

WALL HUNG BOILERS



Murelle HM ErP
Murelle HE ErP
Murelle OF ErP



The flexible domestic hot water boiler

Murelle ErP is a range of compact domestic hot water boilers featuring a unique design and advanced electronic management, allowing flexible installation and use in accordance with the most recent regulations and guidelines on matters of energy savings and environmental awareness. Murelle ErP is available with both traditional and condensing combustion, with outputs ranging from 12 to 35 kW, in heating only, instantaneous and

storage versions, all of which can be combined with the most modern home heating solutions.

The HM condensing range takes the concept of high energy efficiency one step further, managing the entire winter heating system, which is controlled and regulated according to user instructions.

Murelle HM ErP



Murelle OF ErP



Murelle HE ErP
with D.H.W. storage tank



A complete range

Output kW	MURELLE HM ErP		MURELLE HE ErP			MURELLE OF ErP*	
	heating only	instantaneous	heating only	instantaneous	with D.H.W. storage tank	instantaneous	with D.H.W. storage tank
12			✓				
25	✓	✓	✓	✓	✓	✓	✓
30		✓	✓	✓	✓	✓	
35	✓	✓	✓	✓			

* versioni a camera aperta



Family benefits

- › Management of two circuits with different temperatures
- › Integrated outdoor temperature regulation with Siemens curve
- › Domestic water flowmeter for more accurate management of hot water demand
- › Automatic 2-speed pump
- › High and low temperature integrated circuit management (optional)
- › Integrated management of forced circulation solar systems (optional)

MURELLE HE ErP

- › Modulation ratio 1:5
- › NOx emissions less than 30 mg/kWh

MURELLE HM ErP

- › Modulation ratio 1:10
- › Variable speed circulator pump
- › NOx emissions less than 30 mg/kWh
- › Noise emissions less than 51 dB(A)
- › Management of three heating circuits at different temperatures
- › Cascade control of up to 8 boilers (optional)
- › Boiler ideal for integration into multi-energy systems

Modern and practical interface



Murelle ErP is equipped with a control panel that characterizes the look of the boiler, consisting in two separate areas one for the user and one for the installer. Underneath the lower hatch, there is an 8-button keypad allowing intuitive control by the user. Above the LCD display, the hatch hides an area reserved to installers/technicians, characterised by four buttons and a PC data connection port, in addition to a space for the eventual installation of a timer.

A INSTALLER INTERFACE

B BACKLIT DISPLAY SHOWING ALL THE MOST IMPORTANT INFORMATION

C USER INTERFACE

D LED STATUS INDICATOR
BLUE: IN OPERATION - RED: IN ALARM

Hot water when you need it

Murelle 25/55 and 30/55 ErP come with integrated hot water storage. The special shape of the boiler with dual coil, made entirely from stainless steel and featuring a 55 litre capacity, allows an efficient heat exchange and therefore an abundant production of domestic hot water. What's more, the stainless steel ensures long-lasting resistance against corrosive action and improved hygiene.

The Murelle ErP range also includes six heat only models with outputs from 12 to 35 kW, equipped with a motorised diverter valve allowing the boiler to be combined with mono or dual coil Sime solar tanks.



Solar tank
BS 25

An expandable system

All boilers in the Murelle ErP range can be regulated on outdoor temperature according conditions by connecting an external sensor directly to the circuit board, thereby reducing operating costs. Two different thermostats can be connected to manage two circuits with differentiated temperatures.

The optional ZonaMIX kit allows the management of two mixed zones, along with the zone's regulation and control devices (mixing valve, zone pump, temperature sensor). All boilers are designed to allow combination

with a solar thermal system. Using the optional InSOL kit, the boiler can manage a forced circulation solar system.

System diagram with solar integration

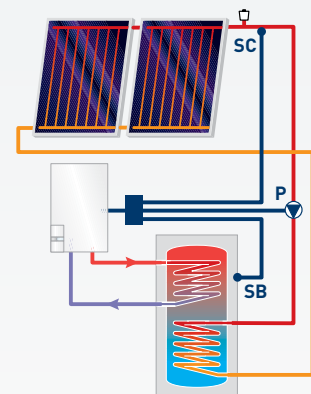
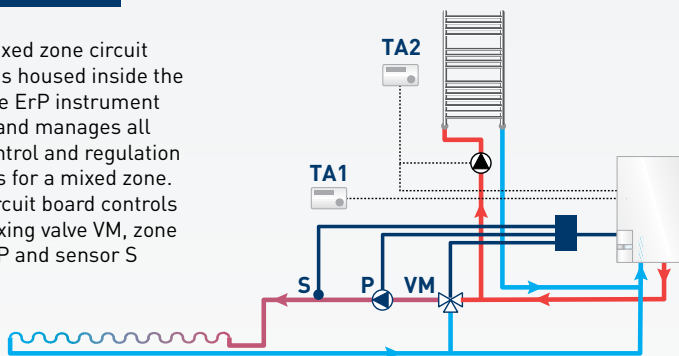
InSOL kit

The solar control circuit board is housed inside the Murelle ErP instrument panel and allows control of solar systems without the need for a dedicated control unit. The solar circuit board controls the SC and SB sensors and pump P

System diagram with mixed temperatures

ZonaMIX kit

The mixed zone circuit board is housed inside the Murelle ErP instrument panel and manages all the control and regulation devices for a mixed zone. The circuit board controls the mixing valve VM, zone pump P and sensor S



