



# Hydra Smart Commercial

Advanced Heating  
& Hot Water Systems

Tankless Water Heater

316L Stainless Steel  
Construction – 250,000 Btuh



High Efficiency  
96% Thermal Efficiency

8 to 1 Turndown Ratio

Continuous Hot Water

1st Hr. Rating: 412 GPH  
at a 70° F Rise

Fully Condensing

Cascade up to 10 units

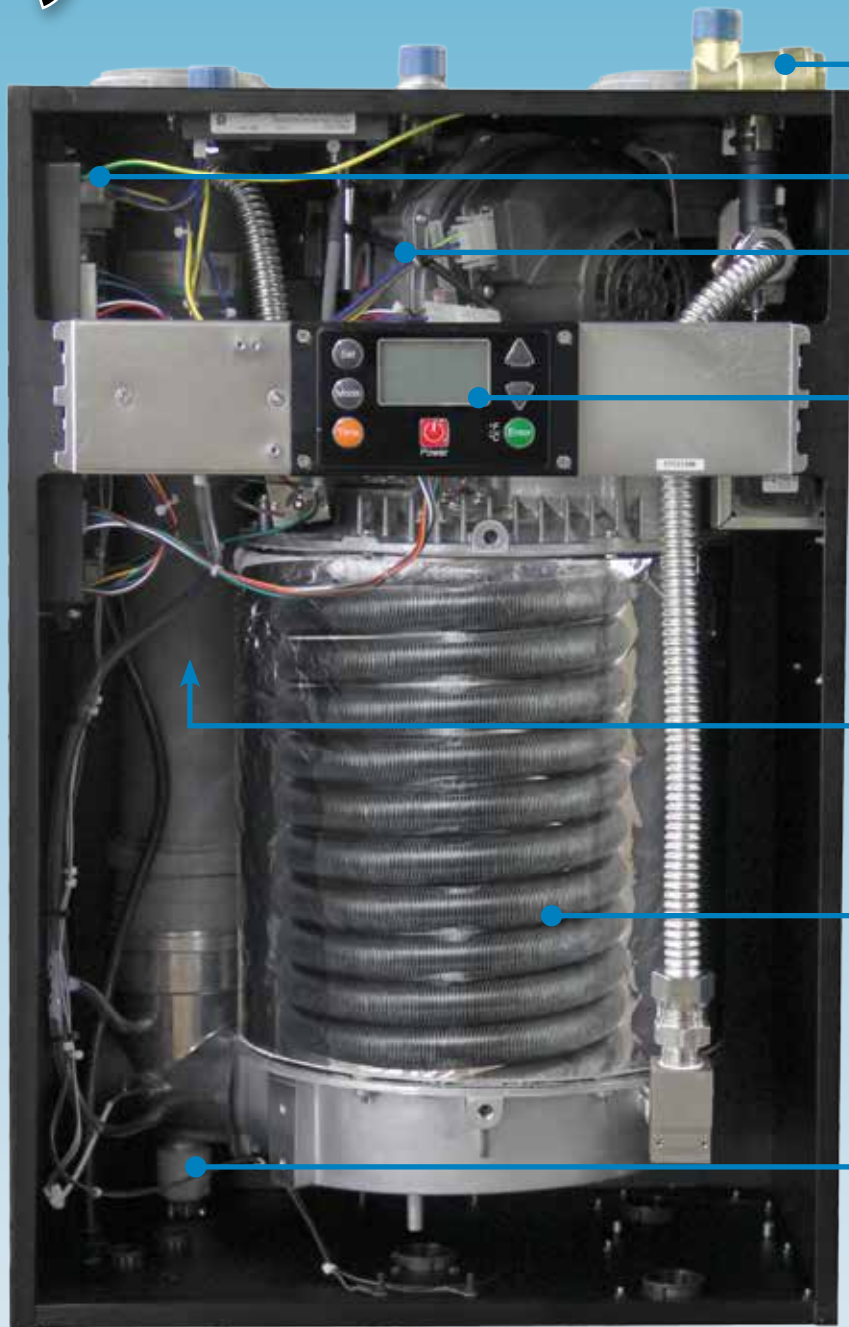
Operates on Very Low Gas  
Pressure down to 2.5"  
Water Column



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

# Hydra Smart

## A CLOSER LOOK



**Domestic Water Inlet Screen**

**Control Board** with cascading capabilities (up to 10 units)

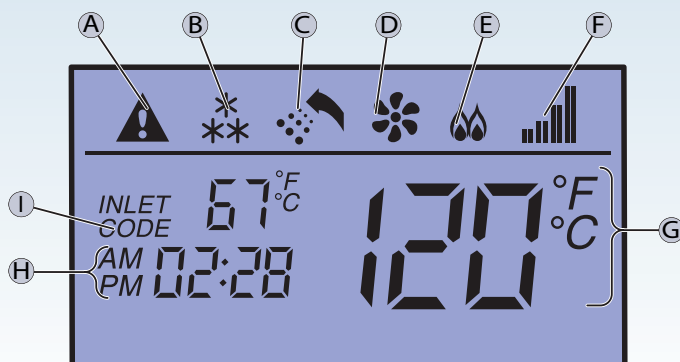
**Modulating Combustion System** with an 8 to 1 turndown ratio

