

NATURAL CIRCULATION SYSTEMS

In natural circulation systems, circulation in the solar primary circuit is caused by natural convection, due to the differences in density between the hot and cold working fluids. The cycle begins as the fluid passes through the collectors, where it is heated by solar radiation. As the fluid is heated, it rises up towards the cylinder located above the collector. As the fluid travels towards the elevated cylinder, it transfers its heat and cools. The heavier, chilled fluid then descends through the return pipe to the bottom of the collector. The main advantage is that the system functions without the need for pumps or any auxiliary electrical power.

Ibersolar offers closed-circuit systems for volumes of 115, 145, 192, and 282 litres. The systems are comprised of an independent primary circuit, therefore, antifreeze can be added in order to prevent problems due to risk of freezing or water hardness.

The systems are comprised of a double-wall water cylinder, solar collector, mounting system, and accessories for system installation.



Product Technical Information

- 2.09 m² flat-plate collector with aluminium absorber and selective black paint (OP-V210) or high efficiency Mirotherm coating (OPS-V210 and OPS-V250).
- Grey-painted, externally enamelled double-wall cylinder with galvanised steel protection. Rigid 40 mm polyurethane insulation. Double corrosion protective anode. Double enamelled "email" certification from the German enamel federation. In compliance with DIN 4753/T3 standards.
- Flexible stainless steel pipes.
- Galvanised steel mounting system.
- Maximum primary circuit operating pressure: 10 bar.
- Maximum secondary circuit operating pressure: 6 bar.
- Expansion vessel integrated into the cylinder.

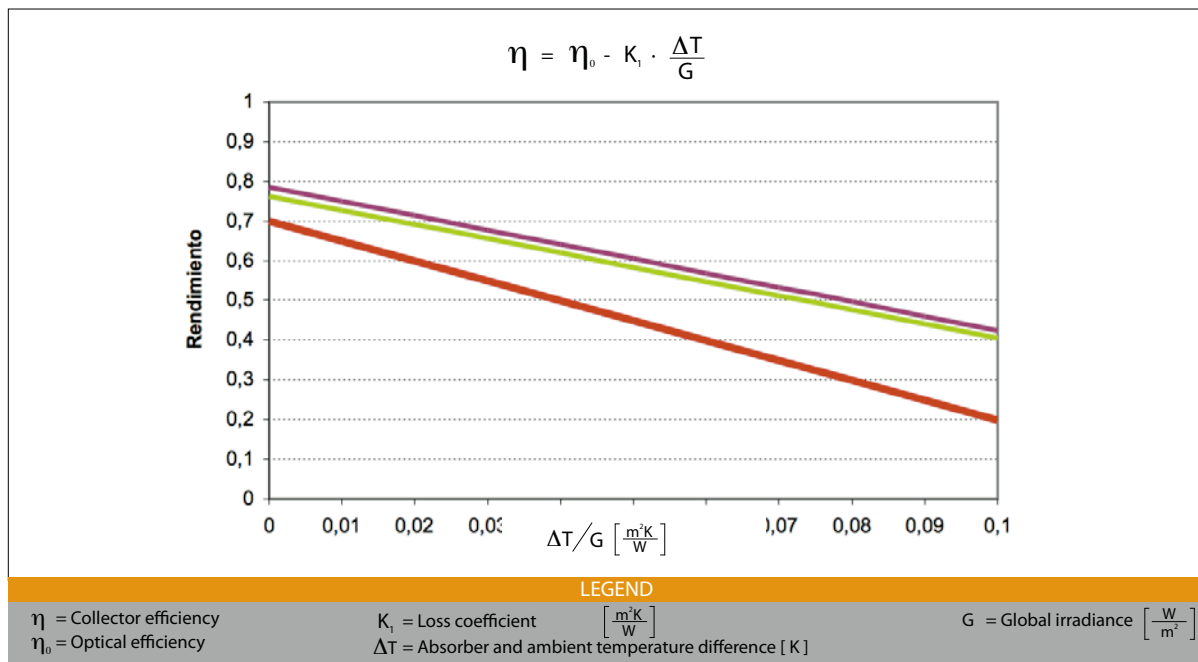
SYSTEMS FOR FLAT ROOF

REFERENCE	Model	Volume [litres]	Cylinder dimensions (mm)	Weight (kg)	Number of collectors	Coating
01020400/100356	NC100	115	1050 x 502	139.20	1xOP-V210	Black paint
01020400/100358	NC140	145	1250 x 502	150.20	1xOP-V210	Black paint
01020400/100360	NC200	192	1270 x 582	168.20	1xOP-V210	Black paint
01020400/101439	NC200	192	1270 x 582	221.40	2xOP-V210	Black paint
01020400/100362	NC282	282	1751 x 581	243.40	2xOP-V210	Black paint
01020400/101429	NC140	145	1250 x 502	151.20	1xOPS-V210	Mirotherm
01020400/101431	NC200	192	1270 x 582	169.20	1xOPS-V210	Mirotherm
01020400/101441	NC200	192	1270 x 582	222.40	2xOPS-V210	Mirotherm
01020400/101435	NC282	282	1751 x 581	245.40	2xOPS-V210	Mirotherm

SYSTEMS FOR PITCHED ROOF

REFERENCE	Model	Volume [litres]	Cylinder dimensions (mm)	Weight (kg)	Number of collectors	Coating
01020400/100355	NC100	115	1050 x 502	141.20	1xOP-V210	Black paint
01020400/100357	NC140	145	1250 x 502	152.20	1xOP-V210	Black paint
01020400/100359	NC200	192	1270 x 582	170.20	1xOP-V210	Black paint
01020400/101438	NC200	192	1270 x 582	225.40	2xOP-V210	Black paint
01020400/100361	NC282	282	1751 x 581	247.40	2xOP-V210	Black paint
01020400/101428	NC140	145	1250 x 502	153.20	1xOPS-V210	Mirotherm
01020400/101430	NC200	192	1270 x 582	171.20	1xOPS-V210	Mirotherm
01020400/101440	NC200	192	1270 x 582	226.40	2xOPS-V210	Mirotherm
01020400/101434	NC282	282	1751 x 581	249.40	2xOPS-V210	Mirotherm

OPS-V210 / OPS-V250 / OP-V210 EFFICIENCY CURVES*



* Certification pending

The natural circulation systems are in compliance with requirements BSS 63/2/21/-94, BSS- 63/1-90 and standards EN60335-1, EN60335-2.

Optional electrical element:

REFERENCE	Power (W)	Dimensions
01090400/101467	750	1 1/4" M
01090400/101468	1000	1 1/4" M
01090400/101469	1500	1 1/4" M
01090400/101471	2500	1 1/4" M

Pressure and temperature valve in secondary circuit

REFERENCE	Pressure	Temperature	Dimensions
01090600/102751	6 bar	94°C	3/4" H

MOUNTING SYSTEMS

