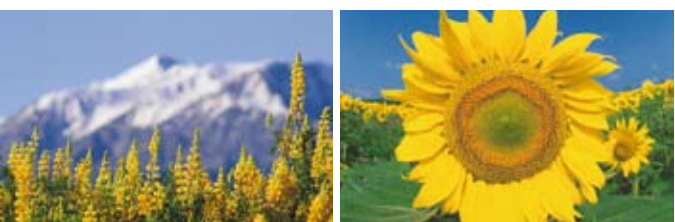


ApenGroup[®]

aermaxline

Rapid

Suspended Warm Air Heater



Caring for the environment!

RAPID The QUICK and ECOLOGICAL Suspended Heater

Our RAPID heaters were conceived and designed for the heating of industrial and commercial buildings. This advanced equipment uses leading-edge technology of pre-mixing air and gas, thus sensibly reducing NOx e CO emissions.

Some Good Reasons to Choose RAPID Heaters

CLEAN COMBUSTION

A burner with total air-gas premix is the main feature of RAPID heaters. Its advantages are:

- No emissions of carbon monoxide ($CO = 0$).
- Very low emission of nitrogen oxides, below 80 mg/kW ($NO_x < 80$ mg/kW).
- Minimised emission of carbon dioxide as a consequence of high-efficiency combustion and reduced fuel consumption.



**Low NOx
premix burner**

NO NEED FOR A HEAT PLANT

Warm air heaters can be installed in the spaces to be heated and do not require a separate room nor an enclosure that would reduce useful space.

NO HYDRAULIC CIRCUIT - NO INTERMEDIATE FLUID: DIRECT HEAT EXCHANGE

The heat produced by the heater is directly transferred to ambient air through direct exchange with combustion products. These products flow inside a sealed system, totally separated from the heated environment.

No intermediate fluid is required, so the hydraulic circuit is unnecessary and water freezing becomes an out-of-date issue.

A few minutes are enough for the environment to warm up thanks to the absence of thermal inertia.

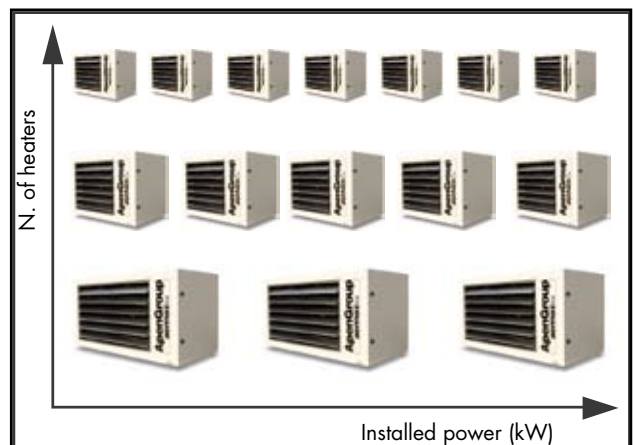


EASE OF INSTALLATION

The equipment only needs to be connected to gas supply and wired to single-phase 230V – 50 Hz m power supply.

SYSTEM MODULARITY

The total heat requirement can be met by multiple appliances installed inside the room, thereby making the installation convenient and rational: thermal output can be managed on an area basis and new units can be installed if additional requirements arise.



Construction Features

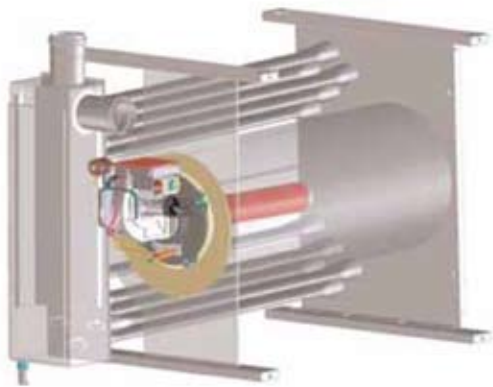
Each part of our RAPID heaters has been carefully designed and tested in our R&D Centre in order to develop and obtain a top-quality, highly-reliable product.

FURNACE

Furnace and air/flue exchanger are entirely built with mild stainless steel (low carbon content) to assure maximum reliability and long life cycle.

