

Direct Drive Blower Coils

HDY AND VDY TECHNICAL CATALOG



A **NIBE** GROUP MEMBER

VDY



HDY



- Energy Efficient
- Easy to Install
- Extended Service Life

- Engineered to save our customers money
- Eliminate the belt and pulleys
- Energy efficient EC Motor
- Improve indoor air quality
- Experience quieter operations
- Reduce costs
- Nominal CFM range of 600 to 3,000 CFM

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Features and Benefits

Direct Drive Blower Coils Meet the Versatile Needs of Our Customer

These compact blower coils are ideally suited for a variety of ducted applications that require a range of 600 to 3000 CFM, capacities between 1.5 tons to 9 tons, and generally rated for applications up to 2.25-inch w.g. of total static pressure. These units provide comfort cooling and heating while offering a broad range of application flexibility between the traditional fan coil unit and a central station air handling unit. Several configurations are available to meet the needs of different climates and applications.

The Direct Drive units can be ordered as:

- 2-pipe system
- 2-pipe system with electric heat
- 4-pipe system

Direct Drive units are ceiling-mounted and available with a variety of options that can meet the design requirements, and provide a low cost solution for a multitude of applications.

HDY/VDY are available with left- or right-hand arrangements for design flexibility.



Features and Benefits

Standard Features

- Variable speed EC Motors (1/2 HP to 3 HP with built-in thermal overload protection) provides energy savings, quiet operation and easy field adjustment. The motor/blower assembly is easily removable for fast and efficient maintenance
- Double-sloped stainless-steel drain pan eliminates water accumulation to prevent mold growth
- Removable design for easy cleaning
- Three-sided toolless filter access and large size cabinet access panels make routine maintenance fast and efficient.
- Small footprint allows installation in variety of building constructions and applications
- 18-gauge galvanized-steel heavy-gage cabinet construction enhances unit durability
- 1-inch duct collar enables quick field installation
- Durable filter rack designed to accept 1-, 2-, or 4-inch filters for better IAQ
- Forward curved, statically and dynamically balanced fans for quieter unit operations
- Left or Right Hand arrangements for installation and design flexibility

Options

- Variety of heating and cooling coil configurations offer flexibility to meet comfort requirements for most applications
- Double wall construction provides an easy-to-clean durable surface. Solid or perforated, it helps to reduce case-radiated sound in ducted applications and protects from water and mechanical damage
- Fully assembled mixing box with low-leak dampers supports outside air ventilation requirements
- MERV 8 and MERV 13 filter options up to 4-inch media provide greater IAQ
- Electric heaters are factory mounted and ETL/cETL certified as an assembly
- Condensate float switch to prevent leaks and water damage
- Interlocking disconnect switch to shut off power when an emergency occurs

Your Benefit	Features
Reduce Costs	<ul style="list-style-type: none"> • Eliminating the belt reduces install time, parts and maintenance • Efficient EC Motor reduces operating costs: <ul style="list-style-type: none"> - Soft start performance reduces the inrush current - 3 speed operation allows the fan to run at low speed during light load conditions
Experience Quieter Operation	<ul style="list-style-type: none"> • No belt squeal • Soft start motor performance gradually increases fan speed
Improve Indoor Air Quality	<ul style="list-style-type: none"> • Removable double-sloped stainless steel drain pan eliminates water accumulation • Mixing box option circulates in outside fresh air

Features and Benefits

Applications

Where the application calls for cooling capacities or external static pressures that can not be met with standard or high-performance Direct Drive fan coil units; use an IEC vertical Direct Drive blower coil.

Application Fit

- Horizontal configuration, with 8 different sizes meet a multitude of room layouts and ventilation needs
- Wide variety of coil options

Large Public Areas

These units are ideal for applications with a large common area such as restaurants, airports, sports arenas, stadiums, private boxes, gymnasiums, exercise areas, locker rooms, atriums and foyers, auditoriums, shopping malls, equipment or mechanical rooms, and casinos, to name a few.

Quality and Safety

- Every unit tested and inspected at the factory for trouble-free startup
- Optional condensate float switch
- Motors have built-in thermal overload protection
- Optional Interlocking Disconnect Switch
- ETL and cETL listed

Operating Limitations

The fan curves outline the airflow and static pressure range where it is acceptable to run these units.

On units with electric heat, the minimum airflow shown on the operating envelope must be maintained to prevent electric heat nuisance trips.

Installation Considerations (Reference IOM for details)

Horizontal units are generally suspended above the ceiling using hanger rods that go through the corner knock-outs provided in the units. Attention should be paid to having enough clearance around the units for service and maintenance. External vibration isolation and flex connections for ducts are recommended.

Acoustical Considerations

With sound becoming more of a concern to design engineers, building owners and occupants, proper consideration should be given to the selection and placement of these units. To further reduce the sound level, additional measures can be taken. Some examples include:

- Using flexible duct connectors
- Lining the main supply and return ducts with acoustical absorption material
- Placing the return air grilles as far away from the unit as possible.

Unit Nomenclature

UNIT SIZE

- 06 • 600 CFM
- 08 • 800 CFM
- 10 • 1000 CFM
- 12 • 1200 CFM
- 16 • 1600 CFM
- 20 • 2000 CFM
- 22 • 2200 CFM
- 30 • 3000 CFM

CABINET OPTIONS

Drain Pan

- AS • Double Slope Stainless Steel

Filter Options

- C • 2 sets of 1-inch throwaway
- F • 1-inch Pleated MERV 8
- G • 2-inch Pleated MERV 8
- M • 2-inch MERV 11 with 2-inch pleated pre-filter
- U • 4-inch MERV 11
- W • 4-inch MERV 13

Insulation

- C* • 1-inch Closed Cell
- W • 1-inch Standard Fiberglass
- S* • 1-inch Premium IAQ Fiberglass (Edges Sealed)
- G* • 1-inch Foil Face (Edges Sealed)

*C, S & G not allowable w/ Double-Wall

Mixing Box

- N • Rear & Bottom Return comes Standard with Single-blade Dampers

Walls Construction

- Y • Single-Wall (Standard)
- A • Double-Wall Construction (Solid Liner)
- B • DW Constr. (Perforated)

Other Cabinet Options

- A • Cabinet/Control Box Service Light

COIL

Rows

- BY • 4
- KY • 6
- LY • 8
- B6 • 4/1
- B7 • 4/2
- K6 • 6/1
- K • 6/2
- QY • 4 row DX 410A
- FY • 6 Row DX 410A

On size 16 and above with 1 row heat coil is 2 circuit, below size 16 coil has 1 circuit

Total rows allowed is 8.

Hand

- R • Right-hand Coil Connections
- L • Left-hand Coil Connections

Standing in front of the unit, hand is determined by looking into the air supply and assigning the hand to match the location of the cooling coil connections.

Material (Tube/Fin/Coatings)

- Y • Aluminum Fins w/ Galvanized Wrap
- S • Aluminum Fins w/ Stainless Steel Wrap
- C • Copper Fins Stainless Steel Wrap

Accessories - Vents/Drains

- Y • MAV(Std)
- A • AAV(2-Pipe)
- B • AAV(4-Pipe)
- C • MAV w/ Drain (2-Pipe)
- D • MAV w/ Drain (4-Pipe)
- E • AAV w/ Drain (2-Pipe)
- F • AAV w/ Drain (4-Pipe)

Accessories - TXV

- Y • None

Unit Nomenclature

EC MOTOR

Motor-Voltage/Phase/Hertz

- C • 115/1/60
- D • 208/1/60
- E • 230/1/60
- F • 277/1/60
- N • 208/3/60
- P • 230/3/60
- G • 460/3/60

Horsepower

- C • 1/2 HP
- E • 1 HP
- F • 1.5 HP (Three Phase only)
- H • 3 HP (Three Phase only)

Motor Type

- M • EC Motor, no board (0 -10VDC)
- N • EC Motor, POT board, 3 discrete speeds

ELECTRIC HEAT

Heater Voltage

- | | |
|--------------|--------------|
| Y • None | F • 277/1/60 |
| C • 120/1/60 | N • 208/3/60 |
| D • 208/1/60 | P • 240/3/60 |
| E • 240/1/60 | G • 480/3/60 |

Heater Kilowatt

- | | | |
|----------|----------|-----------|
| Y • None | | |
| BY • 1.0 | HY • 5 | NH • 15 |
| CY • 1.5 | JY • 6 | NJ • 16 |
| DY • 2 | KY • 7 | NL • 18 |
| EY • 2.5 | LY • 8 | RY • 19.9 |
| FY • 3 | NY • 9.9 | RH • 25 |
| FA • 3.5 | PY • 12 | SY • 30 |
| GY • 4 | QY • 14 | |
| GA • 4.5 | | |

Note: Voltage rules required , motor & heater voltage must match. Dual power source is not available.

