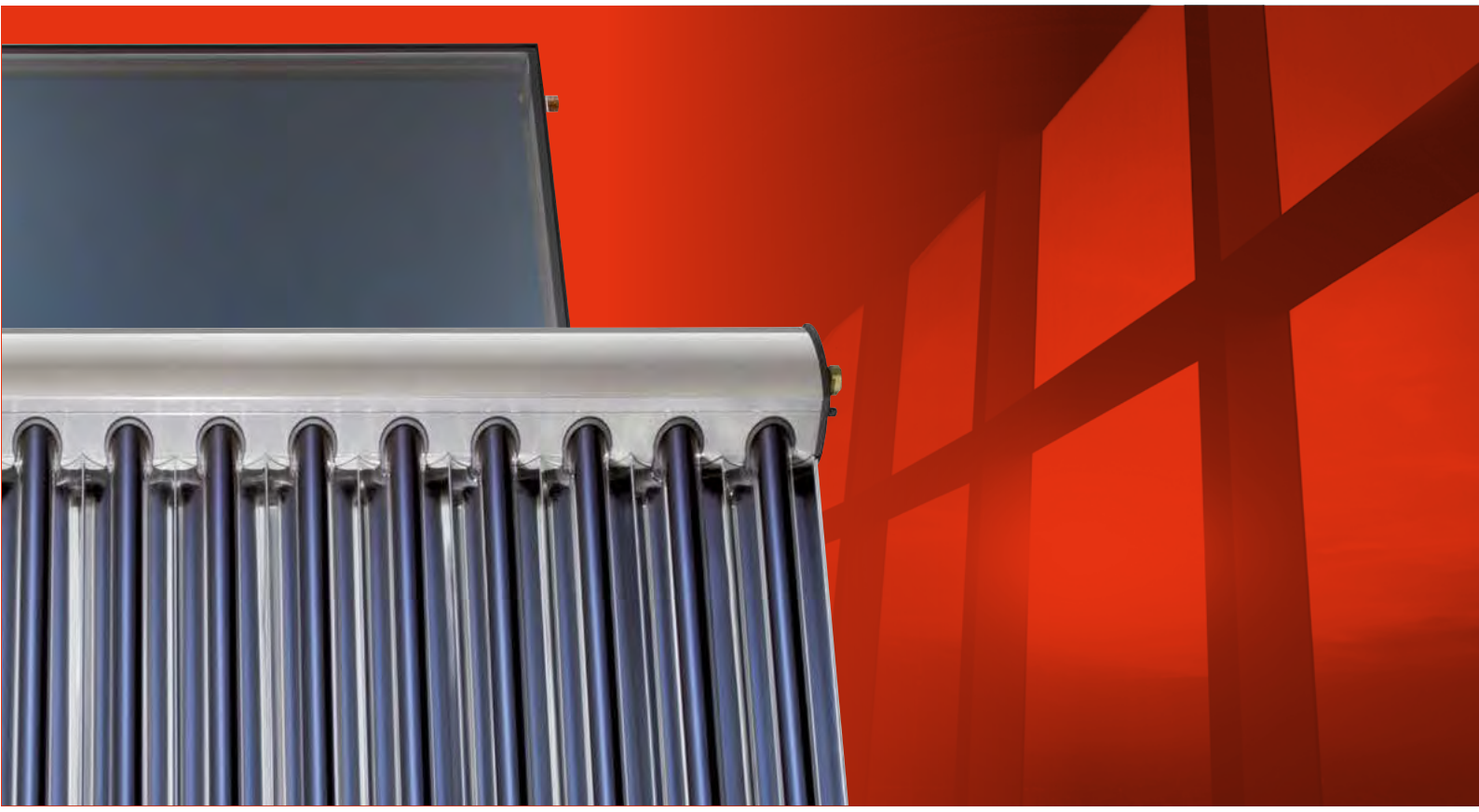
IMMERGAS

THERMAL SOLAR SYSTEMS

General catalogue




IMMERGAS

Indicative performance of solar packs for production of domestic hot water
The solar packs are presented with indications on the number of people who can be served on a level of the domestic hot water demand. These indications are provided referring to:
- solar collectors facing south and installed at a 30° angle in Italy.

Indicative performance of combined solar packs
These solutions have variable performance based on the inclination and exposure of the solar collectors as well as the building energy demand and the type of heating elements.

The data supplied must be considered as general indications. Always refer to qualified technicians to design and implement the system, who will take care of the correct dimensioning of the solar systems.

IMMERGAS: THE SUN IS SHINING ON THE FUTURE OF ENERGY

Immergas, active for over 50 years in the gas boiler and thermal systems sector, represents one of the most advanced realities in offering high technological level energy solutions. Due to its strong tendency towards innovation, it was among the first companies to realise the new environmental functionality and sustainability requirements coming from the domestic heating market. It has responded with a full range of products and integrated solutions featuring **high energy efficiency and low environmental impact.** Today the company would like to accompany its customers in this path of growth and created "**Domus Technica**", a modern centre dedicated to professional training on new technologies. This facility, set up to hold courses for its customers, examines topics concerning solar energy systems and all the most innovative technologies on our market that require not only state-of-the-art products but also consulting services, training and support.

Immergas' success is also based on its focus and trustful relationship it establishes with its customers, because their satisfaction is ours. To always guarantee a high level of services and gain new markets, the company has always placed a strong focus on all those aspects associated with before and after-sales **consultancy services** and **support**.
Professionals in the sector, designers and installers, are constantly kept up-to-date through in-depth technical courses held both at our headquarters and throughout the country.

SOLAR ENERGY SYSTEMS: SUSTAINABLE CHOICE, SURE INVESTMENT

In recent years solar heating systems have imposed themselves as one of the most widespread resources of renewable energy. The growing ecological awareness has stimulated Immergas to further improve the performance of its products by designing **innovative solutions for every type of living context.**

With the new Solar Solutions range, Immergas introduces new system solutions to make it easier for designers and installers to offer efficient integrated systems, capable of providing high energy savings.

SOLAR SOLUTIONS RANGE: THE RENEWAL OF SOLAR ENERGY

The Immergas Solar Solutions range has been renewed by developing latest-generation products and systems capable of exploiting solar energy to a maximum and offering new standards of comfort.

The technological excellence of Immergas solar components is expanded with CP4 M/XL flat-plate collectors and the CSV 14 vacuum collectors. In response to an ever-growing need of sustainable consumption, the absorption surface of the panels has increased (by over 2.51 m^2), thus favouring greater energy performance and a better use of renewable energies. A solution which helps the storage tank reach a higher temperature in less time.
There is also a flat-plate collector model available with a smaller surface (CP4 M 2.05 m^2) to provide more flexible system solutions. Thanks to the new accessories supplied, the collectors are also easier and safer to install on the roof, both vertically (standard supply of packs) and horizontally (for sloped roofs or free-standing installation).

Depending on the system required, Immergas offers **three types of packs**:

- **DOMESTIC SOL V2**, complete combined pump-circulated packs, to integrate heating services and generate domestic hot water
- **INOX SOL V2**, 6 complete pump-circulated packs and 2 **BASIC SOL V2** models to generate domestic hot water
- **NATURAL SOL**, 3 complete packs with natural circulation, to generate domestic hot water

SOLAR READY INTEGRATED SOLUTIONS: SPECIFIC TECHNOLOGICAL SYNERGY

The floor standing condensing boiler **HERCULES Solar 26 ErP**, combines in a small space the advantages of condensation and the possibility of heating domestic hot water with solar energy with the technology of the integrated 200-litre stainless steel storage tank. It is the ideal solution for new systems.

For designing special solutions or for systems integrated in thermal systems, Immergas provides **a wide range of individual components and accessories** with which any type of technical solution proposed can be adequately sized.

IMMERGAS STORAGE TANKS, OUR PRIDE FOR OVER 30 YEARS

The technological excellence and the accurate choice of materials have always distinguished Immergas products. Immergas has been building its storage tanks using stainless steel for over 30 years, making it one of the strengths of the company: a strategic advantage, supported by growing investments, that have allowed our manufacturing departments to extend the **range of stainless steel storage tanks with solutions up to 500 litres in capacity**.
In solar energy systems, storage tanks act as an real energy reservoir. Designed to use solar resources at their best, they hold the heat gathered by the collectors for a long time and generate domestic hot water.

The production of Immergas storage tanks dedicated to solar is the following:

- **UB INOX V2 from 80 to 200 litres** (see page 42)
- **UB INOX SOLAR 200 V2**, equipped with solar accessories as an integration to collectors (see page 44)
- **INOXSTOR 200-300-500 V2, storage tanks** which integrate the new range of solar packs for the production of domestic hot water. They are also supplied individually (see page 46)

Further models completing the range: UB 1000-1500-2000 V2 litres in vitrified steel (see page 48), for the production of domestic hot water, and UB 550 and UB 750 V2 (see page 50), for those applications where solar energy is also used for central heating.

INOX
STAINLESS STEEL RELIABILITY

A GUARANTEE OVER TIME
Stainless steel is an efficient material which remains unchanged by the action of water even when solar energy makes it reach high temperatures.

A PERFECT THERMAL EXCHANGE
There is a double stainless steel coil inside the storage tank which maximises the production of domestic hot water, also taking advantage of solar energy. Moreover the perfect insulation reduces heat losses to a minimum thus favouring lower consumption levels.

SIMPLE MAINTENANCE
A specific flange makes it easy to clean the inside of the storage tank. Stainless steel also allows to intervene with products capable of dissolving lime scale without damaging the internal casing of the tank.

COMPLETE SOLAR PACKS WITH FORCED CIRCULATION for domestic hot water

INOX SOL ErP

BASIC SOL ErP

The INOX SOL TOP V2 and BASIC SOL TOP V2 solar solutions, ideal for houses and small businesses, are made up of **8 complete packs for the production of domestic hot water.**

Each pack is provided with an indication for its use, in order to satisfy **50% of the solar coverage** of the yearly primary energy demand **for the production of domestic hot water**. The data supplied, with collectors facing south and inclined at a 30° angle in Italy, is variable depending on the location and type of installation. Have the system checked by a qualified thermotechnical designer to dimension it ideally.

LIST OF SOLAR PACKS AND MAIN COMPONENTS

SOLAR PACK	SOLAR COLLECTORS			STORAGE TANK capacity (litres)	"Basic" pack without storage tank (*)
	Flat plate	Vacuum	N° collectors		
INOX SOL 200 V2	CP4 XL		1	200	
INOX SOL 200 LUX V2		CSV 14	1	200	
INOX SOL 300 V2	CP4 XL		2	300	
INOX SOL 300 LUX V2		CSV 14	2	300	
INOX SOL 500 V2	CP4 XL		4	500	
INOX SOL 500 LUX V2		CSV 14	3	500	
BASIC SOL V2	CP4 XL		1	-	X
BASIC SOL LUX V2		CSV 14	1	-	X

** Ideal for coupling with HERCULES Condensing models, built-in 120 litre stainless steel storage tank.*

INOX SOL 200 V2

Solar pack with forced circulation with 1 CP4 XL flat-plate collector and 200 litre INOXSTOR storage tank unit

Indicative solution* for units of up to 3 persons

.A

.B

.C

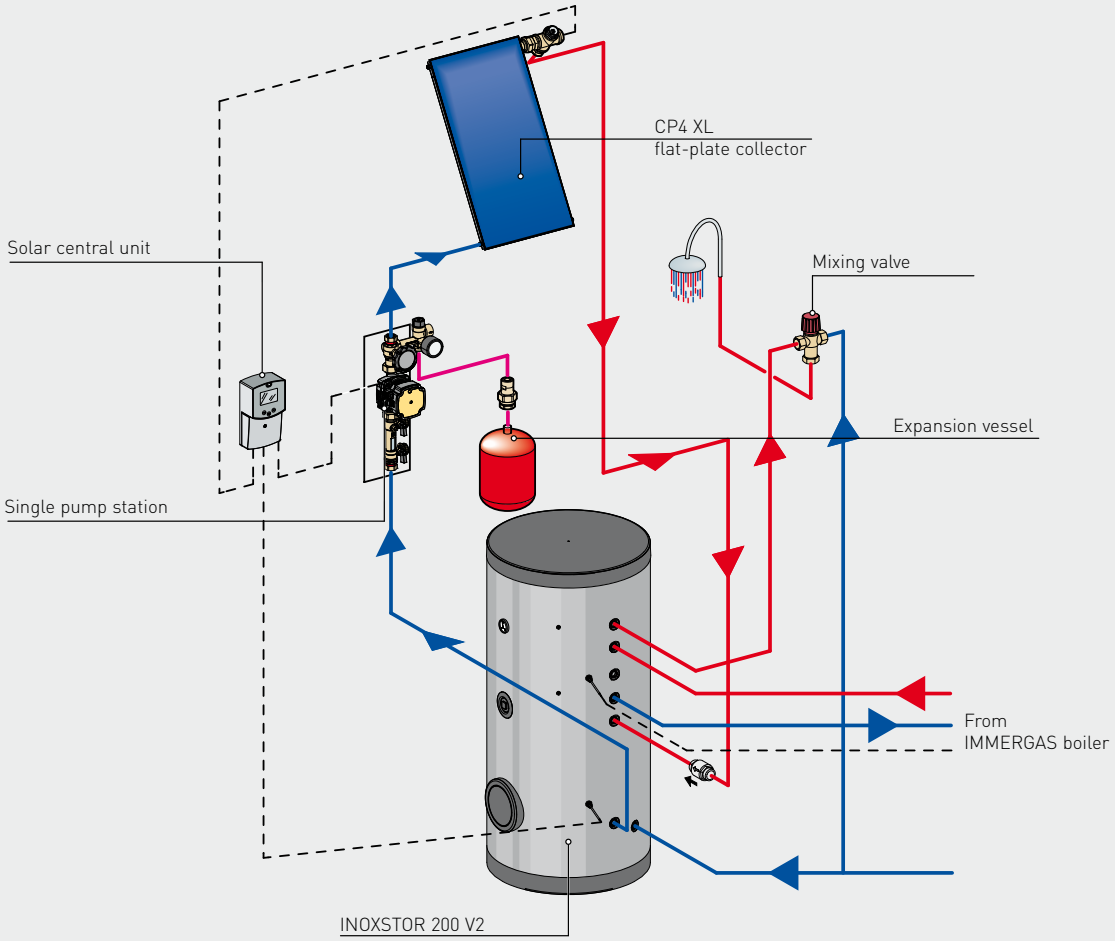
.D

.E

.F

.G

see page 3



INOX SOL 200 V2 (code 3.027832) includes as per standard:

.A **INOXSTOR 200 litre stainless steel storage tank unit** for production of domestic hot water, insulated (efficiency class C) with stainless steel double coil including NTC probe for connection to Immergas boiler < 35 kW and brackets for installation of relative pump station.
The following components can be mounted directly on the storage tank:
- **Single low consumption pump station** with safety valve 6 bar and flow rate regulator (1-6 l/min) with relative connection kit
- **Solar central unit** with temperature probes (storage tank unit and collector)

The use of this storage tank unit involves the installation of an appropriately sized DHW expansion vessel and safety valve, not included in the supply.

.B **1 CP4 XL flat-plate collector** complete with **1 aluminium support frame** for one vertically installed collector

.C **18 litre expansion vessel** with accessories

.D **Complete hydraulic fittings** for mounting the collector

.E ¾" adjustable thermostatic **mixing valve**

.F **1 tank** of 20 kg of premixed **glycol**

.G **4 brackets for slates and tiles** for planar installation on sloped roofs with relative fixing accessories

The pack is supplied as per standard with brackets for slates and tiles for sloped roofs to fix the collectors. The following kits are available for different types of fixing:

Fixing systems	Code	See page
Recessed installation kit	Various codes	62 - 63
Brackets kit for slates/tiles to be drilled*	3.019105	64
"L"-shaped brackets kit for smooth roofs*	3.022776	64
Free-standing vertical installation kit for CP4 XL (on the ground or on flat roofs)	3.022674	60

** Some fixing elements present in the pack must be used with these kits.*

INOX SOL 200 LUX V2

Solar pack with forced circulation with 1 CSV 14 vacuum collector and 200 litre INOXSTOR storage tank unit

Indicative solution* for units of up to 3/4 persons

.A

.B

.C

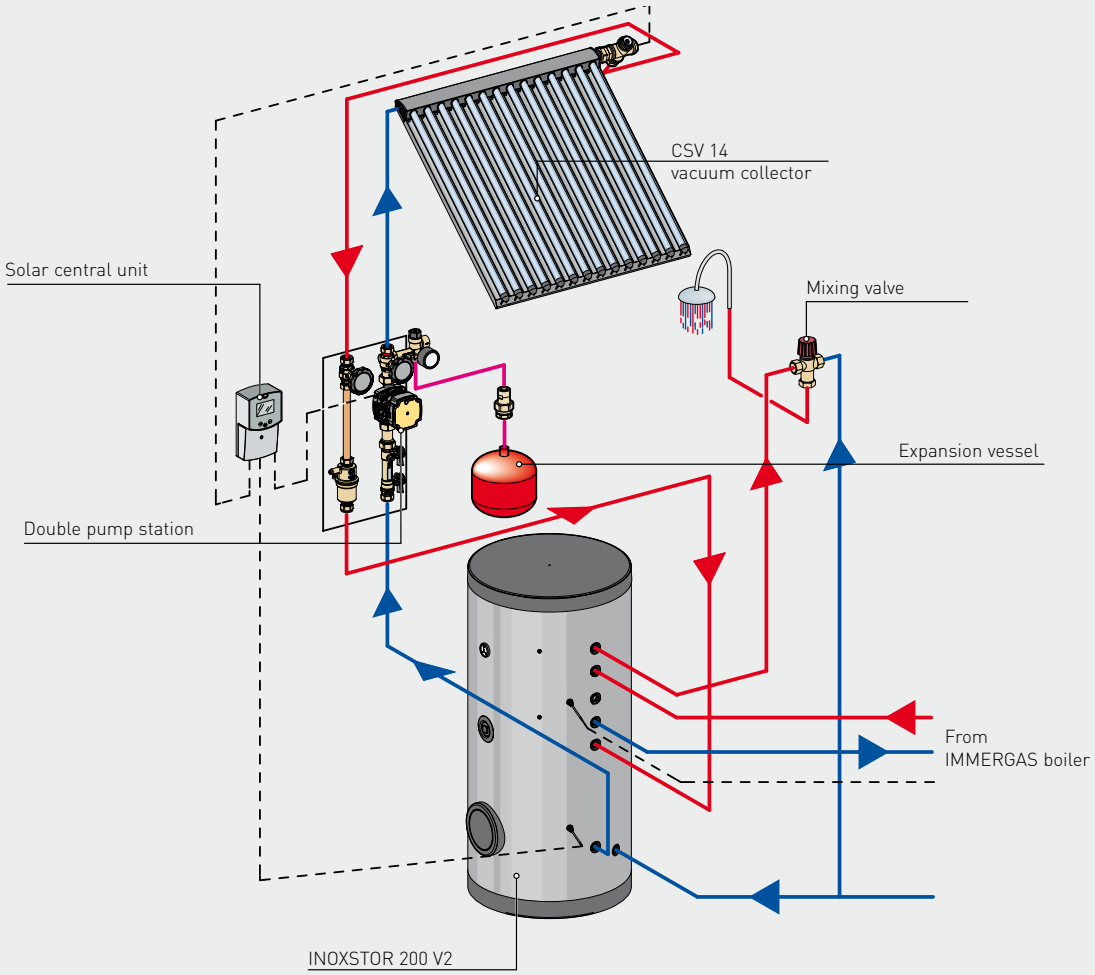
.D

.E

.F

.G

*see page 3



INOX SOL 200 LUX V2 (code 3.027833) includes as per standard:

.A **INOXSTOR 200 litre stainless steel storage tank unit** for production of domestic hot water, insulated (efficiency class C) with stainless steel double coil including NTC probe for connection to Immergas boiler < 35 kW and brackets for installation of relative pump station.
The following components can be mounted directly on the storage tank:
- **Double low consumption pump station** with 6 bar safety valve flow rate regulator (1-6 l/min) and air separating device with relative connection kit
- **Solar central unit*** with temperature probes (storage tank unit and collector)

The use of this storage tank unit involves the installation of an appropriately sized DHW expansion vessel and safety valve, not included in the supply.

