

# CALEFFI SOLAR

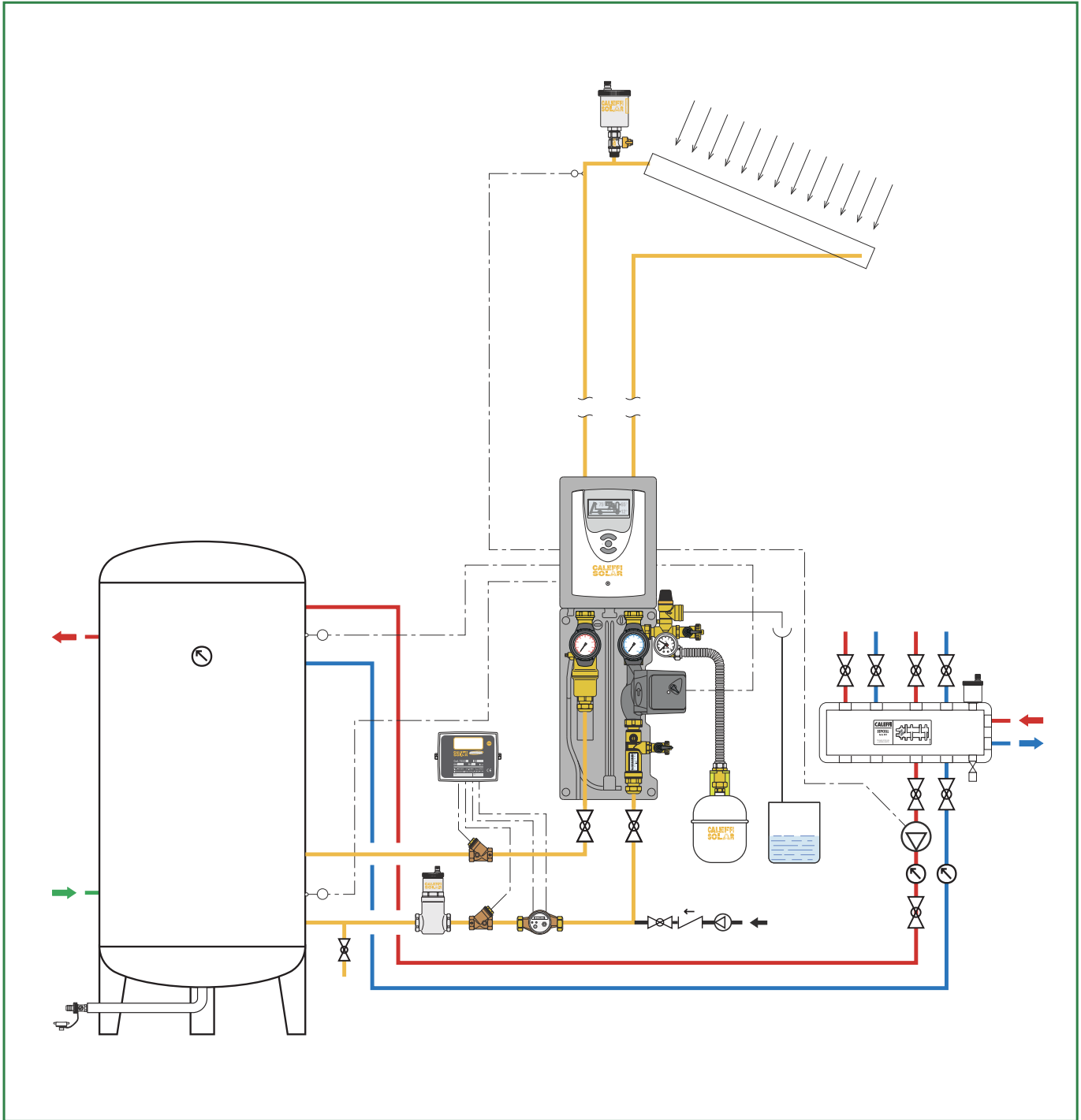


## COMPONENTS FOR SOLAR THERMAL SYSTEMS

2014

The CALEFFI SOLAR® product range has been specially developed for use in solar thermal systems, where high temperatures can normally be reached and where, depending on the kind of system, there can be glycol. Materials and performance of the components must necessarily take into account these particular operating conditions.

## COMPONENTS FOR PRIMARY CIRCUIT



We reserve the right to make changes and improvements to the products and related data in this publication, at any time and without prior notice. All the diagrams, numerical data, etc., are not binding.

## SAFETY RELIEF VALVE - AIR VENTS



### 253

tech. broch. 01089

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 TRD 721 certified to SV 100 § 7.7  
 Settings: 2,5 - 3 - 4 - 6 - 8 - 10 bar.



Code

253042	1/2" F x 3/4" F	2,5 bar
253043	1/2" F x 3/4" F	3 bar
253044	1/2" F x 3/4" F	4 bar
253046	1/2" F x 3/4" F	6 bar
253048	1/2" F x 3/4" F	8 bar
253040	1/2" F x 3/4" F	10 bar
253052	3/4" F x 1" F	2,5 bar
253053	3/4" F x 1" F	3 bar
253054	3/4" F x 1" F	4 bar
253056	3/4" F x 1" F	6 bar
253058	3/4" F x 1" F	8 bar
253050	3/4" F x 1" F	10 bar



### 250

Consisting of:

- Automatic air vent for solar thermal systems.

Brass body. Chrome plated.  
 Max. working pressure: 10 bar.  
 Max. discharge pressure: 2,5 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%.**

Code

250831	3/8" M	without cock
250931	3/8" M	

### 251

tech. broch. 01135

#### 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

251004	1/2" F	
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### 250

tech. broch. 01133

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%.**



### 250

tech. broch. 01133

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%.**



Code

250300	3/8" M x 3/8" F	- butterfly handle
250400	1/2" M x 1/2" F	- lever handle

Code

250031	3/8" M	without cock
250131	3/8" M	
250041	1/2" M	without cock

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



## DEAERATORS - MANUAL AIR SEPARATOR



### 251 DISCAL®

tech. broch. 01134

Deaerator 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

251003 3/4" F



### 251 DISCAL®

tech. broch. 01134

Deaerator for solar thermal systems.  
Brass body. Chrome plated.  
Female connections.  
With drain.  
Max. working pressure: 10 bar.  
Max. discharge pressure: 10 bar.  
**Temperature range: -30–160°C.**  
**Max. percentage of glycol: 50%.**  
PATENT

Code

251006 1" F

251007 1 1/4" F



### 251 DISCAL®

tech. broch. 01134

Deaerator for vertical pipes,  
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

251905 3/4" F

251906 1" F



### 251

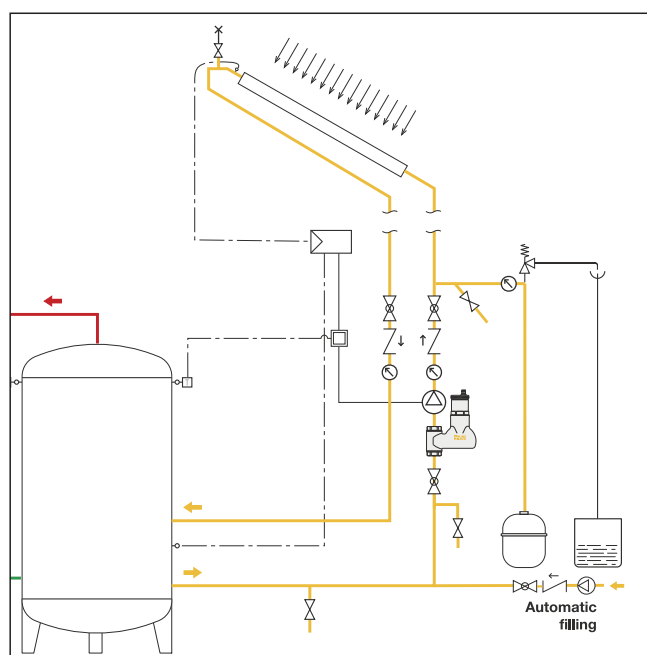
tech. broch. 01197

Manual air separator  
for solar thermal systems.  
Brass body.  
Female connections.  
Max. working pressure: 10 bar.  
**Temperature range: -30–160°C.**  
**Max. percentage of glycol: 50%.**

