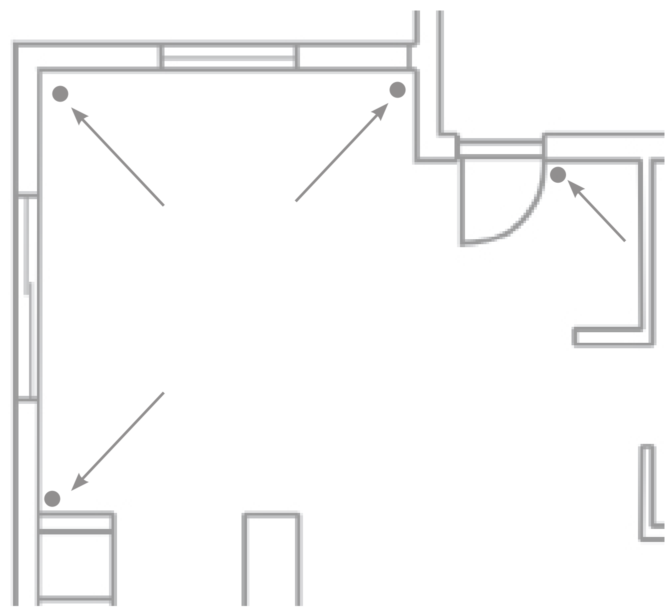
Hi-Velocity Systems™

Small Duct High Velocity Heating, Cooling and Home Comfort Systems

HE-Z Series

Design Manual



Includes:
System Design
Unit Selection
System Layout
Unit Specifications

Manufactured By
Energy Saving Products Ltd

Hi-Velocity System Design

The following section is basic information needed for the designer. If not done already, this section should be read thoroughly before beginning installation.

Heat Loss/Gain

To size a Hi-Velocity System for a residence/commercial space, it is necessary to have an accurate heat loss/gain done for the structure. This will ensure the proper equipment is used for cooling and heating.

A heat loss/gain is done for each room, which will give a total BTUH load for the structure.

Table DES-01 - Example Data for Fig. DES-02		
Room Name	**BTUH Loss**	**BTUH Gain**
Nook	8,326	5,233
Kitchen	2,539	1,688
Bath	1,114	693
Bed #1	2,667	1,592
Bed #2	3,845	2,165
Dining Rm.	5,109	3,802
Foyer	4,186	2,166
Family Rm.	5,859	4,001
Master Bed	9,326	6,046
M.Bath/WIC	2,786	1,193
Totals	**45,757**	**28,579**

The design factors used to achieve this heat loss/gain are shown on Fig. DES-02.

Low Water Temperature Systems

When running Hi-Velocity Systems from a low water temperature system (e.g. A hot water tank), care must be taken when designing and installing the system. Due to the lower water temperature there will be less BTUH's and therefore a lower supply air temperature, it is imperative that the water temperature is known at the design stage. If possible the highest temperature setting should be used, and a water tempering valve installed for the domestic use. The higher water temperature will increase system efficiencies, and the water tempering valve will reduce the risk of scalding. Since some areas have specific regulations regarding combo systems, please check your local building code for details on water tank temperatures, tempering valves, and pump timers.

Due to the lower air temperatures, when running the ductwork in an unconditioned space, the main plenum must be insulated and vapour barriered. Extra insulation should also be used in order to maintain a reasonable leaving air temperature at the vents.

Combination Hi-Velocity and Radiant

One of the benefits of using a hydronic system is the versatility that you have when designing the heating system. Radiant floor heating is an excellent system, but it does have limitations. You cannot have cooling, air filtration, and humidification with a straight radiant heating system. Similarly, sometimes a forced air system is not the only option available for a house, especially if it has a lot of ceramic tile or concrete floor areas.

In the sample house included, radiant floor heating may be unable to meet the requirements to heat the nook. With the Hi-Velocity System, we can heat this room, but would have an excessive number of outlets in a small area.

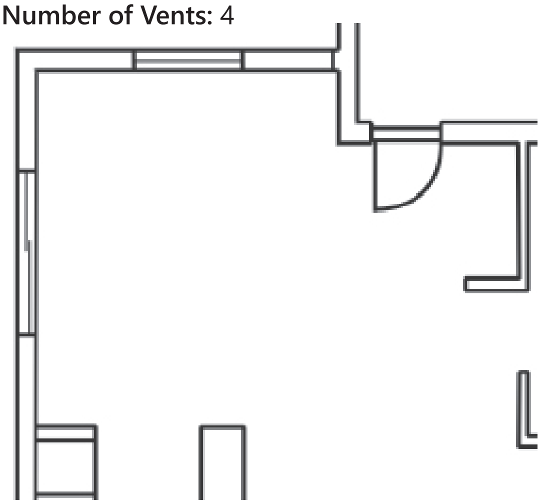
Fig. DES-01 - Nook

Example

Room: Nook

Heat loss: 8,326 BTUH

Number of Vents: 4



It is in rooms such as this that a hybrid system of both radiant heating and the Hi-Velocity System would be the optimum system to provide comfort conditioning. This will provide the home owner with good indoor air quality, and warm floor comfort (not as effective if carpet is laid down).

A common approach to a hybrid system is to heat the basement with radiant tubing. The main floor and 2nd floor if applicable would be heated with the Hi-Velocity System. A few outlets can also be placed in the basement to provide air circulation, and supplementary heating if required.

Unit Selection

With the total load known for the structure, it is now possible to select the proper Hi-Velocity unit (Specifications - Pg. 7).