.B **1 CSV 14 vacuum collector** complete with **1 aluminium support frame** for one vertically installed collector

.C **35 litre expansion vessel** with accessories

.D **Complete hydraulic fittings** for mounting the collector

.E ¾" adjustable thermostatic **mixing valve**

.F **1 tank** of 20 kg of premixed **glycol**

.G **4 brackets for slates and tiles with relative vertical uprights** for planar installation on sloped roofs with relative fixing accessories

** Consult the website immergas.com or contact our Customer Service to perform fixing.*

The pack is supplied as per standard with brackets for slates and tiles for sloped roofs to fix the collectors. The following kits are available for different types of fixing:

Fixing systems	Code	See page
Vertical recessed installation kit for CSV 14	3.022215	68
Free-standing vertical installation kit for CSV 14 (on the ground or on flat roofs, order 2 kits)	3.022733	67

INOX SOL 300 V2

Solar pack with forced circulation with 2 CP4 XL flat-plate collectors and 300 litre INOXSTOR storage tank unit

Indicative solution* for units from 4 to 8 persons

.A

.B

.C

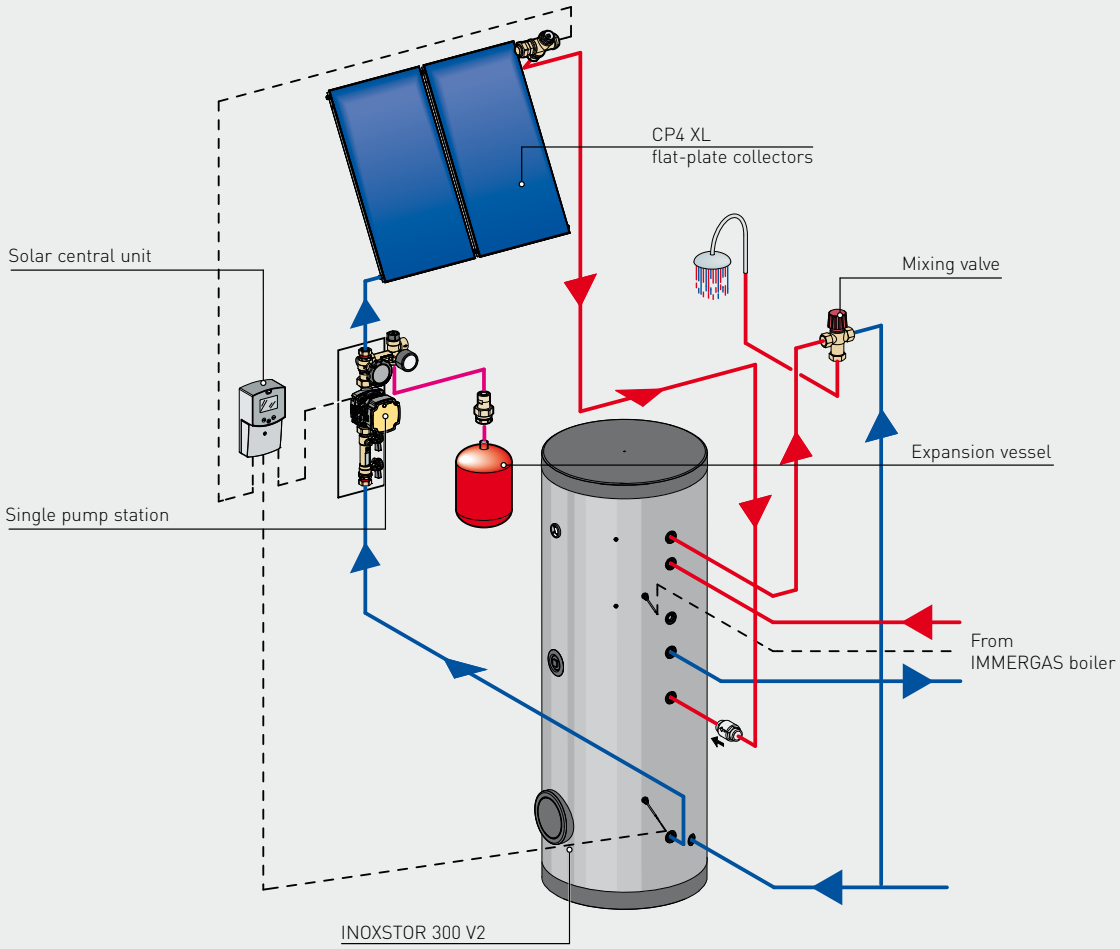
.D

.E

.F

.G

*see page 3



INOX SOL 300 V2 (code 3.027834) includes as per standard:

.A **INOXSTOR 300 litre stainless steel storage tank unit** for production of domestic hot water, insulated (efficiency class C) with stainless steel double coil including NTC probe for connection to Immergas boiler and brackets for installation of relative pump station.
The following components can be mounted directly on the storage tank:
- **Single low consumption pump station** with safety valve 6 bar and flow rate regulator (1-6 l/min) with relative connection kit
- **Solar central unit** with temperature probes (storage tank unit and collector)

The use of this storage tank unit involves the installation of an appropriately sized DHW expansion vessel and safety valve, not included in the supply.

.B **2 CP4 XL flat-plate collectors** complete with **1 aluminium support frame** for two vertically installed collectors

.C **18 litre expansion vessel** with accessories

.D **Complete hydraulic fittings** for mounting the collectors

.E ¾" adjustable thermostatic **mixing valve**

.F **1 tank** of 20 kg of premixed **glycol**

.G **6 brackets for slates and tiles** for planar installation on sloped roofs with relative fixing accessories

The pack is supplied as per standard with brackets for slates and tiles for sloped roofs to fix the collectors. The following kits are available for different types of fixing:

Fixing systems	Code	See page
Recessed installation kit	Various codes	62 - 63
Brackets kit for slates/tiles to be drilled* (order 2 kits)	3.019105	64
"L"-shaped brackets kit for smooth roofs* (order 2 kits)	3.022776	64
Free-standing vertical installation kit for CP4 XL (on the ground or on flat roofs); order: 1 basic kit for CP4 XL 1 extension kit for CP4 XL	3.022674 3.022677	60 60

** Some fixing elements present in the pack must be used with these kits.*

INOX SOL 300 LUX V2

Solar pack with forced circulation with 2 CSV 14 vacuum collectors and 300 litre INOXSTOR storage tank unit

Indicative solution* for units from 5 to 9 persons

.A

.B

.C

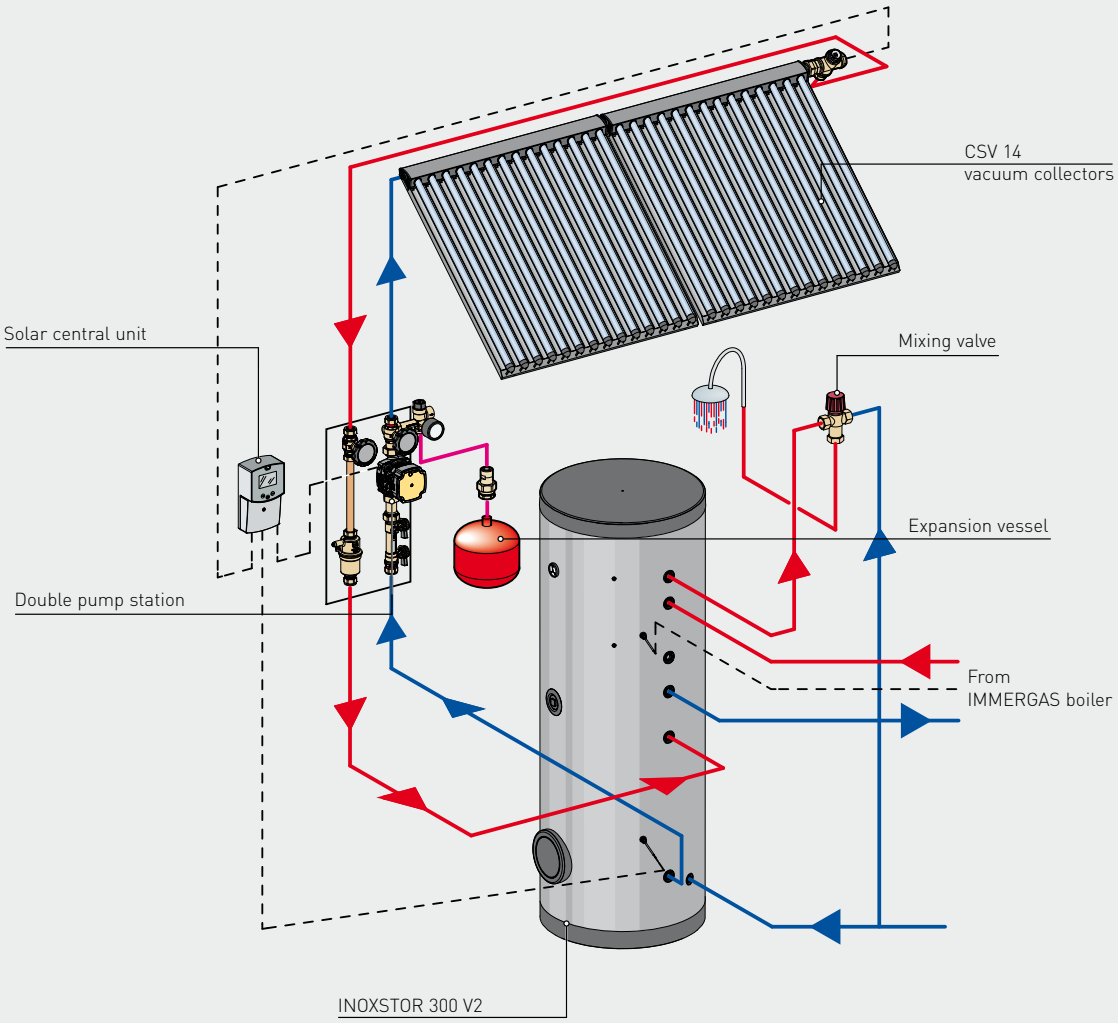
.D

.E

.F

.G

* see page 3



INOX SOL 300 LUX V2 (code 3.027835) includes as per standard:

.A **INOXSTOR 300 litre stainless steel storage tank unit** for production of domestic hot water, insulated (efficiency class C) with stainless steel double coil including NTC probe for connection to Immergas boiler < 35 kW and brackets for installation of relative pump station.
The following components can be mounted directly on the storage tank:
- **Double low consumption pump station** with 6 bar safety valve flow rate regulator (1-6 l/min) and air separating device with relative connection kit
- **Solar central unit*** with temperature probes (storage tank unit and collector)

.B **2 CSV 14 vacuum collectors** complete with **2 aluminium support frames** for one vertically installed collector each

.C **35 litre expansion vessel** with accessories

.D **Complete hydraulic fittings** for mounting the collector

.E ¾" adjustable thermostatic **mixing valve**

.F **1 tank** of 20 kg of premixed **glycol**

.G **6 brackets for slates and tiles with relative vertical uprights** for planar installation on sloped roofs with relative fixing accessories

The use of this storage tank unit involves the installation of an appropriately sized DHW expansion vessel and safety valve, not included in the supply.
** Consult the website immergas.com or contact our Customer Service to perform fixing.*

The pack is supplied as per standard with brackets for slates and tiles for sloped roofs to fix the collectors. The following kits are available for different types of fixing:

Fixing systems	Code	See page
Vertical recessed installation kit for CSV 14 (order 2 kits)	3.022215	68
Free-standing vertical installation kit for CSV 14 (on the ground or on flat roofs, order 3 kits)	3.022733	67

INOX SOL 500 V2

Solar pack with forced circulation with 4 CP4 XL flat-plate collectors and 500 litre INOXSTOR storage tank unit

Indicative solution* for family units/small businesses

.A

.B

.C

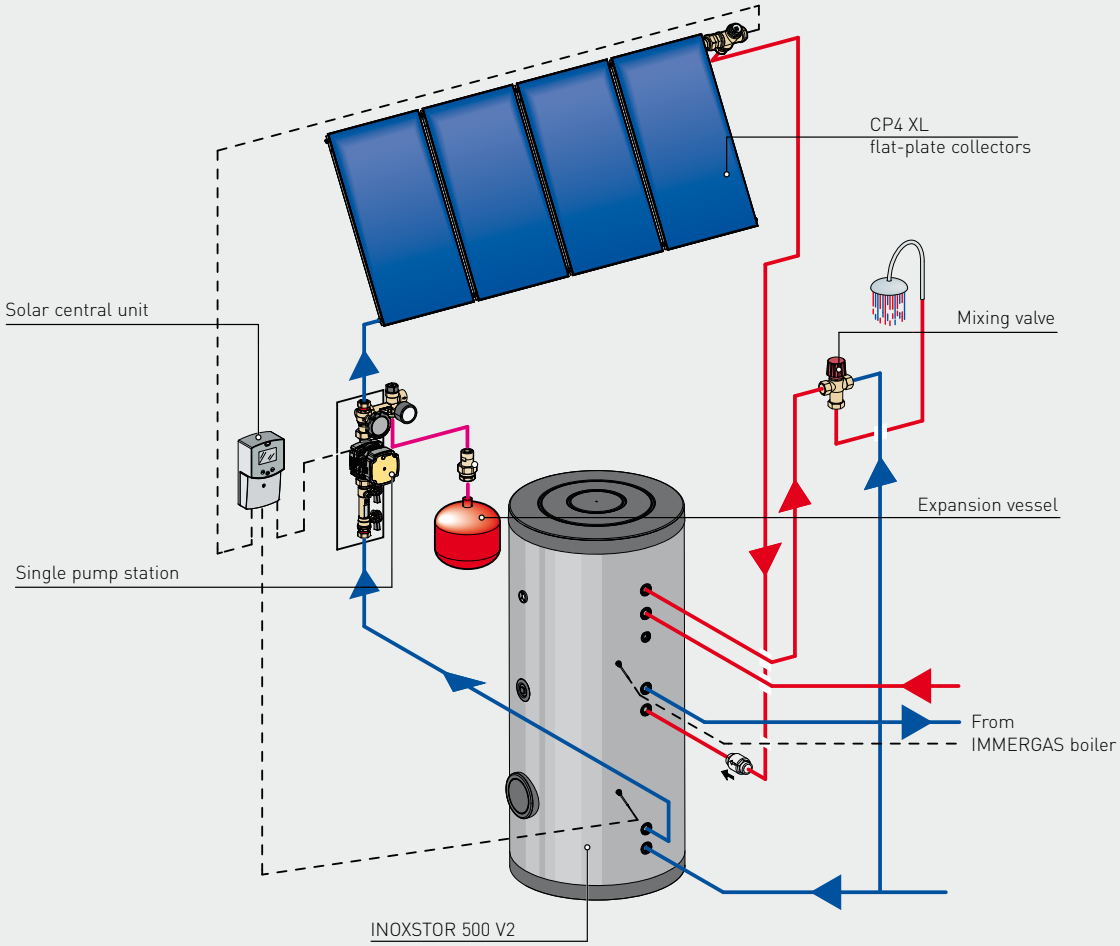
.D

.E

.F

.G

see page 3



INOX SOL 500 V2 (code 3.027836) includes as per standard:

.A **INOXSTOR 500 litre stainless steel storage tank unit** for production of domestic hot water, insulated (efficiency class C) with stainless steel double coil including NTC probe for connection to Immergas boiler < 35 kW and brackets for installation of relative pump station.
The following components can be mounted directly on the storage tank:
- **Single low consumption pump station** with safety valve 6 bar and flow rate regulator (1-6 l/min) with relative connection kit
- **Solar central unit** with temperature probes (storage tank unit and collector)

The use of this storage tank unit involves the installation of an appropriately sized DHW expansion vessel and safety valve, not included in the supply.

.B **4 CP4 XL flat-plate collectors** complete with **2 aluminium support frames** for two vertically installed collectors each

.C **35 litre expansion vessel** with accessories

.D **Complete hydraulic fittings** for mounting the collectors

.E ¾" adjustable thermostatic **mixing valve**

.F **2 tanks** of 20 kg of premixed **glycol**

.G **10 brackets for slates and tiles** for planar installation on sloped roofs with relative fixing accessories

The pack is supplied as per standard with brackets for slates and tiles for sloped roofs to fix the collectors. The following kits are available for different types of fixing:

Fixing systems	Code	See page
Recessed installation kit	Various codes	62 - 63
Brackets kit for slates/tiles to be drilled* (order 3 kits)	3.019105	64
"L"-shaped brackets kit for smooth roofs* (order 3 kits)	3.022776	64
Free-standing vertical installation kit for CP4 XL (on the ground or on flat roofs); order: 1 basic kit for CP4 XL 3 extension kits for CP4 XL	3.022674 3.022677	60 60

** Some fixing elements present in the pack must be used with these kits.*

INOX SOL 500 LUX V2

Solar pack with forced circulation with 3 CSV 14 vacuum collectors and 500 litre INOXSTOR storage tank unit

Indicative solution* for several family units/small businesses

.A

.B

.C

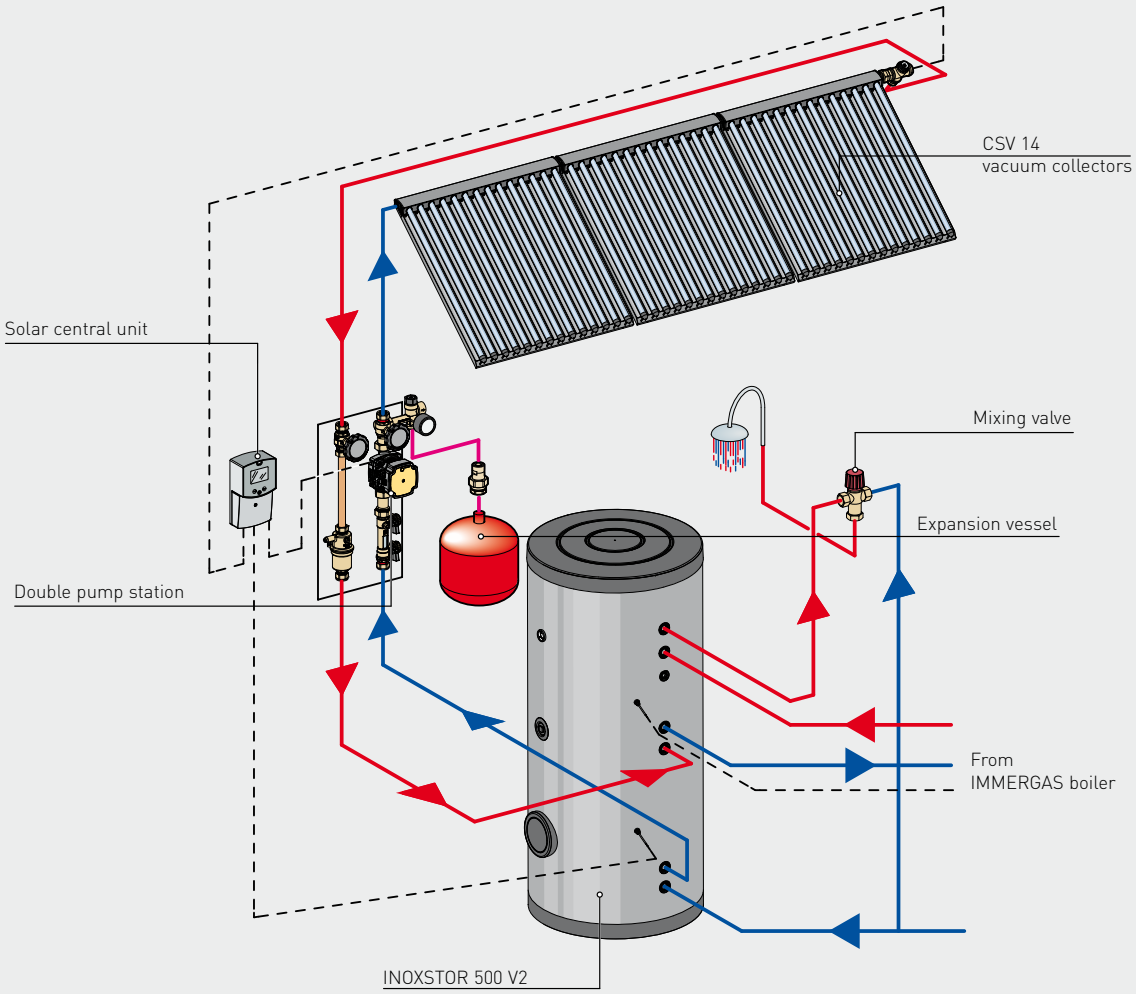
.D

.E

.F

.G

see page 3



INOX SOL 500 LUX V2 (code 3.027837) includes as per standard:

.A **INOXSTOR 500 litre stainless steel storage tank unit** for production of domestic hot water, insulated (efficiency class C) with stainless steel double coil including NTC probe for connection to Immergas boiler < 35 kW and brackets for installation of relative pump station.
The following components can be mounted directly on the storage tank:
- **Double low consumption pump station** with 6 bar safety valve flow rate regulator (1-6 l/min) and air separating device with relative connection kit
- **Solar central unit*** with temperature probes (storage tank unit and collector)

The use of this storage tank unit involves the installation of an appropriately sized DHW expansion vessel and safety valve, not included in the supply.

