

# EVO DUO™ / EVO MICRO™

**INNOVATIVE CONDENSING TECHNOLOGY**



**HAMILTON ENGINEERING, INC.**  
TOTAL WATER MANAGEMENT  
HEATING • TREATMENT • CONSERVATION

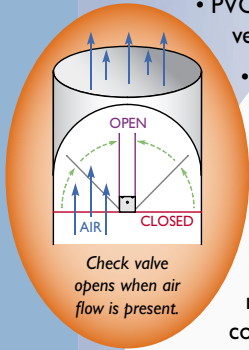
# EVO DUO™ / EVO MICRO™ INNOVATIVE CONDENSING TECHNOLOGY

Up to **99.8% efficient**, stainless steel, condensing water heating and hydronic boiler systems



## VENTING

- PVC or AL 29C stainless steel venting—it's your choice
- Common vent for multiple units made possible by an engineered venting system from Hamilton and built-in non-return valve
- Moisture separation system with drain for mandatory sealed inlet air connection

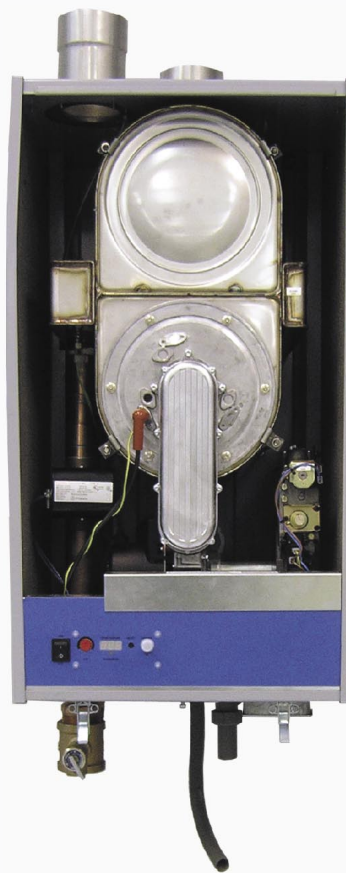


## CONDENSATE DRAIN

- Pressure switch monitors the drain system and shuts the burner down in the event of a condensate back-up
- Easily accessible condensate drain and cleanout
- Larger diameter kink-proof drain hose for condensate removal

## COMPARATIVE COST OF OPERATION

ATMOSPHERIC \$\$\$\$\$\$  
 PRESSURIZED \$\$\$  
 SEALED \$\$\$\$\$\$  
 CONDENSING \$\$



## HEAT EXCHANGER(S)

- All 316L stainless steel materials
- All models are Industrial Grade and ASME stamped and certified.
- New DUO design is more compact and allows for condensing over a greater firing and water temperature range. It yields the highest efficiency on the market.

## CONTROLS

- Flexible power supply requirements utilize 208–240 supply voltage in 50 or 60 hz with no changes or adjustments required
- Optional multiple unit Cascade™ controller allows up to 8 units to operate as one with maximum efficiency and uniform usage on each unit
- Scale-monitoring—internal software constantly monitors heat exchanger performance to warn if scale formation is beginning.
- Freeze protection—controller starts the pump (and the burner, if necessary) to protect against heat exchanger freeze-ups in cold climates.

## PUMP

- Internally controlled and pre-wired at the factory
- Runs only with demand for heat and cool-down period
- Most efficient wire to water design available, with maximum of 2.1 amps energy consumption



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## MODEL SIZES

Model	Input BTU/hr
EVO MICRO	136,300
EVO DUO	199,999
EVO DUO	399,999
EVO DUO	630,000

