sime
VALUING YOUR CLIMATE

HYBRID REVOLUTION

THE HYBRID SYSTEM WITHOUT EXTERNAL UNIT

HYBRID REVOLUTION

H2 20% BIO METHANE 100%

GREEN FLAME

R290 NATURAL REFRIGERANT

DUCTED HEAT PUMP
ø 160 mm dual-duct system with inverter technology, fully integrated into the wall-mounted unit

SILENT OPERATION
Noise level comparable to a standard refrigerator, allowing it to be installed in any room

CONDENSING BOILER
With high-modulation burner, integrated into the same wall-mounted unit

QUICK INSTALLATION
Monobloc unit with hermetically sealed refrigerant circuit, no F-Gas certification required

COMPACT WITHOUT EXTERNAL UNIT
Dimensions similar to a storage boiler and only 2 grilles for heat pump operation

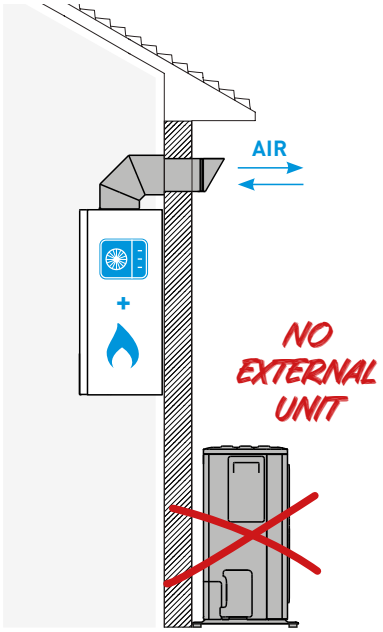
SYSTEM FLEXIBILITY
Maximum efficiency with all types of systems: radiators, fan coil units and underfloor heating

THE HYBRID SYSTEM WITHOUT EXTERNAL UNIT

HYBRID REVOLUTION

HYBRID REVOLUTION is Sime's innovative hybrid system that combines a heat pump and a condensing boiler within the compact casing of a wall-mounted boiler.

The true revolution of HYBRID REVOLUTION is the absence of an external unit: thanks to patented technology, the system uses two ø 160 mm ducts for air intake and discharge, as required for heat pump operation.

