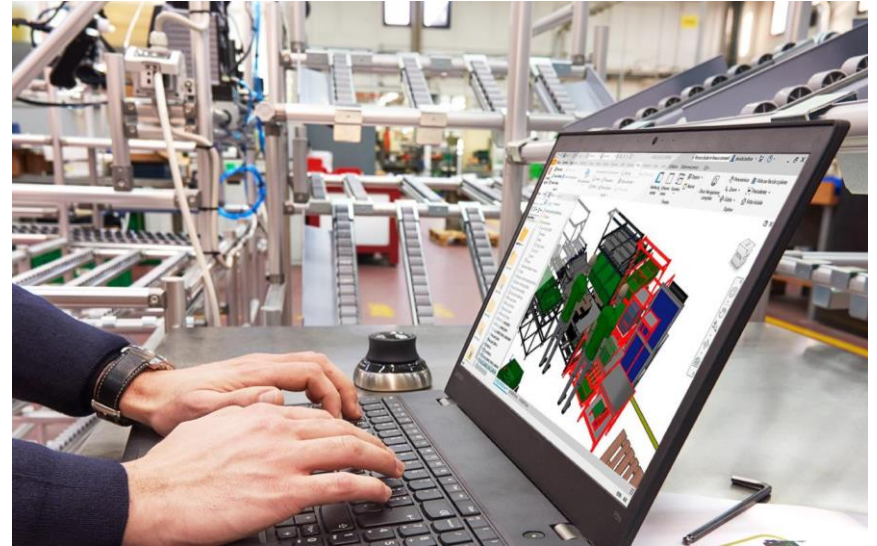
FONTANETO D'AGOGNA PLANT



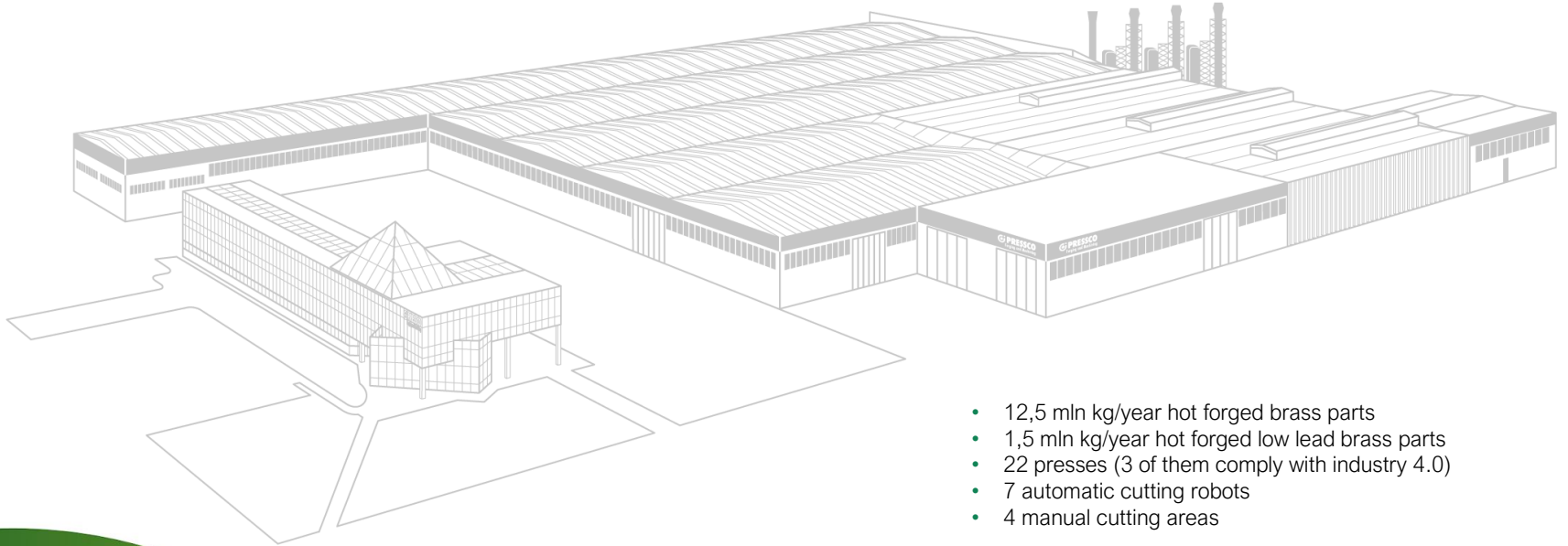
- Designing and building automatic assembly equipment and machines
- Designing and making moulds