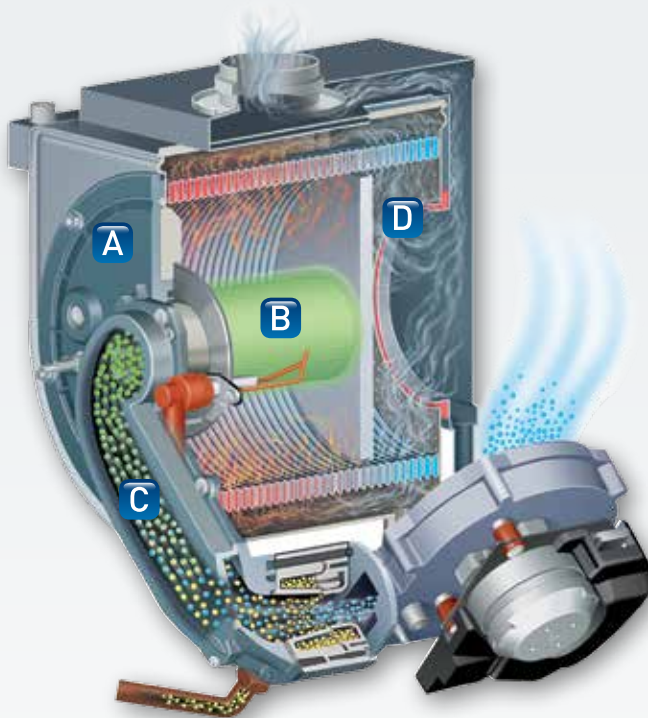
A green heart

Condensing boilers are equipped with a combustion system that guarantees high efficiency thanks to the recovery of heat from the burned flue gas.

In traditional boilers, only a part of the energy contained in the natural gas is transformed into heat, the rest is dispersed into the atmosphere through a flue gas stack.

Through the condensing technique, a large part of the dispersed heat is recovered, achieving maximum efficiency with minimum consumption and ensuring the best possible use of the overall energy provided by the gas.

Murelle HM ErP and Murelle HE ErP have been awarded 4 stars, the maximum possible, based on Directive CE 92/42.



The Murelle HE ErP pre-mix condensing system

A The main heat exchanger is made from high-quality stainless steel (AISI 316), highly resistant against the corrosive action of the condensate. Its cylindrical shape and efficient condensate collection system allow the highest possible heat exchange.

B The pre-mix radial burner is made in steel. Featuring a cylindrical shape and positioned at the centre of the combustion chamber is a special low temperature "micro-flame", which significantly reduces the production of polluting agents (CO and NOx).

C The air and gas needed for combustion enter the burner and are mixed together in the ideal ratio.

D A special process allows the recovery of heat from the combustion gas, which would otherwise normally be dispersed: the aqueous vapour in the fumes condenses after entering into contact with the surfaces of the exchanger, which have been cooled by the return water of the heating circuit.

Respect for the environment

Murelle HM ErP and Murelle HE ErP are set apart by their low environmental impact thanks to the use of an exclusive Sime pre-mix system, which manages combustion, predetermines the flow rate and helps to ensure the optimal temperature of the burner flame,

thereby limiting the formation of polluting agents (CO and NOx). Thanks to these solutions, NOx emissions are less than 30 mg/kWh, less than half of the most restrictive class 5 defined by regulation UNI EN 15502-1.

Murelle HM ErP

A never before reached modulation ratio

In recent years, the increased thermal efficiency of buildings has significantly reduced the thermal load of homes (30-35 Watt/m²). For a home with a surface area of 100 m² an average output of 3.0-3.5 kW is enough, or even less in the case of smaller surface areas.

A traditional condensing boiler will therefore continuously turn on and off, partially offsetting the

benefits of its high combustion efficiency. Murelle HM ErP has a modulation ratio of 1:10. This means, for example, that the Murelle HM 25 ErP can modulate between a minimum output of 2.5 kW up to a maximum output of 25 kW. Thanks to the elevated output modulation, Murelle HM ErP reduces the "Stop&Go", thereby improving the seasonal efficiency of the heating system.

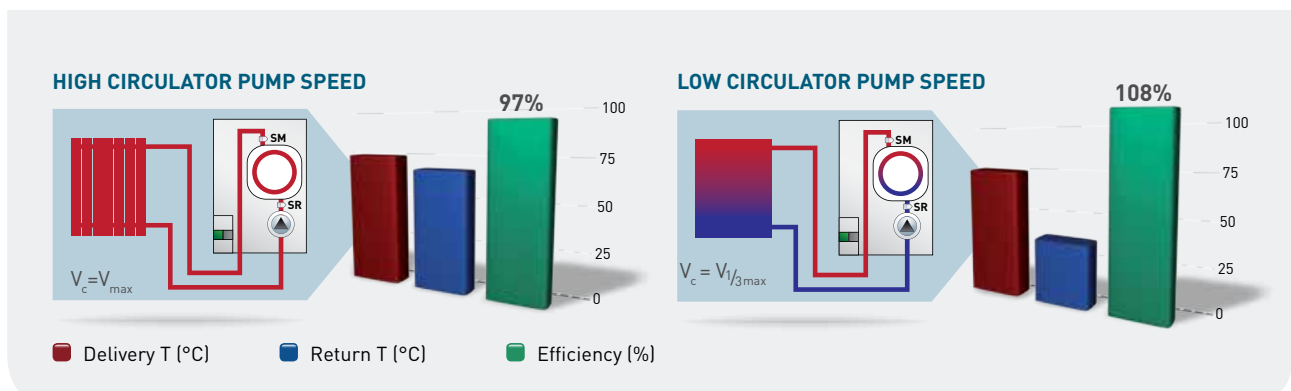
Murelle HM ErP Modulating circulator pump

A condensing boiler achieves maximum energy efficiency when the return temperature is 45-50°C. For this reason, it is commonly thought that a condensing boiler should be connected to low temperature heating systems.

Murelle HM ErP, equipped with a dual sensor control system (SM, SR), is able to control the flow rate of variable speed circulator pumps until the return water temperature reaches the desired value. In traditional radiator heating systems, Murelle HM ErP regulates and maintains the delivery temperature at a preset

value (e.g. 70°C), while through the modulating circulator pump it reduces the system water flow rate until obtaining the desired ΔT (e.g. $\Delta T = 30^\circ\text{C}$) between the delivery and return, so as to optimise the condensing process.

