



Dear Customer,

Congratulations for having chosen a top-quality Immergas product, able to assure well-being and safety for a long period of time. As an Immergas Customer, you can also count on a qualified after-sales service, prepared and updated to guarantee constant efficiency of your storage tank unit.

Read the following pages carefully: you will be able to draw useful tips on the proper use of the device, compliance with which will confirm your satisfaction with the Immergas product.

For assistance and routine maintenance, contact Authorised Service Centres: they have original spare parts and are specifically trained directly by the manufacturer.

General warnings

All Immergas products are protected with suitable transport packaging.

The material must be stored in a dry place protected from the weather.

The instruction booklet is an integral and essential part of the product and must be given to the new user in the case of transfer or succession of ownership.

It must be stored with care and consulted carefully, as all of the warnings provide important safety indications for installation, use and maintenance stages.

This instructions manual provides technical information regarding installation of Immergas storage tank units. As for the other issues related to installation of the said storage tank units (e.g. safety in the work site, environment protection, injury prevention), it is necessary to comply with the provisions specified in the regulations in force and principles of good practice.

In compliance with legislation in force, the systems must be designed by qualified professionals, within the dimensional limits established by the Law. Installation and maintenance must be performed in compliance with the regulations in force, according to the manufacturer's instructions and by an authorised company, which has the specific technical skills in the system sector, as provided for by Law.

Improper installation or assembly of the Immergas appliance and/or components, accessories, kits and devices can cause unexpected problems for people, animals and objects. Read the instructions provided with the product carefully to ensure proper installation.

Maintenance must be carried out by an authorised company. The Authorised After-sales Service represents a guarantee of qualification and professionalism.

The appliance must only be destined for the use for which it has been expressly declared. Any other use will be considered improper and therefore potentially dangerous.

If errors occur during installation, operation and maintenance, due to non-compliance with technical laws in force, standards or instructions contained in this book (or however supplied by the manufacturer), the manufacturer is excluded from any contractual and extra-contractual liability for any damage and the appliance warranty is invalidated.

The manufacturer declines all liability due to printing or transcription errors, reserving the right to make any modifications to its technical and commercial documents without forewarning.



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1 INSTALLATION STORAGE TANK UNIT

1.1 INSTALLATION RECOMMENDATIONS.

The place of installation of the appliance and relative Immergas accessories must have suitable features (technical and structural), such as to allow for (always in safe, efficient and comfortable conditions):

- installation (according to the provisions of technical legislation and technical regulations);
- maintenance operations (including scheduled, periodic, routine and special maintenance);
- removal (outdoors in the place for loading and transporting the appliances and components) as well as their eventual replacement with appliances and/or equivalent components.

Only professionally qualified companies are authorised to install Immergas appliances.

Installation must be carried out according to regulation standards, current legislation and in compliance with local technical regulations and the required technical procedures. Before installing the storage tank unit, ensure that it is delivered in perfect condition; if in doubt, contact the supplier immediately. Packing materials (staples, nails, plastic bags, polystyrene foam, etc.) constitute a hazard and must be kept out of the reach of children.

If the storage tank unit is installed inside or between cabinets, ensure there is sufficient space for normal servicing. It is advisable to leave an adequate gap between the storage tank casing and the sides of the cabinet.

A space of at least 650 mm is to be left in the upper part and 450 mm in the inspection and sacrificial anode connection areas.

In the event of malfunctions, faults or incorrect operation, turn the storage tank off and contact an authorised company (e.g. the Authorised Technical assistance centre, which has specifically trained staff and original spare parts). Do not attempt to modify or repair the appliance alone. Immergas is to comply with the conditions specified in the conventional warranty contract during the period of validity of the said warranty.

Failure to comply with the above implies personal responsibility and invalidates the warranty.

• Installation standards.

Check the features of the installation area in advance, in terms of overall dimensions and weight of the cylinder, setting up a supporting surface under the storage tank unit if necessary, to optimise weight distribution. These storage tank units have been designed for floor installation only; they must be used for the storage of domestic hot water and similar purposes. They have not been designed for wall-installation. Make sure that the volume and pre-charged pressure of the expansion tank of the secondary circuit are suitable for the system;

N.B.: it is mandatory to provide the use of a safety valve and an expansion vessel adequately sized to be fitted on both hydraulic circuits.

Attention.

This storage tank unit is designed to produce and store hot water, it must therefore be connected to a central heating system, to a domestic hot water distribution network and to the water system, compatibly with its specifications and heat output.