Heater Stages

- Y • None
- A • 1-Stage, Single-Phase (1-12 kW)
- B • 2-Stage, Single-Phase (3-12 kW)
- C • 1-Stage, 3-Phase (1-35 kW)
- D • 2-Stage, 3-Phase (4-35 kW)
- E • 3-Stage, 3-Phase (12-35 kW)

Rules apply for stages

CONTROLS

Applications

- | | |
|------|------|
| BA1Y | BP1K |
| BA3Y | BP1H |
| BA1J | BP1L |
| BA3J | BP3K |
| BP1R | BP3H |
| BP3R | BP3L |

1st Digit is Control Voltage

B=24 volt

2nd Digit is Type of Control

A=Motor Controls P=Electric Heat & Motor Controls

Third Digit is Phase

1=Single Phase 3=3 Phase

4th Digit is Fusing and Disconnect

Y=Std 24V Control Fusing and No Disconnect

J=Y plus 40 amp Disconnect;

R=Std. 24V Control Fusing and Heater Fusing, No Disconnect

K=R plus 40 amp Disconnect

H=R plus 60 amp Disconnect

L=R plus 80 amp Disconnect

(All electric heat includes thermal limit switch)

Special Controls

- O • Condensate Overflow Switch

Low Voltage Package

- V • 3-Speed Adjustable (Default)
- W • Proportional (requires 0-10VDC controller)

THERMOSTAT CONTROLS

- N • Basic 24V Digital, Non-programmable
- P • Basic 24V Digital, 7-Day Programmable
- W • Venture 24V Wi-Fi Programmable

AHRI Nominal Capacity

AHRI Certification

IEC's Direct Drive Blower Coil units are certified in compliance with Air-Conditioning, Heating, and Refrigeration Institute (AHRI) industry standard AHRI-440 for room fan coil units. Approved standard ratings are tabulated below.



C-ETL-US Listing

IEC's Direct Drive Blower Coil units are listed by Intertek Testing Services (ITS). ITS's C-ETL-US listing signifies that IEC's blower coil units have been examined by ITS and comply with the minimum requirements of U.S. and Canadian national product safety standard, UL 1995/CSA C22.2 No. 236, and that IEC's manufacturing site has been audited. ITS's re-examination service includes periodic visits to IEC's factory to ensure continued compliance for all listed products



Nominal Capacity Range – HDY

Model	Unit Size	Coil Rows	Nominal CFM	Water Pressure Drop (ft. water)	Cooling Capacity ¹ (Btuh)		Power Input (Watts)
					Total	Sensible	
HDY	06	4	600	1.8	19,900	13,800	85
	06	6	600	3.8	25,000	16,000	120
	06	8	600	4.8	26,000	16,000	120
	08	4	800	2.9	24,900	17,800	160
	08	6	800	5.5	31,000	20,100	175
	08	8	800	8.4	34,800	21,200	205
	10	4	1,000	5.7	33,700	23,200	220
	10	6	1,000	10.7	40,500	25,900	240
	10	8	1,000	15.9	45,100	27,500	260
	12	4	1,200	7.2	38,400	26,800	335
	12	6	1,200	14.7	47,600	30,700	350
	12	8	1,200	20.5	52,000	31,800	380
	16	4	1,600	4.7	49,000	35,300	410
	16	6	1,600	10.0	61,500	39,700	420
	16	8	1,600	14.2	67,100	41,400	520
	20	4	2,000	5.5	62,100	45,000	445
	20	6	2,000	11.2	78,000	51,300	465
	20	8	2,000	17.0	87,400	55,400	510
	22	4	2,200	8.0	65,000	47,200	575
	22	6	2,200	15.0	83,800	54,900	600
22	8	2,200	23.0	95,500	59,000	660	
30	4	3,000	6.1	98,500	71,100	790	
30	6	3,000	10.7	123,900	80,400	860	
30	8	3,000	18.4	140,000	88,500	890	

Nominal Capacity Range – VDY

Model	Unit Size	Coil Rows	Nominal CFM	Water Pressure Drop (ft. water)	Cooling Capacity ¹ (Btuh)		Power Input (Watts)
					Total	Sensible	
VDY	06	4	600	1.5	14,900	11,400	90
	06	6	600	2.8	18,000	12,700	125
	06	8	600	4.0	18,600	12,700	125
	08	4	800	2.0	19,300	15,000	170
	08	6	800	4.0	23,600	16,800	185
	08	8	800	6.0	25,100	17,100	215
	10	4	1,000	5.0	29,300	21,900	230
	10	6	1,000	9.0	34,200	24,000	255
	10	8	1,000	13.0	35,600	24,200	275
	12	4	1,200	5.8	33,500	25,600	355
	12	6	1,200	11.4	40,000	28,400	370
	12	8	1,200	17.0	42,700	29,200	400
	16	4	1,600	3.5	42,200	32,200	435
	16	6	1,600	7.6	52,900	37,200	445
	16	8	1,600	11.8	58,100	39,400	550
	20	4	2,000	4.3	54,200	41,000	478
	20	6	2,000	9.2	68,900	48,000	490
	20	8	2,000	15.0	77,800	51,900	540
	22	4	2,200	4.8	58,100	44,400	605
	22	6	2,200	10.5	74,600	52,300	630
22	8	2,200	17.3	85,000	56,900	695	
30	4	3,000	4.0	83,000	63,900	830	
30	6	3,000	9.8	111,500	77,900	905	
30	8	3,000	16.8	131,400	86,800	935	

- NOTES: 1. Ratings are based on 80°F (26.7°C) DB and 67°F (19.4°C) WB EAT, 45°F (7.2°C) EWT, 10°F Δ (5.6°C Δ) water temperature rise, high fan speed, motor voltage 115-1-60, and airflow under dry coil conditions.
 2. For all application ratings, use IEC's computer selection program, the quick-selection ratings provided in this catalog, or contact your local IEC representative.
 3. For additional information, please consult AHRI's website at www.ahrinet.org.
 4. Ratings are based on the Standard Coil Circuit and FPI option.

