



Thermex Antares

HM 24 - HM 28

Room Sealed Conventional Combi Boiler

Conventional Combi Boiler Installation And User's Manual

Read carefully before
operating the appliance.

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1 INTRODUCTION

THERMEX (ANTARES) HM 24 - HM 28 room sealed conventional boilers are wall hung boilers designed to meet your needs for heating your house as well as preparing domestic hot water by using natural gas. The boilers are suitable for natural gas fuel.

This installation and usage manual contains detailed instructions and recommendations for safe and efficient use of the boiler, further this manual contains technical data, information for installation and connections, use, maintenance, troubleshooting and explanation of the most possible failures of the appliance.

Please do not operate your appliance before reading this manual and to keep in a safe place for future reference.

2 WARNINGS FOR THE USER

- a. Installation and connections of the boiler must be carried out in full conformity with the governing legal regulations, the requirements of local gas distributing Company and the instructions provided by the manufacturer.
- b. Ensure that the flue gas connection is not terminated in a closed compartment and connected with no other appliance but the special chimney made to be used for the connection of more than one appliance and flue gas outlet cap is not clogged.
- c. Ensure that the supply gas complies with the gas type, pressure and capacity of the boiler indicated in the data plate.
- d. Ensure that both central heating system and domestic hot water distribution pipes are cleaned properly before the installation and connection to the boiler. The manufacturer is not responsible of any damages arising from the dirt and small particles left inside the piping and such failures and damages are out of warranty claim.
- e. The commissioning of the boiler must be performed by qualified personnel/Thermex authorised services only. Ensure that electric, water and gas connections to the boiler are carried out are in conformity with local requirements as well as to the instructions provided in this manual.
- f. Cleaning of external surfaces of the appliance should be made by using a damp cloth, do not use any chemical or detergent.

- g. The appliance is not designed for children use so its installation is made in such way to make children difficult to access.
- h. In order to use the appliance efficiently for years to come schedule annual maintenance of the boiler with Thermex authorised service.

3 CONDITIONS INELIGIBLE FOR WARRANTY

The THERMEX warranty claim does not apply any failures arising from any use of the appliance out of such mentioned in this manual as well as from the following cases:

- a. Happened in appliances not commissioned by authorised THERMEX services,
 - b. Arising from installations not confirming the instructions given in this manual as well as those from misuse,
 - c. Arising from selecting a wrong location for the appliance,
 - d. Arising from selecting wrong type of appliance for the intended purpose,
 - e. Arising from intervening the appliance by an unauthorized service agency,
 - f. Physical failures happened after the appliance has been delivered,
 - g. Arising from natural disasters, fire and lightning strike,
 - h. Arising from high or low supply voltage out of the limits stated in the data plate or connections to a power supply line with an inefficient earth connection,
 - i. Arising from the failure of observing the periodic maintenances specified in the instructions to be done in time by the authorized service agencies,
 - j. Arising from other accessories and ancillary products used with the appliance,
 - k. Arising from freezing if antifreeze protection cannot be activated due to a cut of power and gas supply,
 - l. Manipulation of data plate and warranty certificate,
 - m. Using the appliance in a cold water supply network out of the conditions set in this instruction manual,
- The warranty does not apply to above specified failures, and repair of such failures is subject to a fee.

4 SWITCHING ON THE BOILER

Before starting the boiler ensure electric, gas and water connections are properly made and the appliance is supplied with correct power as stated in the data plate.

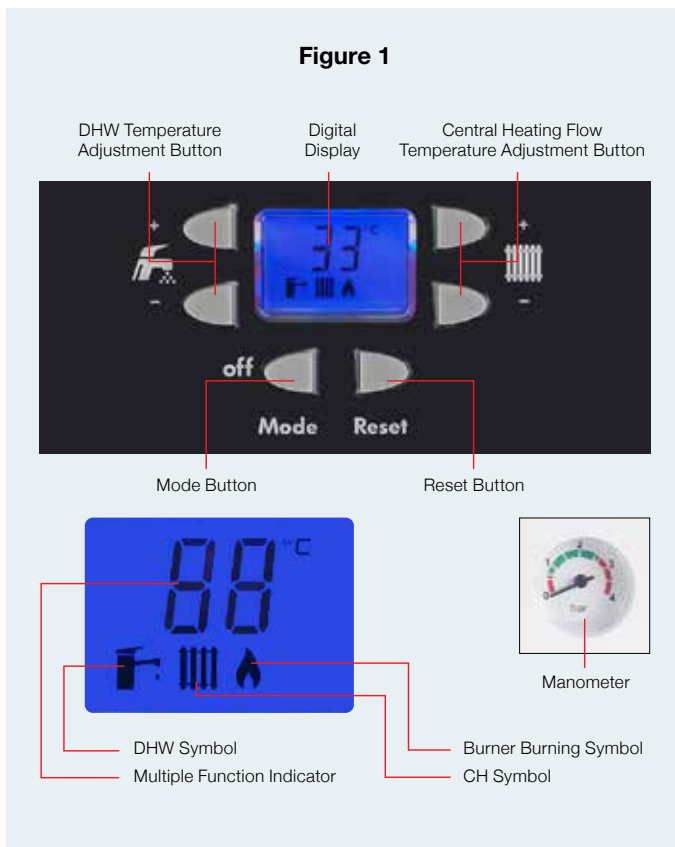
- a. Open power supply connection.
- b. Turn gas cock to open position.
- c. Push on button (**off**) . **Figure 1**
- d. Select Summer/Winter mode. (**Mode**) **Figure 1**

WARNING: In summer mode the boiler does not start unless a hot water tap is opened.

- e. Start the boiler by adjusting to your desired temperature through temperature adjustment buttons. (When the temperature adjustment button is used the temperature adjustment is flashes on the display and temperature adjustment changes with 1°C steps . When you have adjusted the desired temperature the LED display returns to the previous status after 5 seconds.)

WARNING: When the boiler is first started the boiler may show ignition failures and go into block several times till the air in the gas supply line is evacuated. In that case push (**Reset) button and wait for 3 seconds to restart the boiler.**

Figure 1



5 DAILY OPERATION OF THE BOILER

Summer/Winter mode selection;

When it is not required to use Central Heating mode of the boiler, the appliance may be turned to Summer mode sole to produce Domestic Hot Water. In order to set Summer mode push (**Mode**) button.

WARNING: As the mode button also functions as “on-off” button if pushed longer the boiler is switched off. When the boiler is off pump blocking safety is active, anti-freezing protection is not active.

- a. When the appliance is in Summer mode the display shows (**F**) sign. To set this mode; the button with (**Mode**) sign may be pressed to make desired selection. To set hot water temperature you may use (**F**) (+/-) buttons to set the desired temperature.

In Summer mode pump anti blocking safety and anti-frost protection are active.

- b. When the appliance is in Winter mode the display shows (**CH**) and (**F**) signs. To set this mode; the button with (**Mode**) sign may be pressed to make desired selection.

- c. To set Central Heating temperature you may use (**CH**) (+/-) buttons to set the desired temperature. For domestic hot water temperature adjustment with (**F**) (+/-) buttons you may set the desired temperature.

In Winter mode pump anti blocking safety and anti-frost protection are active.

- d. When the boiler is set to “only Heating” mode the display shows (**CH**) sign. To set this mode the button with (**Mode**) sign may be pressed to make desired selection. To set Central Heating temperature you may use (**CH**) (+/-) buttons to set the desired temperature.

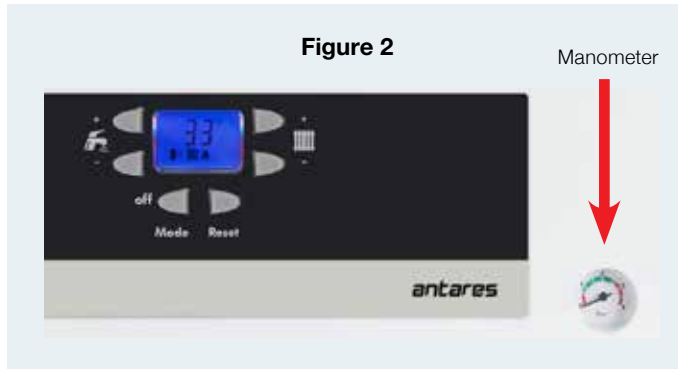
In Only Heating mode pump anti blocking safety and anti-frost protection are active.

WARNING: When the boiler switches on after a heat demand (when the burner is on), (**flame) sign is show in the display.**

6 FILLING THE BOILER

Filling water is supplied through the filling valve located in the bottom of the boiler, **Figure 3**. When the boiler is cold the installation should be filled such that the manometer located in the front of the boiler, (**Figure 2**) indicates a water pressure between 1-1,5

bar. When the pressure drops to the critical level the appliance shuts-off automatically.



7 SWITCHING OFF THE BOILER

To switch off the boiler you should press (**off**) button. When the boiler is switched off with this button pump blocking safety is active, anti-freezing protection is not active and there is electric current in the boiler. In order to switch off the boiler completely, switch the external power supply fuse-circuit breaker to OFF position.

WARNING: In order anti-frost protection to be active electric and gas supply to the boiler should not be closed. Observe the requirements indicated in Paragraph 4. When the temperature inside the boiler drops below 5°C the burner the anti-frost protection switches, turns on the burner and heats the water up to 35°C.

8 MAINTENANCE OF THE BOILER

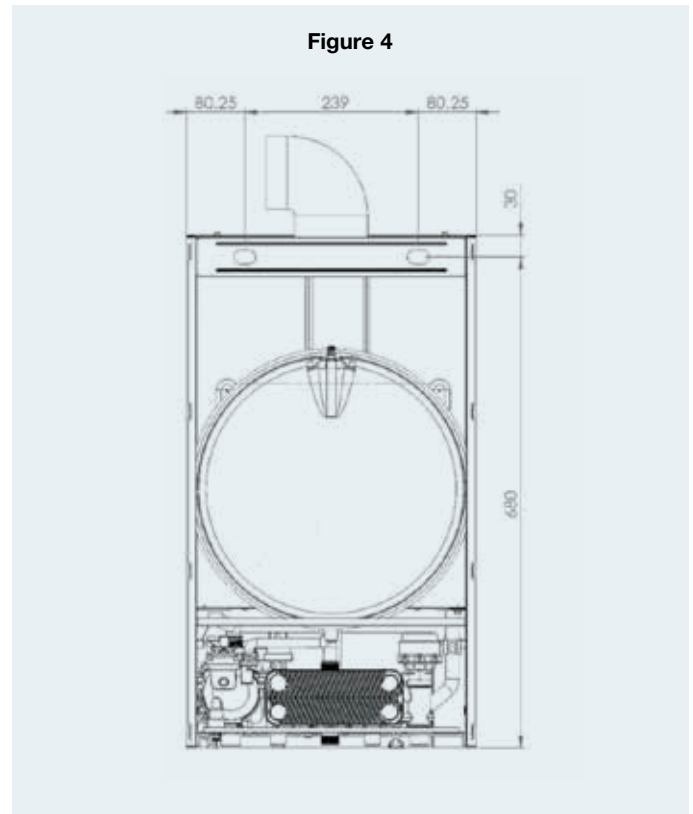
In order to use your appliance trouble-free and efficiently for long years we recommend scheduling annual maintenance, preferably at early winter season, by Thermex authorised service.

Do not clean external surfaces of your appliance with detergent or chemical materials.

Check your installation before making connections to the boiler and ensure that the installation pipes are free from dirt or any particles.

9 INSTALLATION INSTRUCTIONS

Boiler package contains;



Boiler, support Styrofoam, installation hanging equipment, user's manual, warranty certificate and service booklet.

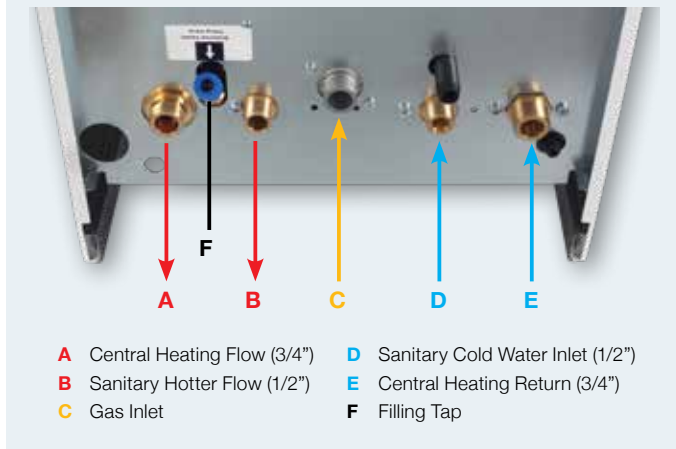
The locations where the boiler can be installed should be selected by observing the relevant regulations and requirements set forth by standards codes of practice in force as well as local gas company standards. Installation hanging equipment should be fixed on the wall in such way to carry the weight of the boiler. The hanging bracket should be fixed level, **Figure 4**.