Table DES-02 – Selected fan coil	
Selected fan coil:	HE-Z-70 H
Entering Water Temp	180°F
House Heat Loss:	**45,757** BTUH
House Heat Gain:	**28,579** BTUH
Minimum Outlets:	2" = 20 HE = 10
Maximum Outlets	2" = 29 HE = 15
Selected Condenser	2.5 ton

Average BTUH Per Outlet

Once the unit has been selected, the average numbers of outlets can be determined (Specifications - Pg. 7). To determine the average number of vents, the minimum is added to the maximum and divided by two.

Example: (Using only 2" outlets)

(Min Outlets (20) + Max Outlets (29) / 2 = 25) *

*Example shown using only 2" outlets

With the average number of vents known it is now possible to determine the average BTUH output per vent. Dividing the average number of outlets into the fan coil output (Specifications - Pg. 7) will give an average BTUH output per vent.

Example:

BTUH per Outlet for HEATING

73,800 BTUH / 25 = 2,952 BTUH/OUTLET
(2,952 BTUH delivery per outlet for Heating)

BTUH per Outlet for COOLING

30,000 BTUH / 25 = 1,200 BTUH/OUTLET
(1,200 BTUH delivery per outlet for Cooling)

The BTUH per outlet is then used to figure out how many outlets are required for each room. As an example, here is a room by room load calculation for the house plan included (Fig. DES-02).

Table DES-03 – Number Outlets Per Room				
Room Name	BTUH LOSS	BTUH GAIN	If using 2" (51mm) Vents	If using HE Vents
Nook	8,326	5,233	4	2
Kitchen	2,539	1,688	2	1
Bath	1,114	693	1	1
Bed #1	2,667	1,592	2	1
Bed #2	3,845	2,165	2	1
Dining Rm.	5,109	3,802	3	2
Foyer	4,186	2,166	2	1
Family Rm.	5,859	4,001	3	2
Master Bed	9,326	6,046	5	3
M.Bath/WIC	2,786	1,193	1	1
Totals	**45,757**	**28,579**	**25**	**15**

A room (Nook) that has a heat loss of 8,326 BTUH and a heat gain of 5,233 BTUH will need 4 vents.

Example:

4 x 2,952 BTUH = 11,808 BTUH
(11,808 > 8,326 Heating requirements satisfied)

4 x 1,200 BTUH = 4,800 BTUH
(4,800 < 5,233 Cooling requirements not satisfied)

The heating checks out but the cooling doesn't in this example. We allow a 0.1 variance on vent checks, which gives a little leeway with vent placement. Also with the kitchen being an adjoining room with an extra 712 BTUH it will help the nook maintain the desired temperature

Table DES-04 - System Check				
	Heating		Cooling	
	Fan Coil Output Heating	House BTUH Loss	Fan Coil Output Cooling	House BTUH Gain
Nook	11,808	8,326	4,800	5,233
Kitchen	5,904	2,539	2,400	1,688
Bath	2,952	1,114	1,200	693
Bed #1	5,904	2,667	2,400	1,592
Bed #2	5,904	3,845	2,400	2,165
Dining Rm.	8,856	5,109	3,600	3,802
Foyer	5,904	4,186	2,400	2,166
Family Rm.	8,856	5,859	3,600	4,001
Master Bed	14,760	9,326	6,000	6,046
M.Bath/wic	2,952	2,786	1,200	1,193
Totals	**73,800**	**45,757**	**30,000**	**28,579**

Not all rooms will check out for cooling as illustrated in Table DES-04, we allow a 0.1 variance on vent checks per room. The Main concern is the total unit output being higher than house BTUH loss. With the venturi action of the Hi-Velocity System the individual rooms will affect each other and help maintain the desired room temperature.

Difference in no. of Vents Req'd for Htg & Clg

There may be cases when the number of outlets needed for heating is significantly different than the amount needed for cooling. This is usually caused by a large appliance load or an excessive amount of windows. If this happens you will have to use the greater number of outlets to provide both heating and cooling for the room. The vents have dampers and can be adjusted for individual room comfort. In cooling mode the outlets must be in the fully open position or there will be a loss in performance and the efficiency of the system.

