

# ECOKAM

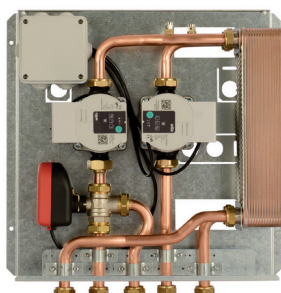
Hydraulic interface unit  
between solid fuel boiler and gas boiler

## DESCRIPTION

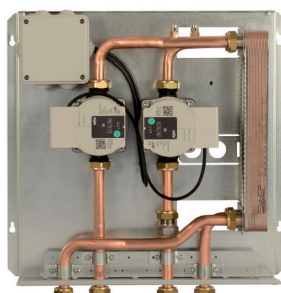
**ECOKAM** units are used in combined gas boiler and solid fuel boiler systems (fireplaces, heating stoves, hydro-stoves, wood and/or pellet boilers) with open or closed tanks. Thanks to the hydraulic separation of the circuits, it is possible to not sum the powers of the two generators as per the indications of INAIL (ex ISPESL).

### Hydraulic interface unit for **HEATING**

#### ECOKAM R



#### ECOKAM RC



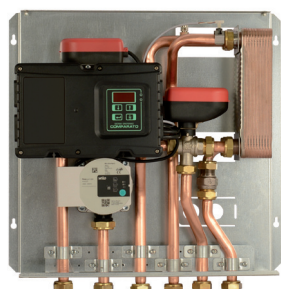
#### SHELL



- Hydraulic separation
- Automatic management of gas boiler and a solid fuel boiler, depending on the operating condition of the latter
- Two heating models 20 kW and 35 kW
- Optional solid fuel boiler pump
- With or without diverting motorised valve

### Hydraulic interface unit for instant production of **DOMESTIC HOT WATER**

#### ECOKAM S



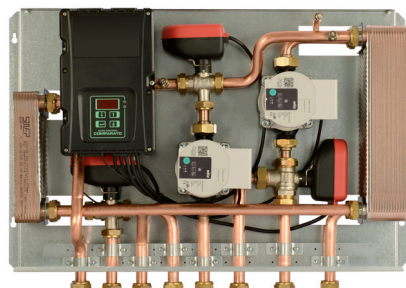
#### SHELL



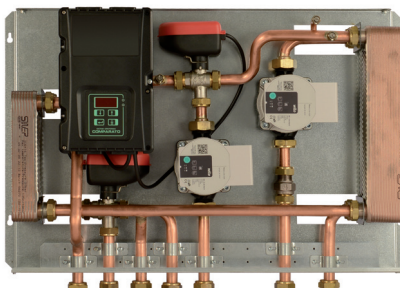
- Automatic management of gas boiler and a solid fuel boiler, depending on the operating condition of the latter
- Electronic modulating control of the domestic hot water temperature
- Optional solid fuel boiler pump

### Hydraulic interface unit for **HEATING** and the instant production of **DOMESTIC HOT WATER**

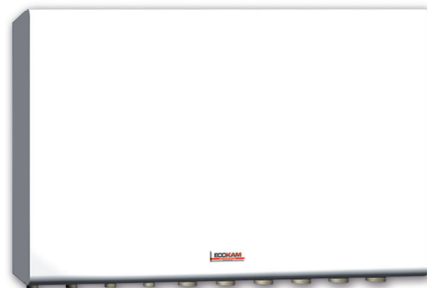
#### ECOKAM RS



#### ECOKAM RSC

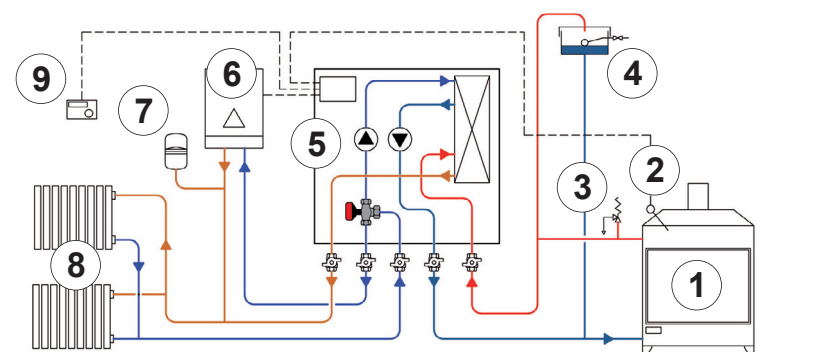


#### SHELL



- Hydraulic separation
- Automatic management of gas boiler and a solid fuel boiler, depending on the operating condition of the latter
- Two heating models 20 kW and 35 kW
- Electronic modulating control of the domestic hot water temperature
- Optional solid fuel boiler pump
- With or without diverting motorised valve for heating