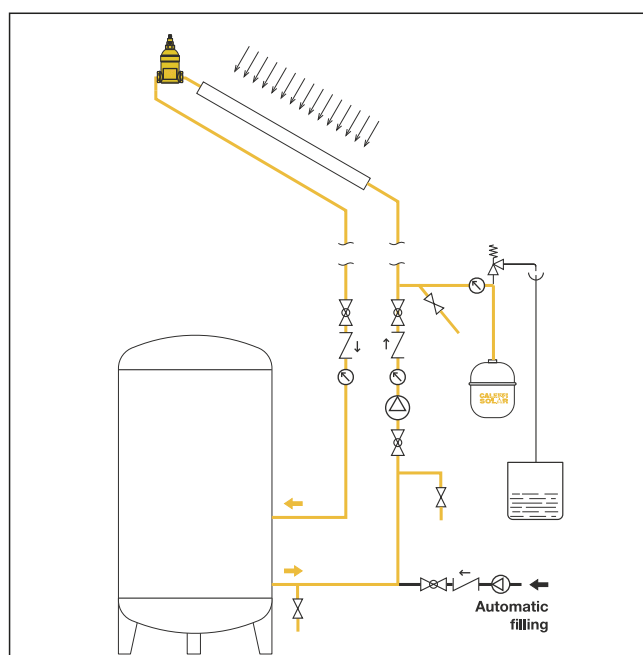
Code

251093 3/4" F

Application diagram of DISCAL® 251 series for vertical pipes



Application diagram of 251 series



## PUMP STATIONS

### 278

Pump station for solar thermal systems, return connection.

Electric supply: 230 V (ac).

Max. working pressure: 10 bar.

**Safety relief valve temperature range: -30–160°C.**

Safety relief valve setting: 6 bar (for other setting, see 253 series using the adapter code F21224).

**Flow meter temperature range: -10–110°C.**

**Max. percentage of glycol: 50%.**

Consisting of:

- Solar circulation pump;
- safety relief valve for solar thermal systems 253 series;
- fill/drain cock;
- instrument holder fitting with pressure gauge;
- flow meter;
- return temperature gauge;
- shut-off valve with check valve;
- 2 hose connections;
- pre-formed shell **insulation**.



Code	Flow meter scale (l/min)	Pump
<b>278050</b>	3/4" F 1–13	UPS 15-65
<b>278052</b>	3/4" F 8–30	UPS 15-80

### 278

Pump station for solar thermal systems, return connection.

Electric supply: 230 V (ac).

Max. working pressure: 10 bar.

**Safety relief valve temperature range: -30–160°C.**

Safety relief valve setting: 6 bar (for other setting, see 253 series using the adapter code F21224).

**Flow meter temperature range: -10–110°C.**

**Max. percentage of glycol: 50%.**

Consisting of:

- Solar circulation pump;
- safety relief valve for solar thermal systems 253 series;
- fill/drain cock;
- instrument holder fitting with pressure gauge;
- flow meter;
- return temperature gauge;
- shut-off valve with check valve;
- 2 hose connections;
- pre-formed shell **insulation**.

Fitted for fitting with digital regulator DeltaSol® C+.



Code	Flow meter scale (l/min)	Pump
<b>278750</b>	3/4" F 1–13	UPS 15-65
<b>278752</b>	3/4" F 8–30	UPS 15-80

## PUMP STATIONS

### 279

Pump station for solar thermal systems, flow and return connection.  
Electric supply: 230 V (ac).  
Max. working pressure: 10 bar.

**Safety relief valve temperature range: -30–160°C.**

Safety relief valve setting: 6 bar (for other setting, see 253 series using the adapter code F21224).

**Flow meter temperature range: -10–110°C.**

**Max. percentage of glycol: 50%.**

Consisting of:

- Solar circulation pump;
- safety relief valve for solar thermal systems 253 series;
- 2 fill/drain cocks;
- instrument holder fitting with pressure gauge;
- flow meter;
- deaerator device;
- flow temperature gauge;
- return temperature gauge;
- 2 shut-off valves with check valves;
- 2 hose connections;
- pre-formed shell **insulation**.

Fitted for fitting with digital regulator DeltaSol® C+.



Code	Flow meter scale (l/min)		Pump
279050	3/4" F	1–13	UPS 15-65
279052	3/4" F	8–30	UPS 15-80

### 278

Digital regulator DeltaSol® C+.

Electric supply: 230 V (ac).

Complete with pre-formed shell **insulation** for coupling with pump stations 278 and 279 series.

Complete with 3 Pt1000 probes, with fourth probe as optional.

Functions: differential temperature regulator with supplementary and optional functions.

Inputs: for 4 Pt1000 probes.

Outputs: 2 semiconductor relays.



Code

278001

### 255

Pump station for solar thermal systems, flow and return connection.

Electric supply: 230 V (ac).

Max. working pressure: 10 bar.

**Safety relief valve temperature range: -30–160°C.**

Safety relief valve setting: 6 bar (for other setting see 253 series).

**Max. flow meter temperature: 120°C.**

**Max. percentage of glycol: 50%.**

Consisting of:

- Grundfos Solar 25-120 circulation pump;
- safety relief valve for solar thermal systems 253 series;
- 2 fill/drain cocks with hose connections;
- instrument holder fitting with pressure gauge;
- flow regulator with flow meter;
- deaerator device;
- flow temperature gauge;
- return temperature gauge;
- 2 shut-off valves with check valves;
- pre-formed shell **insulation**.



Code	Flow meter scale (l/min)	
255266	1" F	5–40

## SPARE PARTS AND ACCESSORIES FOR PUMP STATIONS



### 259

**tech. broch. 01246**

Welded expansion vessel only for primary circuit of solar thermal systems, EC certification.  
Bladder membrane.  
Max. working pressure: 10 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.

Code	Litres	Conn.	Precharge (bar)
259008	8	3/4"	2,5
259012	12	3/4"	2,5
259018	18	3/4"	2,5
259025	25	3/4"	2,5
259033	33	3/4"	2,5



### 259

**tech. broch. 01246**

Welded expansion vessel only for primary circuit of solar thermal systems, EC certification.  
Diaphragm membrane.  
Max. working pressure: 10 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.

Code	Litres	Conn.	Precharge (bar)
259050	50	3/4"	2,5
259080	80	1"	2,5

### 255

**tech. broch. 01136**

Expansion vessel connection kit.  
Consisting of:  
- stainless steel flexible hose (L=610 mm);  
- automatic shut-off cock;  
- wall mounting bracket (for vessels up to 24 litres).  
Max. working pressure: 10 bar.  
**Shut-off cock max. working temperature: 110°C.**  
**Max. percentage of glycol: 50%.**



Code	
255007	3/4"



### 255

System filling pump for pump stations 279, 278 and 255 series.

Code  
**255010**



Adapter for pump stations 278 and 279 series. To be used for the installation of the 1/2" safety relief valve 253 series.

Code  
**F21224**

## BALL VALVE - THREE-PIECE UNION FITTING

### 240

**tech. broch. 01185**

Ball valve for solar thermal system.  
**Body and ball in stainless steel AISI 316.**  
PN 63.  
Female connections.  
Handle in stainless steel AISI 304.  
**Temperature range: -30–200°C.**  
**Max. percentage of glycol: 50%.**



Code	
240400	1/2"
240500	3/4"
240600	1"

### 588

Three-piece straight union fitting for solar thermal systems.  
Max. working pressure: 16 bar.  
**Temperature range: -30–160°C.**  
**Max. percentage of glycol: 50%.**  
Black nickel plated nut.



Code	
588052	3/4" F x M with union
588062	1" F x M with union

## MECHANICAL FITTINGS WITH O-RING SEAL



### 2540

Female fitting, mechanical O-Ring seal for solar thermal systems. For annealed copper, hard copper, brass, mild and stainless steel pipes. Max. working pressure: 16 bar. **Temperature range: -30–160°C.** **Max. percentage of glycol: 50%.** Black nickel plated nut.

Code

254055	3/4" F - Ø 15
254058	3/4" F - Ø 18
254052	3/4" F - Ø 22
254062	1" F - Ø 22
254068	1" F - Ø 28



### 2546

Tee fitting, mechanical O-Ring seal for solar thermal systems. For annealed copper, hard copper, brass, mild and stainless steel pipes. Max. working pressure: 16 bar. **Temperature range: -30–160°C.** **Max. percentage of glycol: 50%.** Black nickel plated nut.

Code

254602	Ø 22
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### 2543

Coupling sleeve, mechanical O-Ring seal for solar thermal systems. For annealed copper, hard copper, brass, mild and stainless steel pipes. Max. working pressure: 16 bar. **Temperature range: -30–160°C.** **Max. percentage of glycol: 50%.** Black nickel plated nut.



