# Rheem ${ }^{\circledR}$ ThermaForce ${ }^{\text {Tw }}$ Super High-Efficiency Condensing Combi Boilers 

## Flexible Installation

- Moveable combustion air intake (left/right) and ability to flex vent in existing B-vent
- Extra long pipe fittings with notched sides for easy gripping with wrench
- Only 5 moving parts - Fan, Bypass Valve, Pump, Gas Valve, and Damper
- Universal shared platform parts - Easily diagnose and service with common parts for all ThermaForce ${ }^{T M}$ units


## Key Features

- Innovative Labyrinth Heat Exchanger with 2 independent copper waterways for maximum heat transfer and minimal heat loss
- Built-in ECM variable speed, high efficiency boiler pump
- Built-in Illuminated Touchscreen Control Panel
- Outdoor reset technology increases efficiency by lowering water temperature automatically
- Wireless cascading using RF balances workload of each unit for longer life
- Only Combi Boilers that can be cascaded for both space heating and domestic hot water
- ENERGY STAR ${ }^{\circledR}$ certified with up to $96 \%$ AFUE and ASME-rated (excludes 160K combi model).


## Specifications

| MODEL NO. |  | $\begin{gathered} \text { CRCBH- } \\ \text { L99i } \end{gathered}$ | $\begin{gathered} \text { CRCBH- } \\ \text { L125i } \end{gathered}$ | $\begin{gathered} \text { CRCBH- } \\ \text { L160i } \end{gathered}$ | $\begin{gathered} \text { CRCBH- } \\ \text { L199i } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Input Rate <br> (Heating Mode) | MAX | 99,000 BTU/h | 99,000 BTU/h | 125,000 BTU/h | 125,000 BTU/h |
|  | MIN | 15,500 BTU/h | 16,500 BTU/h | 23,000 BTU/h | 28,500 BTU/h |
| Output Rate (Heating mode) | MAX | 89,000 BTU/h | 89,000 BTU/h | 111,000 BTU/h | 111,000 BTU/h |
|  | MIN | 14,800 BTU/h | 15,800 BTU/h | 22,000 BTU/h | 27,100 BTU/h |
| Input Rate (Domestic Hot Water) | MAX | 99,000 BTU/h | 125,000 BTU/h | 160,000 BTU/h | 199,000 BTU/h |
|  | MIN | 15,500 BTU/h | 16,500 BTU/h | 23,000 BTU/h | 28,500 BTU/h |
| AFUE |  | 96\% | 95\% | 94\% | 95\% |
| Gas Pressure <br> (Nat Gas or LP gas) | MAX | 14" WC |  |  |  |
|  | MIN | 4" WC |  |  |  |
| Power Supply |  | $120 \mathrm{~V} / 60 \mathrm{~Hz}$ |  |  |  |
| Weight lbs. (empty) |  | 85 |  | 84 |  |
| Pressure vessel water content - USG |  | 0.5 |  | 0.19 |  |
| Boiler Flow Rate - GPM | MAX | 10 |  | 11 | 12 |
|  | MIN | 2 |  |  |  |
| Water Pressure | MAX | DHW 150 psi / Heating 43.5psi |  |  |  |
|  | MIN | DHW 40psi / Heating 8psi |  |  |  |
| Maximum Altitude |  | 10,100 ft | 10,100 ft | 10,100 ft | 10,100 ft ${ }^{3}$ |
| Ambient temperature - Low ( ${ }^{\circ} \mathrm{F}$ ) |  | $32^{\circ}$ |  |  |  |
| Ambient temperature - High ( ${ }^{\circ} \mathrm{F}$ ) |  | $122^{\circ}$ |  |  |  |
| Max relative humidity (non-condensing) |  | 90\% |  |  |  |
| Temp Range | Heating Mode | $51^{\circ} \mathrm{F}-194{ }^{\circ} \mathrm{F}$ |  |  |  |
|  | Domestic Hot Water | $105^{\circ} \mathrm{F}-149{ }^{\circ} \mathrm{F}$ |  |  |  |
| Minimum Activation Flow Rate (DHW) |  | 0.5 GPM |  |  |  |
| Gallons per Minute - GPM (Domestic Hot Water) | MAX | 4 |  | 7 |  |
|  | $67^{\circ} \mathrm{F}$ Rise | 2.4 | 3.2 | 4.1 | 5 |
| Gas Connection |  | 3/4" Male NPT |  |  |  |
| Domestic Hot Water Connection |  | 3/4" Male NPT |  |  |  |
| Heating Connection |  | 1" Male NPT |  |  |  |
| Max equivalent vent length 2" (each side) ${ }^{2}$ |  | 65' |  |  |  |
| Max equivalent vent length 3" each side) |  | 120' |  |  |  |
| Ultra Low NOx |  | Meets $14 \mathrm{ng} / \mathrm{J}$ NOx requirements SCAQMD Rule 1146.2 compliant |  |  |  |
| Warranty ${ }^{1}$ |  | 10-Year Heat Exchanger, 5-Year Parts, 1-Year Labor |  |  |  |

