

Frequently Asked Questions

How does the Hi-Velocity System work?

The Hi-Velocity System is a mini duct system. Pressure is created in the supply ducts and converted to velocity at the outlets utilizing the Venturi Effect. This creates equal air flow to all the outlets and results in unmatched air delivery creating a draft free environment eliminating hot and cold spots.

What types of applications can the Hi-Velocity System work in?

The Hi-Velocity System is ideal for residential, multi-family, retrofit and commercial applications.

How does the Hi-Velocity System address Indoor Air Quality (IAQ)?

The Hi-Velocity System can provide humidification, dehumidification, introduce fresh air and be used with high efficiency air filters.

Can the Hi-Velocity System provide heating and cooling?

The Hi-Velocity System is a complete home comfort system, which can be used for heating, cooling or a combination of both.

How does the Hi-Velocity System compare to a conventional forced air system?

The Hi-Velocity System utilizes the Venturi Effect to eliminate the hot and cold spots which are normally associated with conventional systems and creates even temperatures throughout the home. This benefit is enhanced in homes with high cathedral ceilings. From an installation stand-point designing duct layouts is substantially easier because vent outlets no longer need to be located on outside walls.

Can the Hi-Velocity System work with my existing air ducts?

The Hi-Velocity System is designed to use small diameter ducts and will not operate correctly with larger duct systems.

What kind of sound levels can I expect from the Hi-Velocity System?

When designed and installed correctly the noise level on the Hi-Velocity System is equal or less than a conventional system.

Where is the best location for the Hi-Velocity System?

The flexibility of the Hi-Velocity System allows the air handler to be located in attics, basements, crawl spaces and closets.

Where are the best locations for placing outlets?

The outlets can be located in the floor, wall or ceiling, all three locations are equally effective.

Are different styles of vent plates available?

Our vent plates are available in many different types of compositions, plastic, metal, and wood which can be finished to match their surroundings.

What size of Hi-Velocity System do I require?

It is recommended that an accurate room to room heat loss/gain is performed on the structure to ensure the correct size of unit is selected.

What options are available for heating?

Boilers, dual purpose hot water heaters, heat pumps, and geothermal systems can all be used as heat sources. We also manufacture a slide in electric module for the system.

What options are available for cooling?

Condensing units, chillers, heat pumps and geothermal systems can be used as cooling sources.

Can additional components such as humidifiers and HRV/ERV's be added?

Various types of humidifiers and HRV/ERV's can be easily added to the unit.

What types of filters can be used on the Hi-Velocity System?

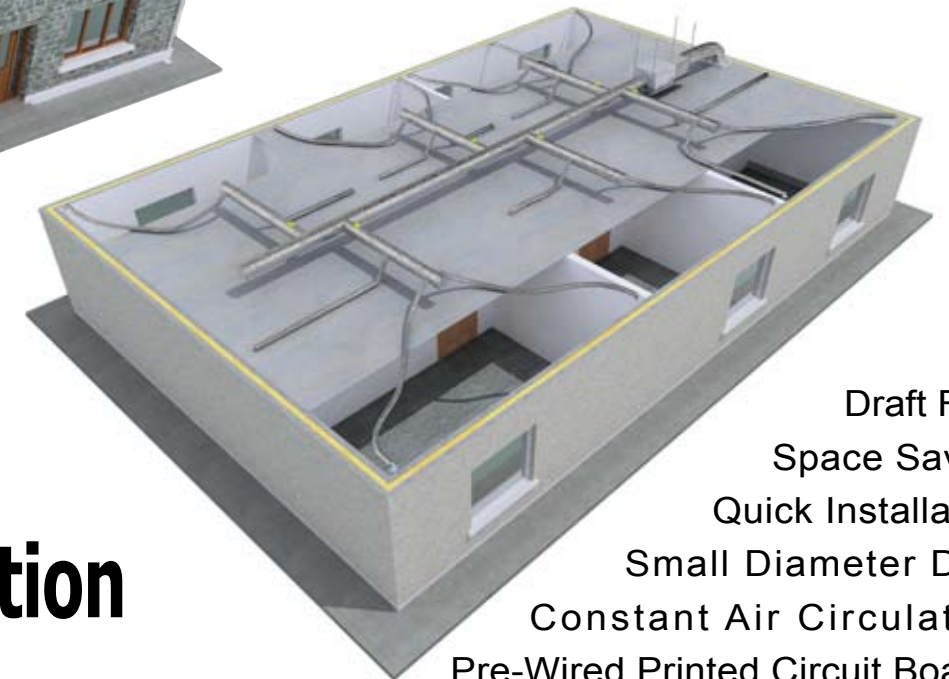
Most filters on the market today can be matched to the units, including media filters, electronic filters and HEPA filters.