## APPLICATION EXAMPLES

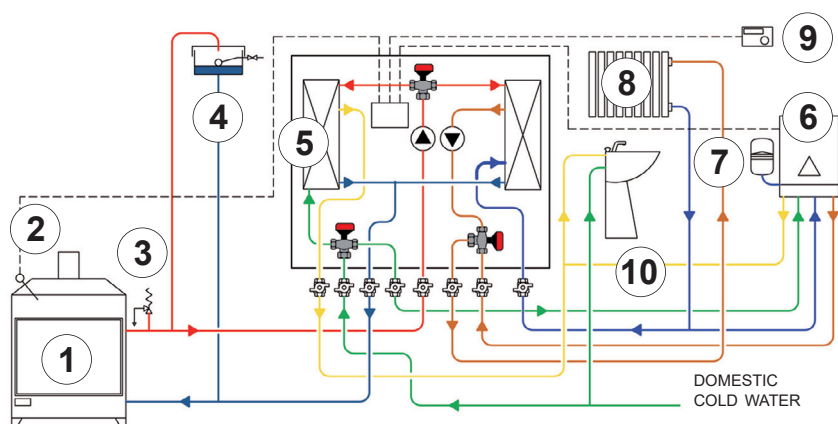
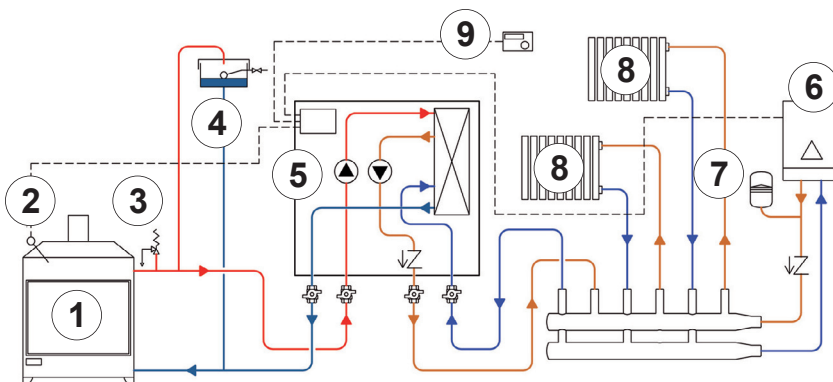


### ECOKAM R

1. SOLID FUEL BOILER
2. IMMERSION PROBE / CONTACT PROBE
3. THERMAL RELIEF AND SAFETY VALVE
4. OPEN EXPANSION VESSEL (ALTERNATIVELY, CLOSED VESSEL)
5. ECOKAM R
6. GAS BOILER
7. CLOSED EXPANSION VESSEL
8. HEATING SYSTEM
9. GAS BOILER AMBIENT THERMOSTAT

### ECOKAM RC

1. SOLID FUEL BOILER
2. IMMERSION PROBE / CONTACT PROBE
3. THERMAL RELIEF AND SAFETY VALVE
4. OPEN EXPANSION VESSEL (ALTERNATIVELY, CLOSED VESSEL)
5. ECOKAM RC
6. GAS BOILER
7. CLOSED EXPANSION VESSEL
8. HEATING SYSTEM
9. GAS BOILER AMBIENT THERMOSTAT