Fig. DES-02 - House Drawing

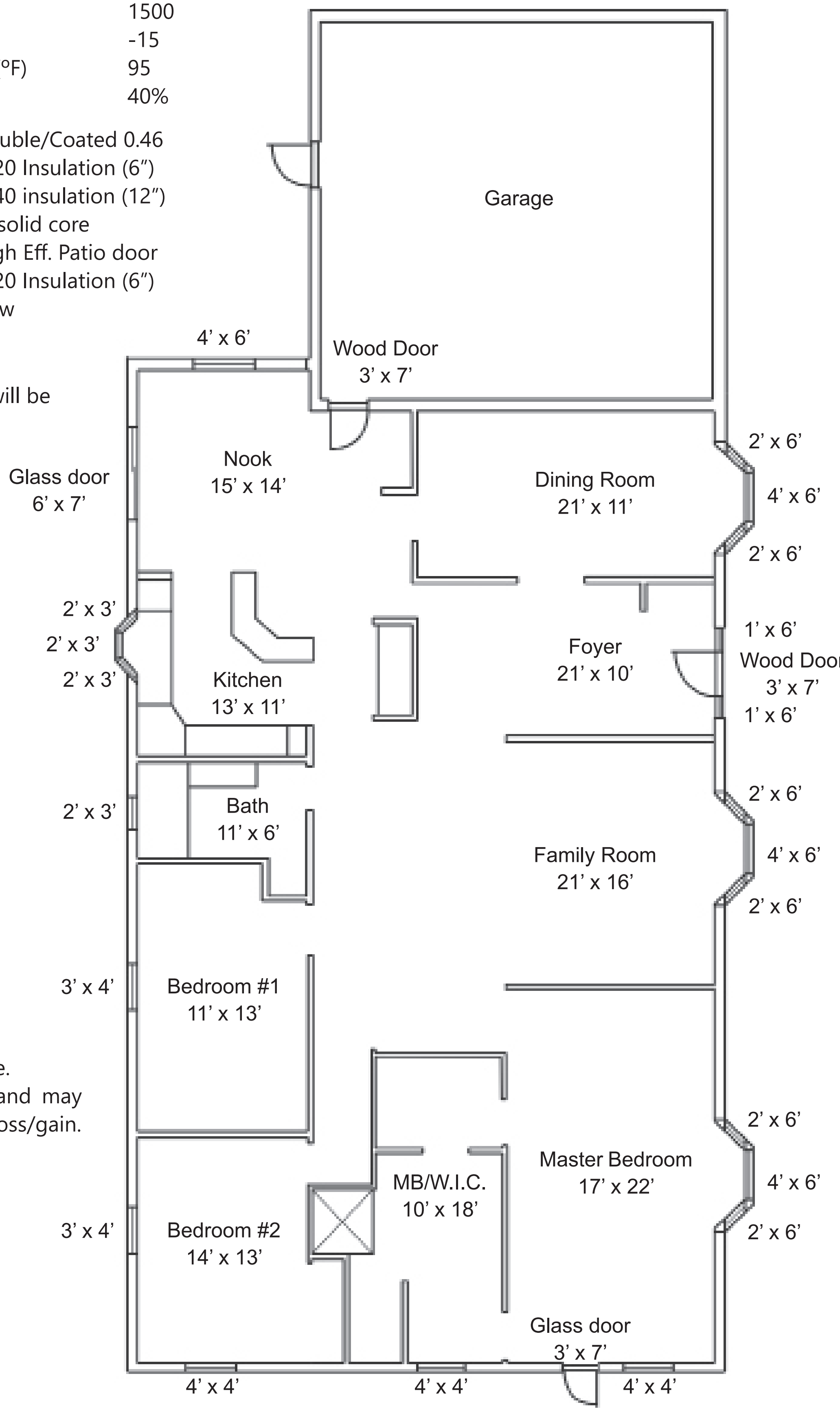
Design Factors for ESP's heat calc program

Air change/Hour	0.3
Altitude above sea level (ft)	1500
Outdoor Heating temp (°F)	-15
Outdoor Cooling DB temp (°F)	95
Humidity	40%

Glass	Double/Coated 0.46
Cold floor area	R-20 Insulation (6")
Exposed ceiling	R-40 insulation (12")
Standard doors	1" solid core
Glass doors	High Eff. Patio door
Exposed wall	R-20 Insulation (6")
Construction	New

All ceiling heights are 9'

Fan coil and main plenum will be located in the crawl space



- This drawing is not to scale.
- This is an example only and may not reflect an actual heat loss/gain.

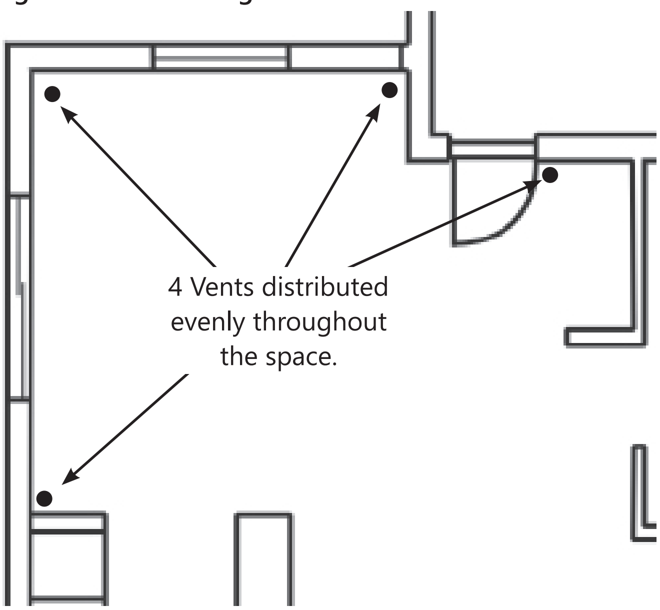
System Layout

With the total vents known, the layout of the Hi-Velocity System can now be done. Start with individual vent placements (if you have not already read the section on Vents in System Design, please do so before starting). Then place the main plenum so the flex runs will be the shortest length possible. With the plenum placed, the flex runs can be drawn connecting the vent outlet to the main plenum.

Drawing Vent Placement

To demonstrate a vent layout, we'll place 4 two inch vents to properly condition the Nook (Fig. DES-03). From table 16 we calculated that the Nook has a Heat loss/gain of 8,326/5,233, which will require 4 two inch vents to satisfy heating and cooling requirements.

Fig. DES-03 - Placing Vents: Nook



With this room 3 two inch vents would have satisfied the heating requirements, but would not satisfy the cooling requirements. For the nook we need 4 two inch vents for cooling, so 4 two inch vents must be placed in the nook. The vents do have an adjustable damper and can be adjusted for individual room comfort if too much heating is being supplied. In cooling mode the outlets must be in the fully open position.

The outlets should be located where it is considered to be a "low traffic area". Typical areas are in the corner of a room, or to the side of a window or door. When the vents are properly located, the home owner can expect to have a nearly draft free home.

Once all the vents have been placed in each room, the main plenum can now be drawn. Figs. DES-04 and DES-05 shows where all vents have been located in the individual rooms.

