

MAXIMUM USER'S

Instruction and **IE** recommendation booklet



STORAGE TANK UNIT 1000-1500-2000 V2



Dear Customer,

Our compliments 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 storage tank, compliance with which will confirm your satisfaction with the Immergas product.

For assistance and scheduled maintenance contact Authorised After-Sales centres: they have original spare parts and are specifically trained directly by the manufacturer.

General recommendations

All Immergas products are protected with suitable transport packaging.

The material must be stored in dry environments protected against bad weather.

The instruction book is an integral and essential part of the product and must be consigned to the new user also 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 specific technical expertise in the system sector, as required by Law.

Improper installation or assembly of the Immergas appliance and/or components, accessories, kit and devices can cause unexpected problems to people, animals and objects. Read the instructions provided with the product carefully to ensure a 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 the technical laws in force, standards or instructions contained in this manual (or however supplied by the manufacturer), the manufacturer accepts no contractual and extra-contractual liability for any damages and the storage tank warranty is invalidated.

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1 STORAGE TANK UNIT INSTALLATION

1.1 INSTALLATION RECOMMENDATIONS.

Only professionally enabled companies are authorised to install Immergas appliances.

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

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

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.

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. 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 if necessary, to optimise weight distribution. These storage tanks 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. Ensure that the useful heat output of the generator is at least 15% higher than the heat output that can be absorbed by the storage tank, and that the volume and factory-set pressure of the expansion tank of the secondary circuit are suitable for the system;

Attention: this storage tank unit is designed to produce and store hot water, it must therefore be connected to a 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 rooms where the temperature cannot fall below 0°C. It must not be exposed to the effects of the weather.

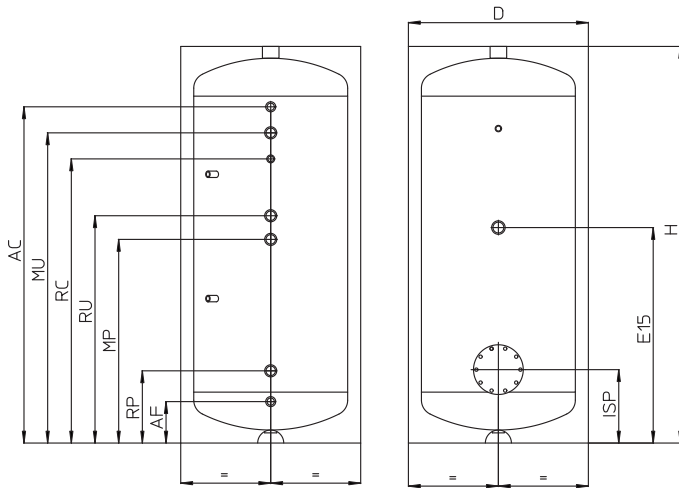
INSTALLER

USER

MAINTENANCE TECHNICIAN

1.2 MAIN DIMENSIONS.

V2 Vitrified steel Storage Tank Unit



- Key:
- D - Storage tank diameter
 - H - Storage tank height
 - ISP - Inspection flange
 - E15 - Storage tank integration resistance
 - AF - Domestic cold water inlet
 - RP - Return from solar panels
 - MP - Flow to solar panels
 - RU - Return from storage tank
 - RC - Recirculation (Optional)
 - MU - Flow to storage tank
 - AC - Domestic hot water outlet

	UB 1000 V2 Vitrified Storage Tank (mm)	Ø	UB 1500 V2 Vitrified Storage Tank (mm)	Ø	UB 2000 V2 Vitrified Storage Tank (mm)	Ø
D	Ø 950	--	Ø 1200	--	Ø 1300	--
H	2110	--	2250	--	2570	--
ISP	410	Ø 180	445	Ø 290	500	Ø 180
E15	1115	--	1315	--	1550	--
AF	180	1" 1/4	225	1" 1/2	460	2"
RP	375	1" 1/4	325	1" 1/4	570	1" 1/4
MP	1065	1" 1/4	1225	1" 1/4	1470	1" 1/4
RU	1170	1" 1/4	1395	1" 1/4	1670	1" 1/4
RC	1455	1"	1670	1"	600	1"
MU	1620	1" 1/4	1815	1" 1/4	1970	1" 1/4
AC	1805	1" 1/4	1955	1" 1/2	2140	2"

1-1

1.3 CONNECTION.

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. Water connections must be made in a rational way.