A suitable filter must be installed to the water inlet to the boiler, **Figure 5**.

Check that the maximum water mains pressure does not exceed 6 bars; if it does, a pressure reducing valve must be installed.

Make sure that the gas category for which the boiler was designed corresponds to the category available in the location where it will be used and the supplied gas pressure, as well as the gas installation, is in conformity with data plate.

Figure 5



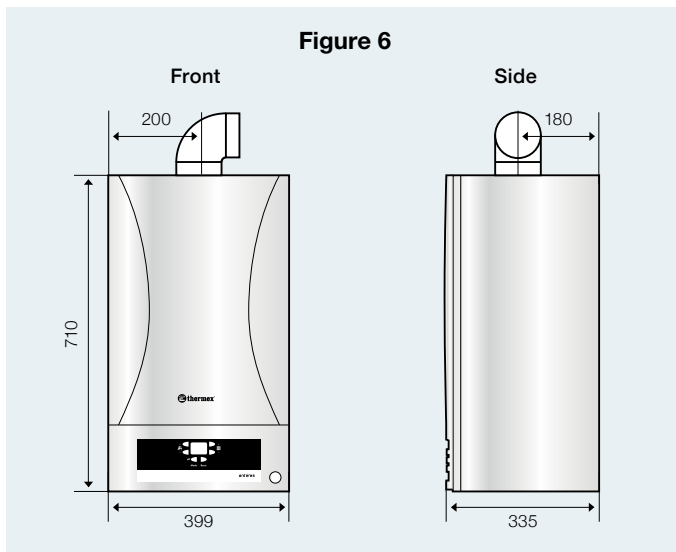
- d. On the chimney walls
- e. Balconies
- f. Elevator shafts.

The followings must be observed when making flue connection:

- a. Flue terminal vertical distance to eaves and roof coverings should be minimum 1,5 m from the top and should also extend further from such eaves and roof coverings.
- b. Minimum vertical distance above the ground should be 0,3 m and in places where there is an impact risk the flue terminal must be covered with a wire net.
- c. When the flue terminal is extended off the wall it must extend minimum 50 mm outside the wall.
- d. Horizontally connected flue connections must be installed with 1% downward slope.
- e. Where the appliance is installed to penthouses flue terminal should be minimum 40 cm above the roof. In such cases the roof must be insulated with non-combustible material.
- f. Maximum length of the flue connection is 4 m. Maximum length is shortened by 1 meter for each additional 90° elbow and 0,5 meter for each additional 45° elbow.
- g. Roof tightness must be fully ensured with vertical flue applications. In case where tightness cannot be ensured any failure or damage which may arise is out of warranty claim.

10 DIMENSIONS OF THE BOILER

Dimensions of the boiler are given in **Figure 6**.

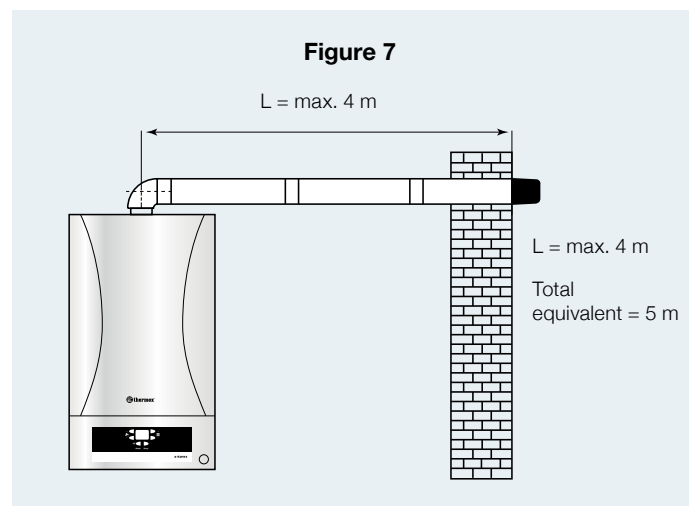


11 FLUE CONNECTION

When connecting the flue, the flue gas accessories supplied by the manufacturer must be used. When selecting the location of the boiler the position of flue gas connection and flue terminal should be considered. For flue connection the requirements set forth by the local authorities and gas distributing company must be observed.