Drawing the Plenum

For this layout we have chosen to use a Main Plenum with a 56/44 bullhead tee split. On one side 14 vents will used, while 11 will be used on the other. This is allowable as we can use a Bull Head Tee up to a 60/40 split. If the split is greater than 60/40, a Branch Tee should be used instead of the Bullhead Tee. See Module DUC - Installing Plenum and Branch Duct for Installation Instructions.

With a 56/44 split we will be able to reach all vents using standard 10' and 15' flex runs. If you have to extend the flex runs longer than 10', reference Table DES-05 for adjustment factors. Space Savers series minimum length is 5', and adjustments must be made from table 05 if extending flex runs longer than 5'.

Table DES-05: De-rating Values

HE Series				
Tubing Length	10'	15'	20'	25'
Adjustment Factor	0%	10%	20%	35%

The main plenum we choose to use is 8", it is not required to use 8" for the whole run. If space or cost is a concern, the main plenum can be reduced down to a smaller size. If reducing the plenum, reference Table DES-06 for allowable length and maximum number of vents for the size chosen. Never reduce at a bullhead tee, always reduce after the bullhead tee or you can lose approximately 20% of your airflow.

Table DES-06 – Duct Reduction

Duct Size	# of 2" (51mm) Vents	# of Vents (HE)	Max Length
4" (102mm)	4	N/A	30'(9.14m)
5" (127mm)	6	3	40'(12.19m)
6" (152mm)	12	6	50'(15.24m)
7" (178mm)	19	9	60'(18.29m)
8" (203mm)	29	14	70' (21.33m)
10" (254mm)	48	24	100' (30.48m)

Drawing the Flex Runs

Once the vents and plenum have been drawn in, the two may now be connected with the flexible branch duct. The minimum flex run is 10' (3.05m) and the maximum is 25' (7.62m)

Table DES-07 - Allowable Branch Duct Lengths

Model	Min. Length	Max. Length
HE Series	10' (3.05m)	25' (7.62m)

