



IMMERGAS

MAGIS COMBO

Hybrid heat pump

NEW NEW NEW NEW NEW NEW NEW NEW



MAGIS COMBO

Heat pump and condensing: the intelligence and efficiency of hybrids

MAGIS COMBO is the hybrid heat pump that **heats, cools and produces hot water with an internal condensing unit designed to meet the highest demands.**

The outdoor condensing unit is available in 3 single-phase versions: 5, 8 and 10 kW. The internal unit is equipped with a condensing generator (27 kW for hot water production and 24 kW for heating) and an integrated hydronic module that controls the exchange of energy between the refrigeration circuit and the water circuit.

MAGIS COMBO takes up **little space** and, compared to condensing boilers, allows for **significant energy saving** thanks to its high energy efficiency. **It is particularly well suited to new homes** built with high insulation criteria and **an excellent solution when replacing** old generators on medium and high-temperature systems, as its heating temperature can reach **up to 80 °C.**

The system comes in two versions:

MAGIS COMBO (combi version)

Connection in series to a separate boiler makes it possible to add solar heating for domestic hot water production. The solar probe kit is optional.

MAGIS COMBO PLUS (heating only version)

The internal unit is designed for combination with a separate storage tank unit for domestic hot water (optional). In the domestic hot water mode, the internal unit and heat pump work on a single boiler supply/return circuit.





SOLUTIONS FOR NEW HOMES

MAGIS COMBO extends the Immergas range of split solutions, which started with MAGIS PRO ErP. These systems require installation by qualified professionals with F-GAS license for refrigeration connection between the two units. Ideal for achieving very high energy ratings in new residential buildings.

INCENTIVE FOR REPLACEMENT

Compared to a condensing boiler, it offers greater savings in management costs.

INTEGRATED INTELLIGENT ELECTRONICS

The circuit board assigns priority to internal unit or heat pump based on weather conditions, to ensure top performance in any season.

PROTECTION AGAINST FREEZING

The MAGIS COMBO split solution is well suited to the design of systems in very cold areas.

COMPACT SOLUTION

The generators are well integrated to give an advantage in terms of installation and reduce overall space needs.

REDUCED VISUAL IMPACT

The external unit is smaller than a normal hydronic heat pump, giving more flexibility when choosing a position on external walls or on a balcony.

IDEAL FOR COMBINATION WITH PHOTOVOLTAIC SYSTEMS





MAIN FEATURES INTERNAL UNIT

48 plates R410A / water exchanger

Stainless steel condensing module

10 litres expansion vessel

Flowswitch that activates heat pump unit just if the water flow rate is enough

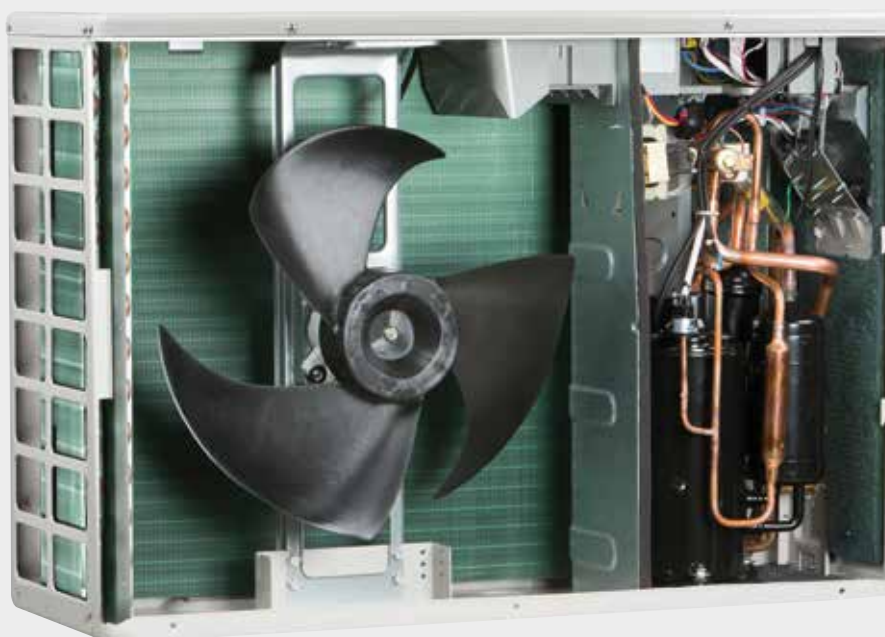
Hydraulic group – 7,5 head m.w.c. low consumption circulator for heat pump unit (in the PLUS version can manage also DHW mode)

Hydraulic group - 7 head m.w.c. low consumption circulator for condensing internal unit circuit

PCB prearranged to manage 2 zones (without System controller), 1 direct and 1 mixed temperature (heating and cooling)

System Controller (optional) to manage systems with more zones

Standard shut off knobs with 3/4" filter as standard



AUDAX PRO 5

MAIN FEATURES OUTDOOR CONDENSING UNIT (AUDAX PRO)

Inverter technology rotative compressor for all models

Preloaded **refrigerant GAS R410A**

Shut off knobs R410A as standard

Air finned heat exchanger (with single fan)