Hi-Velocity Systems

Features and Benefits



Residential



Commercial

New Construction
or
Retrofits

Draft Free
Space Saving
Quick Installation
Small Diameter Duct
Constant Air Circulation
Pre-Wired Printed Circuit Boards
Constant Circulation Improves Air Quality
Vent Plate Selection Complements Any Decor
Adjustable Vents Plates Maximize Air Control
Hi-Efficiency Programmable EPC Motors
Hi-Efficiency Pre-Piped Refrigeration Cooling Modules



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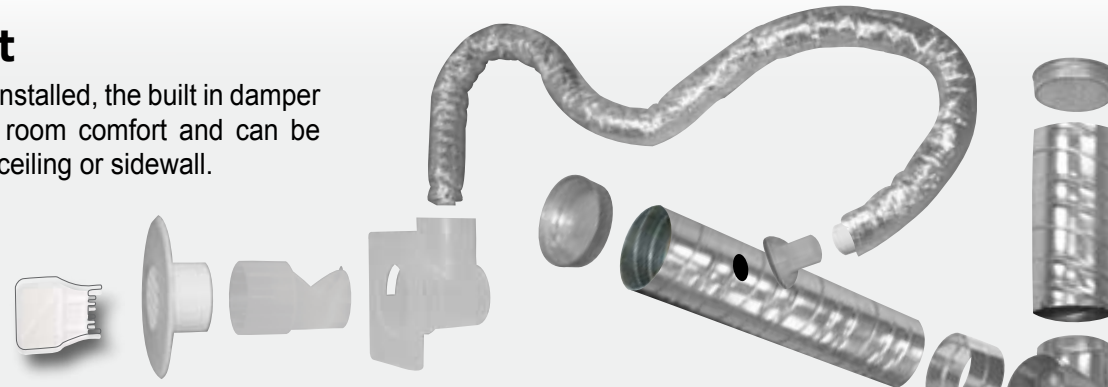
www.hi-velocity.com

ESP 110.04-HE

www.hi-velocity.com

Rough-In Boot

Is quickly and easily installed, the built in damper allows for individual room comfort and can be installed in the floor, ceiling or sidewall.



Damper Key

Designed to fit into the vent plate to allow for easy airflow adjustment.

(Enlarged Section)

Branch Take-Off

Shaped to fit the plenum making it easier to install and includes a gasket for an airtight seal.

Two Inch (50mm) Assembled Flexible Duct

The flexible duct can be installed along joists, in between walls or other space confined areas quickly and easily. Attached from the Branch Take-Off to the Rough-In Boot delivering the air quietly with a sound absorbing inner core.



Heating and Cooling Modules

Many coil options are available for the Hi-Velocity unit to meet the challenges of today's demands.

Heating

Can be supplied by:
Dual Purpose Hot Water Heaters,
Boiler, Heat Pump, Geothermal and
Electric Strip.

Cooling

Can be supplied by:
Refrigerant, Chilled Water, Heat
Pump and Geothermal.