Fig. DES-05 - House Layout using 2" (51mm) & HE Vents

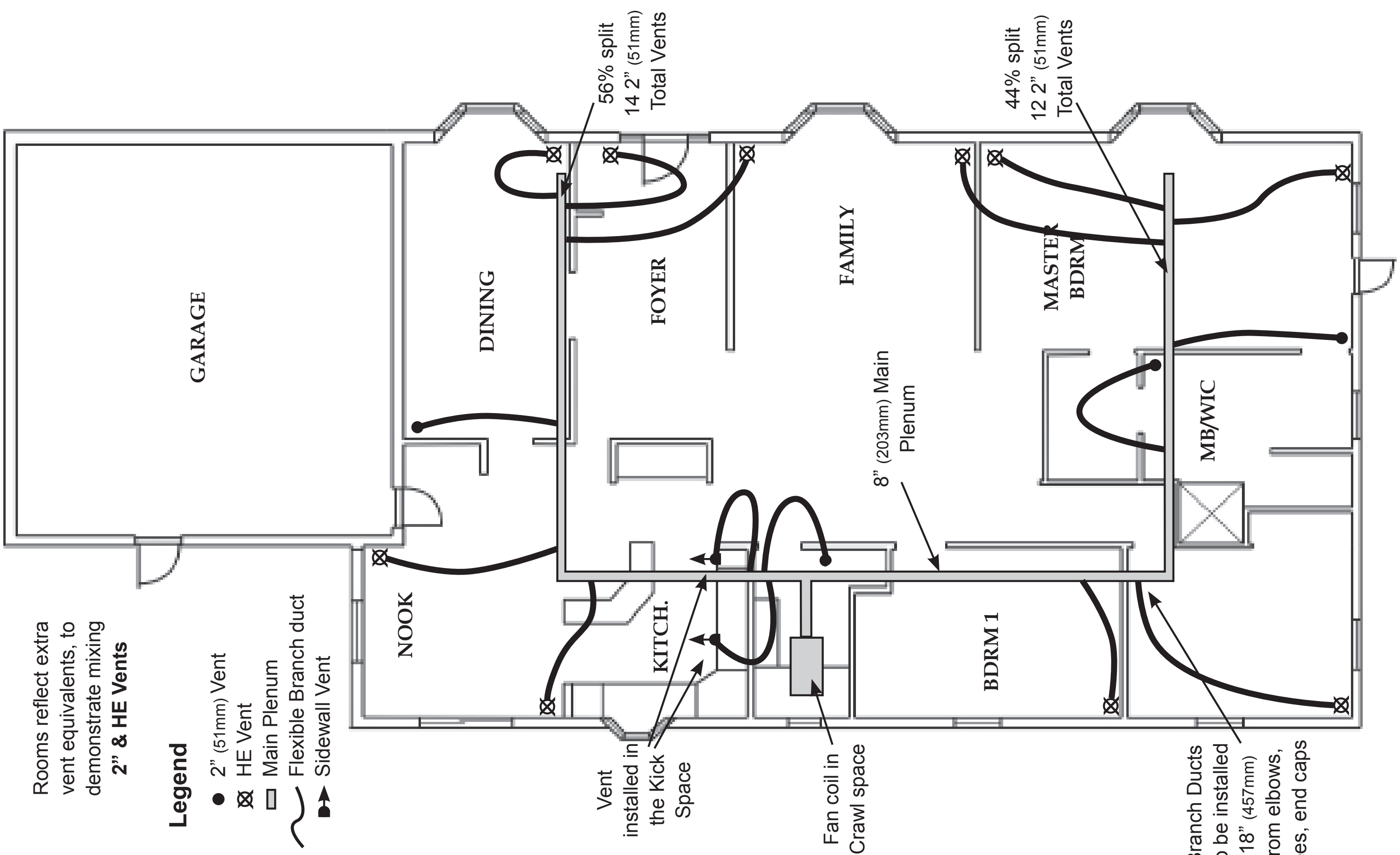
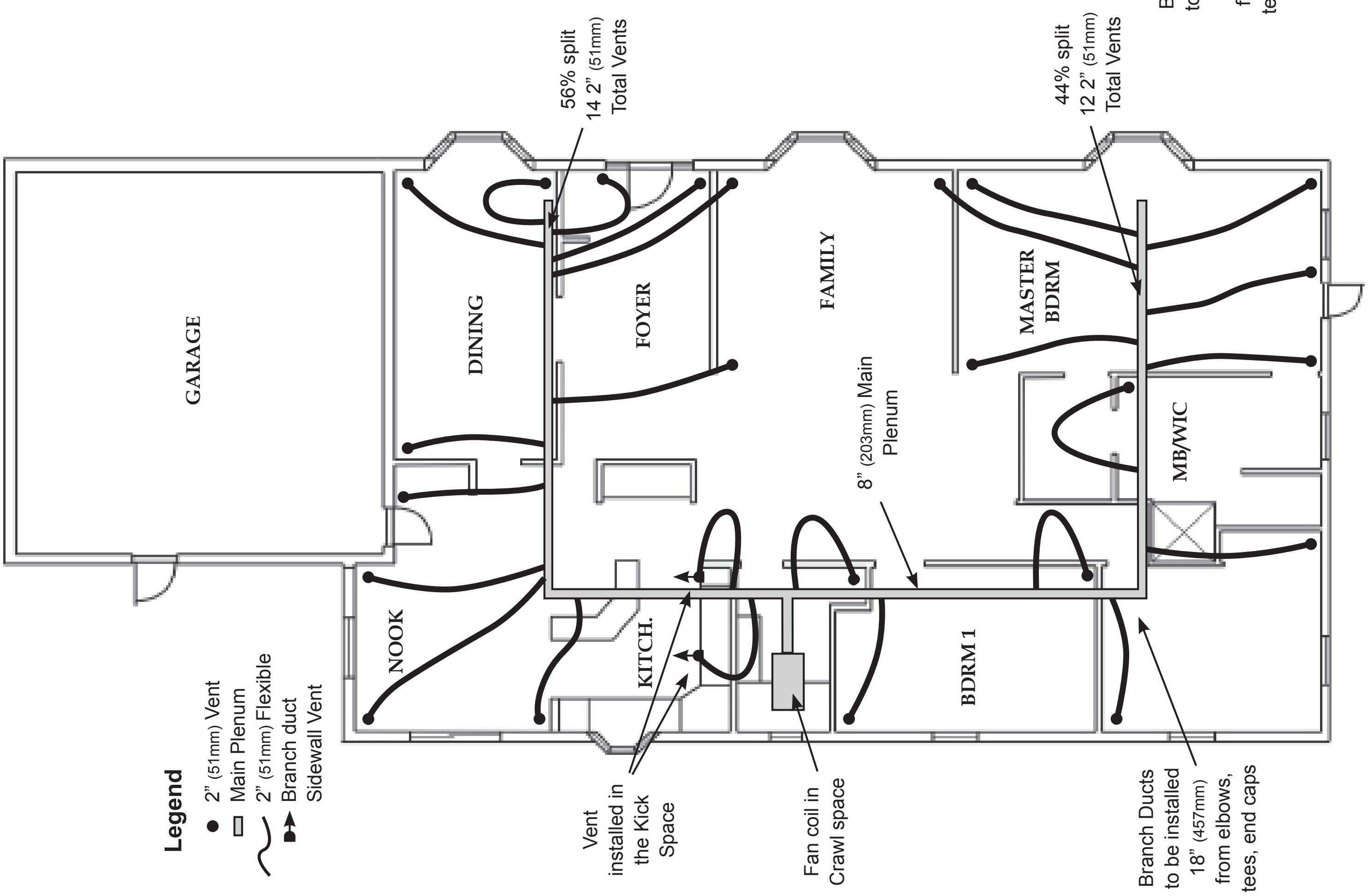


Fig. DES-04 - House Layout using 2" (51mm) Vents



PSB Zoning Design

PSB Zoning

The PSB Board is compatible with most Forced Air Zoning Packages. Zoning control panels with a Recirculation Fan Option are strongly recommended, so as to utilize continuous air circulation for optimal Indoor Air Quality (IAQ) and Energy Efficiency. Independent testing has shown that utilizing the recirculation fan with the Hi-Velocity Systems VFD motor reduces total energy usage. This is due to less on/off cycling of AC and Heating equipment by constant de-stratification of the air.

Quick acting, spring shut dampers are not to be used with the PSB Board. Instead, it is suggested to use a slow acting electronic damper, which gives the PSB controller adequate time to adjust to variations in duct pressure.

Layout Design

There are three basic layout styles to be used with the PSB Controller: the Perimeter Loop/Branch (Fig. DES-06), the Main Plenum Branch (Fig. DES-07), and the Open Duct standard design (Fig. DES-08).

The **Perimeter Loop** layout is as the term implies. A perimeter loop of plenum duct is installed in the structure, from there branch tees are installed for each zone dependant on the zone size, and a zone damper is installed for each take-off/zone.

The **Main Plenum Branch** method is similar to a Perimeter Loop, in that you direct the main plenum to the area loads, with branch tees directing each zone to the outlets, once again installing zone dampers.

