

# CONDEXA PRO

EXCELLENCE AND VERSATILITY



**RIELLO**  
Energy For Life

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## CONDEXA PRO

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Riello Condexa PRO is a condensing pre-mixed, fan-induced, 10:1 modulating wall hung boiler. Designed both for stand-alone and cascade applications up to 2.4 mbtuh. It is suitable for a wide variety of applications, from office buildings and sports facilities to schools and hotels.

Available in two models, each of which can be combined in cascade systems up to six units:

CONDEXA PRO 75 NA

CONDEXA PRO 117 NA

- CASCADE UP TO 6 UNITS
- INTEGRATED MANAGEMENT CONTROLLER
- CASCADE MANAGEMENT INCLUDED
- BUILT-IN CIRCULATING PUMP
- 4" FLUE EXHAUST / AIR INTAKE ADAPTERS
- ROOM SEALED COMBUSTION
- NPT CONNECTIONS
- IN-FIELD CONVERTIBLE FROM NATURAL GAS TO LPG
- LOW EMISSIONS – SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT CERTIFIED



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## RIELLO HEAT EXCHANGER TECHNOLOGY

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Riello designed and manufactured in stainless steel:  
2 sizes, 255,902 Btu/h (75 kW) and 399,204 Btu/h (117 kW)

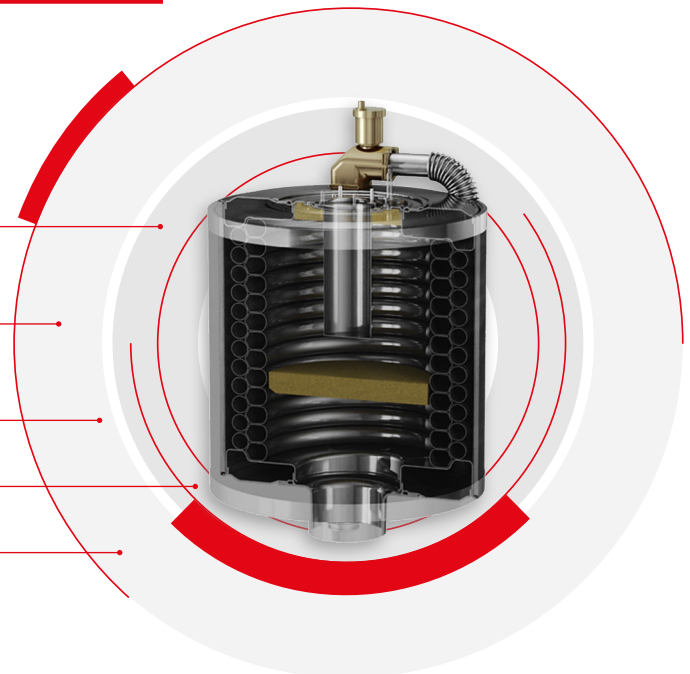
Ultra high efficiency AFUE > 95%

Dual coiled, with smooth stainless steel tubes and patented profile

Premix burner with high modulation range and low NOx emissions

Low hydraulic pressure losses

High fan speeds





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## BUILT-IN COMPONENTS

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### MAX OPERATING TEMPERATURE:

Max operating temperature (set point ) 194 °F (90 °C)  
Safety thermostat set @ 203 °F (95 °C)

### WATER FLOW METER:

Water flow meter on supply outlet, for flow rate control of the boiler circuit.

### WATER PRESSURE SWITCH/RETURN SENSOR:

Low water pressure switch and return water sensor for heat exchanger protection

### FLUE SENSOR:

Flue sensor for combustion temperature sensing; and notifies user for required heat exchanger cleaning

### FLUE GAS PRESSURE SENSOR:

Air/flue differential pressure switch

### GAS VALVE:

Pneumatic gas valve  
Turndown ratio 10:1

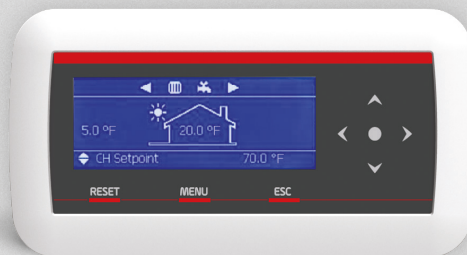


NOTE: this picture is only representative

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## INTEGRATED DISPLAY & CONTROL

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### THE SYSTEM BRAIN

The Condexa PRO electronic controller monitors and quickly processes data from the boiler and from the system. It assures optimum comfort minimal energy waste and maximum operation safety. The controller features exceptional intuitive learning capabilities and high modulation ratios. The operating logic of the boiler in master/slave mode for a cascade application is integrated into the board.

The interface display is back-lit, intuitive and multilingual, simplifying communication between the unit and the users. The electronic controller is built into each boiler as well as cascade system applications, eliminating the need for a separate remote control panel.



## THE INGREDIENTS OF SUCCESS

### MIXER WITH HIGH CAPACITY TURNDOWN RATIO

The MIXER has two venturi's, one of which has a flue gas check valve; that closes at low power.

