Water Heaters Training Unit





www.edibon.com Sproducts Spr.- Thermodynamics & Thermotechnics



INTRODUCTION

A water heater is a device that is used to increase the water temperature to supply the needs of humans.

There are different types of heaters depending on the type of energy used to heat the water, whether they are continuous heating or storage, etc. In addition, they can be classified according to the type of building in which they will be installed, because the demand is different for commercial building than for residential ones.









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GENERAL DESCRIPTION

The Water Heater Training Unit, "WHT", allows demonstrating the operation of three types of water heaters.

The unit has three heaters, two of them commercial one with electronic ignition and one in millivolt, and a residential gas heater without storage tank.

The main objective of the unit is to demonstrate the differences between heating water in different ways, the efficiency and consumption of a heater with and accumulation tank and one without tank.

It is composed of different pipes through which circulates the water that is heated in each of the heaters, and the whole installation has accessories and elements that allow the unit to be compatible with propane gas as heating fuel.

SPECIFICATIONS

Anodized aluminum structure and panels of painted steel.

Main metallic elements of stainless steel.

This unit includes wheels for its mobility.

Commercial gas heater with electronics ignition: Capacity: 144 | approx.

Power: 45 kW.

Commercial gas heater with millivolt ignition:

Capacity: 144 | approx.

Power: 45 kW.

Residential tank less water heater:

Max. flow: 26 l/min approx.

Water disconnection.

Gas disconnection.

Propane accessories to ensure heater units are propane fuel compatible.

Ball valve to regulate the flow of the water.

Solenoid valve to regulate the flow of the gas.

Two expansion vessels.

Cables and accessories, for normal operation.

Manuals: This unit is supplied with the following manuals: Required Services, Assembly and Installation, Starting-up, Safety, Maintenance & Practices Manuals.

EXERCISES AND PRACTICAL POSSIBILITIES

- 1.- Study of the heat transfer in different types of water heaters.
- 2.- Study of the difference on heating speed between the tanked heater and the tank less heater.
- 3.- Demonstration of the safety of gas connections in a heater.
- 4.- Demonstration of the functionality of the electronic switches of a heater.

REQUIRED SERVICES

- Electrical supply: single phase, 200 VAC- 240 VAC/50 Hz o 110 VAC – 127 VAC/60 Hz, 1 kW.

- Water supply.

5.- Study of the difference between heating with commercial and residential gas heater.

6.- Study of the difference between heating with electronic ignition and millivolt ignition gas heater.

DIMENSIONS AND WEIGHTS

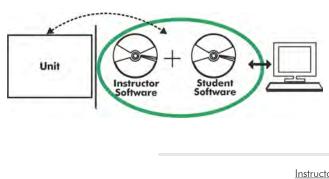
WHT:

 Dimensions: 1900 x 2400 x 800 mm approx. (74.80 x 94.48 x 31.49 inches approx.)
Weight: 160 Kg approx. (352.74 pounds approx.)

REQUIRED CONSUMABLES (Not included)

- Propane.

Optional



WHT/ICAI. Interactive Computer Aided Instruction Software System:

With no physical connection between unit and computer, this complete software package consists of an Instructor Software (EDIBON Classroom Manager -ECM-SOF) totally integrated with the Student Software (EDIBON Student Labsoft -ESL-SOF). Both are interconnected so that the teacher knows at any moment what is the theoretical and practical knowledge of the students.

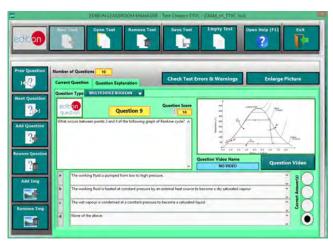
Instructor Software

- ECM-SOF. EDIBON Classroom Manager (Instructor Software).

ECM-SOF is the application that allows the Instructor to register students, manage and assign tasks for workgroups, create own content to carry out Practical Exercises, choose one of the evaluation methods to check the Student knowledge and monitor the progression related to the planned tasks for individual students, workgroups, units, etc... so the teacher can know in real time the level of understanding of any student in the classroom.

Innovative features:

- User Data Base Management.
- Administration and assignment of Workgroup, Task and Training sessions.
- Creation and Integration of Practical Exercises and Multimedia Resources.
- Custom Design of Evaluation Methods.
- Creation and assignment of Formulas & Equations.
- Equation System Solver Engine.
- Updatable Contents.
- Report generation, User Progression Monitoring and Statistics.



ETTE. EDIBON Training Test & Exam Program Package - Main Screen with Numeric Result Question



ECM-SOF. EDIBON Classroom Manager (Instructor Software) Application Main Screen



ECAL. EDIBON Calculations Program Package - Formula Editor Screen



ERS. EDIBON Results & Statistics Program Package - Student Scores Histogram

Optional

Student Software

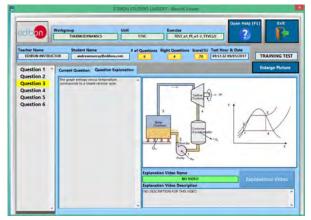
- ESL-SOF. EDIBON Student Labsoft (Student Software).

ESL-SOF is the application addressed to the Students that helps them to understand theoretical concepts by means of practical exercises and to prove their knowledge and progression by performing tests and calculations in addition to Multimedia Resources. Default planned tasks and an Open workgroup are provided by EDIBON to allow the students start working from the first session. Reports and statistics are available to know their progression at any time, as well as explanations for every exercise to reinforce the theoretically acquired technical knowledge.

Innovative features:

- Student Log-In & Self-Registration.
- Existing Tasks checking & Monitoring.
- Default contents & scheduled tasks available to be used from the first session.
- Practical Exercises accomplishment by following the Manual provided by EDIBON.
- Evaluation Methods to prove your knowledge and progression.
- Test self-correction.
- Calculations computing and plotting.
- Equation System Solver Engine.
- User Monitoring Learning & Printable Reports.
- Multimedia-Supported auxiliary resources.

For more information see ICAI catalogue. Click on the following link: www.edibon.com/en/files/expansion/ICAI/catalog



ERS. EDIBON Results & Statistics Program Package - Question Explanation



ESL-SOF. EDIBON Student LabSoft (Student Software) Application Main Screen



EPE. EDIBON Practical Exercise Program Package Main Screen

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ECAL. EDIBON Calculations Program Package Main Screen

* Specifications subject to change without previous notice, due to the convenience of improvement of the product.



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REPRESENTATIVE: