

## **Engineering Submittal**

# Gallant Cascade System CPS500 Primary Secondary



#### **Engineering Submittal Data**

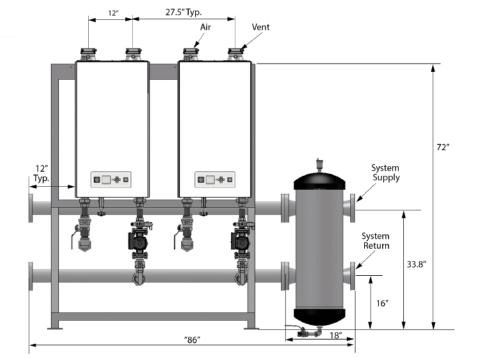
- Distribution Manifold for (2) Gallant 250 Boilers
- The Distribution Manifold Includes:
  - 3" ANSI Flange Connections with Gaskets and Hardware
  - Blind Flanges
  - 3" ANSI to 3" NPSC Flanges
  - Heavy-Duty Concrete Anchors & Bolts
  - Flexible Stainless Steel Connecting Hoses for Easy Boiler Connections
  - Boiler Communication Cable
  - System Temperature Sensor
- Primary Secondary Piping Assemblies
  - Individual Boiler Shut Off Valves
  - Individual Boiler Drain/Shut Off Valves
  - Individual Circulator Isolation Valves
- Individual Flanged Boiler Circulators
  - 3 Speed Grundfos UPS-15-58
  - Gaskets & Hardware
- Hydronic Junction for
  - System Separation
  - Air Elimination with Vent
  - Dirt Separation
  - Drain Valve
  - Insulated
  - 3" ANSI Flange Connections

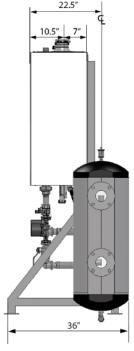
#### **Optional Equipment**

- GA CAS17 CSD-1 Kit (1 Kit per Boiler is Required)
  - Probe Type Low Water Cut-Off Field Wired to Boiler for Manual Reset
  - Boiler High Temperature Limit Control Field Wired to Boiler for Manual Reset
  - Drywell for Boiler High Temperature Limit Control
  - Required Pipe Fittings
- GA VKIT01 Stainless Steel Vent/Air Side Wall Termination Kit for 2 Pipe 3" PVC/CPVC System (1 Kit per Boiler)
- GAVTERM04 PVC Vent/Air Side Wall Termination
  Kit for 2 Pipe 3" PVC/CPVC System (1 Kit per Boiler)



### Specifications





Cascade Kit P/N	# of Manifolds	# of Solo 250 Boilers	Total Input MBH Note 1	Total Output MBH Note 1 & 2	Total Net AHRI Rating MBH Note 3	Total EDR Water Ft 2 Note 4	Total Output Boiler Horse- Power	Minimum Recommended System Pipe Size Note 5	Minimum Recommended Natural Gas Header Size Note 6
CPS500	1	2	43.6 - 480	444	386	2,574	13.3	2″	2"

**Note1:** Input and output ratings are shown for sea level applications. The Gallant 250 automatically derates the input at approximately 2% for every 1,000 feet of altitude. No alteration to the boiler or burner system is required.

Note 2: Gallant Solo 250 output rating is based on DOE heating capacity.

**Note 3:** The AHRI rating is based on piping and pick up allowance of 1.15. This allowance should be sufficient for standard radiation requirements.

Note 4: Equivalent Direct Radiation (EDR) is based on 150 Btu/h per square foot at 170°F average supply temperature.

Note 5: Minimum recommended system iron pipe size is based on temperature differential of 20°F.

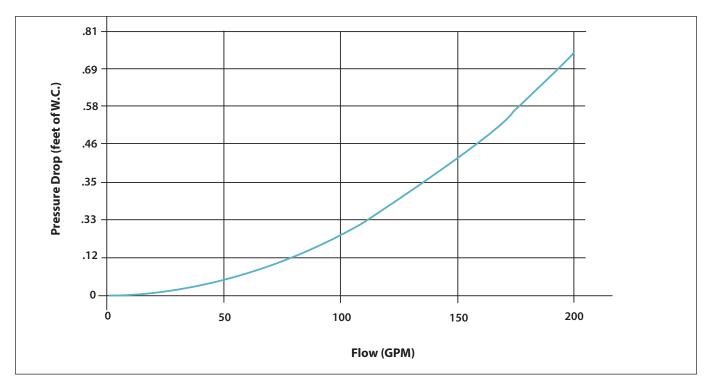
**Note 6:** Minimum recommended natural gas header size is based on using schedule 40 metallic pipe with 0.30" w.c. pressure drop and 100 feet of total equivalent length.

Component	Individual Water Content Gal	Individual Shipping Weight Lbs	
Gallant 250	4.5	140	
2 Boiler Manifold	6.6	267	
Hydronic Junction	8	124	

Cascade Kit P/N	Total Water Content Gal.	Total Shipping Weight Lbs	
CPS 500	24	725	



## Hydronic Junction System Pressure Drop Curve



Project / Location	Date				
Consulting Engineer/ Architect					
Mechanical Contractor					
Notes					