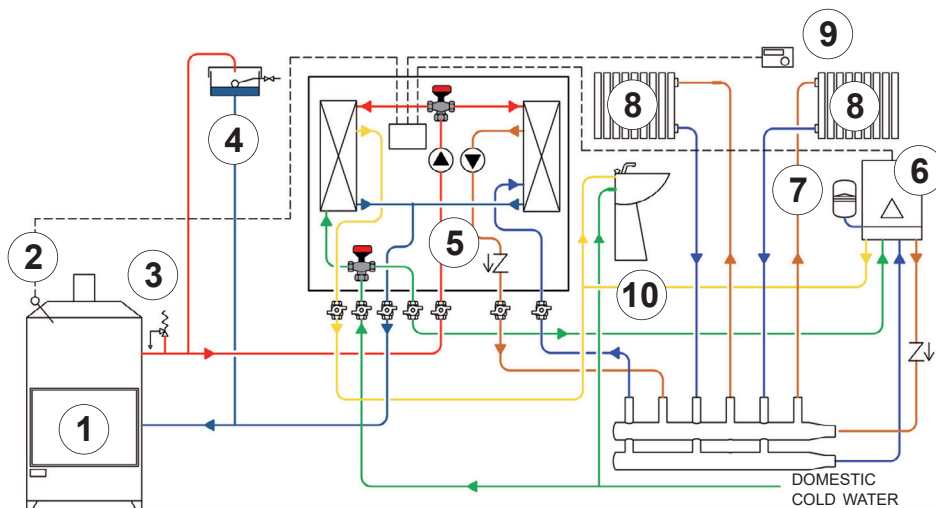


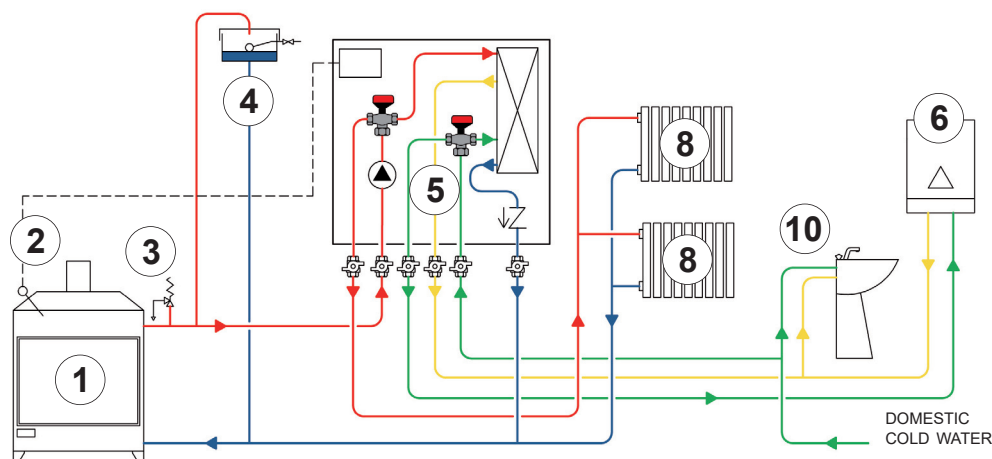
### ECOKAM RS

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3. THERMAL RELIEF AND SAFETY VALVE
4. OPEN EXPANSION VESSEL (ALTERNATIVELY, CLOSED VESSEL)
5. ECOKAM RS
6. GAS BOILER
7. CLOSED EXPANSION VESSEL
8. HEATING SYSTEM
9. GAS BOILER AMBIENT THERMOSTAT
10. DOMESTIC UTILITIES

### ECOKAM RSC

1. SOLID FUEL BOILER
2. IMMERSION PROBE / CONTACT PROBE
3. THERMAL RELIEF AND SAFETY VALVE
4. OPEN EXPANSION VESSEL (ALTERNATIVELY, CLOSED VESSEL)
5. ECOKAM RSC
6. GAS BOILER
7. CLOSED EXPANSION VESSEL
8. HEATING SYSTEM
9. GAS BOILER AMBIENT THERMOSTAT
10. DOMESTIC UTILITIES



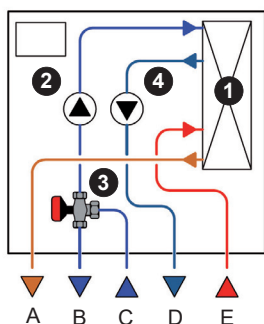


## ECOKAM S

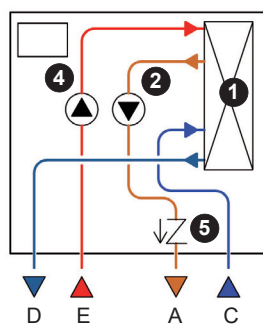
1. SOLID FUEL BOILER
2. IMMERSION PROBE / CONTACT PROBE
3. THERMAL RELIEF AND SAFETY VALVE
4. OPEN EXPANSION VESSEL (ALTERNATIVELY, CLOSED VESSEL)
5. ECOKAM S
6. GAS BOILER
8. HEATING SYSTEM
10. DOMESTIC UTILITIES