**LCD Screen** - displays all information about the operating functions of the water heater

**3" PVC Exhaust Out** up to 130 feet vent length

**316L Stainless Steel, Finned, Heat Exchanger** with ratings of 98% combustion efficiency & Ultra Low NOx certified.

**Condensate Out**



### Display Icons:




- |                          |                                     |
|--------------------------|-------------------------------------|
| A) Error Icon            | F) Firing Rate Indicator            |
| B) Freeze Indicator Icon | G) Outlet Water Temperature Display |
| C) Water Usage Icon      | H) Clock Display                    |
| D) Blower Icon           | I) Code Display                     |
| E) Burner On Icon        | J) Inlet Display                    |

# THE FLOW RATES

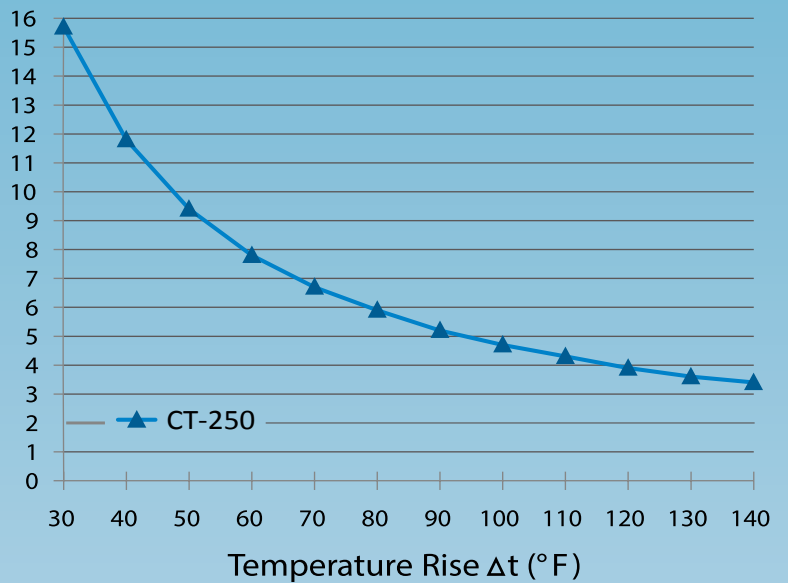
CT-250 Flow Rates (US GPM)

Inlet	Outlet				
	105°F	120°F	140°F	160°F	185°F
40°F	7.2	5.9	4.7	3.9	3.3
55°F	9.4	7.2	5.5	4.5	3.6
70°F	13.4	9.4	6.7	5.2	4.1

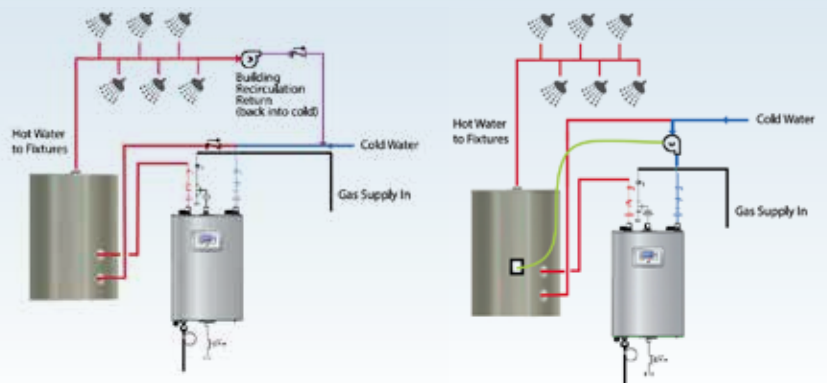
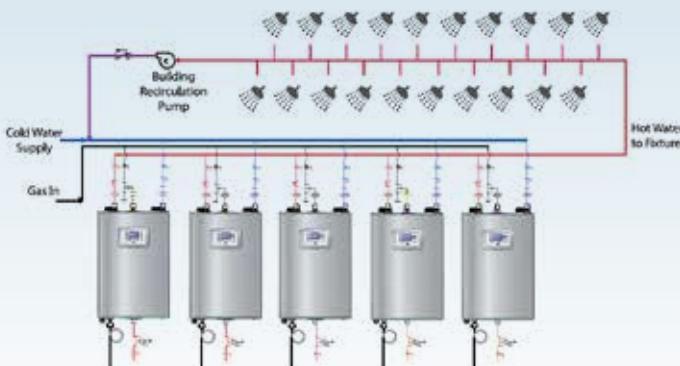
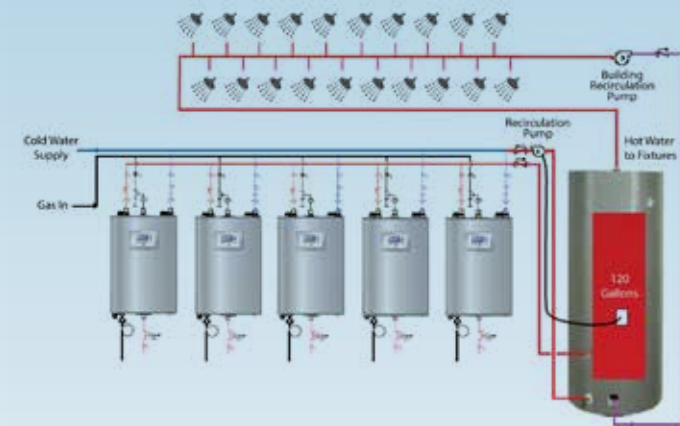
Total Number of Simultaneous 2.5 GPM Showers