Electronic lamination valve

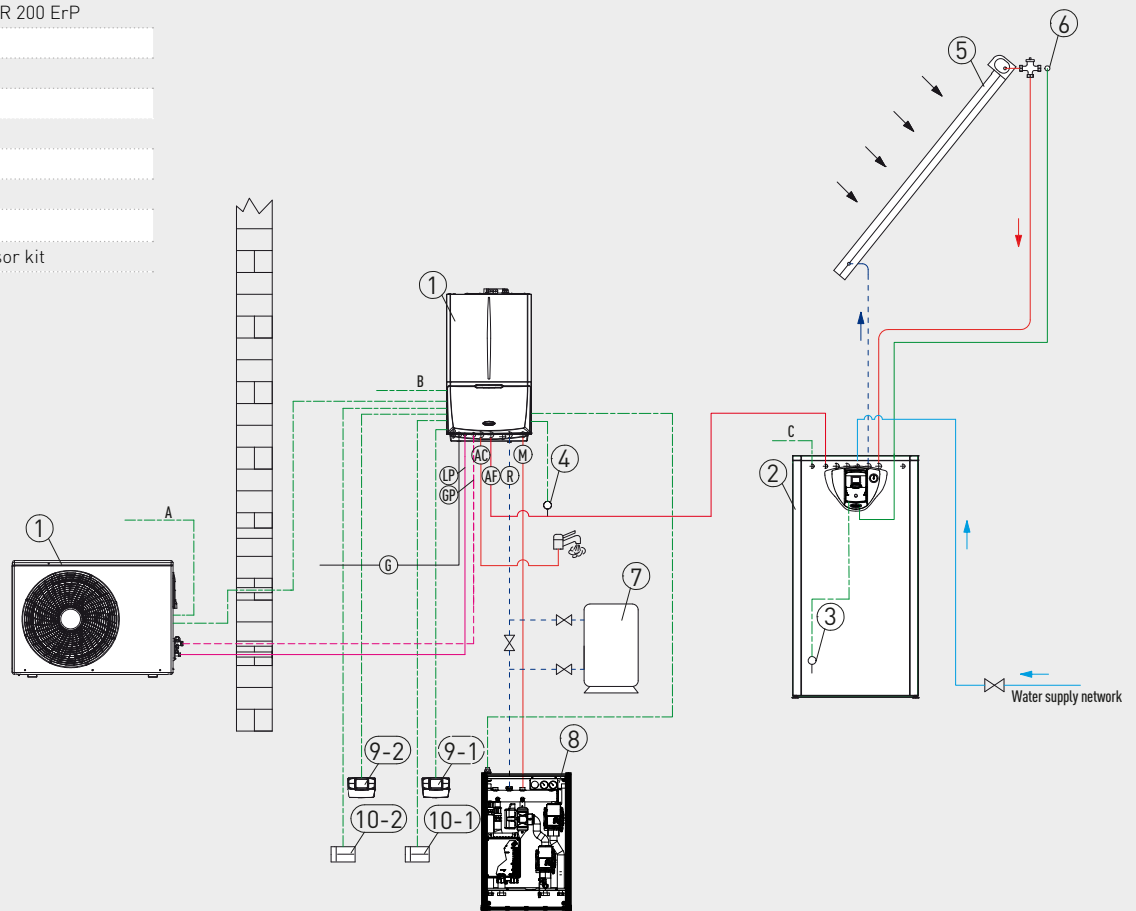
4-way valve for cycle inversion

Reversible **heating and cooling function**

Possible **installation outdoor** without protection

Key

1	MAGIS COMBO
2	DHW storage tank UB INOX SOLAR 200 ErP
3	Storage tank NTC probe
4	Solar probe kit
5	Flat-Plate solar collectors
6	Solar collector probe
7	Buffer tank (to dimension)
8	Distribution manifold kit (2 zones)
9	CAR ^{v2}
10	Temperature/humidity active sensor kit



EXAMPLE OF CONFIGURATION FOR MAGIS COMBO WITH TWO SYSTEM ZONES

Installation is also recommended as replacement of existing boilers in systems with fan coils or medium-temperature radiators.

Room heating mode

MAGIS COMBO is switched on by a request from one of the two system zones. If the time required to reach full capacity is longer than the set time, internal unit will be triggered.

Room cooling mode

MAGIS COMBO is switched on by a request from one of the two system zones.

Domestic hot water mode

Condensing internal unit will provide to domestic hot water production.

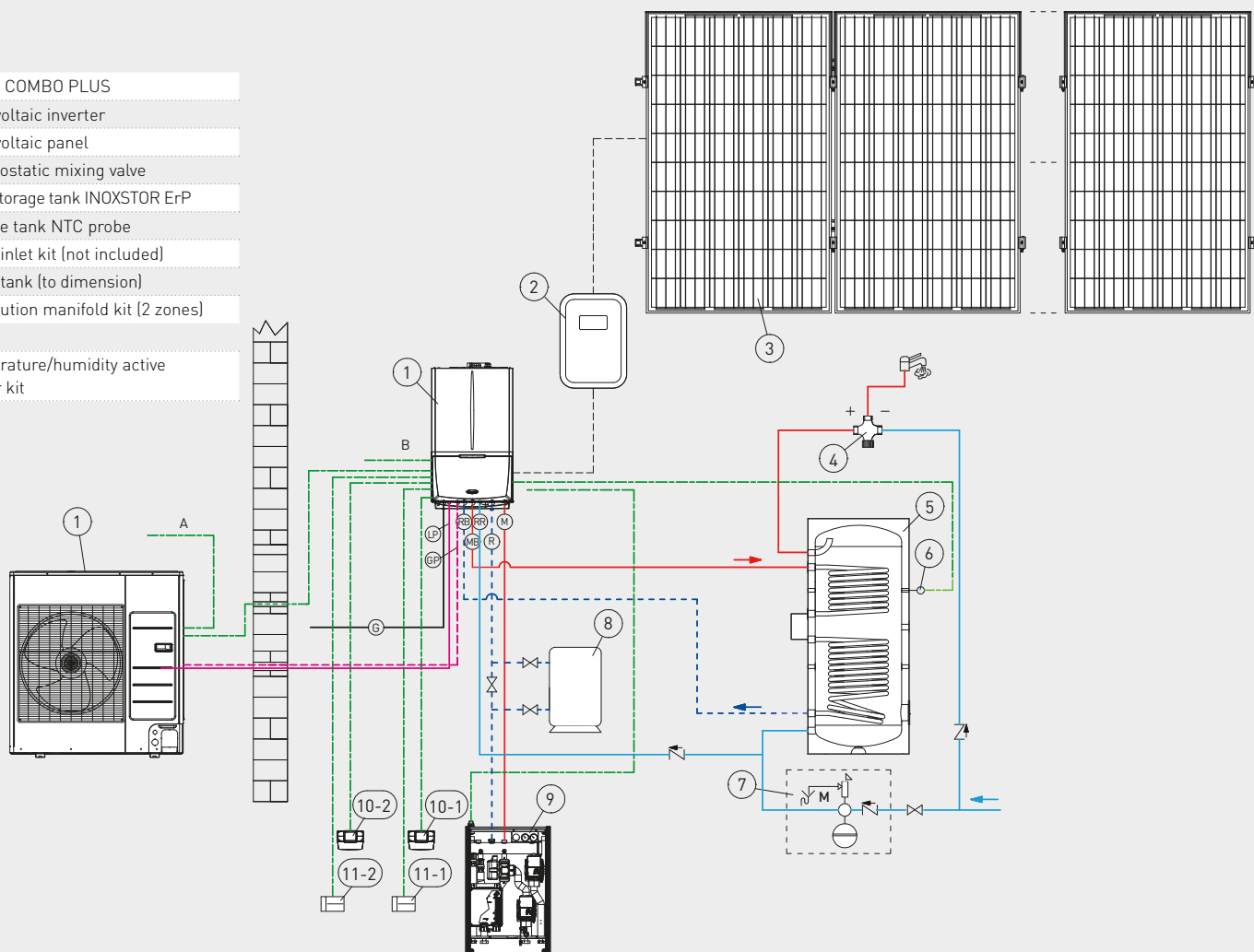
Storage tank unit is combined with a serie connection: it's ideal in situation where the product is coupled to a solar heating system with the possibility to have pre-heated hot water from the solar system.

NOTE: the inclusion and sizing of buffer tank will be decided based on the quantity of water in the heating system.