The drop-shaped furnace and the air/flue exchanger, whose tube bundle is custom designed, guarantee performance that place RAPID heaters among the leading units for heat efficiency.

Heat exchanger and combustion chamber



PREMIX BURNER

The burner is entirely made of AISI 430 steel and undergoes specific engineering processing that guarantee top reliability and high thermal-mechanical performance. The burner assembly, including the air-gas valve, allows clean combustion with the lowest emission of polluting elements.

AIR/GAS MIXING: GUARANTEED SAFETY

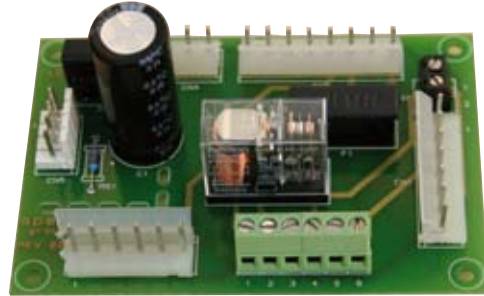
An advanced technique of air/gas mixing guarantees total safety. The gas valve delivers gas according to the air:gas ratio set at the factory.

If combustion air fails, the gas valve shuts up. If combustion air decreases, the valve automatically reduces gas flow while maintaining optimal combustion parameters.

SAFETY AND CONTROL DEVICES

The following devices are installed on RAPID heaters:

1. Safety thermostat with manual reset and positive safety
2. Electronic ignition device for the burner and ionisation flame control device
3. Ignition and flame detection electrodes



Quality and Certified Performance

CIB's corporate system was certified by ISO 9001.

Our products carry the CE mark, obtained after the passing of severe tests. These standards guarantee that our RAPID heaters provide:

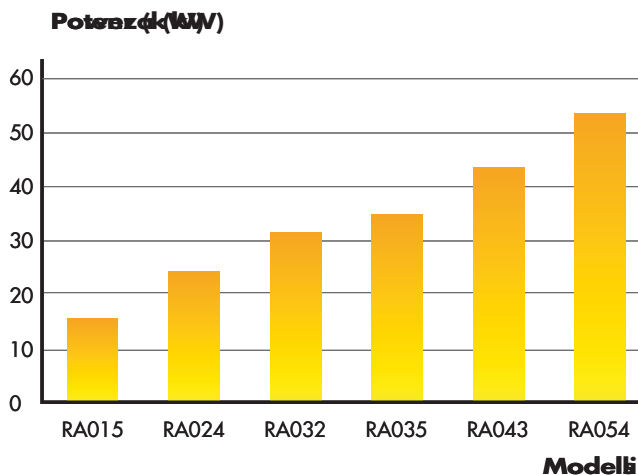
- Certified Performance
- Certified Security
- Total safety, both for the user and the environment



High Efficiency and Working Standards

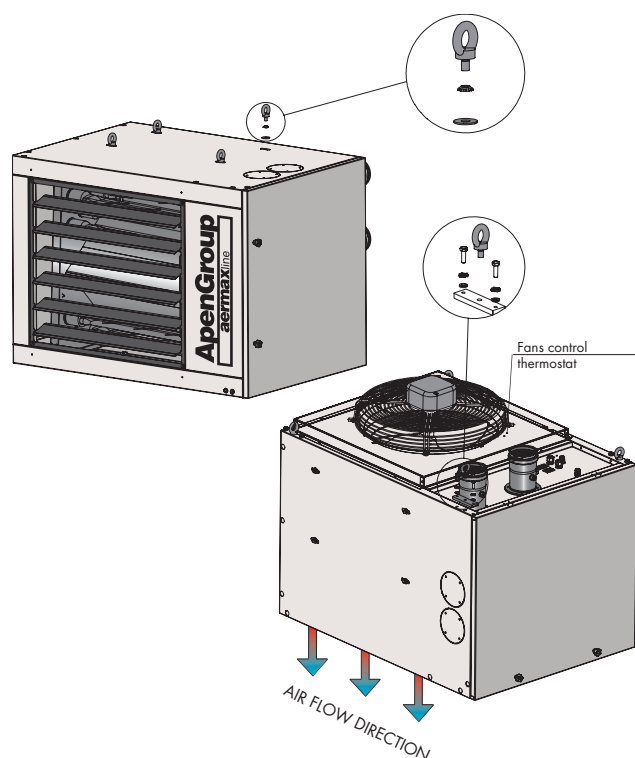
RAPID heaters work in ON/OFF mode, i.e. thermal output, and therefore thermal input and fuel consumption, remain steady and are based on heat request.