## COMPONENTS AND FLOWS

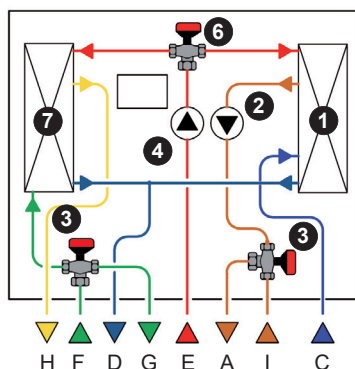
### ECOKAM R



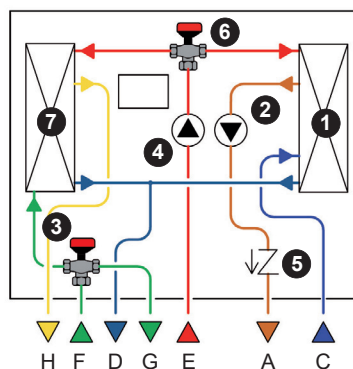
### ECOKAM RC



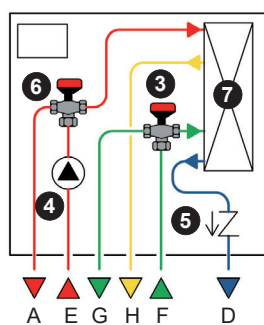
### ECOKAM RS



### ECOKAM RSC



### ECOKAM S



- A : Outlet to heating system
- B : Return to gas boiler
- C : Heating system return
- D : Return to solid fuel boiler
- E : Outlet from solid fuel boiler
- F : Treated domestic cold water inlet
- G : Domestic cold water outlet to gas boiler
- H : Domestic hot water outlet to users
- I : Outlet from gas boiler

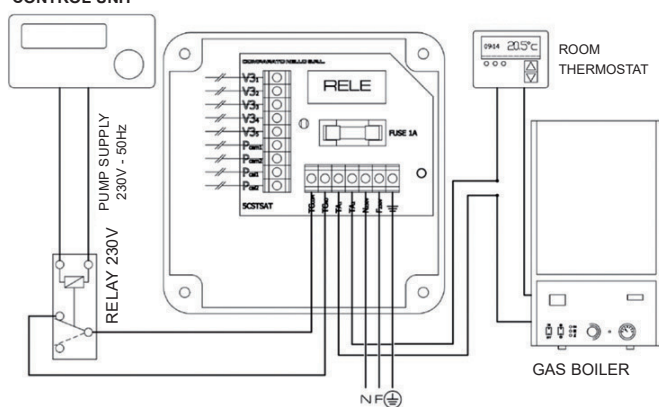
- 1 : Heating plate exchanger
- 2 : System pump
- 3 : Motorised 3-way diverting **SINTESI** valve
- 4 : Solid fuel boiler pump (optional)
- 5 : Non-return valve
- 6 : Motorised 3-way modulating **SINTESI** valve
- 7 : DHW production plate exchanger

## ELECTRICAL CONNECTIONS

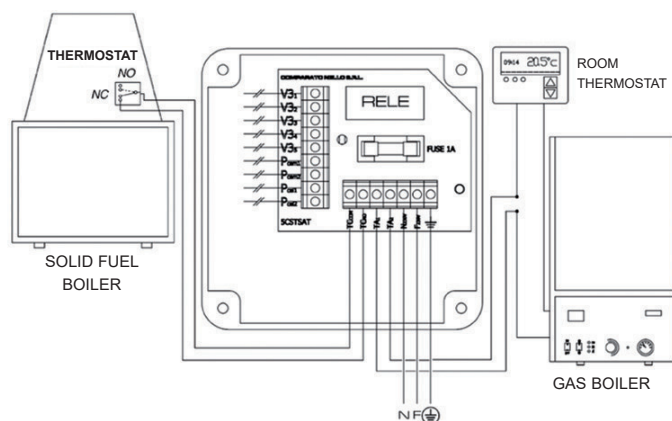
- Power supply: 230V 50Hz, under magnetothermal switch. Power supply always present (all models).
- Solid fuel boiler control: the controller, thermostat or control unit, must be provided with clean or voltage-free contacts (all models).
- Gas boiler room thermostat: clean contact to be connected in series to the gas boiler room thermostat to force the switching off (all models except ECOKAM S).

