



Typical Specifications for DynaFLO Indirect Domestic Hot Water Heater

Overview

Provide _____ fully packaged indirect domestic water heaters for single point utility connections. Each heater shall heat cold domestic water at the designed flow rate to the required temperature. The heaters will use boiler water at design conditions as the heat medium to provide uninterrupted hot water. The heater shall use a double-wall or single-wall stainless steel plate heat exchanger depending on the model selected:

The Camus DynaFLO model _____ is the basis of design. Alternatives must be approved and meet the following minimum design and performance requirements.

The package is designed for 120VAC/1Phase/60Hz.

On the DHW side it is rated for:

- ☐ 150PSIG
- ☐ 250PSIG (Only available in Stainless Steel in sizes D3-D9)

On the boiler side it is rated for:

- ☐ 150PSIG
- ☐ 250PSIG (Only available in Black Iron in sizes D7-D9)

Design and Performance Requirements:

Mechanical System – This shall be a complete package requiring only connection to drains, domestic water and boiler water systems. The entire domestic water side shall be lead-free.

- The package shall have a footprint that is not larger than 7.1 ft².
- The boiler system piping shall be stainless steel, type L copper, or black iron.
- The domestic water piping shall be stainless steel or type L copper.
- The heat exchanger shall be a stainless steel, double-wall or single-wall, brazed plate heat exchanger. The double wall heat exchanger will provide for visual leak detection from between plates and prevents cross contamination between the boiler and domestic sides.
- The package shall be equipped with Victaulic connections for easy removal of the heat exchanger.
- The package shall be equipped with ½" ports on the inlet and outlet of the boiler side for mounting a differential pressure gauge.
- The electro-hydraulic control valve shall be a 3-way control valve that can be turned into 2-way operation either by a spectacle blind or a valve (depending on the model).
- A domestic water circulating pump shall be provided as an integral component of this system. The pump shall run continuously while the heater is in operation to reduce scaling of the heat exchanger. The pump shall have a dedicated power switch and fuse.
- To prevent personnel injury by inadvertent contact, the heat exchanger shall be completely enclosed within a protective shroud.
- Ball valves shall be provided to completely isolate the heater from the domestic and/or boiler water systems.
- A "wye" strainer shall be provided at the boiler and domestic water inlet to prevent fouling of the control valve and heat exchanger.
- There _____ shall or _____ shall not be a 150psi pressure relief valve on the domestic water outlet prior to any isolation valves to prevent over pressurization of the heat exchanger, piping and accessories.
- A manual reset adjustable high limit switch mounted on the domestic water outlet.
- ½" Drain valve mounted on the domestic water outlet.
- Air vent mounted on the domestic water inlet.

Typical Specifications for DynaFLO Indirect Domestic Hot Water Heater

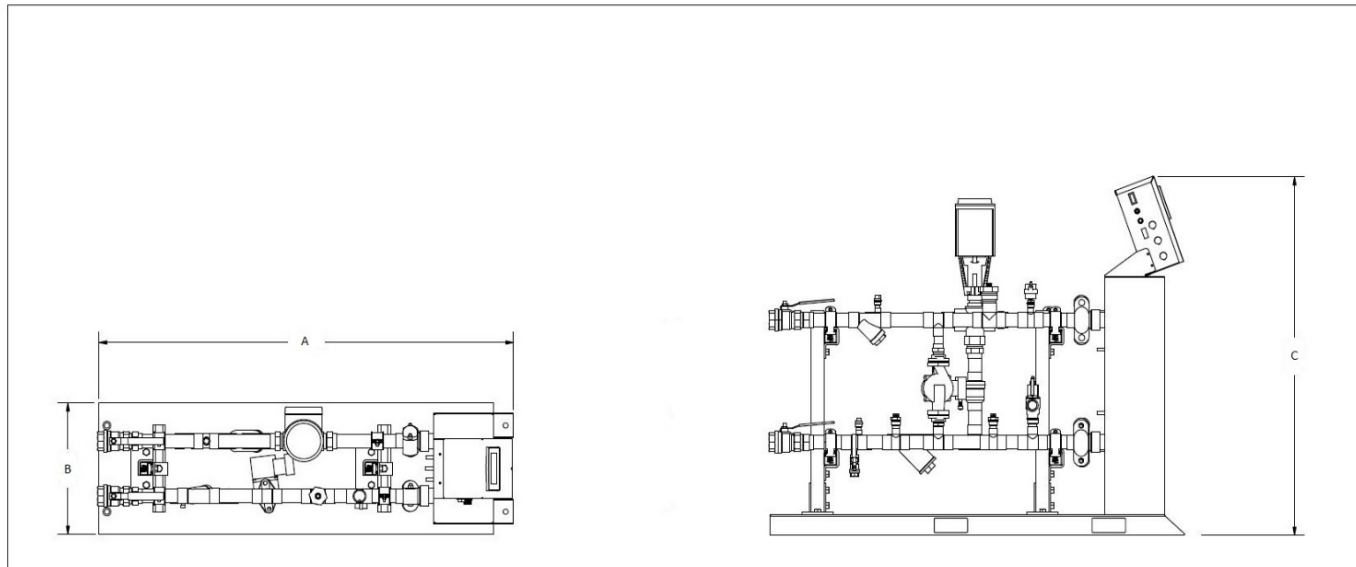
Temperature Control System: This shall be a complete electronic temperature control system including the temperature sensor, valve actuator and a controller. The system shall control the outlet water temperature to within +/- 1 deg F under steady state conditions. The control system shall be mounted on and fully integrated into the mechanical skid package. The domestic water system, either ____ shall or ____ shall not be equipped with the patent pending IntelliFLO technology. If equipped with IntelliFLO, the domestic water system will come with a flowmeter mounted on the domestic water inlet. The system, if equipped with IntelliFLO, will maintain +/-2 deg F under normal domestic load fluctuations.