Key

1	MAGIS COMBO PLUS
2	Photovoltaic inverter
3	Photovoltaic panel
4	Thermostatic mixing valve
5	DHW storage tank INOXSTOR ErP
6	Storage tank NTC probe
7	Safety inlet kit (not included)
8	Buffer tank (to dimension)
9	Distribution manifold kit (2 zones)
10	CAR ^{v2}
11	Temperature/humidity active sensor kit



EXAMPLE OF CONFIGURATION FOR MAGIS COMBO PLUS WITH TWO SYSTEM ZONES AND PHV SYSTEM

Ideal installation in new homes to achieve a high energy efficiency rating and large % of power from Renewable Energy Sources.

Room heating mode

MAGIS COMBO PLUS is switched on by a request from one of the two system zones. If the time required to reach full capacity is longer than the set time, internal unit will be triggered.

Room cooling mode

MAGIS COMBO PLUS is switched on by a request from one of the two system zones.

Domestic hot water mode

With MAGIS COMBO PLUS, heat pump and internal unit operate on a single supply/return circuit in the Storage Tank Unit. For domestic hot water production, the system features the possibility of choosing between two options:

- operation with priority to domestic hot water over the system;
- simultaneous operation, favouring the internal condensing unit for domestic hot water.

NOTE: the inclusion and sizing of buffer tank will be decided based on the quantity of water in the heating system.



Technical characteristics	Unit of measurement	MAGIS COMBO 5	MAGIS COMBO 8	MAGIS COMBO 10
Code	N.G.	3.027234	3.027235	3.027236
Code	L.P.G.	3.027246	3.027247	3.027248
CE certificate		0476CR1328	0476CR1328	0476CR1328
Refrigerant quantity (R410A)	g	1.200	2.000	2.000
Heating capacity (system water 35 °C)	kW	5,80	7,71	9,70
Heating capacity (system water 45 °C)	kW	5,30	7,26	9,27
Heating capacity (system water 55 °C)	kW	4,80	6,17	8,45
Flow temperature range (C.H.)	°C	25 - 55	25 - 55	25 - 55
Outside air temperature range (C.H.)	°C	-20/35	-20/35	-20/35
COP (system water 35 °C)		4,53	4,08	4,09
COP (system water 45 °C)		3,42	3,13	3,11
COP (system water 55 °C)		2,64	2,34	2,35
Cooling capacity (system water 18 °C)	kW	6,03	7,58	7,58
Cooling capacity (system water 7 °C)	kW	4,90	5,38	7,31
Flow temperature range (cooling)	°C	7-25	7-25	7-25
Outside air temperature range (cooling)	°C	10-46	10-46	10-46
EER (system water 18 °C)		3,61	3,77	3,77
EER (system water 7 °C)		2,62	2,41	2,38
Power supply	V - Hz	230-50	230-50	230-50
Maximum power absorbed	W	3.200	4.130	5.200
Condensing unit weight (empty)	kg	47,5	74,0	74,0
DATA REFERRED TO INTERNAL CONDENSING UNIT				
Pump absorbed power (internal unit circuit)	W	60	60	60
Pump absorbed power (refrigerant circuit)	W	52	52	52
Maximum nominal heat input (D.H.W. mode)	kW	28,1	28,1	28,1
Maximum nominal heat input (C.H. mode)	kW	24,9	24,9	24,9
Minimum nominal heat input	kW	5,1	5,1	5,1
Maximum nominal heat output (D.H.W. mode)	kW	27,3	27,3	27,3
Maximum nominal heat output (C.H. mode)	kW	24,0	24,0	24,0
Minimum nominal heat output	kW	4,8	4,8	4,8
Efficiency at nominal heat output (80/60 °C)	%	96,2	96,2	96,2
Efficiency at 30% of load (80/60 °C)	%	98,4	98,4	98,4
Efficiency at nominal heat output (40/30 °C)	%	106,8	106,8	106,8
Efficiency at 30% of load (40/30 °C)	%	106,1	106,1	106,1
Flow temperature range (C.H.)	°C	20-80	20-80	20-80
NO _x class		6	6	6
Flow rate capacity in continuous duty (Δt 30 °C)	l/min	13,1	13,1	13,1
Central heating expansion vessel capacity (real)	l	10 [8,3]	10 [8,3]	10 [8,3]
Central heating circuit max pressure	bar	3	3	3
Appliance water content	l	2,8	2,8	2,8
Weight (empty)	kg	55,8	55,8	55,8

Refer to the following conditions:

Environment	Heating (°C)	Cooling (°C)
T system water (R/M) - air (bs/bu)	30/35 - 7/6	23/18 - 35 (bs)
T system water (R/M) - air (bs/bu)	40/45 - 7/6	12/7 - 35 (bs)

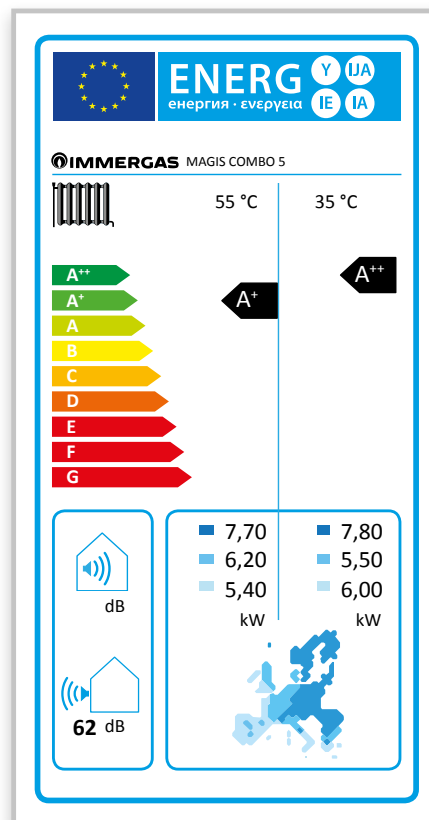
Technical data reported may be subject to change.

For more information consult the technical sheet or the website immergas.com

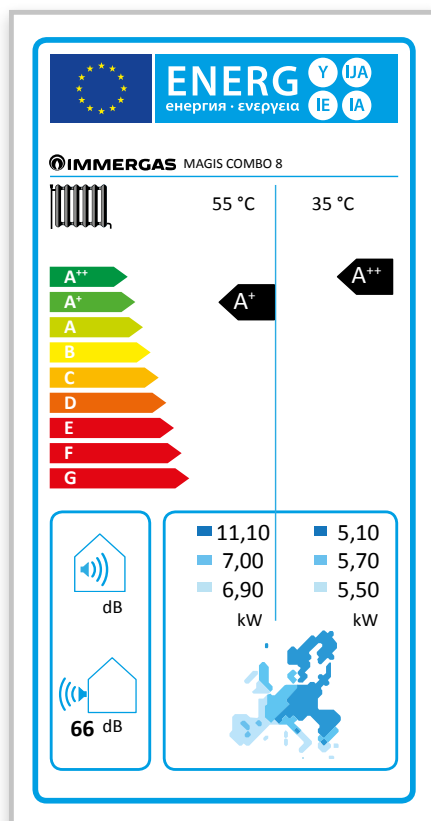


In accordance with the ELD directive (in conformity with regulation 811/2013), we include the label of each water heater to enable customers to evaluate the products. The labels are shown in the documentation accompanying the units as well as on the immergas.com website in each product's page.