Code

254305	Ø 15
254308	Ø 18
254302	Ø 22



### 2547

Male elbow fitting, mechanical O-Ring seal for solar thermal systems. For annealed copper, hard copper, brass, mild and stainless steel pipes. Max. working pressure: 16 bar. **Temperature range: -30–160°C.** **Max. percentage of glycol: 50%.** Black nickel plated nut.

Code

254755	3/4" M - Ø 15
254758	3/4" M - Ø 18
254752	3/4" M - Ø 22



### 2544

Male fitting, mechanical O-Ring seal for solar thermal systems. For annealed copper, hard copper, brass, mild and stainless steel pipes. Max. working pressure: 16 bar. **Temperature range: -30–160°C.** **Max. percentage of glycol: 50%.** Black nickel plated nut.

Code

254455	3/4" M - Ø 15
254458	3/4" M - Ø 18
254452	3/4" M - Ø 22
254465	1" M - Ø 15
254462	1" M - Ø 22



### 2548

Female elbow fitting, mechanical O-Ring seal for solar thermal systems. For annealed copper, hard copper, brass, mild and stainless steel pipes. Max. working pressure: 16 bar. **Temperature range: -30–160°C.** **Max. percentage of glycol: 50%.** Black nickel plated nut.

Code

254855	3/4" F - Ø 15
254858	3/4" F - Ø 18
254852	3/4" F - Ø 22



### 2545

Elbow coupling sleeve, mechanical O-Ring seal for solar thermal systems. For annealed copper, hard copper, brass, mild and stainless steel pipes. Max. working pressure: 16 bar. **Temperature range: -30–160°C.** **Max. percentage of glycol: 50%.** Black nickel plated nut.

Code

254505	Ø 15
254508	Ø 18
254502	Ø 22



### 2540

Plug for Ø 22 copper pipe.

Code

254002	Ø 22
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# DIGITAL REGULATOR

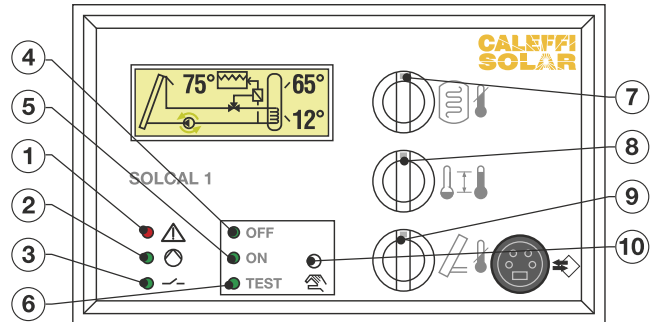
## 257 SOLCAL® 1

Digital regulator for solar thermal systems.  
Complete with wall mounting basis  
for plug-in electrical connection.  
Complete with three probes type Pt1000.  
Double relays output.  
Supply: 230 V  $\pm$ 6% - 50 Hz.  
Power consumption: 4 VA.  
Max. contact rating: 250 V (ac) - 8 (2) A.  
Protection class: IP 40.



Code (h x b x p)  
**257041** 90 x 136 x 80

### Characteristic components



- 1) LED 1: function error or probe fault (red)
- 2) LED 2: Solar circuit pump ON
- 3) LED 3: second relays output active
- 4) LED 4: OFF regulator non active
- 5) LED 5: ON regulator active
- 6) LED 6: active relays test
- 7) Storage temperature control setting at level 1, at level 2 depending on programme (see system)
- 8)  $\Delta T$  min. and max. control
- 9) Min. temperature control for solar panel activation and min. working time
- 10) Operation button

### Regulation programs

The regulator allows to manage 11 regulation programs, depending on the possible system configurations. They can be used for systems with single or double storage, swimming-pools, heating or domestic water systems, etc..

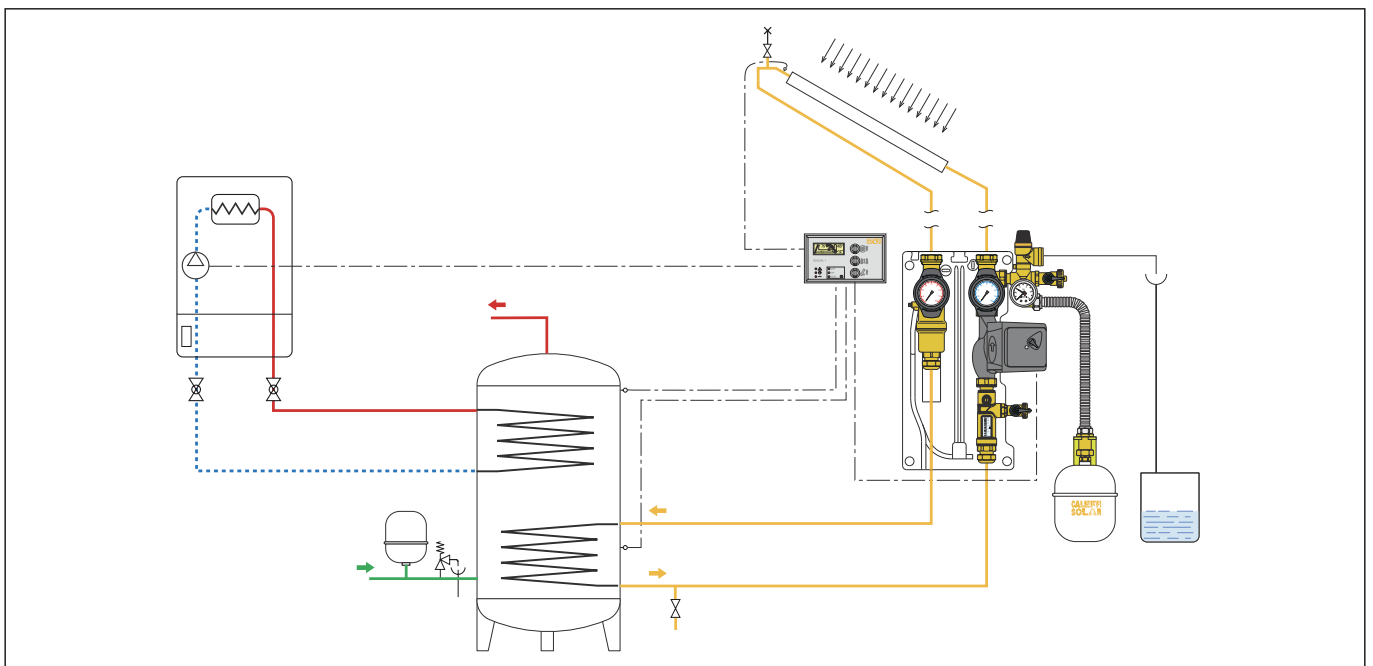
## 257



Pocket for Pt1000 probe.  
In stainless steel.  
Length: 100 mm.

Code  
**257004** 1/2"

### Application diagram of regulator 257 series



## DIFFERENTIAL REGULATORS AND THERMOSTAT



**257** **tech. broch. 01143**

Differential temperature regulator for solar thermal systems, with relays output. Complete with contact probe and immersion probe with pocket. Box protection class: IP 65. Electric supply: 230 V  $\pm$ 6% - 50 Hz. Nominal power consumption: 1,45 VA. Contact rating on switch-over: 6 A (230 V).  $\Delta$ T adjustment range: 2–20 K. Hysteresis: 2 K ( $\pm$ 1 K).



Code

**257010**



**257** **tech. broch. 01143**

Box complete with DIN bar, for regulator or thermostat 257 series. Protection class: IP 65.

Code (h x w x d)

**257001** 200 x 122 x 112



**257** **tech. broch. 01143**

Double box complete with DIN bar, for regulator and thermostat 257 series. Protection class: IP 65.

Code (h x w x d)

**257003** 200 x 160 x 112



**257** **tech. broch. 01143**

Differential temperature regulator for solar thermal systems, with relays output. Box protection class: IP 65. Electric supply: 230 V  $\pm$ 6% - 50 Hz. Nominal power consumption: 1,45 VA. Contact rating on switch-over: 6 A (230 V).  $\Delta$ T adjustment range: 2–20 K. Hysteresis: 2 K ( $\pm$ 1 K).



Code

**257000**



**150** **tech. broch. 01143**

Contact probe for regulator or thermostat 257 series and for regulator 1520 series (flow or return). Cable length: 2 m.