3 CSV 14 vacuum collectors complete with **3 aluminium**

** Consult the website immergas.com or contact our Customer Service to perform fixing.*

.B **support frames** for one vertically installed collector each

.C **80 litre expansion vessel** with accessories

.D **Complete hydraulic fittings** for mounting the collectors

.E ¾" adjustable thermostatic **mixing valve**

.F **2 tanks** of 20 kg of premixed **glycol**

.G **8 brackets for slates and tiles with relative vertical uprights** for planar installation on sloped roofs with relative fixing accessories

The pack is supplied as per standard with brackets for slates and tiles for sloped roofs to fix the collectors. The following kits are available for different types of fixing:

Fixing systems	Code	See page
Vertical recessed installation kit for CSV 14 (order 3 kits)	3.022115	68
Free-standing vertical installation kit for CSV 14 (on the ground or on flat roofs, order 4 kits)	3.022733	67

BASIC SOL V2

Solar pack with forced circulation with 1 CP4 XL flat-plate collector for coupling with HERCULES Condensing ErP boilers (models with built-in 120 litre storage tank)

Indicative solution* for units from 2 to 3 persons

.A

.B

.C

.D

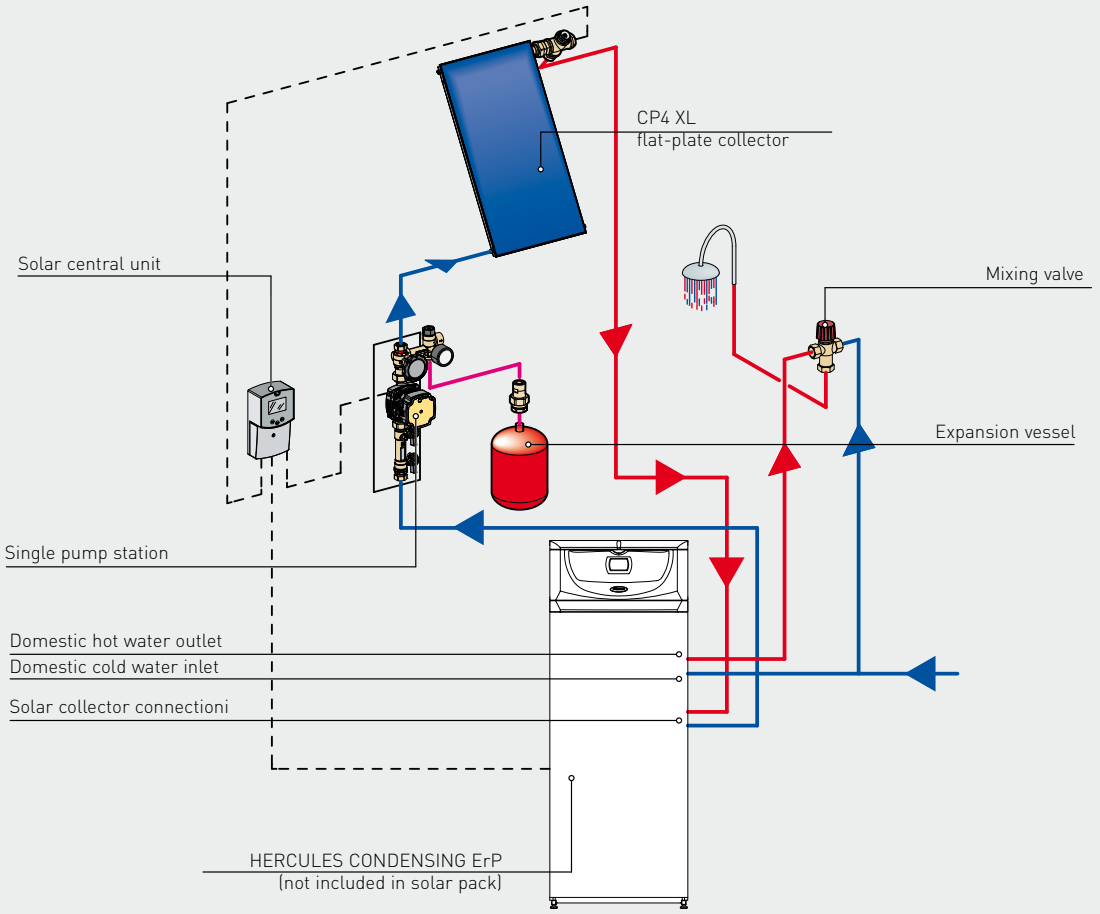
.E

.F

.G

.H

see page 3



BASIC SOL V2 (code 3.025641) includes as per standard:

.A **1 CP4 XL flat-plate collector** complete with **1 aluminium support frame** for one vertically installed collector

.B **Single pump station** with 6 bar safety valve and flow rate regulator (1-6 l/min) with relative connection kit

.C **Solar central unit** with temperature probes (storage tank unit and collector)

.D **18 litre expansion vessel** with accessories

.E **Complete hydraulic fittings** for mounting the collector

.F ¾" adjustable thermostatic **mixing valve**

.G **1 tank** of 20 kg of premixed **glycol**

.H **4 brackets for slates and tiles** for planar installation on sloped roofs with relative fixing accessories

The pack is supplied as per standard with brackets for slates and tiles for sloped roofs to fix the collectors. The following kits are available for different types of fixing:

Fixing systems	Code	See page
Recessed installation kit	Various codes	62 - 63
Brackets kit for slates/tiles to be drilled*	3.019105	64
"L"-shaped brackets kit for smooth roofs*	3.022776	64
Free-standing vertical installation kit for CP4 XL (on the ground or on flat roofs)	3.022674	60

** Some fixing elements present in the pack must be used with these kits.*

BASIC SOL V2 + HERCULES Condensing ErP is the solution that integrates:

- **Boiler**
- **Storage tank** (use the optional solar collector coupling kit code 3.019998 not supplied in the pack)
- **Solar heating system**
- **Heating system area distribution** improving aesthetics and reducing technical clearance inside the home

BASIC SOL LUX V2

Solar pack with forced circulation with 1 CSV 14 vacuum collector for coupling with HERCULES Condensing ErP boilers (models with built-in 120 litre storage tank)

Indicative solution* for units of up to 3 persons

.A

.B

.C

.D

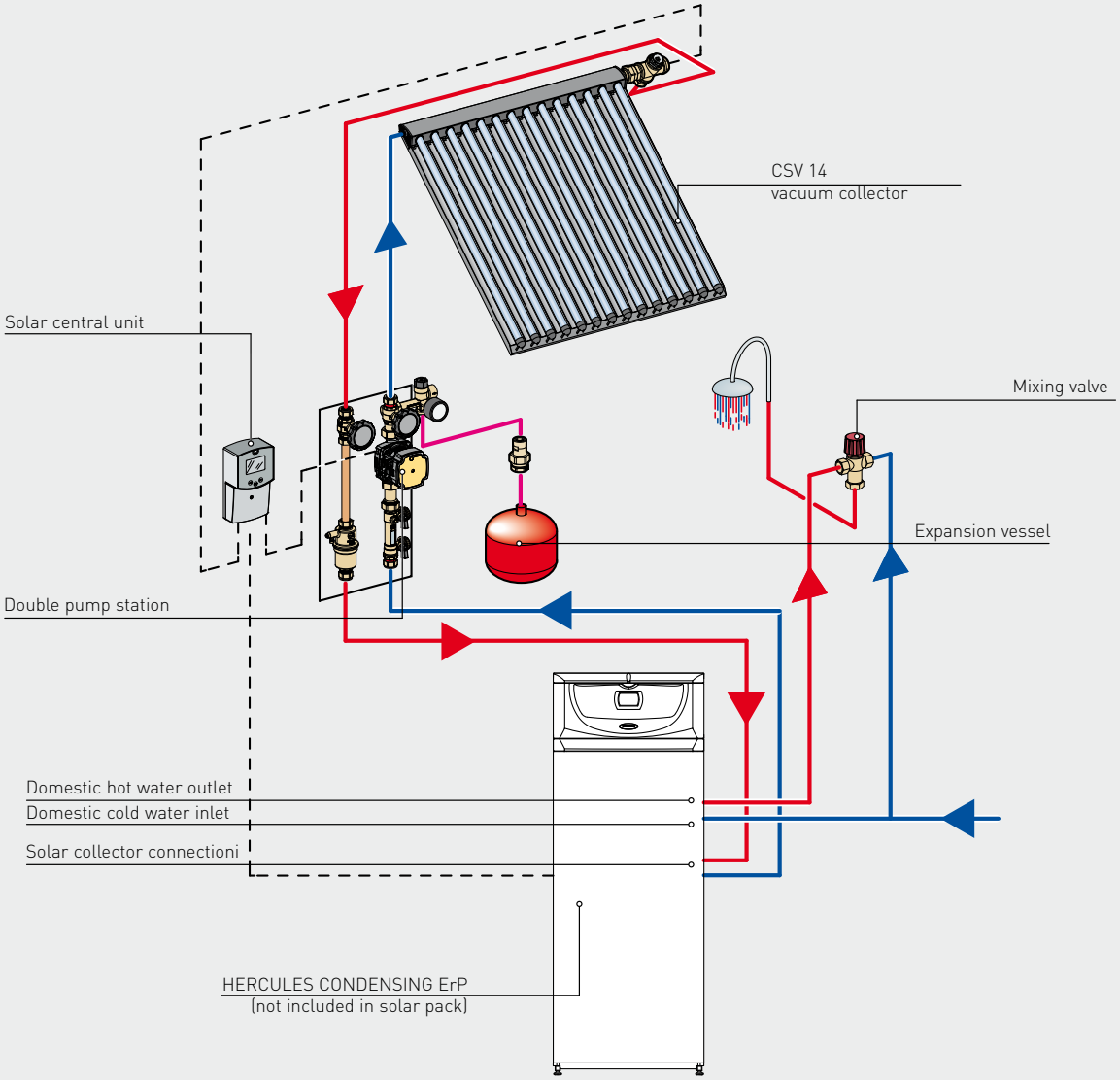
.E

.F

.G

.H

see page 3



BASIC SOL LUX V2 (code 3.025642) includes as per standard:

.A **1 CSV 14 vacuum collector** complete with **1 aluminium support frame** for one vertically installed collector

.B **Double low consumption pump station** with 6 bar safety valve, flow rate regulator (1-6 l/min) and air separating device with relative connection kit

.C **Solar central unit** with temperature probes (storage tank unit and collector)

.D **35 litre expansion vessel** with accessories

.E **Complete hydraulic fittings** for mounting the collector

.F ¾" adjustable thermostatic **mixing valve**

.G **1 tank** of 20 kg of premixed **glycol**

.H **4 brackets for slates and tiles** with relative vertical uprights for level installation on sloped roofs with relative fixing accessories

The pack is supplied as per standard with brackets for slates and tiles for sloped roofs to fix the collectors. The following kits are available for different types of fixing:

Fixing systems	Code	See page
Vertical recessed installation kit for CSV 14	3.022215	68
Free-standing vertical installation kit for CSV 14 (on the ground or on flat roofs, order 2 kits)	3.022733	67

BASIC SOL LUX V2 + HERCULES Condensing ErP is the solution that integrates:

- **Boiler**
- **Storage tank** (use the optional solar collector coupling kit code 3.019998 not supplied in the pack)
- **Solar heating system**
- **Heating system area distribution** improving aesthetics and reducing technical clearance inside the home

COMPLETE PUMP CIRCULATED SOLAR PACKS COMBINED for heating and domestic hot water

DOMESTIC SOL V2

The DOMESTIC SOL V2 solar solutions, ideal for single-family houses, are made up of **4 complete packs for the integration of heating and production of domestic hot water**.
Each pack can be used with various application layouts according to the type of thermal system to be installed and the boiler; for further information consult the website immergas.com or contact our Customer Service.

These solutions have variable performances based on the inclination and exposure of the solar collectors as well as the energy demand for winter heating of the building and the type of heating elements chosen. Have the system checked by a qualified thermotechnical designer to dimension it ideally.

LIST OF PACKS AND MAIN COMPONENTS

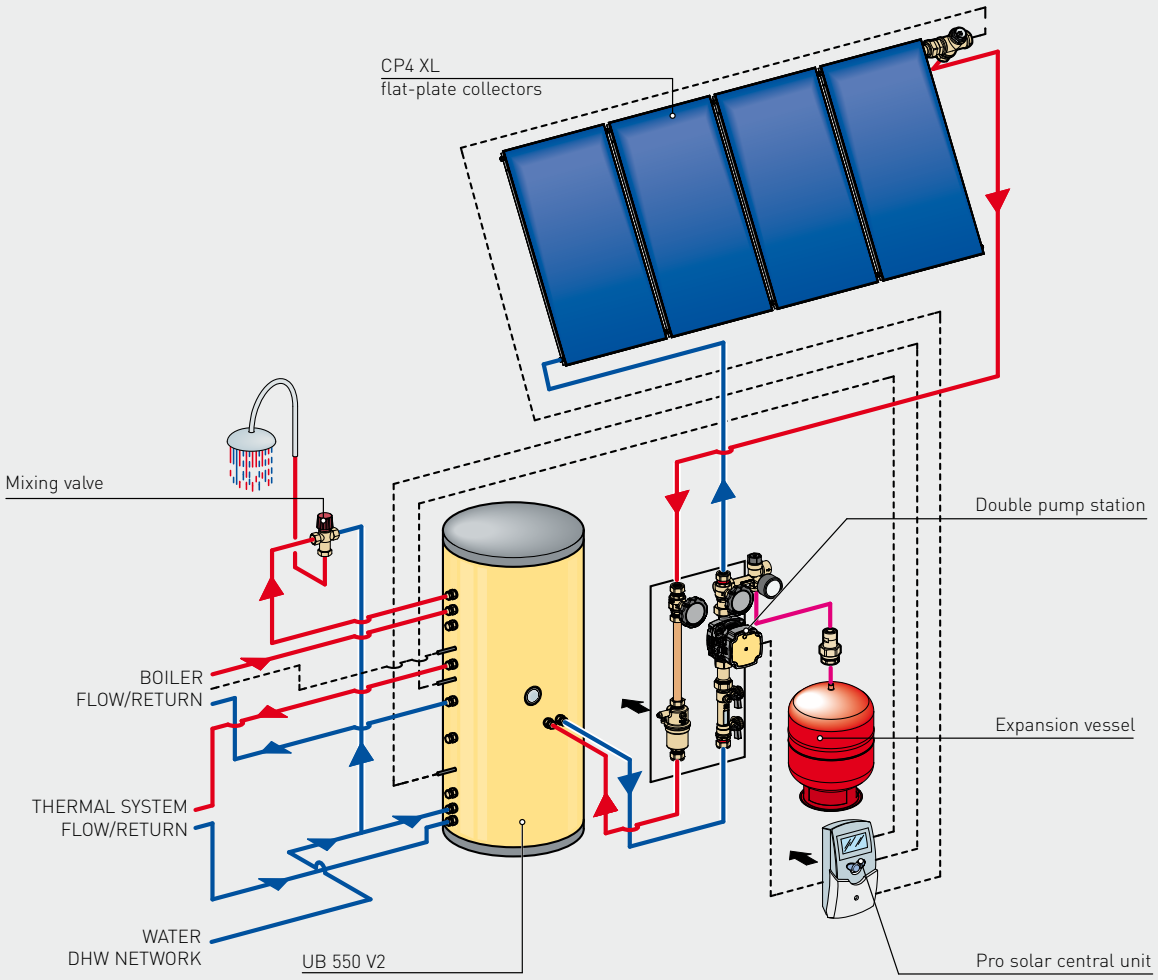
SOLAR PACK	SOLAR COLLECTORS			COMBINED STORAGE TANK UNIT
	CP4 XL Flat-plate	CSV 14 Vacuum	Number of collectors	Capacity (litres)
DOMESTIC SOL 550 V2	X		4	550
DOMESTIC SOL 550 LUX V2		X	3	550
DOMESTIC SOL 750 V2	X		5	750
DOMESTIC SOL 750 LUX V2		X	4	750

DOMESTIC SOL 550 V2

Combined pump-circulated solar pack with 4 CP4 XL flat-plate collectors and 550 litre storage tank unit

Solution* for single-family houses

*see page 3



DOMESTIC SOL 550 V2 (code 3.027838) includes as per standard:

.A **Combined 550 litre storage tank unit**, insulated, for heating integration with a 28.5 litre immersed stainless steel coil for production of domestic hot water and solar integration coil. Supplied with connections for boiler and auxiliary heat generator (for example AUDAX heat pump), the storage tank unit is integrated by the following components:
- **Double low consumption pump station** with 6 bar safety valve flow rate regulator (2-12 l/min) and air separating device with relative connection kit
- **PRO Solar central unit** with four temperature probes (storage tank unit and collector)
- **NTC probe** for Immergas boiler connection < 35 kW

.B **4 CP4 XL flat-plate collectors** complete with **2 aluminium support frames** for two vertically installed collectors each

.C **80 litre expansion vessel** with accessories

.D **Complete hydraulic fittings** for mounting the collectors

.E ¾" adjustable thermostatic **mixing valve**

.F **2 tanks** of 20 kg of premixed **glycol**

.G **10 brackets for slates and tiles** for planar installation on sloped roofs with relative fixing accessories

The pack is supplied as per standard with brackets for slates and tiles for sloped roofs to fix the collectors. The following kits are available for different types of fixing:

Fixing systems	Code	See page
Recessed installation kit	Various codes	62 - 63
Brackets kit for slates/tiles to be drilled* (order 3 kits)	3.019105	64
"L"-shaped brackets kit for smooth roofs* (order 3 kits)	3.022776	64
Free-standing vertical installation kit for CP4 XL (on the ground or on flat roofs); order: 1 basic kit for CP4 XL 3 extension kits for CP4 XL	3.022674 3.022677	60 60

** Some fixing elements present in the pack must be used with these kits.*

DOMESTIC SOL 550 LUX V2

Combined pump-circulated solar pack with 3 CSV 14 vacuum collectors and 550 litre storage tank unit

Solution* for single-family houses

.A

.B

.C

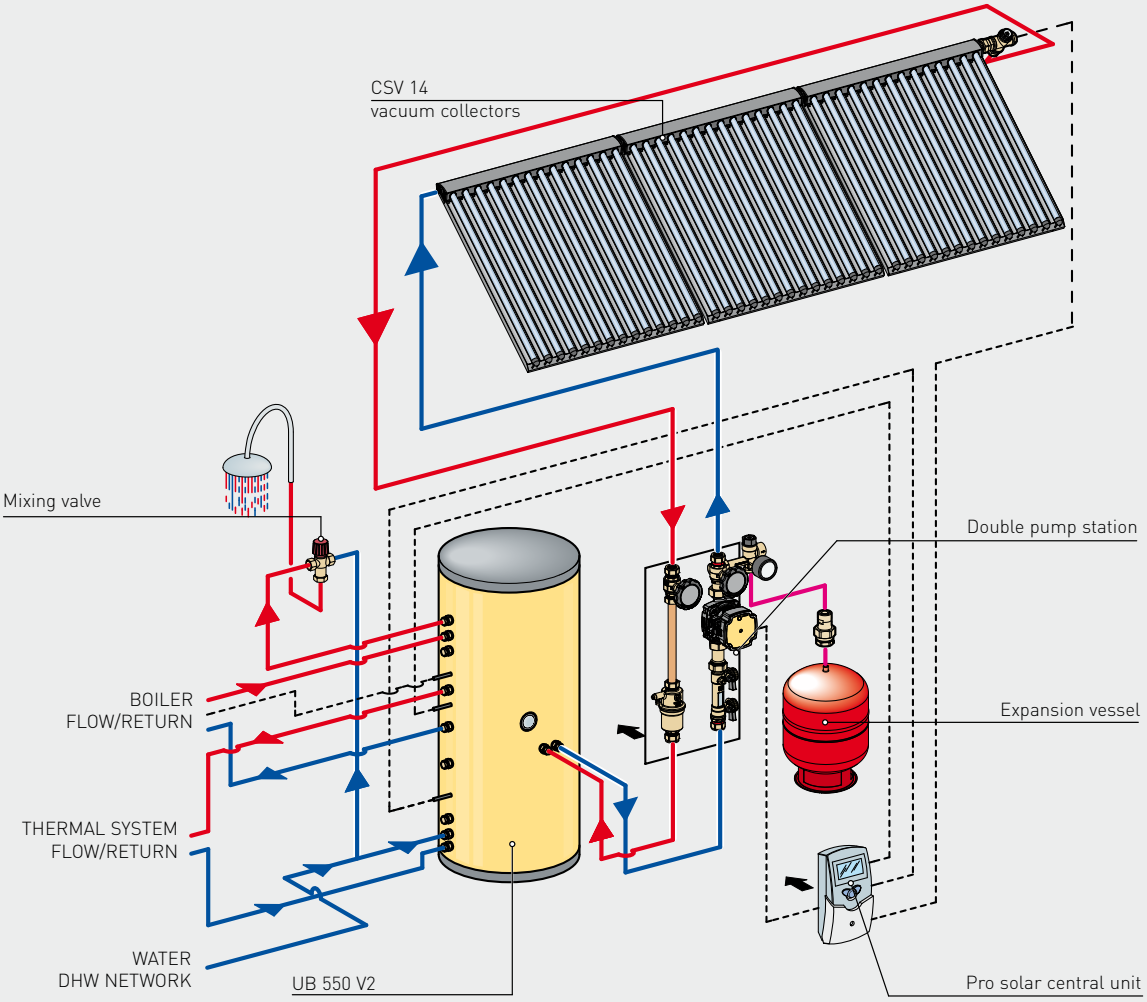
.D

.E

.F

.G

*see page 3



DOMESTIC SOL 550 LUX V2 (code 3.027839) includes as per standard:

.A **Combined 550 litre storage tank unit**, insulated, for heating integration with a 28.5 litre immersed stainless steel coil for production of domestic hot water and solar integration coil. Supplied with connections for boiler and auxiliary heat generator (for example AUDAX heat pump), the storage tank unit is integrated by the following components:
- **Double low consumption pump station** with 6 bar safety valve flow rate regulator (2-12 l/min) and air separating device with relative connection kit
- **PRO Solar central unit** with four temperature probes (storage tank unit and collector)
- **NTC probe** for Immergas boiler connection < 35 kW

.B **3 CSV 14 vacuum collectors** complete with **3 aluminium support frames** for one vertically installed collector each

.C **80 litre expansion vessel** with accessories

.D **Complete hydraulic fittings** for mounting the collectors

.E ¾" adjustable thermostatic **mixing valve**

.F **2 tanks** of 20 kg of premixed **glycol**

.G **8 brackets for slates and tiles with relative vertical uprights** for planar installation on sloped roofs with relative fixing accessories

The pack is supplied as per standard with brackets for slates and tiles for sloped roofs to fix the collectors. The following kits are available for different types of fixing:

Fixing systems	Code	See page
Vertical recessed installation kit for CSV 14 (order 3 kits)	3.022215	68
Free-standing vertical installation kit for CSV 14 (on the ground or on flat roofs, order 4 kits)	3.022733	67

DOMESTIC SOL 750 V2

Combined pump-circulated solar pack with 5 CP4 XL flat-plate collectors and 750 litre storage tank unit