When the heater is turned on, the burner starts working at maximum capacity. The range of RAPID heaters includes 6 models, from 15 kW to 54 kW.



Versatility of Installation

RAPID heaters can also be hanged to the roof by means of suspension eyebolts and can blow air vertically or horizontally. For horizontal air blow, G14444.08 kit is supplied, including supporting eye-bolts. For vertical air blow, the heater is supplied with G14437 kit and additional thermostats for fan control.



Conversion to Another Gas Type

RAPID heaters are designed to burn either natural gas or liquid propane.

In order to convert them to another gas type, a calibrated diaphragm must be installed between the gas valve and the venturi. This diaphragm changes the default air/gas ratio. This operation is particularly simple and quick.

The heaters are delivered ready and tested for natural gas and include a packaged kit with the diaphragm for liquid propane.

Available Accessories

You can require RAPID heaters to be supplied with a standard control panel or with a remote control including a room thermostat.

Remote control includes:

- ON/OFF button,
- summer/winter switch and reset button.



You can use the remote control with thermostat to regulate room temperature, switch to summer or winter working mode, turn off the heater without powering off the unit, display burner lock and reset the burner after a lock.

With the remote control too, the safety thermostat (STB) can only be reset using the button on the heater.



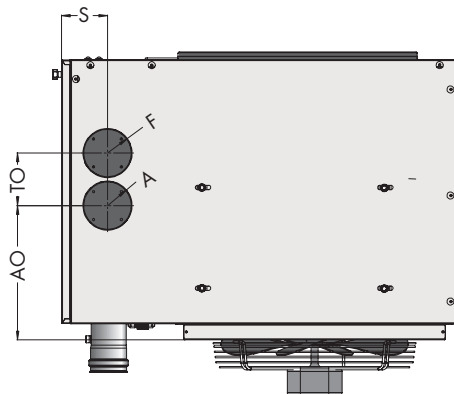
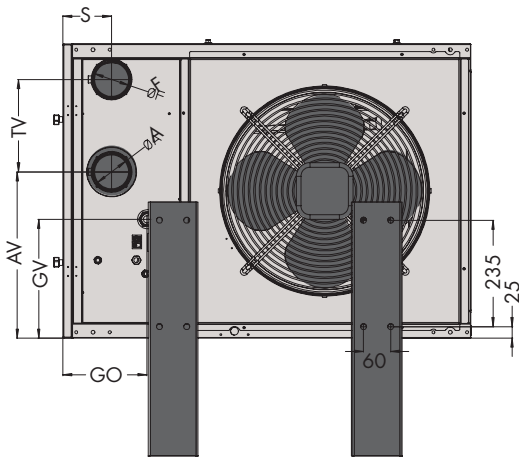
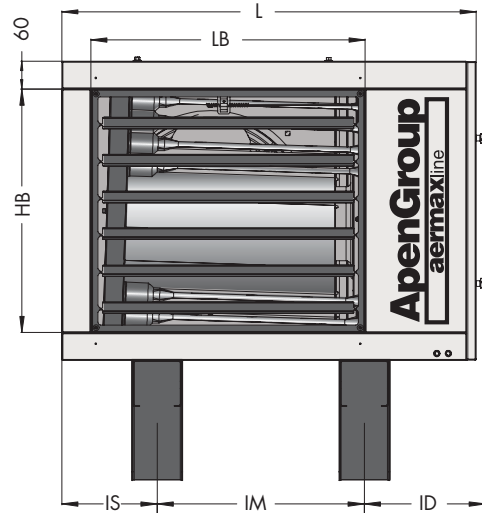
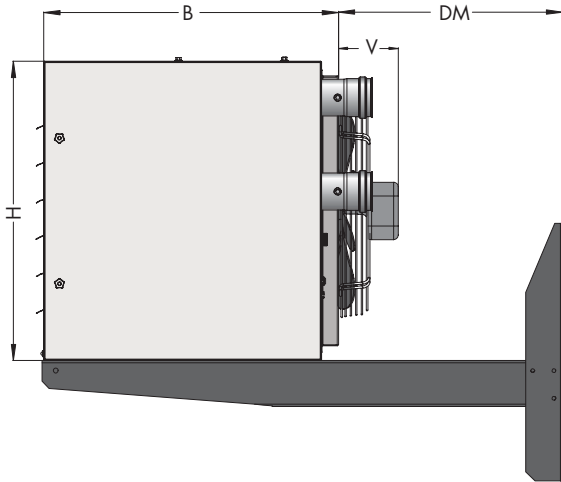
Technical Data