Thanks to its variable speed circulator pump and the control system, Murelle HM ErP guarantees continuous maximum combustion efficiency even in cases where old boilers that work with traditional radiator heating systems are replaced.



Murelle HM ErP Very low noise



Silence in the home is a precious and essential need. Murelle HM ErP, with a sound power level of 51 dB(A) halves noise emissions compared to Murelle HE ErP with a sound power level of 55 dB(A). To obtain this result, Murelle HM ErP uses acoustically selected components, anti-vibration joints and soundproof coverings.

< 51 dB(A)
MURELLE HM



Murelle HM ErP Integration in multi-energy systems

Thanks to its special features, Murelle HM ErP is the "ideal boiler" for multi-energy systems where thermal solar systems, biomass generators and heat pumps cooperate and work together.

To ensure the heating needs of large residential buildings, multiple Murelle HM ErP boilers can be interconnected. The new on-board electronics feature remarkable communication potential; an optional micro-card is all that's needed for reciprocal dialogue with up to 8 generators.



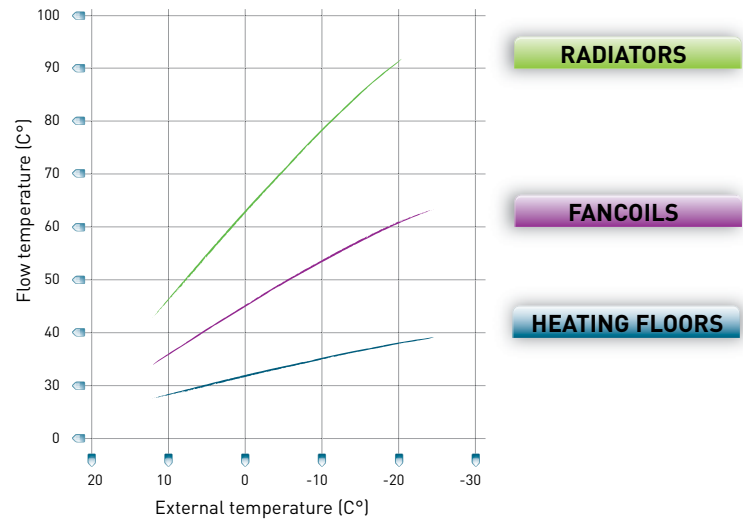
Murelle HM ErP

3 climate zones in perfect balance

The Murelle ErP ability to adapt to home heating systems outdoes itself with Murelle HM ErP.

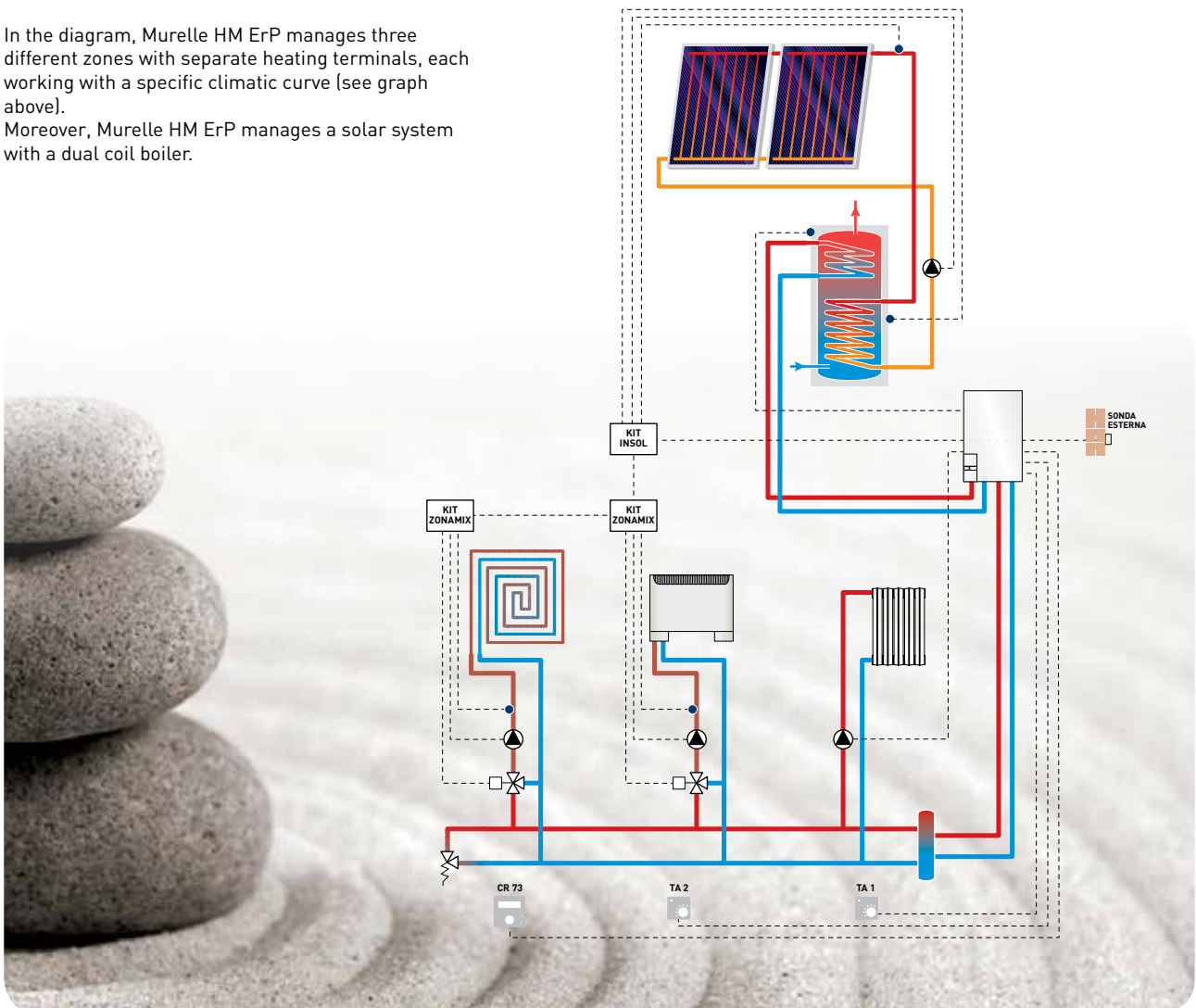
Even the most complex heating systems featuring three different types of terminals, operating at different temperatures (e.g. radiators, fan coil and radiant heating panels) can be controlled by Murelle HM ErP, with the regulation of three different climate zones.