Solution* for single-family houses

.A

.B

.C

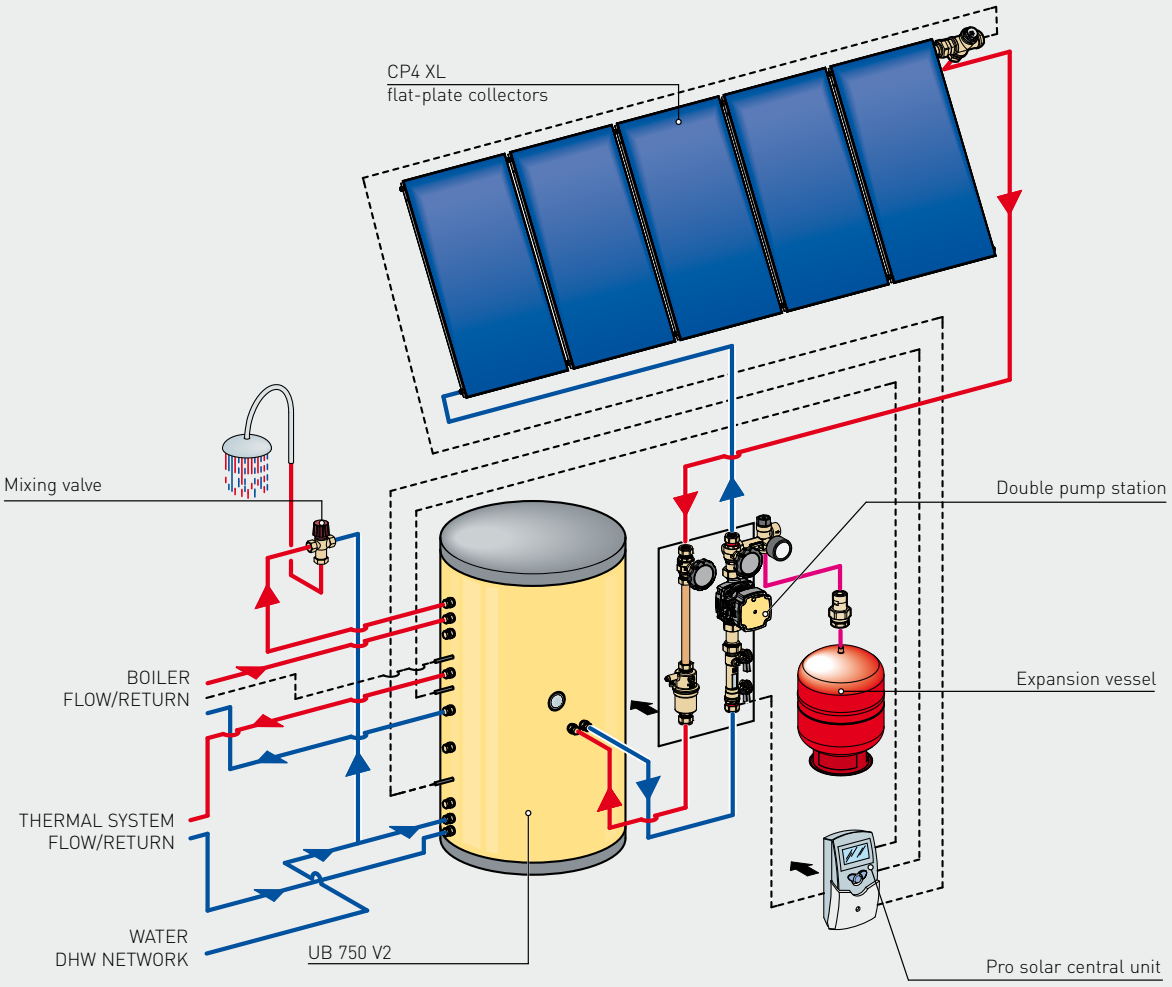
.D

.E

.F

.G

*see page 3



DOMESTIC SOL 750 V2 (code 3.027840) includes as per standard:

.A **Combined 750 litre storage tank unit**, insulated, for heating integration with a 28.5 litre immersed stainless steel coil for production of domestic hot water and solar integration coil. Supplied with connections for boiler and auxiliary heat generator (for example AUDAX heat pump), the storage tank unit is integrated by the following components:
- **Double low consumption pump station** with 6 bar safety valve flow rate regulator (2-12 l/min) and air separating device with relative connection kit
- **PRO Solar central unit** with four temperature probes (storage tank unit and collector)
- **NTC probe** for Immergas boiler connection < 35 kW

.B **5 CP4 XL flat-plate collectors** complete with **2 aluminium support frames** for two collectors each and **1 aluminium support frame** for one collector, installed vertically

.C **80 litre expansion vessel** with accessories

.D **Complete hydraulic fittings** for mounting the collectors

.E ¾" adjustable thermostatic **mixing valve**

.F **2 tanks** of 20 kg of premixed **glycol**

.G **12 brackets for slates and tiles** for planar installation on sloped roofs with relative fixing accessories

The pack is supplied as per standard with brackets for slates and tiles for sloped roofs to fix the collectors. The following kits are available for different types of fixing:

Fixing systems	Code	See page
Recessed installation kit	Various codes	62 - 63
Brackets kit for slates/tiles to be drilled* (order 3 kits)	3.019105	64
"L"-shaped brackets kit for smooth roofs* (order 3 kits)	3.022776	64
Free-standing vertical installation kit for CP4 XL (on the ground or on flat roofs), order: 1 basic kit for CP4 XL 4 extension kits for CP4 XL	3.022674 3.022677	60

** Some fixing elements present in the pack must be used with these kits.*

DOMESTIC SOL 750 LUX V2

Combined pump-circulated solar pack with 4 CSV 14 vacuum collectors and 750 litre storage tank unit

Solution* for single-family houses

.A

.B

.C

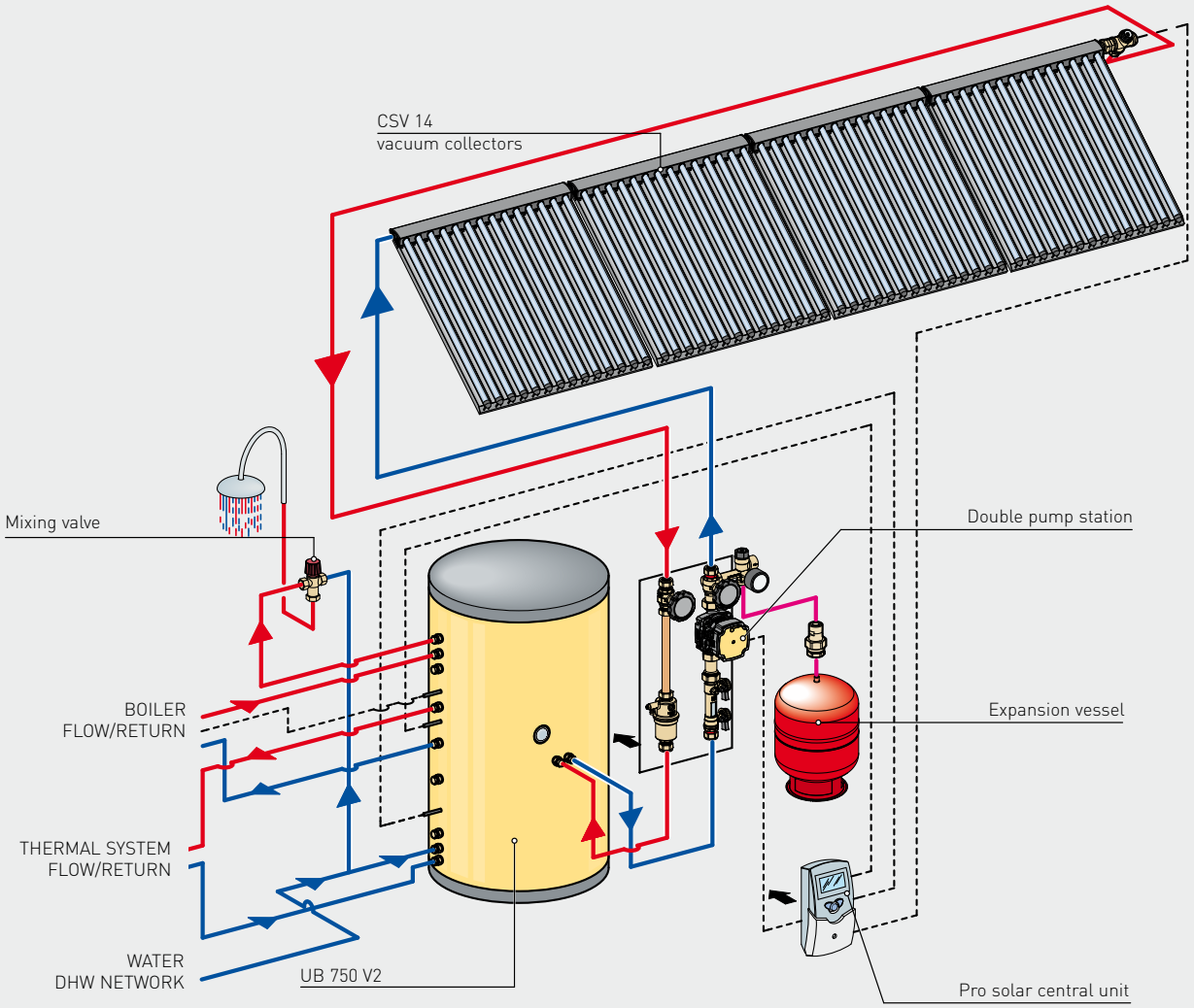
.D

.E

.F

.G

*see page 3



DOMESTIC SOL 750 LUX V2 (code 3.027841) includes as per standard:

.A **Combined 750 litre storage tank unit**, insulated, for heating integration with a 28.5 litre immersed stainless steel coil for production of domestic hot water and solar integration coil. Supplied with connections for boiler and auxiliary heat generator (for example AUDAX heat pump), the storage tank unit is integrated by the following components:
- **Double low consumption pump station** with 6 bar safety valve flow rate regulator (2-12 l/min) and air separating device with relative connection kit
- **PRO Solar central unit** with four temperature probe (storage tank unit and collector)
- **NTC probe** for Immergas boiler connection < 35 kW

.B **4 CSV 14 vacuum collectors** complete with **4 aluminium support frames** for one vertically installed collector each

.C **80 litre expansion vessel** with accessories

.D **Complete hydraulic fittings** for mounting the collectors

.E ¾" adjustable thermostatic **mixing valve**

.F **2 tanks** of 20 kg of premixed **glycol**

.G **10 brackets for slates and tiles with relative vertical uprights** for planar installation on sloped roofs with relative fixing accessories

The pack is supplied as per standard with brackets for slates and tiles for sloped roofs to fix the collectors. The following kits are available for different types of fixing:

Fixing systems	Code	See page
Vertical recessed installation kit for CSV 14 (order 4 kits)	3.022215	68
Free-standing vertical installation kit for CSV 14 (on the ground or on flat roofs, order 5 kits)	3.022733	67

INDIVIDUAL SOLAR COMPONENTS
for forced circulation systems

This section includes all the components necessary for forced solar heating system.

Aside from the solar collectors and storage tank units already included in the single solar packs, further accessories are available to integrate the system, as well as accessories useful to implement special systems or large-sized systems (such as for example 550, 750, 1000, 1500 and 2000 litre vitrified steel storage tank units, high flow rate circulation units, etc.).

Solar central unit

Ideal for solar thermal systems with exclusive integration of domestic hot water, thanks to the probe supplied as per standard, it controls the circulation pump based on the real availability of solar energy and the temperature of the solar storage tank.

The solar central unit (code 3.019097) is characterised by:

- **Compact size and elegant design**
- **User-friendly controls** (only 3 keys)
- **Easy to read** functioning parameters thanks to the digital display
- **Installable on wall or into electric panel or into UB INOX 120-200 V2**

Main functions	Description
collector temperature indication	Measures the temperature in a range from -40 to +250 °C
Solar storage tank temperature indication	Measures the temperature in a range from -40 to +250 °C
Solar system operating hour meter	Measures the operating hours of the solar pump
Solar pump activation temperature differential adjustment	Adjusts the heat drop that makes the solar pump start up; it can be calibrated from 1 to 20 °C it is calibrated as per standard at 6 °C
Solar pump deactivation temperature differential adjustment	Adjusts the heat drop that makes the solar pump stop; it can be calibrated from 0.5 to 19.5 °C it is calibrated as per standard at 4 °C
Solar storage tank max. temperature	Value can be set from 4 to 80 °C, interrupts heating of the storage tank to prevent overheating; it is calibrated as per standard at 60 °C
Collector temperature limit	Value can be set from 110 to 200 °C, interrupts functioning of the solar pump to prevent overheating of the circuit solar components; calibrated as per standard at 140 °C

TECHNICAL DATA

Power supply	Relay 1	Relay 2	Outlet probe 1	Outlet probe 2	Dimensions (mm)		
					H	L	P
220...240 V ~	Solar pump power supply	External user power supply	Solar collector (black cable)	Storage tank probe (grey cable)	173	110	47

PRO solar central unit

Advanced central unit, capable of managing special systems (such as two sets of collectors on double-pitched roofs, heating systems integration, heating integration for swimming pools etc.). Supplied as per standard with four probes, to be able to control two different Δt based on the type of system required. It is supplied as per standard in combined solar packs for heating and domestic hot water integration (see page 28).

The PRO solar central unit (code 3.019519) is characterised by:

- **Compact size and elegant design**
- **User-friendly controls** (only 3 keys)
- **Easy to read** functioning parameters thanks to the digital isplay
- **Installable on wall or into electric panel**
- **Possibility of setting up to 9 system layouts** among which: management of double-pitched roof systems and of two storage tank units

Main functions	Description
Double collector temperature indication	Measures the temperature in a range from -40 to +250 °C
Double solar storage tank temperature indication	Measures the temperature in a range from -40 to +250 °C
Solar system operating hour meter	Measures the operating hours of the solar pump (it can be reset)
Double solar pump activation temperature differential adjustment	Adjusts the heat drop that makes the solar pump start up; it can be calibrated from 1 to 20 °C it is calibrated as per standard at 6 °C
Double solar pump deactivation temperature differential adjustment	Adjusts the heat drop that makes the solar pump stop; it can be calibrated from 0.5 to 19.5 °C it is calibrated as per standard at 4 °C
Solar storage tank max. temperature	Value can be set from 2 to 95 °C, interrupts heating of the storage tank to prevent overheating; it is calibrated as per standard at 60 °C
Collector temperature limit	Value can be set from 110 to 200 °C, interrupts functioning of the solar pump to prevent overheating of the circuit solar components; calibrated as per standard at 140 °C

TECHNICAL DATA

Power supply	Modulating relay 1	Modulating relay 2	Outlet probe 1-3	Outlet probe 2-4	Dimensions (mm)		
					H	L	P
220...240 V ~	Solar pump power supply	External user power supply	Solar collector (black cable)	Storage tank probe (grey cable)	173	110	47

80, 120 and 200 litre stainless steel storage tank units V2

The UB Inox storage tank unit range is made of stainless steel, ideal for containing domestic hot water, with upper inspection flange. Casing painted in RAL 9010.

The UB Inox storage tank units are equipped with:

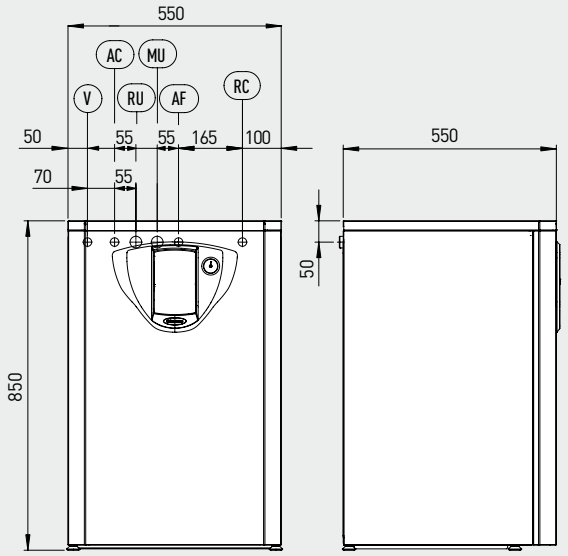
- **2 extractable, stainless steel double concentric coil water/ water heat exchangers** (1 for UB INOX 80 V2 model)
- **8 bar safety valve** and 8 litre **domestic hot water expansion vessel** with 2.5 bar preload
- **2 probe-supports and NTC probe** for Immergas boiler connection < 35 kW
- **Storage tank draining valve**
- **Thermometer and thermometer probe**
- **Magnesium anode**
- **Soft upper, lower and frontal insulation two-layer perimeter insulation** (stiff + soft)
- **Connection to solar collectors with optional kits** for UB INOX 120 V2 and 200 V2 models (see page 52)
- **Set up for insertion of solar control unit** for UB INOX 120 V2 and 200 V2 (see page 52)

UB Inox 200 V2

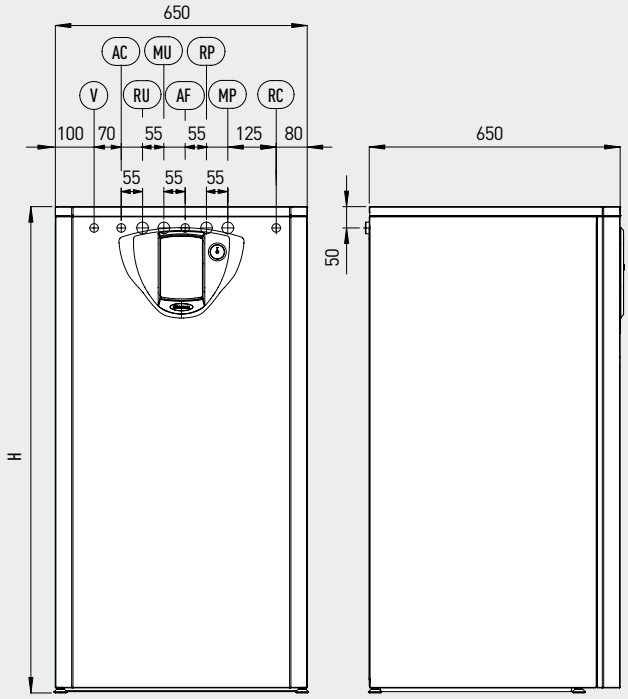
Type	Efficency class	Code
UB INOX 80 V2	C	3.027817
UB INOX 120 V2	C	3.027818
UB INOX 200 V2	C	3.027819

TECHNICAL DATA

Technical features	Unit of measurement	UB INOX 80 V2	UB INOX 120 V2	UB INOX 200 V2
Storage tank useful capacity	l	83,9	128,8	199
Domestic hot water side maximum pressure	bar	8	8	8
Maximum operating pressure	°C	99	99	99
Domestic hot water expansion vessel	l	4,0	5,0	8,0
Leaks	kWh/24h (W/K)	1,35 (1,25)	1,51 (1,39)	1,87 (1,73)
Coil thickness	mm	0,8	0,8	0,8
Coil length	mm	10350	-	-
Lower/upper coil length	mm	-	3850/8400	6500/10700
Coil exchange surface	m^2	0,65	-	-
Lower/upper coil heat exchange surface	m^2	-	0,24/0,53	0,41/0,67
Coil capacity	l	2,75	-	-
Lower/upper coil capacity	l	-	1,02/2,23	1,73/2,84
Primary fluid flow rate (coil)	l/h	1030	1325	1390
Coil head loss at 1000 l/h	kPa (m c.a.)	13,2 (1,35)	7,1 (0,72)	8,3 (0,85)
Central heating side maximum pressure	bar	6	6	6
Central heating side maximum temperature	°C	90	90	90
Heat exchange maximum output	kW	23,9	30,8	32,3
Reintegration heat output	kW	15,7	18,8	20,2
Full/empty weight	kg	153,7/70,9	202,0/78,9	304,0/99,4
Total water content	l	82,8	123,3	204,6



UB INOX 80 V2



UB INOX 120-200 V2

Key

V	Electrical connection	MU	Storage tank unit flow
AC	Domestic hot water outlet	RP	Return to solar collectors (optional)
AF	Domestic hot water inlet	MP	Flow from solar collectors (optional)
RU	Storage tank unit return	RC	Domestic hot water pump (optional)
H	Height (850 mm UB INOX 120 V2; 1250 mm UB INOX 200 V2)		

Connections

From boiler	From solar collectors*	Domestic hot water		
MU-RU	MP-RP	AF	AC	RC
3/4"	3/4"	3/4"	3/4"	1/2"

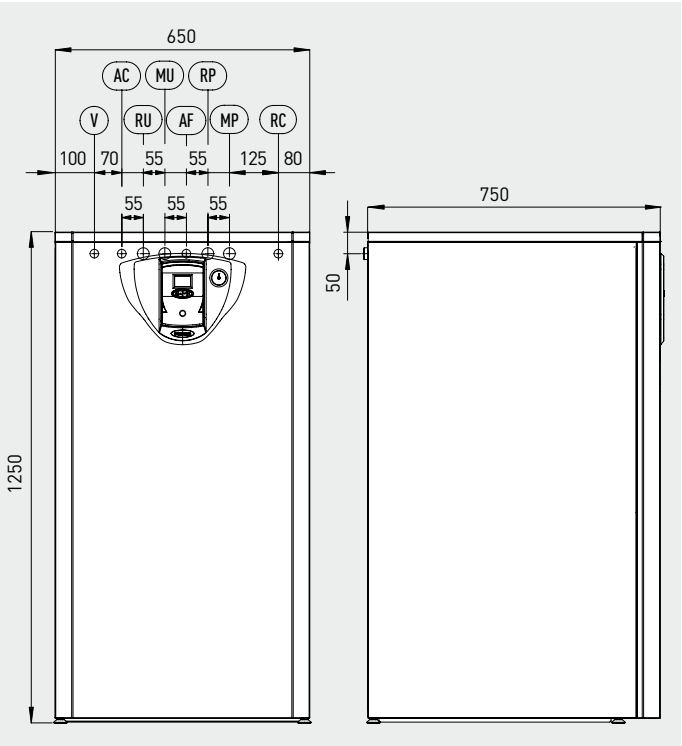
** For UB INOX 120-200 V2*

200 litre stainless steel storage tank unit V2 with built-in solar circuit

The UB INOX SOLAR 200 V2 storage tank unit (code 3.027820) is an integrated solution consisting in a 200 litre stainless steel storage tank unit for production of domestic hot water, inspection flange and built-in solar circuit. Casing painted in RAL 9010.
Ideal for installing systems with limited space.