Code

**150009**



**257** **tech. broch. 01143**

Thermostat for solar thermal systems, with relays output. For thermal integration control and diverter valves. Box protection class: IP 65. Electric supply: 230 V  $\pm$ 6% - 50 Hz. Nominal power consumption: 1,45 VA. Contact rating on switch-over: 6 A (230 V). Adjustment temperature range: 20–90°C. Hysteresis: 1 K.



Code

**257002**



**150** **tech. broch. 01143**

Immersion probe for regulator or thermostat 257 series and for regulator 1520 series. Cable length: 2 m.

Code

**150006**



**150** **tech. broch. 01143**

Pocket for immersion probe code 150006.

Code

**150029** 1/4" M

## HEAT METER

### 75525 CONTECA

 tech. broch. 01146

Direct heat metering with local LCD reading or centralised reading with controller code 755010 or interface code 755055, for solar thermal systems.

Max. working pressure: 10 bar.

Temperature range: 5–120°C.

Max. percentage of glycol: 50%.

The CONTECA module is supplied complete with:

- Pair of temperature probes with immersion pockets.
- Y pockets for immersion probes.
- Water meter, with pulse output (max. temperature 120°C).
- Electronic integrator with LCD.
- Supply 24 V (ac) 50 Hz - 1 W.
- Set for transmission in RS485 Bus mode.

Conformity to EN 1434-1.



Code	Conn.	Meas. type	Q <sub>nom</sub> m <sup>3</sup> /h
755254	1/2"	single jet	1,5
755255	3/4"	single jet	2,5
755256	1"	multi jet	3,5
755257	1 1/4"	multi jet	6
755258	1 1/2"	multi jet	10
755259	2"	multi jet	15

## BALANCING VALVE WITH FLOW METER

### 258

 tech. broch. 01148

Balancing valve with flow meter, for solar thermal systems.

Direct reading of flow rate.

Brass valve body and flow meter.

Chrome plated.

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: -30–130°C.

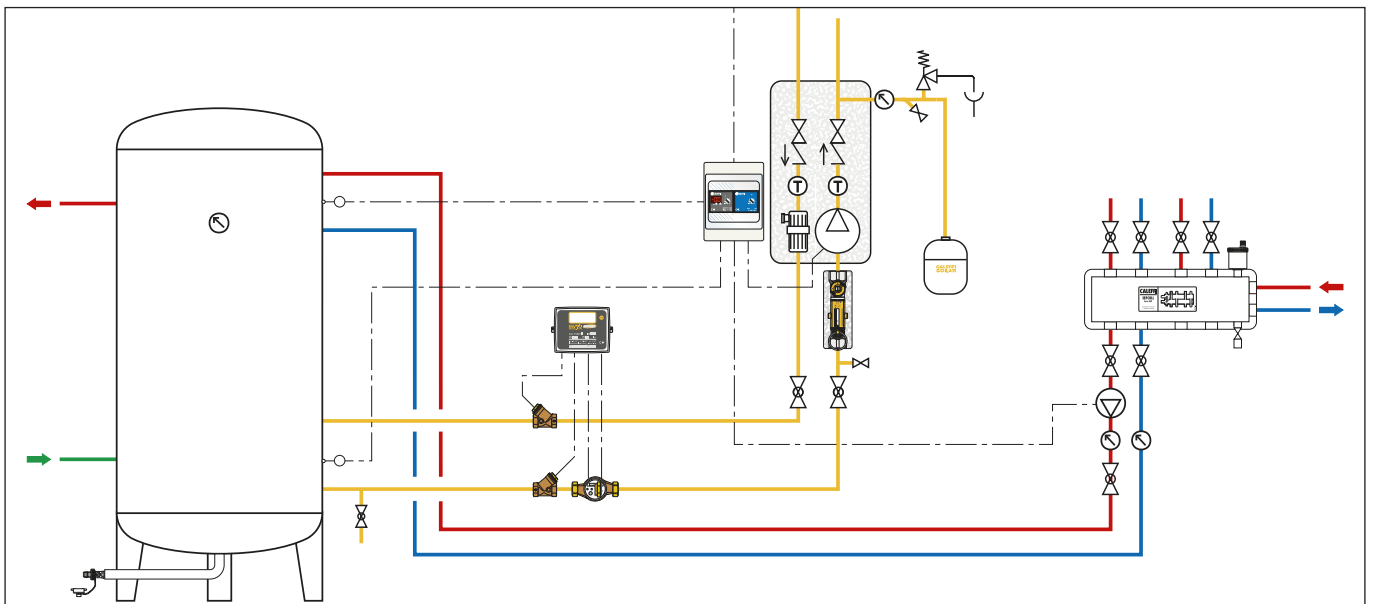
Max. percentage of glycol: 50%

PATENT PENDING.

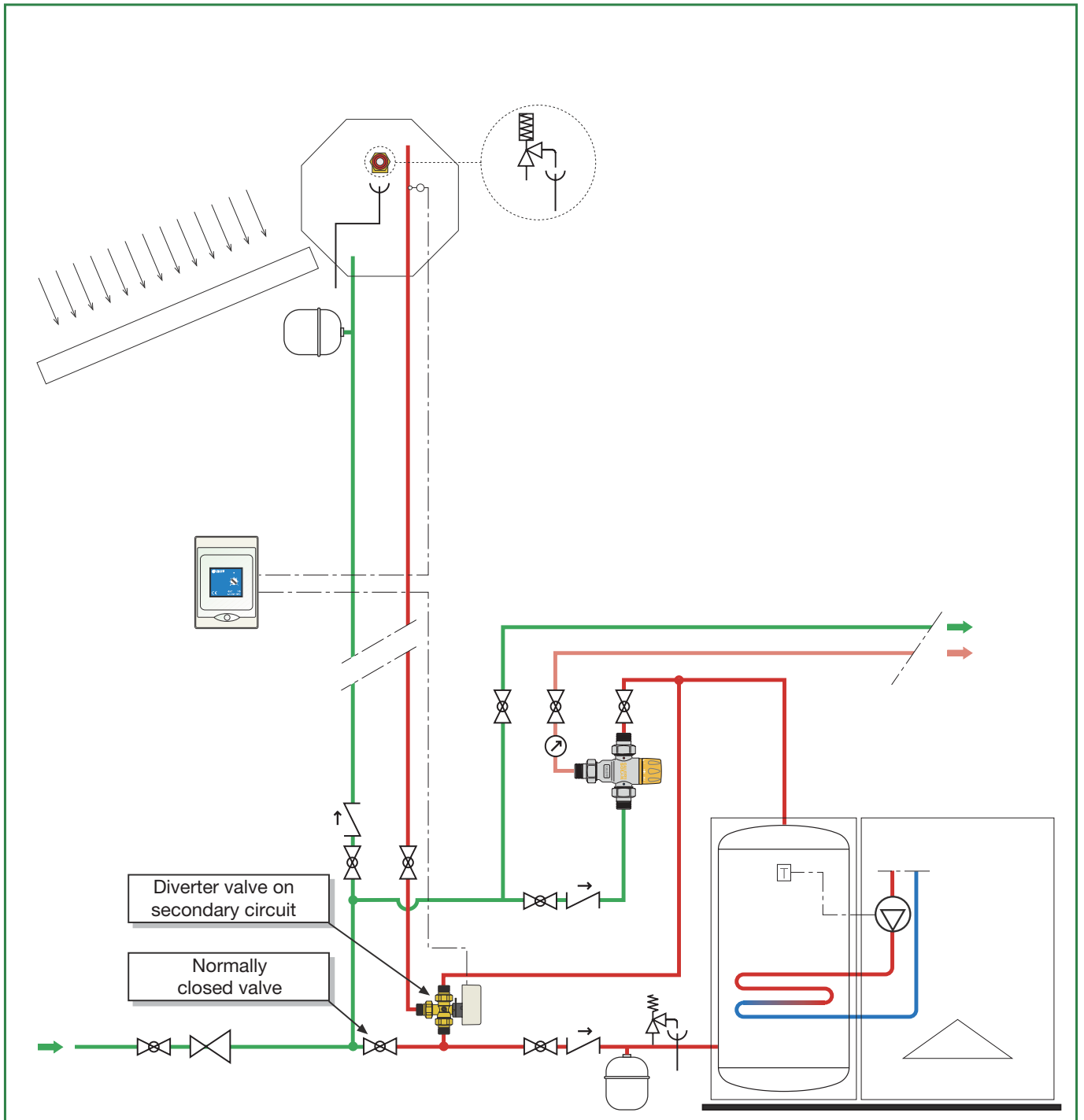


Code	Conn.	Flow rate range (l/min)
258503	3/4"	2– 7
258533	3/4"	3–10
258523	3/4"	7–28
258603	1"	10–40

Application diagram of heat metering 75525 series and balancing valve 258 series



# COMPONENTS FOR SECONDARY CIRCUIT



## SAFETY DEVICES FOR SECONDARY CIRCUIT

Prescribed by Collection "R" 2009 ISPEL



### 527 SOL

Safety relief valve certified and calibrated to INAIL. Certified for domestic water use. Female connections. Discharge overpressure 10%. Closing differential 20%. PN 10. Temperature range: 5–110°C. Settings: 4 - 5 - 6 - 7 - 8 bar.