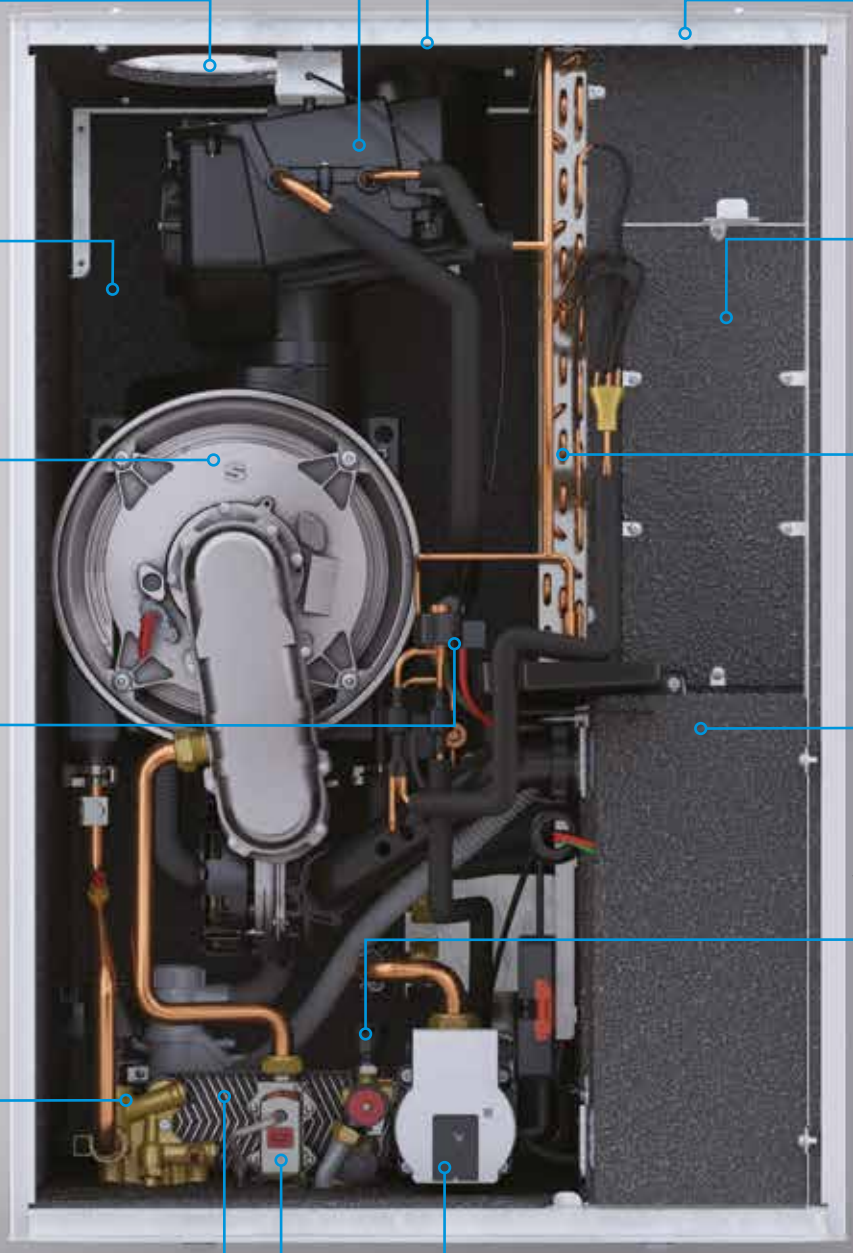


TECHNOLOGY THAT RESPECTS ARCHITECTURE

Hybrid systems combine the efficiency of a heat pump with the comfort of a condensing boiler, making them ideal for replacing old boilers with minimal modifications to the existing system.

However, the external unit may represent a limit in confined spaces or in the presence of architectural constraints. HYBRID REVOLUTION eliminates this problem: it does not require an external unit and only two grilles remain visible on the wall, which can be easily integrated into the building's aesthetics.