## EVO MICRO



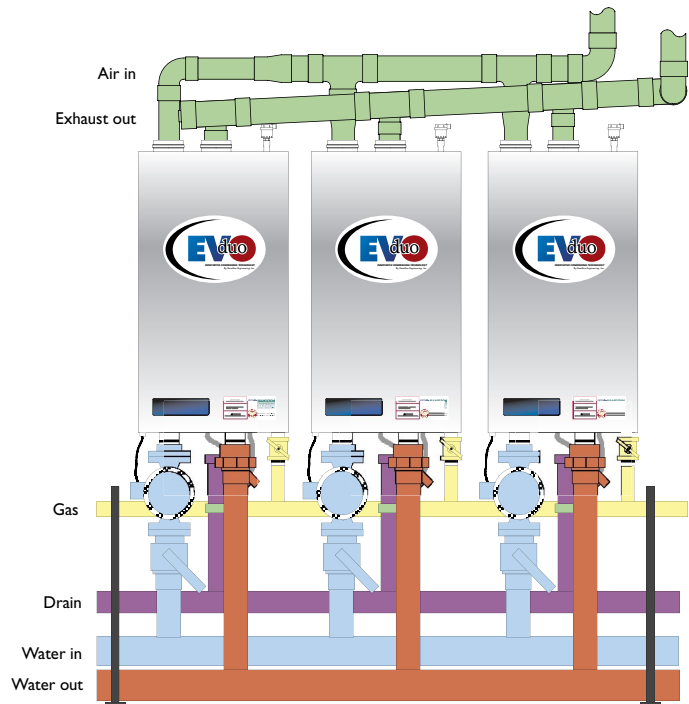
- All of the same features of the EVO DUO described at left
- Small, lightweight, compact design

## EVO BACK PACK



- Space-saving design mounts an EVO MICRO or EVO DUO unit directly to an 80, 120, or 200 gallon storage tank.
- The storage tank is glass-lined, insulated and jacketed to prevent heat loss and maintain efficiency.

## EVO RACK PACK



- Hamilton's standard Rack Pack™ includes one or more units rack-mounted and pre-plumbed with the water piping.
- Factory-built rack can stand alone or be mounted on the wall, freeing up valuable floor space in the equipment room.
- The deluxe Rack Pack Six Pack™ package, pictured above, includes the rack and water piping, as well as the following:
  - Individually switched electrical power
  - Common venting
  - Gas manifold
  - Common condensate drain neutralizer
  - Cascade™ controller, which manages multiple units as one. Employing only one setting, the individual units receive rotated, even use.



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## EVO DUO™ / EVO MICRO™ TECHNICAL INFORMATION