It is equipped with:

- **2** extractable stainless steel double concentric coil **water/water heat exchangers**
- **NTC probe** for Immergas boiler connection < 35 kW
- **1-6 l/min single solar low consumption pump station**
- **18 litre solar expansion vessel**
- **12 litre domestic hot water expansion vessel**
- **8 bar domestic hot water safety valve**
- **6 bar solar circuit safety valve**
- **¾" thermostatic mixing valve**
- **Solar control unit integrated in storage tank control panel** with relative temperature probes
- **Magnesium anode**
- **Soft upper, lower and frontal insulation two-layer perimeter insulation** (stiff + soft)
- **Solar circuit water pressure gauge**



Key

V	Electrical connection	MU	Storage tank unit flow
AC	Domestic hot water outlet	RP	Return to solar collectors (optional)
AF	Domestic hot water inlet	MP	Flow from solar collectors (optional)
RU	Storage tank unit return	RC	Domestic hot water pump (optional)

Connections

From boiler	From solar collectors	Domestic hot water		
MU-RU	MP-RP	AF	AC	RC
¾"	¾"	¾"	¾"	½"

TECHNICAL DATA

Technical features	Unit of measurement	UB INOX SOLAR 200 V2
Storage tank useful capacity	l	199
Domestic hot water side maximum pressure	bar	8
Domestic hot water side maximum temperature	°C	99
Domestic hot water expansion vessel	l	8
Leaks	kWh/24h (W/K)	1,87 (1,73)
Coil thickness	mm	0,8
Solar coil length	mm	6500
CH coil length	mm	10700
Solar coil exchange surface	m^2	0,41
CH coil exchange surface	m^2	0,67
Solar coil capacity	l	1,73
CH coil capacity	l	2,84
CH/solar primary fluid flow rate (coil)	l/h	1140/1140
Single coil head loss at 1000 l/h	kPa (m c.a.)	12,3 (1,25)
Central heating side maximum pressure	bar	6
Central heating side maximum temperature	°C	90
Solar heat exchange maximum output	kW	23,8
CH heat exchange maximum output	kW	26,5
Full weight	kg	311
Empty weight	kg	106
Total water content	l	205
Solar circuit maximum pressure	bar	6
Solar expansion vessel factory-set pressure	bar	2,5
Content of glycoled water in the solar circuit	l	3,7
Power absorbed by the solar pump	W	36
Equipment electrical system protection	-	IPX0D
Max. solar pump head	m c.a.	6
Solar circuit maximum peak temperature	°C	150
Solar circuit maximum continuous working temperature	°C	130

200, 300 and 500 litre stainless steel storage tank units V2

The range of new INOXSTOR stainless steel solar storage tanks, is ideal to contain domestic hot water with an inspection flange at the lower part.

The storage tanks are equipped with:

- **2 stainless steel** double concentric coil **water/water heat exchangers**
- **2 probe-supports and NTC probe** for Immergas boiler connection < 35 kW
- **Thermometer**
- **Double magnesium anode**
- **Suitable flexible insulation which can be disassembled** (6 cm thick on INOXSTOR 200/300 V2 and 8 cm thick on INOXSTOR 500 V2)
- **Pre-arranged to fix pump station to the body of the storage tank**
- **Pre-arranged to Electronic anode (optional) code 3.025003**

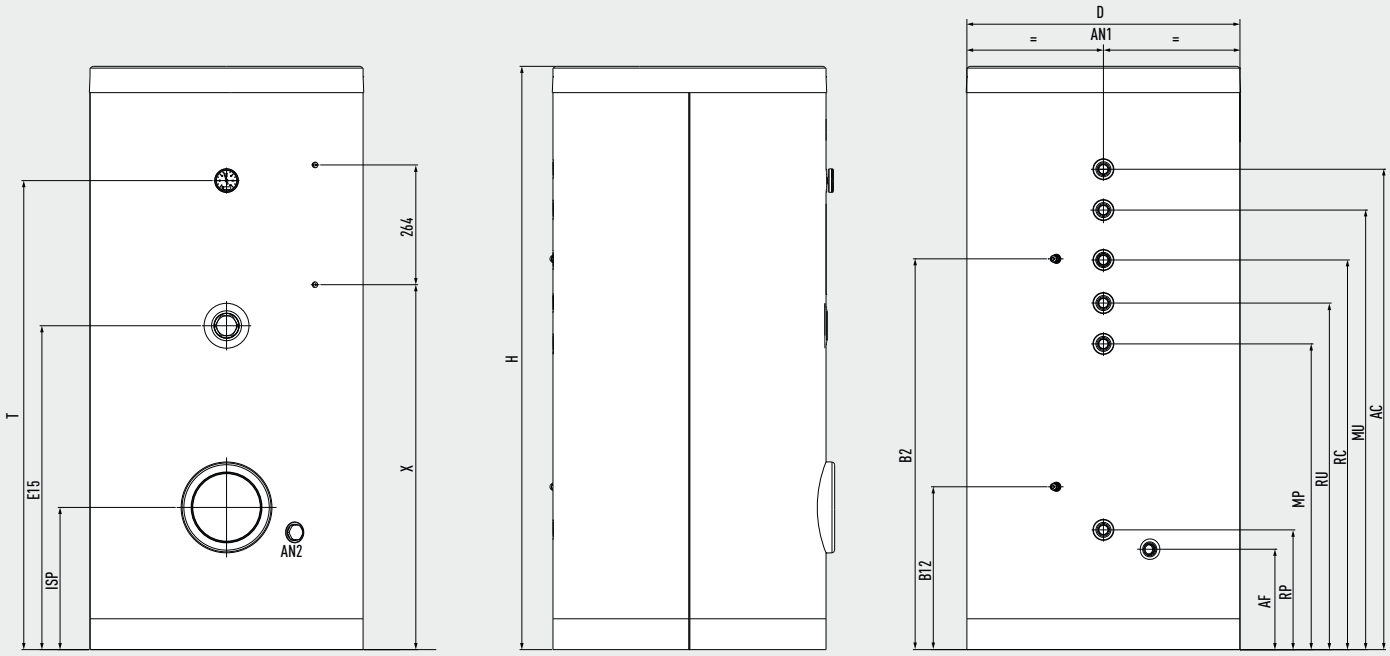
The use of this storage tank unit involves the installation of an appropriately sized DHW expansion vessel and safety valve, not included in the supply.

INOXSTOR 200 V2

Type	Efficiency class	Code
INOXSTOR 200 V2	C	3.027746
INOXSTOR 300 V2	C	3.027747
INOXSTOR 500 V2	C	3.027748

TECHNICAL DATA

Technical features	Unit of measurement	INOXSTOR 200 V2	INOXSTOR 300 V2	INOXSTOR 500 V2
Storage tank unit capacity	l	202,6	279,0	480,3
Domestic hot water side maximum pressure	bar	8	8	8
Domestic hot water side maximum temperature	°C	99	99	99
Maximum coil pressure	bar	6	6	6
Central heating side maximum temperature	°C	90	90	90
Full/empty storage tank unit weight	kg	60,7/274,9	75,0/366,1	101,0/598,9
Dispersions	kWh/24h (W/K)	1,95 (1,81)	2,18 (2,02)	2,41 (2,23)
Upper coil exchange surface	m^2	0,72	0,8	1,23
Upper coil capacity	l	4,1	4,6	7
Upper coil heat exchange power	kW	32,0	32,0	32,0
Upper coil primary fluid flow rate	l/h	1630	1655	1845
Upper coil primary fluid T delta	°C	17	17	14,9
Upper coil useful reintegration power	kW	26,3	26,3	26,3
Lower coil exchange surface	m^2	1,3	1,31	1,84
Lower coil capacity	l	7,5	7,5	10,6
Lower coil heat exchange power	kW	52,0	52,0	52,0
Lower coil primary fluid flow rate	l/h	2950	3080	3057
Lower coil primary fluid T delta	°C	15	14,5	14,6
Lower coil useful reintegration power	kW	34,3	34,3	34,3



N.B.: while performing the connection, set up a drain fitting and an interception cock at the cold water inlet (AF) to facilitate maintenance operations.

Key

D	Storage tank diameter	RU	Return from storage tank	E15	Storage tank integration resistance (optional)
H	Storage tank height	RC	DHW Pump (optional)	T	DHW thermometer
ISP	Inspection flange	MU	Flow to storage tank	X	Distance above ground to fix circulation unit
AF	Domestic cold water inlet	AC	Domestic hot water outlet	AN1	Magnesium anode 1
RP	Return from solar collectors	B2	Domestic hot water probe	AN2	Magnesium anode 2
MP	Flow to solar collectors	B12	Solar storage tank probe		

Symbol	INOXSTOR 200 V2 (mm)	Connections	INOXSTOR 300 V2 (mm)	Connections	INOXSTOR 500 V2 (mm)	Connections
D	Ø 620	-	Ø 620	-	Ø 810	-
H	1325	-	1715	-	1735	-
ISP	315	100x150	315	100x150	430	100x150
AF	222	¾"	222	¾"	215	1"
RP	265	¾"	265	¾"	305	1"
MP	675	¾"	815	¾"	860	1"
RU	765	¾"	995	¾"	960	1"
RC	860	¾"	1130	¾"	1200	¾"
MU	970	¾"	1345	¾"	1310	1"
AC	1060	¾"	1450	¾"	1420	1"
B2	862	-	1237	-	1100	-
B12	360	-	430	-	500	-
E15	715	1½" F	925	1½" F	910	1½"
T	1035	-	1450	-	1350	-
X	805	-	1202	-	1180	-
AN1		¾"		¾"		¾"
AN2	259	¾"	273	¾"	289	¾"
Tilting Diagonal	1465	-	1825	-	1915	-

1000, 1500 and 2000 litre vitrified steel storage tank units V2

The vitrified steel storage tank units are characterised by an internal glazed enamel treatment (also called vitrification) that makes the product highly resistant to water and steam as well as protecting it from corrosion, thus guaranteeing the inalterability of the chemical-physical features of the domestic hot water. They are the ideal solution for centralised systems.

The vitrified steel storage tank units **have an inspection flange** in the lower part and are equipped with:

- **2** coil **water/water heat exchangers**
- **2 probe-supports and NTC probe** for Immergas boiler connection < 35 kW
- **Thermometer and thermometer probe**
  Magnesium anode (2 for UB 2000 V2)
- **UB 1000 V2 and UB 1500 V2 pre arranged for electrical resistance** (see page 52)
- **Polyurethane (PU) rigid insulation** thick 70 mm on UB 1000 V2, thick 100 mm on UB 1500 V2 (both of them can be disassembled in case of necessity)
- **Polyurethane (PU) flexible insulation disassemblable** thick 100 mm on UB 2000 V2

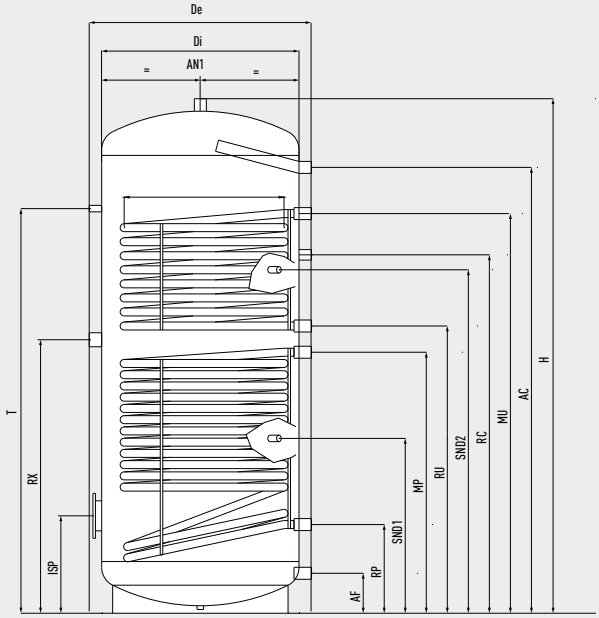
The use of this storage tank unit involves the installation of an appropriately sized DHW expansion vessel and safety valve, not included in the supply.

UB 1000 V2

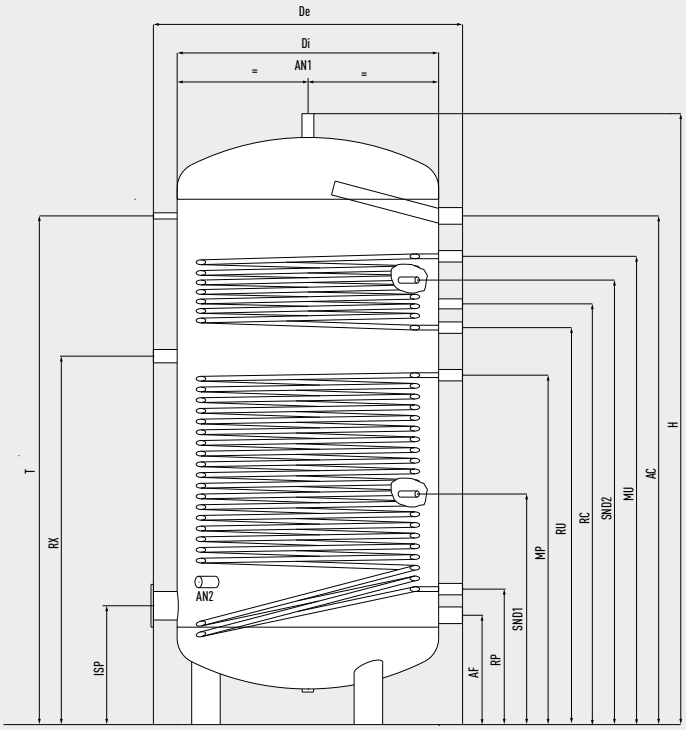
Type	Code
UB 1000 ErP	3.027815
UB 1500 ErP	3.027816
UB 2000 ErP	3.025605

TECHNICAL DATA

Technical features	Unit of measurement	UB 1000 V2	UB 1500 V2	UB 2000 V2
Storage tank useful capacity	l	888,5	1388	2032
Domestic hot water side maximum pressure	bar	8	8	8
Domestic hot water side maximum temperature	°C	99	99	99
Central heating side maximum pressure	bar	12	12	12
Central heating side maximum temperature	°C	99	99	99
Full weight	kg	1191	1782	2422
Upper coil heat exchange surface (boiler)	m^2	1,6	2,3	2
Upper coil capacity	l	10	19,7	15,8
Lower coil heat exchange surface (solar collectors)	m^2	2,8	3,9	5,9
Lower coil capacity	l	17	33,4	45,4
Leaks	kWh/24h (W/K)	3,4 (3,16)	3,9 (3,61)	7,2 (6,63)



UB 1000 - 1500 V2



UB 2000 V2

Symbol	Key	Dimensions (mm) UB 1000 V2	Dimensions (mm) UB 1500 V2	Dimensions (mm) UB 2000 V2
T	Thermometer	1640	1825	2140
Rx	Integrative resistance 1 ½" F	1115	1315	1550
Isp	Inspection flange	410	445	500
H	Height	2110	2250	2570
De	Outside diameter	950	1200	1300
Di	Inside diameter	790	950	1100
AF	Domestic cold water inlet	180	225	460
AC	Domestic hot water outlet	1805	1955	2140
MU	Storage tank unit flow (boiler)	1620	1815	1970
RU	Storage tank unit return (boiler)	1170	1395	1670
MP	Flow from solar collectors	1065	1225	1470
RP	Return from solar collectors	375	325	570
RC	Recirculation	1455	1670	1770
SND2	Boiler probe connection (as per standard)	1395	1560	1870
SND1	Solar probe connection	720	575	970
-	Tilting diagonal	2310	2550	2880

Connections

Storage tank unit	System connections	From solar collectors	Domestic hot water		
	MU-RU	MP-RP	RC	AC	AF
UB 1000 V2	1 ¼"	1 ¼"	1"	1 ¼"	1 ¼"
UB 1500 V2	1 ¼"	1 ¼"	1"	2"	2"
UB 2000 V2	1 ¼"	1 ¼"	1"	2"	2"

550 and 750 litre combined storage tank units V2

The combined storage tank units for heating and domestic hot water integration consists in a storage tank suitable to contain primary heating circuit water. They are specifically intended to be used in single-family homes.

They are equipped with:

- **Stainless steel water/water heat exchanger,** for the production of domestic hot water, which passes through the entire height of the storage tank for an overall capacity of 28.5 litres; it therefore acts as a storage tank and provides constant production in DHW mode with the storage tank unit kept at a suitable temperature
- **Water/water heat exchanger** with storage tank development in the lower part allowing solar integration coupled with the collectors
- **Connections for coupling with boiler**
- **Connections for possible auxiliary heat generator** (for example AUDAX heat pump)
- **Pre-arranged to fix double pump station to the body of the storage tank**
- **Pre arranged for electrical resistance** (see page 52)
- **Polyurethane (PU) rigid insulation** thick 70 mm (which can be disassembled in case of necessity)

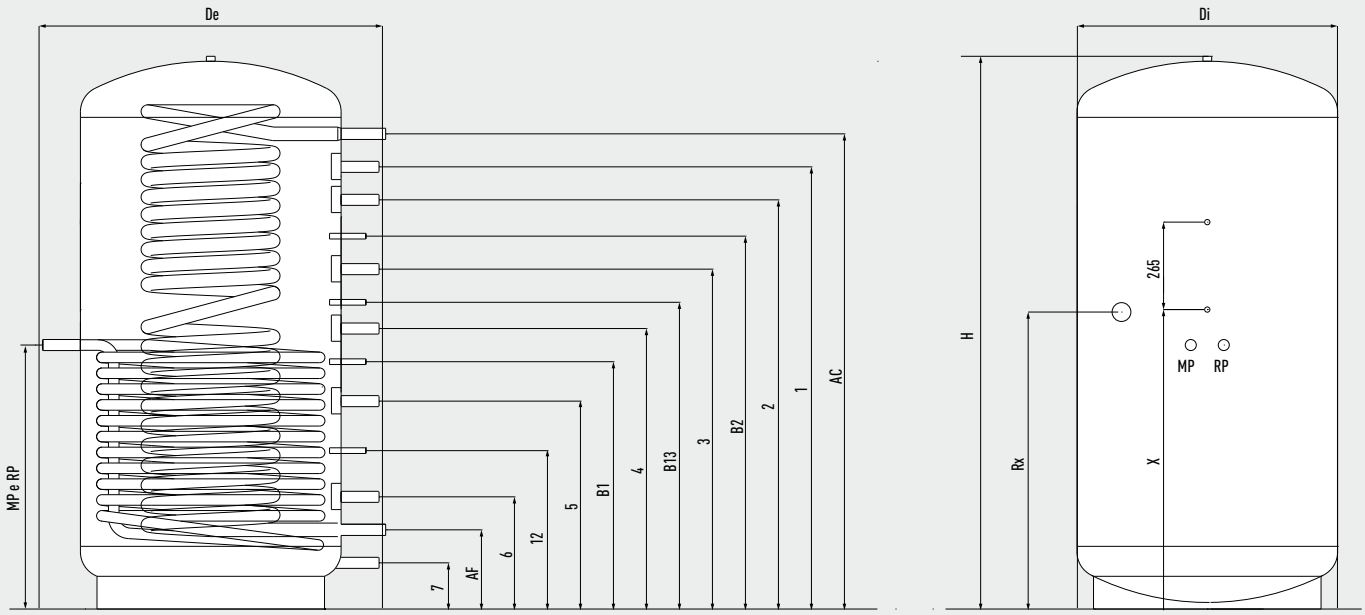
The use of this storage tank unit involves the installation of an appropriately sized expansion vessel, not included in the supply.