### ECOKAM R / RC

#### SOLID FUEL BOILER CONTROL UNIT



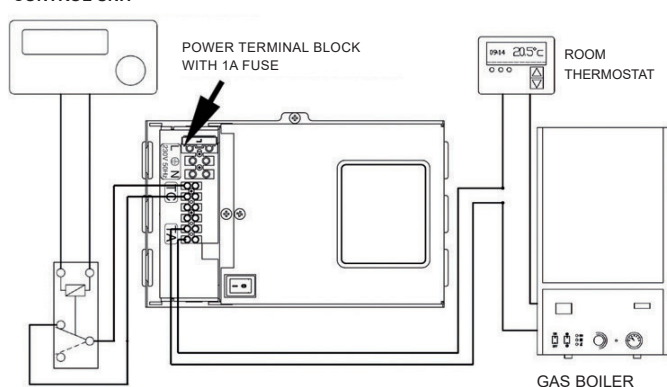
Solid fuel boiler **with control unit**



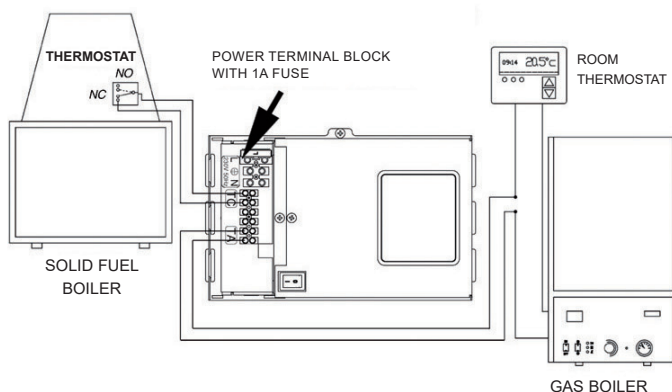
Solid fuel boiler **with thermostat**  
(contact or immersion type)

### ECOKAM RS / RSC

#### SOLID FUEL BOILER CONTROL UNIT



Solid fuel boiler **with control unit**



Solid fuel boiler **with thermostat**  
(contact or immersion type)



## TECHNICAL FEATURES

PRIMARY CIRCUIT - solid fuel boiler	
Fluid type	water VDI 2035 max. glycol 30%
Max temperature	90°C
Max pressure	6 bar
SECONDARY CIRCUIT - heating and gas boiler	
Fluid type	water VDI 2035 max. glycol 30%
Max temperature	90°C
Max pressure	6 bar
SECONDARY CIRCUIT - domestic hot water (Ecokam RS / RSC / S)	
Fluid type	water
Max temperature	80°C
Max pressure	6 bar
Max flow rate	30 l/min
Min flow rate	2,5 l/min
PIPING	
Material	copper
Size	Ø18 mm
HYDRAULIC CONNECTIONS	
Material	brass
Size	G3/4" with nut joint
HYDRAULIC SUPPORT	
Material	galvanized sheet 12/10
SHELL	
Material	black sheet 10/10
Colour	RAL 9010
POWER SUPPLY	
Voltage	230V +/- 10%
Frequency	50 Hz
Max power consumption	100W - two pumps 50W - one pump
USAGE	
Installation	indoor environments
Room temperature range	5 - 55 °C
Humidity range	25 - 85%
MOTORISED VALVES	
ON/OFF	45 sec
Modulating	15 sec
EMPTY WEIGHTS	
Ecokam R (all versions)	max 11 kg
Ecokam RS (all versions)	max 18 kg
Ecokam S	max 8 kg

## CHARACTERISTICS OF EXCHANGERS

ECOKAM R / RC / RS / RSC - heating 20 kW		
For solid fuel boilers with firebox power * up to 20 kW		
Useful power **	14 kW	8 kW
PRIMARY CIRCUIT - SOLID FUEL BOILER		
Flow rate	800 l/h	800 l/h
In / out temperature	80 / 65 °C	65 / 56 °C
SECONDARY CIRCUIT - HEATING		
Flow rate	700 l/h	700 l/h
In / out temperature	55 / 72 °C	50 / 60 °C
ECOKAM R / RC / RS / RSC - heating 35 kW		
For solid fuel boilers with burner thermal power * up to 35 kW		
Useful power **	21 kW	12 kW
PRIMARY CIRCUIT - SOLID FUEL BOILER		
Flow rate	1.100 l/h	1.100 l/h
In / out temperature	80 / 64 °C	65 / 55 °C
SECONDARY CIRCUIT - HEATING		
Flow rate	860 l/h	860 l/h
In / out temperature	55 / 75 °C	50 / 62 °C



\* The burner thermal power is the amount of heat developed inside the combustion chamber.


\*\* The useful power is the part of the burner thermal power which is given to water.