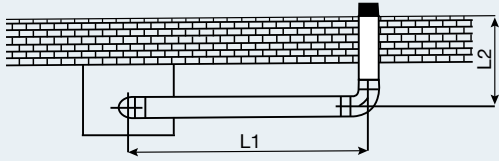
Flue connection must not be made to:

- a. Building stairwells,
- b. Building aisles,
- c. Light-wells,



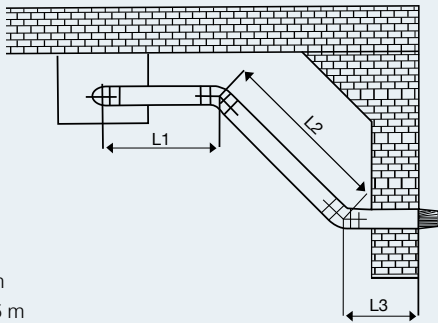
In the use of additional elbows
 90° → 1 m
 45° → 0,5 m → total equivalent length decreases.

Figure 8



$L1 + L2 = 3 \text{ m}$
 Total equivalent = 5 m
 90° elbow = equal to 1 m flue length
 45° elbow = equal to 0,5 m flue length

Figure 9



$L1 + L2 + L3 = 3 \text{ m}$
 Total equivalent = 5 m

Figure 10

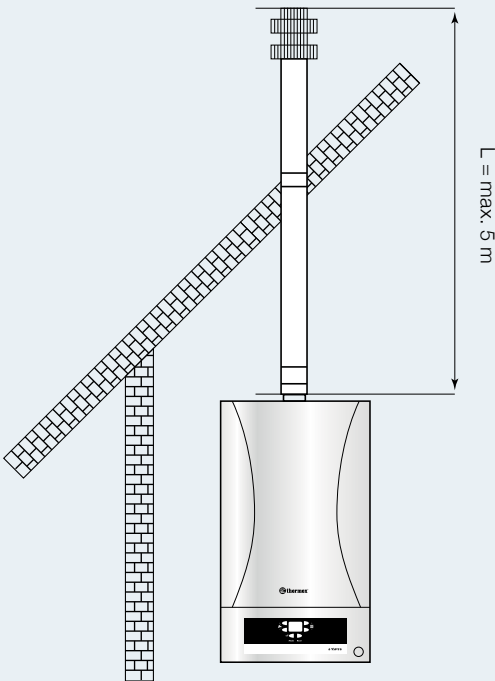


Figure 11

Product	Total Equivalent Flue Length (m)	Air Baffle (mm)
Thermex Antares HM 24	4	Ø46
	3	Ø44
	2	Ø42
Thermex Antares HM 28	1	Ø40
	4	Ø46
	3	Ø44
	2	Ø42
	1	Ø40