UB 550 V2

Type	Code
UB 550 V2	3.027813
UB 750 V2	3.027814

TECHNICAL DATA

Technical features	Unit of measurement	UB 550 V2	UB 750 V2
Capacity	l	553	733
Domestic hot water side maximum pressure	bar	6	6
Solar circuit maximum pressure	bar	10	10
Central heating side maximum pressure	bar	3	3
Maximum operating pressure	°C	99	99
Empty weight	kg	164	180
Domestic hot water coil exchange surface	m^2	5,5	5,5
Domestic hot water coil capacity	l	27	27
Solar coil exchange surface	m^2	1,8	2,4
Solar coil capacity	l	11,1	14,8
Leaks	kWh/24h (W/K)	2,69 (2,49)	2,95 (2,73)



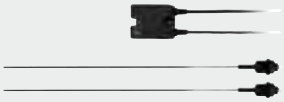
Symbol	Key	Dimensions (mm) UB 550 V2	Dimensions (mm) UB 750 V2
Rx	Integrative resistance 1 ½"	1050	930
H	Height	1930	1770
De	Storage tank external diameter	810	950
Di	Storage tank internal diameter	650	790
X	Circulation unit fixing height	962	937
AF	Domestic cold water inlet	240	270
AC	Domestic hot water outlet	1635	1470
MP and RP	Solar collectors flow and return	855	830
1	--	1535	1370
2	Auxiliary generator flow	1435	1270
3	--	1180	1060
4	--	940	880
5	--	700	660
6	Auxiliary generator return	340	370
7	--	160	180
B1	Probe connection	840	750
B2	DHW probe connection	1280	1160
B12	Solar probe connection	490	510
B13	Probe connection	1080	960
-	Tilting diagonal	2093	2009

Connections

storage tank unit	System connections	From solar collectors	Domestic hot water	
	1.....7	MP-RP*	AC	AF
UB 550 V2	1"	1"	1"	1"
UB 750 V2	1"	1"	1"	1"

** The hydraulic connection from the collectors is made on the circulation unit installed on the storage tank unit.*

Storage tank unit options

Type		Description
Solar central unit kit for UB INOX 120-200 V2 Code 3.019097		See page 42
Electronic anode kit for INOXSTOR 200-300 and 500 V2 Code 3.025003		No need of periodic replacement
2 kW electric resistance kit for UB INOXSTOR 200-300-500 V2 and UB 550-750 V2 Code 3.020861		
5 kW electric resistance kit for UB 1000-1500 V2 and UB 750 V2 Code 3.020862		
Connection pipe kit for UB INOX 200 V2 solar collector Code 3.022195		Including pipes and fittings for connection in template
Connection pipe kit for 2 UB INOX 120 V2 solar collector or 2 UB INOX 200 V2 in parallel Code 3.022196		Including pipes and fittings for connection in template
Connection pipe kit for UB INOX 120 V2 solar collector Code 3.022197		Including pipes and fittings for connection in template
Connection kit for 2 UB INOX 120 V2 or 2 UB INOX 200 V2 in parallel Code 3.022212		
UB INOX 80 V2 recirculation pipe kit Code 3.022198		
UB INOX 120 V2 recirculation pipe kit Code 3.022199		
UB INOX 200/200 SOLAR V2 recirculation pipe kit Code 3.022200		
Recirculation pipe kit for 2 UB INOX 120 V2 or 2 UB INOX 200 V2 in parallel Code 3.022201		

Temperature probe kit

Type		Description
NTC contact probe kit for storage tank for coupling boilers <35 kW with commercial storage tank unit Code 3.019375		Allows to check the DHW temperature of a commercial storage tank unit with the Immergas boiler <35 kW. Provided as per standard on all storage tank units in the catalogue , except UB550 and 750 V2
Solar collector temperature probe kit for cascade and zone regulator Code 3.019374		To be used to manage the solar system coupled to thermal plants using the cascade and zone regulator Code 3.015244 or system controller Code 3.021522
Storage tank unit temperature probe kit for cascade and zone regulator Code 3.015268		To be used to control the storage tank unit temperature coupled to thermal plants using the cascade and zone regulator Code 3.015244.
Solar collector temperature probe kit for UB INOX SOLAR 200 V2 and HERCULES SOLAR 26 ErP Code. 1.028812		As per standard with these products

CP4 XL
flat-plate collector

CP4 XL flat-plate collector (code 3.022664) is characterised by:

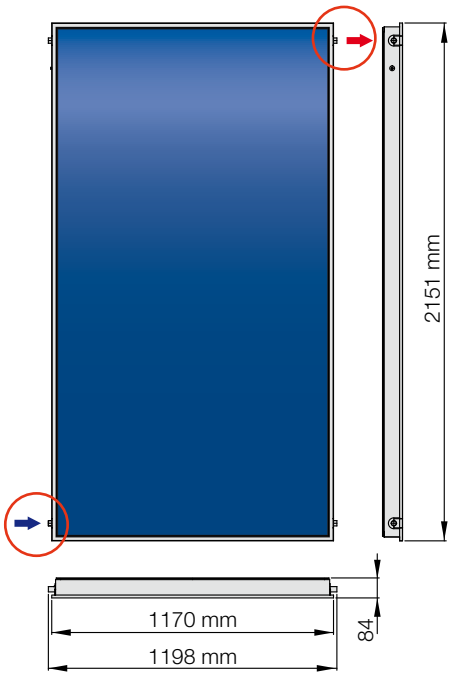
- **Large absorption surface** (2,31 m²)
- **SOLAR KEYMARK certification** and conformity with **EN 12975**
- **Can be installed either vertically or horizontally**
- **Special hardened glass** (4 mm thick) with low iron content for high solar transmission
- **Optimum handling** thanks to its contained weight
- **High resistance** to atmospheric conditions and heat stress
- **Insulation** using mineral wool (40 mm thick)
- **Reversibility of connections and less head losses**
- **4 connections with "smooth" pipe, without fittings**
- **Possibility of connecting up to 6 collectors in series**

TECHNICAL DATA

Collector weight (empty)	47 kg
Selector inside pipe diameter	Ø 8 mm
Capacity	1,7 l
Casing	Aluminium
Absorber	Highly selective covering
Gross surface	2,52 m²
Solar absorption area	2,31 m²
Stagnation maximum temperature (dry)	234 °C

TECHNICAL DATA

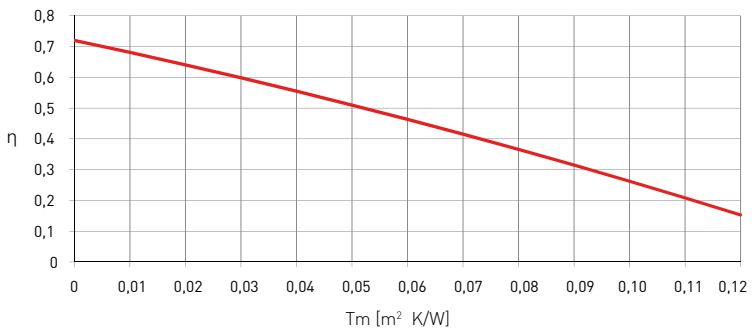
Optical efficiency (according to EN 12975)	0.759
a1 ref. opening surface	3.48 W / m² K
a2 ref. opening surface	0.0161 W / m² K²
Kθ angle incidence 50°	0.95
Heating capacity	5,72 KJ/ m² K
Maximum functioning pressure	10 bar
Average flow	1.25 l/min



Key

- Cold fluid inlet ø 22 mm
- Hot fluid outlet ø 22 mm

Efficiency graphic (referring to solar radiation G 800 W/m²)



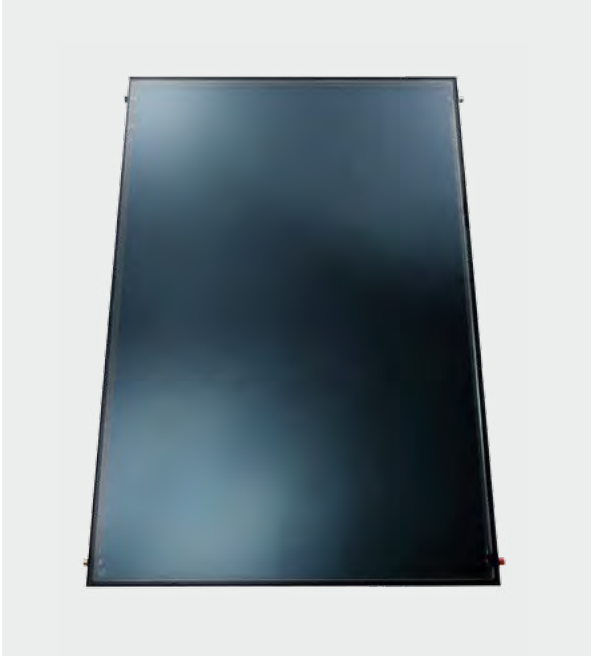
$$T_m = \frac{t_m - t_a}{G}$$

t_m = average temp. in collector t_a = room air temp. G = total solar radiation intensity

CP4 M
flat-plate collector

The CP4 M flat-plate collector (code 3.022876)
is characterised by:

- **SOLAR KEYMARK certification** and conformity with **EN 12975**
- **Can be installed either vertically or horizontally**
- **Special hardened glass** (4 mm thick) with low iron content for high solar transmission
- **Optimum handling** thanks to its contained weight
- **High resistance** to atmospheric conditions and heat stress
- **Insulation** using mineral wool (40 mm thick)
- **Reversibility of connections and less head losses**
- **4 connections with "smooth" pipe, without fittings**
- **Possibility of connecting up to 6 collectors in series**

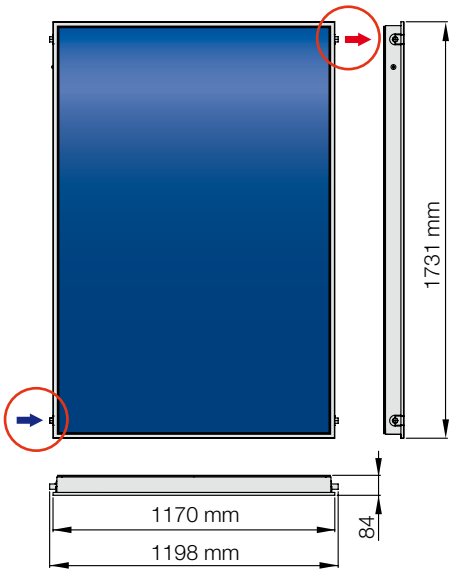


Technical data

Collector weight (empty)	37,1 kg
Selector inside pipe diameter	Ø 8 mm
Capacity	1,4 l
Casing	Aluminium
Absorber	Highly selective covering
Gross surface	2,03 m²
Solar absorption area	1,84 m²
Stagnation maximum temperature (dry)	234 °C

Technical data

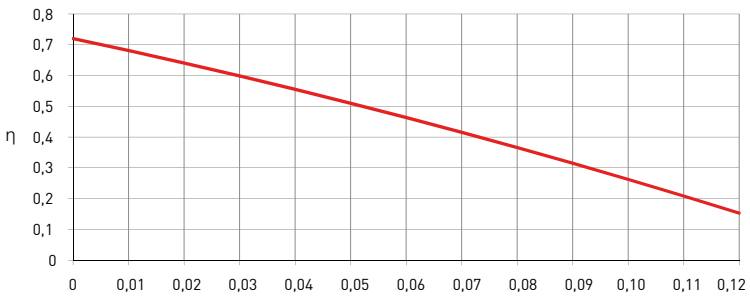
Optical efficiency (according to EN 12975)	0,759
a1 ref. opening surface	3,48 W / m² K
a2 ref. opening surface	0,0161 W / m² K²
Kθ angle incidence 50°	0,95
Heating capacity	5,72 KJ / m² K
Maximum functioning pressure	10 bar
Average flow	1,00 l/min



Key

- Cold fluid inlet ø 22 mm
- Hot fluid outlet ø 22 mm

Efficiency graphic (referring to solar radiation G 800 W/m²)



$$T_m = \frac{t_m - t_a}{G}$$

t_m = average temp. in collector t_a = room air temp. G = total solar radiation intensity

CSV 14
vacuum collector

The CSV 14 vacuum collector (code 3.022694)
is characterised by:

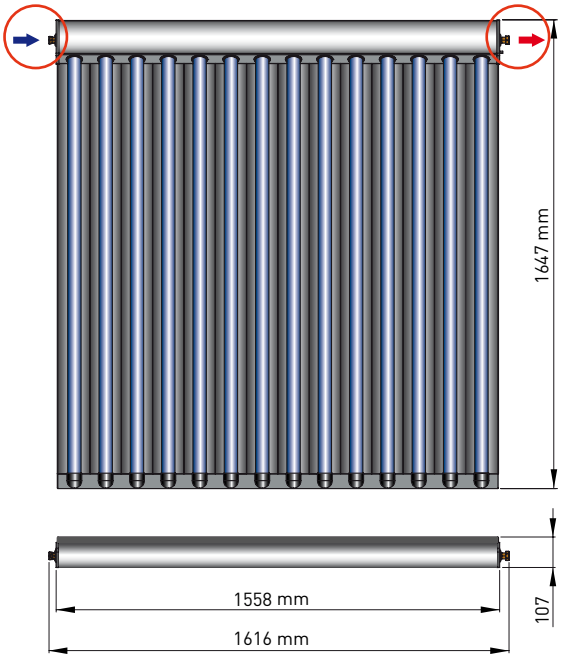
- **Large absorption surface** (2,33 m²)
- **SOLAR KEYMARK certification** and conformity with **EN 12975**
- **High energy yield the whole year** round using special parabolic concentrator mirror
- **CPC14 type and ideal heat insulation using glass vacuum tubes**
- **Easy replacement of individual tube** without having to empty the system
- **Reversibility of connections**
- **2 connections on opposite sides with ¾" M-F threaded fittings**
- **Can only be installed vertically**
- **Possibility of connecting up to 6 collectors in series**

Technical data

Collector weight (empty)	42 kg
Selector inside pipe diameter	Ø 8 mm
Capacity	2,3 l
Casing	Aluminium
Glass	Borosilicate
Absorber	Aluminium nitrate
Gross surface	2,57 m²
Solar absorption area	2,33 m²
Stagnation maximum temperature (dry)	272 °C

Technical data

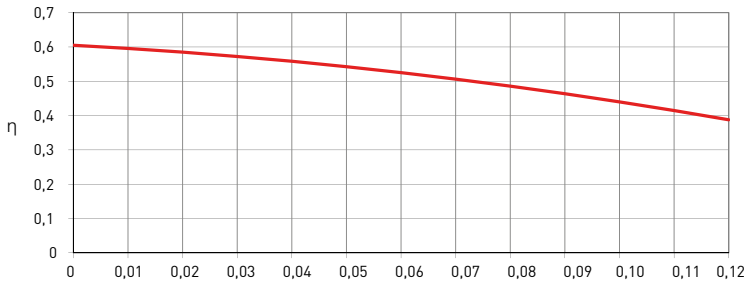
Optical efficiency (according to EN 12975)	0,588
a1 ref, opening surface	0,605 W / m² K
a2 ref, opening surface	0,007 W / m² K²
Kθ angle incidence 50°	θ_l 50° = 0,84 θ_t 50° = 1,03
Heating capacity	30,33 kJ/m2K
Maximum functioning pressure	10 bar
Average flow	1,25 l/min



Key

- Cold fluid inlet ¾ " M-F
- Hot fluid outlet ¾ " M-F

Efficiency graphic (referring to solar radiation G 800 W/m²)



$$T_m = \frac{t_m - t_a}{G}$$

t_m = average temp. in collector t_a = room air temp. G = total solar radiation intensity

Solar collector installation kits

There are different assembly solutions for installation of new solar collectors based on the type of covering or the positioning of the collectors themselves (vertically or horizontally). The following pages illustrate all the components available in the catalogue based on positioning and type of collector.

The list below provides the configurations available based on the installation kits provided in the catalogue.

NB: All solar packs with forced circulation are provided with frame, fitting and fixing kits for vertical installation only on sloped roofs above tiles.

CP4 XL/M FLAT-PLATE COLLECTORS

KIT FOR INSTALLATION ON TILES

- Vertical installation see page 58
- Horizontal installation see page 59

KIT FOR FREE STANDING INSTALLATION

- Vertical installation see page 60
- Horizontal installation see page 61

KIT FOR RECESSED INSTALLATION WITH OUTFLOW UNDER THE COLLECTOR

- Universal installation (vertically or horizontally) see page 62 NEW
- Vertical installation see page 62

KIT FOR RECESSED INSTALLATION WITH OUTFLOW OVER THE COLLECTOR PREVIEW

- Vertical installation see page 63
- Horizontal installation see page 63

FIXING SYSTEMS FOR CP4 XL/M FLAT-PLATE COLLECTORS see page 64

HYDRAULIC CONNECTIONS FOR CP4 XL/M FLAT-PLATE COLLECTORS see page 65

CSV 14 VACUUM COLLECTORS

KIT FOR VERTICAL INSTALLATION ON TILES see page 66

KIT FOR FREE - STANDING VERTICAL INSTALLATION ON TILES see page 67

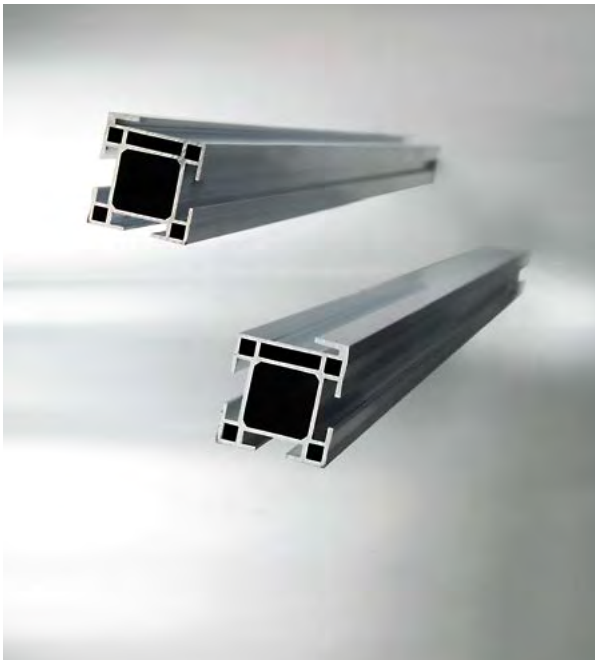
KIT FOR VERTICAL RECESSED INSTALLATION see page 68

FIXING SYSTEMS FOR CSV 14 VACUUM COLLECTORS see page 69

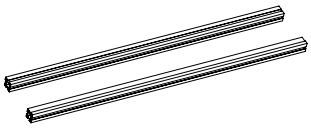
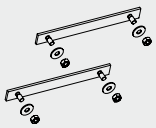
HYDRAULIC CONNECTIONS FOR CSV 14 VACUUM COLLECTORS see page 69

Kit for installation on tiles CP4 XL/M flat-plate collectors

Installation on tiles on sloped roofs requires the use of specific support frames which consist in 2 horizontal aluminium profiles upon which the CP4 XL/M flat-plate collector is fixed. **In order to fix the frames, use the relative support brackets** (see page 64).



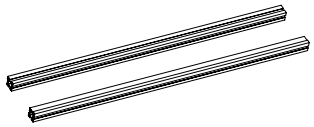
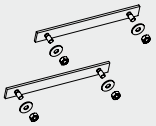
VERTICAL INSTALLATION

Type		Description
Frame on tiles kit for 1 vertical CP4 XL/M flat-plate collector Code 3.022670		The kit includes: 2 horizontal profiles Length = 1225 mm each components
Frame on tiles kit for 2 vertical CP4 XL/M flat-plate collectors Code 3.022671		The kit includes: 2 horizontal profiles Length = 2453 mm each components
Frame connection kit for additional CP4 XL/M flat-plate collector Code 3.022681		The kit includes: 2 brackets The kit allows to mechanically connect two frames together when installing more than one collector

FRAMES AND RELATIVE CONNECTION KITS - based on number of flat-plate collectors

Number of flat-plate collectors	Frame on tiles kit for 1 Flat-Plate collector Code 3.022670	Frame on tiles kit for 2 Flat-Plate collectors Code 3.022671	Frame connection kit for additional Flat Plate collector Code 3.022681
1	N° 1	-	-
2	-	N° 1	-
3	N° 1	N° 1	N° 1
4	-	N° 2	N° 1
5	N° 1	N° 2	N° 2
6	-	N° 3	N° 2

HORIZONTAL INSTALLATION

Type		Description
Frame on tiles kit for 1 horizontal CP4 XL/M flat-plate collector Code 3.022749		The kit includes: 2 horizontal profiles Length = 2206 mm each components (the profiles must be shortened when using CP4 M)
Frame connection kit for additional CP4 XL/M flat-plate collector Code 3.022681		The kit includes: 2 brackets The kit allows to mechanically connect two frames together when installing more than one collector

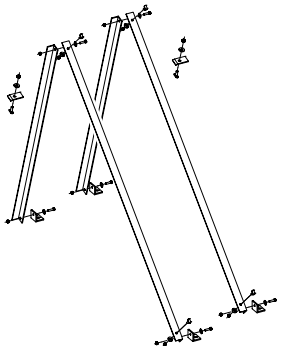
FRAMES AND RELATIVE CONNECTION KITS - based on number of flat-plate collectors

Number of flat-plate collectors	Frame on tiles kit for 1 flat-plate collector Code 3.022749	Frame connection kit for additional flat-plate collector Code 3.022681
1	N° 1	-
2	N° 2	N° 1
3	N° 3	N° 2
4	N° 4	N° 3
5	N° 5	N° 4
6	N° 6	N° 5

Kit for free-standing installation CP4 XL/M flat-plate collectors

Free-standing installation on flat roofs, terraces or on the ground with a 45° inclination require the use of specific aluminium profiles which allow installation of the CP4 XL/M flat-plate collectors. Appropriate systems must be used for fixing based on the capacity of the installation of withstanding the action of atmospheric agents, especially wind.
In addition to these fixing kits, the support frame kit for the vertical CP4 XL/M flat-plate collector and eventually the extra CP4 XL/M frame connection kit must be provided (see page 58).

VERTICAL INSTALLATION

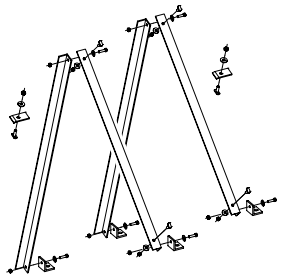
Type		Description
Basic free-standing 45° installation kit for 1 vertical CP4 XL/M flat-plate collector Code 3.022674		The kit includes: 4 profiles 2 collector side fixing brackets
Free-standing 45° installation extension kit for vertical CP4 XL/M flat-plate collector Code 3.022677		The kit includes: 2 profiles 1 fixing clamp with hole 1 mounting template (to be removed after installation)

FREE-STANDING INSTALLATION KIT AND RELATIVE ADDITIONAL KITS* - based on number of flat-plate collectors

Number of flat-plate collectors	Basic free-standing 45° installation kit for flat-plate collector Code 3.022674	Free-standing 45° installation extension kit for flat-plate collector Code 3.022677
1	N° 1	-
2	N° 1	N° 1
3	N° 1	N° 2
4	N° 1	N° 3
5	N° 1	N° 4
6	N° 1	N° 5

** Remember that free-standing installation also involves the use of the support frame kits carried on page 58.*

HORIZONTAL INSTALLATION

Type		Description
Free-standing 45° installation kit for 1 flat-plate collector Code 3.022750		The kit includes: 4 profiles 2 collector side fixing brackets (the horizontal profiles must be shortened when using CP4 M)

FREE-STANDING INSTALLATION KIT* - based on number of flat-plate collectors

Number of flat-plate collectors	Free-standing 45° installation kit for 1 flat-plate collector Code 3.022750
1	N° 1
2	N° 2
3	N° 3
4	N° 4
5	N° 5
6	N° 6

** Remember that free-standing installation also involves the use of the support frame kits carried on page 59.*

Kit for recessed installation flat-plate collectors with outflow under the collector

Recessed installation on sloped roofs uses kits which allow integrating the CP4 XL/M flat-plate collectors In-roof.
The collector is fixed directly on the roof (**without using support frames**) and the waterproof frame will be positioned around it by means of fixing systems that must be provided according to the type of covering.