Attention: to preserve the duration and efficiency of the domestic hot water exchanger it is recommended to install the "polyphosphate dispenser" kit (or other device in compliance with Standard in force and perfectly) in the presence of water whose characteristics can give rise to scale deposits (in particular, and as an example, the device is recommended when water hardness is higher than 25 French degrees).

1.4 FILLING THE SYSTEM.

When the storage tank has been connected, fill the system. Filling is performed at low speed to ensure releasing any air bubbles contained in the water through the vents installed on the central heating system.

Close the filling valve when the boiler manometer pointer indicates approx. 1.2 bar (see boiler instruction book).

1.5 DOMESTIC HOT WATER STORAGE TANK UNIT.

The storage tank unit must be connected to a boiler and a solar panel system. It contains large coiled heat exchanger pipes, which help notably reduce hot water production times.

- Boiler protection:
 - Vitrified steel Storage Tank Units: treatment with glazed enamel (also called vitrification), gives the product a high capacity of inalterability of the chemical-physical features of the domestic hot water.

Additional quality support is provided by magnesium anodes installed, by standard, on the product. On request it is possible to install impressed current anodes.

- Efficiency: the coiled heat exchange surface is sized to supply large quantities of hot water.
- Heat insulation: the storage tanks with a capacity of 1000, 1500 and 2000 litres are insulated with flexible polyurethane with a thickness of 100 mm., CFC and HCFC-free.
- External casing: this is made of a coupled PVC sheath.

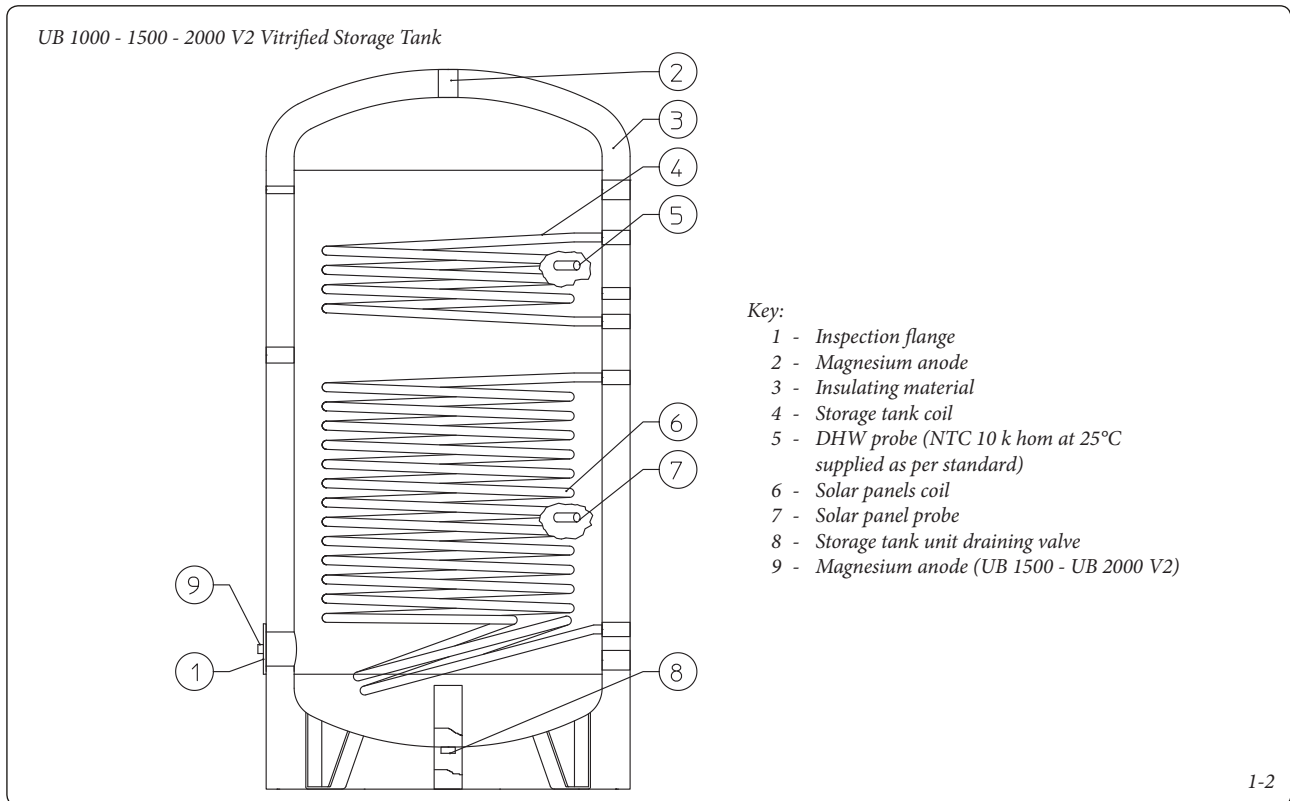
N.B.: every year a skilled technician (e.g. Authorised After-sales Service), must check the efficiency of the storage tank unit's Magnesium Anode. The storage tank unit is prepared for introduction of the domestic hot water pump fitting.