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CRCBH-L99i CRCBH-L125i, CRCBH-L160i \& CRCBH-L199i

Indoor Direct Vent
99,000-199,000 BTU/h Natural Gas/LP Convertible



Water heater pressure drop - ThermaForce ${ }^{\text {TM }}$
CRCBH-L99i, CRCBH-L125i,
CRCBH-L160i \& CRCBH-L199i


View the boiler head loss - ThermaForce ${ }^{\text {m" }}$ CRCBH-L99i, CRCBH-L125i, CRCBH-L160i \& CRCBH-L199i


Specifications

| VENTING | MAXIMUM EQUIVALENT LENGTH |
| :---: | :---: |
| ULC-636 PVC, CPVC or Polyproyplene | (each side) |
| $2^{\prime \prime}$ | $65^{\prime 2}$ |
| $3^{\prime \prime}$ | $120^{\prime}$ |
| $2^{\prime \prime}$ or 3" $90^{\circ}$ Long Sweep Vent Elbow | Allow 5 equivalent feet |
| $2^{\prime \prime}$ or 3" $90^{\circ}$ Short Sweep Vent Elbow | Allow 8 equivalent feet |
| $2^{\prime \prime}$ or 3" 45 Vent Elbow | Allow 3 equivalent feet |
| Polyproyplene |  |
| PPs 87-90 Elbow | Allow 8 equivalent feet |
| Flex PPS |  |
| $3^{\prime \prime}$ PPs Flex | $3^{\prime}$ 'Actual (Equivalent = Actual x 1.4) |

${ }^{2}$ Approximate input derate of $10-16 \%$ at 2" maximum vent length.

| SURFACE | MIN. DISTANCE FROM COMBUSTIBLE SURFACES | RECOMMENDED DISTANCE FOR INSTALLATION AND SERVICE |
| :---: | :---: | :---: |
| Front | 2" | 24" |
| Rear | $0{ }^{\prime \prime}$ | $0{ }^{\prime \prime}$ |
| Left Side | 1.5 " | $6 "$ |
| Right Side | 4" | $6{ }^{\prime \prime}$ |
| Top | $2{ }^{\prime \prime}$ | 24 " |
| Bottom | 8" | 24 " |


|  | PIPING CONNECTIONS | DIMENSION |
| :---: | :---: | :---: |
| A | Exhaust Outlet | 2" Schedule 40 PVC $^{\|c\|}$ 2" Schedule 40 PVC |
| B | Combustion Air Inlet | $3 / 4^{\prime \prime}$ Male NPT |
| C | Cold Domestic Water Connection | $3 / 4^{\prime \prime}$ Male NPT |
| D | Hot Domestic Water Connection | $1^{\prime \prime}$ Male NPT |
| E | Heating Water Inlet | $1^{\prime \prime}$ Male NPT |
| F | Heating Water Outlet | $3 / 4^{\prime \prime}$ Male NPT |
| G | Gas Inlet | $3 / 4^{\prime \prime}$ Hose |
| H | Condensate Outlet | $7 / 16^{\prime \prime}$ Rubber Plug |
| I | Control Wiring |  |

Dimensions



B (ALTERNATE)


CRCBH-L160i, CRCBH-L199 BOTTOM VIEW
CRCBH-L99i, CRCBH-L125i BOTTOM VIEW

## Parts \& Accessories

| Floor Stand P-267C | Service Parts Kit P-911R | EZ Pipe Manifold 251-063, 251-064 | 2" PVC Sidewall Vent Kit P-741 | $3^{11}$ PVC Sidewall Vent Kit P-742 |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |

[^1]
[^0]:    See Warranty Certificate for complete information. ²Approximate input derate of $10-16 \%$ at 2 " maximum vent length Natural Gas only, LP is 7,800 ft

[^1]:    In keeping with its policy of continuous progress and product improvement, Rheem reserves the right to make changes without notice.