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Cooling Capacity

Cooling Capacity – HDY

Unit Size	CFM	Rows	EAT (°F) DB/WB	EWT (°F)	ΔT (°F)	Total (MBH)	Sensible (MBH)	GPM	WPD (ft. wg.)
06 (1/2 HP)	500	4	75 / 63	45	10	12.5	10.6	2.5	1.0
					12	11.1	10.0	1.8	0.6
		6	75 / 63	45	10	15.3	11.9	3.0	2.0
					12	14.0	11.4	2.3	1.3
	8	75 / 63	45	10	16.7	12.6	3.3	3.1	
				12	15.5	12.0	2.6	2.1	
	600	4	75 / 63	45	10	14.6	12.5	2.9	1.2
					12	13.1	11.9	2.2	0.8
		6	75 / 63	45	10	18.1	14.2	3.6	2.6
					12	16.7	13.6	2.8	1.7
		8	75 / 63	45	10	20.0	15.1	4.0	4.1
					12	18.6	14.5	3.1	2.7
700	4	75 / 63	45	10	16.6	14.3	3.3	1.5	
				12	15.1	13.7	2.5	1.0	
	6	75 / 63	45	10	20.8	16.4	4.1	3.3	
				12	19.2	15.8	3.2	2.2	
	8	75 / 63	45	10	23.2	17.6	4.6	5.2	
				12	21.7	16.9	3.6	3.5	
08 (1 HP)	700	4	75 / 63	45	10	16.6	14.3	3.3	1.5
					12	15.1	13.7	2.5	1.0
		6	75 / 63	45	10	20.8	16.4	4.1	3.3
					12	19.2	15.8	3.2	2.2
	8	75 / 63	45	10	23.2	17.6	4.6	5.2	
				12	21.7	16.9	3.6	3.5	
	800	4	75 / 63	45	10	18.5	16.2	3.7	1.8
					12	16.9	15.5	2.8	1.2
		6	75 / 63	45	10	23.4	18.7	4.6	3.9
					12	21.8	18.0	3.6	2.6
		8	75 / 63	45	10	26.3	20.1	5.2	6.3
					12	24.7	19.3	4.1	4.3
900	4	75 / 63	45	10	20.4	17.9	4.0	2.1	
				12	18.6	17.2	3.1	1.4	
	6	75 / 63	45	10	25.9	20.8	5.1	4.6	
				12	24.2	20.1	4.0	3.1	
	8	75 / 63	45	10	29.4	22.5	5.8	7.5	
				12	27.6	21.7	4.6	5.1	
10 (1/2 HP)	900	4	75 / 63	45	10	22.6	18.6	4.5	3.1
					12	20.8	17.9	3.4	2.0
		6	75 / 63	45	10	27.0	20.9	5.3	6.1
					12	25.2	20.1	4.2	4.1
	8	75 / 63	45	10	28.3	21.5	5.6	8.8	
				12	26.6	20.7	4.4	6.0	
	1000	4	75 / 63	45	10	24.7	20.4	4.9	3.5
					12	22.8	19.7	3.8	2.3
		6	75 / 63	45	10	29.6	23.0	5.9	7.1
					12	27.8	22.2	4.6	4.8
		8	75 / 63	45	10	31.4	23.9	6.2	10.4
					12	29.5	23.1	4.9	7.1
1100	4	75 / 63	45	10	26.7	22.3	5.3	4.0	
				12	24.7	21.5	4.1	2.6	
	6	75 / 63	45	10	32.4	25.2	6.4	8.2	
				12	30.4	24.4	5.0	5.5	
8	75 / 63	45	10	34.4	26.2	6.8	12.0		
			12	32.5	25.4	5.4	8.2		

NOTES: 1. Ratings are based on 75°F (23.9°C) DB and 63°F (17.2°C) WB EAT, 45°F (7.2°C) EWT, 10°F Δ (5.6°C Δ) or 12°F (6.7°C Δ) water temperature rise.
 2. WPD=Water Pressure Drop

Cooling Capacity

Cooling Capacity – HDY

Unit Size	CFM	Rows	EAT (°F) DB/WB	EWT (°F)	ΔT (°F)	Total (MBH)	Sensible (MBH)	GPM	WPD (ft. wg.)
12 (1 HP)	1100	4	75 / 63	45	10	26.7	22.3	5.3	4.0
					12	24.7	21.5	4.1	2.6
		6	75 / 63	45	10	32.4	25.2	6.4	8.2
					12	30.4	24.4	5.0	5.5
	8	75 / 63	45	10	34.4	26.2	6.8	12.0	
				12	32.5	25.4	5.4	8.2	
	1200	4	75 / 63	45	10	28.7	24.1	5.7	4.5
					12	26.7	23.3	4.4	3.0
		6	75 / 63	45	10	35.0	27.4	6.9	9.2
					12	32.8	26.5	5.4	6.2
	8	75 / 63	45	10	37.5	28.6	7.4	13.8	
				12	35.4	27.7	5.8	9.4	
1300	4	75 / 63	45	10	30.6	25.9	6.1	4.9	
				12	28.5	25.0	4.7	3.3	
	6	75 / 63	45	10	37.5	29.5	7.4	10.3	
				12	35.4	28.6	5.8	7.0	
8	75 / 63	45	10	40.4	30.9	8.0	15.5		
			12	38.2	30.0	6.3	10.6		
16 (1 HP)	1400	4	75 / 63	45	10	32.1	27.7	6.4	2.3
					12	29.4	26.6	4.9	1.5
		6	75 / 63	45	10	37.9	30.6	7.5	4.5
					12	35.4	29.6	5.9	3.0
	8	75 / 63	45	10	40.3	31.7	8.0	6.6	
				12	37.8	30.6	6.2	4.5	
	1600	4	75 / 63	45	10	36.0	31.3	7.1	2.7
					12	33.2	30.2	5.5	1.8
		6	75 / 63	45	10	42.9	34.9	8.5	5.4
					12	40.3	33.8	6.7	3.7
	8	75 / 63	45	10	46.0	36.3	9.1	8.1	
				12	43.3	35.1	7.2	5.5	
1800	4	75 / 63	45	10	39.8	34.9	7.9	3.2	
				12	36.8	33.7	6.1	2.1	
	6	75 / 63	45	10	47.6	39.0	9.4	6.4	
				12	44.9	37.9	7.4	4.4	
8	75 / 63	45	10	51.5	40.8	10.2	9.7		
			12	48.8	39.7	8.1	6.7		
20 (1 HP)	1800	4	75 / 63	45	10	43.8	37.1	8.7	3.0
					12	40.4	35.7	6.7	1.9
		6	75 / 63	45	10	52.7	41.6	10.4	6.0
					12	49.4	40.2	8.2	4.1
	8	75 / 63	45	10	57.1	43.7	11.3	9.1	
				12	53.9	42.3	8.9	6.2	
	2000	4	75 / 63	45	10	47.6	40.6	9.4	3.4
					12	44.1	39.1	7.3	2.2
		6	75 / 63	45	10	57.8	45.9	11.5	6.9
					12	54.2	44.4	9.0	4.7
	8	75 / 63	45	10	63.3	48.5	12.6	10.7	
				12	59.6	46.9	9.9	7.3	
2200	4	75 / 63	45	10	51.2	44.0	10.2	3.8	
				12	47.6	42.5	7.9	2.5	
	6	75 / 63	45	10	62.8	50.1	12.4	7.9	
				12	59.1	48.5	9.8	5.4	
8	75 / 63	45	10	69.2	53.2	13.7	12.3		
			12	65.5	51.6	10.8	8.5		

NOTES: 1. Ratings are based on 75°F (23.9°C) DB and 63°F (17.2°C) WB EAT, 45°F (7.2°C) EWT, 10°F Δ (5.6°C Δ) or 12°F (6.7°C Δ) water temperature rise.