### 542 SOL

Temperature relief valve, with fail-safe action. Certified and calibrated to INAIL. Certified for domestic water use. Max. working pressure: 10 bar. Max. working temperature: 100°C. Setting temperature: 85°C. Discharge rating: 108 kW.



Code

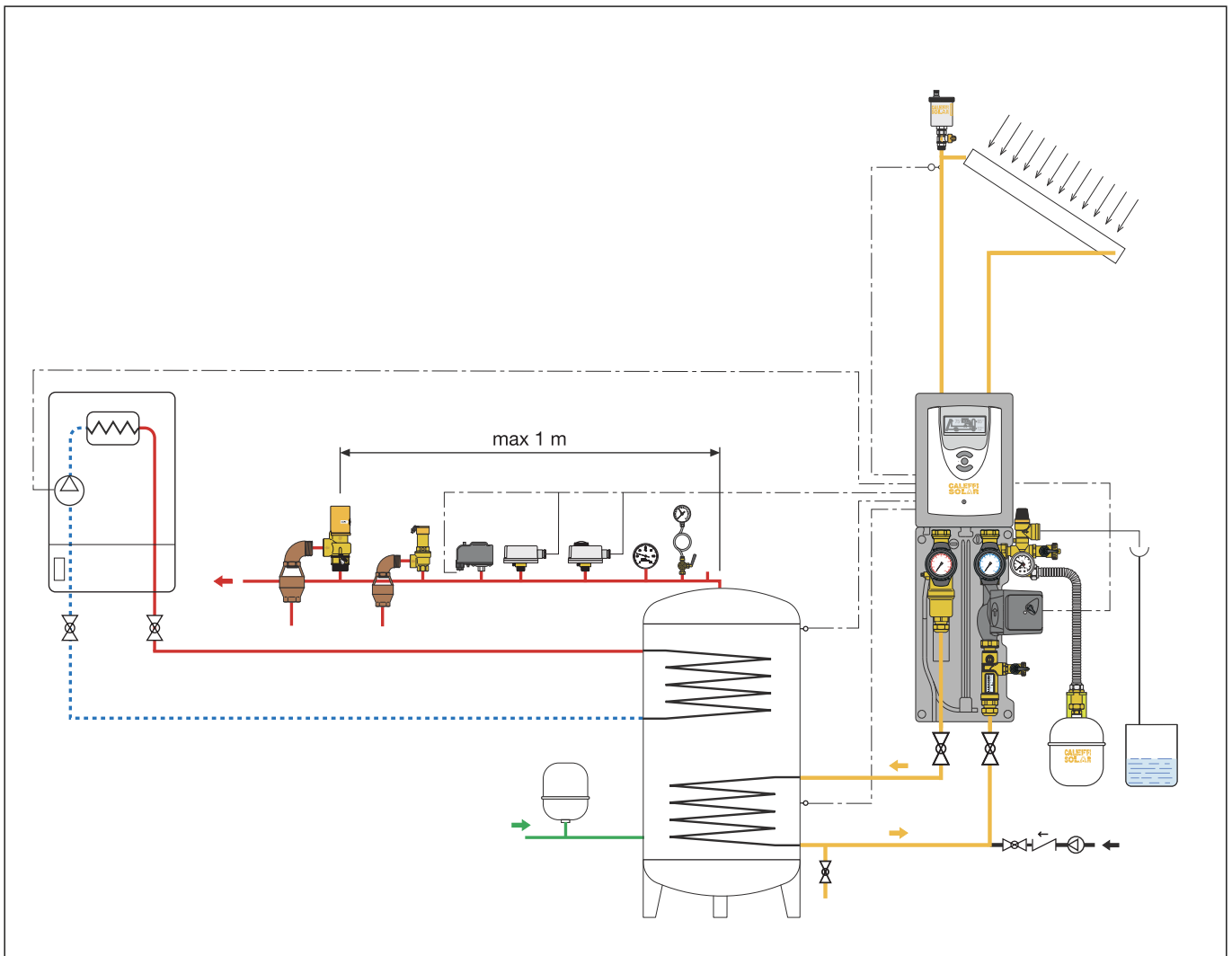
527440 SOL	1/2" x 3/4"	4 bar
527450 SOL	1/2" x 3/4"	5 bar
527460 SOL	1/2" x 3/4"	6 bar
527470 SOL	1/2" x 3/4"	7 bar
527480 SOL	1/2" x 3/4"	8 bar

Code

Setting

542870 SOL	1 1/2" M x 1 1/4" F	85°C
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Application diagram of 527 SOL and 542 SOL valves



## TEMPERATURE AND PRESSURE RELIEF VALVE



### 309

tech. broch. 01147

Temperature and pressure relief valve.  
**For solar thermal systems, to protect the hot water storage.**  
**CR** dezincification resistant alloy body. Chrome plated.  
 Setting temperature: 90°C.  
 Discharge rating:  
 1/2" x Ø 15: 10 kW.  
 3/4" x Ø 22: 25 kW.  
 Settings: 6 - 7 - 10 bar.  
**Settings certified to EN 1490: 7 - 10 bar.**



Code

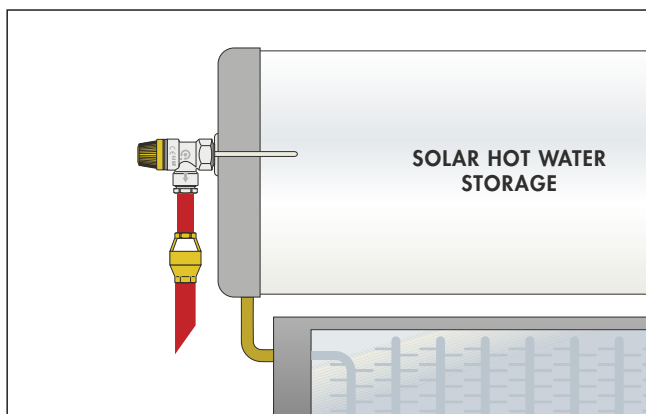
309461	1/2" M x Ø 15	6 bar
309471	1/2" M x Ø 15	7 bar
309401	1/2" M x Ø 15	10 bar
309561	3/4" M x Ø 22	6 bar
309571	3/4" M x Ø 22	7 bar
309501	3/4" M x Ø 22	10 bar

### Product certification in accordance with European Standard EN 1490

European Standard EN 1490: 2000, entitled "Building valves - Combined temperature and pressure relief valves - Tests and requirements", describes the constructional and performance specifications that TP relief valves must have.

Caleffi 309 series TP relief valves for solar systems are certified by Buildcert (UK) to comply with the requirements of the European Standard EN 1490.

### Application diagram of valve 309 series on a solar hot water storage



## ANTI-FREEZE SAFETY DEVICE



### 603

**ICECAL®**

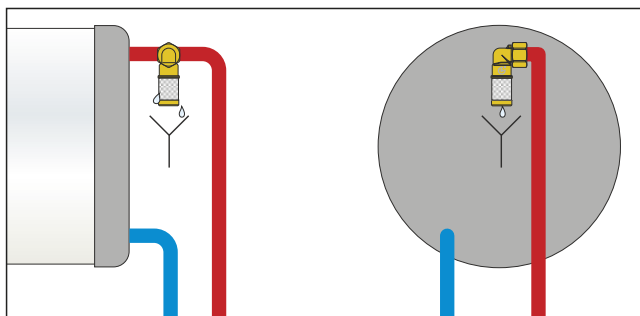
Anti-freeze safety device.  
**For solar thermal systems, to protect the hot water storage.**  
**CR** dezincification resistant alloy body.  
 Max. working pressure: 10 bar.  
 Ambient temperature range: -30-90°C.  
 Opening temperature: 3°C.  
 Closing temperature: 4°C.