Through a series of optional kits, the boiler can manage up to three zones, including two mixed ones.

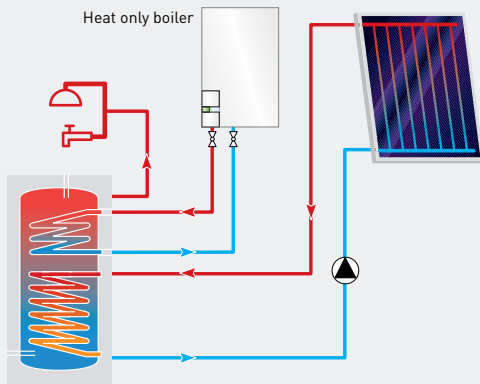


In the diagram, Murelle HM ErP manages three different zones with separate heating terminals, each working with a specific climatic curve (see graph above).

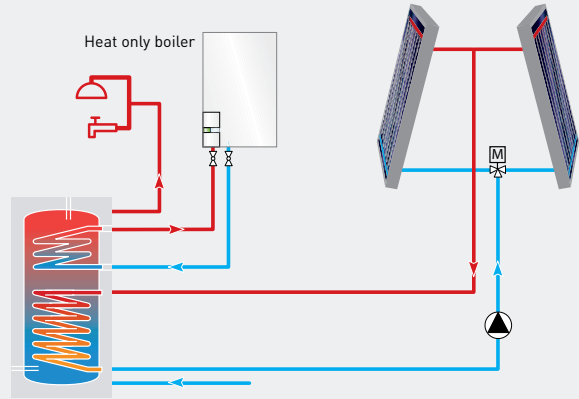
Moreover, Murelle HM ErP manages a solar system with a dual coil boiler.



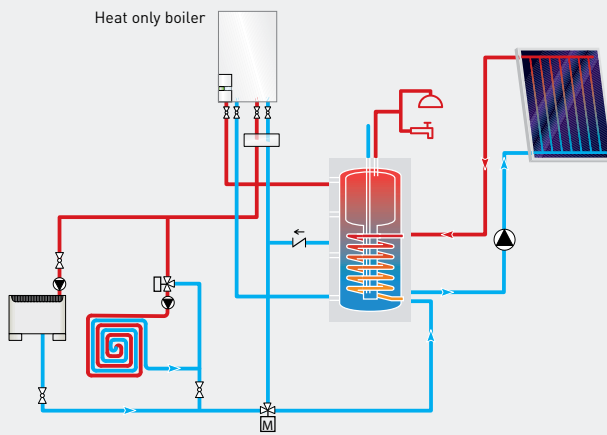
EXAMPLES OF SOLAR SYSTEMS CONTROLLED BY KIT INSOL COD. 8092235



1 FORCED SOLAR SYSTEM (ALSO DRAIN BACK) WITH HEAT ONLY BOILER

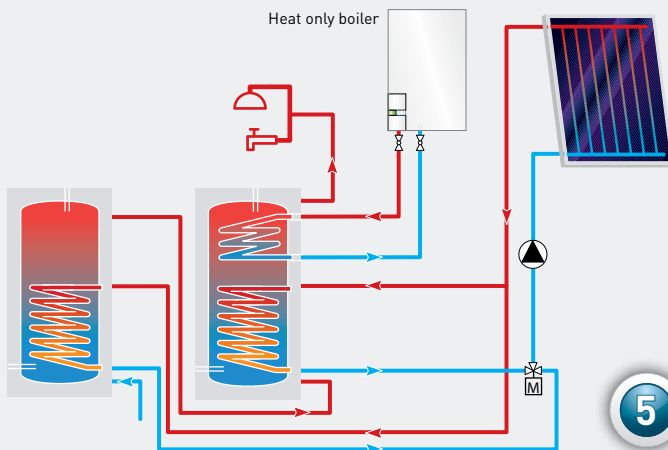
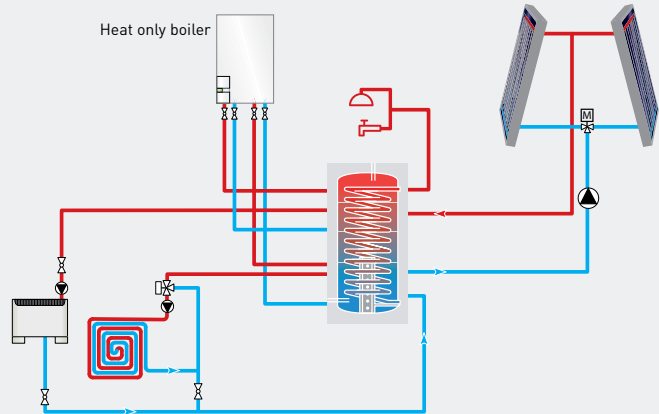


2 DOUBLE-PITCHED FORCED SOLAR SYSTEM WITH HEAT ONLY BOILER



3 FORCED SOLAR SYSTEM WITH TANK IN TANK WITH BOILER HEAT ONLY PER-HEATED RETURN

4 FORCED SOLAR SYSTEM DOUBLE-PITCHED WITH PIPE IN TANK WITH HEAT ONLY BOILER DIRECT HEATING



5 FORCED SOLAR SYSTEM WITH PRIORITY DOUBLE STORAGE WITH HEAT ONLY BOILER

New remote controls

The new remote controls and Sime Home Plus perfectly complete the Murelle ErP range, they are specifically designed for the best integration with domestic hot water boilers. The elegant and linear design blends into any environment, while the exclusive functions allow total control over the heating system and boiler.