Caleffi Hydronic Solutions production

ENGINEERING OF MOULDS AND MACHINERY

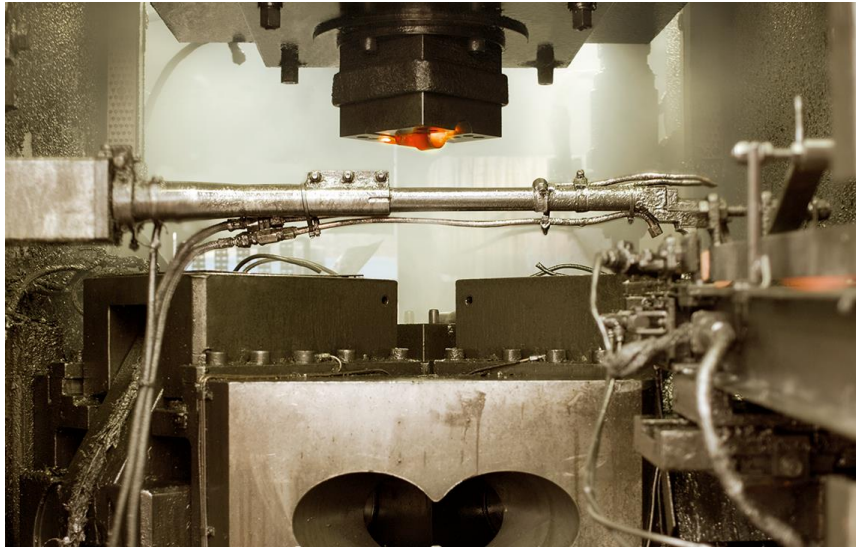


HOT FORGING PRESSCO PLANT



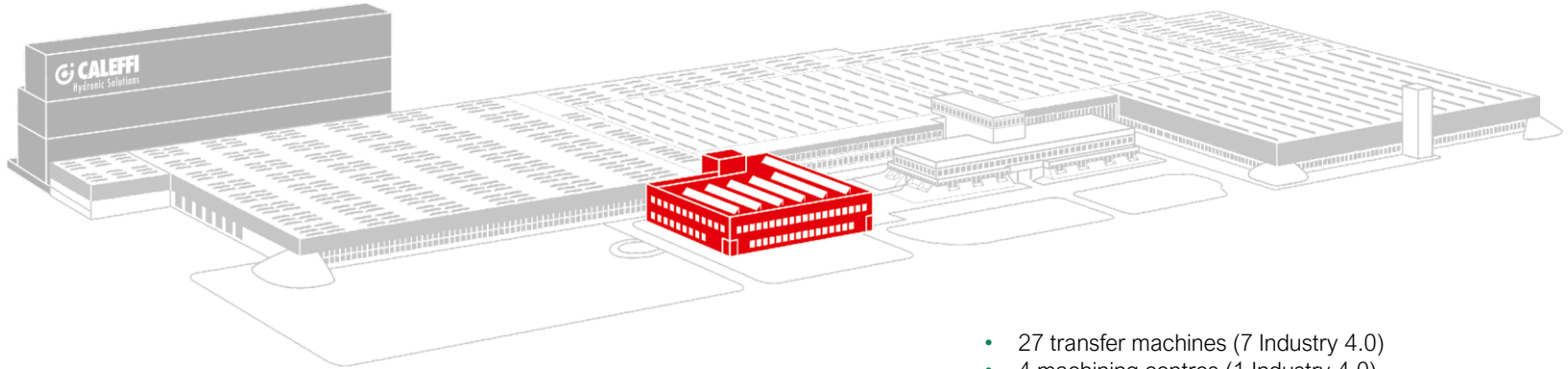
- 12,5 mln kg/year hot forged brass parts
- 1,5 mln kg/year hot forged low lead brass parts
- 22 presses (3 of them comply with industry 4.0)
- 7 automatic cutting robots
- 4 manual cutting areas