The main advantages are:

- Modularity for single or multiple installations
- Fully inspectable and accessible for maintenance
- Easy installation and possibility of integrating connection pipes inside the kit
- Ideal waterproof thanks to the special sheet steel trays between the covering and the collector

UNIVERSAL INSTALLATION (VERTICALLY OR HORIZONTALLY)* NEW

Type	Description
Universal recessed kit for 1 flat-plate collector Code 3.025469	The kit includes: special waterproof trays, perimeter frames, waterproofing sheath
Universal recessed frame extension kit for CP4 XL/M flat-plate collector Code 3.025477	The kit includes: intermediate frame around collectors

VERTICAL INSTALLATION*

Type	Description
Recessed kit for 1 flat-plate collector Code 3.022213	The kit includes: special waterproof trays, perimeter frames, waterproofing sheath
Recessed frame extension kit for CP4 XL/M flat-plate collector Code 3.023028	The kit includes: intermediate frame around collectors

** Regarding the number of collector contact our pre-sales dept. to order the correct number of option kits.*

Kit for recessed installation flat-plate collectors with outflow over the collector

PREVIEW PREVIEW PREVIEW

Recessed installation on sloped roofs uses kits which allow integrating the CP4 XL/M flat-plate collectors In-roof.
The collector is fixed directly on the roof (without using support frames) and the waterproof frame will be positioned around it by means of fixing systems that must be provided according to the type of covering.

The main advantages are:

- Easy placing and installation
- Excellent sealing due to flow over the solar collector
- Modularity for single or multiple installations on thehorizontal axis (long side for vertical collector, short side for horizontal collector)
- Fully inspectable and accessible for maintenance
- Possibility of integrate the connecting pipes inside the kit

Available beginning 2018

VERTICAL INSTALLATION*

Type	Description
Recessed kit with outflow over the frame for 1 vertical flat-plate collector CP4 XL Code. 3.027735	The kit includes: Perimeter sealing frame, waterproof sheath, collector brackets
Recessed kit with outflow over the frame for 1 vertical flat-plate collector CP4 M Code. 3.027768	The kit includes: Intermediate frame for collectors placed side by side
Recessed extension kit with outflow frame for additional flat- plate collector CP4 XL/M Code 3.027736	The kit includes: Intermediate frame for collectors placed side by side

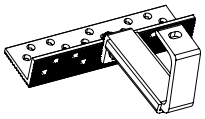
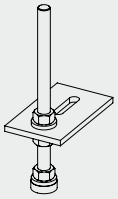
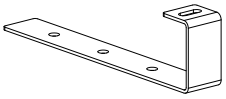
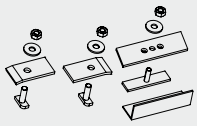
HORIZONTAL INSTALLATION*

Type	Description
Recessed kit with outflow over the frame for 1 horizontal flat-plate collector CP4 XL/M Code. 3.027769	The kit includes: Perimeter sealing frame, waterproof sheath, collector brackets
Recessed extension kit with outflow frame for additional CP4 XL/M flat-plate collector Code 3.027849	The kit includes: Intermediate frame for collectors placed side by side

** Regarding the number of collector contact our pre-sales dept. to order the correct number of option kits.*

Fixing systems for CP4 XL/M flat-plate collectors

These systems allow installing flat-plate collectors level on various types of sloped roofs. Depending on the roof- type, appropriate screws/plugs must be provided to ensure a correct fixing.

Type		Description
4 brackets kit for slates/tiles for CP4 XL/M flat-plate collector Code 3.022678 This kit is standard in all Solar packets		The kit includes: 4 brackets 2 collector side fixing brackets It allows to fix the collector frame onto sloped roofs without drilling the tiles (for 1 collector)
2 brackets kit for slates/tiles for CP4 XL/M flat-plate collector Code 3.022680		The kit includes: 2 brackets 1 fixing clamp with hole 1 mounting template (to be removed after installation)
4 brackets kit for slates/tiles to be drilled for CP4 XL/M flat-plate collector* Code 3.019105		The kit includes: 4 brackets It allows to fix the collector frame onto sloped roofs
4 "L"-shaped brackets kit for slates/tiles on smooth roofs for CP4 XL/M flat-plate collector* Code 3.022776		The kit includes: 4 brackets It allows to fix the selector frame onto smooth roofs (for 1 collector)
Fixing elements kit for CP4 XL/M flat-plate collector Code 3.022922 this kit must always be added when using the kits Code 3.019105 and Code 3.022776		The kit includes: collector side fixing brackets and 1 intermediate bracket

** Add the fixing element kit code 3.022922 if you are installing a complete solar pack.*

SUPPORT BRACKETS AND RELATIVE ADDITIONAL KITS - based on number of flat-plate collectors

Number of flat-plate collectors	Installation with brackets for slates and tiles for Flat-Plate collector		Installation with brackets for slates and tiles to be drilled for flat-plate collector		Installation with "L"-shaped brackets for smooth roofs for flat-plate collector	
	Code 3.022678	Code 3.022680	Code 3.019105	Code 3.022922	Code 3.022776	Code 3.022922
1	N° 1	-	N° 1	N° 1	N° 1	N° 1
2	N° 1	N° 1	N° 2	N° 1	N° 2	N° 1
3	N° 1	N° 2	N° 2	N° 2	N° 2	N° 2
4	N° 1	N° 3	N° 3	N° 3	N° 3	N° 3
5	N° 1	N° 4	N° 3	N° 4	N° 3	N° 4
6	N° 1	N° 5	N° 4	N° 5	N° 4	N° 5

N.B. For the horizontal application, 1 kit with 4 brackets for slates and tiles must be used (code 3.022678) for each collector installed as the installation distance increases. For other applications, contact our Customer Service.

Hydraulic connections for CP4 XL/M flat-plate collectors

Type	Description
Connection kit for 1 vertical CP4 XL/M flat-plate collector Code 3.022797	The kit includes: fittings for Ø 18 copper pipes and DN 16 and DN 20 steel pipes 2 plugs for CP4 XL/M (To be used for sets of 1 to 6 collectors in series)
Connection kit for additional vertical CP4 XL/M flat-plate collector Code 3.019085	The kit includes: hydraulic fittings to connect up to 3 CP4 XL/M flat-plate collectors in series
Vent kit and fitting for Ø 22 mm pipe for horizontal CP4 XL/M flat-plate collector Code 3.022849	This kit is used in applications with horizontal CP4 XL/M Flat-Plate
2 plug kit for CP4 XL/M flat-plate collector Code 3.020364	The kit includes: 2 mechanical sealing plugs to close fittings not used by CP4 XL/M flat-plate collector
Connection extendible kit for orizontal short side CP4 XL/M flat-plate collector Code 3.025693	
Connection extendible kit for orizontal long side CP4 XL/M flat-plate collector Code 3.026073	

HYDRAULIC CONNECTION FOR VERTICAL INSTALLATION - long side

N° Flat collectors	Connection kit for 1 vertical flat-plate collector Code 3.022797	Connection kit for additional flat-plate collector Code 3.019085
1	n. 1	-
2	n. 1	n. 1
3	n. 1	n. 1
4	n. 1	n. 2
5	n. 1	n. 2
6	n. 1	n. 3

HYDRAULIC CONNECTION FOR HORIZONTAL INSTALLATION - short side

N° Flat collectors	Connection kit for 1 vertical flat-plate collector Code 3.022797	Connection extendible kit for orizontal short side flat-plate collector Code 3.025693	Vent kit and fitting for Ø 22 mm pipe for horizontal flat-plate collector Code 3.022849	2 plug kit Flat-Plate collector Code 3.020364
1	n. 1	-	n. 1	-
2	n. 1	1	n. 2	-
3	n. 1	2	n. 3	n. 1
4	n. 1	3	n. 4	n. 1
5	n. 1	4	n. 5	n. 2
6	n. 1	5	n. 6	n. 2

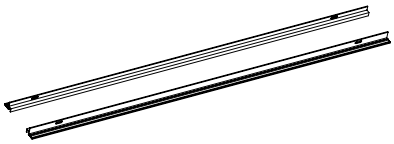
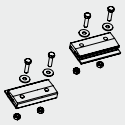
It is impossible to use the cross shaped connection. The probe must be installed in the probe-support flate-plate collector.

HYDRAULIC CONNECTION FOR HORIZONTAL INSTALLATION - long side

N° Flat collectors	Connection kit for 1 vertical flat-plate collector Code 3.022797	Connection extendible kit for orizontal long side CP4 XL/M flat-plate collector Code 3.026073	Vent kit and fitting for Ø 22 mm pipe for horizontal CP4 XL/M flat-plate collector Code 3.022849
1	1	-	-
2	1	1	1
3	1	2	2
4	1	3	3
5	1	4	4
6	1	5	5

Kit for vertical installation on tiles CSV 14 vacuum collectors

Installation on tiles on sloped roofs requires the use of specific support frames which consist in 2 horizontal aluminium profiles on which the CSV 14 vacuum collector is fixed. **In order to fix the frames, use the relative support brackets** (see page 69).

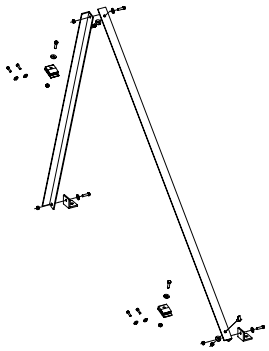
Type		Description
Frame on tiles kit for 1 vertical CSV 14 vacuum collector Code 3.022701		The kit includes: 2 horizontal profiles Length = 1614 mm each component
Frame connection kit for additional CSV 14 vacuum collector Code 3.022735		The kit includes: 2 brackets The kit allows to mechanically connect two frames together when installing more than one collector

FRAMES AND RELATIVE CONNECTION KITS - based on number of vacuum collectors

Number of vacuum collectors	Frame on tiles kit for 1 vacuum collector Code 3.022701	Frame connection kit for additional vacuum collector Code 3.022735
1	N° 1	-
2	N° 2	N° 1
3	N° 3	N° 2
4	N° 4	N° 3
5	N° 5	N° 4
6	N° 6	N° 5

Kit for free-standing vertical installation CSV 14 vacuum collectors

Free-standing installation on flat roofs, terraces or on the ground with a 45° inclination require the use of specific aluminium profiles which allow installation of the CSV 14 vacuum collectors. Appropriate systems must be used for fixing based on the capacity of the installation of withstanding the action of atmospheric agents, especially wind. **In addition to the kits, the support frame kit for the vertical CSV 14 vacuum collector and eventually the extra CSV 14 frame connection kit must be provided**
(see page 66).

Type		Description
Free-standing 45° installation kit for 1 vertical CSV 14 vacuum collector Code 3.022733		The kit includes: 2 profiles collector fixing bracket

FREE-STANDING INSTALLATION KIT* - based on number of vacuum collectors

Number of vacuum collectors	Free-standing 45° installation kit for 1 vacuum collector Code 3.022733
1	N° 2
2	N° 3
3	N° 4
4	N° 5
5	N° 6
6	N° 7

** Remember that free-standing installation also involves the use of the support frame kits carried on page 66.*

Kit for vertical recessed installation CSV 14 vacuum collectors

Recessed installation on sloped roofs uses kits which allow integrating the CSV 14 vacuum collectors In-roof.
The collector is fixed directly on the roof (**without using support frames**) by means of fixing systems that must be provided according to the type of covering.

The main advantages are:

- Modularity for single or multiple installations
- Fully inspectable and accessible for maintenance
- Easy installation and possibility of integrating connection pipes inside the kit
- Ideal waterproof thanks to the special sheet steel trays between the covering and the collector

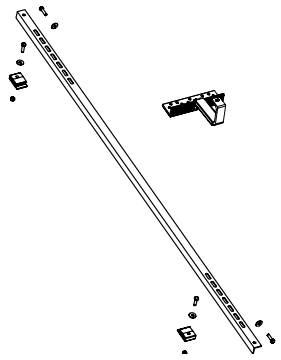
Type	Description
Recessed kit for 1 vacuum collector Code 3.022215	The kit includes: special waterproof trays, upper frame, waterproofing sheath

RECESSED KIT - based on number of vacuum collectors

Number of vacuum collectors	Recessed kit for 1 vacuum collector Code 3.022215
1	N° 1
2	N° 2
3	N° 3
4	N° 4
5	N° 5
6	N° 6

Fixing systems for CSV 14 vacuum collectors

These systems allow installing vacuum collectors level on sloped roofs. Depending on the roof-type, appropriate screws/plugs must be provided to ensure a correct fixing.

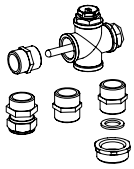
Type		Description
2 brackets kit for slates/tiles for CSV 14 vacuum collector Code 3.022700		The kit includes: 2 brackets 1 fixing upright L = 1750 mm and 2 collector side fixing brackets

KIT WITH 2 BRACKETS FOR SLATES/TILES - based on number of vacuum collectors

Number of vacuum collectors	Number of vacuum collectors 2 brackets kit for slates/tiles for vacuum collector Code 3.022700
1	N° 2
2	N° 3
3	N° 4
4	N° 5
5	N° 6
6	N° 7

Hydraulic connections for CSV 14 vacuum collectors

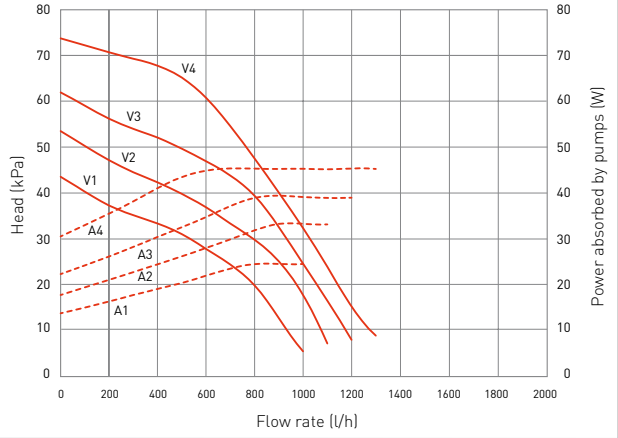
Multiple CSV 14 vacuum collectors shall be connected by means of the ¾" M-F threaded fittings and the gaskets already present on the collectors.

Type		Description
Connection kit for 1 CSV 14 vacuum collector Code 3.022796		The kit includes: fittings for Ø 18 copper pipes and DN 16 and DN 20

Solar pump stations ErP

These units can be installed on the INOXSTOR 200-300-500 V2 storage tank units (see page 46) and UB 550-750 V2 (see page 50).

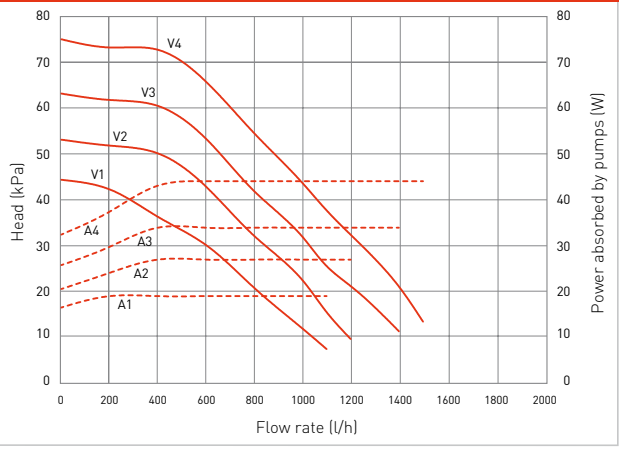
Graphic of solar pump stations (1-6 l/min)



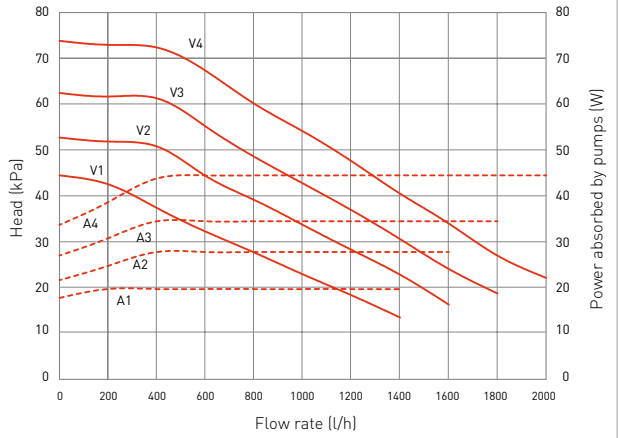
Key

Head pump at:		Power absorbed by pumps:	
V1	First speed	A1	First speed
V2	Second speed	A2	Second speed
V3	Third speed	A3	Third speed
V4	Fourth speed	A4	Fourth speed

Graphic of solar pump stations (2-12 l/min)



Graphic of solar pump stations (8-28 l/min)



Type	Description
Single solar pump station ErP with 1-6 l/min flow rate Code 3.025662	The kit includes: • low consumption circulation pump • 6 bar safety valve • 0-10 bar pressure gauge • one-way ball valve, thermometer and connection to the safety unit • flow rate regulated and filling and draining valve • attachment for expansion vessel • filling valve • draining valve • insulation 1" hydraulic connections 230 V ~ power supply voltage
Single solar pump station ErP with 2-12 l/min flow rate Code 3.025663	
Double solar pump station ErP with 1-6 l/min flow rate Code 3.025664	The kit includes: • low consumption circulation pump • 6 bar safety valve • 0-10 bar pressure gauge • one-way ball valve, thermometer and connection to the safety unit • ball valve with temperature sensor • flow rate regulated and filling and draining valve • attachment for expansion vessel • filling valve • draining valve • insulation • air separating device with vent 1" hydraulic connections 230 V ~ power supply voltage
Double solar pump station with 2-12 l/min flow rate Code 3.025665	
Double solar pump station ErP with 8-28 l/min flow rate Code 3.025666	

Solar valve kit

This kit is particularly interesting in all installations where, due to the design, there is the need to couple an instantaneous boiler downstream from the solar heating system, therefore feeding the boiler cold water inlet with pre-heated water from the solar collectors.

The most interesting solutions are:

- **Application on semi-centralised condominium systems** where the solar system is centralised for the production of domestic hot water, while every housing has an autonomous instantaneous boiler for room heating and integration of domestic hot water
- **Application of solar systems with storage tank with instantaneous boiler**

The kit is composed of 1 thermostatic diverter valve and 1 mixing valve:

Type	Code
Solar valve kit for instant wall-hung boilers	3.018911

OPERATION

When a temperature above 48 °C is detected, **the thermostatic diverter valve** sends the preheated water from the solar storage tank directly to the mixing valve and then on to the utilities. With lower temperatures, the water is diverted towards the boiler which will integrate it based on the temperature set on the DHW thermostat.
The adjustable thermostatic mixing valve guarantees to the utilities the requested comfort temperature up to a maximum of 60 °C.

Hydraulic accessories

Type		Description
¾" thermostatic mixing valve kit Code 3.019099		The kit includes: 1 thermostatic mixing valve with a 42 °C - 60 °C adjustment range and maximum inlet temperature of 90 °C
1"¼ thermostatic mixing valve kit Code 3.020322		The kit includes: 1 thermostatic mixing valve with a 42 °C - 60 °C adjustment range and maximum inlet temperature of 85 °C. Equipped with thermometer
18 litre expansion vessel kit Including metal clamp and wall fixing bracket Code 3.019131	 *18 litre expansion vessel*	The expansion vessel must be dimensioned according to the content of the solar circuit fluid and the stagnation temperature of the collectors
24 litre expansion vessel kit Including metal clamp and wall fixing bracket Code 3.019138		
35 litre expansion vessel kit Including wall fixing bracket Code 3.019135		
80 litre expansion vessel kit With support for placing on the floor Code 3.019139		
Automatic valve kit for expansion vessel (as standard for a packs) Code 3.023005		Automatically shuts the passage of fluid during maintenance of the expansion vessel
Solar collector connection kit for HERCULES Condensing (models with built-in 120 litre storage tank) Code 3.019998		For connecting 1 Flat-Plate or vacuum collector. It must be used coupled with the typical BASIC SOL V2 and BASIC SOL LUX V2 packs

Filling and installation accessories

Type		Description
Ø 18 copper pipe connection kit for collectors Code 3.019089		The kit includes: double Ø 18 mm insulated 15 m long copper pipe integrated cable for solar collector temperature probe
DN 16 steel pipe connection kit for collectors Code 3.019125		The kit includes: double DN 16 insulated 15 m long steel pipe integrated cable for solar collector temperature probe
DN 20 steel pipe connection kit for collectors Code 3.020354		The kit includes: double DN 20 insulated 15 m long steel pipe integrated cable for solar collector temperature probe hydraulic fittings for connections
Tank of glycol for CP4 XL/M flat-plate collectors and CSV 14 vacuum collectors Code 1.031756		The kit includes: one 20 kg can of glycol and propylene already mixed and ready to use Antifreeze protection up to - 25 °C
1" nut kit for DN 20 steel pipe Code 3.021009*		For connection to pump stations
1" nut kit for DN 16 steel pipe Code 3.019981*		For connection to pump stations
¾" nut kit for DN 16 steel pipe Code 1.027255*		For connection to solar collectors
Cover for CP4 M flat-plate collector Code 1.028522		Allows to cover the collector to guarantee its integrity until it is filled
Cover for CP4 XL flat-plate collector Code 1.033271		
Cover for CSV 14 vacuum collector Code 1.033273		
System filling pump station Code 3.018742		Ideal for correctly filling the forced circulation solar system with the water-glycol solution
DHW priority 3-way valve kit for DOMESTIC SOL V2 Code 3.020633		
3-way valve return temperature raising kit for DOMESTIC SOL V2 Code 3.020632		

**This kit is not necessary when you use code 3.019125 and 3.020354*

SOLAR PACKS WITH NATURAL CIRCULATION for domestic hot water

The NATURAL SOL range is composed by of **3 complete packs with natural circulation for the production of domestic hot water**. These solutions are the ideal application for solar systems in the Mediterranean area and in areas with a mild climate and for all those systems where a simple installation is required. Each pack is provided with an indication for its use, in order to satisfy 50% **of the solar coverage** of the yearly primary energy demand **for the production of domestic hot water**. The data supplied, with collectors facing south and inclined at a 30° angle in Italy, is variable depending on the location and type of installation.
Have the system checked by a qualified thermotechnical designer to dimension it ideally.