SIME HOME



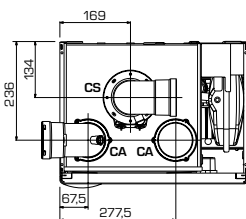
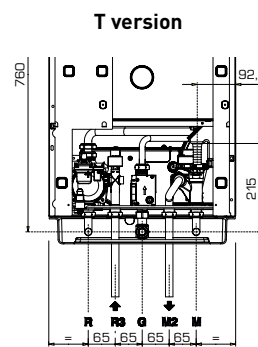
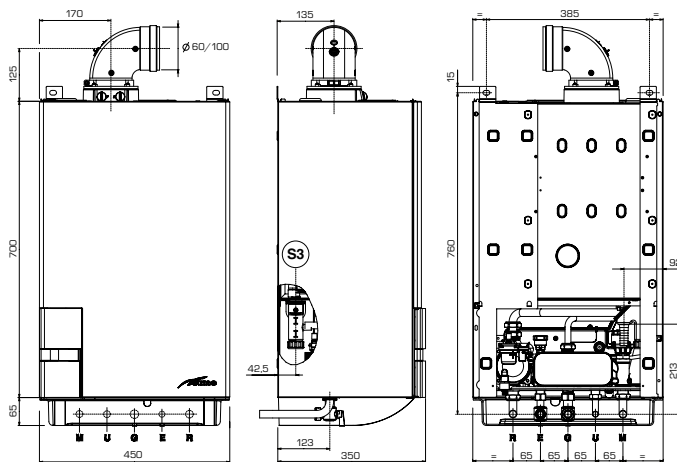
SIME HOME PLUS

MAIN FEATURES

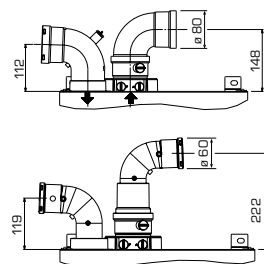
	SIME HOME	SIME HOME PLUS
High resolution dot-matrix display	✓	✓
Weekly heating programming	✓	✓
Weekly D.H.W. storage programming		✓
Climate regulation on external and internal sensor	✓	✓
Remote control of boiler parameters	✓	✓
System function parameters display	✓	✓
Advanced boiler diagnostics with suggestions		✓
Contact for automatic phone dialler		✓
Indication of earnings from solar circuit		✓

Murelle HM ErP

		MURELLE HM ErP				
MODEL		25	30	35	25 T	35 T
Nominal heat output 80-60°C	kW	23,9	28,8	34,1	23,9	34,1
Minimum heat output 80-60°C	kW	2,3	2,7	3,2	2,3	3,2
Nominal heat output 50-30°C	kW	26,2	31,4	37,2	26,2	37,2
Minimum heat output 50-30°C	kW	2,6	3,1	3,7	2,6	3,7
Nominal/minimum heat input	kW	24,5/2,45	29,5/2,95	34,8/3,48	24,5/2,45	34,8/3,48
Min/max useful output 80-60°C	%	93,6/97,5	92,7/97,6	92,5/98,0	93,6/97,5	92,5/98,0
Min/max useful output 50-30°C	%	107,3/107,0	105,3/106,4	106,3/106,8	107,3/107,0	106,3/106,8
Heating energy efficiency class		A	A	A	A	A
Domestic hot water energy efficiency class		A	A	A	-	-
Domestic hot water load profile		XL	XL	XL	-	-
Heating sound power	dB (A)	50	48	52	50	52
Absorbed power (Qn max)	W	91	98	104	91	104
Absorbed power (Qn min)	W	59	60	61	59	61
Electrical protection class	IP	X4D	X4D	X4D	X4D	X4D
Heating setting range	°C	20÷80	20÷80	20÷80	20÷80	20÷80
Boiler water content	l	4,9	5,5	6,0	4,9	6,0
Max operating pressure	bar	3	3	3	3	3
Exp. vessel preload capacity and pressure	l/bar	8/1	10/1	10/1	8/1	10/1
Domestic hot water setting range	°C	10÷60	10÷60	10÷60	-	-
Specific hot water flow rate (EN 13203)	l/min	11,2	13,6	16,1	-	-
Continuous hot water flow rate ΔT 30°C	l/min	11,4	13,8	16,3	-	-
Minimum hot water flow rate	l/min	2,0	2,0	2,0	-	-
Min/max hot water pressure	bar	0,2/7,0	0,2/7,0	0,2/7,0	-	-
Max horizontal rectilinear length pipe ø 60/100	m	6,0	5,0	4,0	6,0	4,0
Max horizontal rectilinear length pipe ø 80/125	m	12,0	10,0	8,0	12,0	8,0
Max horizontal rectilinear length pipes ø 80+80	m	25+25	25+25	25+25	25+25	25+25
Max horizontal rectilinear length pipes ø 60+60	m	9+9	7+7	5+5	7+7	5+5
NOx emission class (EN 15502-1:2015)		6 (<56 mg/kWh)				
Weight	kg	40	42	44	39	41



separate pipes

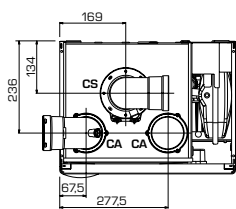
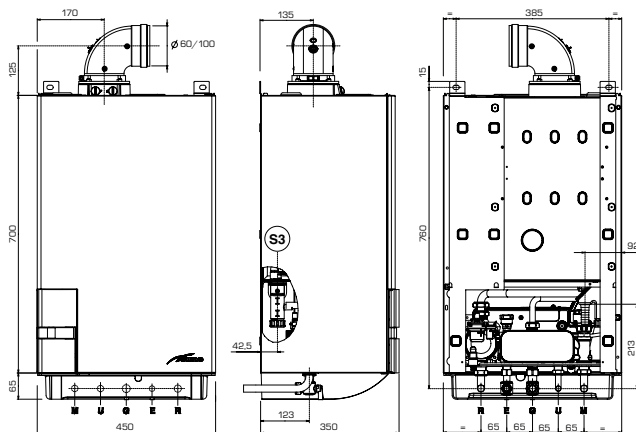


