

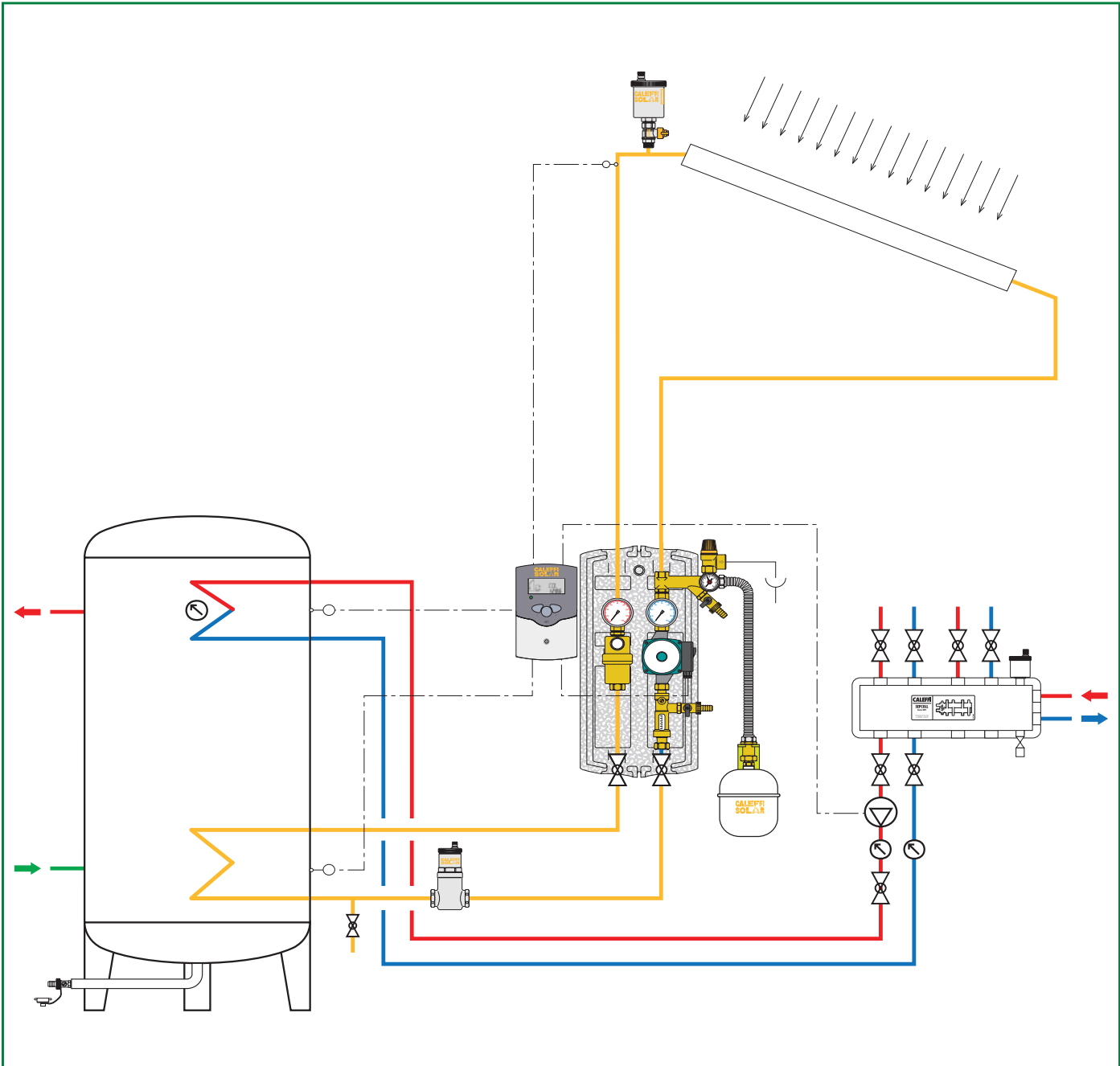
CALEFFI SOLAR



SOLAR PRODUCT GUIDE 2007

The Caleffi Solar series of products are specifically designed for use in circuits of solar systems. In these systems the heating fluid may contain glycol as additive and may operate at high temperatures. The materials and components used in its manufacture and the performance of these must be suitable for these operating conditions.