| Model | | RA015 | RA024 | RA032 |
|------------------------------------|-------------------|-------------|-------------|-------------|
| EC Approval | | 0694BN4077 | 0694BN4077 | 0694BN4077 |
| Rated thermal output | kW | 16,5 | 26,5 | 34,8 |
| Rated thermal input | kW | 15,3 | 24,3 | 31,7 |
| Efficiency | % | 92,6 | 91,8 | 91,2 |
| Ø of inlet air/flue exhaust pipe | mm | 80/80 | 80/80 | 80/80 |
| Available pressure on flue exhaust | Pa | 50 | 50 | 90 |
| Air flow rate (T 15°C) | m ³ /h | 1.600 | 3.050 | 3.050 |
| Air throw range | m | 22 | 22 | 24 |
| Air ΔT | °C | 27,4 | 22,9 | 29,8 |
| Fan speed | g/min | 1.050 | 1.270 | 1.270 |
| Fan No. & Ø / angle | mm/° | 1 x 350/25° | 1 x 400/22° | 1 x 400/22° |
| Supply Voltage | V/Hz | 230/50 | 230/50 | 230/50 |
| Input power | W | 220 | 260 | 260 |
| Noise level in free field (6 m) | dB(A) | 39,9 | 44,4 | 44,4 |

| Model | | RA035 | RA043 | RA054 |
|------------------------------------|-------------------|-------------|-------------|-------------|
| EC Approval | | 0694BN4077 | 0694BN4077 | 0694BN4077 |
| Rated thermal output | kW | 38,7 | 47,5 | 58,0 |
| Rated thermal input | kW | 34,9 | 43,6 | 53,4 |
| Efficiency | % | 90,2 | 91,8 | 92,1 |
| Ø of inlet air/flue exhaust pipe | mm | 80/80 | 80/80 | 80/80 |
| Available pressure on flue exhaust | Pa | 90 | 110 | 110 |
| Air flow rate (T 15°C) | m ³ /h | 3.800 | 5.000 | 6.250 |
| Air throw range | m | 25 | 30 | 32 |
| Air ΔT | °C | 26,3 | 25,0 | 24,5 |
| Fan speed | g/min | 1.350 | 1.270 | 1.350 |
| Fan No. & Ø / angle | mm/° | 1 x 420/27° | 2 x 400/22° | 2 x 420/27° |
| Supply Voltage | V/Hz | 230/50 | 230/50 | 230/50 |
| Input power | W | 330 | 500 | 620 |
| Noise level in free field (6 m) | dB(A) | 47,5 | 47,4 | 50,5 |

Dimensions

| Model | Size | | | Louvers | | | Brackets | | | Gas Supply | | | Weight Kg | |
|-------|------|-----|-----|---------|-----|-----|----------|-----|-----|------------|------|-----|--------------|-----|
| | L | B | H | V | HB | LB | IM | IS | ID | DM | GAS | GO | | GV |
| RA015 | 720 | 640 | 650 | 140 | 530 | 415 | 450 | 116 | 174 | 475 | 3/4" | 186 | 263 | 70 |
| RA024 | 900 | 640 | 650 | 140 | 530 | 595 | 450 | 206 | 264 | 475 | 3/4" | 186 | 263 | 80 |
| RA032 | 900 | 640 | 650 | 140 | 530 | 595 | 450 | 206 | 264 | 475 | 3/4" | 186 | 263 | 84 |
| RA035 | 900 | 640 | 650 | 140 | 530 | 595 | 450 | 206 | 264 | 475 | 3/4" | 186 | 263 | 90 |
| RA043 | 1240 | 640 | 650 | 140 | 530 | 935 | 780 | 228 | 252 | 475 | 3/4" | 186 | 263 | 112 |
| RA054 | 1240 | 640 | 740 | 140 | 620 | 935 | 780 | 228 | 252 | 475 | 3/4" | 183 | 352 | 117 |