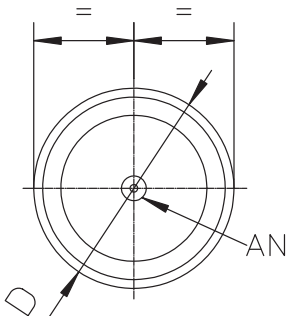
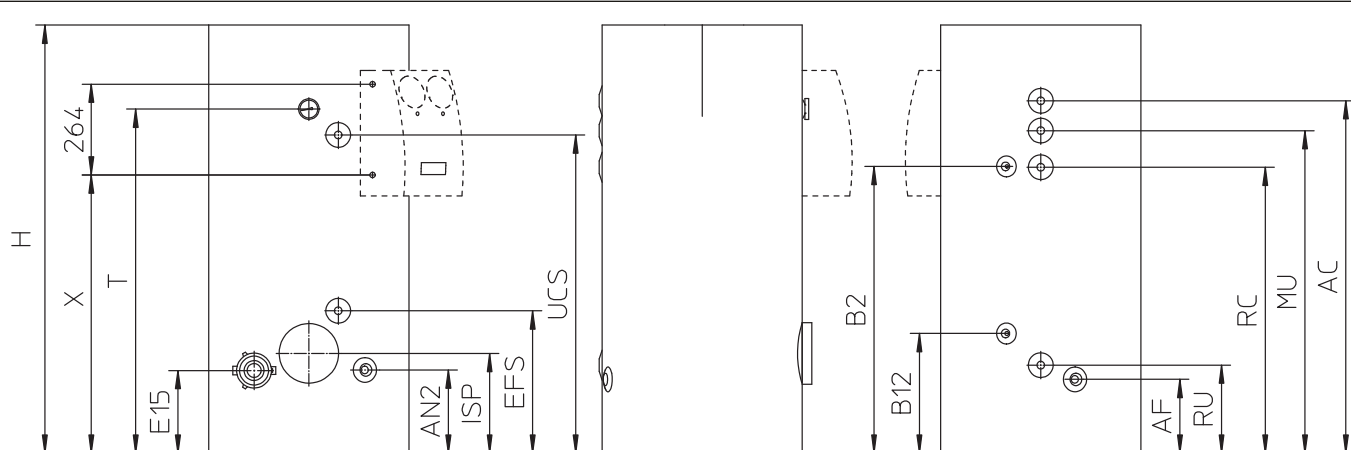
The materials used for installation and connection must be fully compatible with the minimum characteristics required for solar use.

It must also be installed in an environment in which the temperature cannot fall below 0°C.

It must not be exposed to atmospheric agents.



1.2 MAIN DIMENSIONS.



Key:

- D - Storage tank diameter
- H - Storage tank height
- T - Thermometer
- E15 - Domestic hot water integration resistance (Optional)
- ISP - Inspection storage tank flange
- B2 - DHW probe
- B12 - Solar storage tank probe
- RC - Domestic hot water pump (Optional)
- AC - Domestic hot water outlet
- MU - Storage tank unit flow
- RU - Storage tank unit return
- UCS - Heat exchanger hot outlet
- EFS - Heat exchanger cold outlet
- AF - Domestic cold water inlet
- AN - Anode 1 connection
- AN2 - Anode 2 connection

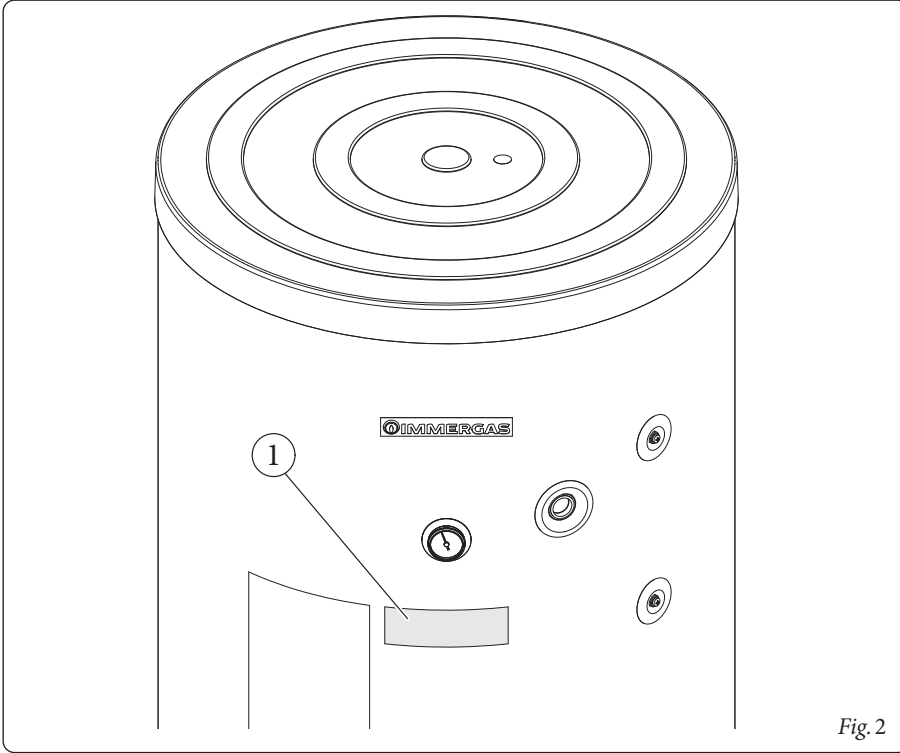
	OMNISTOR 300 (mm)	Ø	OMNISTOR 500 (mm)	Ø
D	Ø 620	--	Ø 810	--
H	1715	--	1735	--
T	1450	--	1350	--
X	1200	--	1180	--
E15	275	1" 1/2	270	1" 1/2
ISP	315	--	430	--
B2	970	--	900	--
B12	430	--	500	--
RC	1270	3/4"	1230	3/4"
AC	1450	3/4"	1420	3/4"
MU	1360	3/4"	1325	3/4"
RU	245	3/4"	245	3/4"
UCS	1400	3/4"	1380	3/4"
EFS	385	3/4"	365	3/4"
AF	222	3/4"	215	3/4"
AN	--	3/4"	--	3/4"
AN2	275	3/4"	270	3/4"