Components for primary circuit - Solutions with glycol



Air vents and air separators

250

Automatic air vent valve for solar heating systems. Brass body. Chrome plated.
 Max. percentage of glycol: 50%.
 Max. working pressure: 150 psi.
 Max. discharge pressure: 70 psi.
 Working temperature range: -25 – 360°F.



Code	Connection	Pk	Lbs
250041A	1/2" NPT male	1	0.3

NA292

Shut-off valve for air vent valve 250 series.
 Max. percentage of glycol: 50%.
 Max. working pressure: 150 psi.
 Working temperature range: -25 – 350°F.



Code	Connection	Pk	Lbs
NA29284	1/2" NPT male x 1/2" NPT female	1	0.3

253

Safety valve for solar heating systems.
 Brass body. Chrome plated.
 Female-female connections.
 Max. percentage of glycol: 50%.
 Working temperature range: -25 – 320°F.
 Discharge outlet 3/4" female.
 Discharge capacity: 180,000 BTU.



Code	Connection	PSI	Pk	Lbs
253042	1/2" female x 3/4" female	35	1	0.3
253043	1/2" female x 3/4" female	45	1	0.3
253044	1/2" female x 3/4" female	60	1	0.3
253046	1/2" female x 3/4" female	90	1	0.3
253048	1/2" female x 3/4" female	120	1	0.3
253040	1/2" female x 3/4" female	145	1	0.3

251

DISCAL

Air separator for solar heating systems.
 Brass body. Chrome plated.
 1/2" NPT female bottom thread.
 Female-female connections.
 Max. percentage of glycol: 50%.
 Max. working pressure: 150 psi.
 Max. discharge pressure: 150 psi.
 Working temperature range: -25 – 320°F.



Code	Connection	Pk	Lbs
251003A	3/4" NPT female	1	2.0

251

DISCALAIR

Automatic air vent valve for solar heating systems.
 Brass body. Chrome plated.
 Female connection.
 Max. percentage of glycol: 50%.
 Max. working pressure: 150 psi.
 Max. discharge pressure: 150 psi.
 Working temperature range: -25 – 320°F.



Code	Connection	Pk	Lbs
251004A	1/2" NPT female	1	0.8

Mixing valves and diverting valves

2521

Adjustable thermostatic mixing valve for solar heating systems. Brass body. Chrome plated.
 Max. percentage of glycol: 50%.
 Max. working pressure: 200 psi.
 Adjustable temperature range: 85 – 150°F.
Max: inlet Temperature 210°F.



Code	Connection	Cv	Pk	Lbs
252140A	1/2" NPT unions	3.0	1	2.2
252150A	3/4" NPT unions	3.0	1	2.2
252149A	1/2" sweat unions	3.0	1	2.2
252159A	3/4" sweat unions	3.0	1	2.2

		Flow Capacity - GPM				
Cv	Δ P	1 psi	2 psi	3 psi	4 psi	5 psi
3.0	GPM	3.0	4.2	5.2	6.0	6.7
6.0	GPM	6.0	8.4	10.4	12.0	13.4

2523

High flow adjustable thermostatic mixing valve for solar heating systems.
 Brass body. Chrome plated.
 Max. percentage of glycol: 50%.
 Max. working pressure: 200 psi.
 Working temperature range: 85 – 150°F.
Max: inlet Temperature 210°F.



Code	Connection	Cv	Pk	Lbs
252359A	3/4" sweat unions	6.0	1	5.3
252369A	1" sweat unions	6.0	1	5.3

6443

Motorized three-way diverting ball valve for solar heating systems. Non-spring return 3-wire control.
 Max. percentage of glycol: 50%.
 Max. Δ P differential close-off: 150 psi.
 Working temperature range: 20 – 230°F.
 Power supply: 24 VAC.
 Power consumption: 4 VA.
 Rating of microswitch contacts: 5A (24 V).