ECOKAM RS / RSC / S - DHW production	
Power	35 kW
PRIMARY CIRCUIT	
Flow rate	700 l/h
In / out temperature	80 / 36 °C
SECONDARY CIRCUIT	
Flow rate	14,5 l/h
In / out temperature	10 / 45 °C


Temperature adjustable from 35°C to 50°C

## VERSIONS AND CODES

Version	Rated power	Pump	Code
 Ecokam R	20 kW	2 1	ES2P18N ES1P18IN
	35 kW	2 1	ES2P35N ES1P35IN
 Ecokam RC	20 kW	2 1	ES2P18RCN ES1P18RCIN
	35 kW	2 1	ES2P35RCN ES1P35RCIN

Version	Pump	Code
 Ecokam S	0 1	ES0P18SN ES1P18SN

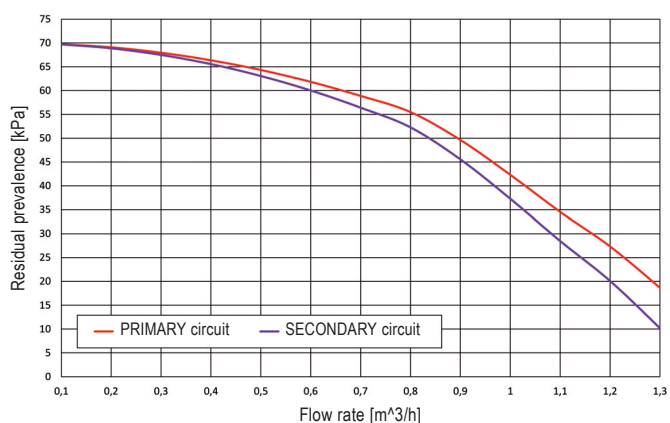
Version	Rated power	Pump	Code
 Ecokam RS	20 kW	2 1	ES2P18RS ES1P18RSI
	35 kW	2 1	ES2P35RS ES1P35RSI
 Ecokam RSC	20 kW	2 1	ES2P18RSC ES1P18RSCI
	35 kW	2 1	ES2P35RSC ES1P35RSCI