HYBRID REVOLUTION IN DETAIL

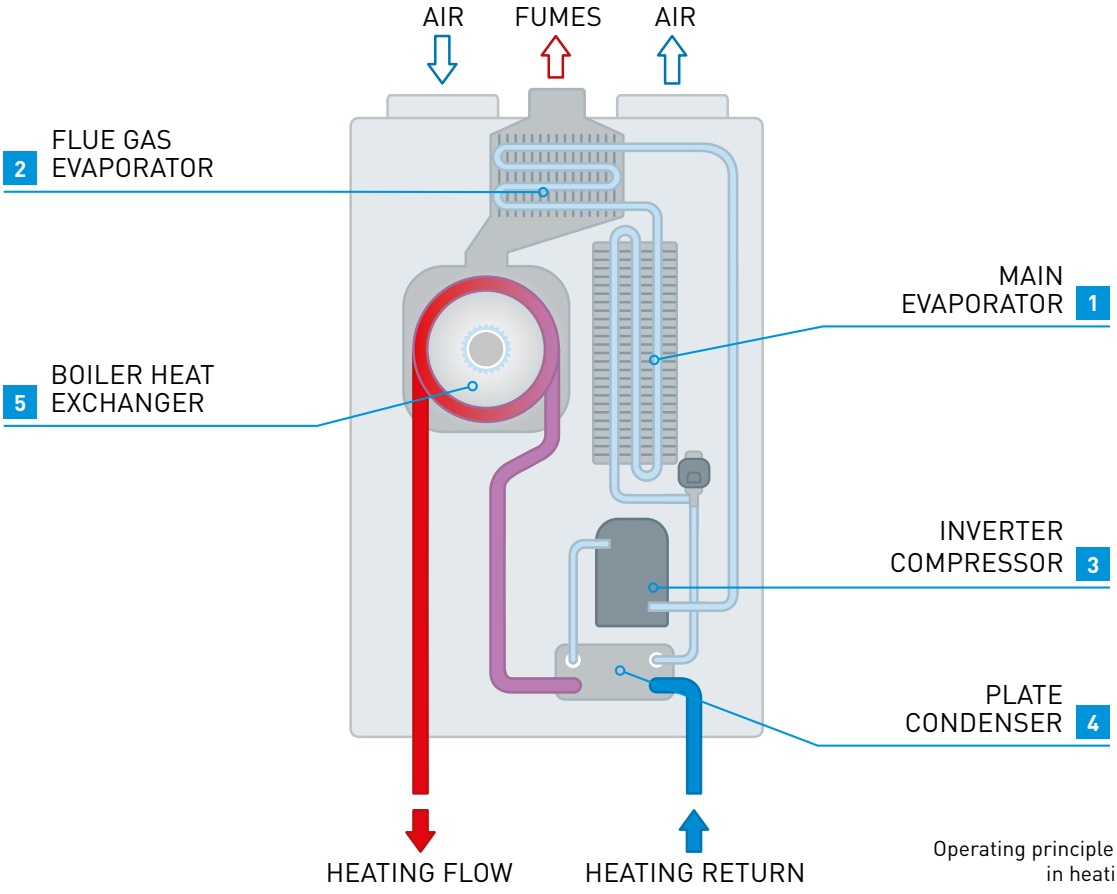


PATENTED TECHNOLOGY, MAXIMUM EFFICIENCY

At the heart of HYBRID REVOLUTION is Sime's patented innovative technology, developed to allow the heat pump to operate at high efficiency across its entire operating range.

The refrigerant circuit, hermetically sealed and pre-charged with natural refrigerant gas R290 (< 150g), features two separate evaporators.

- The main evaporator 1 recovers heat from outside air
- The flue gas evaporator 2 recovers residual energy from the condensing boiler flue gases, cooling them down to 10°C
- The inverter compressor 3 compresses the refrigerant gas, increasing its pressure and temperature; the heat is then transferred to the heating system return water via the plate condenser 4
- The condensing boiler heat exchanger 5 only intervenes to cover any remaining thermal demand.

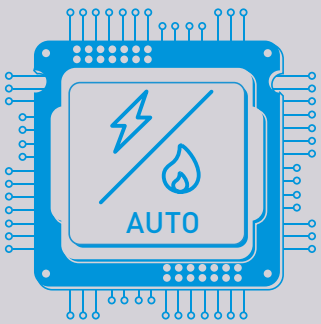


Operating principle diagram in heating mode

AUTOMATIC HYBRID MANAGEMENT

The advanced electronics of HYBRID REVOLUTION automatically and intelligently manage the heat pump and condensing boiler, even in combined operation, based on the outdoor temperature, the conditions of the system and energy optimisation.

The heat pump operates as the primary heat source down to –7°C, while the boiler only intervenes to cover any remaining demand, ensuring continuous comfort and high seasonal efficiency.



IDEAL FOR REPLACEMENT

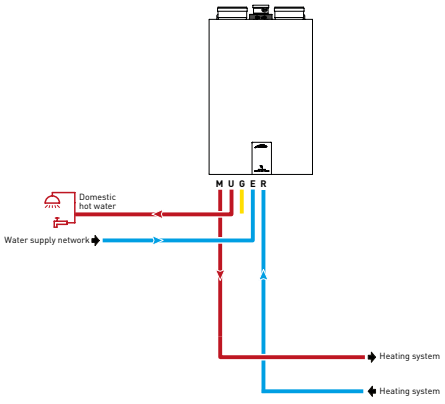
HYBRID REVOLUTION is designed to replace an old gas boiler with more efficient technology, quickly and easily, without compromising comfort.

- Pin-to-pin installation: uses existing hydraulic connections
- Compatible with all types of systems: radiators, fan coil units and underfloor heating
- Suitable for any kind of home: from small flats to large villas.