| Model | Standard Horizontal Exhaust | | | | |
|-------|-----------------------------|----|-----|-----|-----|
| | A | F | AV | TV | S |
| RA015 | 80 | 80 | 367 | 204 | 105 |
| RA024 | 80 | 80 | 367 | 204 | 105 |
| RA032 | 80 | 80 | 367 | 204 | 105 |
| RA035 | 80 | 80 | 367 | 204 | 105 |
| RA043 | 80 | 80 | 367 | 204 | 105 |
| RA054 | 80 | 80 | 457 | 204 | 105 |

A Air suction tube
F Exhaust flue discharge

| Model | Optional Vertical Exhaust | | | | |
|-------|---------------------------|----|-----|-----|-----|
| | A | F | AO | TO | S |
| RA015 | 80 | 80 | 305 | 120 | 105 |
| RA024 | 80 | 80 | 305 | 120 | 105 |
| RA032 | 80 | 80 | 305 | 120 | 105 |
| RA035 | 80 | 80 | 305 | 120 | 105 |
| RA043 | 80 | 80 | 305 | 120 | 105 |
| RA054 | 80 | 80 | 310 | 120 | 100 |

A Air suction tube
F Exhaust flue discharge

Exhaust Piping

RAPID heaters' combustion circuit includes a furnace, a sealed air-flue exchanger, and an air-gas fan installed before the furnace.

Our RAPID heaters, together with relevant terminals, fittings and pipes for combustion air intake and exhaust, are certified for 6 standard installation layouts, meeting the most common requirements.

The following layouts are supported with certified material:

C13 type: Air intake and exhaust pipes, either concentric or separate, with terminals on the same wall.

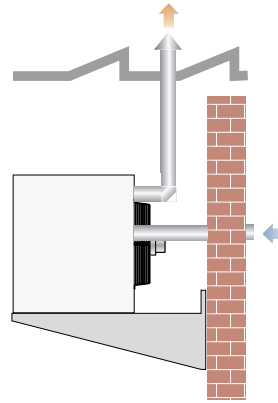
C33 type: Air intake and exhaust pipes, either concentric or separate, with terminals on the roof.

C43 type: Separate air intake and flue exhaust pipes on different walls.

C53 type: Air intake pipe with terminal on a wall and flue exhaust with terminal on the roof.

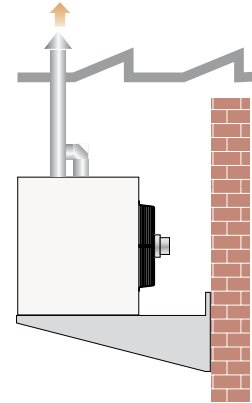
B23 type: Air is taken in from the room and flue exhaust is on a wall/roof.

If pipes and terminals manufactured by third parties are used (C63 type), they must be certified. Flue exhaust ducts must be made of materials resistant to condensate corrosion, such as aluminium (1.5 mm thick) or stainless steel (0.6 mm thick).



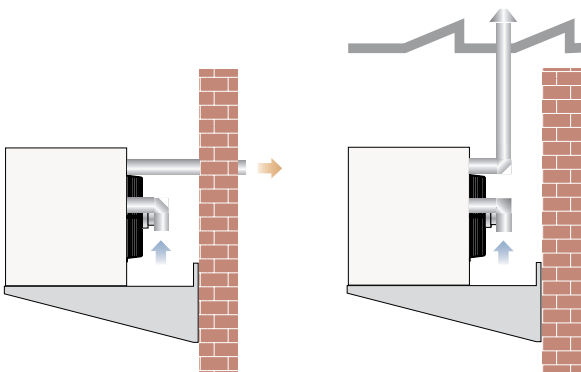
C53 TYPE

Sealed combustion circuit. Both pipes are connected to outdoor through different walls.