The **Open Duct** layout is the same concept that is used on Page 6. This method utilizes the branch split and bullhead tees planning of air flow, with each zone being individually controlled.

Each basic layout has it's typical applications. For example, the Perimeter Loop and Main Branch Layouts are best served doing multi-zones of 4 or more, with the Open Duct best servicing 2 - 4 zones. Perimeter Loop works well in a single level application, while the Main branch is better suited for multi-level applications.

In some installations, it is necessary to reduce the size of the main plenum. Caution must be used when reducing plenum size, since smaller ducts can handle less number of outlets. Also keep in mind that once reduced, the main plenum cannot be increased again.

The Branch Take Offs easily form to ducts in the 6" to 8" range; extra care must be taken with smaller sized ducts to ensure a proper air seal. For tee reductions, keep the tee to the full duct size, reducing only after the tee. Keep the length of the smaller duct sizes to a minimum, since the duct loss is much higher. If a hole saw will be used to drill the branch take-off holes, metal ducts are recommended to be 28 gauge steel.

Whichever method of zoning layout is utilized, it continues to be important for Indoor Air Quality that a certain amount of air is by-passed through each zone. This air recirculation is also important for Energy Efficiency, and even though the zone may not be calling for it, the recirc air will aid in overall living comfort.

Perimeter Loop (Fig. 01)

When designing the perimeter loop, first determine the system load and individual zones. Locate the fan coil and vent outlets as per Page 5. Design the Perimeter Loop with the proper diameter 8" or 10" duct, as determined by the fan coil unit. Use appropriate plenum duct size around the perimeter of the structure.

When sizing the branch zone plenum off the Perimeter Loop, use the Zoning Duct Reduction Guide. (Table DES-07). Total the outlets for each individual zone to determine the zone plenum duct diameter. Locate the tee servicing this zone to minimize the zone plenum duct, and run the plenum where it'll be possible to keep the AFD duct to 10' and 15' lengths. There is no minimum length on the Zone Main Plenum run. For maximum length allowed refer to the Zoning Duct Reduction Guide.

Main Plenum Branch (Fig. 02)

The Main Plenum also requires that a comprehensive system load is completed, zones determined, fancoil and outlets located as per this design manual. The Plenum duct is then located to direct the air to the loads at each zone, and elbow and tees can be located where required, as per this design manual.

The zone duct diameter is determined from the duct reduction guide and an appropriate balanced tee installed. Locate the tee servicing this zone to minimize the zone plenum duct, and run the plenum where it'll be possible to keep the AFD duct to 10' and 15' lengths. There is no minimum length on the Zone Main Plenum run. For maximum length allowed refer to the Zoning Duct Reduction Guide.

Open Duct System (Fig. 03)

The Open Branch layout utilizes the layout on Page 6 its entirety, from load calculation to duct location. This method is best suited when 2 - 4 zones are utilized, by following the design manual and duct reduction guide if necessary. You will either branch or bullhead the tees to 1 or 2 zones, and continue the plenum to the furthest run, installing zone dampers where required.

PSB Zoning Design Layouts

Duct Size	# of vents 2" (51mm)	# of vents (HE)	Plenum Max. Length
5" (127mm)	6	3	40' (12.2m)
6" (152mm)	12	6	50' (15.2m)
7" (178mm)	19	9	60' (18.3m)
8" (203mm)	29	14	70' (21.3m)
10" (254mm)	50	25	100' (30.5m)

Table DES-07 - Zoning Duct Reduction Guide

LEGEND
Main Plenum
Branch Zone
HE Outlet
2" Outlet
HE and 2" Flex Duct
Zone Damper