Shell	Description	Code
	Ecokam R • RC • S shell	CEK
	Ecokam RS • RSC shell	CEKRS

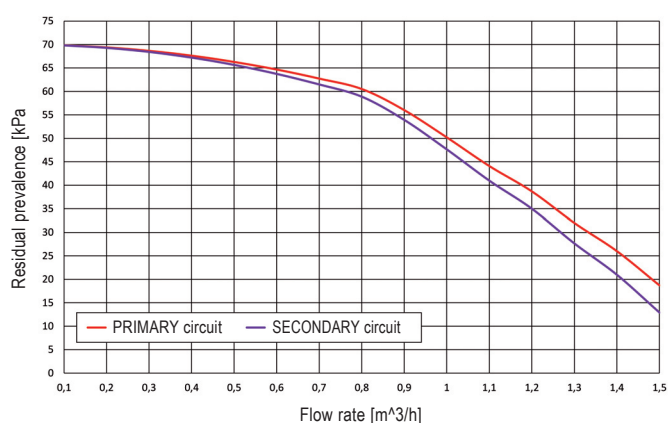


## HEAD LOSS

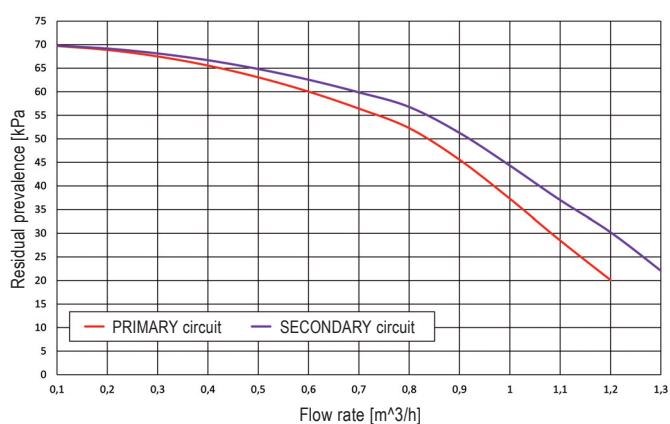
**ECOKAM R - 20 kW**



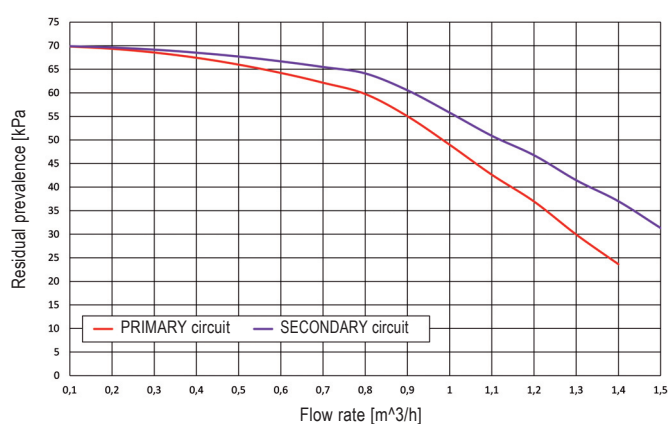
**ECOKAM R - 35 kW**



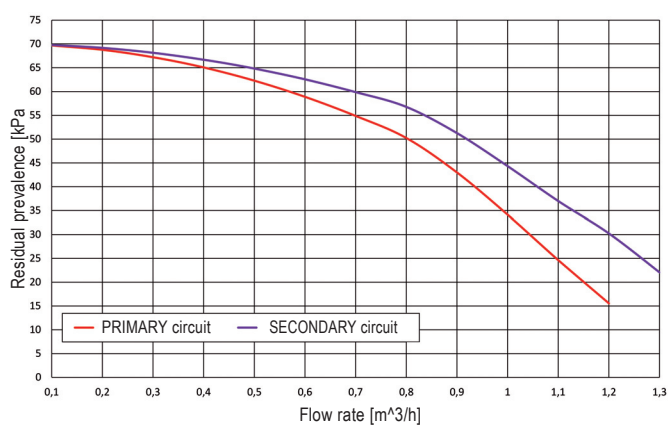
**ECOKAM RC - 20 kW**



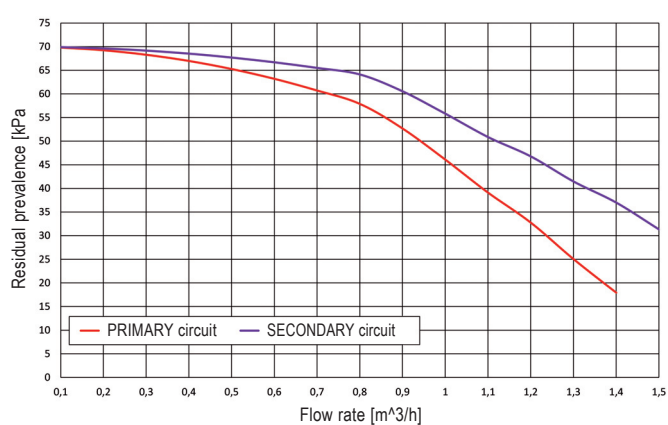
**ECOKAM RC - 35 kW**



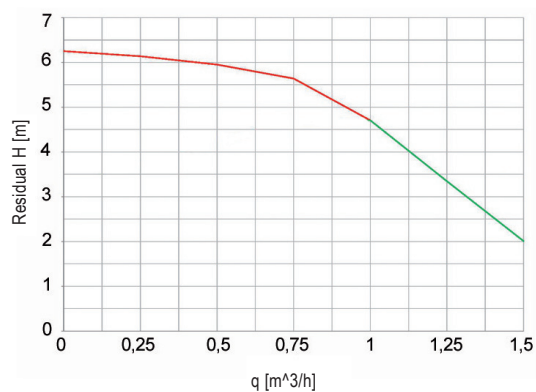
**ECOKAM RS / RSC - 20 kW**



**ECOKAM RS / RSC - 35 kW**



**ECOKAM S • heating circuit residual prevalence**





# **ANTI-CONDENSATION SYSTEM** (accessory) • add "A" at the bottom of the code - except Ecokam S

The **ECOKAM** interface units can be fitted with an integrated anti-condensation device. It consists of an adjustable thermostat located on the return line of the solid fuel boiler.

Depending on the set temperature, the system pump will only start the heat exchange with the system when the set temperature is reached, thus avoiding any cold return that could cause condensation on the boiler exchanger.

## **INSTALLATION WARNINGS**

It is advisable to use flexible hydraulic connections in order to compensate for any thermal expansion and possible misalignment between the system connections.

## **CERTIFICATIONS**

**CE Machinery Directive**

2006/42/CE.