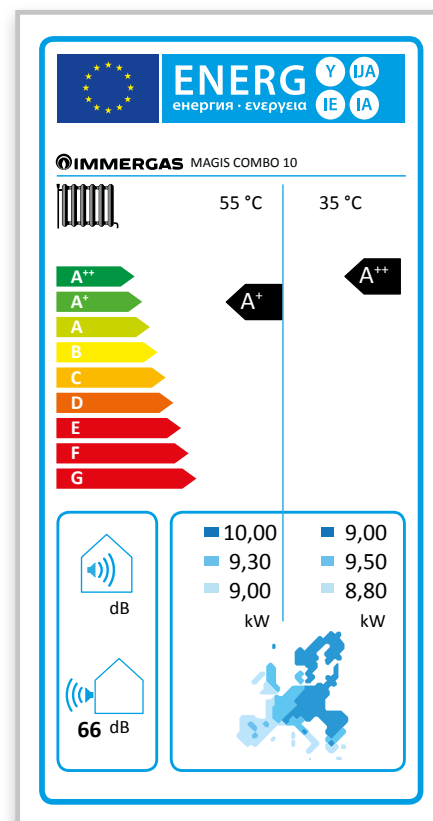
MAGIS COMBO 5



MAGIS COMBO 8



MAGIS COMBO 10



Technical characteristics	Unit of measurement	MAGIS COMBO 5 PLUS	MAGIS COMBO 8 PLUS	MAGIS COMBO 10 PLUS
Code	N.G.	3.027237	3.027238	3.027239
Code	L.P.G.	3.027249	3.027250	3.027251
CE certificate		0476CR1328	0476CR1328	0476CR1328
Refrigerant quantity (R410A)	g	1.200	2.000	2.000
Heating capacity (system water 35 °C)	kW	5,80	7,71	9,70
Heating capacity (system water 45 °C)	kW	5,30	7,26	9,27
Heating capacity (system water 55 °C)	kW	4,80	6,17	8,45
Flow temperature range (C.H.)	°C	25 - 55	25 - 55	25 - 55
Outside air temperature range (C.H.)	°C	-20/35	-20/35	-20/35
COP (system water 35 °C)		4,53	4,08	4,09
COP (system water 45 °C)		3,42	3,13	3,11
COP (system water 55 °C)		2,64	2,34	2,35
Cooling capacity (system water 18 °C)	kW	6,03	7,58	7,58
Cooling capacity (system water 7 °C)	kW	4,90	5,38	7,31
Flow temperature range (cooling)	°C	7-25	7-25	7-25
Outside air temperature range (cooling)	°C	10-46	10-46	10-46
EER (system water 18 °C)		3,61	3,77	3,77
EER (system water 7 °C)		2,62	2,41	2,38
Power supply	V - Hz	230-50	230-50	230-50
Maximum power absorbed	W	3.200	4.130	5.200
Condensing unit weight (empty)	kg	47,5	74,0	74,0
DATA REFERRED TO INTERNAL CONDENSING UNIT				
Pump absorbed power (internal unit circuit)	W	60	60	60
Pump absorbed power (refrigerant circuit)	W	52	52	52
Maximum nominal heat input (D.H.W. mode)	kW	28,1	28,1	28,1
Maximum nominal heat input (C.H. mode)	kW	24,9	24,9	24,9
Minimum nominal heat input	kW	5,1	5,1	5,1
Maximum nominal heat output (D.H.W. mode)	kW	27,3	27,3	27,3
Maximum nominal heat output (C.H. mode)	kW	24,0	24,0	24,0
Minimum nominal heat output	kW	4,8	4,8	4,8
Efficiency at nominal heat output (80/60 °C)	%	96,2	96,2	96,2
Efficiency at 30% of load (80/60 °C)	%	98,4	98,4	98,4
Efficiency at nominal heat output (40/30 °C)	%	106,8	106,8	106,8
Efficiency at 30% of load (40/30 °C)	%	106,1	106,1	106,1
Flow temperature range (C.H.)	°C	20-80	20-80	20-80
NO _x class		6	6	6
Central heating expansion vessel capacity (real)	l	10 (8,3)	10 (8,3)	10 (8,3)
Central heating circuit max pressure	bar	3	3	3
Appliance water content	l	2,5	2,5	2,5
Weight (empty)	kg	55	55	55

Refer to the following conditions:

Environment	Heating (°C)	Cooling (°C)
T system water (R/M) - air (bs/bu)	30/35 - 7/6	23/18 - 35 (bs)
T system water (R/M) - air (bs/bu)	40/45 - 7/6	12/7 - 35 (bs)

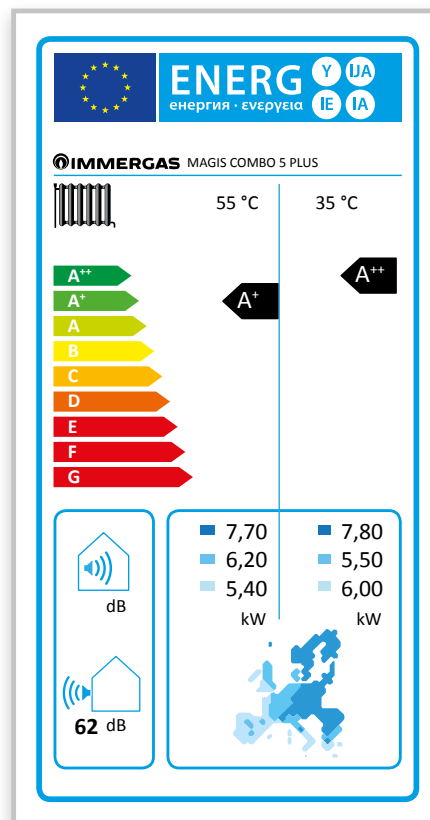
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For more information consult the technical sheet or the website immergas.com