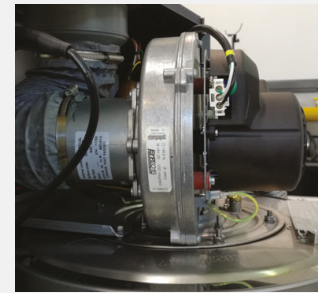
The venturi's creates a variable throat, doubling the turndown ratio from 5:1 to 10:1.

The Condexa Pro has an ionization flame control combined with a zero governor combustion.



### ADVANTAGES OF A 10:1 TURNDOWN RATIO

- Produces energy savings by minimizing on/off cycles
- Makes the boiler more suitable for integration with renewable heat sources.
- Lowers CO<sub>2</sub> emission and creates a more environmentally responsible system
- Increases the number of applications by creating a broader btu range
- Reduces the value of weighted emissions, increasing the turndown ratio



## DIMENSIONS

### ONE SIZE:

(same dimensions for both models)

W (Width): 23.62 in (600 mm)

D (Depth): 17.12 in (435 mm)

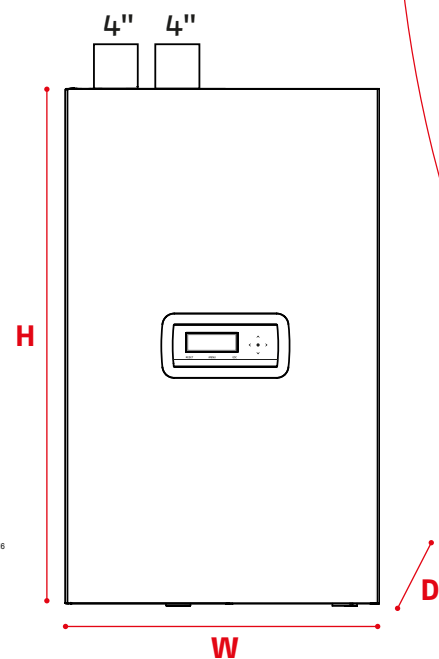
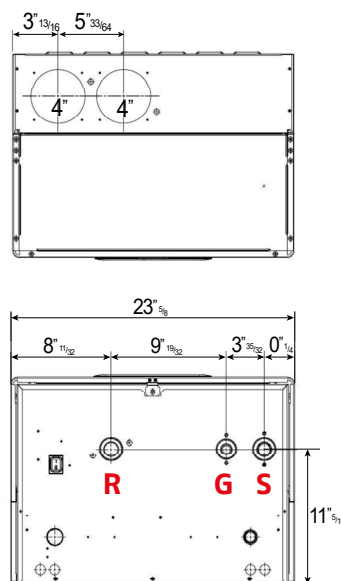
H (Height): 39.37 in (1000 mm)

### HYDRAULIC CONFIGURATION:

G (Gas): 1" 1/4 NPT

S (Supply): 1" 1/2 NPT

R (Return): 1" 1/2 NPT



# CONDEXA PRO

## ONE PRODUCT, MULTIPLE SOLUTIONS



### STAND ALONE APPLICATION

A FREE-STANDING FRAME IS AVAILABLE AS AN OPTION TO SUPPORT THE UNIT WHEN A WALL HUNG INSTALLATION IS NOT POSSIBLE.



### LINEAR CASCADE

THE CONDEXA PRO IS DESIGNED TO WORK IN HIGH POWER CASCADE SYSTEMS. THE INTEGRATED MASTER/SLAVE LOGIC ENABLES EQUAL OPERATION OF THE UNITS .



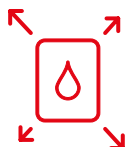
### BACK-TO-BACK CASCADE

THE BACK-TO-BACK CONFIGURATION SAVES SPACE IN A MECHANICAL ROOM, WHILE CREATING HIGH POWER SOLUTIONS. IN CASCADE INSTALLATIONS, THE INTERFACE BETWEEN PRIMARY AND SECONDARY CIRCUIT CAN BE ACHIEVED WITH A HYDRAULIC SEPARATOR AND A PLATE HEAT EXCHANGER.



### CONDEXA PRO VERSATILITY

THE CONDEXA PRO IS HIGHLY ADAPTABLE TO MULTIPLE APPLICATIONS. THE TWO MODELS 75 NA AND 117 NA CAN BE COMBINED IN LINEAR AND BACK-TO-BACK CASCADE CONFIGURATIONS ALLOWING AS MANY AS 20 DIFFERENT CONFIGURATIONS.



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## THE CONDEXA PRO ADVANTAGE

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The Condexa PRO is an ideal choice for cascade systems. The boiler's modularity and specific features make it suitable for commercial applications, both in new build and retrofit.