Fig. DES-06 - Perimeter Loop

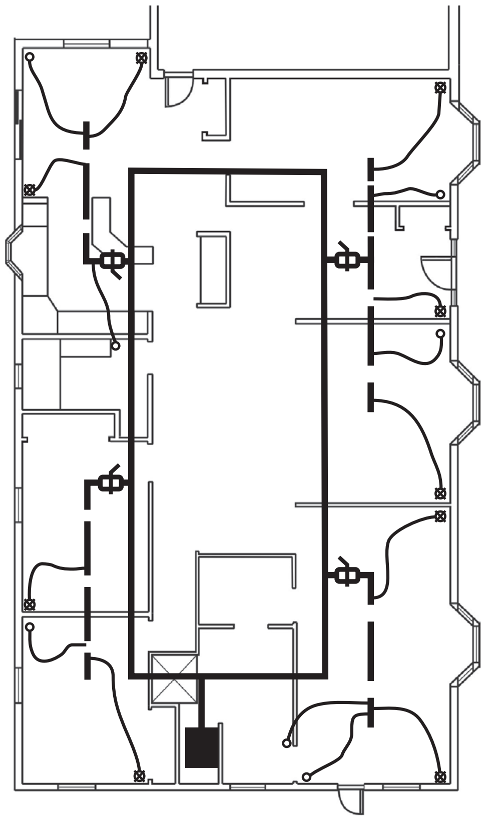


Fig. DES-07 - Main Plenum Branch

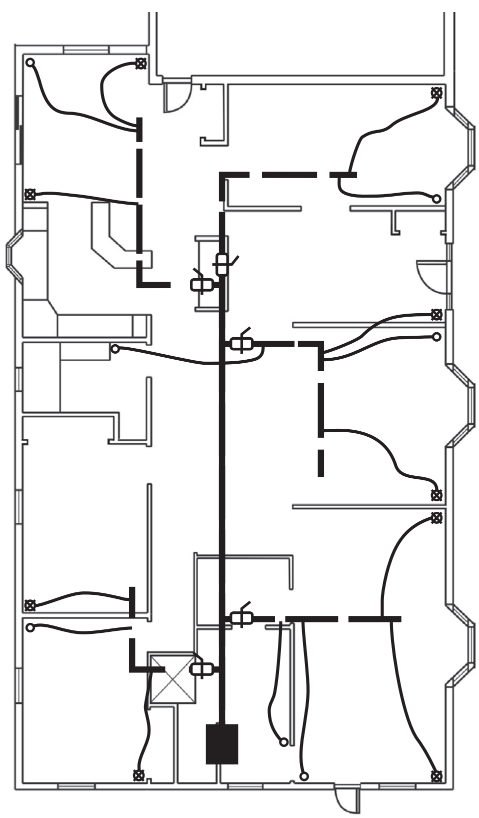
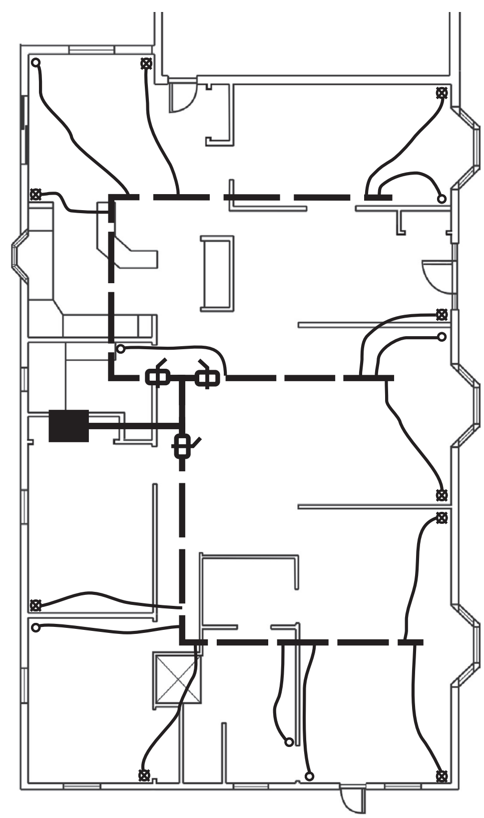


Fig. DES-08 - Open Duct System



Hi-Velocity Systems
www.hi-velocity.com

Matching Coils
Refrigerant Coils
RPM-E/RCM-50, 70,100
Chilled Water Coils
WCM-50, 70, 100
Hot Water Coils
HWC-50, 70, 100
Electrical Coils
ESH-650 (5-15 kW)
ESH-750 (5-18 kW)
ESH-1100 (10-23 kW)

HE-Z Series Specifications

Hi-Velocity Fan Coil w/ VFD

	HE-Z-50/51	HE-Z-70/71	HE-Z-100/101
Hot Water Heating[1]	**2 Ton Airflow (7.0 kW)**	**3 Ton Airflow (10.6 kW)**	**5 Ton Airflow (17.6 kW)**
Coil Type	6 Row/10 FPI	6 Row/10 FPI	6 Row/10 FPI
Max. BTUH @ 190°F E.W.T. (kW @ 88°C)	59,400 (17.4 kW)	89,200 (26.1 kW)	134,000 (39.3 kW)
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)
Max. BTUH @ 170°F E.W.T. (kW @ 77°C)	49,600 (14.5 kW)	74,400 (21.8 kW)	111,800 (32.8 kW)
Max. BTUH @ 160°F E.W.T. (kW @ 71°C)	44,600 (13.1 kW)	67,100 (19.7 kW)	100,700 (29.5 kW)
Max. BTUH @ 150°F E.W.T. (kW @ 66°C)	39,700 (11.6 kW)	59,700 (17.5 kW)	89,700 (26.3 kW)
Max. BTUH @ 140°F E.W.T. (kW @ 60°C)	34,700 (10.2 kW)	51,800 (15.2 kW)	78,400 (23.0 kW)
Max. BTUH @ 130°F E.W.T. (kW @ 54°C)	29,700 (8.7 kW)	44,700 (13.1 kW)	67,100 (19.7 kW)
Max. BTUH @ 120°F E.W.T. (kW @ 49°C)	24,800 (7.3 kW)	37,400 (11.0 kW)	56,200 (16.5 kW)
Max. BTUH @ 110°F E.W.T. (kW @ 43°C)	20,100 (5.9 kW)	30,300 (8.9 kW)	45,500 (13.3 kW)
GPM Flow Ratings (L/s Flow Ratings)	5 (0.32 L/s)	7 (0.44 L/s)	10 (0.63 L/s)
Pressure Drop in Ft. H_2O (Drop in KPa)	3 (8.96 KPa)	6.5 (19.4 KPa)	6.8 (20.3 KPa)