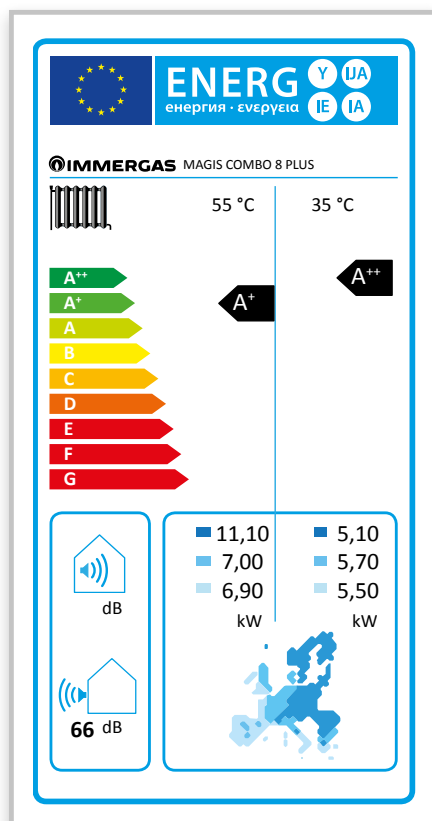


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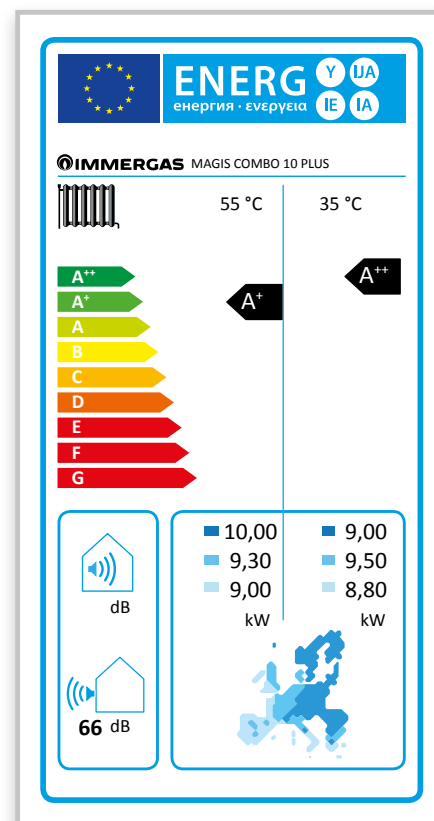
MAGIS COMBO 5 PLUS



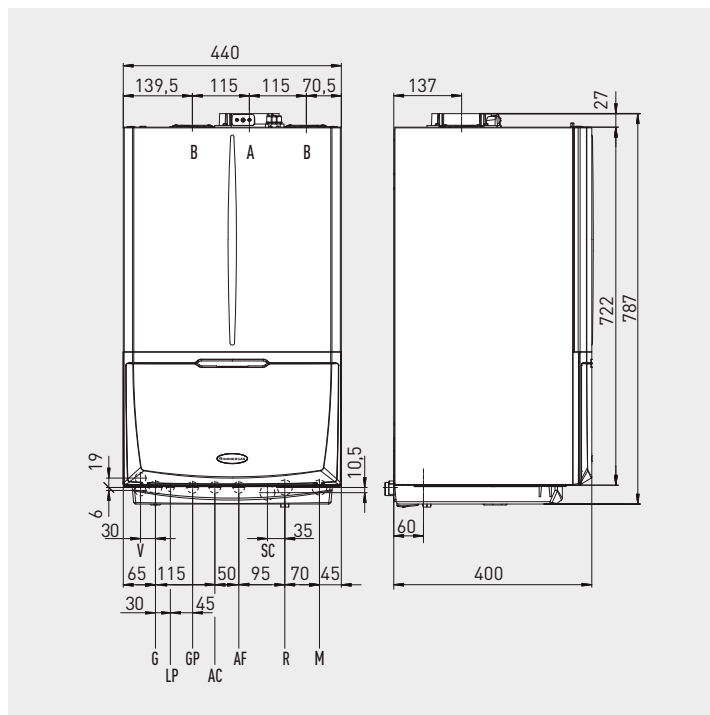
MAGIS COMBO 8 PLUS



MAGIS COMBO 10 PLUS



MAGIS COMBO



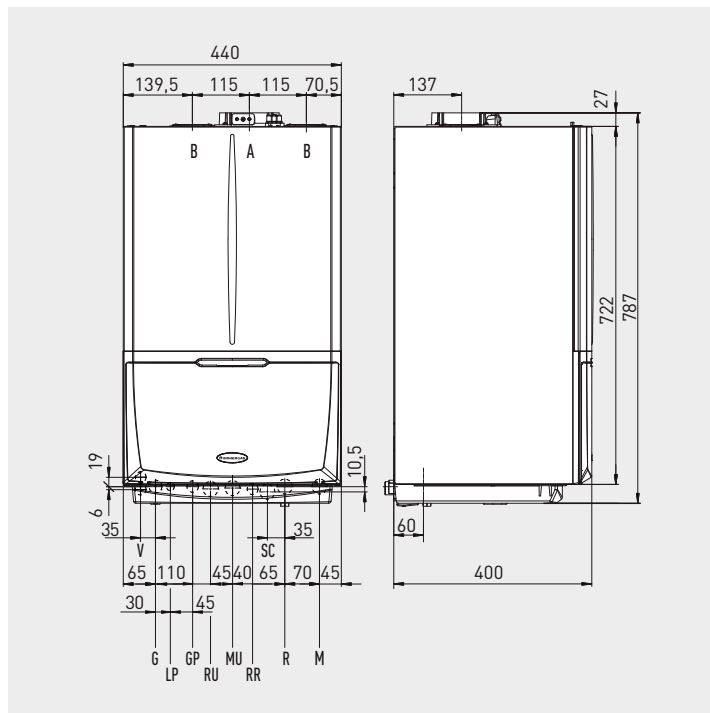
Key

V	Electrical connection
G	Gas supply
LP	Liquid refrigerant
GP	Gas refrigerant
AC	Domestic hot water outlet
AF	Domestic cold water inlet
SC	Condensate drain (minimum internal diameter 13 mm)
R	System return
M	System flow

Hydraulic connections

R410A		Gas	D.H.W.		System	
LP	GP	G	AC	AF	R	M
3/8"	5/8"	3/4"	1/2"	1/2"	3/4"	3/4"

MAGIS COMBO PLUS

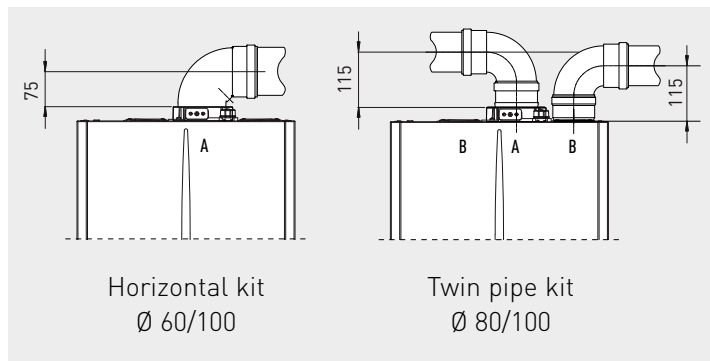



Key

V	Electrical connection
G	Gas supply
LP	Liquid refrigerant
GP	Gas refrigerant
RU	Return storage tank
MU	Flow storage tank
RR	System filling
SC	Condensate drain (minimum internal diameter 13 mm)
R	System return
M	System flow