Fig. 1



1.3 DATA PLATE.

Data nameplate positioning.



Key (Fig. 2):
1 - Data plate

Fig. 2

Key for data nameplate.

IMMERGAS™			
Md.	Cod.Md.	Sr N°	CHK
Type:			
Product range:			
①			
②			
③			
④			

Fig. 3

Reference	Description
Md.	Model
Cod. Md.	Model code
Sr N°	Serial number
CHK	Check
Type	Type of appliance
Product range	Product range
1	Useful volume
2	Net weight
3	Maximum heating circuit operating temperature
4	Maximum working pressure

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USER

MAINTENANCE TECHNICIAN

TECHNICAL DATA



1.4 HYDRAULIC CONNECTION.

Before making the connections, all of the system piping must be washed thoroughly to remove any residues that could compromise the proper operation of the storage tank unit. Water connections must be made in a rational way.

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. The storage tank unit safety valve outlet must be connected to a draining funnel.

If this is not the case, the storage tank unit manufacturer declines any liability in the event of flooding if the drain valve cuts in.

Unused DHW side hydraulic connections are to be closed with hydraulic seal caps.

All connection fittings must be adequately insulated to minimise heat dispersion.

Insulated caps to be applied on unused fittings during installation are standard supplied.

Attention: to preserve the duration of the D.H.W. heat exchanger's efficiency features, we recommend the installation of a device to reduce the formation of lime scale in presence of water whose characteristics can lead to lime scale deposits.

1.5 SYSTEM FILLING.

After connecting the storage tank unit, fill the hydraulic circuits. Filling is performed at low speed to ensure releasing any air bubbles contained in the water through the vents installed on the system.

See the relative instruction manuals for the filling methods (boiler and heat pump).

1.6 DOMESTIC HOT WATER STORAGE TANK UNIT.

The storage tank unit must be connected to a heat generator and to a solar panel system by using the appropriate optional kit. It contains a large coiled heat exchanger pipe, which allows to notably reduce hot water production times.