**CE Low Voltage Directive**

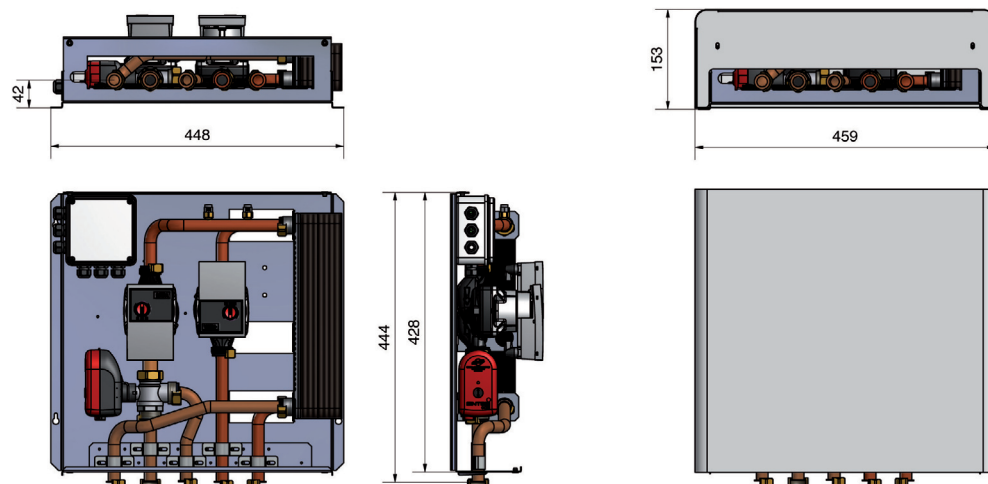
2014/35/ue: 26/04/2014

**CE Electromagnetic Compatibility Directive**

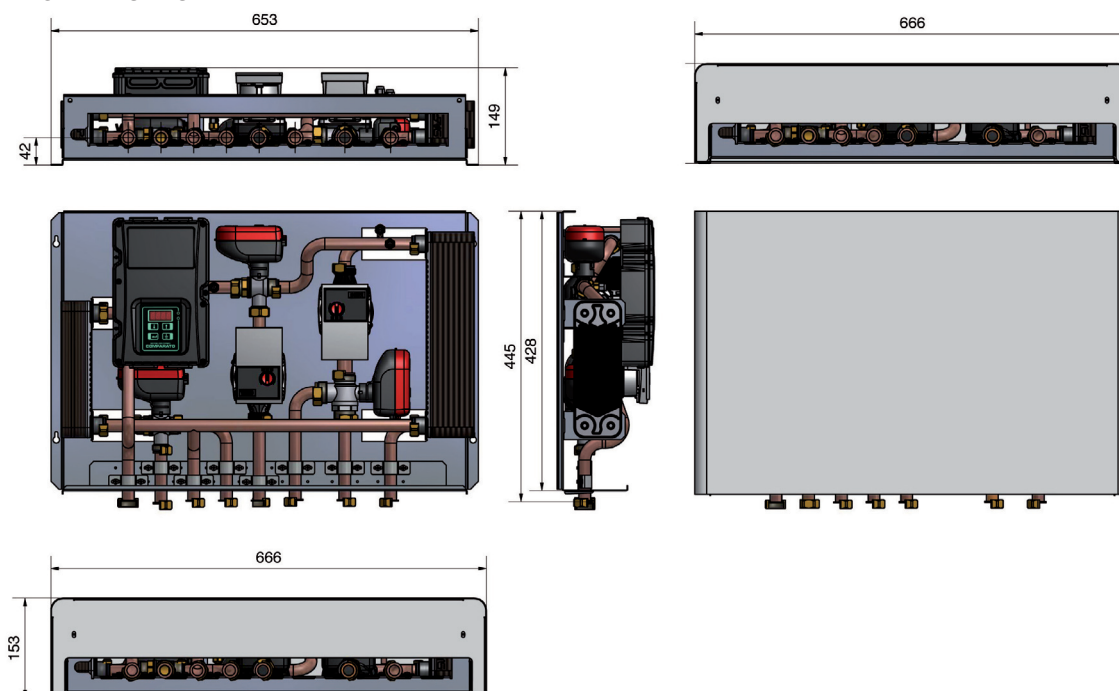
2014/30/UE

## **OVERALL SIZE**

### **ECOKAM R / RC - ECOKAM S**



### **ECOKAM RS / RSC**



# ECOKAM



# comparato.com

## EXAMPLE OF SPECIFICATIONS

**ECOKAM R HYDRAULIC INTERFACE UNIT** for the separation of the solid fuel boiler from the rest of the system, with plate exchanger and diverting motorised valve, maximum burner thermal power 35 kW, wall-hanging technical room installation, complete with: • brazed plate exchanger • 3-way diverting motorised valve • solid fuel boiler circuit pump • plant pump • electrical box with electromechanical management board. Ø18mm copper pipes, maximum working pressure 6 bar, maximum temperature 90°C, hydraulic connections G3/4" with flat-contact nut joint, electrical supply 230V 50Hz, maximum power consumption 100W, dimensions 448x444x150mm.

Brand: **COMPARATO**

Code: **ES2P35N**

**COVER SHELL**, white powder-coated RAL9010.

Brand: **COMPARATO**

Code: **CEK**

## UPDATED DATA SHEETS AVAILABLE AT [www.comparato.com](http://www.comparato.com)

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**HYDROTHERMAL SYSTEMS**  
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