Inlet	CT-250
40°F	
55°F	
70°F	

Flow Rates at Various Temperature Rises



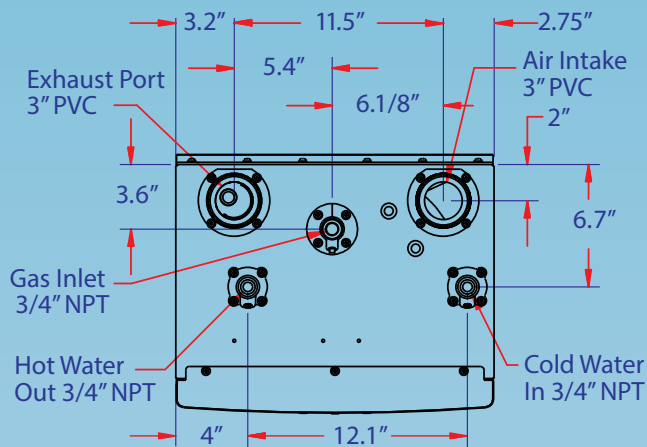
# PIPING OPTIONS



## CASCADING

The Hydra Smart is offered in 250,000 Btuh and can be cascaded up to 10 units, reaching a Btuh as high as 2.5 million Btuh down to 30,000 Btuh to achieve a turndown as high as 83 to 1.

# SPECIFICATIONS



Model	CT-250
Type	Indoor, Wall Hung, Fully Condensing
Minimum / Maximum Input (Btu/Hr)	30,000 / 250,000
Combustion Efficiency	98%
Thermal Efficiency	96%
Dimensions (Inches)	H 26 X W 17.4 X D 14.2 (3.7 cu. ft.)
Weight (lbs)	90
Water Inlet / Outlet Connection	3/4" NPT
Gas Inlet Connection	3/4" NPT
Minimum Flow Rate for Activation	0.6 GPM
Ignition	Electronic Spark Ignition
Venting Type	Direct Vent (2 pipe – intake and exhaust), Power vent (1 pipe, exhaust only)
Venting Materials	Sch. 40 PVC, Sch. 40 CPVC, Polypropylene, Stainless Steel
Max 3" Vent Length – Single Pipe / Power Vent	130 ft, deduct 5 ft per 90° elbow
Max 3" Vent Length – Two Pipe / Direct Vent	65 ft, deduct 5 ft per 90° elbow
Common Venting	Yes
Safety	Flame Rod, Thermal Fuse, Overheat Prevention Device, Fan Speed Monitor, Flue Temperature Monitor, Blocked Vent Detector, Water Shut Off Valve, 2X10A Fuse, Dual Flame Sensing, Flue Damper
Water Pressure Min / Max (PSI)	30 / 160
NG/LP Minimum Static Gas Pressure 1/2"	6" (non-corrugated, black iron)
NG/LP Minimum Static Gas Pressure 3/4"	2.5" (non-corrugated, black iron)
NG/LP Maximum Static Gas Pressure	14"
Gas Pressure for Adjustments	8" for NG, 11" for LP
Electrical	120V AC, 60 Hz
Power Consumption	500W (Max 4.2 Amps), 8W (Standby)
<b>Features</b>	
Listing	ETL (Z21.10.3 / CSA 4.3), ASME HLW
Cascading	Masterless, 10 units
Heat Exchanger	Expandable, Stainless 316L
<b>Performance</b>	
Hot Water Capacity (35°F Rise)	13.2
Hot Water Capacity (45°F Rise)	10.3
Hot Water Capacity (77°F Rise)	6.0
Domestic Mode Temp. Settings	100 – 140°F
Commercial Mode Temp. Settings	100 – 190°F
Warranty	6 Year Commercial