Chilled Water Cooling[1]	**WCM-50**		**WCM-70**		**WCM-100**	
Coil Type	6 Row/10 FPI		6 Row/10 FPI		6 Row/10 FPI	
WCM Modules in **Cooling Mode**	Total	Sensible	Total	Sensible	Total	Sensible
Max. BTUH @ 48°F E.W.T. (kW @ 8.9°C)	19,300 (5.7 kW)	13,700 (4.0 kW)	27,000 (7.9 kW)	19,200 (5.6 kW)	42,100 (12.3 kW)	30,300 (8.9 kW)
Max. BTUH @ 46°F E.W.T. (kW @ 7.8°C)	20,900 (6.1 kW)	14,200 (4.2 kW)	29,400 (8.6 kW)	20,000 (5.9 kW)	45,800 (13.4 kW)	32,100 (9.4 kW)
Max. BTUH @ 44°F E.W.T. (kW @ 6.7°C)	22,600 (6.6 kW)	14,900 (4.4 kW)	31,800 (9.3 kW)	21,000 (6.2 kW)	49,500 (14.5 kW)	33,700 (9.9 kW)
Max. BTUH @ 42°F E.W.T. (kW @ 5.6°C)	24,200 (7.1 kW)	15,700 (4.6 kW)	34,000 (10.0 kW)	21,800 (6.4 kW)	53,200 (15.6 kW)	35,100 (10.3 kW)
Max. BTUH @ 40°F E.W.T. (kW @ 4.4°C)	25,800 (7.6 kW)	16,300 (4.8 kW)	36,400 (10.7 kW)	23,000 (6.7 kW)	56,800 (16.6 kW)	36,400 (10.7 kW)
WCM Modules in **Heating Mode**	Total		Total		Total	
Max. BTUH @ 150°F E.W.T. (kW @ 66°C)	39,700 (11.6 kW)		59,700 (17.5 kW)		89,700 (26.3 kW)	
Max. BTUH @ 140°F E.W.T. (kW @ 60°C)	34,700 (10.2 kW)		51,800 (15.2 kW)		78,400 (23.0 kW)	
Max. BTUH @ 130°F E.W.T. (kW @ 54°C)	29,700 (8.7 kW)		44,700 (13.1 kW)		67,100 (19.7 kW)	
Max. BTUH @ 120°F E.W.T. (kW @ 49°C)	24,800 (7.3 kW)		37,400 (11.0 kW)		56,200 (16.5 kW)	
Max. BTUH @ 110°F E.W.T. (kW @ 43°C)	20,100 (5.9 kW)		30,300 (8.9 kW)		45,500 (13.3 kW)	
GPM Flow Ratings (L/s Flow Ratings)	5 (0.32 L/s)		7 (0.44 L/s)		10 (0.63 L/s)	
Pressure Drop in Ft. H_2O (Drop in KPa)	3 (8.97 KPa)		6.5 (19.4 KPa)		6.8 (20.3 KPa)	

Refrigerant Cooling[1]	**RPM-E/RCM-50**	**RPM-E/RCM-70**	**RPM-E/RCM-100**
RPM-E/RCM Modules BTUH Refrigerant TX Cooling	1.5 - 2.0 Tons (5.3-7.0 kWh)	2.5 - 3.0 Tons (8.8-10.6 kWh)	3.5 - 5.0 Tons (12.3-17.6 kWh)

Electrical Heating	**HV-650 ESH**	**HV-750 ESH**	**HV-1100 ESH**
Kilowatt Range (240v)	5 - 15 kW	5 - 18 kW	10 - 23 kW

Fan Coil Specifications		**HE-Z-50/51**	**HE-Z-70/71**	**HE-Z-100/101**
Max Rated CFM @ 1.2" E.S.P. (L/s @ 298 Pa)		500 (236 L/s)	750 (354 L/s)	1250 (590 L/s)
Voltage		115/230/1/50/60 F.L.A. 8 amp	115/230/1/50/60 F.L.A. 8 amp	115/230/1/50/60 F.L.A. 8 amp
Nominal Operating Amperage		4 Amps	6 Amps	8 Amps
Integral Surge and Fuse System		Yes	Yes	Yes
Horse Power/Watts		3/4hp - 310W	3/4hp - 530W	3/4hp - 720W
Motor RPM		Variable	Variable	Variable
Supply Air Size		8″ round (203mm)	8″ round (203mm)	10″ round (254mm)
Supply Maximum Length[2]		70′ (21.3m)	80′ (24.4m)	100′ (30.5m)
Return Size Needed		12″ (120 in^2) (305mm/774cm^2)	12″ (120 in^2) (305mm/774cm^2)	14″ (168 in^2) (356mm/1084cm^2)
Minimum Outlets[3] Maximum Outlets		12 (2″) 6 (HE) 24 (2″) 12 (HE)	20 (2″) 10 (HE) 32 (2″) 16 (HE)	28 (2″) 14 (HE) 52 (2″) 26 (HE)
Shipping Weight (no coil)		85 lbs (38.6 Kg)	97 lbs (44 Kg)	111 lbs (50.3 Kg)
Fan Coil Size	Length Width Height	32 5/16″ (821mm) 14 1/2″ (368mm) 18 1/4″ (464mm)	32 5/16″ (821mm) 19 1/2″ (495mm) 18 1/4″ (464mm)	32 5/16″ (821mm) 25 1/2″ (648mm) 18 1/4″ (464mm)

(1) **Heating** specs are rated at 68°F E.A.T., **Cooling** specs are rated at 80°F/67°F dB/wB
(2) Maximum length is from the unit to the supply run end cap. More than one run per unit is allowable.
(3) Minimum of **eight 2″ outlets** per ton of cooling needed. (HE Duct = Minimum **four outlets** per ton)

BTUH - British Thermal Units per Hour
E.W.T. - Entering Water Temperature
GPM - US Gallons per Minute
L/s - Litres per Second
CFM - Cubic Feet per Minute

F.L.A. - Full-Load Amperage
RPM - Revolutions per Minute
E.S.P. - External Static Pressure
E.A.T. - Entering Air Temperature
dB/wB - Dry Bulb/Wet Bulb

Energy Saving Products Ltd, established in 1983, manufactures the Hi-Velocity Systems™ product line for residential, commercial and multi-family markets. Our facilities house Administration, Sales, Design, Manufacturing, as well as Research & Development complete with an in-house test lab. Energy Saving Products prides itself on Customer Service and provides design services and contractor support.

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