STRESS-FREE DOMESTIC HOT WATER

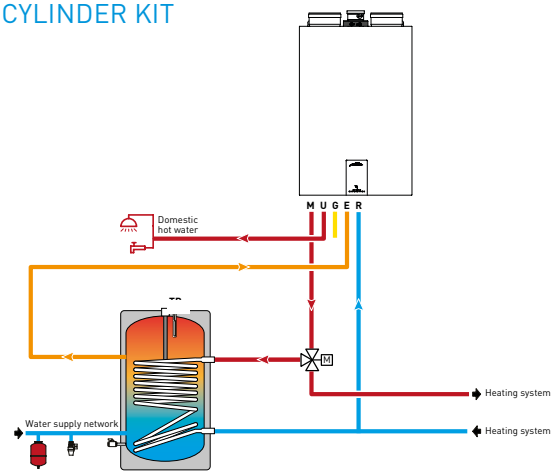
HYBRID REVOLUTION ensures constantly available domestic hot water, adapting to different requirements thanks to two installation configurations:

INSTANTANEOUS PRODUCTION WITH BOILER



In the standard configuration, HYBRID REVOLUTION produces DHW instantaneously via the integrated condensing boiler, ensuring continuous supply and immediate response times: a solution that ensures maximum simplicity, without the need for storage tanks.

COMBINED PRODUCTION WITH OPTIONAL CYLINDER KIT



The optional DHW cylinder kit allows for the heat pump to be used also for the production of DHW, maximising the use of renewable energy and photovoltaic self-consumption, if present. The condensing boiler provides instantaneous integration only when the cylinder temperature is too low.

THE BEST OF HYBRID REVOLUTION

HIGH-PERFORMANCE NATURAL REFRIGERANT

R290

HYBRID REVOLUTION uses natural refrigerant gas R290, which has very low environmental impact, allowing the heat pump to operate efficiently even with high-temperature systems with radiators.

The hermetically sealed refrigerant circuit, pre-charged with less than 150g, ensures safety and installation flexibility without the need for F-Gas certification.

COMBUSTION FOR THE GASES OF THE FUTURE

H_2 20% BIO METHANE 100%

GREEN FLAME

The condensing boiler integrated into HYBRID REVOLUTION adopts Green Flame combustion technology, designed for the use of gases with low environmental impact, such as biomethane and natural gas/hydrogen mixtures.

A solution designed for the evolution of the gas network and progressive decarbonisation.

EFFICIENCY THAT MAKES NO NOISE

HYBRID REVOLUTION is designed to ensure extremely quiet operation, thanks to the absence of the external unit and construction solutions developed for noise reduction.

Optimised airflow paths and sound-absorbing materials ensure extremely quiet operation, with sound levels comparable to those of a standard refrigerator.

PHOTOVOLTAIC SYSTEM AND SELF-CONSUMPTION

The self-consumption function maximises the use of the energy produced by the photovoltaic system, increasing direct use in the home.

When production exceeds demand, thanks to a signal from the inverter, the excess energy is automatically converted into heat for space heating and DHW[1], reducing grid consumption.

[1]: with optional DHW cylinder kit.

REMOTE CONTROL AND ROOM PROBES

REMOTE CONTROL

ADVANCED CONTROL AS STANDARD

The remote control supplied as standard allows for the complete and intuitive management of the system:

- Colour graphic display
- Weekly programmable thermostat function
- Class VI control (ErP).

Continuous supply temperature control optimises system efficiency and ensures comfort.

SRS ROOM PROBES
(up to 8 zones)

MULTI-ZONE MANAGEMENT

With the optional SRS room probes, HYBRID REVOLUTION can manage up to 8 zones independently, customising comfort and reducing energy consumption.

Wireless technology allows for simple installation, even in existing buildings.

INTEGRATED CONNECTIVITY

The Wi-Fi connectivity allows for the remote management of HYBRID REVOLUTION using the Sime Connect App, to control system operation at any time.

Thanks to the App, it is possible to:

- Monitor the status of the system
- Modify temperatures and time programs
- Receive notifications in the event of anomalies.

SIME CONNECT

MORE SAVINGS, MORE VALUE FOR YOUR HOME

ENERGY BILL SAVINGS UP TO 40%

Thanks to the renewable energy transferred by the heat pump, HYBRID REVOLUTION guarantees significant energy savings compared to a traditional boiler.