Cooling Capacity

Cooling Capacity – HDY

Unit Size	CFM	Rows	EAT (°F) DB/WB	EWT (°F)	ΔT (°F)	Total (MBH)	Sensible (MBH)	GPM	WPD (ft. wg.)		
22 (1 1/2 HP)	2000	4	75 / 63	45	10	47.6	40.6	9.4	3.4		
					12	44.1	39.1	7.3	2.2		
		6	75 / 63	45	10	57.8	45.9	11.5	6.9		
					12	54.2	44.4	9.0	4.7		
			8	75 / 63	45	10	63.3	48.5	12.6	10.7	
						12	59.6	46.9	9.9	7.3	
	2200	4	75 / 63	45	10	51.2	44.0	10.2	3.8		
					12	47.6	42.5	7.9	2.5		
		6	75 / 63	45	10	62.8	50.1	12.4	7.9		
					12	59.1	48.5	9.8	5.4		
			8	75 / 63	45	10	69.2	53.2	13.7	12.3	
						12	65.5	51.6	10.8	8.5	
	2400	4	75 / 63	45	10	54.9	47.4	10.9	4.2		
					12	51.1	45.9	8.4	2.8		
		6	75 / 63	45	10	67.5	54.2	13.4	8.8		
					12	63.8	52.6	10.5	6.1		
			8	75 / 63	45	10	74.9	57.9	14.8	14.0	
						12	71.0	56.2	11.7	9.6	
	30 (3 HP)	2800	4	75 / 63	45	10	70.6	59.9	14.0	3.1	
						12	65.5	57.8	10.8	2.0	
			6	75 / 63	45	10	88.5	69.1	17.6	6.7	
						12	83.3	66.8	13.8	4.5	
				8	75 / 63	45	10	99.5	74.4	19.7	10.7
							12	94.2	72.1	15.6	7.4
3000		4	75 / 63	45	10	74.4	63.4	14.8	3.3		
					12	69.1	61.2	11.4	2.2		
		6	75 / 63	45	10	93.5	73.3	18.5	7.2		
					12	88.1	71.0	14.6	4.9		
			8	75 / 63	45	10	105.5	79.2	20.9	11.8	
						12	100.0	76.8	16.5	8.1	
3200		4	75 / 63	45	10	78.1	66.9	15.5	3.6		
					12	72.7	64.6	12.0	2.4		
		6	75 / 63	45	10	98.3	77.5	19.5	7.8		
					12	92.9	75.2	15.3	5.4		
			8	75 / 63	45	10	111.1	83.8	22.0	12.8	
						12	105.6	81.4	17.5	8.8	

NOTES: 1. Ratings are based on 75°F (23.9°C) DB and 63°F (17.2°C) WB EAT, 45°F (7.2°C) EWT, 10°F Δ (5.6°C Δ) or 12°F (6.7°C Δ) water temperature rise.

Cooling Capacity

Cooling Capacity – VDY

Unit Size	CFM	Rows	EAT (°F) DB/WB	EWT (°F)	ΔT (°F)	Total (MBH)	Sensible (MBH)	GPM	WPD (ft. wg.)
06 (1/2 HP)	500	4	75 / 63	45	10	9.1	8.2	1.8	0.6
					12	8.5	8.0	1.4	0.4
		6	75 / 63	45	10	10.6	8.8	2.1	1.1
					12	9.6	8.3	1.6	0.7
	8	75 / 63	45	10	10.5	8.4	2.1	1.5	
				12	9.5	8.0	1.6	1.0	
	600	4	75 / 63	45	10	11.0	9.9	2.2	0.8
					12	9.8	9.4	1.6	0.5
		6	75 / 63	45	10	12.8	10.6	2.5	1.5
					12	11.5	10.0	1.9	1.0
		8	75 / 63	45	10	12.9	10.3	2.6	2.1
					12	11.6	9.8	1.9	1.3
700	4	75 / 63	45	10	12.8	11.5	2.5	1.0	
				12	11.3	10.9	1.9	0.6	
	6	75 / 63	45	10	14.9	12.4	3	1.9	
				12	13.5	11.8	2.2	1.2	
	8	75 / 63	45	10	15.3	12.2	3	2.7	
				12	13.9	11.6	2.3	1.7	
08 (1 HP)	700	4	75 / 63	45	10	12.8	11.5	2.5	1.0
					12	11.3	10.9	1.9	0.6
		6	75 / 63	45	10	14.9	12.4	3	1.9
					12	13.5	11.8	2.2	1.2
	8	75 / 63	45	10	15.3	12.2	3	2.7	
				12	13.9	11.6	2.3	1.7	
	800	4	75 / 63	45	10	14.5	13.0	2.9	1.2
					12	12.9	12.4	2.1	0.8
		6	75 / 63	45	10	17.1	14.2	3.4	2.4
					12	15.5	13.5	2.6	1.5
		8	75 / 63	45	10	17.6	14.1	3.5	3.4
					12	16.1	13.4	2.7	2.2
900	4	75 / 63	45	10	16.2	14.6	3.2	1.4	
				12	14.5	13.9	2.4	0.9	
	6	75 / 63	45	10	19.2	15.9	3.8	2.9	
				12	17.5	15.2	2.9	1.9	
8	75 / 63	45	10	20.0	15.9	4	4.1		
			12	18.3	15.2	3	2.7		
10 (1/2 HP)	900	4	75 / 63	45	10	20.3	17.3	4	2.6
					12	18.7	16.6	3.1	1.7
		6	75 / 63	45	10	22.9	18.4	4.5	4.7
					12	21.3	17.7	3.5	3.2
	8	75 / 63	45	10	23.1	18.1	4.6	6.5	
				12	21.5	17.4	3.6	4.3	
	1000	4	75 / 63	45	10	22.2	19.0	4.4	3.0
					12	20.5	18.3	3.4	2.0
		6	75 / 63	45	10	25.2	20.3	5	5.5
					12	23.6	19.6	3.9	3.7
		8	75 / 63	45	10	25.8	20.2	5.1	7.7
					12	24.1	19.5	4	5.2
1100	4	75 / 63	45	10	24.0	20.7	4.8	3.4	
				12	22.3	20.0	3.7	2.3	
	6	75 / 63	45	10	27.6	22.3	5.5	6.4	
				12	25.8	21.6	4.3	4.3	
8	75 / 63	45	10	28.5	22.3	5.7	9.0		
			12	26.7	21.6	4.4	6.1		

NOTES: 1. Ratings are based on 75°F (23.9°C) DB and 63°F (17.2°C) WB EAT, 45°F (7.2°C) EWT, 10°F Δ (5.6°C Δ) or 12°F (6.7°C Δ) water temperature rise.

Direct Drive Blower Coils

HDY AND VDY TECHNICAL CATALOG

Cooling Capacity

Cooling Capacity – VDY

Unit Size	CFM	Rows	EAT (°F) DB/WB	EWT (°F)	ΔT (°F)	Total (MBH)	Sensible (MBH)	GPM	WPD (ft. wg.)
12 (1 HP)	1100	4	75/63	45	10	24.0	20.7	4.8	3.4
					12	22.3	20.0	3.7	2.3
		6	75/63	45	10	27.6	22.3	5.5	6.4
					12	25.8	21.6	4.3	4.3
	8	75/63	45	10	28.5	22.3	5.7	9.0	
				12	26.7	21.6	4.4	6.1	
	1200	4	75/63	45	10	25.8	22.4	5.1	3.8
					12	24.0	21.7	4	2.5
		6	75/63	45	10	29.9	24.3	5.9	7.2
					12	28.0	23.5	4.6	4.9
		8	75/63	45	10	31.2	24.5	6.2	10.3
					12	29.3	23.7	4.8	7.0
1300	4	75/63	45	10	27.5	24.0	5.5	4.2	
				12	25.7	23.3	4.3	2.8	
	6	75/63	45	10	32.1	26.2	6.4	8.0	
				12	30.2	25.4	5	5.5	
	8	75/63	45	10	33.9	26.6	6.7	11.7	
				12	31.7	25.7	5.2	7.9	
16 (1HP)	1400	4	75/63	45	10	28.4	24.7	5.6	1.9
					12	25.7	23.6	4.3	1.2
		6	75/63	45	10	34.3	27.7	6.8	3.8
					12	31.7	26.6	5.2	2.5
	8	75/63	45	10	36.9	28.6	7.3	5.8	
				12	34.1	27.4	5.6	3.8	
	1600	4	75/63	45	10	32.0	27.9	6.3	2.3
					12	29.1	26.8	4.8	1.5
		6	75/63	45	10	38.9	31.5	7.7	4.7
					12	36.0	30.3	6	3.1
		8	75/63	45	10	42.2	32.9	8.4	7.1
					12	39.3	31.7	6.5	4.8
1800	4	75/63	45	10	35.3	31.1	7	2.6	
				12	32.4	29.9	5.4	1.7	
	6	75/63	45	10	43.3	35.3	8.6	5.5	
				12	40.4	34.1	6.7	3.7	
8	75/63	45	10	47.4	37.1	9.4	8.5		
			12	44.3	35.8	7.3	5.7		
20 (1 HP)	1800	4	75/63	45	10	37.6	32.4	7.5	2.3
					12	34.2	31.0	5.7	1.5
		6	75/63	45	10	46.4	36.8	9.2	4.9
					12	42.9	35.4	7.1	3.3
	8	75/63	45	10	51.0	38.8	10.1	7.6	
				12	47.2	37.2	7.8	5.1	
	2000	4	75/63	45	10	41.1	35.6	8.1	2.7
					12	37.6	34.2	6.2	1.7
		6	75/63	45	10	50.9	40.7	10.1	5.7
					12	47.3	39.2	7.8	3.8
		8	75/63	45	10	56.6	43.2	11.2	9.0
					12	52.7	41.5	8.7	6.0
2200	4	75/63	45	10	44.3	38.7	8.8	3.0	
				12	40.8	37.2	6.7	2.0	
	6	75/63	45	10	55.3	44.5	11	6.5	
				12	51.7	42.9	8.5	4.4	
8	75/63	45	10	61.9	47.5	12.3	10.4		
			12	57.8	45.7	9.6	7.0		