HOT FORGING



MULTI-SPINDLE MECHANICAL MACHINING AND TRANSFERS

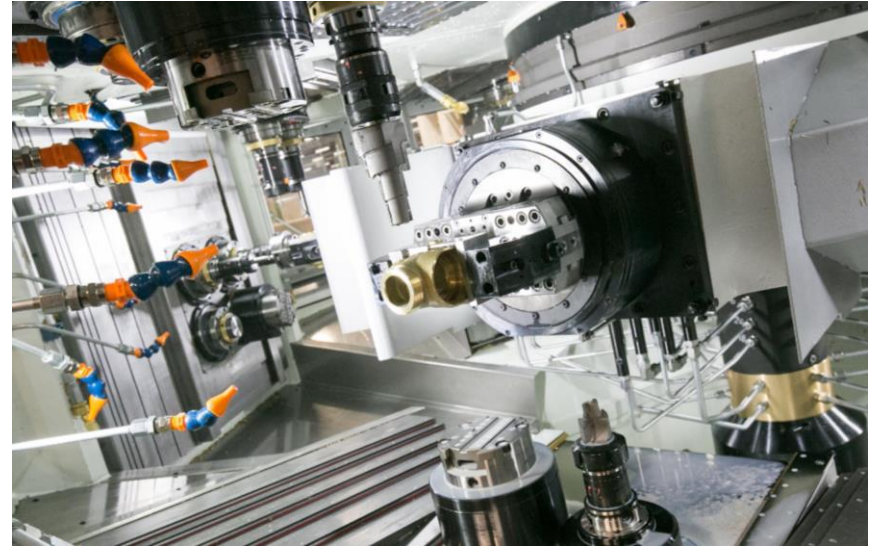
FONTANETO D'AGOGNA PLANT



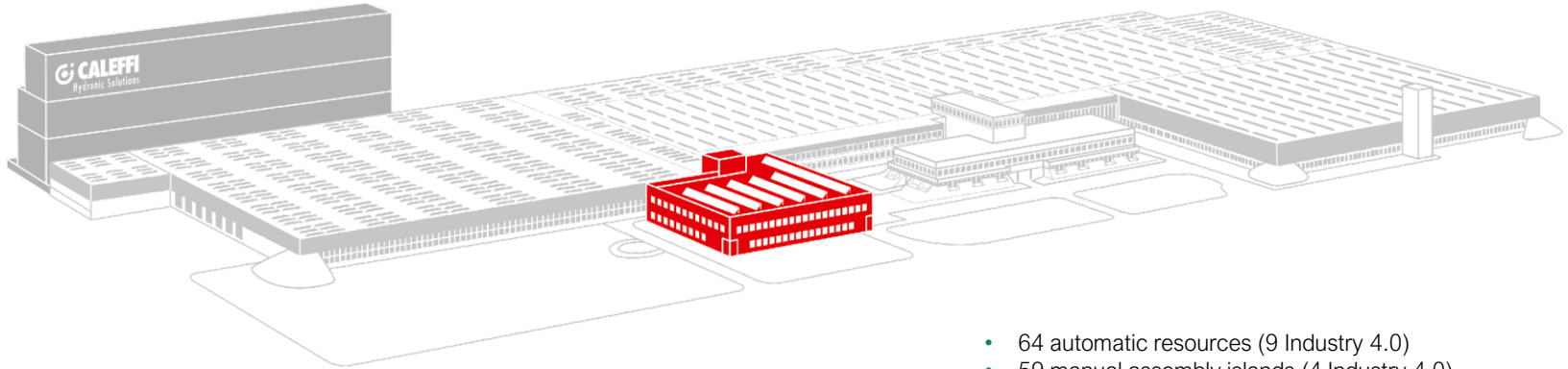
- 27 transfer machines (7 Industry 4.0)
- 4 machining centres (1 Industry 4.0)
- 58 single and multi-spindle lathes (9 Industry 4.0)

Caleffi Hydronic Solutions production

MULTI-SPINDLE MECHANICAL MACHINING AND TRANSFERS



ASSEMBLY LINES



- 64 automatic resources (9 Industry 4.0)
- 59 manual assembly islands (4 Industry 4.0)