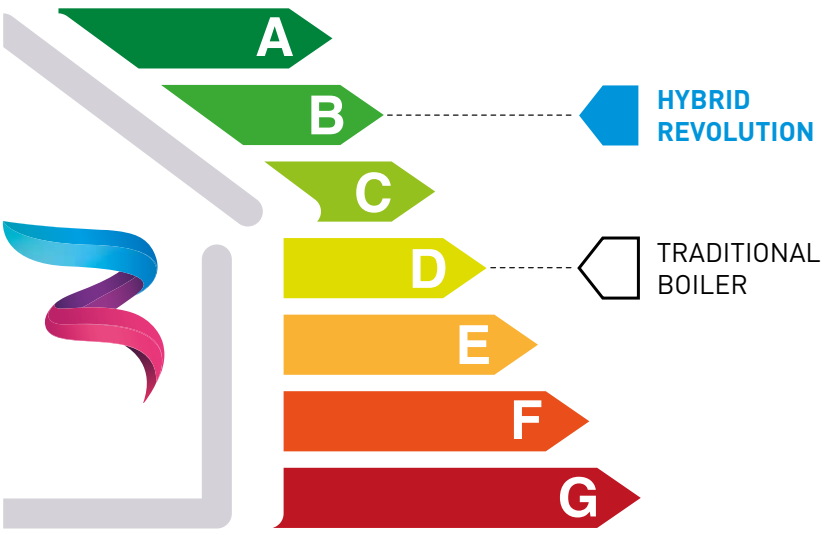
Depending on the characteristics of the building and system, it is possible to achieve energy bill savings between 25% and 40%, providing immediate and long-term economic benefits.

Calculate the savings for your home:

IMPROVE THE ENERGY RATING OF YOUR HOME

Installing a hybrid system such as HYBRID REVOLUTION helps improve the building's energy performance, with an increase of up to 2 energy classes, simply by replacing the old boiler.

Improving the energy rating not only reduces consumption, but also increases the value of the property, making it more competitive on the market and aligned with future energy efficiency regulations.



TECHNICAL DATA

Hybrid Revolution condensing boiler		**30**
Specific DHW flow rate Δt 30°C (EN 13203)	l/min	13,2
Continuous DHW flow rate Δt 25/35°C	l/min	16,7/11,9
Minimal water heating capacity	l/min	2
DHW output	kW	30,0 - 3,0
Heating output (80-60°C)	kW	24,7 - 2,8
DHW energy efficiency class		
DHW energy efficiency	%	87
Domestic hot water load profile		XL
Fuel		G20 - G31
Electrical protection rating	IP	X5D
Heating adjustment range	°C	20-75
Max working pressure	bar	3
Expansion vessel capacity	l	9
DHW adjustment range	°C	10-60
DHW pressure (max/min)	bar	7,0/0,5
Maximum straight horizontal flue length of ø 80 flue duct	m	25
NOx class[1]		6
Overall weight (condensing boiler + heat pump)	kg	79

[1] NOx class according to EN 15502-1:2021+A1:2023.

Hybrid Revolution heat pump		**30**
Rated output[2]	kW	3,31
Electrical input[2]	kW	0,838
C.O.P.[2]		3,95
Heating energy efficiency class		
SCOP on		3,38
Compressor		DC Rotary Hermetic Inverter
Refrigerant gas (type/quantity)		R290 - 150 g
Minimum heat pump operating temperature	°C	-7,0
Indoor sound power level[3]	dB(A)	40,3
Outdoor sound power level[3]	dB(A)	49,8

