



## Innoline® 50/50 Four-Pipe System

Designed to Deliver Strong Value

- Year-round comfort and reliability
- Lower installation and operating cost
- Clean and quiet operation

# Innoline® 50/50 Four-Pipe System

---

## An Integral Component that Provides True Savings

The Whalen Innoline® 50/50 Four Pipe System features all the advantages of a conventional four-pipe system but reduces pump and piping requirements by 50 percent.

During design day conditions, two pumps – each sized to carry 50 percent of the total flow – operate in parallel, delivering 100 percent of the hot or chilled water required.

Marginal days can be handled by one or two pumps circulating hot or chilled water through one or both heat-exchangers. This design allows pump and motor usage to be staged as conditions require, keeping energy demands at a minimum.

### Big Energy Savings and Nearly Maintenance Free

Most buildings run at peak capacity only a few weeks during the year. The Innoline® 50/50 unit takes advantage of this fact by using smaller pumps that can be staged to reduce energy consumption compared to operating a single larger pump.

Combine this with the operation of only one of the two fans during part of the year, and the energy savings are significant.

The Innoline® 50/50 unit is practically maintenance-free, with only the filter requiring periodic replacement or cleaning. There are also no control valves and piping joints that can lead to leaks and service calls.



# Benefits that Make a Big Difference

When you consider all of the features of Whalen units, it's easy to see why they deliver so many benefits to contractors and users alike.

## Lower Installed Costs

The overall system main size is reduced by 50 percent since each side of an Innoline® 50/50 unit handles one-half of total cooling requirements. This translates into smaller standard pumps and reduced labor times. By design, each unit is naturally balanced once the flow is established in the riser. The balancing and venting of individual units is a "task of the past." Instead, you gain the benefits of a reverse return balancing system without the need to run an express riser within the building.

## Increased Reliability

By designing the Innoline® 50/50 unit with two equally sized heat exchangers, 50% system redundancy is provided during peak the heating and cooling seasons.

## Valve Control VS. Fan Cycle Control

Condensation and/or moisture are formed on the fins of any fan coil unit when high humidity (dew point) levels are allowed to exist in the surrounding space. The riser heat-exchanger system continuously dehumidifies the room air by allowing the chilled water coil to be active at all times. Units incorporating control valves to shut off the chilled water supply allow residual moisture formed during the dehumidifying process to re-evaporate into the air stream. The phenomenon is expedited when the fan is allowed to run continuously.

The dual fan arrangement of the Innoline® 50/50 unit provides superior dehumidifying at low load conditions typically found during intermediate seasons. By having a fan/coil combination more closely matched to the lower room load, the unit runs longer to remove moisture from the air. At these conditions, a unit with a single fan and water coil will cool the room too quickly to achieve adequate moisture removal.

Most households and businesses select fan cycling control when offered the option of both systems. If a continuous running fan is preferred, then power consumption is not the primary concern. Whalen offers both types of systems to the customer.

## Return Air Opening

The Whalen return air opening with an architectural aluminum grille is sized for easy removal of the fan motor and blower assembly. Unlike a unit with ball valves, flow control valves, balancing valves and coil with numerous joints, the return opening does not have to be enlarged and covered with a steel access panel. Whalen offers hinged aluminum return air grilles that allow for changing the filter without the use of tools.

## Supply Air Opening

All supply openings are painted black to block the view into the unit. When one unit is used for two rooms, a sight baffle is placed between the two grilles.

## Innoline® 50/50 Four-Pipe System Capacities

### 50% Capacity

Model	CFM	Fluid Velocity (FPS)	Cooling Capacity <sup>1</sup>			Heating Capacity <sup>2</sup>	
			EWT (°F)	TC (Btu/hr)	SC (Btu/hr)	EWT (°F)	TC (Btu/hr)
W3022	170	6.0	45	4958.9	4237.4	140	8363.1
W4022	200	6.0	45	5,834.0	4,985.2	140	9,838.9
W6022	300	6.0	45	8,249.5	6,227.5	140	14,976.6
W6022X	300	6.0	45	9,528.8	6,682.8	140	14,997.0
W8022	400	6.0	45	11,692.0	8,889.3	140	16,797.8
W10022	500	6.0	45	12,562.5	9,806.5	140	19,804.6
W12022	600	6.0	45	15,710.5	12,531.0	140	23,771.1
W16022	800	6.0	45	20,651.8	16,971.8	140	30,581.9


### 100% Capacity

Model	CFM	Fluid Velocity (FPS)	Cooling Capacity <sup>1</sup>			Heating Capacity <sup>2</sup>	
			EWT (°F)	TC (Btu/hr)	SC (Btu/hr)	EWT (°F)	TC (Btu/hr)
W3022	340	6.0	45	9917.8	8474.9	140	16726.1
W4022	400	6.0	45	11,668.0	9,970.4	140	19,677.8
W6022	600	6.0	45	16,499.0	12,455.0	140	29,953.2
W6022X	600	6.0	45	19,057.5	13,365.5	140	29,994.0
W8022	800	6.0	45	23,384.0	17,778.5	140	33,595.6
W10022	1000	6.0	45	22,612.5	17,651.7	140	35,648.3
W12022	1200	6.0	45	28,278.9	22,555.8	140	42,788.0
W16022	1600	6.0	45	37,173.2	30,549.2	140	55,047.4

1. Rated in accordance with ARI Standard 440. Cooling capacities based on 80°F DB/67°F WB entering air, 45°F entering water, 10°F water temperature rise

2. Water heating coils rated at 70°F DB entering air, 140°F entering water, 20°F water temperature drop and high fan speed.





Behind every unit that carries the Whalen name is a singularity of purpose: the engineering and manufacturing of products that improve the quality of life for our customers.

Our long-term commitment to this endeavor assures you of systems that are distinctive in **concept**, **performance**, **reliability** and **value**.

The number of industry “firsts” from Whalen is impressive. They include:

- The industry’s first vertical stack valveless fan coils
- The first vertical stack heat pump offering
- The first removable chassis closet-type heat pumps
- The first AHRI-listed water-cooled air conditioning units with hydronic heat

Let us put Whalen innovation to work for you, too. Find out how our approach to your project will deliver a “perfect fit” solution – and make your life easier.

Need to locate a sales representative? Whalen’s sales rep locator tool was designed to help you easily find a Whalen sales representative within the United States and Canada.

[whalencompany.com/relocator](http://whalencompany.com/relocator)



P.O. Box 1390 • Easton, MD 21601 USA  
[whalencompany.com](http://whalencompany.com)



WL002 rev. 08-19