NOTES: 1. Ratings are based on 75°F (23.9°C) DB and 63°F (17.2°C) WB EAT, 45°F (7.2°C) EWT, 10°F Δ (5.6°C Δ) or 12°F (6.7°C Δ) water temperature rise.

Cooling Capacity

Cooling Capacity – VDY

Unit Size	CFM	Rows	EAT (°F) DB/WB	EWT (°F)	ΔT (°F)	Total (MBH)	Sensible (MBH)	GPM	WPD (ft. wg.)	
22 (1-1/2 HP)	2000	4	75/63	45	10	41.1	35.6	8.1	2.7	
					12	37.6	34.2	6.2	1.7	
		6	75/63	45	10	50.9	40.7	10.1	5.7	
					12	47.3	39.2	7.8	3.8	
		8	75/63	45	10	56.6	43.2	11.2	9.0	
					12	52.7	41.5	8.7	6.0	
	2200	4	75/63	45	10	44.3	38.7	8.8	3.0	
					12	40.8	37.2	6.7	2.0	
		6	75/63	45	10	55.3	44.5	11	6.5	
					12	51.7	42.9	8.5	4.4	
		8	75/63	45	10	61.9	47.5	12.3	10.4	
					12	57.8	45.7	9.6	7.0	
	2400	4	75/63	45	10	47.5	41.7	9.4	3.4	
					12	43.9	40.3	7.3	2.2	
		6	75/63	45	10	59.8	48.3	11.9	7.3	
					12	55.9	46.7	9.2	4.9	
		8	75/63	45	10	67.3	51.8	13.3	11.8	
					12	63.1	50.0	10.4	8.0	
	30 (3 HP)	2800	4	75/63	45	10	60.3	52.7	12	2.4
						12	55.4	50.7	9.2	1.6
			6	75/63	45	10	78.5	62.2	15.6	5.5
						12	73.3	60.0	12.1	3.7
			8	75/63	45	10	90.5	67.7	17.9	9.2
						12	84.7	65.2	14	6.2
3000		4	75/63	45	10	63.8	56.0	12.7	2.6	
					12	58.8	53.9	9.7	1.7	
		6	75/63	45	10	83.6	66.5	16.6	6.1	
					12	78.3	64.3	12.9	4.1	
		8	75/63	45	10	97.1	72.8	19.3	10.3	
					12	90.9	70.1	15	7.0	
3200		4	75/63	45	10	67.2	59.1	13.3	2.8	
					12	62.0	57.0	10.2	1.9	
		6	75/63	45	10	88.6	70.7	17.6	6.7	
					12	83.1	68.4	13.7	4.5	
		8	75/63	45	10	103.2	77.6	20.5	11.4	
					12	97.2	74.9	16.1	7.7	

NOTES: 1. Ratings are based on 75°F (23.9°C) DB and 63°F (17.2°C) WB EAT, 45°F (7.2°C) EWT, 10°F Δ (5.6°C Δ) or 12°F (6.7°C Δ) water temperature rise.

Direct Drive Blower Coils

HDY AND VDY TECHNICAL CATALOG

Heating Capacity

Heating Capacity – HDY

Unit Size	CFM	Rows	EWT (°F)	ΔT (°F)	MBH	LAT (°F)	GPM	WPD (ft. wg.)	
06 (1/2 HP)	500	1	140	40	8.8	86.3	0.4	0.5	
				20	12.8	93.8	1.3	2.5	
			40	19.0	105.2	1	1.5		
		180	20	40	22.4	111.4	2.3	5.6	
				40	14.6	97.1	0.7	0.4	
			20	20.8	108.6	2.1	1.8		
	600	1	140	40	31.1	127.6	1.6	1.1	
				20	35.8	136.4	3.7	3.9	
			40	9.9	85.3	0.5	0.6		
		180	20	14.4	92.2	1.5	2.9		
				40	21.3	102.9	1.1	1.8	
			20	25.1	108.8	2.6	6.7		
	700	1	140	40	16.7	95.7	0.8	0.4	
				20	23.7	106.6	2.4	2.2	
			40	35.3	124.5	1.8	1.3		
		180	20	40.9	133.1	4.2	4.8		
				40	10.9	84.4	0.5	0.7	
			20	15.8	90.9	1.6	3.4		
	08 (1 HP)	700	1	140	40	23.4	100.9	1.2	2
					20	27.7	106.6	2.8	7.8
				40	18.5	94.5	0.9	0.5	
			2	140	26.3	104.8	2.7	2.6	
					40	39.2	121.9	2	1.5
				20	45.5	130.2	4.6	5.7	
08 (1 HP)	700	1	140	40	10.0	83.3	0.5	0.6	
				20	14.7	89.4	1.5	3	
			40	21.7	98.7	1.1	1.8		
		180	20	25.6	103.9	2.6	6.9		
				40	17.3	92.9	0.9	0.5	
			20	24.8	102.8	2.5	2.3		
	800	1	140	40	36.8	118.7	1.9	1.4	
				20	42.9	126.7	4.4	5.2	
			40	11.1	82.9	0.6	0.7		
		2	140	16.2	88.7	1.6	3.5		
				40	23.9	97.7	1.2	2.1	
			20	28.3	102.8	2.9	8.1		
	900	1	140	40	19.3	92.3	1	0.5	
				20	27.5	101.8	2.8	2.7	
			40	40.9	117.3	2.1	1.7		
		2	140	47.7	125.2	4.9	6.2		
				40	12.1	82.5	0.6	0.8	
			20	17.6	88.2	1.8	4		
900	1	180	40	26.1	96.8	1.3	2.4		
			20	30.9	101.8	3.2	9.3		
		40	21.1	91.7	1.1	0.6			
	2	140	30.1	101	3	3.2			
			40	44.8	116.1	2.3	1.9		
		20	52.3	123.8	5.3	7.1			

NOTES: 1. Based on 70°F (21.1°C) entering air temperature.
 2. For leaving air temperature above 130°F (54.4°C) consult the factory.