Caleffi Hydronic Solutions production

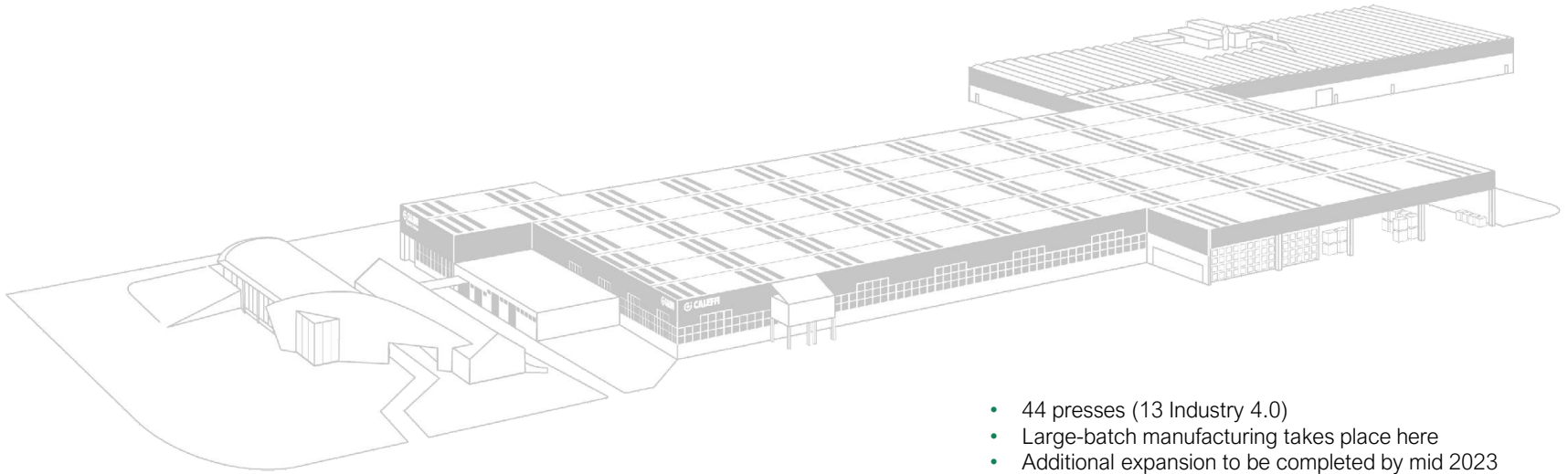
ASSEMBLY LINES



Caleffi Hydronic Solutions production

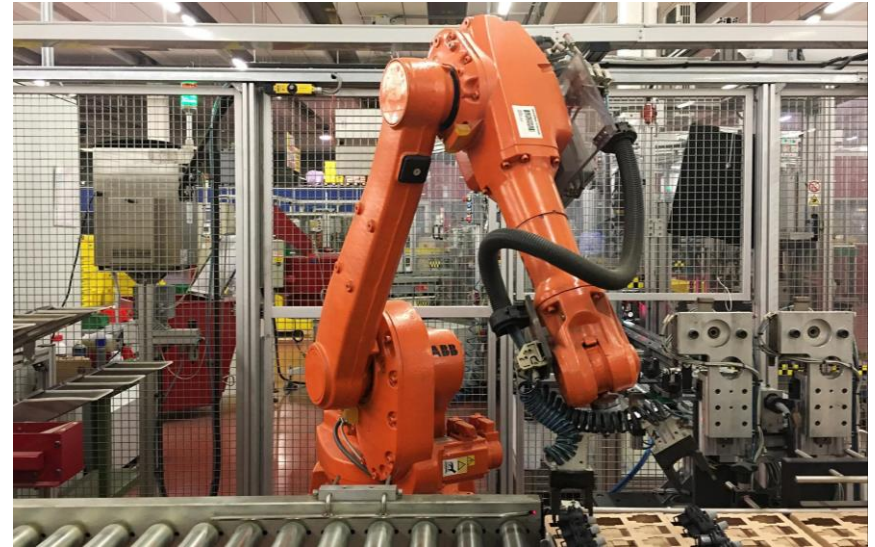
PLASTIC MOULDING

GATTICO - VERUNO PLANT



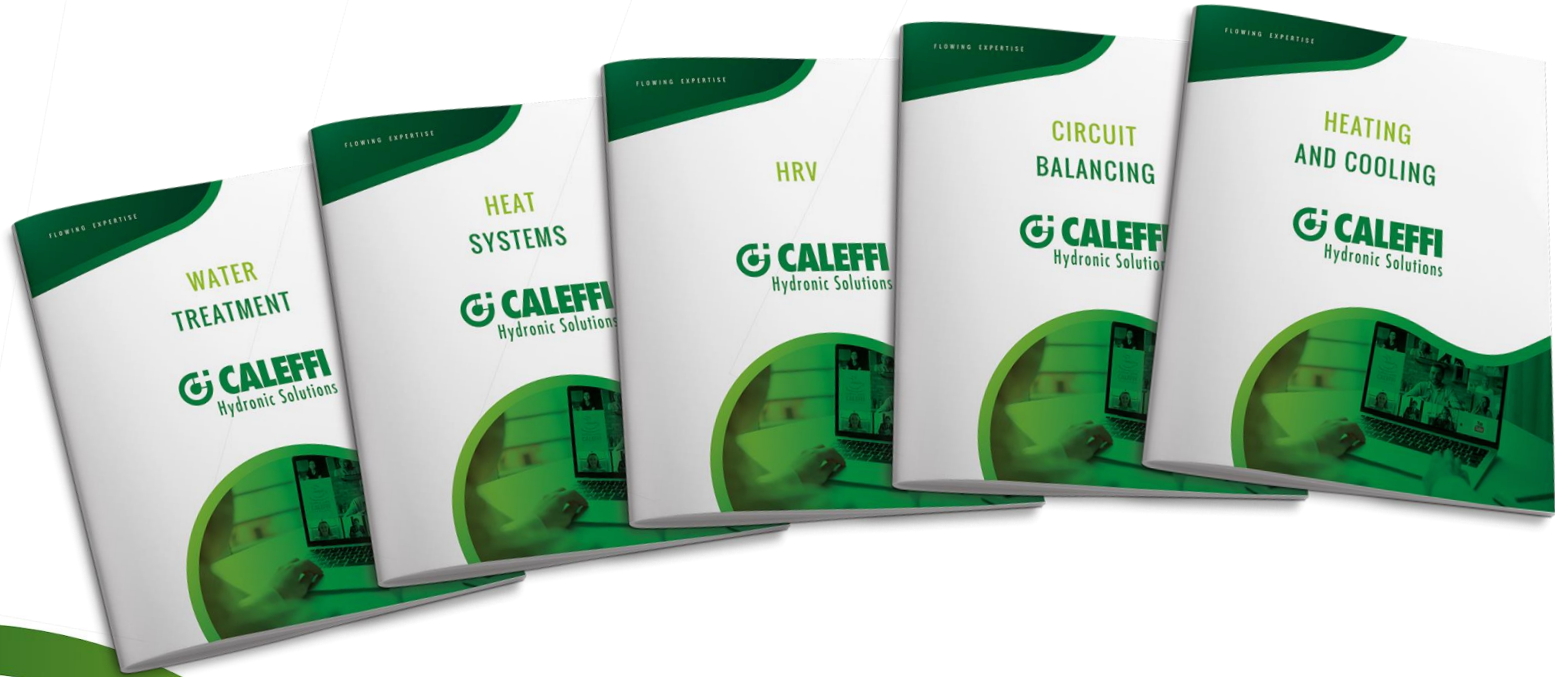
- 44 presses (13 Industry 4.0)
- Large-batch manufacturing takes place here
- Additional expansion to be completed by mid 2023

PLASTIC MOULDING



Caleffi Hydronic Solutions

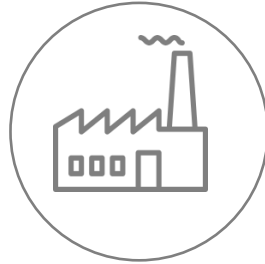
WHAT WE DO



OUR SALES CHANNELS



WHOLESALEERS



OEM

PUMPS AND BOILERS
MANUFACTURERS MAINLY



BIG PROJECT

MAV

Our vertical warehouse meets the recent need of point of sales to reduce their stock. It ensures a more dynamic service in terms of number of monthly shipments and promptness in order dispatch as well as accuracy, on international scale.

- **Covered surface 3.120 m²**
- **Height 32,70 – 21 m**
- **Length 96 m**
- **Up to 51.000 boxes**
- **Up to 14.000 pallets**



CUBOROSSO

- Study of new products, **research**, technical improvement aimed at obtaining energy savings.
- **3D prototyping** and tests at once.