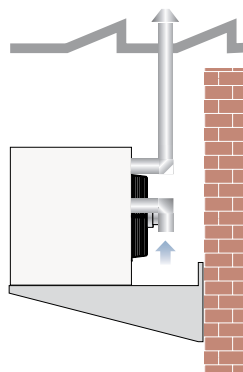
C33 TYPE

Combustion circuit is sealed from the room. Piping is connected to outdoor using one concentric terminal.



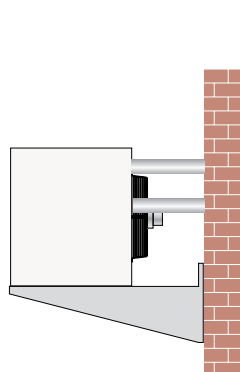
B23 TYPE

Open combustion circuit, combustion air intake from indoor, flue are exhausted outdoor.



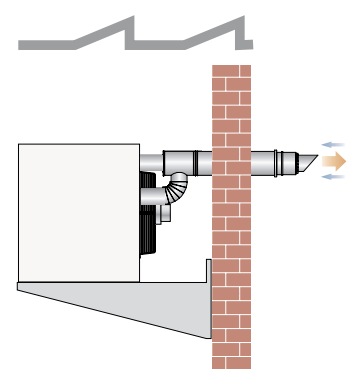
B23 TYPE

Open combustion circuit, combustion air intake from indoor, flue are exhausted outdoor.



C13 TYPE

Combustion circuit is sealed from the room. Pipes are connected outdoor through the wall.



C13 TYPE

Sealed combustion circuit. Concentric pipes run through the wall.



ApenGroup, Caring for the Environment

ENERGY SAVINGS: A MUST IN OUR HISTORY

Since its foundation, in 1967, APEN GROUP has been a leading company in the manufacturing of HVAC equipment.

It was originally named Thermovür and its main task was to produce environment-friendly burners and equipment for residential and industrial heating.

In 1973, its sister company AERMAX was created, whose principal activity was the manufacturing of warm air heaters.

In 1991 the two companies merged in present APEN GROUP SPA (APEN stands for the Italian of Companies for new energies).

OUR MISSION

APEN GROUP's mission is to design, manufacture and market HVAC equipment that stand out for their quality and the care for the environment.

Our staff is constantly striving to develop products that minimise polluting emissions and consumptions and maximise efficiency levels, while guaranteeing ideal heating and climatization in any context, from homes to large industrial sites.

A LEADING COMPANY IN THE INDUSTRY

Our modern facility is built on an area of 30,000 sqm, 11,000 of which encompass headquarters, manufacturing and research facilities.

Easy and timely intercompany communication is provided through an IBM AS400 server with a fully integrated Server Windows NT PC network.

TECHNOLOGY APPLIED TO RESEARCH AND MANUFACTURING

A highly trained team of skilled designers and researchers follows each step of product design and implements leading-edge technical and manufacturing solutions.

The manufacturing of our products takes advantage of ultimate, state-of-the-art planning and organization methods, which include: digital control equipment, welding robots, computer-assisted machinery, and high automation in order to deliver top quality, manufacturing flexibility and timely deliveries.

Innovation, reliability, and originality are built-in features of each of our products.

CERTIFIED QUALITY

In February 2003, Apen Group's quality standards have been certified according to UNI EN ISO 9001:2000 standards (certification was renewed in 2006) as regards to "design, manufacturing, marketing, and service of warm air heaters, condensing heaters and exchangers, gas convectors, air handling units, burners, and boilers."

SALES ORGANIZATION

During its forty-year-long presence on the market, Apen Group has developed a widespread domestic and international sales organization.

Our network is formed by more than 40 Area Representatives, design engineers, distributors, and agents who can meet any heating need of Apen Group's clients.

SERVICE CENTRES

350 Service Centres are dedicated to support the client and solve, as quickly as possible, any problem that may arise with APEN GROUP products.

Our Service Centres are fully Uni En ISO 9001 compliant and guarantee professional support and full assistance for the management and maintenance of our equipment.

CUSTOMER SERVICE

To be truly customer-oriented, a service must satisfy custom requests from the clients.

APEN GROUP can meet any project need by developing custom products. Its flexibility in the manufacturing process and the availability of state-of-the-art machinery for metal sheet processing guarantee cost effective products.

Cost effectiveness is another basic characteristic of APEN GROUP products, besides a high potential for technology, commercial, and industrial development.

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