Code	Connection	Cv	Pk	Lbs
644359A	3/4" sweat unions	4.5	1	2.5
644350A	3/4" NPT unions	4.5	1	2.5

Z635

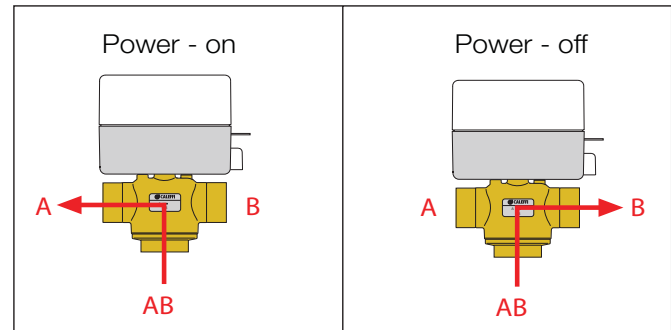
Motorized three-way diverting valve for solar heating systems. Two position on/off spring return 2-wire control. Brass body.
 Max. percentage of glycol: 50%.
 Max. body pressure: 300 psi.
 Max. Δ P differential close off: 25 psi.
 Working temperature range: 30 – 240°F.
 Power consumption: 6.5 W, 7 VA.
 Rating of microswitch contacts: 5A.
 UL & cUL Listed.
 US Patent 7,048,251.



Code	Connection	Cv	VAC	Pk	Lbs
Z611535	3/4" sweat	5.0	24 with microswitch	1	2.4
Z616535	3/4" sweat	5.0	120 with microswitch	1	2.4
Z621535	3/4" sweat	5.0	24 no microswitch	1	2.4
Z626535	3/4" sweat	5.0	120 no microswitch	1	2.4

Three way diverting on

Three way diverting off



Z-one series	5.0 Cv	Flow Capacity - GPM				
	Δ P	1 psi	2 psi	3 psi	4 psi	5 psi
	GPM	5.0	7.1	8.7	10.0	11.2

Z615

Motorized three-way diverting valve for solar heating systems. Two position on/off spring return 2-wire control. Brass body.
 Max. percentage of glycol: 50%.
 Max. body pressure: 300 psi.
 Max. Δ P differential close off: 25 psi.
 Working temperature range: 30 – 240°F.
 Power consumption: 6.5 W, 7 VA.
 Rating of microswitch contacts: 5A.
 UL & cUL Listed.
 US Patent 7,048,251.



Code	Connection	Cv	VAC	Pk	Lbs
Z611515	3/4" NPT	5.0	24 with microswitch	1	2.4
Z616515	3/4" NPT	5.0	120 with microswitch	1	2.4
Z621515	3/4" NPT	5.0	24 no microswitch	1	2.4
Z626515	3/4" NPT	5.0	120 no microswitch	1	2.4

Solar circulation stations

255



(shown without insulation cover)

Circulation unit for solar heating systems, flow and return connections.

Max. percentage of glycol: 50%.

Max. working pressure: 150 psi.

Working temperature range: -20 – 320°F.

Safety relief valve setting: 90 psi.

Max. temperature of shut-off valves with built-in flow checks: 250°F.

Consisting of:

- Wilo Star pump, 16 ft head, 115VAC. UL listed.
- safety relief valve 253 series for solar systems.
- 2 filling / draining valves with hose connection.
- pressure gauge.
- flow adjusting valve with built-in flow meter.
- in-line air vent with manual release.
- flow temperature gauge.
- return temperature gauge.
- 2 shut-off valves with built-in flow checks.
- pre-formed insulation shell.

Code	Connection	Pk	Lbs
255056A	3/4" NPT unions	1	18.0
255059A	3/4" sweat unions	1	18.0

256



Circulation unit for solar heating systems, flow and return connections.

Max. percentage of glycol: 50%.

Max. working pressure: 150 psi.

Working temperature range: -20 – 320°F.

Safety relief valve setting: 90 psi.

Max. temperature of shut-off valves with built-in flow checks: 250°F.