Hydraulic connections

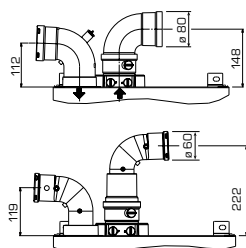
M	C.H. flow	3/4"
R	C.H. return	3/4"
G	Gas supply	3/4"
R3	D.H.W. storage tank return	3/4"
M2	D.H.W. storage tank flow	3/4"
C	System filling	1/2"
E	D.H.W. inlet	1/2"
U	D.H.W. outlet	1/2"
S3	Condensate drain	ø 25
CA/CS	Intake/Drain	

Murelle HE ErP

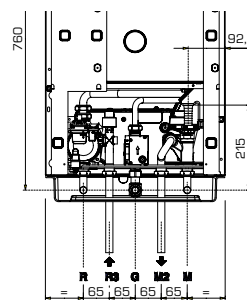
		MURELLE HE ErP						
MODEL		25	30	35	12 T	25 T	30 T	35 T
Nominal heat output 80-60°C	kW	23,9	28,9	34,1	11,7	23,9	28,9	34,1
Minimum heat output 80-60°C	kW	4,7	5,9	7,9	2,8	4,7	5,9	7,9
Nominal heat output 50-30°C	kW	26,2	31,6	37,2	12,8	26,2	31,6	37,2
Minimum heat output 50-30°C	kW	5,4	6,6	8,8	3,2	5,4	6,6	8,8
Nominal/minimum heat input	kW	24,5/5,0	29,5/6,2	34,8/8,2	12,0/3,0	24,5/5,0	29,5/6,2	34,8/8,2
Min/max useful output 80-60°C	%	94,0/97,5	95,0/98,0	96,0/98,0	94,0/97,5	94,0/97,5	95,0/98,0	96,0/98,0
Min/max useful output 50-30°C	%	107/107	107/107	107/107	107/107	107/107	107/107	107/107
Heating energy efficiency class		A	A	A	A	A	A	A
Domestic hot water energy efficiency class		A	A	A	-	-	-	-
Domestic hot water load profile		XL	XL	XL	-	-	-	-
Heating sound power	dB (A)	55	53	54	48	55	53	54
Absorbed power (Qn max)	W	84	83	93	66	84	83	93
Absorbed power (Qn min)	W	55	55	56	51	55	55	56
Electrical protection class	IP	X4D	X4D	X4D	X4D	X4D	X4D	X4D
Heating setting range	°C	20÷80	20÷80	20÷80	20÷80	20÷80	20÷80	20÷80
Boiler water content	l	4,9	5,5	6,0	4,4	5,0	5,6	6,1
Max operating pressure	bar	3	3	3	3	3	3	3
Exp. vessel preload capacity and pressure	l/bar	8/1	10/1	10/1	8/1	8/1	10/1	10/1
Domestic hot water setting range	°C	10÷65	10÷65	10÷65	-	-	-	-
Specific hot water flow rate (EN 13203)	l/min	11,2	13,6	16,1	-	-	-	-
Continuous hot water flow rate ΔT 30°C	l/min	11,3	13,8	16,3	-	-	-	-
Minimum hot water flow rate	l/min	2,0	2,0	2,0	-	-	-	-
Min/max hot water pressure	bar	0,2/7,0	0,2/7,0	0,2/7,0	-	-	-	-
Max horizontal rectilinear length pipe ø 60/100	m	6,0	5,0	4,0	6,0	6,0	5,0	4,0
Max horizontal rectilinear length pipe ø 80/125	m	12,0	10,0	8,0	12,0	12,0	10,0	8,0
Max horizontal rectilinear length pipes ø 80+80	m	25+25	25+25	25+25	25+25	25+25	25+25	25+25
Max horizontal rectilinear length pipes ø 60+60	m	9+9	7+7	5+5	17+17	9+9	7+7	5+5
NOx emission class (EN 15502-1:2015)		6 (<56 mg/kWh)						
Weight	kg	43,4	45,0	46,6	41,2	42,4	44,0	45,2