Code

603040 1/2" F with nut

### Application diagram of 603 series device on domestic water circuit



## MOTORISED BALL DIVERTER VALVE



### 6443

tech. broch. 01132

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

**Complete with actuator with 3-contact control.**  
**With auxiliary microswitch.**

Supply: 230 V (ac).  
 Power consumption: 8 VA.  
 Auxiliary microswitch contact rating:

0,8 A (230 V).  
 Ambient temperature range: 0-55°C.  
 Protection class: IP 44 (vertical stem).  
 IP 40 (horizontal stem).

**Operating time: 10 s (90° rotation).**  
 Cable length: 100 cm.



Code		Supply voltage	
		V	Kv (m³/h)
644346	1/2"	230	3,9
644356	3/4"	230	3,9
644357	3/4"	230	8,6
644366	1"	230	9,0
644348	1/2"	24	3,9
644358	3/4"	24	3,9
644359	3/4"	24	8,6
644368	1"	24	9,0

## THERMOSTATIC MIXING VALVE

Sizing software available on [www.caleffi.com](http://www.caleffi.com)



### 2521 tech. broch. 01127

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



Code	Temperature adjustment	Kv (m <sup>3</sup> /h)
252140	1/2"	30-65°C 2,6
252150	3/4"	30-65°C 2,6



### 2523 tech. broch. 01129

Thermostatic mixing valve with interchangeable cartridge for solar thermal systems. Brass body.  
 Male union connections.  
 Max. working pressure: 14 bar.  
**Max. inlet temperature: 110°C.**



Code	Temperature adjustment	Kv (m <sup>3</sup> /h)
252340	1/2"	30-65°C 4,0
252350	3/4"	30-65°C 4,5
252360	1"	30-65°C 6,9
252370	1 1/4"	30-65°C 9,1
252380	1 1/2"	35-65°C 14,5
252390	2"	35-65°C 19,0



### 2521 tech. broch. 01127

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



Code	Temperature adjustment	Kv (m <sup>3</sup> /h)
252153	3/4"	30-65°C 2,6



### 2523

Spare cartridge.  
 For thermostatic mixing valve 2523 series.

Code	Temperature adjustment
252305	1/2" - 3/4"



### 2523

Spare cartridge.  
 For thermostatic mixing valve 2523 series.

Code	Temperature adjustment
252306	1" - 1 1/4"
252308	1 1/2" - 2"



### 2521 depl. 01257

Thermostatic mixing valve for centralised solar thermal systems.  
**CR** dezincification resistant alloy body.  
 Male union connections.  
 Antiscale inner regulator in technopolymer.  
 Max. working pressure: 14 bar.  
**Max. inlet temperature: 100°C.**



Code	Temperature adjustment	Kv (m <sup>3</sup> /h)
252151	3/4"	35-65°C 4,5
252160	1"	35-65°C 5,5
252170	1 1/4"	35-65°C 7,6
252180	1 1/2"	35-65°C 11,0
252190	2"	35-65°C 13,3

## ANTI-SCALD THERMOSTATIC MIXING VALVE



### 2527 tech. broch. 01165

Anti-scald adjustable thermostatic mixing valve, **with check valves and strainers**, for solar thermal systems.  
 High thermal performance device, **with anti-scald safety function.**  
**CR** dezincification resistant alloy body. Chrome plated.  
 Male union connections.


Performance to standards NF 079 Doc. 8, EN 15092, EN 1111, EN 1287.  
 Max. working pressure: 10 bar.  
**Max. inlet temperature: 100°C.**



Code	Temperature adjustment	Kv (m <sup>3</sup> /h)
252714	1/2"	35-55°C 1,5
252713	3/4"	35-55°C 1,7

# SOLAR STORAGE-TO-BOILER CONNECTION KIT

## 264 SOLARNOCAL

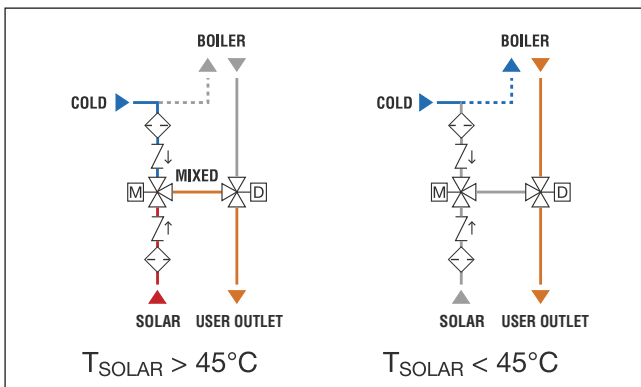
 tech. broch. 01163



### Function

A thermostatic anti-scald mixing valve, at the kit inlet, controls the temperature of the water coming from the solar hot water storage. The thermostat, by means of the probe positioned on the hot water flow from the solar hot water storage, controls the diverter valve at the kit outlet. Depending on the temperature setting, the valve diverts the water towards the user circuit or activates the boiler circuit, **without thermal integration**.

### Hydraulic diagrams



Solar storage-to-boiler connection kit, **without thermal integration**. Consisting of:

- thermostatic anti-scald mixing valve, adjustable with knob, for solar thermal systems. Complete with strainers and check valves at the inlets;
- diverter valve with three-contact actuator, with auxiliary microswitch;
- thermostat with probe for solar thermal system, for operating diverter valve. Display showing temperature.
- pre-formed **shell protective cover**.

**Diverter-mixing valve coupling with adjustable position** of the inlet and outlet connections.

### Mixing valve

**CR** dezincification resistant alloy body.  
Max. working pressure: 10 bar.  
Adjustment temperature range: 35–55°C.

**Max. inlet temperature: 100°C.**

### Diverter valve

Brass body.  
Max. working pressure: 10 bar.  
Temperature range: -5–110°C.

### Actuator

Three-contact type.  
Electric supply: 230 V (ac).  
Power consumption: 8 VA.  
Auxiliary microswitch contact rating: 0,8 A (230 V).  
Ambient temperature range: 0–55°C.  
Protection class: IP 44 (vertical stem).  
IP 40 (horizontal stem).

Operating time: 10 s.  
Cable length: 1 m.

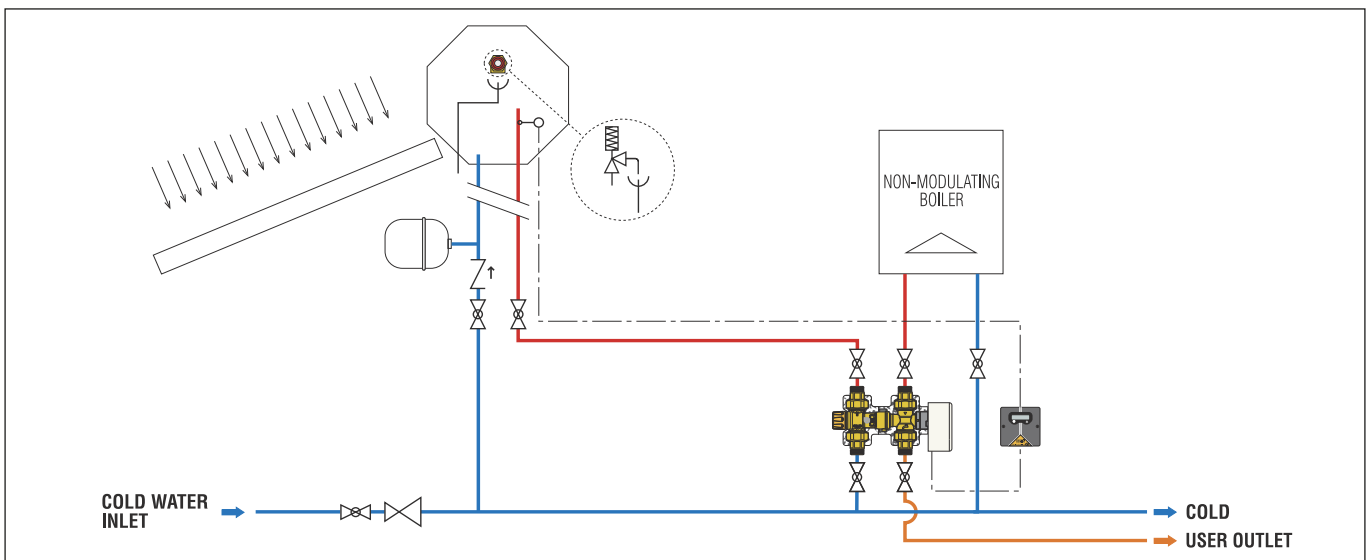
### Thermostat with probe

Electric supply: 230 V (ac).  
Adjustable temperature range: 25–50°C.  
Factory setting: 45°C.  
Box protection class: IP 54.