Heating Capacity

Heating Capacity – HDY

Unit Size	CFM	Rows	EWT (°F)	ΔT (°F)	MBH	LAT (°F)	GPM	WPD (ft. wg.)	
10 (1/2 HP)	900	1	140	40	16.1	86.5	0.8	1.5	
				20	22.0	92.6	2.2	7.1	
		180	1	140	40	32.6	103.6	1.7	4.3
					20	37.8	108.9	3.9	15.9
		2	140	140	40	27.3	98.1	1.4	1.2
					20	36.2	107.2	3.6	5.3
	180		140	40	54.1	125.7	2.8	3.2	
				20	61.6	133.4	6.3	11.5	
	1000	1	140	140	40	17.1	85.9	0.9	1.7
					20	23.4	91.7	2.4	7.9
		180	1	140	40	34.8	102.2	1.8	4.8
					20	40.4	107.4	4.1	17.7
		2	140	140	40	29.3	97.1	1.5	1.3
					20	38.9	106	3.9	5.9
	180		140	40	58.2	123.9	3	3.6	
				20	66.3	131.4	6.8	13	
	1100	1	140	140	40	18.1	85.2	0.9	1.8
					20	24.8	90.9	2.5	8.7
		180	1	140	40	36.8	101	1.9	5.2
					20	42.8	106	4.4	19.4
		2	140	140	40	31.2	96.2	1.6	1.4
					20	41.5	105	4.2	6.5
	180		140	40	62.1	122.2	3.2	4	
				20	70.9	129.7	7.2	14.4	
12 (1 HP)	1100	1	140	40	18.1	85.2	0.9	1.8	
				20	24.8	90.9	2.5	8.7	
		180	1	140	40	36.8	101	1.9	5.2
					20	42.8	106	4.4	19.4
		2	140	140	40	31.2	96.2	1.6	1.4
					20	41.5	105	4.2	6.5
	180		140	40	62.1	122.2	3.2	4	
				20	70.9	129.7	7.2	14.4	
	1200	1	140	140	40	19.0	84.7	1	2
					20	26.2	90.2	2.6	9.4
		180	1	140	40	38.8	99.9	2	5.7
					20	45.1	104.8	4.6	21
		2	140	140	40	33.0	95.4	1.7	1.6
					20	44.0	104	4.4	7.2
	180		140	40	65.8	120.7	3.3	4.4	
				20	75.2	128	7.7	15.8	
	1300	1	140	140	40	19.9	84.2	1	2.1
					20	27.4	89.5	2.8	10.1
		180	1	140	40	40.7	99	2.1	6.1
					20	-	-	-	-
		2	140	140	40	34.7	94.7	1.7	1.7
					20	46.4	103.1	4.7	7.8
	180		140	40	69.3	119.4	3.5	4.7	
				20	79.4	126.6	8.1	17.2	

NOTES: 1. Based on 70°F (21.1°C) entering air temperature.
 2. For leaving air temperature above 130°F (54.4°C) consult the factory.

Direct Drive Blower Coils

HDY AND VDY TECHNICAL CATALOG

Heating Capacity

Heating Capacity – HDY

Unit Size	CFM	Rows	EWT (°F)	ΔT (°F)	MBH	LAT (°F)	GPM	WPD (ft. wg.)
16 (1 HP)	1400	1	140	40	21.2	84	1.1	0.5
				20	31.2	90.7	3.1	2.5
			180	40	46.2	100.5	2.3	1.5
				20	54.7	106.2	5.6	5.7
		2	140	40	39.5	96.1	2	0.9
				20	53.4	105.3	5.4	4.1
	180	40	79.7	122.7	4.1	2.5		
		20	91.4	130.4	9.3	9.1		
	1600	1	140	40	23.0	83.3	1.2	0.5
				20	33.8	89.6	3.4	2.8
			180	40	50.0	98.9	2.5	1.7
				20	59.3	104.3	6	6.5
		2	140	40	43.1	95	2.2	1
				20	58.4	103.8	5.9	4.8
	180	40	87.2	120.5	4.4	2.9		
		20	100.2	128	10.2	10.6		
	1800	1	140	40	24.7	82.7	1.2	0.6
				20	36.3	88.7	3.7	3.2
			180	40	53.6	97.5	2.7	1.9
				20	63.7	102.7	6.5	7.3
		2	140	40	46.5	93.9	2.3	1.1
				20	63.2	102.5	6.4	5.4
	180	40	94.2	118.4	4.8	3.3		
		20	108.5	125.8	11.1	12		
20 (1 HP)	1800	1	140	40	28.1	84.4	1.4	0.9
				20	39.7	90.4	4	4.4
			180	40	58.8	100.2	3	2.6
				20	69.0	105.5	7	9.9
		2	140	40	45.9	93.6	2.3	0.5
				20	65.4	103.6	6.6	2.7
	180	40	97.2	120	4.9	1.7		
		20	113.3	128.3	11.5	6.2		
	2000	1	140	40	29.9	83.8	1.5	1
				20	42.3	89.6	4.3	4.8
			180	40	62.5	99	3.2	2.9
				20	73.5	104	7.5	10.9
		2	140	40	49.3	92.8	2.5	0.6
				20	70.1	102.5	7.1	3
	180	40	104.2	118.2	5.3	1.8		
		20	121.7	126.3	12.4	6.9		
	2200	1	140	40	31.6	83.3	1.6	1
				20	44.7	88.8	4.5	5.2
			180	40	66.1	97.8	3.4	3.1
				20	77.8	102.7	7.9	11.9
		2	140	40	52.4	92.1	2.6	0.7
				20	74.6	101.4	7.5	3.4
	180	40	110.8	116.7	5.6	2		
		20	129.7	124.6	13.2	7.6		

NOTES: 1. Based on 70°F (21.1°C) entering air temperature.
 2. For leaving air temperature above 130°F (54.4°C) consult the factory.

Heating Capacity

Heating Capacity – HDY

Unit Size	CFM	Rows	EWT (°F)	ΔT (°F)	MBH	LAT (°F)	GPM	WPD (ft. wg.)
22 (1 1/2 HP)	2000	1	140	40	29.9	83.8	1.5	1
				20	42.3	89.6	4.3	4.8
		1	180	40	62.5	99	3.2	2.9
				20	73.5	104	7.5	10.9
		2	140	40	49.3	92.8	2.5	0.6
				20	70.1	102.5	7.1	3
	180		40	104.2	118.2	5.3	1.8	
			20	121.7	126.3	12.4	6.9	
	2200	1	140	40	31.6	83.3	1.6	1
				20	44.7	88.8	4.5	5.2
			180	40	66.1	97.8	3.4	3.1
				20	77.8	102.7	7.9	11.9
		2	140	40	52.4	92.1	2.6	0.7
				20	74.6	101.4	7.5	3.4
	180	40	110.8	116.7	5.6	2		
		20	129.7	124.6	13.2	7.6		
	2400	1	140	40	33.1	82.8	1.7	1.1
				20	47.0	88.1	4.7	5.7
			180	40	69.5	96.8	3.5	3.4
				20	81.9	101.6	8.3	12.9
		2	140	40	55.4	91.4	2.8	0.7
				20	78.9	100.4	8	3.7
	180	40	117.2	115.2	6	2.2		
		20	137.3	123	14	8.3		
30 (3 HP)	2800	1	140	40	31.8	80.5	1.6	0.1
				20	58.0	89.2	5.8	1
			180	40	85.2	98.2	4.3	0.6
				20	104.1	104.4	10.6	2.5
		2	140	40	71.4	93.6	3.6	0.5
				20	102.3	103.8	10.3	2.3
	180	40	152.3	120.4	7.7	1.4		
		20	177.2	128.6	18.1	5.2		
	3000	1	140	40	33.6	80.4	1.7	0.2
				20	60.4	88.7	6.1	1.1
			180	40	88.7	97.4	4.5	0.7
				20	108.5	103.5	11.1	2.6
		2	140	40	74.9	93.1	3.8	0.5
				20	107.2	103.1	10.8	2.5
	180	40	159.4	119.2	8.1	1.5		
		20	185.7	127.3	18.9	5.6		
	3200	1	140	40	35.4	80.2	1.8	0.2
				20	62.8	88.2	6.3	1.2
			180	40	92.1	96.7	4.7	0.7
				20	112.7	102.6	11.5	2.8
		2	140	40	78.2	92.6	3.9	0.5
				20	111.8	102.4	11.3	2.6
	180	40	166.3	118.1	8.4	1.6		
		20	194.0	126.1	19.8	5.9		

NOTES: 1. Based on 70°F (21.1°C) entering air temperature.
 2. For leaving air temperature above 130°F (54.4°C) consult the factory.