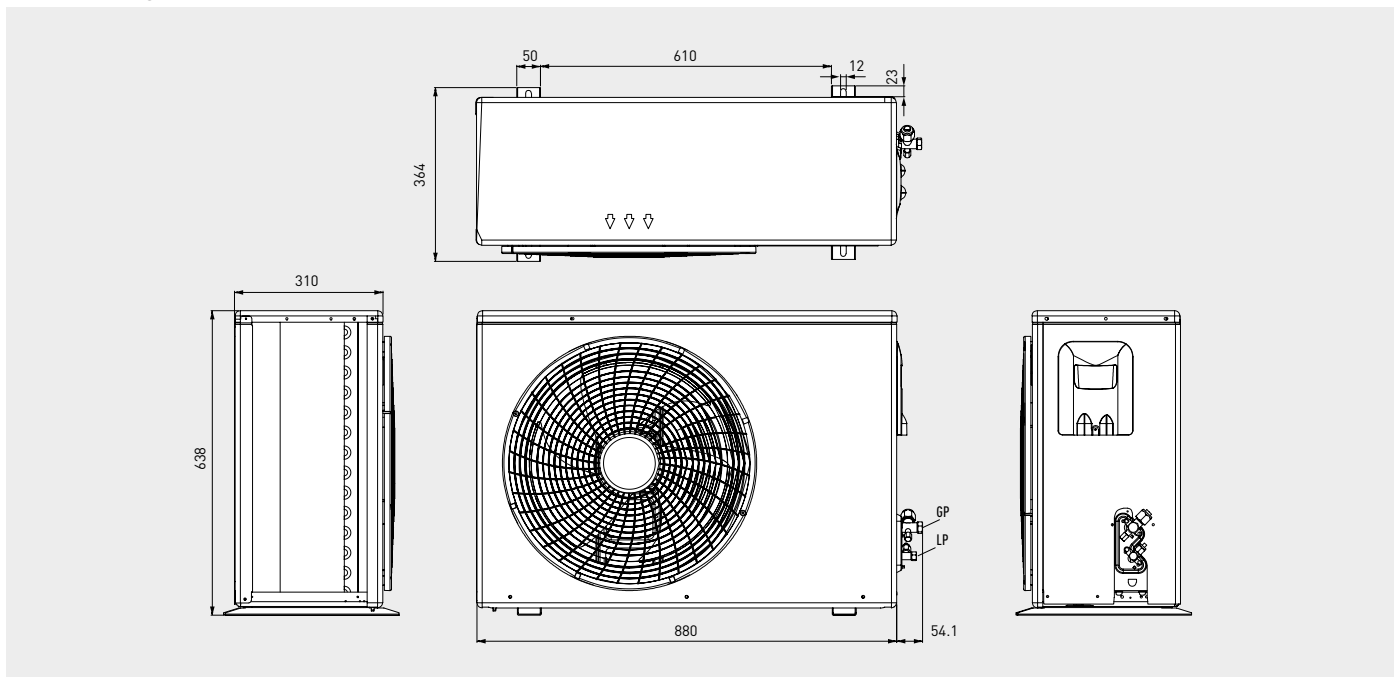
Hydraulic connections

R410A		Gas	D.H.W.		System
LP	GP	G	MU - RU	RR	R - M
3/8"	5/8"	3/4"	3/4"	1/2"	3/4"



 To ensure correct installation of internal unit, the air inlet/flue outlet pipes kit must be selected from the Immergas "Green Series".

Condensing unit AUDAX PRO 5



Hydraulic connections

R410A

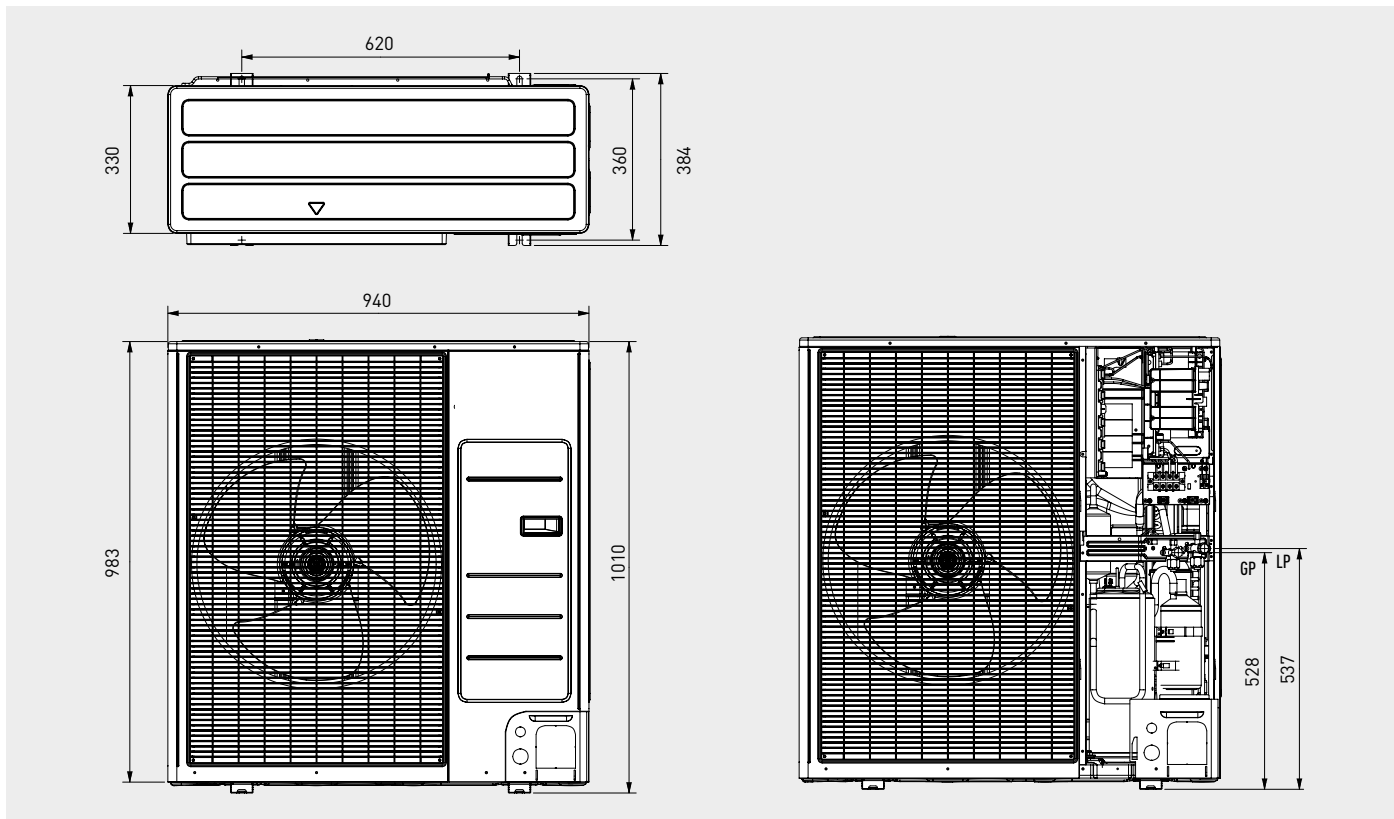
GP (gas refrigerant)