List of packs and main components

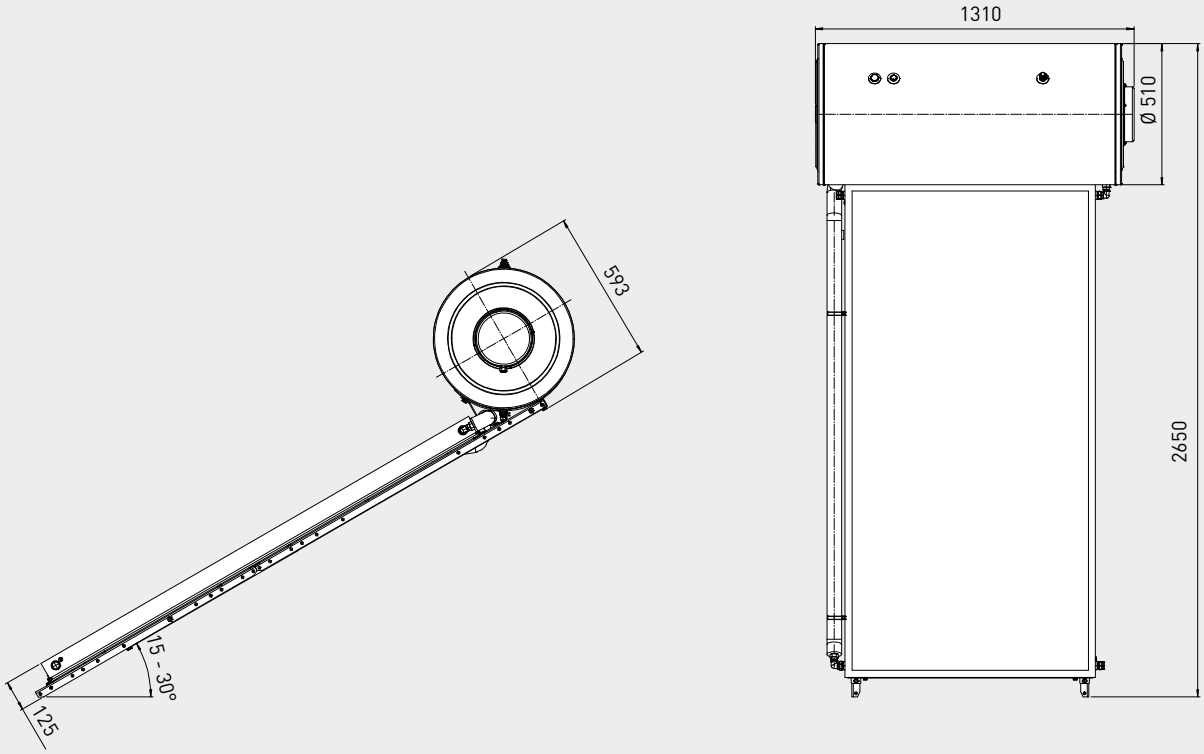
SOLAR PACK	SOLAR COLLECTORS			STORAGE TANK
	Flat-plate	Selective Flat-plate	Number of collectors	Capacity (litres)
NATURAL SOL 150	X		1	150
NATURAL SOL 200		X	1	200
NATURAL SOL 280	X		2	280

NATURAL SOL 150

Solar pack with natural circulation with 1 flat-plate collector and 150 litre storage tank unit

Indicative solution* for units of up to 3 persons

*see page 3



Dimensions refer to on sloped roof installations.

NATURAL SOL 150 (code 3.020217) includes as per standard:

- **1 flat-plate collector**
- **150 litre storage tank unit** - double walled, insulated, vitrified steel - with two magnesium anodes
- **3 bar safety valve** (solar circuit)
- **6 bar safety valve** (DHW circuit)
- **Fixing system for sloped roofs** (on roof) and **free-standing installation*** on flat roofs or on the ground
- **2 bottles of glycol** (to be mixed with water; water content in solar circuit equal to 10 litres)
- **Insulated pipes for collector-storage tank connection**
- **Hydraulic fittings and screws for assembly**

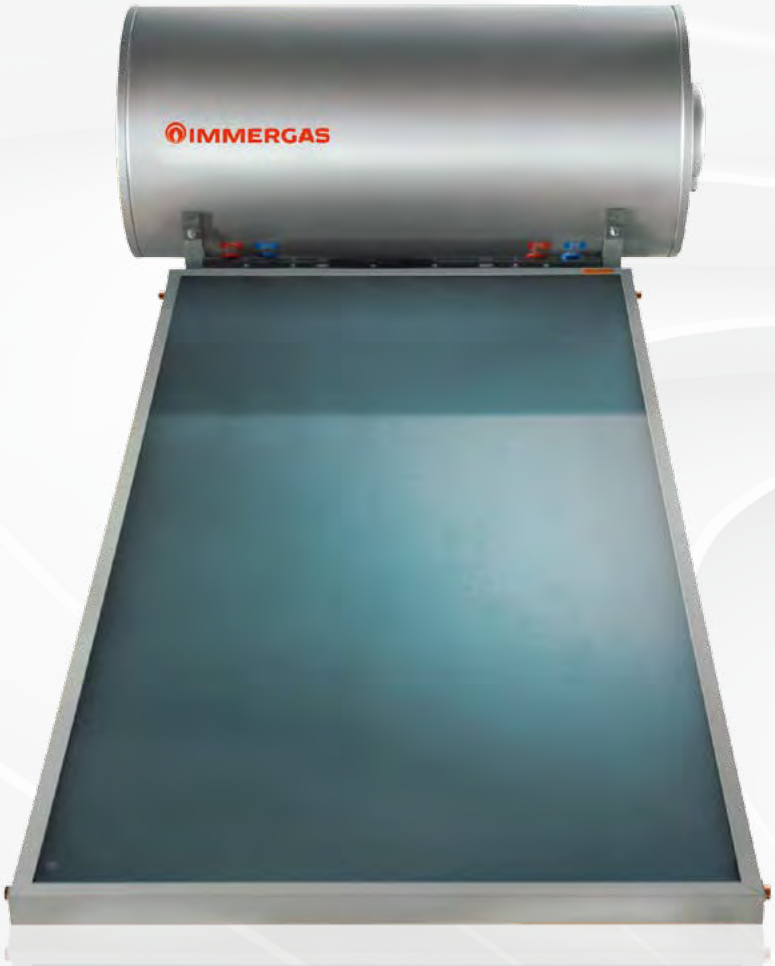
** The installation requires a structural calculation that considers the place of installation and static equilibrium of the system respect to action of wind and atmospheric agents.*
A supplementary D.H.W. expansion vessel could be necessary.

Fixing systems	Code
4 brackets kit for slates/tiles to fix directly onto the roof	3.019236

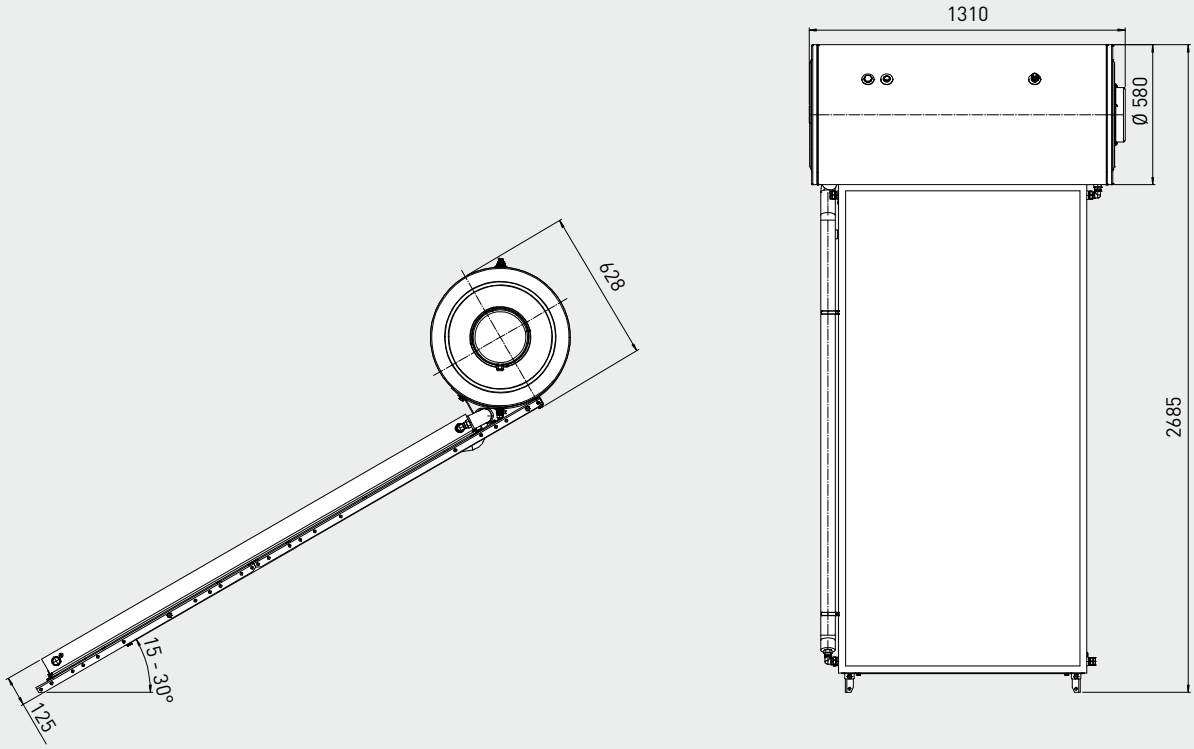
NATURAL SOL 200

Solar pack with natural circulation with 1 flat-plate collector and 200 litre storage tank unit

Indicative solution* for units of up to 3-4 persons



*see page 3



Dimensions refer to on sloped roof installations.

NATURAL SOL 200 (code 3.020647) includes as per standard:

- **1 selective flat-plate collector**
- **200 litre storage tank unit** - double walled, insulated, vitrified steel - with two magnesium anodes
- **3 bar safety valve** (solar circuit)
- **6 bar safety valve** (DHW circuit)
- **Fixing system for sloped roofs** (on roof) and **free-standing installation*** on flat roofs or on the ground
- **3 bottles of glycol** (to be mixed with water; water content in solar circuit equal to 12 litres)
- **Insulated pipes for collector-storage tank connection**
- **Hydraulic fittings and screws for assembly**

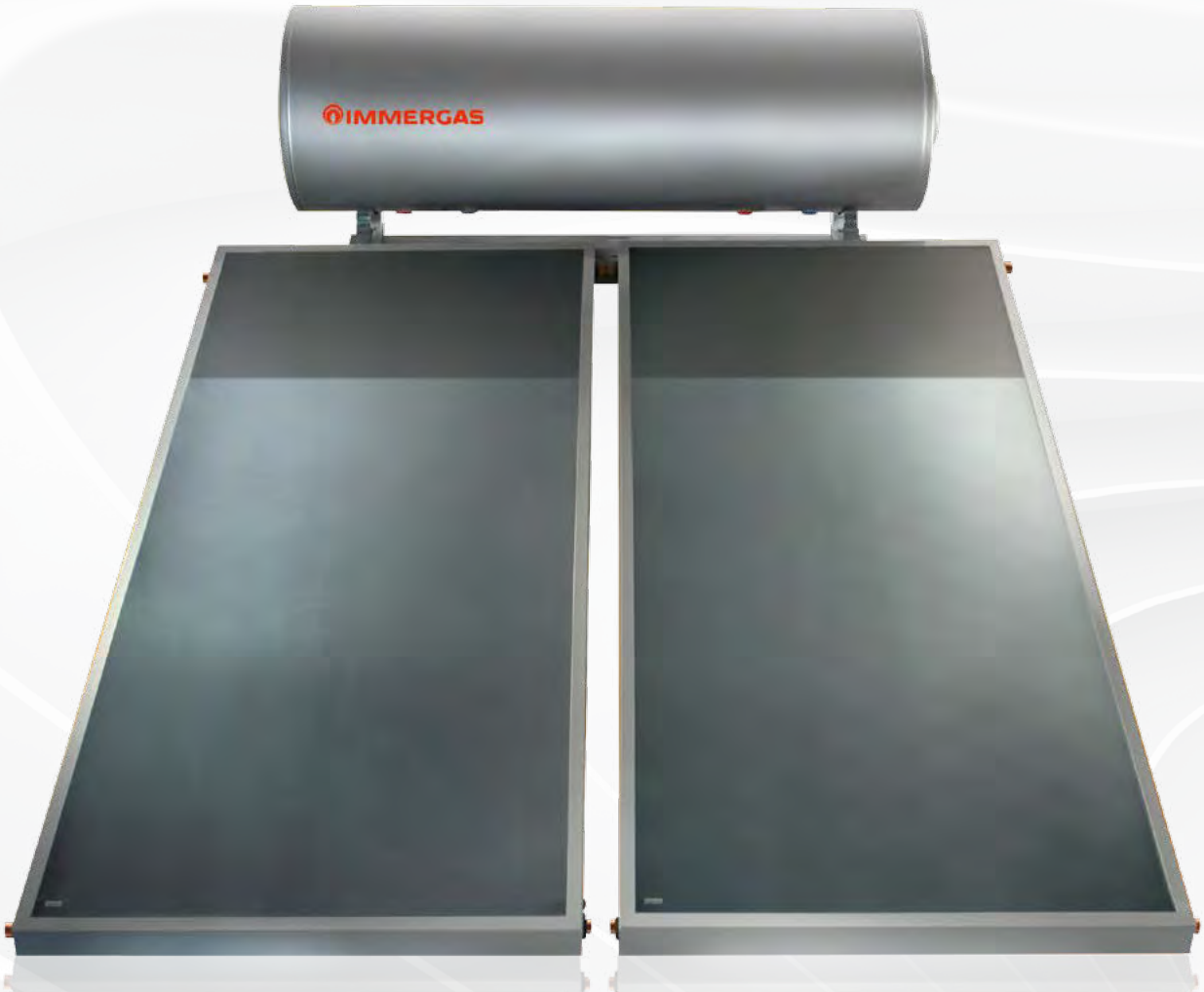
** The installation requires a structural calculation that considers the place of installation and static equilibrium of the system respect to action of wind and atmospheric agents.*
A supplementary D.H.W. expansion vessel could be necessary.

Fixing systems	Code
4 brackets kit for slates/tiles to fix directly onto the roof	3.019236

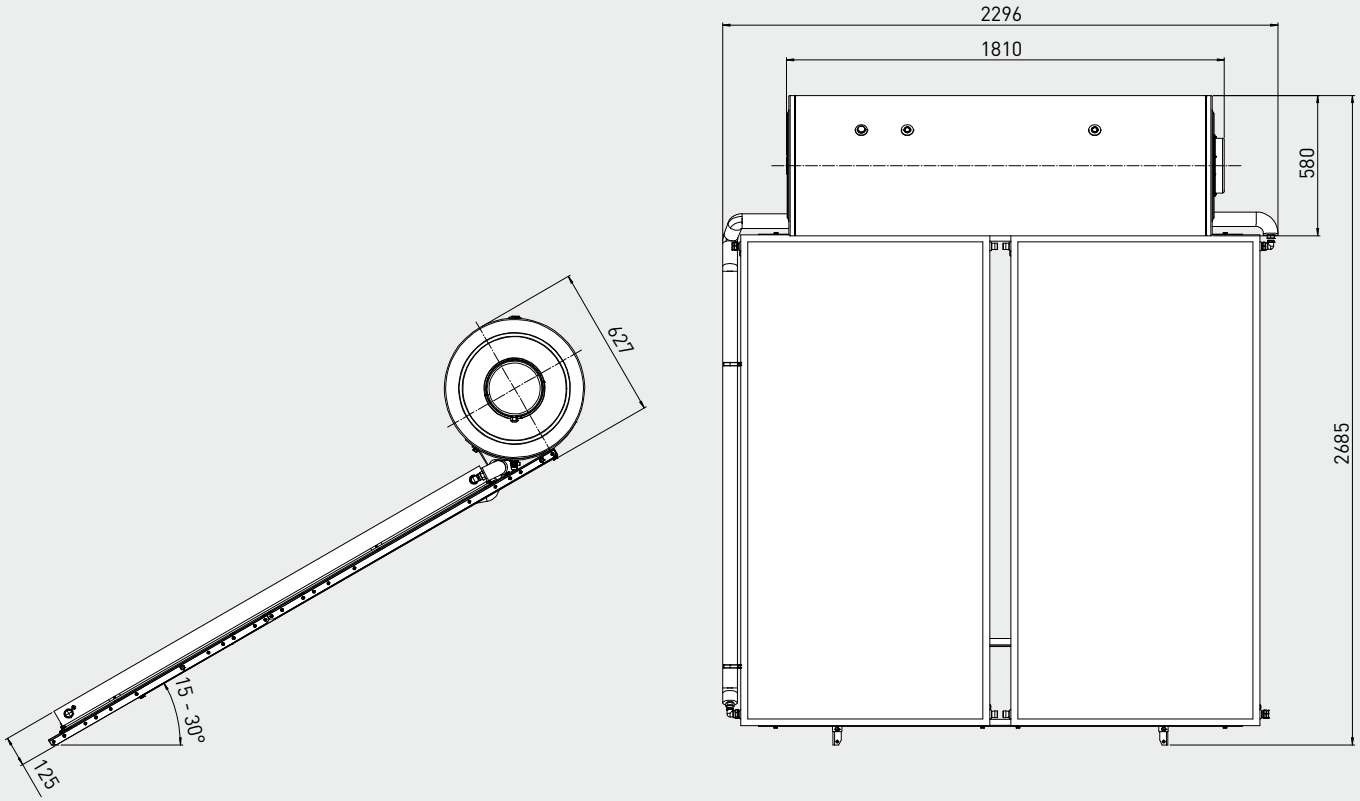
NATURAL SOL 280

Solar pack with natural circulation with 2 flat-plate collectors and 280 litre storage tank unit

Indicative solution* for units of up to 6 persons



*see page 3



Dimensions refer to on sloped roof installations.

NATURAL SOL 280 (code 3.020218) includes as per standard:

- **2 flat-plate collectors**
- **280 litre storage tank unit**- double walled, insulated, vitrified steel - with two magnesium anodes
- **3 bar safety valve** (solar circuit)
- **6 bar safety valve** (DHW circuit)
- **Fixing system for sloped roofs** (on roof) and **free-standing installation*** on flat roofs or on the ground
- **3 bottles of glycol** (to be mixed with water; water content in solar circuit equal to 20 litres)
- **Insulated pipes for collector-storage tank connection**
- **Hydraulic fittings and screws for assembly**

** The installation requires a structural calculation that considers the place of installation and static equilibrium of the system respect to action of wind and atmospheric agents.*
A supplementary D.H.W. expansion vessel could be necessary.

Fixing systems	Code
4 brackets kit for slates/tiles to fix directly onto the roof (order 2 kits)	3.019236

The **NATURAL SOL** packs must be installed carefully evaluating the type of covering or sloped roof. Due to the considerable weight of the system while operating, it is recommended to perform a static and loaded calculation of the structure upon which it rests, also keeping in mind possible snowfall and gusts of wind.

TECHNICAL DATA

Type	Unit of measurement	NATURAL SOL 150	NATURAL SOL 200	NATURAL SOL 280
Collector	n.	1	1	2
Dimensions	mm	2032 x 1032 x 93	2031 x 1027 x 88	2032 x 1032 x 93
Empty weight	kg	40	41	40 x 2
Content	litres	1,5	1,4	1,5 x 2
Gross surface	m^2	2,095	2,086	2,095 x 2
Net surface	m^2	1,905	1,903	1,905 x 2
Max operating pressure	bar	3	3	3
Max operating temperature	°C	93	93	93
Storage tank				
Dimensions	mm	1310 x Ø 502	1310 x Ø 580	1810 x Ø 580
Empty weight	kg	67	85	107
Content	litres	145	192	282
Max DHW circuit pressure	bar	6	6	6
Max solar circuit pressure	bar	3	3	3
Connections	inches	1/2" F	1/2" F	1/2" F
Complete system				
Storage tank	litres	145	192	282
Collectors	n.	1	1	2
Overall weight (full)	kg	297	360	485

NATURAL SOL
Options

Type		Code	Notes
Solar valve kit for istantaneous wall-hung boilers*		3.018911	Kit for coupling an istantaneous boiler downstream the solar heating system, then supplying the cold water inlet of the boiler with water preheated by NATURAL SOL
¾" thermostatic mixing valve kit		3.019099	Can be calibrated from 42 to 60 °C Maximum inlet temperature of 90 °C
Integrative 1,5 kW electric resistance kit (ideal to guarantee the anti-freeze function)		3.020341	Ideal to guarantee the anti-freeze function, can be calibrated by a specific thermostat
Pressure - temperature safety valve kit		3.020342	Setted at 6 bar and 94 °C
Electronic anode kit		3.020344	Can be used instead of magnesium anodes, requires no periodical replacement
1 litre bottle of glycol		1.028473	To be mixed with water according to the minimum outside temperature
NATURAL SOL by-pass kit		3.022453	Can be used to empty the storage tank during winter
4 brackets kit for slates/tiles to fix directly on roof		3.019236	It allows to fix the collector frame directly onto sloped roofs without drilling the tiles

** In some models, functioning of the burner and boiler pump can be deactivated when a temperature close to the set temperature is detected. Therefore it is possible to avoid using the solar valve kit by installing a thermostatic mixing valve upstream the boiler. For further information contact our Customer Service.*

App Immergas TOOLBOX

Available on App Store | Available on Google play | Available on Windows Store

immergas.com

Immergas S.p.A.
42041 Brescello (RE) - Italy
T. 0522.689011
F. 0522.689178

IMMERGAS
IMMERGAS SPA - ITALY
CERTIFIED COMPANY
UNI EN ISO 9001:2008

Design, manufacture and post-sale assistance of gas boilers, gas water heaters and related accessories