Direct Drive Blower Coils

HDY AND VDY TECHNICAL CATALOG

Heating Capacity

Heating Capacity – VDY

Unit Size	CFM	Rows	EWT (°F)	ΔT (°F)	MBH	LAT (°F)	GPM	WPD (ft. wg.)		
06 (1/2 HP)	500	1	140	40	8.8	86.3	0.4	0.5		
				20	12.8	93.8	1.3	2.5		
			40	19.0	105.2	1	1.5			
		180	20	40	22.4	111.4	2.3	5.6		
				40	14.6	97.1	0.7	0.4		
			2	140	20	20.8	108.6	2.1	1.8	
	40	31.1			127.6	1.6	1.1			
	600	1	140	20	35.8	136.4	3.7	3.9		
				40	9.9	85.3	0.5	0.6		
			20	14.4	92.2	1.5	2.9			
		180	40	21.3	102.9	1.1	1.8			
				20	25.1	108.8	2.6	6.7		
			2	140	40	16.7	95.7	0.8	0.4	
	20	23.7			106.6	2.4	2.2			
	700	1	140	40	35.3	124.5	1.8	1.3		
				20	40.9	133.1	4.2	4.8		
			180	40	10.9	84.4	0.5	0.7		
		20			15.8	90.9	1.6	3.4		
		2	140	40	23.4	100.9	1.2	2		
				20	27.7	106.6	2.8	7.8		
	180		40	18.5	94.5	0.9	0.5			
				20	26.3	104.8	2.7	2.6		
	08 (1 HP)		700	1	140	40	10.0	83.3	0.5	0.6
						20	14.7	89.4	1.5	3
180		40			21.7	98.7	1.1	1.8		
				20	25.6	103.9	2.6	6.9		
		2		140	17.3	92.9	0.9	0.5		
20					24.8	102.8	2.5	2.3		
180	40		36.8	118.7	1.9	1.4				
		20	42.9	126.7	4.4	5.2				
	800	1	140	40	11.1	82.9	0.6	0.7		
20				16.2	88.7	1.6	3.5			
180			40	23.9	97.7	1.2	2.1			
		20		28.3	102.8	2.9	8.1			
		2	140	19.3	92.3	1	0.5			
20				27.5	101.8	2.8	2.7			
180	40		40.9	117.3	2.1	1.7				
		20	47.7	125.2	4.9	6.2				
	900	1	140	40	12.1	82.5	0.6	0.8		
20				17.6	88.2	1.8	4			
180			40	26.1	96.8	1.3	2.4			
		20		30.9	101.8	3.2	9.3			
		2	140	21.1	91.7	1.1	0.6			
20				30.1	101	3	3.2			
180	40		44.8	116.1	2.3	1.9				
		20	52.3	123.8	5.3	7.1				

NOTES: 1. Based on 70°F (21.1°C) entering air temperature.
 2. For leaving air temperature above 130°F (54.4°C) consult the factory.

Heating Capacity

Heating Capacity – VDY

Unit Size	CFM	Rows	EWT (°F)	ΔT (°F)	MBH	LAT (°F)	GPM	WPD (ft. wg.)
10 (1/2 HP)	900	1	140	40	16.1	86.5	0.8	1.5
				20	22.0	92.6	2.2	7.1
		180	20	40	32.6	103.6	1.7	4.3
				20	37.8	108.9	3.9	15.9
		2	140	40	27.3	98.1	1.4	1.2
				20	36.2	107.2	3.6	5.3
	180		40	54.1	125.7	2.8	3.2	
			20	61.6	133.4	6.3	11.5	
	1000	1	140	40	17.1	85.9	0.9	1.7
				20	23.4	91.7	2.4	7.9
			180	40	34.8	102.2	1.8	4.8
				20	40.4	107.4	4.1	17.7
		2	140	40	29.3	97.1	1.5	1.3
				20	38.9	106	3.9	5.9
	180	40	58.2	123.9	3	3.6		
		20	66.3	131.4	6.8	13		
	1100	1	140	40	18.1	85.2	0.9	1.8
				20	24.8	90.9	2.5	8.7
			180	40	36.8	101	1.9	5.2
				20	42.8	106	4.4	19.4
		2	140	40	31.2	96.2	1.6	1.4
				20	41.5	105	4.2	6.5
	180	40	62.1	122.2	3.2	4		
		20	70.9	129.7	7.2	14.4		
12 (1 HP)	1100	1	140	40	18.1	85.2	0.9	1.8
				20	24.8	90.9	2.5	8.7
			180	40	36.8	101	1.9	5.2
				20	42.8	106	4.4	19.4
		2	140	40	31.2	96.2	1.6	1.4
				20	41.5	105	4.2	6.5
	180	40	62.1	122.2	3.2	4		
		20	70.9	129.7	7.2	14.4		
	1200	1	140	40	19.0	84.7	1	2
				20	26.2	90.2	2.6	9.4
			180	40	38.8	99.9	2	5.7
				20	45.1	104.8	4.6	21
		2	140	40	33.0	95.4	1.7	1.6
				20	44.0	104	4.4	7.2
	180	40	65.8	120.7	3.3	4.4		
		20	75.2	128	7.7	15.8		
	1300	1	140	40	19.9	84.2	1	2.1
				20	27.4	89.5	2.8	10.1
			180	40	40.7	99	2.1	6.1
				20	0.0			
		2	140	40	34.7	94.7	1.7	1.7
				20	46.4	103.1	4.7	7.8
	180	40	69.3	119.4	3.5	4.7		
		20	79.4	126.6	8.1	17.2		

NOTES: 1. Based on 70°F (21.1°C) entering air temperature.
 2. For leaving air temperature above 130°F (54.4°C) consult the factory.

Direct Drive Blower Coils

HDY AND VDY TECHNICAL CATALOG

Heating Capacity

Heating Capacity – VDY

Unit Size	CFM	Rows	EWT (°F)	ΔT (°F)	MBH	LAT (°F)	GPM	WPD (ft. wg.)	
16 (1 HP)	1400	1	140	40	21.2	84	1.1	0.5	
				20	31.2	90.7	3.1	2.5	
			180	40	40	46.2	100.5	2.3	1.5
				20	54.7	106.2	5.6	5.7	
			2	140	40	39.5	96.1	2	0.9
				20	53.4	105.3	5.4	4.1	
		180	40	40	79.7	122.7	4.1	2.5	
			20	91.4	130.4	9.3	9.1		
		1600	1	140	40	23.0	83.3	1.2	0.5
				20	33.8	89.6	3.4	2.8	
			180	40	40	50.0	98.9	2.5	1.7
				20	59.3	104.3	6	6.5	
			2	140	40	43.1	95	2.2	1
				20	58.4	103.8	5.9	4.8	
		180	40	40	87.2	120.5	4.4	2.9	
			20	100.2	128	10.2	10.6		
		1800	1	140	40	24.7	82.7	1.2	0.6
				20	36.3	88.7	3.7	3.2	
			180	40	40	53.6	97.5	2.7	1.9
				20	63.7	102.7	6.5	7.3	
			2	140	40	46.5	93.9	2.3	1.1
				20	63.2	102.5	6.4	5.4	
		180	40	40	94.2	118.4	4.8	3.3	
			20	108.5	125.8	11.1	12		
20 (1 HP)	1800	1	140	40	28.1	84.4	1.4	0.9	
				20	39.7	90.4	4	4.4	
			180	40	40	58.8	100.2	3	2.6
				20	69.0	105.5	7	9.9	
			2	140	40	45.9	93.6	2.3	0.5
				20	65.4	103.6	6.6	2.7	
		180	40	40	97.2	120	4.9	1.7	
			20	113.3	128.3	11.5	6.2		
		2000	1	140	40	29.9	83.8	1.5	1
				20	42.3	89.6	4.3	4.8	
			180	40	40	62.5	99	3.2	2.9
				20	73.5	104	7.5	10.9	
			2	140	40	49.3	92.8	2.5	0.6
				20	70.1	102.5	7.1	3	
		180	40	40	104.2	118.2	5.3	1.8	
			20	121.7	126.3	12.4	6.9		
		2200	1	140	40	31.6	83.3	1.6	1
				20	44.7	88.8	4.5	5.2	
			180	40	40	66.1	97.8	3.4	3.1
				20	77.8	102.7	7.9	11.9	
			2	140	40	52.4	92.1	2.6	0.7
				20	74.6	101.4	7.5	3.4	
		180	40	40	110.8	116.7	5.6	2	
			20	129.7	124.6	13.2	7.6		

NOTES: 1. Based on 70°F (21.1°C) entering air temperature.
 2. For leaving air temperature above 130°F (54.4°C) consult the factory.