separate pipes



T version

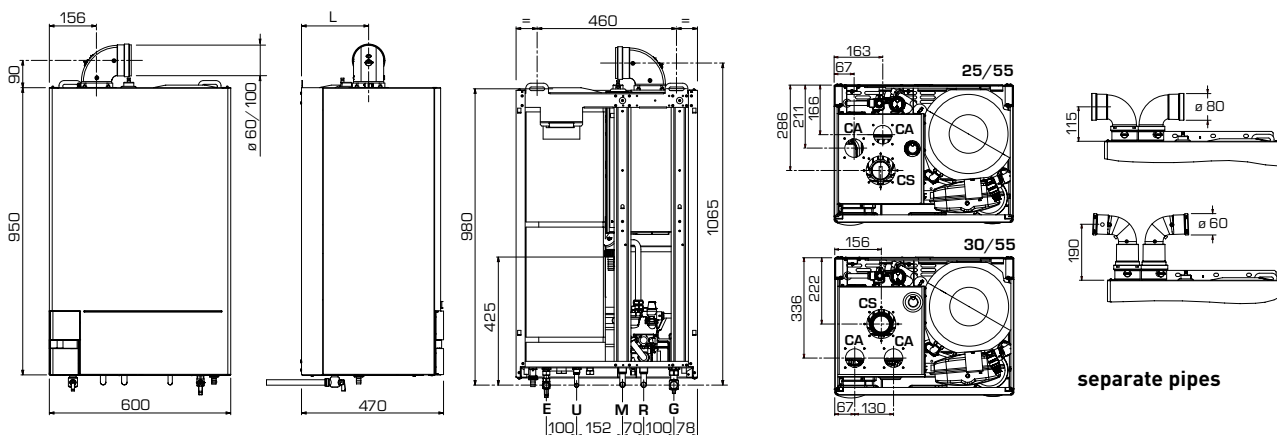


Hydraulic connections

M	C.H. flow	3/4"
R	C.H. return	3/4"
G	Gas supply	3/4"
R3	D.H.W. storage tank return	3/4"
M2	D.H.W. storage tank flow	3/4"
C	System filling	1/2"
E	D.H.W. inlet	1/2"
U	D.H.W. outlet	1/2"
S3	Condensate drain	ø 25
CA/CS	Intake/Drain	

Murelle HE ErP with D.H.W. storage tank

		MURELLE HE ErP	
MODEL		25/55	30/55
Nominal heat output 80-60°C	kW	23,9	28,9
Minimum heat output 80-60°C	kW	6,1	7,6
Nominal heat output 50-30°C	kW	26,2	31,6
Minimum heat output 50-30°C	kW	7,0	8,5
Nominal/minimum heat input	kW	24,5/6,5	29,5/8,0
Min/max useful output 80-60°C	%	94,0/97,5	95,0/98,0
Min/max useful output 50-30°C	%	107/107	107/107
Heating energy efficiency class		A	A
Domestic hot water energy efficiency class		B	B
Domestic hot water load profile		XL	XL
Heating sound power	dB (A)	49	50
Absorbed power (Qn max)	W	90	94
Absorbed power (Qn min)	W	58	59
Electrical protection class	IP	X4D	X4D
Heating setting range	°C	20÷80	20÷80
Boiler water content	l	9,6	10,0
Max operating pressure	bar	3	3
Exp. vessel preload capacity and pressure	l/bar	10/1	10/1
Domestic hot water setting range	°C	10÷65	10÷65
Specific hot water flow rate (EN 13203)	l/min	15,5	17,5
Continuous hot water flow rate ΔT 30°C	l/min	11,3	13,8
Min/max hot water pressure	bar	0,2/7,0	0,2/7,0
D.H.W. storage tank capacity	l	55	55
Time of recovery from 25 to 55°C	min	6'30"	6'00"
D.H.W. expansion vessel capacity	l	2,5	2,5
Max horizontal rectilinear length pipe ø 60/100	m	6,0	5,0
Max horizontal rectilinear length pipe ø 80/125	m	12,0	10,0
Max horizontal rectilinear length pipe ø 80+80	m	25+25	25+25
Max horizontal rectilinear length pipe ø 60+60	m	9+9	7+7
NOx emission class (EN 15502-1:2015)		6 (<56 mg/kWh)	
Weight	kg	68	70

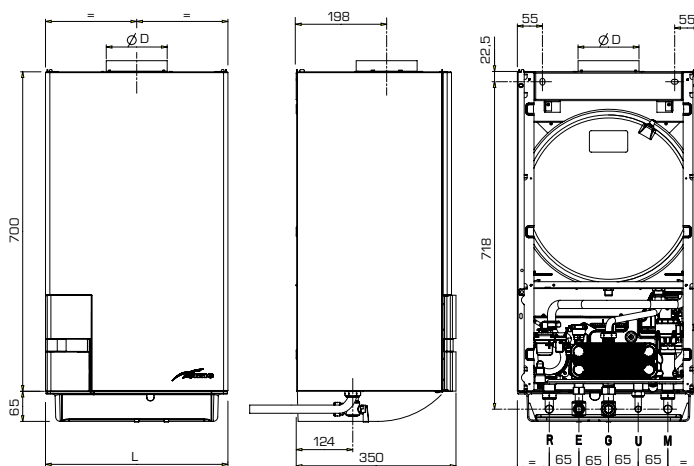


Hydraulic connections			
M	C.H. flow	3/4"	U D.H.W. outlet 1/2"
R	C.H. return	3/4"	C Recirculation 1/2"
G	Gas supply	3/4"	S3 Condensate drain ø 25
E	D.H.W. inlet	1/2"	CA/CS Intake/Drain

mm	L
25/55	286
30/55	222

Murelle OF ErP

		MURELLE OF ErP	
MODEL		25	30
Nominal heat output	kW	23,0	27,0
Minimum heat output	kW	8,7	10,2
Nominal/minimum Heat input	kW	25,5/10,2	30,0/12,0
Useful heat output 100%	%	90,0	90,0
Useful heat output at 30% of load	%	89,5	89,5
Heating energy efficiency class		C	C
Domestic hot water energy efficiency class		B	B
Domestic hot water load profile		XL	XL
Heating sound power	dB (A)	49	49
Absorbed power (Qn max)	W	54	54
Absorbed power (Qn min)	W	47	47
Electrical protection class	IP	X4D	X4D
Heating setting range	°C	20÷80	20÷80
Boiler water content	l	7,1	8,0
Max operating pressure	bar	3	3
Max operating temperature	°C	85	85
Exp. vessel preload capacity and pressure	l/bar	7/1	8/1
Domestic hot water setting range	°C	10÷65	10÷65
Specific hot water flow rate (EN 13203)	l/min	10,7	12,7
Continuous hot water flow rate ΔT 30°C	l/min	10,9	12,9
Minimum hot water flow rate	l/min	2,4	2,4
Min/max hot water pressure	bar	0,2/7,0	0,2/7,0
NOx emission class		3 (<150 mg/kWh)	
Weight	kg	30	33