12 ELECTRIC CONNECTION

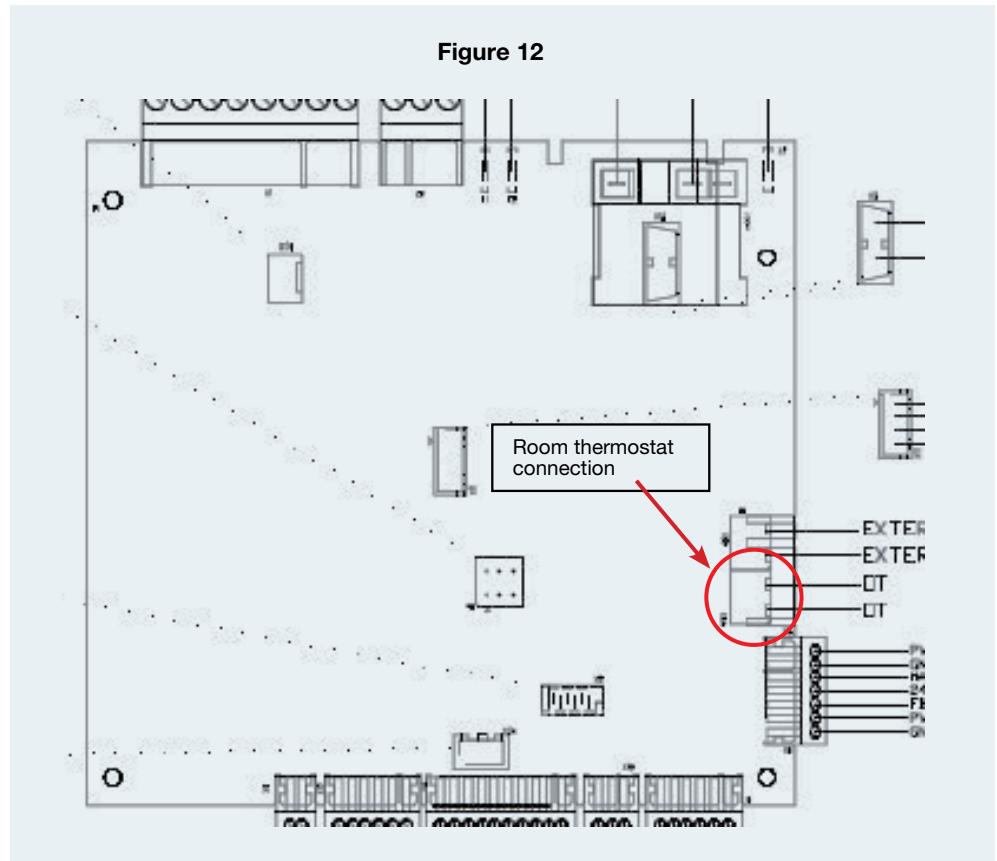
The appliance must be connected to a power supply line with an efficient earth connection. The appliance must be connected to 220 ~ 230 V single phase power supply line with efficient earth connection through (3-10 A). Automatic circuit breaker.

WARNING: Fan baffle plates included in the package should be used with the connections for horizontal and vertical flue extensions. *Figure 11.*

13 ELECTRIC SCHEME AND ROOM THERMOSTAT

The room thermostat can be connected to the main board by removing the bridge shown in **Figure 12** and connecting the cables of the room thermostat to these terminals. This connection is suitable for both simple type and digital type room thermostats.

To use a room thermostat capable of controlling all functions of the boiler including domestic hot water production, contact with your authorised service agency. Such room thermostats may provide internet connection and remote access may be made. If required, you may control the appliance through a computer or smart phones and tablets that provide required features.



14 ERROR CODES

The appliance informs certain failures and warnings to the user through the LCD display, **Figure 13**. In such case, if the error does not disappear after performing the indicated action the closest authorised service must be called to fix the error of the appliance.

Figure 13

DESCRIPTION OF THE ERROR	ERROR CODE	REQUIRED ACTION
No fire warning	E01	RESET the boiler
Flue gas sensor warning	E02	RESET the boiler
Central heating water sensor warning	E03	RESET the boiler
Domestic hot water sensor warning	E04	RESET the boiler
Fan warning - hall signal	E05	RESET the boiler
Flue gas sensor over temperature warning	E06	RESET the boiler
Low water pressure warning	E08	Check water pressure
Safety thermostat warning	E09	RESET the boiler
High water pressure warning - Only at Min. Power	E10	Check water pressure
Processor Eeprom fault	E13	Switch off and then Switch on the boiler
Central heating water return sensor warning	E24	RESET the boiler