Consisting of:

- Wilo Star pump, 16 ft head, 115VAC. UL listed.
- safety relief valve 253 series for solar systems.
- 2 filling / draining valves with hose connection.
- pressure gauge.
- flow adjusting valve with built-in flow meter.
- return temperature gauge.
- shut-off valve with built-in flow check.
- pre-formed insulation shell.



(shown with insulation cover)

Code	Connection	Pk	Lbs
256056A	3/4" NPT unions	1	15.0
256059A	3/4" seat unions	1	15.0

259



High temperature expansion tank for solar heating systems.

Compatible with glycol mixture.

Max. percentage of glycol: 50%.

Max. working pressure: 150 psi.

Working temperature range: 32 – 250°F.

Max. diaphragm temperature: 215°F.

Pre-charged pressure: 35 psi.

Code	Gallons	Connection	Pk	Lbs
259012	3	3/4" straight	1	14.0
259018	5	3/4" straight	1	17.4
259025	7	3/4" straight	1	21.3
259035	9	3/4" straight	1	24.3
259050	13	3/4" straight	1	27.6

255



High temperature expansion tank connection kit.

Consisting of:

- stainless steel flexible hose.
- wall bracket with mounting screws.
- double check valve for system and tank.
- mounts 259 series tank to circulation units.

Code	Connection	Pk	Lbs
255001	3/4" straight	1	3.0

255



System filling hand pump for 255 and 256 solar circulation units.

Code	Pk	Lbs
255010A	1	3.0

255



Replacement flow meter with flow adjusting valve or 255 and 256 series circulation units.

Code	Flow meter scale	Pk	Lbs
255015A	1/4 – 3-1/2 gpm	1	3.0

intelligent Solar - differential temperature controllers

257 iSolar Plus

Differential temperature controller for solar heating systems with 2 relay outputs. Complete with 4 input sensors and power cord.

Power supply: 115V.
Power consumption: 2 Amp.
Rating of relay contacts: 2 Amp.
 ΔT adjustment range: 2 - 40°Ra.



Features:

- Graphical display with system-monitoring.
- 4 temperature input sensors.
- 2 electronic relays for pump speed control.
- 9 selectable system arrangements.
- 2 ΔT functions.
- 2 tank priority logic.
- Real time clock for timer function.
- Energy use meter.
- Freeze protection.
- Adjustable min. collector temperature.
- Adjustable max. storage tank temperature.
- Cooling function.
- Emergency shutdown function.
- V Bus connection for optional data logging interface.
- Monitor and control of system by optional Service Center Software.

Code	Pk	Lbs
257260A	1	2.0

257 iSolar Ax

A basic differential temperature controller for solar heating systems with 1 relay output. Complete with 2 input sensors and power cord.

Power supply 115V.
Power consumption: 4 Amp.
Rating of relay contacts: 2 Amp.
 ΔT adjustment range: 4 - 30°Ra.



Features:

- LED system function display.
- 2 temperature sensor inputs.
- 1 output relay for pump or valve control.
- Freeze protection.
- Adjustable min. collector temperature.
- Adjustable max. storage tank temperature.

Code	Pk	Lbs
257270A	1	2.0

257 iSolar 3

Differential temperature controller for solar heating systems with 2 relay outputs. Complete with 4 input sensors and power cord.

Power supply: 115V.
Power consumption: 2 Amp.
Rating of relay contacts: 2 Amp.
 ΔT adjustment range: 2 - 40°Ra.



Features:

- Graphical display with system-monitoring.
- 4 temperature input sensors.
- 2 output relays for pump or valve control.
- 2 selectable system arrangements.
- Energy use meter.
- Freeze protection.
- Adjustable min. collector temperature.
- Adjustable max. storage tank temperature.
- Cooling function.
- Emergency shutdown function.

Code	Pk	Lbs
257230A	1	2.0

257 iSolar DL

Datalogger records large packets of data (e.g. measuring and monitoring values of the solar system) over long periods of time. The internal memory can be configured and displayed by Service Center Software or by integrated web interface with any standard Internet browser. The data logger is equipped with a 2 MB Flash memory and is used with iSolar Plus controller connected to V Bus.