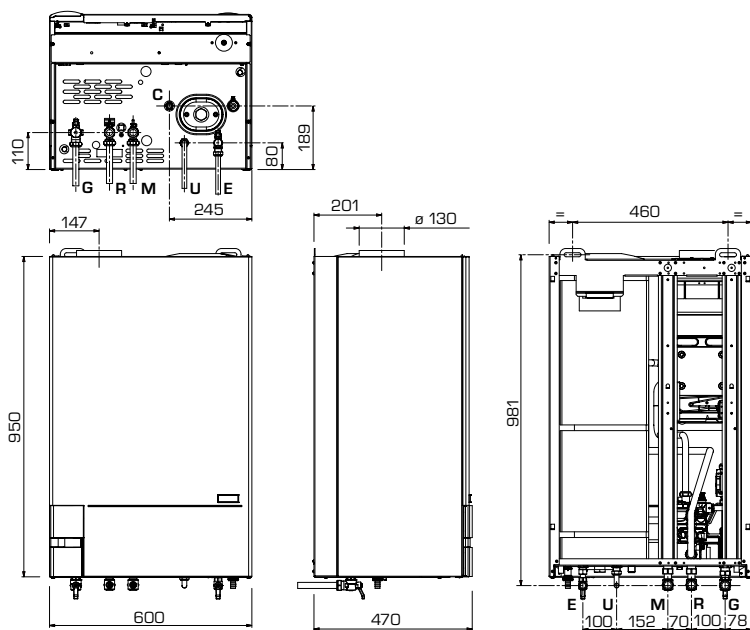
Hydraulic connections

M	C.H. flow	3/4"
R	C.H. return	3/4"
G	Gas supply	3/4"
E	D.H.W. inlet	1/2"
U	D.H.W. outlet	1/2"

mm	L	ø D
25 OF	400	130
30 OF	450	150

Murelle OF ErP with D.H.W. storage tank

		MURELLE OF ErP
MODEL		25/55
Nominal heat output	kW	23,0
Minimum heat output	kW	8,5
Nominal/minimum Heat input	kW	25,5/10,2
Useful heat output 100%	%	90,0
Useful heat output at 30% of load	%	89,5
Heating energy efficiency class		C
Domestic hot water energy efficiency class		B
Domestic hot water load profile		XL
Heating sound power	dB [A]	47
Absorbed power (Qn max)	W	57
Absorbed power (Qn min)	W	50
Electrical protection class	IP	X4D
Heating setting range	°C	20÷80
Boiler water content	l	8,2
Max operating pressure	bar	3
Max operating temperature	°C	85
Exp. vessel preload capacity and pressure	l/bar	10/1
Domestic hot water setting range	°C	10÷60
Specific hot water flow rate (EN 13203)	l/min	15,0
Continuous hot water flow rate ΔT 30°C	l/min	10,9
Min/max hot water pressure	bar	0,2/7,0
Boiler capacity	l	55
Time of recovery from 25 to 55°C	min	7'30"
D.H.W. expansion vessel capacity	l	2,5
NOx emission class		3 (<150 mg/kWh)
Weight	kg	64



Hydraulic connections

M	C.H. flow	3/4"
R	C.H. return	3/4"
G	Gas supply	3/4"
E	D.H.W. inlet	1/2"
U	D.H.W. outlet	1/2"
C	Recirculation	1/2"

Within the scope of the "20-20-20 Plan", the European Union has passed a number of known directives including:

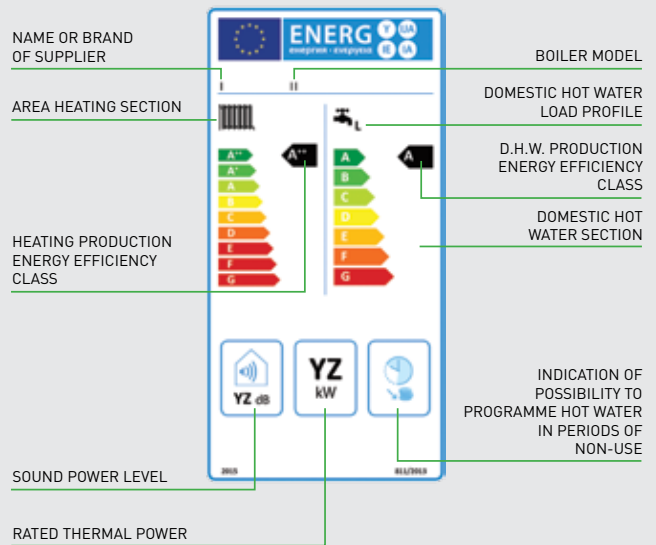
- › **Energy Related Products (ErP) Directive**, which regulates eco-compatible design
- › **Energy Labelling Directive (ELD)**, which regulates the labelling of devices based on their energy efficiency.

ECO-COMPATIBLE DESIGN (ErP)

Regulations covering ECO-COMPATIBLE DESIGN define the requirements that products must satisfy in order to be commercialised in the European market **from 26th September 2015**, specifically in regards to minimum heating and domestic hot water efficiency, maximum allowed polluting agents and noise levels. Moreover, **from 1st August 2015**, domestic hot water boilers can only be operated with high-efficiency circulator pumps.

ENERGY LABELLING (ELD)

From 26th September 2015, equipment with an output up to 70 kW and domestic hot water boilers with a volume up to 500 litres must carry **ENERGY LABELS** classifying products according to their level of efficiency, in a scale from **A+++** to **G**.



ENERGY LABEL FOR COMBINED HEATING EQUIPMENT



Fonderie Sime. S.p.A has obtained voluntary certifications ISO 14001 and OHSAS 18001, constituting international recognition of the commitment and responsibility assumed by Sime on matters of the environment and worker safety. Through the successful achievement of this objective, Sime has materialised its corporate mission, while undertaking to continuously improve its current activities and future processes.