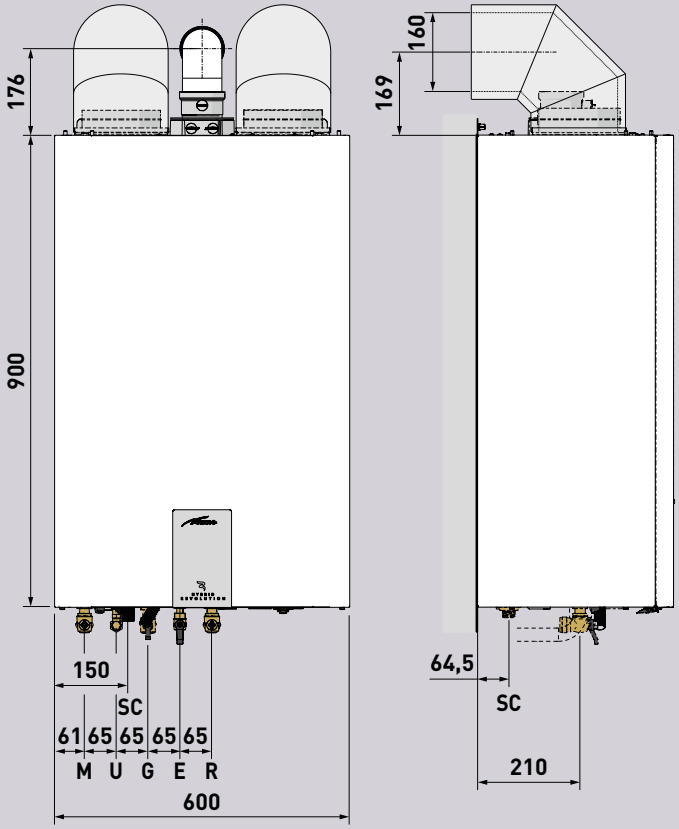
PERFORMANCE UNDER THE FOLLOWING CONDITIONS:
[2] UNI EN 14511-1:2022 with active heat recovery contribution.
[3] UNI EN 12201-2:2024.

Maximum length of ø 160 mm coaxial ducts		**L Horizontal**	**H Vertical**
Intake[4]	m	3	4
Discharge[4]	m	3	4

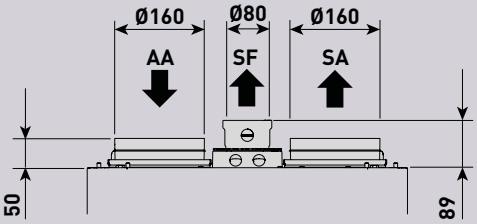
[4] The maximum straight length already includes one 90° bend. Shortening one section DOES NOT allow a corresponding extension of the other.

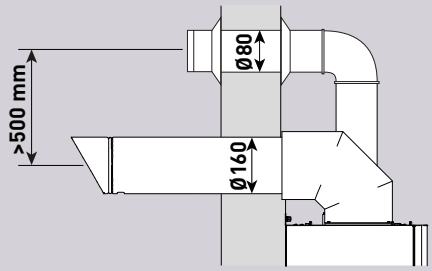
DIMENSIONS

Hybrid Revolution 30

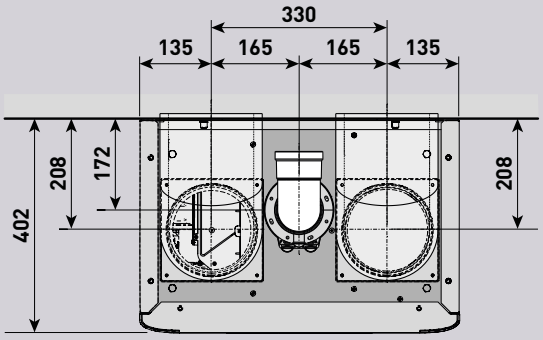


LEGEND		
R	System return	ø 3/4"
M	System delivery	ø 3/4"
G	Gas supply	ø 3/4"
E	D.H.W. inlet	ø 1/2"
U	D.H.W. outlet	ø 1/2"
AA	Boiler/Heat pump air intake	ø 160
SA	Heat pump air discharge	ø 160
SC	Condensate drain	ø 20
SF	Flue exhaust	ø 80



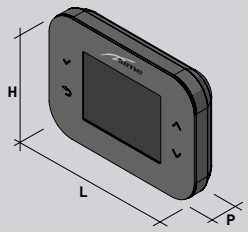


ATTENTION: when the flue outlet is wall-mounted, the flue duct must be positioned at least 500 mm above the air ducts.

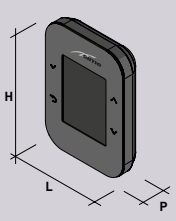


REMOTE CONTROL AND SRS ROOM PROBE

Remote control



SRS room probe
(battery powered)



LEGEND	Remote control	Room probe
L (mm)	132	72
H (mm)	95	95
D (mm)	27	27
Weight (g)	170	90

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Fonderie Sime S.p.A. - Via Garbo, 27 - 37045 Legnago (VR) Italy - Tel. +39 0442 631111
For information on the sales and service of Sime products, please visit the website **www.sime.it** or contact **info@sime.it**