Power supply: 115V.
Memory: 2 MB.
Interface: RS 232.



Code	Description	Pk	Lbs
257201A	Data logger	1	2.0

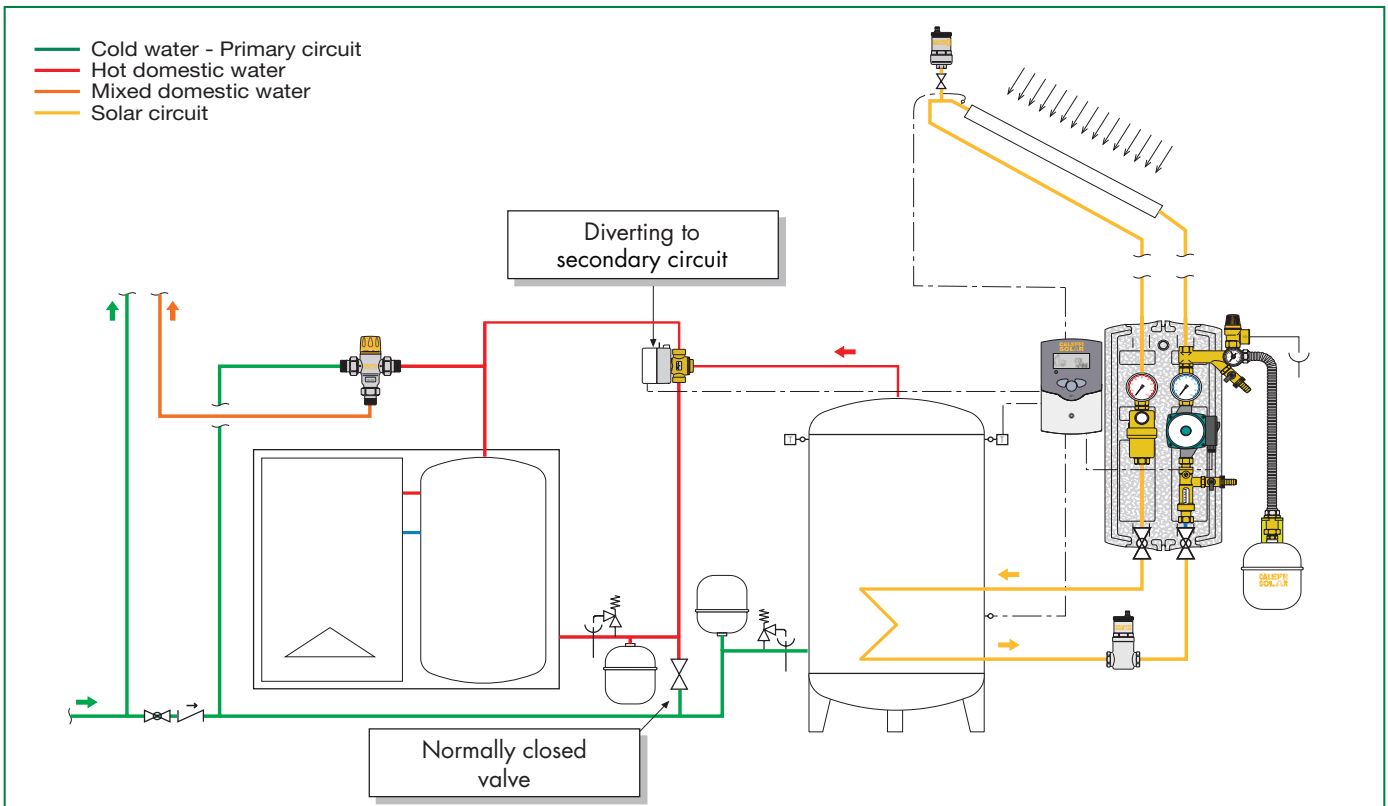
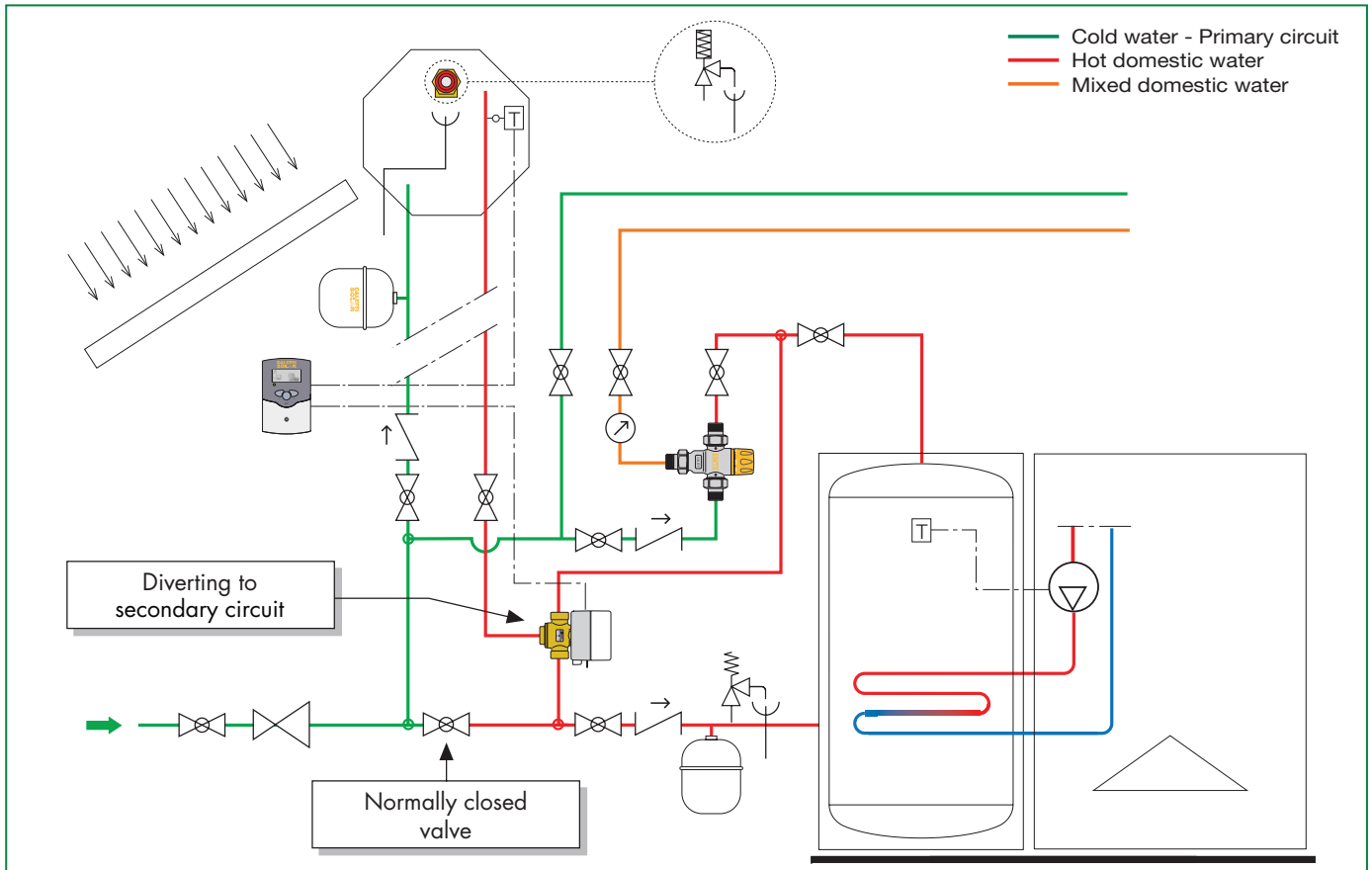
257

The interface adapter RS-COM enables the connection of a PC to iSolar Plus controller with V Bus. Service Center Software allows the measured data to be recorded numerically in a log-data file. The adapter does not need an external power supply. Includes RS232 cable.



Code	Description	Pk	Lbs
257203A	RS232	1	1.0

Components for primary circuit - Domestic hot water





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