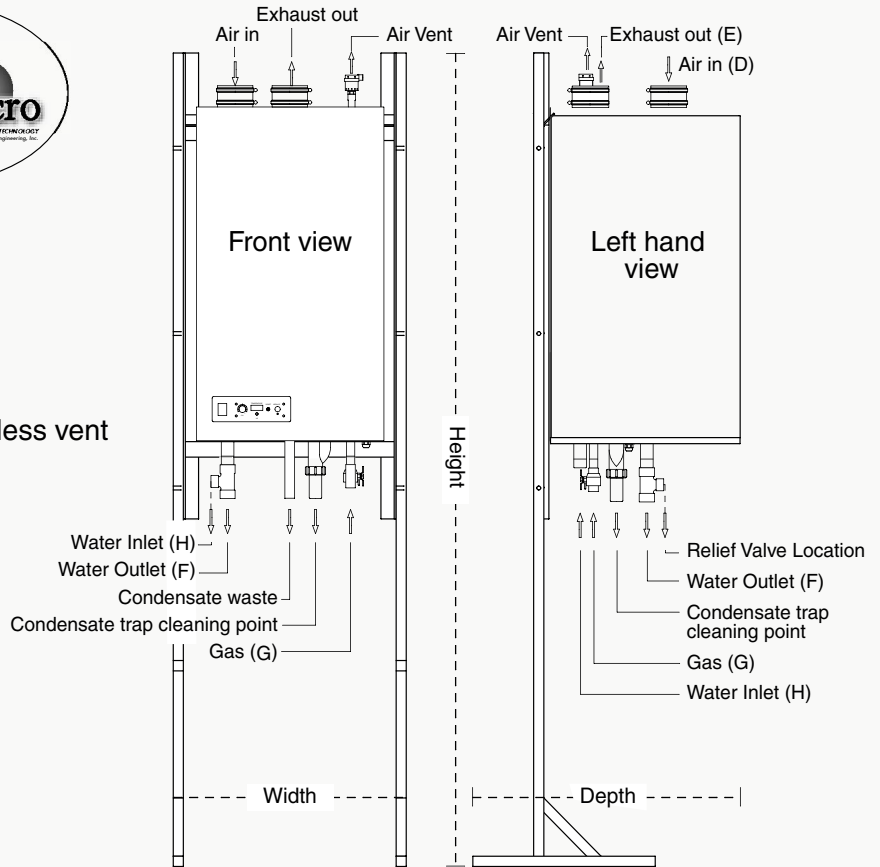


### Standard Equipment

- 316L Stainless steel heat exchanger
- Modulating stainless steel burner
- Self diagnostic microprocessor controls
- Externally adjustable thermostat
- Sealed combustion, PVC or AL 29C stainless vent
- Stainless steel cover
- Water flow switch
- Pressure relief valve
- Dual high limit sensors
- All bronze circulating pump
- Blocked flue/blocked condensate drain pressure switch
- 24/7 customer service

### Optional Equipment

- Rack Pack™ & Back Pack™ include rack and water piping
- Rack Pack Six Pack™ includes the above, plus:
  - Cascade Controls
  - Common Venting
  - Individually switched electrical power
  - Common condensate drain neutralizer



Model	Width	Height	Depth	D	E	F (FPT)	G	H (MPT)
129	22"	79"	20"	3"	3"	1.0"	0.75"	1.0"
199	25"	79"	27"	3"	3"	1.5"	0.75"	1.5"
399	25"	79"	27"	4"	4"	2.0"	0.75"	1.5"
599	25"	79"	34.5"	5"	5"	2.0"	1.0"	1.5"

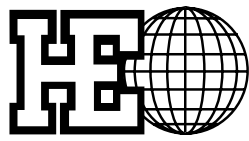
Model	Input BTU/hr	Water Heater* Output BTU/hr	Boiler** Output BTU/hr	GPH Recovery @100°F ΔT	GPH Recovery @80°F ΔT	GPH Recovery @60°F ΔT	Shipping Weight
HW 129	136,300	up to 132,890	up to 130,150	160	199	265	77 lbs.
HW 199	199,999	up to 193,999	up to 189,999	233	291	388	112 lbs.
HW 399	399,999	up to 387,999	up to 379,999	466	582	776	194 lbs.
HW 599	630,000	up to 611,100	up to 598,500	734	917	1223	234 lbs.

\*At 97% thermal efficiency with 86°F incoming water to heat exchanger

\*\*At 95% thermal efficiency with 140°F incoming water to heat exchanger

- Dimensions are approximate. Please consult factory before installation.
- Maximum amperage draw at 230 volts and one phase is less than 3 amps.