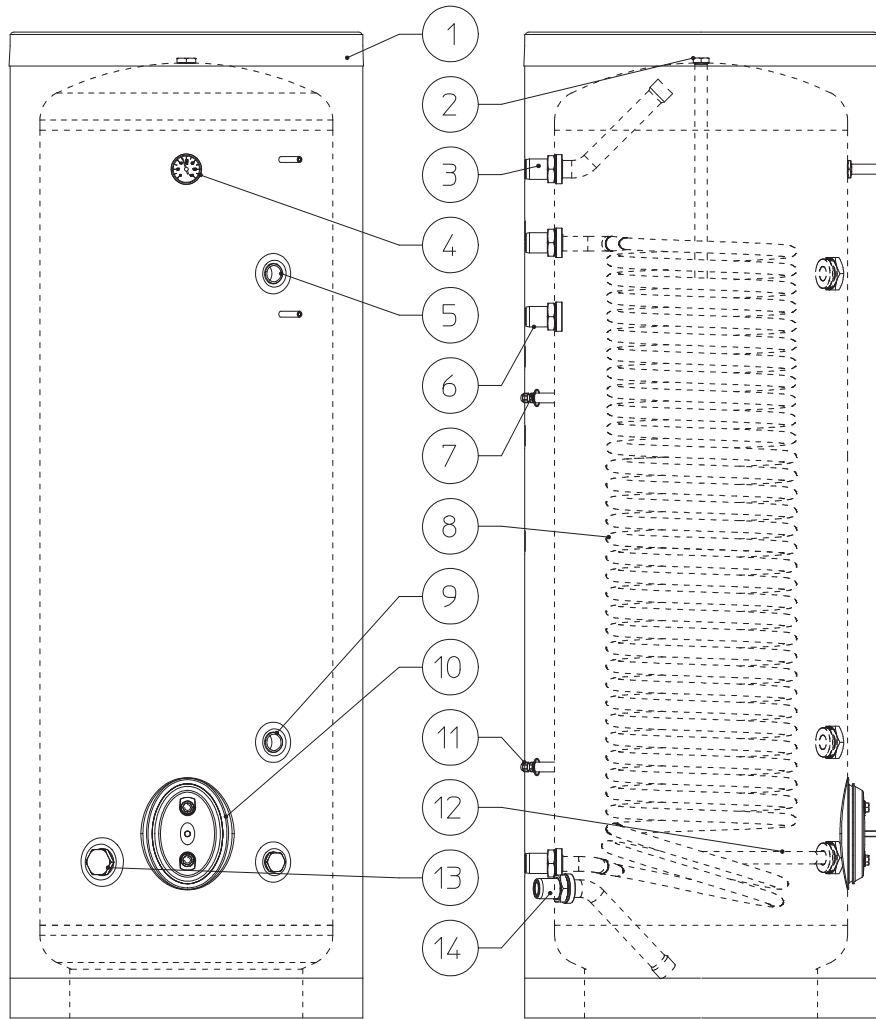
Storage tank units are insulated with high-performing insulating materials that can limit heat dispersion. The insulating material on Omnistor 300 litre model is about 60 mm thick and about 80 mm thick on the Omnistor 500 litre model.

- Protection: this storage tank unit manufactured with a stainless steel casing and bottom ensures a long life. The assembly concepts and welding (T.I.G.) are implemented to the minimum detail to ensure maximum reliability.
- Efficiency: the coil exchange surface is sized to provide high performance with heat pumps and for large hot water production.
- The storage tank unit has two seats to include the sacrificial anode, which is supplied as standard to protect the inner part of the storage tank unit against corrosion; one is on the upper part and the other is on the side of the storage tank unit.

N.B.: have the efficiency of the sacrificial anodes checked annually by a qualified company, (e.g. the Authorised Technical Assistance centre).



1.7 MAIN COMPONENTS.



Key:

- 1 - Insulating material
- 2 - Sacrificial anode L = 350 mm
(L = 590 mm for Omnistor 500)
(Seat for optional electronic anode)
- 3 - Hot outlet
- 4 - DHW thermometer
- 5 - Plate heat exchanger outlet
- 6 - Domestic hot water recirculation fitting (Optional)
- 7 - DHW probe
- 8 - Storage tank unit coil
- 9 - Plate heat exchanger inlet
- 10 - Inspection flange
- 11 - Solar storage tank unit probe
- 12 - Sacrificial anode L = 350 mm
(Seat for optional electronic anode)
- 13 - DHW integration resistance (Optional)
- 14 - Cold inlet

Fig. 4

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TECHNICAL DATA



1.8 KITS AVAILABLE ON REQUEST.

- Solar heating system coupling kit. The system is designed to be combined with the thermal solar system as supplementary energy source. The coupling kit is supplied complete with connection pipes, circulation unit and solar control unit.
- Storage tank unit integration resistance kit (on request). The storage tank unit is set up for application of an integration resistance to provide the anti-freeze function, which can be calibrated by a specific thermostat.
- Electronic anode kit. The storage tank unit is set up for the installation of the electronic anode. Direct current is made to circulate between the device and the tank to be protected via a special titanium anode screwed on and located inside storage tank unit itself. The capacity of the electronic anode of self learning and adjusting itself according to the actual conditions of the structure under protection make even the supply of the current dynamic and perfectly balanced with the requirements of the system to be protected.

The above-mentioned kits are supplied complete with instructions for assembly and use.



2 INSTRUCTIONS FOR USE AND MAINTENANCE

2.1 CLEANING AND MAINTENANCE.

Attention: to preserve the storage tank unit's integrity and keep the safety features, performance and reliability, which distinguish storage tank units, unchanged over time, you must at least execute maintenance operations on a yearly basis in compliance with what is stated in the relative point at "annual check and maintenance of the appliance". Annual maintenance is essential to validate the conventional warranty of Immergas. We recommend stipulating a yearly cleaning and maintenance contract with your zone Immergas Authorised After-sales Service.

2.2 OPERATION.

This storage tank unit enables easy provisioning of water for domestic use and industrial use.

The storage tank unit is connected to the water distribution network via the cold water fitting and to the utilities via the hot water fitting.