1. The controller shall be installed on the skid, in an enclosure and adjustable to view from the front, back, left or right side as the installation requires.
2. The control system is designed such that there shall not be a need to adjust any control related parameter, including any PID parameter, to maintain the domestic outlet temperature tolerances stated above.
3. The HMI shall be a 4.3" colour touchscreen.
4. The domestic water temperature shall be field adjustable.
5. Temperature sensor shall be included and installed in the system.
6. The controller shall be equipped with high and low DHW outlet temperature alarms that are field adjustable.
The controller shall be provided with:
 - a. Field adjustable DHW outlet high and low temperature alarms.
 - b. Visual indication of alarms.
 - c. Local alarm indication relay.
 - d. Remote alarm indication relay.
 - e. Remote temperature monitor.
 - f. Remote actuator position monitor.
 - g. Remote set point control.
 - h. Remote actuator control.
7. The control valve actuator shall have a manual operation mode.
8. The controller shall be capable of trending both domestic water temperature, actuator position, setpoint and alarms.
9. Communication protocol shall be ModBus. The system shall be able to communicate to the BMS the following parameters:
 - a. Domestic water outlet temperature.
 - b. Actuator Position
 - c. Setpoint
 - d. Alarm condition
10. The operator shall be able to change the following parameters through the BMS:
 - a. Domestic water outlet setpoint
 - b. Actuator Position
11. The controller shall be equipped with two output relays that energize/deenergize in relation to actuator position which in turn corresponds to demand. These relays are intended to be connected to a boiler system pump and/or a DHW system pump such that these pumps can turn On when there is demand and Off when there is no demand.

Warranty: The heat exchanger is covered under 18 months limited warranty against thermal shock. The balance of the package shall be covered for one year.

Typical Specifications for DynaFLO Indirect Domestic Hot Water Heater

Dimensions and Connections:



DynaFLO Model	A	B	C
S1-S5; D1-D3	52-1/2"	16"	44"
S6; D4-D6	58-1/4"	16"	44"
D7-D9	63.57"	16"	44"

DynaFLO Model	Outlet Connections
DOWB-S1-	1.5" FNPT
DOWB-S2-	1.5" FNPT
DOWB-S3-	2" FNPT
DOWB-S4-	2" FNPT
DOWB-S5-	2" FNPT
DOWB-S6-	2" FNPT

DynaFLO Model	Outlet Connections
DOWB-D1-	1.5" FNPT
DOWB-D2-	1.5" FNPT
DOWB-D3-	2" FNPT
DOWB-D4-	2" FNPT
DOWB-D5-	2" FNPT
DOWB-D6-	2" FNPT
DOWB-D7-	2.5" FNPT
DOWB-D8-	2.5" FNPT
DOWB-D9-	2.5" FNPT

