

Hot Water Coil Add-On

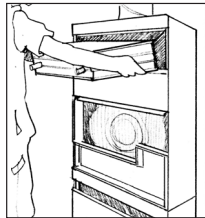


Installation

Designed for the Hi-Velocity System, the HWC is a High Capacity Hydronic Heating water coil that comes installed in the “H” Series fan coils and can be field installed in the “BU” Series fan coils. To install, simply remove the front blower panels, and slide the coil into place on the supply air side of the blower. (**Fig. HWC-01**)

The water coil is designed with 3/4” copper connections with 6 internal rows of 3/8” copper tubing, for high heat transfer ratings even when using low water temperature sources. The coil is factory tested at 500 psi for leaks, and is designed to have a low water pressure drop through the coil reducing pump head loss.

Fig. HWC-01 - Hot Water Coil easily slides into the fan coil



The Fan Coil can be installed in upflow, counterflow or horizontal positions, using the lowest water connection into the coil as the supply line and the highest water connection as the return line, to reduce possible air trapping within the coil. Typical hot water heating sources used are dual purpose hot water tanks (natural gas or oil), boilers (gas, oil, electric or wood fired), and even solar heating systems. Geo-thermal systems, water-to-water heat pumps or reverse cycle chillers would use the WM or WCM coils, as they have a drain pan incorporated within the coil casing, for condensate water formed from the cooling cycle.

When used with dual purpose hot water tanks, be sure to size the tank for both the domestic hot water usage as well as the heating requirements.

Table HWC-01 – WCM/WM pipe sizing

Zone BTUH Heat loss	Pipe Size up to 40 feet	Pipe Size 40 – 100 feet
0 - 35,000 (0 - 10.3 kW)	5/8” (16mm)	3/4” (19mm)
35,001 - 70,000 (10.4 - 20.5 kW)	3/4” (19mm)	1” (25mm)
70,001 - 140,000 (20.6 - 41.0 kW)	1” (25mm)	1 1/4” (32mm)

Piping The Hot Water Coil

Size your supply and return lines according to **Table HWC-01**. **Figs. HWC-02 and 03** illustrated typical pipe runs from a dual purpose hot water tank to a fan coil. These drawings are only for reference as all piping has to be run according to local codes.

Fig. HWC-02 - Hot water tank: With side take-offs

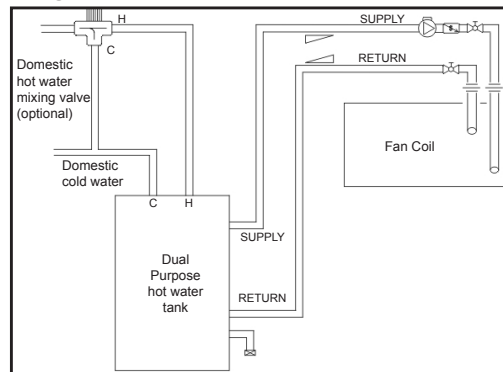
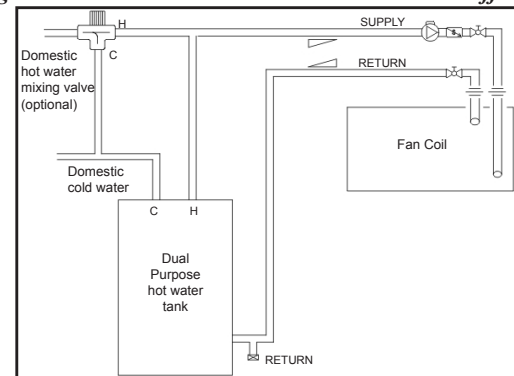


Fig. HWC-03 - Hot water tank: Without side take-offs



Incorporated within the circuit board there is a timer that when turned on will duty cycle the circulation pump for 5 minutes every 24 hours to ensure there is no stagnate water within the water coil. Spring check valves are required to be installed on the supply and return to prevent gravity flow from the hot water source on a call for cooling or constant fan.

Specifications

Specifications		HWC-50 Coil	HWC-70 Coil	HWC-100 Coil	HWC-1750 Coil
Matching Fan Coil		HE-Z/HE/HV-50/51 LV-50	HE-Z/HE/HV-70/71 LV-70 LV-Z/LV-E-1050	HE-Z/HE/HV-100/101 LV-120/140	LV-Z/LV-E-1750
Coil Type		6 Row/10 FPI	6 Row/10 FPI	6 Row/10 FPI	6 Row/12 FPI
Part Number		20100100050	20100100070	20100100100	20090101750
Fin Material		Aluminum	Aluminum	Aluminum	Aluminum
Tubing Material		Copper	Copper	Copper	Copper
Type of Fins		.006 Al (0.1524mm)	.006 Al (0.1524mm)	.006 Al (0.1524mm)	.006 Al (0.1524mm)
Hydronic Connection Sizes	Supply	3/4” (19mm)	3/4” (19mm)	3/4” (19mm)	1 1/8” (29mm)
	Return	3/4” (19mm)	3/4” (19mm)	3/4” (19mm)	1 1/8” (29mm)
Flow Rate (GPM)		5 (0.32 L/s)	7 (0.44 L/s)	10 (0.63 L/s)	10 (0.63 L/s)
Pressure Drop FT. H₂O		3 (9.0 kPa)	6.5 (19.4 kPa)	6.8 (20.3 kPa)	4.9 (14.65 kPa)
Coil Dimensions		13 1/2” x 5 1/2” x 16” (343mm x 140mm x 406mm)	19” x 5 1/2” x 16” (483mm x 140mm x 406mm)	25” x 5 1/2” x 16” (635mm x 140mm x 406mm)	26 1/4” x 8” x 22 5/8” (667mm x 200mm x 575mm)
Shipping Weight		17 lbs (8kg)	21 lbs (10kg)	28 lbs (13kg)	45 lbs (13kg)
Max. BTUH 180°F E.W.T. (kW @ 82°C)		54,500 (16.0 kW)	81,800 (24.0 kW)	122,900 (36.0 kW)	137,000 (40.0 kW)

Module HWC Hot Water Coil Installation (1/1)