If a utility withdraws hot water, the cold water enters the tank where it is heated to the temperature set on the thermostat.

It is recommended to adjust the temperature between 48 and 55°C by means of heat pumps and between 60 and 65°C with boiler as this temperature guarantees the best performance of the storage tank unit and at the same time ensures:

- maximum hygiene;
- maximum affordability;
- delay in lime scale formation.

The DHW in the storage tank unit is heated with the passage of CH water, which circulates inside the coils inside the storage tank unit itself.

In all cases the maximum temperature inside the storage tank unit must not exceed 99°C.

2.3 EMPTYING THE STORAGE TANK UNIT.

To be able to carry out the storage tank unit emptying operation, use the special drain cocks set up during installation.

Before draining, ensure that the DHW inlet valve is closed.

2.4 CLEANING THE CASE.

To clean the outer parts of the storage tank unit, just use a cloth dampened with product suitable for the purpose that can be found on the market. Abrasive, solvents, petrol and alcohol products are not recommended.

2.5 DECOMMISSIONING.

In the event of decommissioning the storage tank unit, contact a qualified company for the relative operations, among other things making sure that water supply is disconnected.

At the end of its service life, the appliance must not be disposed of like normal household waste nor abandoned in the environment, but must be removed by a professionally authorised company. Contact the manufacturer for disposal instructions.

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TECHNICAL DATA



3 CONTROL AND MAINTENANCE

3.1 FUNCTIONAL DIAGRAMS.

Two examples of storage tank unit connection are provided below.

Omnistor - Magis Pro connection.