Code

**264352** 3/4"

### Application diagram of SOLARNOCAL kit 264 series





# SOLAR STORAGE-TO-BOILER CONNECTION KIT

## 265 SOLARINCAL

 tech. broch. 01163

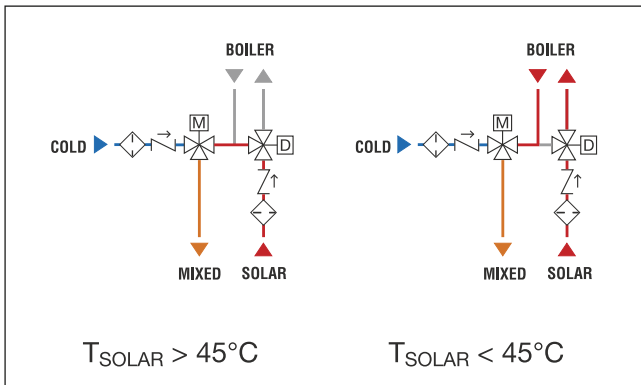


### Function

The thermostat, by means of the probe positioned on the hot water flow from the solar hot water storage, controls the diverter valve at the kit inlet. Depending on the temperature setting, the valve diverts the water towards the user circuit or the boiler circuit, **with thermal integration**.

A thermostatic anti-scald mixing valve, at the kit outlet, constantly controls the temperature of the water sent to the user.

### Hydraulic diagrams



Solar storage-to-boiler connection kit, **with thermal integration**.

Consisting of:

- thermostatic anti-scald mixing valve, adjustable with knob, for solar thermal systems. Complete with strainers and check valves at the inlets;
- diverter valve with three-contact actuator, with auxiliary microswitch;
- thermostat with probe for solar thermal system, for operating diverter valve. Display showing temperature.
- pre-formed **shell protective cover**.

**Diverter-mixing valve coupling with adjustable position** of the inlet and outlet connections.

### Mixing valve

For technical details see 264 series.

### Diverter valve

For technical details see 264 series.

### Actuator

For technical details see 264 series.

### Thermostat with probe

For technical details see 264 series.

Code

**265352** 3/4"

## ACCESSORIES



## 265

Thermostat with display showing storage temperature.

For devices 264 and 265 series.

Electric supply: 230 V (ac).

Adjustable temperature range: 25–50°C.

Factory setting: 45°C.

Box protection class: IP 54.

Code

**265001**

Code

**264359** kit 264 series without thermostat and probe

**265359** kit 265 series without thermostat and probe

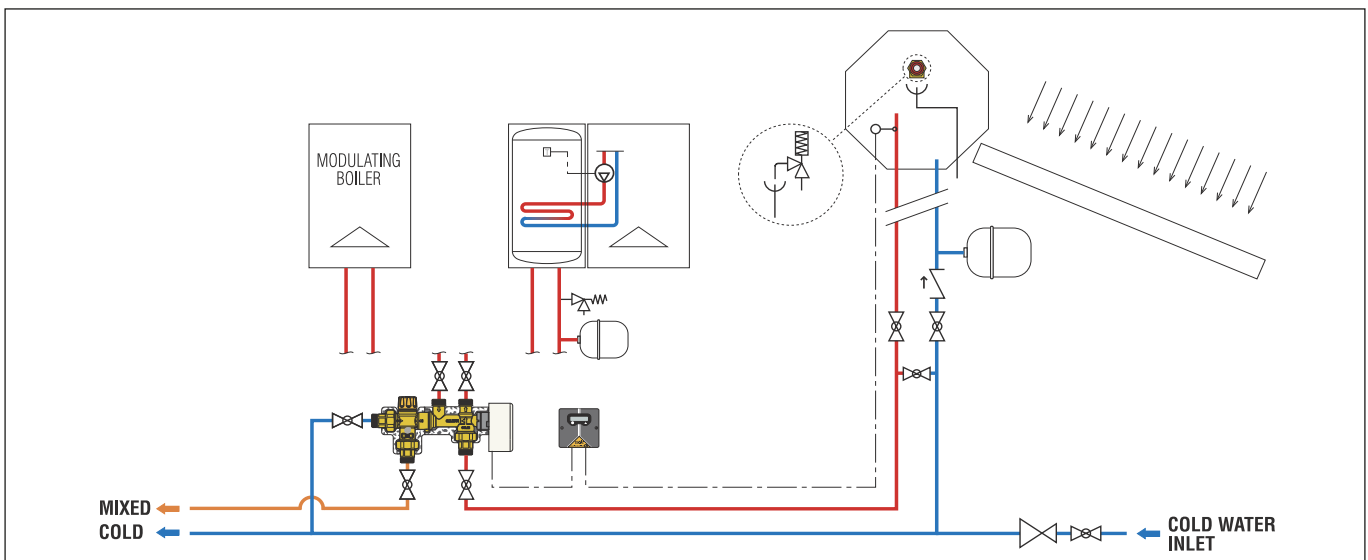
**257004** Stainless steel pocket for Ø 6 mm probe

**F29525** box with switching 3 contact relay

**F29466** Ø 15 mm contact probe

**F29467** pocket for Ø 15 mm probe

### Application diagram of SOLARINCAL kit 265 series



# SOLAR STORAGE-TO-BOILER THERMOSTATIC CONNECTION KIT

## 262 SOLARINCAL-T

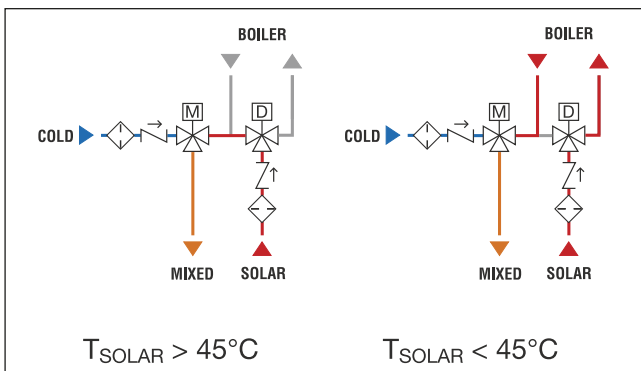
 tech. broch. 01164



### Function

A thermostatic diverter valve, at the kit inlet, receives hot water coming from the solar water storage. Depending on the temperature setting, the valve diverts the water automatically and in a proportional manner towards the user circuit or the **boiler with storage circuit, with thermal integration**. The valve modulates the flow rates to optimise the energy contained in the solar storage and reduces boiler operation times to a minimum. A thermostatic anti-scald mixing valve, at the kit outlet, constantly controls and limits the temperature of the water sent to the user.

### Hydraulic diagrams



Solar storage-to-boiler connection kit, **with thermal integration**. Consisting of:

- thermostatic anti-scald mixing valve, adjustable with knob, for solar thermal systems. Complete with strainers and check valves at the inlets.
- thermostatic diverter valve;
- pre-formed **shell protective cover**.

**Diverter-mixing valve coupling with adjustable position** of the inlet and outlet connections.

### Mixing valve

**CR** dezincification resistant alloy body.  
Max. working pressure: 10 bar.  
Adjustment temperature range: 35–55°C.

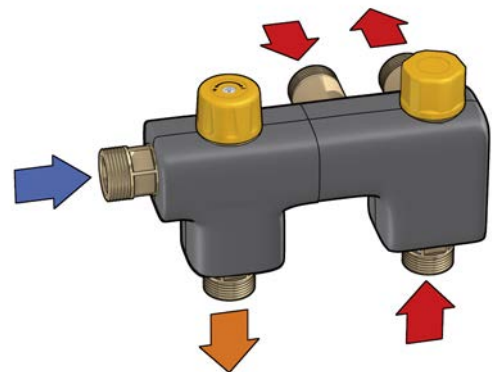
**Max. inlet temperature: 100°C.**

Performance to standards NF 079 doc. 8, EN 15092, EN 1111, EN 1287.

### Diverter valve

Brass body.  
Max. working pressure: 10 bar.  
Factory setting: 45°C.