### OPTIMAL EFFICIENCY

The efficiency of a Condexa PRO cascade system is significantly higher than a traditional single boiler installation with the same output. By automatically controlling the number of boilers in operation, the system can optimize the heat supply according to demand at any particular time. For instance, in spring and autumn when the heat request is lower, or in buildings like hotels and restaurants where the heat request is not constant, the system can switch individual boilers on and off ensuring optimum efficiency.

### PEACE OF MIND

A Condexa PRO cascade system is more reliable than a traditional boiler installation as each boiler in the cascade can be individually serviced and maintained without interrupting the system's performance.

### SIGNIFICANT SAVINGS

The high efficiency of the cascade system combined with the intelligent condensing technology of the boilers will allow reduced costs of the heating system and will achieve payback within several years. Also, reduced installation time and quick servicing produce savings for the end user.

### INTELLIGENT CONTROL

The Condexa PRO interface can control the functionality of each boiler, as well as multiple zones.

### EASE OF SERVICING

The Condexa PRO range is designed so that all components can be easily serviced and maintained from the front. Each boiler in the cascade system can be individually serviced and maintained, while the other units continue to operate.

### SPACE SAVINGS

The cascade system is designed to provide a space-saving and versatile solution for light commercial buildings or large domestic properties. A Condexa PRO cascade installation can be tailored to meet the space requirements of the customer as there are three cascade possibilities: wall hung installation, free-standing side-by-side, and back-to-back installation. Also, because of the system modularity, the total output can be accurately sized to meet the space and energy requirements of the building.

### SIMPLE INSTALLATION

A Condexa PRO cascade system involves a simple installation process. The installer can lift each unit separately and the boiler fits through most doorways. Plus, the system can be assembled on-site in the mechanical room for both new-build and retrofit applications.

### RELIABILITY

By choosing a Riello Condexa PRO system, you ensure that all components of your cascade system work in harmony with one another. Flow volumes are balanced and hydraulic performance is optimized so that you experience reliability and savings from your heating system.

### TURNDOWN RATIO

The Condexa PRO electronic configuration can manage up to 6 units with a turndown ratio down to only 25,590 btuh. To configure multi-boiler systems, all components of the cascade system must be properly sized and selected with the help of a design engineer specialist.

### COMMITMENT TO THE ENVIRONMENT

A Condexa PRO cascade system can also automatically control the number of boilers in operation according to heat demand, saving energy and reducing emissions.

# INSTALLATION OPTIONS

## STAND ALONE APPLICATIONS



**255,902 BTU**  
**75 kW**

**399,204 BTU**  
**117 kW**

CONDEXA PRO 75 NA

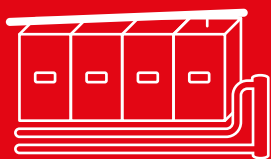
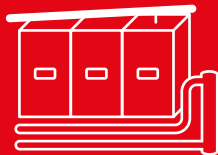


CONDEXA PRO 117 NA



## CASCADE APPLICATIONS

### LINEAR CASCADE

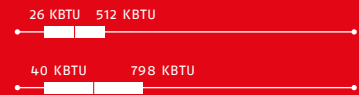


### BACK-TO-BACK CASCADE



**511,804 BTU**  
**150 kW**  
**798,408 BTU**  
**234 kW**

CONDEXA PRO 75 NA  
(2 PCS)  
CONDEXA PRO 117 NA  
(2 PCS)



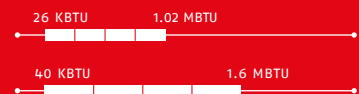
**767,706 BTU**  
**225 kW**  
**1,197,612 BTU**  
**351 kW**

CONDEXA PRO 75 NA  
(3 PCS)  
CONDEXA PRO 117 NA  
(3 PCS)



**1,023,608 BTU**  
**300 kW**  
**1,596,816 BTU**  
**468 kW**

CONDEXA PRO 75 NA  
(4 PCS)  
CONDEXA PRO 117 NA  
(4 PCS)



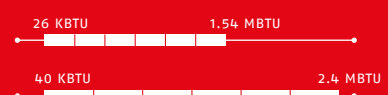
**1,279,510 BTU**  
**375 kW**  
**1,996,020 BTU**  
**585 kW**

CONDEXA PRO 75 NA  
(5 PCS)  
CONDEXA PRO 117 NA  
(5 PCS)



**1,535,412 BTU**  
**450 kW**  
**2,395,224 BTU**  
**702 kW**

CONDEXA PRO 75 NA  
(6 PCS)  
CONDEXA PRO 117 NA  
(6 PCS)



**ABOUT RIELLO**

Founded in 1922, Riello is a leading manufacturer of products and services for heating, air-conditioning and energy efficiency. Headquartered in Legnago (Verona), Italy, Riello operates in over 120 countries. Riello is a part of UTC Climate, Controls & Security, a unit of United Technologies Corp., a leading provider to the aerospace and building systems industries worldwide. For more information, visit

[www.riello.com](http://www.riello.com)

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The Company is constantly working to perfect all of its production processes, therefore the aesthetics, size, technical data, equipment and accessories of the products may be subject to change.

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