1.6 KITS AVAILABLE ON REQUEST.

- Recirculation kit (on request). The storage tank unit is prepared for application of the pump kit. Immergas supplies a series of fittings and attachments that allow connection between the storage tank unit and domestic hot water system. The pump kit attachment is also envisioned on the template.
- Solar panels kit (on demand). If solar panels are to be used for the production of domestic hot water, Immergas supplies the solar panels kit on demand.

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

1.7 MAIN COMPONENTS.



2 USE AND MAINTENANCE INSTRUCTIONS

2.1 CLEANING AND MAINTENANCE.

The user is advised to service the storage tank unit on an annual basis.

This ensures that the optimal safety, performance and operation characteristics of the storage tank unit remain unchanged over time.

2.2 OPERATION.

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

The storage tank 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 60 and 65°C because this temperature guarantees the best performance of the storage tank unit and at the same time ensures:

- maximum hygiene
- maximum savings
- delay in lime scale formation

The DHW in the storage tank is heated with the passage of CH/solar 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 drain the storage tank, use the special draining valve in the lower part of the storage tank.

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

2.4 CLEANING THE CASE.

To clean the outer parts of the storage tank, 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, contact an authorised 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.

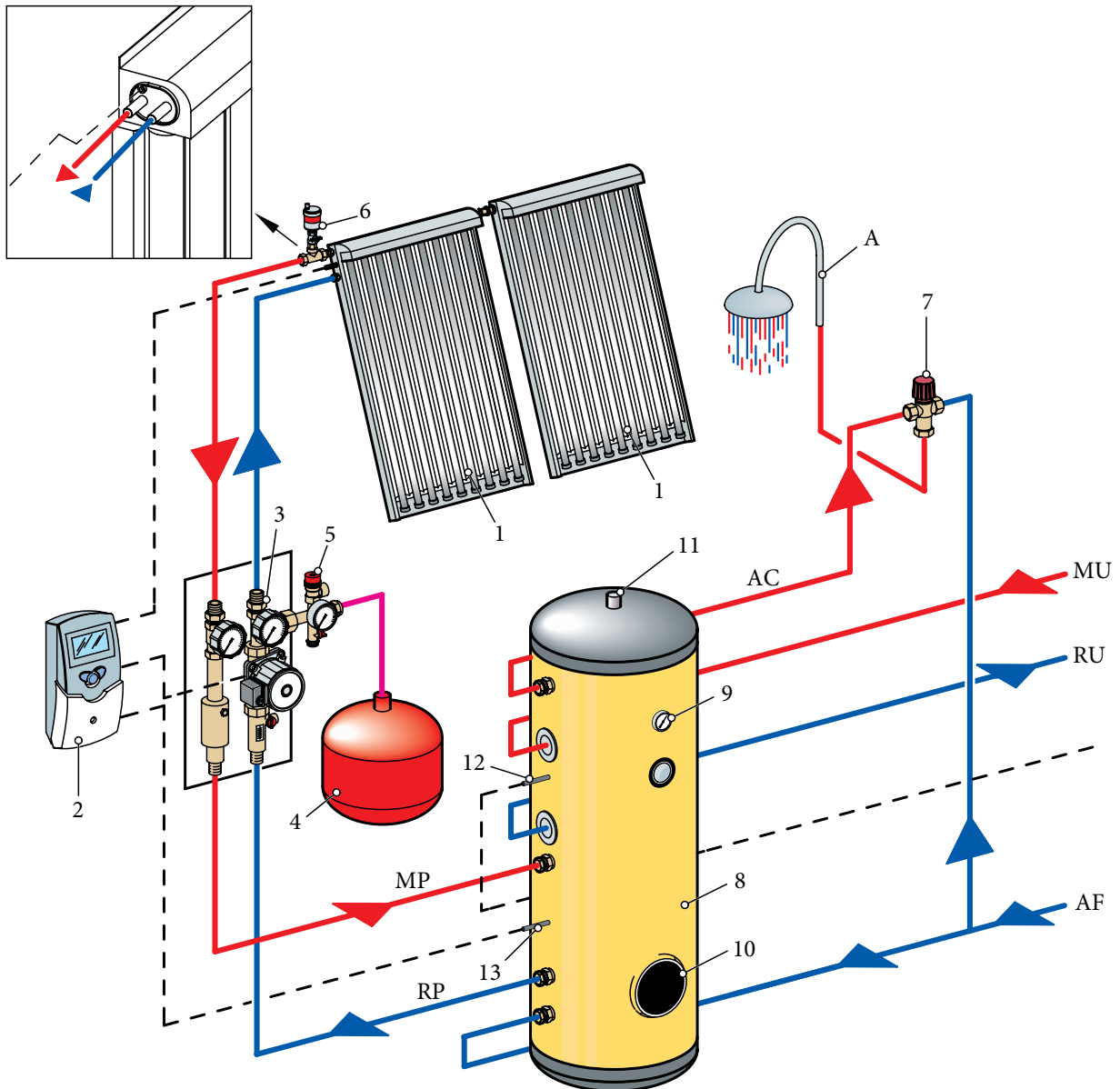
3 CHECKS AND MAINTENANCE

3.1 FUNCTIONAL LAYOUT.

The following is an example of the connection of the storage tank unit coupled with a solar panel heating system (Fig. 3-1).

Key:

- | | |
|-----------------------------------|--|
| 1 - Solar collectors | 11 - Magnesium anode fitting |
| 2 - Electronic control unit | 12 - DHW probe fitting (NTC 10 k hom at 25°C supplied as per standard) |
| 3 - Solar circulation unit | 13 - Solar panel probe fitting |
| 4 - Solar system expansion vessel | |
| 5 - 6 bar safety valve | AC - Domestic hot water outlet |
| 6 - System probe and venting unit | AF - Domestic cold water inlet |
| 7 - Mixing valve | MU - Storage tank unit flow |
| 8 - V2 Storage tank unit | RU - Storage tank unit return |
| 9 - Storage tank unit thermometer | MP - Flow from solar panels |
| 10 - Inspection flange | RP - Return to solar panels |



3-1

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 the integrity of the storage tank Magnesium Anode.

- In case of particularly hard water it is advisable to remove the lime scale from the storage tank 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 (if it is damaged, replace it with a new one), close the draining valve and fill the tank ensuring that neither flange or valve are leaking.