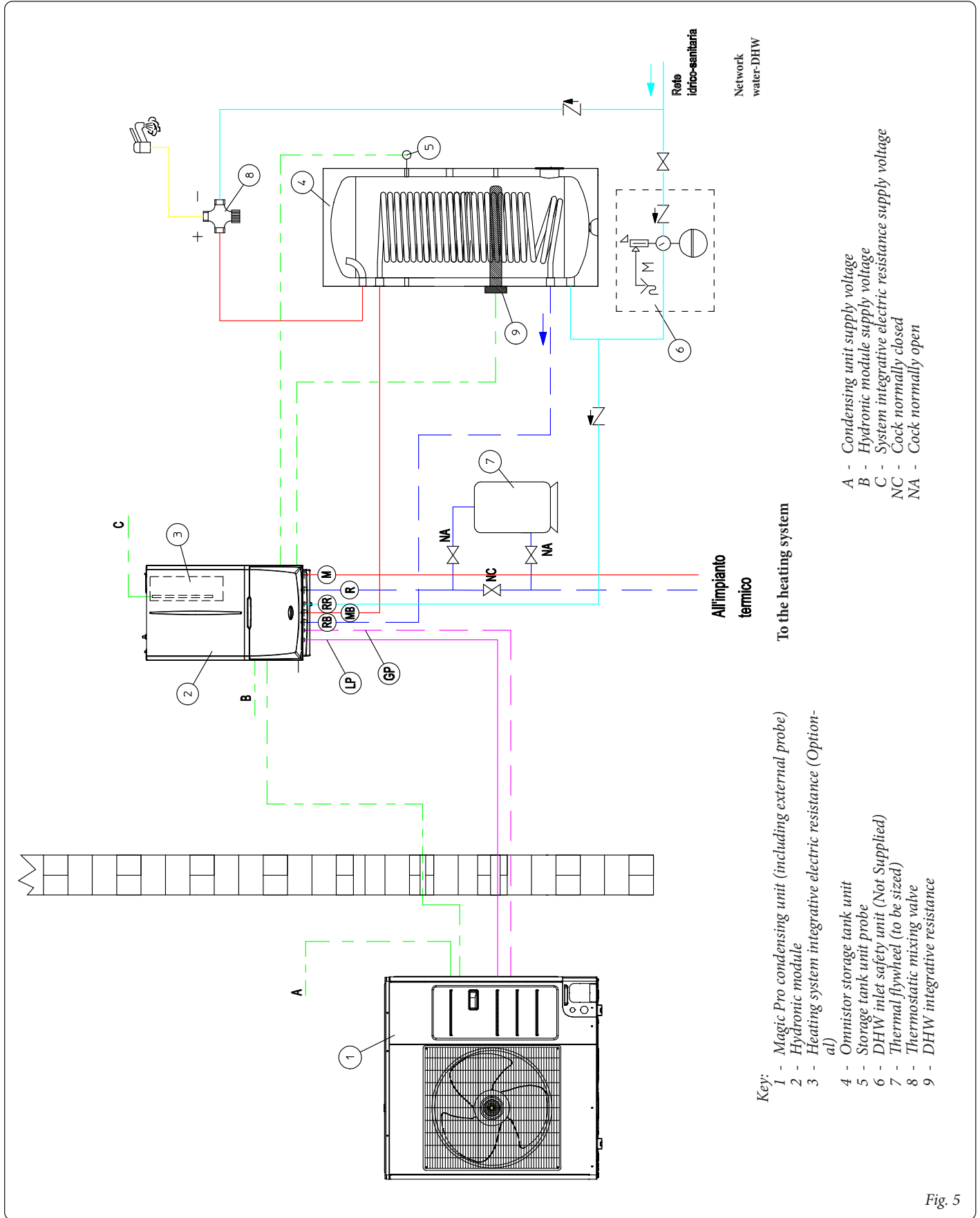


Fig. 5



3.2 YEARLY STORAGE TANK UNIT CHECK AND MAINTENANCE.

The following checks and maintenance should be performed at least once a year.

- Check for water leaks or oxidation from/on the fittings;
- Visually check that the safety and control devices have not been tampered with, in particular:
 - adjustment probes;
 - expansion vessel;
 - safety valve on D.H.W. side;
- Check integrity of the storage tank unit sacrificial anodes;
- In case of particularly hard water it is advisable to remove the lime scale from the storage tank unit at least once a year. To do so, it is necessary to empty the tank from the draining valve, remove the flange to access the inside, and then use a plastic or wooden spatula to remove the most stubborn sediments, then clean and rinse again with a jet of water.
- During cleaning, be very careful not to damage the protection inside the tank.
- When you have completed the process, put the flange back in place using the gasket (it if is damaged, replace it with a new one), close the draining valve and fill the tank ensuring that neither flange or valve are leaking.