WE DO CARE



DIGITAL MARKETING

Caleffi has been reinforcing Digital Communication and Marketing over the years and developed a number of touchpoints:

- website restyling
- editorial strategy
- multichannel digital strategy
- web based tools to support design and mobile app
- BIM/MEP/PIM



caleffi.com



G  **BIM**

MEPcontent
The BIM library for MEP engineers

bimobject



ANTIFREEZE PROTECTION



108 iStop® tech. broch. 01376

Antifreeze valve. Brass body.
Max. working pressure: 10 bar.
Working temperature range: 0-65 °C.
Ambient temperature range: -30-60 °C.
Opening temperature: 3 °C.
Closing temperature: 4 °C.

Threaded connections

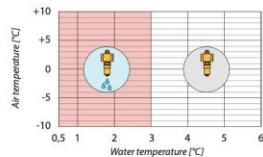
Code			
108601	1"	1	25
108701	1 1/4"	1	20
108801	1 1/2"	1	20

Compression ends

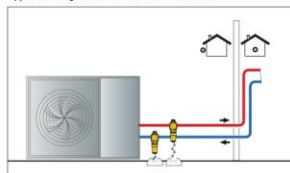
Code			
108301	∅ 28	1	20

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.



Application diagrams of antifreeze valve 108 series



ANTIFREEZE PROTECTION WITH AIR SENSOR



108 iStop® tech. broch. 01376

Antifreeze valve with air sensor. Brass body.
Max. working pressure: 10 bar.
Working temperature range: 0-65 °C.
Ambient temperature range: -30-60 °C.

Antifreeze function (water sensor).
Opening temperature: 3 °C.
Closing temperature: 4 °C.

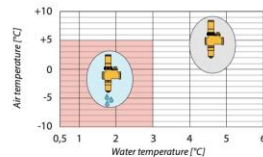
Enabling of antifreeze function with low outside air temperature < 5 °C.

PATENT PENDING.

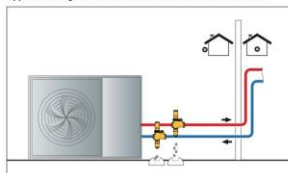
Code			
108611	1"	1	25
108711	1 1/4"	1	20

Operating principle

The 108 series antifreeze valve allows drainage of the medium in the circuit when the circuit temperature reaches a value of 3 °C. In outside temperature conditions over 5 °C, antifreeze valve intervention is inhibited by the air temperature sensor. This prevents the valve from cutting in during operation in cooling mode during the summer.



Application diagrams of antifreeze valve with air sensor 108 series



HP ANTIFREEZE PROTECTION COMPARISON

iSTOP®

- ✓ It prevents the formation of ice in the system circuit.
- ✓ It allows the use of pure water: the properties of the heat transfer fluid are not affected.
- ✓ Low purchase and maintenance costs.
- ✓ Totally mechanical.
- ✓ Eco-friendly.
- ✓ Simple and fast maintenance.
- ⚠ An high presence of impurities could lead to valve malfunction.
- ⚠ Incorrect installation could inhibit the operation of the valve.

GLYCOL

- ✓ It prevents the formation of ice in the system circuit.
- ⚠ The glycol-based solution modifies the system's performance: decrease the heat exchange capacity, increase the flowrate and increase the pressure drop.
- ⚠ High purchase and maintenance costs.
- ⚠ Harmful to the environment.
- ⚠ The glycol-based water solution must be sufficiently concentrated to ensure appropriate protection.
- ⚠ With Mono Ethylene Glycol or MPG Mono Propylene Glycol corrosion may occur in the presence of oxygen (non inert MEG antifreeze).
- ⚠ The percentage of glycol in the system must be periodically checked: an incorrect percentage of glycol value may cause malfunctions and destruction of the unit's heat exchanger. If the mixture is too concentrated the unit warranty of the heat pump could be voided.
- ⚠ Draining the water circuit is not recommended:
 - The water circuit will rust, which will shorten its service life;
 - Water will remain at the bottom of the plate exchangers and freezing may cause damage.

HP ANTIFREEZE PROTECTION COSTS

iSTOP®



≅ 118 \$ per valve (1¼")
Italian purchase price

EXAMPLE

A system with a floor radiant and a heat pump of 14 kW (≅ 48.000 BTU/h) needs two antifreeze valves.

Purchase cost of two antifreeze valves (1¼")
≅ 236 \$

US Propylene Glycol



≅ 1600 \$ per 55 gallons
US purchase price

EXAMPLE

A system with a floor radiant and a heat pump of 14 kW (≅ 48.000 BTU/h) needs approximately a water volume of 23 liters/kW (≅ 1,77*10³ gal/BTU/h).

System water volume = 322 liters (85 gallons)
Hypothesis of glycol concentration = 30%
Glycol required for the system = 97 liters (26 gallons)

Purchase cost of glycol ≅ 760 \$

SUMMARY TABLE WITH A FLOOR RADIANT SYSTEM (23 liters/kW)

HP nominal power	kW	10	12	14	16
	BTU/h	34000	41000	48000	55000
Water volume	liters	230	276	322	368
	gallons	60	72	85	97
Purchase cost of glycol (30% concentration) *		524 \$	628 \$	760 \$	847 \$
		↓ - 57%	↓ - 62%	↓ - 69%	↓ - 72%
Purchase cost of two antifreeze valves		224 \$ (1")	236 \$ (1 ¼")	236 \$ (1 ¼")	236 \$ (1 ¼")

- * To the purchase cost of glycol are to be added the contributions of higher electricity consumption:
 - higher pumping costs due to the increase of pressure drop and flow rate;
 - lower efficiency of the heat pump due to the decrease of thermodynamic power.
- Furthermore, the cost does not include the maintenance costs:
- every 2 years it's recommended to check the concentration and top up the amount necessary to reach the right concentration;
 - the replacement of glycol should be done every 5 years, to avoid excessive decay of glycol which would lead to the risk of ice formation and corrosion of components.