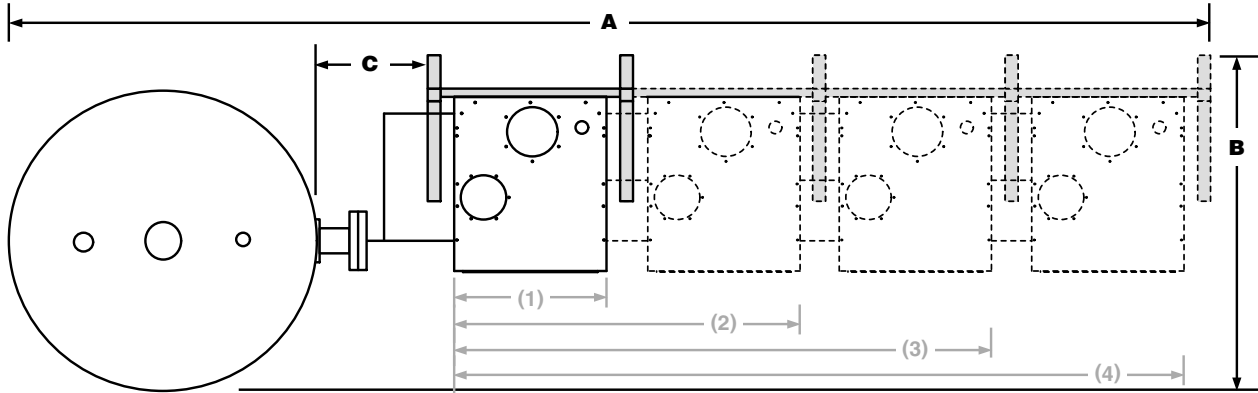




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## EVO DUO/EVO MICRO STANDARD PRE-PLUMBING CONFIGURATIONS



	120 gallon tank (28")			175 & 200 gallon tank (32")			220 & 257 gallon tank (30")			275 & 350 gallon tank (36")			432 & 500 gallon tank (42")		
Model	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
(1) HW 129	5'1"	2'1"	1'0"	5'9"	2'5"	1'4"	5'3"	2'3"	1'0"	5'9"	2'9"	1'0"	6'3"	3'3"	1'0"
(2) HW 129	6'9"	2'1"	1'0"	7'5"	2'5"	1'4"	6'11"	2'3"	1'0"	7'5"	2'9"	1'0"	7'11"	3'3"	1'0"
(3) HW 129	8'5"	2'1"	1'0"	9'1"	2'5"	1'4"	8'7"	2'3"	1'0"	9'1"	2'9"	1'0"	9'7"	3'3"	1'0"
(4) HW 129	10'2"	2'1"	1'0"	10'10"	2'5"	1'4"	10'4"	2'3"	1'0"	10'10"	2'9"	1'0"	11'4"	3'3"	1'0"
(1) HW 199	5'4"	2'8"	1'0"	6'0"	3'0"	1'4"	5'6"	2'10"	1'0"	6'0"	3'4"	1'0"	6'6"	3'10"	1'0"
(2) HW 199	7'3"	2'8"	1'0"	7'11"	3'0"	1'4"	7'5"	2'10"	1'0"	7'11"	3'4"	1'0"	8'5"	3'10"	1'0"
(3) HW 199	9'2"	2'8"	1'0"	9'10"	3'0"	1'4"	9'4"	2'10"	1'0"	9'10"	3'4"	1'0"	10'4"	3'10"	1'0"
(4) HW 199	11'2"	2'8"	1'0"	11'10"	3'0"	1'4"	11'4"	2'10"	1'0"	11'10"	3'4"	1'0"	12'4"	3'10"	1'0"
(1) HW 399	5'4"	2'8"	1'0"	6'0"	3'0"	1'4"	5'6"	2'10"	1'0"	6'0"	3'4"	1'0"	6'6"	3'10"	1'0"
(2) HW 399	7'3"	2'8"	1'0"	7'11"	3'0"	1'4"	7'5"	2'10"	1'0"	7'11"	3'4"	1'0"	8'5"	3'10"	1'0"
(3) HW 399	9'2"	2'8"	1'0"	9'10"	3'0"	1'4"	9'7"	2'10"	1'0"	9'10"	3'4"	1'0"	10'4"	3'10"	1'0"
(4) HW 399	11'2"	2'8"	1'0"	11'10"	3'0"	1'4"	11'4"	2'10"	1'0"	11'10"	3'4"	1'0"	12'4"	3'10"	1'0"
(1) HW 599	5'4"	3'4"	1'0"	6'0"	3'8"	1'4"	5'6"	3'6"	1'0"	6'0"	4'0"	1'0"	6'6"	4'6"	1'0"
(2) HW 599	7'3"	3'4"	1'0"	7'11"	3'8"	1'4"	7'5"	3'6"	1'0"	7'11"	4'0"	1'0"	8'5"	4'6"	1'0"
(3) HW 599	9'5"	3'4"	1'3"	10'1"	3'8"	1'7"	9'7"	3'6"	1'0"	10'1"	4'0"	1'3"	10'7"	4'6"	1'3"
(4) HW 599	11'5"	3'4"	1'3"	12'1"	3'8"	1'7"	11'7"	3'6"	1'0"	12'1"	4'0"	1'3"	12'7"	4'6"	1'3"

\*Dimensions are approximate. Please consult factory before installation.

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