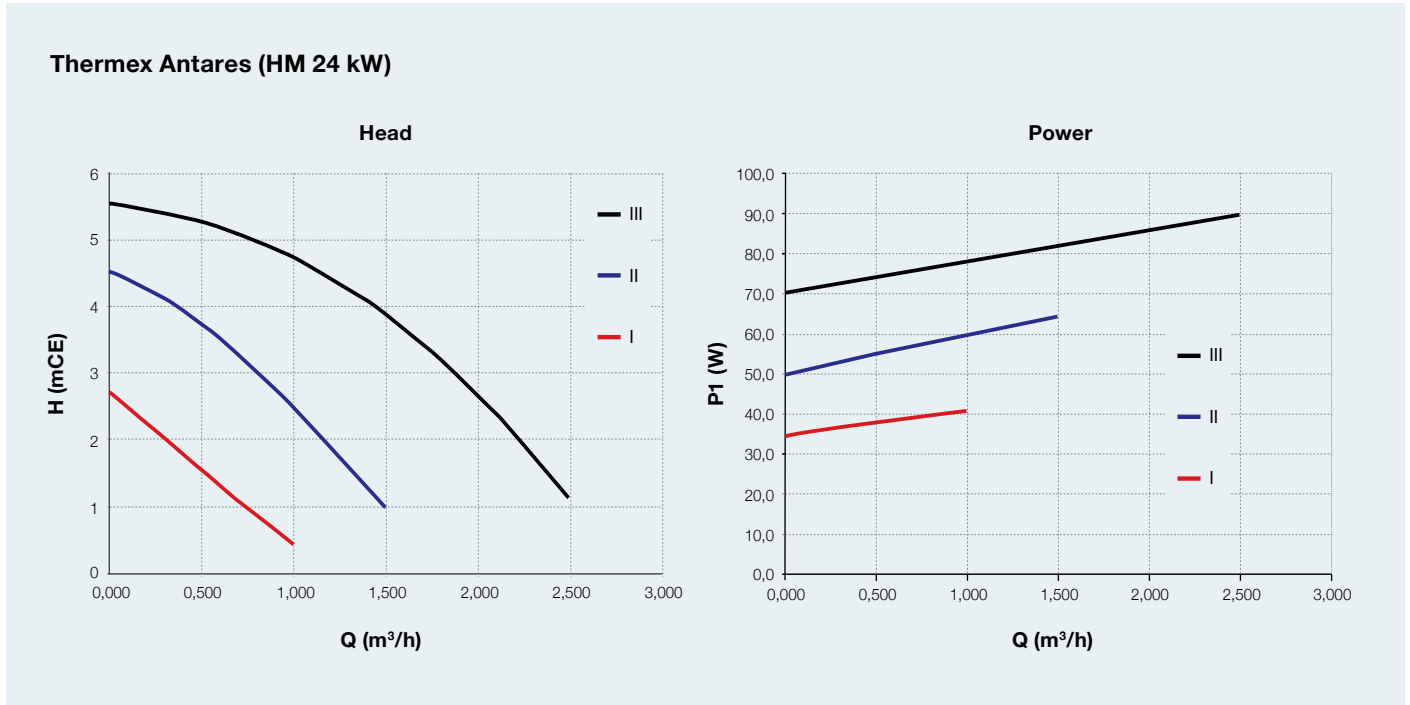
15 TECHNICAL DATA

Figure 14

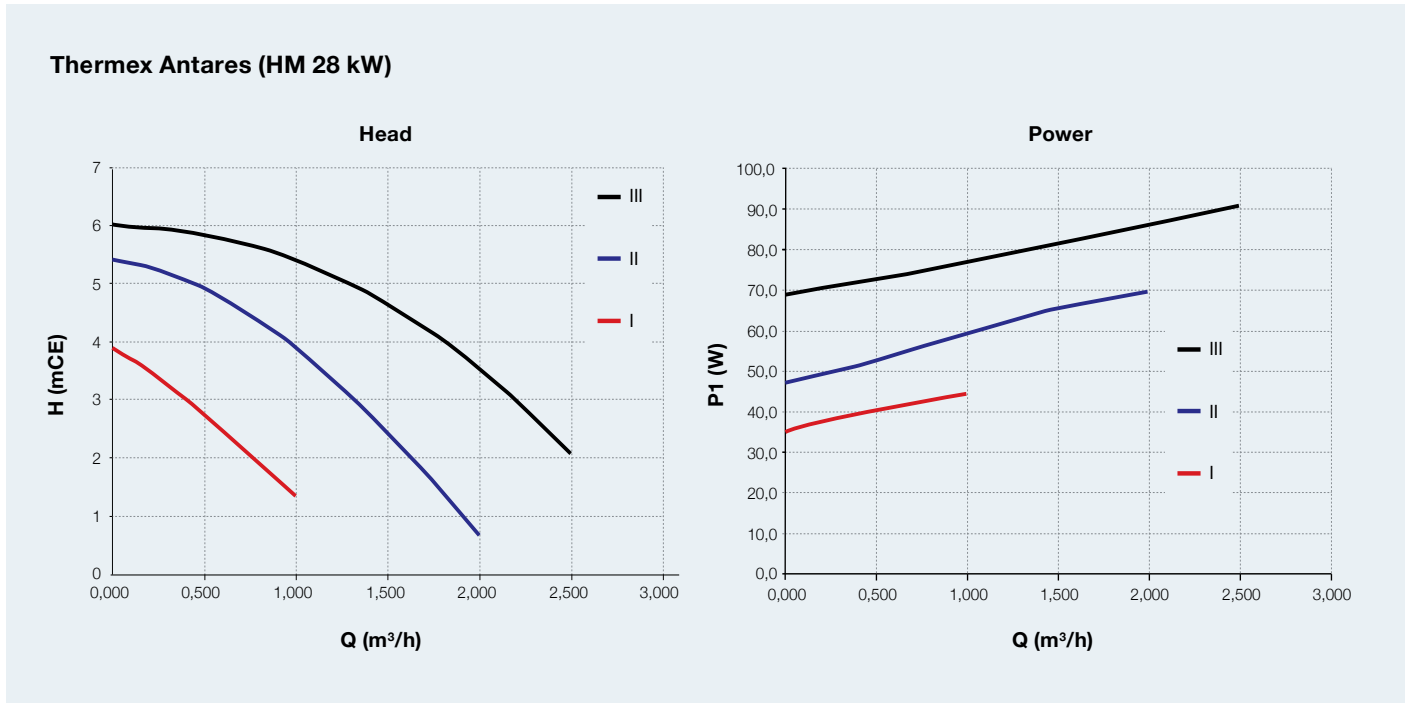
Technical Specifications

Conventional Boiler Models	Unit	Thermex Antares HM 24	Thermex Antares HM 28
Gas Type		G20	G20
Gas Inlet Pressure (for G20)	mbar	20	20
Type		C12, C32	C12, C32
Category		I2H (G20=20 mbar)	I2H (G20=20 mbar)
Central Heating System			
Maximum Efficiency (Partial Load)	%	91,2	91,1
Central Heating Nominal Power (Max) (80-60°C)	kW	23,7	27,5
Central Heating Nominal Power (80-60°C)	kW	9,3	11,4
Central Heating Temperature Adjustment	°C	35-80	35-80
Central Heating Circuit Max. Pressure	bar	3	3
Central Heating Circuit Min. Pressure	bar	0,5	0,5
NOx Class		3	3
Gas Consumption - at Maximum Power	m ³ /h	2,75	3,20
Gas Consumption - at Minimum Power	m ³ /h	1,14	1,39
Expansion Vessel Capacity	Liter	8	8
Expansion Vessel Pre-charged Pressure	bar	1	1
Domestic Hot Water (DHW) System			
DHW Heating Power, Max	kW	23,1	27,2
DHW Heating Power, Min	kW	9,3	11,4
DHW Volume (ΔT = 30°C, Max)	l/min.	11	13
DHW Volume (ΔT = 25°C, Max)	l/min.	13,2	15,6
DHW Temperature Adjustment	°C	30-60	30-60
Maximum Operating Pressure	bar	9	9
Minimum Operating Pressure	bar	0,3	0,3
Electrical Specifications			
Power Supply Voltage	VAC	230	230
Power Supply Frequency	Hz	50	50
Power Consumption	W	140	140
Electric System Protection Grade	-	IP X4D	IP X4D
Connections to Installation			
Gas Connection	inch	3/4	3/4
Central Heating Circuit Flow / Return	inch	3/4	3/4
DHW Inlet / Outlet	inch	1/2	1/2
General Specifications			
Flue Diameter - Ø	mm	60/100	60/100
Dimensions (Height x Width x Depth), Without Package	mm	710 x 399 x 335	710 x 399 x 335
Dimensions (Height x Width x Depth), With Package	mm	760 x 430 x 392	760 x 430 x 392
Weight (Without Package)	kg	32	33
Weight (With Package)	kg	34	35

Pump Operating Field 15-5



Pump Operating Field 15-6



This document is issued to provide information about the appliance.
THERMEX, in order to develop/improve its products, preserves the right to modify
instruction and user's manual without prior notice.



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