MOTORIZED THREE-WAY BALL DIVERter VALVES



6445

tech. broch. 01392

Motorised three-way ball valve. With insulation kit for **heating and conditioning systems**. With auxiliary microswitch. Supply: 230 V (AC). Max. working pressure: 10 bar. Max. Op. 10 bar. Temperature range: -3 - 110 °C. Ambient temperature range: 0 - 55 °C. Power consumption: - 644562: 4 VA - 644566: 8 VA. Auxiliary microswitch contact rating: 0,8 A (230 V). Protection class: IP 44. **90° rotation.**



Code	Operating time	Supply voltage V	Kv (m ³ /h)		
644562 1"	40 s	230	9	1	—
644566 1"	10 s	230	9	1	—



6440

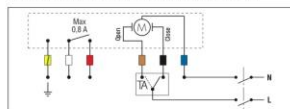
tech. broch. 01131

3-contact control spare actuator for motorised ball zone valves 6445 series. Supply: 230 V (AC).



Code	Operating time	Supply voltage V		
644002	40 s	230	1	10
644012	10 s	230	1	10

Wiring diagram for valves 6445 series, with 3-contact actuator.



638

tech. broch. 01196

Motorised three-way ball valve. With insulation kit for **heating and conditioning systems**. Supply: 230 V (AC). Max. working pressure: 16 bar. Max. Op. 10 bar. Temperature range: -10 - 110 °C. Ambient temperature range: -10 - 55 °C. With auxiliary microswitch. Power consumption: 6 VA. Auxiliary microswitch contact rating: 6 (2 A - 230 V (AC)). Protection class: IP 65. Operating time: 30 s (**90° rotation**).



Code	Operating time	Supply voltage V	Kv (m ³ /h)		
638373 1 1/4"	50 s	230	24,7	1	—
638383 1 1/2"	50 s	230	47	1	—

Operating diagram for 6445 series valve - with "T" drilling



Spare actuator for motorised ball zone valves 638 series. **90° rotation.**



Code	Supply voltage V		
638012	230	1	—



Insulation kit for heating and cooling systems. Medium temperature range: -10 - 110 °C. For motorised three-way ball valves 638 series.

Code	Use		
CBN638173	1 1/4"	1	—
CBN638183	1 1/2"	1	—

SEMI-AUTOMATIC SELF-CLEANING MAGNETIC FILTER

577 CALEFFI XF tech. broch. 01391



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.
Strainer mesh size Ø = 0,16 mm.



Threaded connections

Code			
577500	3/4"	1	-
577600	1"	1	-
577700	1 1/4"	1	-

Compression ends

Code			
577200	Ø 22	1	-
577300	Ø 28	1	-

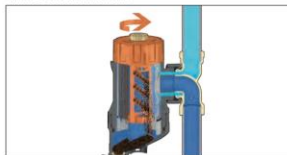


Insulation for semi-automatic self-cleaning magnetic filter.

Code	Use		
CBN577500	577500/600/700	1	-
CBN577800	577800/900	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.



577 CALEFFI XF tech. broch. 01391



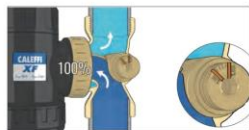
Semi-automatic self-cleaning magnetic filter **complete with by-pass.**
Technopolymer body.
Female connections.
Adjustable for horizontal and vertical pipes.
Drain cock with hose connection.
Max. working pressure: 3 bar.
Temperature range: 0-90 °C.
Strainer mesh size Ø = 0,16 mm.



Code			
577800	1 1/2"	1	-
577900	2"	1	-

Adjustable by-pass

Sizes DN 40 (code 577800, 1 1/2") and DN 50 (code 577900, 2") are equipped with a by-pass that allows the limitation of the flow rate passing through the device by up to 50%, thereby increasing the Kv value.
We recommend 100% filtration during filling and for the first weeks of system operation. Then, during the "maintenance" phase, the device can be set to function as a by-pass to achieve a higher Kv.



MULTIFUNCTION DEVICE WITH DIRT SEPARATOR AND STRAINER



5453 DIRTMAG PLUS tech. broch. 01258
 Multifunction device with dirt separator and strainer.
 Specific for the complete cleaning of the hydraulic circuit, to protect continuously generator and components.
 Technopolymer body.
 Dirt separator with technopolymer internal element, with magnet.
 Two inspectable strainers with stainless steel mesh:
 1 for initial cleaning (blue colour) already installed.
 1 for maintenance (grey colour) in package.
 Shut-off valves with nuts, brass body.
Female connections and Ø 22 and Ø 28 mm with compression ends. Adjustable for horizontal, vertical or 45° pipes.
 Drain cock with hose connection.
 Max. working pressure: 3 bar.
 Temperature range: 0-90 °C.