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TECHNICAL DATA



4 TECHNICAL DATA STORAGE TANK.

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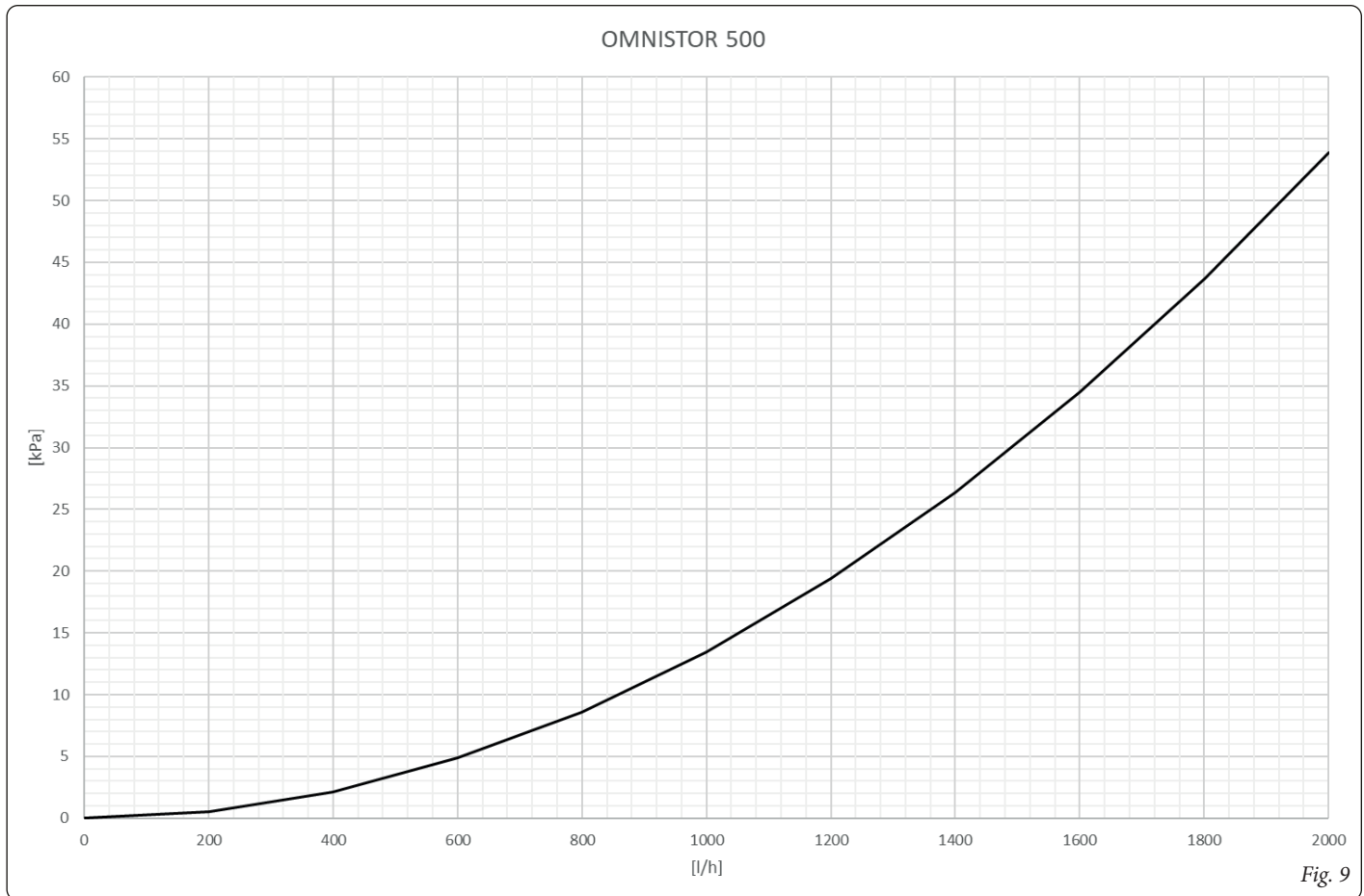
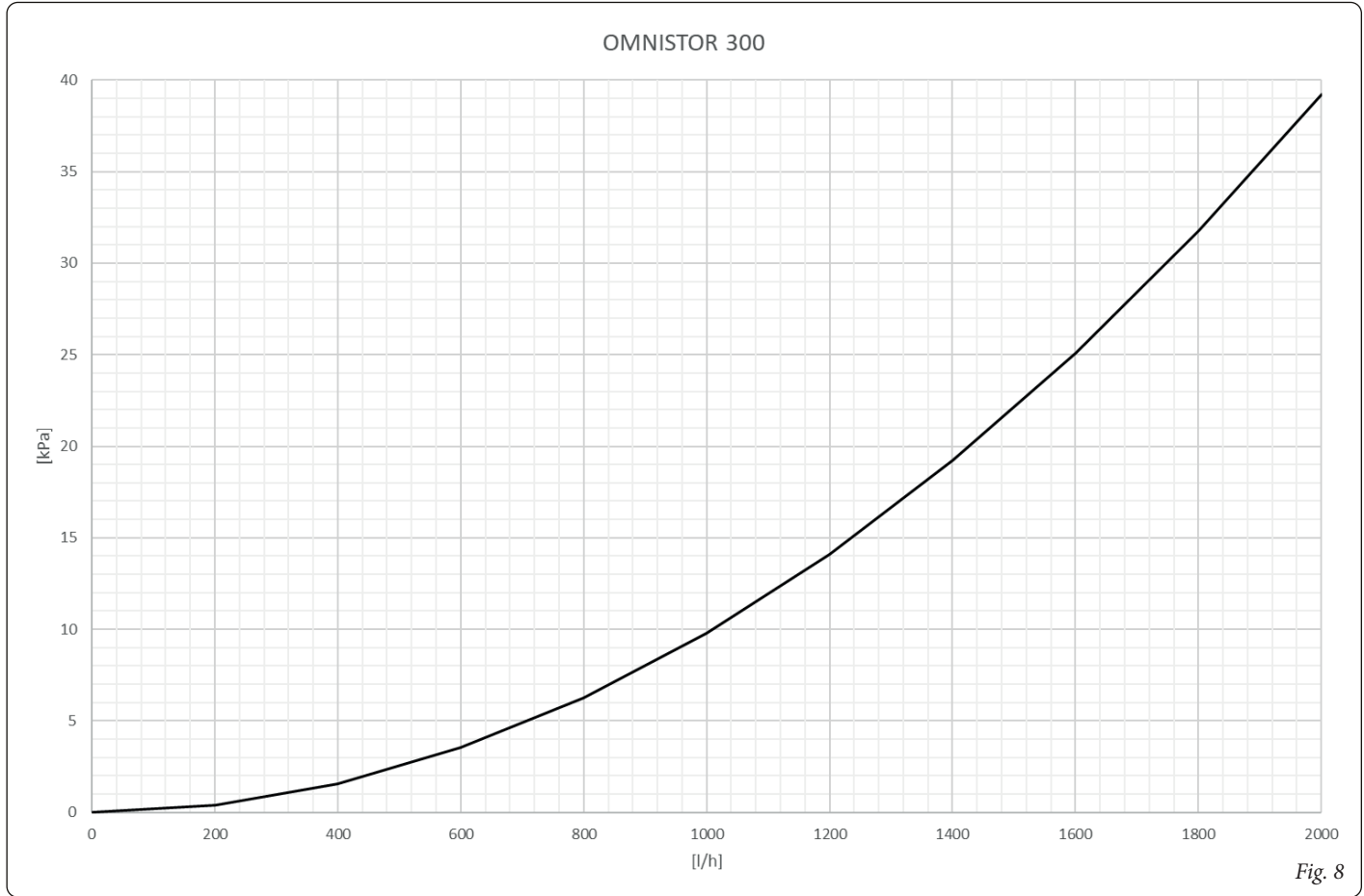
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TECHNICAL DATA

		OMNISTOR 300	OMNISTOR 500
Insulation material	-	GREINER NEODUL L	
Insulation thickness	mm	60	60
Heat dispersion	kWh/24h	2,18	2,41
Heat dispersion	W	91	100
Energy efficiency class	-	C	C
Heat dispersion (P _{sb} sol)	W/K	2,02	2,23
Nominal value	l	300	500
Useful volume	l	277	480
Maximum working pressure	bar	8	8
Maximum temperature	°C	99	99
Diameter with thermal insulation	mm	620	810
Height	mm	1715	1735
Tipping height	mm	1825	1915
Empty storage tank unit weight	kg	75,0	101,0
Dimensions with packaging (LxHxD)	mm	690 x 1925 x 690	885 x 1925 x 880
Weight of unit with packaging	kg	92,0	121,0
Protection against corrosion	-	Stainless steel AISI 316L + Magnesium anode	
DHW Tank Data - Upper coil			
Exchange surface	m ²	2,6	3,2
Coil capacity	l	14,3	17,6
Maximum working pressure	bar	6	6
Maximum temperature	°C	90	90
Coil outer diameter	mm	25	25
Coil thickness	mm	0,8	0,8
Coil length	mm	33300	41000



4.1 HEAD LOSSES.



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TECHNICAL DATA



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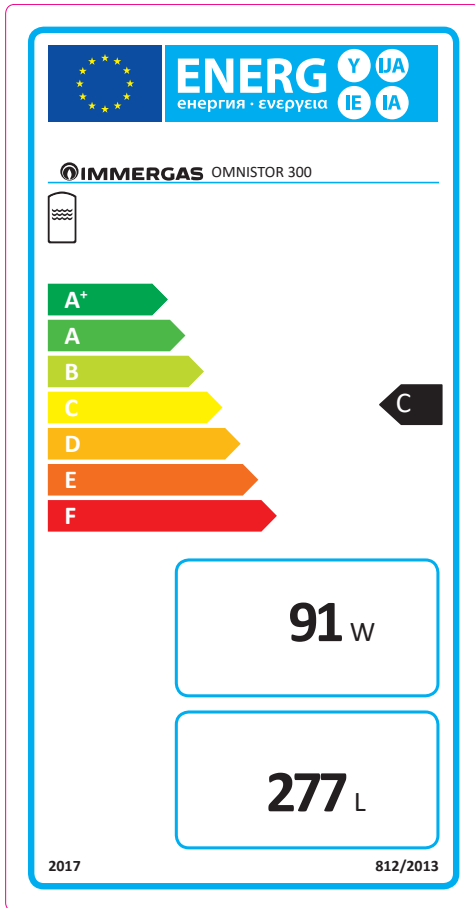
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MAINTENANCE TECHNICIAN

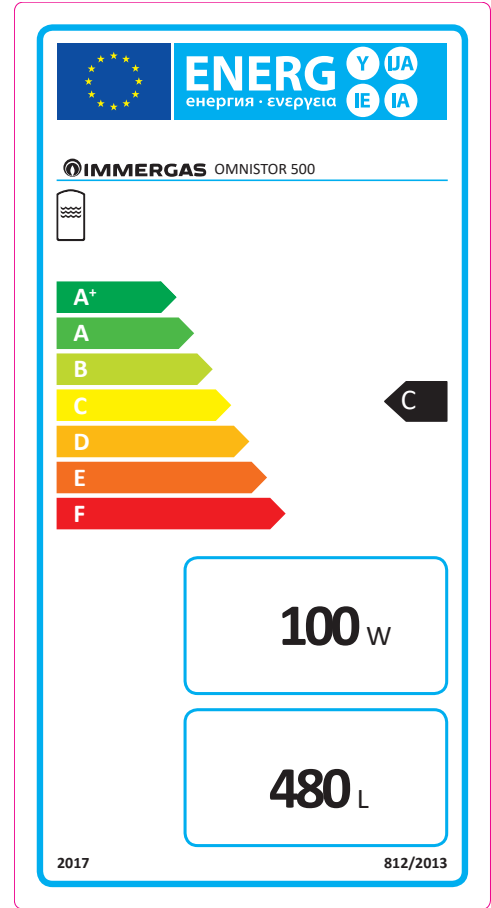
TECHNICAL DATA

4.2 PRODUCT FICHE (IN COMPLIANCE WITH REGULATION 812/2013).

OMNISTOR 300



OMNISTOR 500





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 This instruction booklet is made of ecological paper.