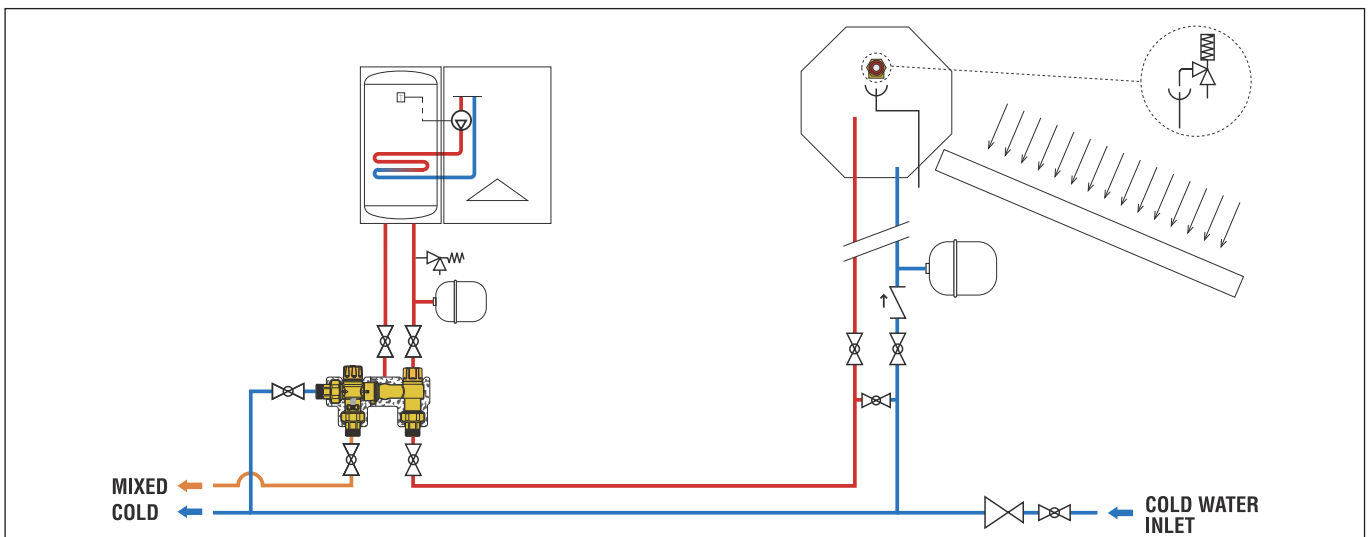
**Max. inlet temperature: 100°C.**



Code

**262350**    3/4"

### Application diagram of SOLARINCAL-T kit 262 series



# SOLAR STORAGE-TO-BOILER THERMOSTATIC CONNECTION KIT

## 263 SOLARINCAL-T PLUS

 tech. broch. 01164



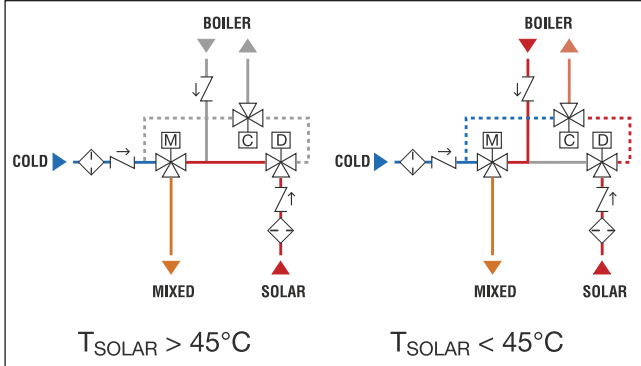
### Function

A thermostatic diverter valve, at the kit inlet, receives hot water coming from the solar water storage. Depending on the temperature setting, the valve diverts the water automatically and proportionally towards the user circuit or the **instantaneous boiler circuit, with thermal integration**. The valve modulates the flow rates to optimise the energy contained in the solar storage and reduces boiler operation times to a minimum.

A specific thermostatic control device limits the boiler inlet temperature to prevent it being switched on and off too often, which leads to hunting and irregular operation.

A thermostatic anti-scald mixing valve, at the kit outlet, constantly controls the temperature of the water sent to the user.

### Hydraulic diagrams



Solar storage-to-boiler connection kit, **with thermal integration**. Consisting of:

- thermostatic anti-scald mixing valve, adjustable with knob, for solar thermal systems. Complete with strainers and check valves at the inlets;
- thermostatic diverter valve;
- thermostatic control device;
- pre-formed **shell protective cover**.

### Mixing valve

**CR** dezincification resistant alloy body.  
Max. working pressure: 10 bar.  
Adjustment temperature range: 35–55°C.

**Max. inlet temperature: 100°C.**

Performance to standards NF 079 doc. 8, EN 15092, EN 1111,

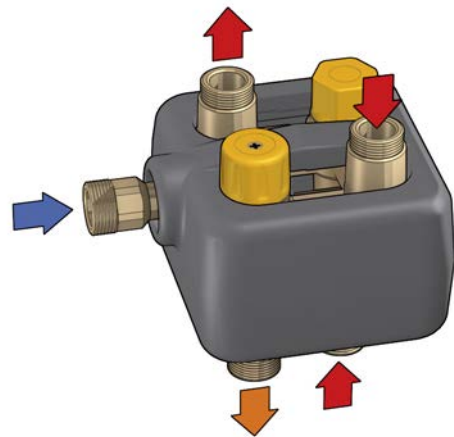
### Diverter valve

**CR** dezincification resistant alloy body.  
Max. working pressure: 10 bar.  
Factory setting: 45°C.

**Max. inlet temperature: 100°C.**

### Control device

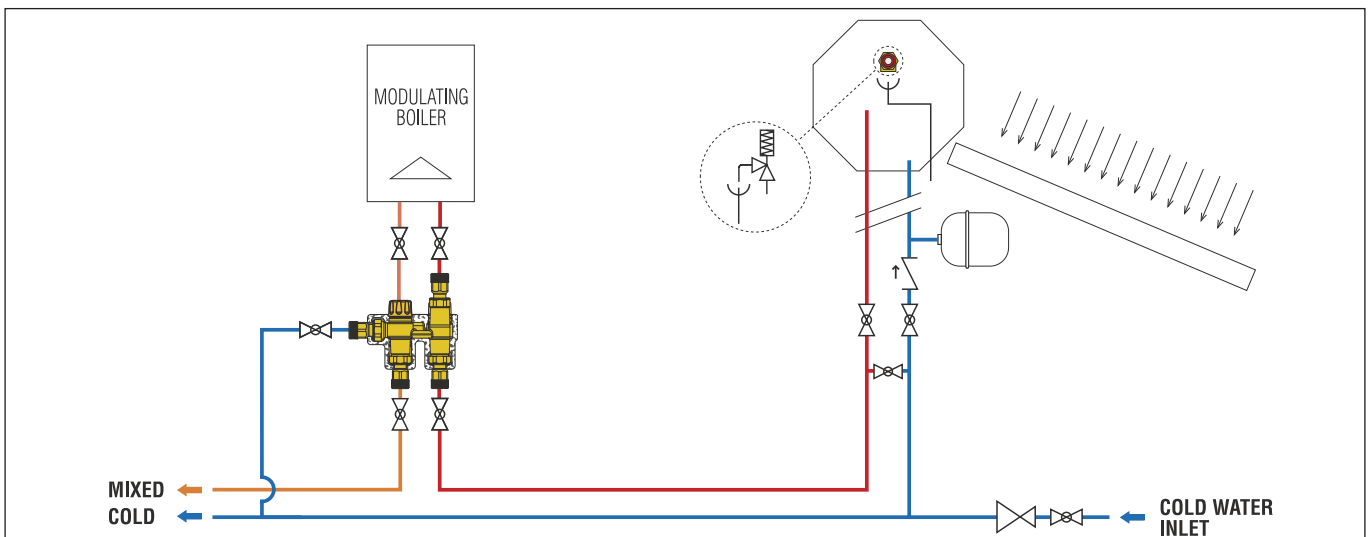
**CR** dezincification resistant alloy body.  
Factory setting: 30°C.  
Max. inlet temperature: 85°C.



Code

**263350** 3/4"

### Application diagram of SOLARINCAL-T Plus kit 263 series





Caleffi S.p.A.  
S.R. 229 n. 25 · 28010 Fontaneto d'Agogna (NO) · Italy  
Tel. +39 0322 8491 · Fax +39 0322 863723  
info@caleffi.com · www.caleffi.com

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