Threaded connections

Code			
545375	3/4"	1	5
545376	1"	1	5
545377	1 1/4"	1	5

Compression ends

Code			
545372	Ø 22	1	5
545373	Ø 28	1	5

DEAERATOR-DIRT SEPARATOR WITH MAGNET



5464 DISCAL DIRTMAG
 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.



Threaded connections

Code			
546405	3/4" F	1	5
546406	1" F	1	5

Compression ends

Code			
546402	Ø 22	1	5
546403	Ø 28	1	5

Problems caused by impurities in hydraulic circuits

The components of a heating and cooling system are exposed to degradation caused by the impurities contained in the system circuit. If the impurities in the thermal medium are not removed, they can impair operation of the units or components, such as heat generators or exchangers, especially in the system commissioning stage, already from the very first passage. This problem must not be underestimated because generator manufacturers will frequently reject warranty claims if their product is not adequately protected by a strainer from the time the product is commissioned onwards.



DEAERATOR



551 DISCAL
 Deaerator. Brass body.
Female and male connections and Ø 22 and Ø 28 mm with compression ends. Adjustable for horizontal and vertical pipes.
 Max. working pressure: 10 bar.
 Max. discharge pressure: 10 bar.
 Temperature range: 0-110 °C.

Threaded connections

Code			
551705	3/4" F	1	5
551706	1" F	1	5
551716	1" M	1	5

Compression ends

Code			
551702	Ø 22	1	5
551703	Ø 28	1	5

DIFFERENTIAL BY-PASS VALVE



519 tech. broch. 01007
 Differential by-pass valve,
 adjustable with graduated scale.
 Max. working pressure: 10 bar.
 Temperature range: 0-110 °C.
 Max. percentage of glycol: 30 %.



Threaded connections

Code	Setting range m.w.g.		
519500	3/4"	1-6	1 50
519504	3/4"	10-40	1 50
519700	1 1/4"	1-6	1 10
519703	1 1/4"	5-25	1 10

Compression ends

Code	Setting range m.w.g.		
519002	Ø 22	1-6	1 50



519 tech. broch. 01007
 Differential by-pass valve,
 adjustable with graduated scale.
 Max. working pressure: 10 bar.
 Temperature range: 0-100 °C.
 Max. percentage of glycol: 30 %.

Code	Setting range m.w.g.		
519015	3/4"	1-6	1 25



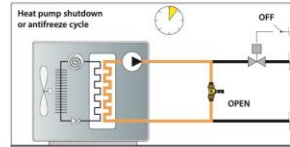
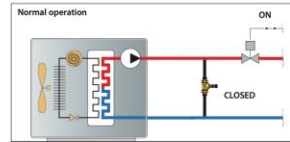
518 tech. broch. 01410
 Differential by-pass
 valve,
 adjustable with graduated scale.
 Max. working pressure: 10 bar.
 Temperature range: 0-100 °C.
 Max. percentage of glycol: 30 %.

Code	Setting range m.w.g.		
518500	3/4"	1-6	1 50

Compression ends

Code	Setting range m.w.g.		
518002	Ø 22	1-6	1 50

Application diagrams of differential by-pass valve 519 series



BALANCING VALVE WITH FLOW METER

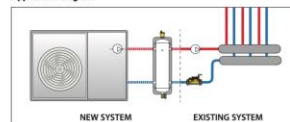


132 tech. broch. 01149
 Balancing valve with flow meter.
 Direct reading of flow rate.
 Brass valve body and flow meter.
 Ball valves for flow rate adjustment.
 Graduated scale flow meter with
 magnetic movement flow rate indicator.

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

Code	Flow rate range (l/min)		
132512	3/4"	5-13	1 5
132522	3/4"	7-28	1 5
132602	1"	10-40	1 5
132702	1 1/4"	20-70	1 5
132802	1 1/2"	30-120	1 5

Application diagram



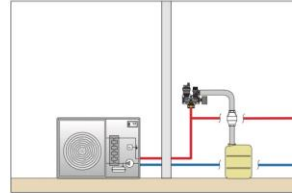
INSTRUMENT HOLDER IN COMPOSITE MATERIAL



305
Instrument holder in composite material for heating systems.
Equipped with air vent, safety relief valve in composite material and pressure gauge.
With insulation.
Temperature range: 5-90 °C.
Up to 50 kW.

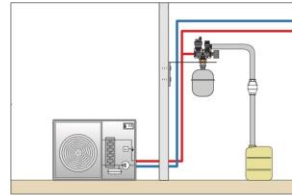
Code			
305663	1" 3 bar TÜV	1	5

Application diagram for instrument holder 305 series



305
Instrument holder in composite material for heating systems.
Equipped with air vent in composite material, safety relief valve and pressure gauge.
With insulation.
Temperature range: 5-90 °C.
Up to 50 kW.

Code			
305671	1" 1,8 bar	1	5
305673	1" 3 bar NF	1	5
305674	1" 4 bar without insulation	1	5



305
Instrument holder kit in composite material for heating systems.
Equipped with air vent, safety relief valve in composite material, pressure gauge, automatic shut-off cock for expansion vessel and fixing bracket.
With insulation.
Temperature range: 5-90 °C.
Up to 50 kW.

Code			
305503	3/4" 3 bar TÜV	1	10

BUFFER TANK FOR HEAT PUMP SYSTEMS

5485

tech. broch. 01406

Wall-mounted buffer tank-hydraulic separator for heat pump. In AISI 304 stainless steel.



With highly effective expanded EPP insulation.
Max. working pressure: 4 bar.
Max. percentage of glycol: 30%.
Working temperature range: -10-95 °C (without the formation of ice).

