Gas Home Supply Trainer

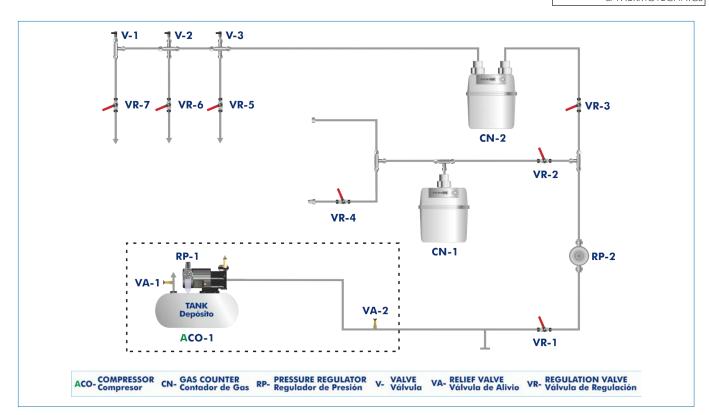## GHST

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⤷PRODUCTS
⤷90.- THERMODYNAMICS
& THERMOTECHNICS

edibon

Engineering and Technical Teaching Equipment

| ACO- | COMPRESSOR Compresor | CN- | GAS COUNTER Contador de Gas | RP- | PRESSURE REGULATOR Regulador de Presión | V- | VALVE Válvula | VA- | RELIEF VALVE Válvula de Alivio | VR- | REGULATION VALVE Válvula de Regulación |

INTRODUCTION

Gaseous fuels are frequently used as raw material to obtain energy at a domestic level, for example in stoves or in boilers used for heating or hot water. Therefore, almost any building has a complex gas supply pipe and fittings network that must be periodically checked. In this sense, the "GHST" unit designed by EDIBON allows for an in-depth study of a complete gas system, the elements of the system, possible leaks and the hazards derived from them.

GENERAL DESCRIPTION

The Gas Home Supply Trainer, "GHST", designed by EDIBON, consists of a teaching unit where the elements normally used on any domestic gas installation are arranged on the front panel of the unit as in a real installation.

The unit works with air, so it can be safely used in classrooms and laboratories, and includes real industrial elements. It has an air compressor with reservoir and relief valve, which supplies the air required to work with the unit. Besides, there is a compressed air connection in the front panel that can be connected to the reservoir to use a possible external compressor.

The air supply line, after the reservoir, has an air pressure regulator, relief valve, gas pressure regulator and flow regulation valves. Following a real distribution, air is distributed in two branches that can work separately with the aid of valves. One branch is for the study and simulation of leaks and the other branch, with a real gas connection, to study a normal gas supply pipe and control the maintenance according to current regulations.

There is an industrial gas meter in each branch: a gas meter with one connection in one branch and a gas meter with two connections in the other branch, so they can be compared.

In the leaks detection branch, air is distributed in three ways with microflow regulation valves that simulate the leaks and their detection with a leak detector included in the unit. Besides, it includes a leak detection spray for a quick, easy and reliable detection.

SPECIFICATIONS

Anodized aluminum frame and panels made of painted steel.

The unit includes wheels to facilitate its mobility.

Main metallic elements made of stainless steel.

Diagram in the front panel with distribution of the elements similar to the real one.

Air supply:

Compressor. Power: 1.5 kW.

Compressed air reservoir with relief valve. Capacity: 6 l.

Compressed air connection with ball valve in the front panel.

Air pressure regulator:

Maximum pressure: 10 bar.

Outlet pressure: 0.01 – 0.6 bar.

Gas pressure regulator:

Inlet pressure: 350 mbar.

Outlet pressure: 20 mbar.

Ball valve for the flow regulation and distribution.

Gas supply pipe:

Gas connection with ball valve.

Gas connection.

Gas meter with one connection. Maximum flow rate: 6 m³/h.

Two ball valves for the flow regulation and distribution.

Leaks simulation pipe:

Three microflow regulation valves to simulate leaks.

Gas meter with two connections. Maximum flow rate: 6 m³/h.

Four ball valves for the flow regulation and distribution.

Leak detection spray.

Leak detection device. Maximum water column: 500 mm.

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.- Assembly and understanding of the elements of a real gas installation.

2.- Gas pipes operation.

3.- Simulation and detection of leaks in installations.

4.- Control and maintenance of installations according to current regulations.

REQUIRED SERVICES

- Electrical supply: single-phase, 220V/50Hz or 110V/60Hz.
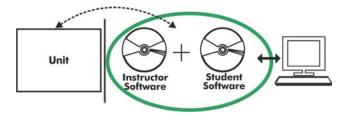
DIMENSIONS AND WEIGHTS

GHST:
-Dimensions: 1600 x 700 x 1800 mm approx.
(62.99 x 27.55 x 70.86 inches approx.)
-Weight: 110 Kg approx.
(242 pounds approx.)

GHST/ICAI. Interactive Computer Aided Instruction Software System:

With no physical connection between unit and computer (PC), **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.
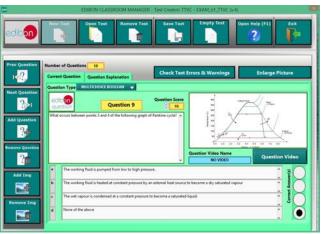
Instructor Software

- 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.

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

ECAL. EDIBON Calculations Program Package - Formula Editor
Screen

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

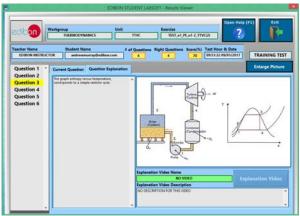ERS. EDIBON Results & Statistics Program Package - Student
Scores Histogram

- 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:
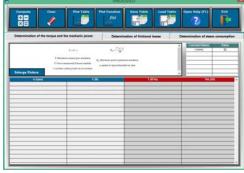www.edibon.com/en/files/expansion/ICAI/catalog

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

EPE. EDIBON Practical Exercise Program Package Main Screen

ERS. EDIBON Results & Statistics Program Package - Question Explanation

ECAL. EDIBON Calculations Program Package Main Screen

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

INTERNATIONAL

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