3.3 STORAGE TANK UNIT TECHNICAL DATA

		UB 1000 V2 Vitrified Storage Tank	UB 1500 V2 Vitrified Storage Tank	UB 2000 V2 Vitrified Storage Tank
Storage tank unit capacity	l	888.5	1388	2032
Domestic hot water side maximum pressure	bar	8	8	8
DHW side maximum temperature	°C	99	99	99
Maximum coil pressure	bar	8	8	8
Central heating side maximum temperature	°C	99	99	99
Upper coil exchange surface	m ²	1.60	2.3	2
Upper coil capacity	l	10	19.7	15.8
Lower coil exchange surface	m ²	2.8	3.9	5.9
Lower coil capacity	l	17	33.4	45.4
Empty storage tank unit weight	kg	302	345	390
Full storage tank unit weight	kg	1191	1782	2422
Heat dispersion - Psbsol	W/K	3.16	3.61	6.63

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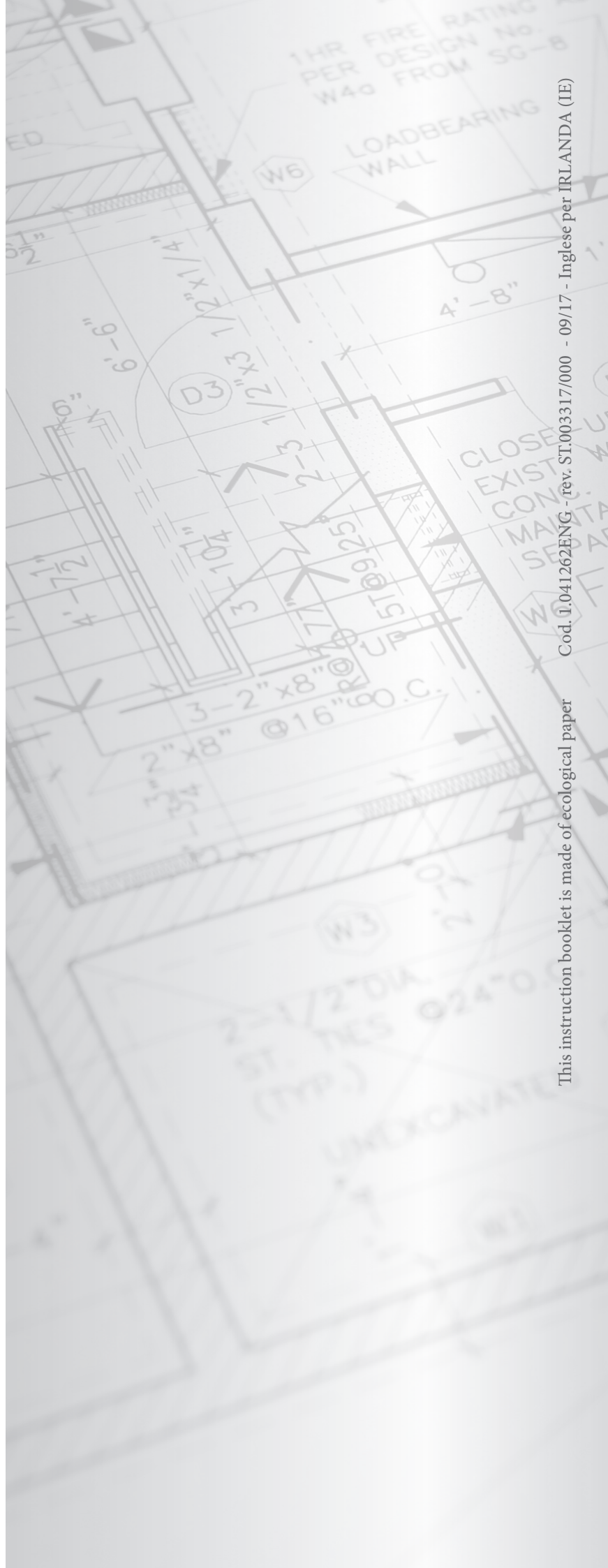
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