Electric Modules



Hot Water Coils



Chilled Water Modules



Refrigerant Modules

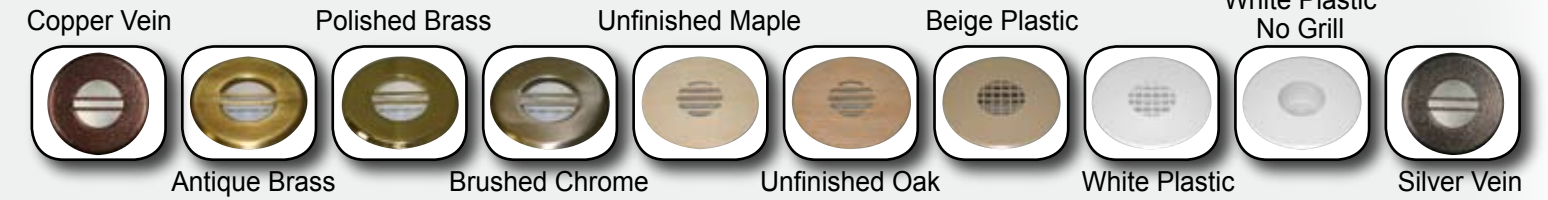


Plenum

The typical 8" (200 mm) and 10" (250 mm) plenum used with the Hi-Velocity Systems makes for fast installations. This reduces over-all installation time compared to conventional systems and increases usable space of the structure.

Vent Plates

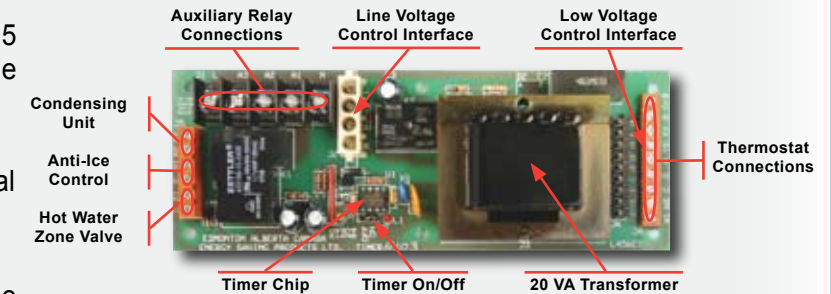
Available in a variety of styles to blend in with their surroundings, our plastic and wood vent plates can be painted or stained to match with any color scheme.



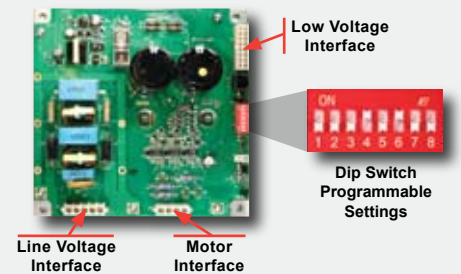
Control Board

- Automatic voltage and frequency recognition circuitry, 115 or 230 volt, 50 or 60 cycle, our electronics will adjust to the input automatically
- Protected with an integral surge and fuse system
- Terminal for B/O heat pump, as well as a neutral C terminal
- Built-in 2 stage heating/cooling terminals
- Dehumidifier sequence program
- A constant fan operation that can now be controlled from the thermostat
- The auxiliary heating contacts
- 24V zone valve terminals
- Condensing unit terminals
- Freeze stat terminals
- Potable water timer circuit
- 20VA transformer for auxiliary uses

Control Board



Motor Controller



Single Side Access Fan Coils

- Our fan coils are designed around the structure, not the structure around the system. The fan coil can be located in small spaces such as a closet, basement, crawl space or attic.
- Cooling capacities ranging from 1.5 ton to 5 tons.
- Optional heating coil simply slides in place.
- Heating capacities up to 140,000 btuh.
- Comes pre-wired for heating, cooling and ventilation so no additional controls are needed.
- Installs Vertically, Horizontally or Counter-Flow.

Electronic Performance Controlled (EPC) Motors

- Hi-Efficiency, reduce operating costs up to 50%
- Programmable EPC inverter drive, utilizing mass flow technology to supply 1.5 to 5 tons air flow.
- 6 independent speeds
 1. Hi-Cooling
 2. Low-Cooling
 3. Dehumidification
 4. Hi-Heating
 5. Low-Heating
 6. Constant air flow
- Zoning Friendly