5/8" (15,88 mm)

LP (liquid refrigerant)

1/4" (6,35 mm)

Condensing unit AUDAX PRO 8/10



Hydraulic connections

R410A

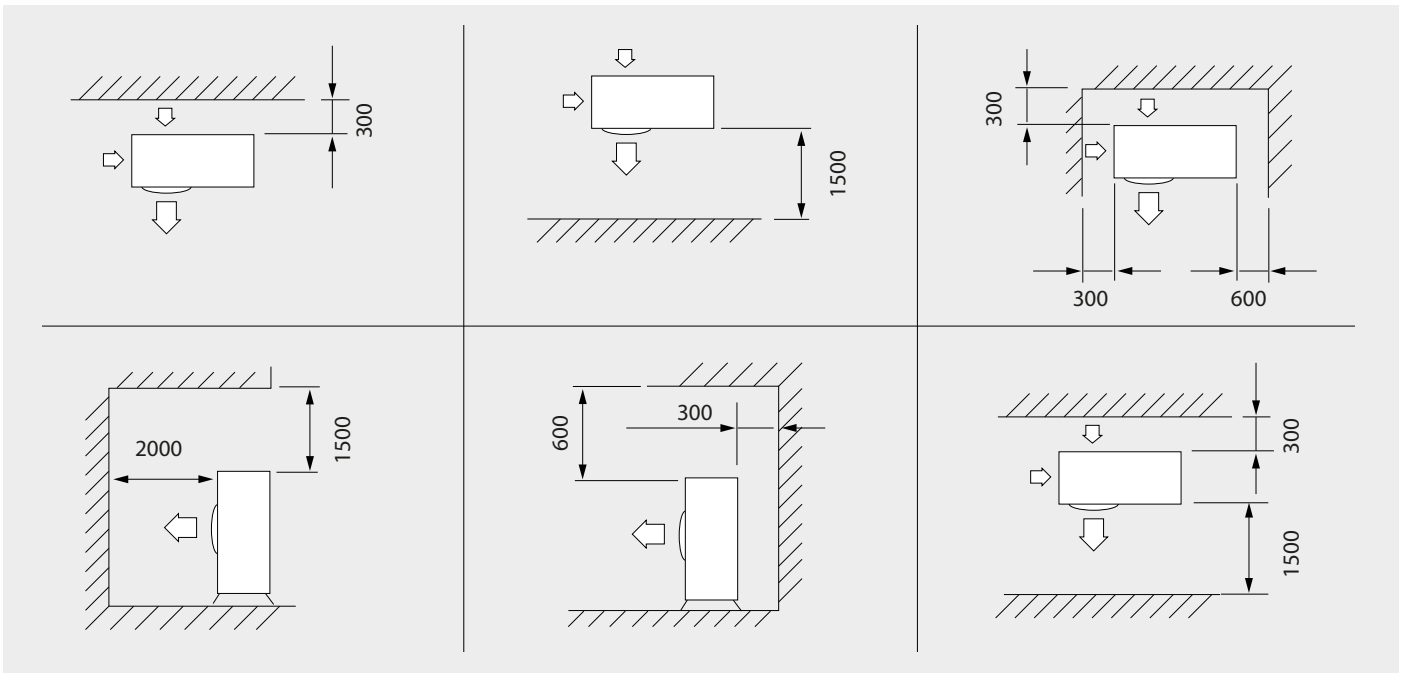
GP (gas refrigerant)

5/8" (15,88 mm)

LP (liquid refrigerant)

3/8" (9,52 mm)

Minimum distances for AUDAX PRO installation



Technical note - System minimum water content:

To facilitate proper execution of the heat pump defrost cycles, a minimum water content in the system is required, which must be: **7 U/kW** of the machine's power for any type of system. So attention must be paid to the systems divided over several zones, where the water content available to the machine changes continuously.

This is why it may be necessary to provide a heating flywheel that guarantees normal operation with systems divided into zones (with variable water content in circulation).

This minimum content also guarantees proper operation with fan coils used for cooling (a condition in which the flow temperature is very low and has significant heat load variations that vary the number of active fan coils). It is also important to check that the dehumidifier line has a minimum of **3 U/kW** of the machine (dehumidifier hydraulic circuit connection).

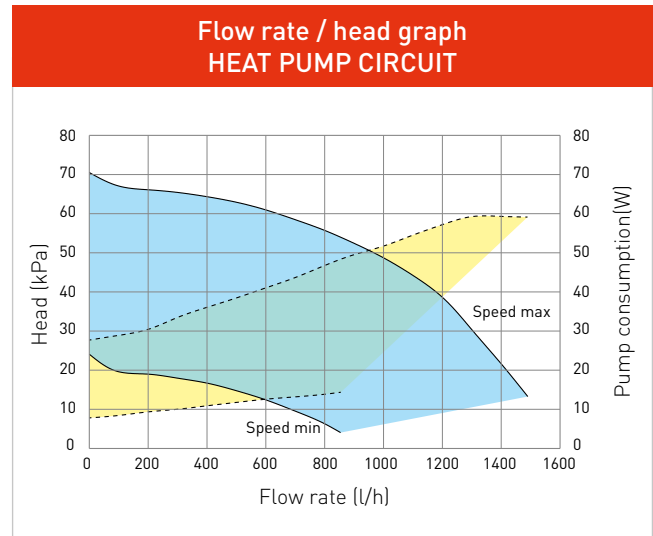
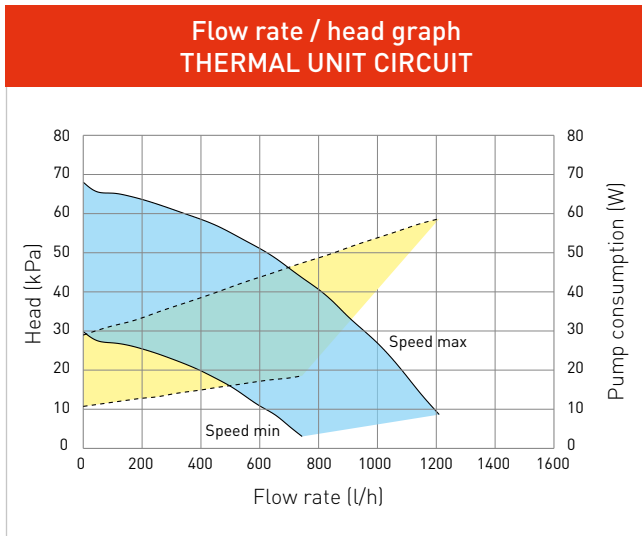
For the installation of the buffer tank, see on page 18.