Air vent top connection:
15-30 liters 1";
50 liters 1 1/4".

Drain valve bottom connection:
15-30 liters 1";
50 liters 1 1/4".

Front probe holder connection 1/4" F.

Code	Volume	Connections		
548515	15 liters	1" F	1	-
548520	20 liters	1" F	1	-
548525	25 liters	1" F	1	-
548530	30 liters	1" F	1	-
548550	50 liters	1 1/4" F	1	-

5020 MINICAL®

tech. broch. 01406



Automatic air vent. In hot stamped brass.

With hydropscopic safety cap.

With insulation.

Max. working pressure: 10 bar.
Max. drain pressure: 2,5 bar.
Max. working temperature: 120 °C.

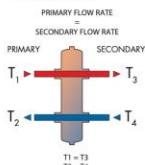


Code			
502067	1" M	1	50

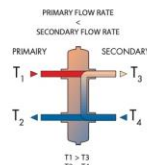
Fitting for code 548550.

Code			
F0001878	1 1/4" M x 1" F	1	-

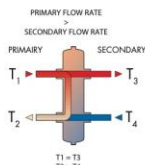
Operating principle



Limit configuration for heat pump systems: temperature difference at the user points the same as the value for the heat pump.



In a heat pump system this configuration may not guarantee the correct temperature at the terminals.



Optimal configuration for heat pump systems: temperature difference at the user points greater than the value for the heat pump.

NEW

Construction details

Material AISI 304 stainless steel

The 5485 series inertial hydraulic separator is a higher quality product than traditional carbon steel types, and therefore helps to keep the thermal system clean. It therefore reduces the number of problems caused by the impurities generated by corrosion.

EPP insulation

The highly effective expanded PPE insulation allows the heat pump to run efficiently in both heating and air-conditioning modes. The special body geometry makes the inertial hydraulic separator extremely compact and visually attractive.



Front probe holder connection

The 1/4" probe holder connection can be used to measure the thermal medium temperature with temperature probes or measurement temperature gauges.

Sizing

The hydraulic separator should be sized in accordance with the maximum recommended flow rate value at the inlet. The selected value should be the sum of the primary circuit flow rates or the sum of the secondary circuit flow rates, whichever is greater.

On the other hand, the inertial hydraulic separator volume depends on the minimum volume of water required by the heat pump manufacturer to guarantee proper machine operation even in defrosting phases. Generally, with more modern heat pumps, it can assume an average value calculated on the basis of the machine power, which varies from 2,5 to 3,5 litres/kWt.

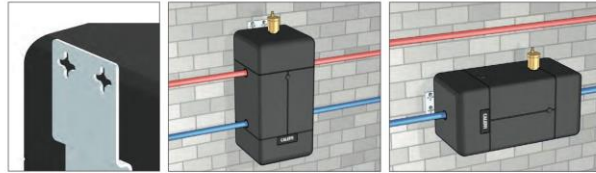
Volume	Connections	Max flow rate	Nominal power HP
15 l	1"	3,5 m ³ /h	3-5 kWt
20 l	1"	3,5 m ³ /h	3-5 kWt
25 l	1"	3,5 m ³ /h	6-8 kWt
30 l	1"	3,5 m ³ /h	9-12 kWt
50 l	1 1/4"	5,5 m ³ /h	13-25 kWt

BUFFER TANK FOR HEAT PUMP SYSTEMS

Extremely versatile installation

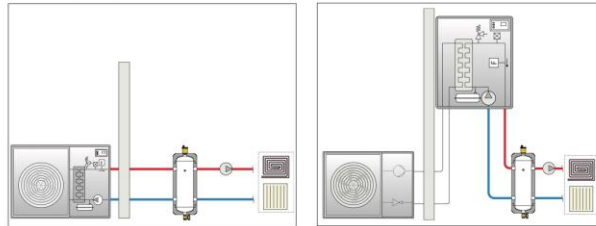
The 6 identical 1" connections (4 at the side, 1 at the top and 1 at the bottom) mean that this device can be installed in different configurations. The brackets are also designed to allow wall mounting of the 5485 series both vertically and horizontally.

Installation examples

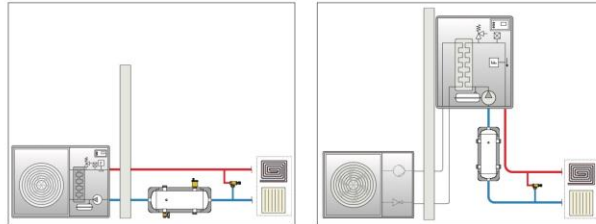


Application diagrams

Installation as hydraulic separator



Installation as buffer tank



AUTOMATIC COMPACT CHARGING UNIT

580010

tech. broch. 01333

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. CR deionization resistant alloy 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 12229 standard.
 Pressure reducing valve certified to EN 1567 standard.
 PATENT PENDING.



Code

580010 1/2"



1 5

580011

tech. broch. 01361

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 12229 standard.
 Pressure reducing valve certified to EN 1567 standard.
 PATENT.



Code

580011 1/2"



1 5

Backflow prevention reference standards

To avoid water backflow from the heating system, which is polluted and hazardous for human health, it is **indispensable to install an automatic charging unit with a backflow preventer**.
 The correct use of hydraulic backflow preventers is governed by the European reference standard EN 1717:2000 ("Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow").

THANK YOU



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