Technical note - Installing the chiller lines:

The length of the pipes between the outdoor and indoor units and the difference must not exceed the specified limits.

The maximum lengths of the chiller lines are listed below, based on the condensing unit model and the type of installation:

	MAGIS COMBO 5/PLUS	MAGIS COMBO 8 and 10/PLUS
Length limit	≤ 30 m	≤ 50 m
Difference in height (with internal unit lower than outdoor unit)	≤ 20 m	≤ 30 m
Difference in height (with internal unit higher than outdoor unit)	≤ 20 m	≤ 15 m



Key

- Available head in the system
- Pump consumption

The internal unit is supplied with two low power consumption pumps with variable speed control. The heat pump circulator speed is set via parameter "A04" (which can be set between 55% and 100%). The thermal unit circulator speed is set via parameter "A19" (which can be set between 45% and 100%).

NOTE: for proper system operation, make sure that the minimum flow in operating conditions never drops below 500 l/h.


Combining MAGIS COMBO with a heat regulation device is an excellent investment because it improves the seasonal energy efficiency of the heating system. For each of the following heat regulation devices we therefore indicate a class, which gives you the percentage value of increased efficiency. System controller is only necessary to manage 3 or more system zones. In the other cases MAGIS COMBO electronic system permits a total independent management.

STANDARD INSTALLATION WITHOUT SYSTEM CONTROLLER

CAR^{v2} (Modulating remote control)

Type		Code
Modulating thermostat. Temperature control class V* or VI Contribution to seasonal space heating energy efficiency 3%* or 4%	 Dimensions (H x L x D) mm 103 x 142 x 31	3.021395

CRONO 7

ON-OFF Chronothermostat. Temperature control class IV* or VII Contribution to seasonal space heating energy efficiency 3%* or 4%	 Dimensions (H x L x D) mm 103 x 142 x 31	3.021622
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Available also in WIRELESS version – code 3.021624


Temperature/humidity active sensor kit

To be used with radiant systems that also work in cooling mode. Temperature control class V* or VI Contribution to seasonal space heating energy efficiency 3%* or 4%	 Dimensions (H x L x D) mm 127 x 80 x 30	3.021524
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Room hygrostat

To be used with radiant systems that also work in cooling mode	 Dimensions (H x L x D) mm 70 x 115 x 40	3.023302
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External probe

To be used when external probe as standard in outdoor condensing unit is not correctly exposed. Temperature control class: II*, VI or VII Contribution to seasonal space heating energy efficiency 2%*, 4% or 3,5%		3.015266
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2 relays board kit MAGIS COMBO - PRO

To be used without system controller to manage dehumidifiers		3.026302
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* Temperature control class with default settings. Some heat regulation device can change class depending on the settings and operation modes that can be changed, for example Modulating or ON/OFF. The use of these devices contributes, in percentage, to the seasonal energy efficiency of the heating system. For more information about installation with SYSTEM CONTROLLER (code 3.021522) contact the presales-dept.

Relay board kit

Type		Code
To be installed inside internal unit, allows interface between zone valves and CAR ^{V2}		3.015350

Safety thermostat kit

For generators set up with low temperature		3.019229
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Solar probe kit

To be installed on domestic cold water inlet pipe (for MAGIS COMBO)		3.021452
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Storage tank NTC probe kit



To be used connected to commercial storage tank unit with MAGIS COMBO PLUS		3.019375
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Inside the various range of options it is possible to find out complementary accessories for installing MAGIS COMBO, combi and PLUS version.

The use of original kits enhances quality and reliability of the products.

Stainless steel storage tank unit* for domestic hot water

Type		Code
UB INOX 80 ErP Equipped with 1 concentric coil water/water heat exchanger (only for MAGIS COMBO)		3.025594
UB INOX 120 ErP Equipped with 2 concentric coil water/water heat exchangers		3.025595
UB INOX 200 ErP Equipped with 2 concentric coil water/water heat exchangers		3.025596
UB INOX SOLAR 200 ErP Equipped with 2 concentric coil water/water heat exchangers and solar circuit included		3.025597
INOXSTOR 200 ErP Equipped with 2 concentric coil water/water heat exchangers		3.025598
INOXSTOR 300 ErP Equipped with 2 concentric coil water/water heat exchangers		3.025599

Buffer tank with capacity of 75 litres

Wall-hung or floor-standing installation NEW	Dimensions (H x Ø) mm 716 x 510	3.027288
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Bracket for buffer tank

Wall-hung installation NEW		3.027290
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Distribution manifold kit for 1 direct and 1 mixed temperature zones

For direct connection to MAGIS COMBO without system controller		3.026301
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Anti freeze protection kit -15 °C

To protect internal unit MAGIS COMBO		3.017324
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* Storage tank units can be connected to MAGIS COMBO with connection in series (with the possibility to have pre-heated hot water from the solar system) or to MAGIS COMBO PLUS: in this application internal unit and heat pump work in the same delivery/return circuit of the storage tank.


Connection kit for R410A circuit

Type	Code
The purpose of this kit is to allow an easy connection of the refrigerant circuit, even in the case of pipes coming out from the wall on the internal unit MAGIS COMBO	3.026089


Anti-scale kit

For MAGIS COMBO inside the building		3.017323
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Distribution manifold kit (only with system controller)

Distribution manifold kit for 1 direct and 2 mixed temperature zones (the kit includes an expansion for the system controller for each zone, a 24 Vac transformer and an NTC probe for each mixed delivery. Wall-hung or recessed installation)		3.021527
Distribution manifold kit for 2 mixed temperature zones (the kit includes an expansion for the system controller for each zone, a 24 Vac transformer and an NTC probe for each delivery. Wall-hung or recessed installation)		3.021528

Dehumidifier kit

Dehumidifier kit* Only for recessed installation with codes 3.022146 and 3.022147		3.021529
Dehumidifier back frame kit*		3.022146
Dehumidifier front grille kit*		3.022147

* Useful for radiant systems that work also in cooling.





App Immergas TOOLBOX



immergas.com



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	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	