Heating Capacity

Heating Capacity – VDY

Unit Size	CFM	Rows	EWT (°F)	ΔT (°F)	MBH	LAT (°F)	GPM	WPD (ft. wg.)
22 (1 1/2 HP)	2000	1	140	40	29.9	83.8	1.5	1
				20	42.3	89.6	4.3	4.8
		1	180	40	62.5	99	3.2	2.9
				20	73.5	104	7.5	10.9
		2	140	40	49.3	92.8	2.5	0.6
				20	70.1	102.5	7.1	3
	180		40	104.2	118.2	5.3	1.8	
			20	121.7	126.3	12.4	6.9	
	2200	1	140	40	31.6	83.3	1.6	1
				20	44.7	88.8	4.5	5.2
			180	40	66.1	97.8	3.4	3.1
				20	77.8	102.7	7.9	11.9
		2	140	40	52.4	92.1	2.6	0.7
				20	74.6	101.4	7.5	3.4
	180	40	110.8	116.7	5.6	2		
		20	129.7	124.6	13.2	7.6		
	2400	1	140	40	33.1	82.8	1.7	1.1
				20	47.0	88.1	4.7	5.7
			180	40	69.5	96.8	3.5	3.4
				20	81.9	101.6	8.3	12.9
		2	140	40	55.4	91.4	2.8	0.7
				20	78.9	100.4	8	3.7
	180	40	117.2	115.2	6	2.2		
		20	137.3	123	14	8.3		
30 (3 HP)	2800	1	140	40	31.8	80.5	1.6	0.1
				20	58.0	89.2	5.8	1
			180	40	85.2	98.2	4.3	0.6
				20	104.1	104.4	10.6	2.5
		2	140	40	71.4	93.6	3.6	0.5
				20	102.3	103.8	10.3	2.3
	180	40	152.3	120.4	7.7	1.4		
		20	177.2	128.6	18.1	5.2		
	3000	1	140	40	33.6	80.4	1.7	0.2
				20	60.4	88.7	6.1	1.1
			180	40	88.7	97.4	4.5	0.7
				20	108.5	103.5	11.1	2.6
		2	140	40	74.9	93.1	3.8	0.5
				20	107.2	103.1	10.8	2.5
	180	40	159.4	119.2	8.1	1.5		
		20	185.7	127.3	18.9	5.6		
	3200	1	140	40	35.4	80.2	1.8	0.2
				20	62.8	88.2	6.3	1.2
			180	40	92.1	96.7	4.7	0.7
				20	112.7	102.6	11.5	2.8
		2	140	40	78.2	92.6	3.9	0.5
				20	111.8	102.4	11.3	2.6
	180	40	166.3	118.1	8.4	1.6		
		20	194.0	126.1	19.8	5.9		

NOTES: 1. Based on 70°F (21.1°C) entering air temperature.
 2. For leaving air temperature above 130°F (54.4°C) consult the factory.

Static Resistance Table

Component Static Resistance Table (in w.c.)

Unit Size	Nominal CFM	Dry Coil (includes cabinet)					Filters						Mixing Box
		4 Row	5 Row	6 Row	7 Row	8 Row	1" MERV 8 Pleated	(Qty. 2) 1" Throw-away	2" MERV 8 Pleated	2" MERV 11 w/Prefilter	4" MERV 11 Pleated	4" MERV 13 Pleated	
06	400	0.07	0.08	0.10	0.11	0.12	0.07	0.05	0.04	0.04	0.03	0.04	0.02
	500	0.11	0.13	0.16	0.18	0.19	0.11	0.07	0.05	0.06	0.05	0.06	0.03
	600	0.15	0.19	0.22	0.24	0.27	0.14	0.09	0.06	0.07	0.06	0.08	0.04
	700	0.20	0.24	0.28	0.31	0.34	0.17	0.11	0.08	0.09	0.08	0.10	0.06
	800	0.24	0.29	0.34	0.38	0.42	0.21	0.14	0.09	0.11	0.09	0.12	0.08
08	600	0.15	0.19	0.22	0.24	0.27	0.14	0.09	0.06	0.07	0.06	0.08	0.04
	700	0.20	0.24	0.28	0.31	0.34	0.17	0.11	0.08	0.09	0.08	0.10	0.06
	800	0.24	0.29	0.34	0.38	0.42	0.21	0.14	0.09	0.11	0.09	0.12	0.08
	900	0.28	0.34	0.40	0.45	0.49	0.24	0.16	0.10	0.12	0.10	0.14	0.10
	1000	0.33	0.40	0.46	0.52	0.57	0.27	0.18	0.12	0.14	0.12	0.16	0.12
10	800	0.12	0.14	0.16	0.18	0.21	0.10	0.08	0.06	0.13	0.05	0.05	0.04
	900	0.15	0.18	0.21	0.24	0.26	0.12	0.09	0.07	0.16	0.06	0.06	0.05
	1000	0.19	0.22	0.26	0.29	0.32	0.14	0.11	0.08	0.18	0.07	0.07	0.06
	1100	0.22	0.26	0.30	0.34	0.37	0.16	0.13	0.09	0.21	0.08	0.08	0.08
	1200	0.25	0.30	0.35	0.39	0.43	0.18	0.14	0.10	0.23	0.09	0.09	0.09
12	1000	0.19	0.22	0.26	0.29	0.32	0.14	0.11	0.08	0.18	0.07	0.07	0.06
	1100	0.22	0.26	0.30	0.34	0.37	0.16	0.13	0.09	0.21	0.08	0.08	0.08
	1200	0.25	0.30	0.35	0.39	0.43	0.18	0.14	0.10	0.23	0.09	0.09	0.09
	1300	0.29	0.34	0.40	0.44	0.48	0.19	0.16	0.11	0.25	0.10	0.10	0.11
	1400	0.32	0.38	0.44	0.49	0.54	0.21	0.18	0.12	0.28	0.11	0.11	0.13
16	1400	0.19	0.23	0.28	0.31	0.34	0.14	0.17	0.10	0.21	0.09	0.09	0.07
	1500	0.22	0.26	0.31	0.35	0.38	0.16	0.19	0.10	0.24	0.10	0.10	0.09
	1600	0.24	0.29	0.35	0.38	0.42	0.17	0.21	0.11	0.26	0.11	0.11	0.10
	1700	0.27	0.32	0.38	0.42	0.47	0.19	0.22	0.12	0.28	0.12	0.12	0.11
	1800	0.29	0.35	0.42	0.46	0.51	0.20	0.24	0.13	0.30	0.12	0.13	0.12
20	1800	0.22	0.27	0.32	0.37	0.42	0.18	0.17	0.11	0.24	0.10	0.13	0.07
	1900	0.24	0.30	0.36	0.41	0.46	0.19	0.18	0.12	0.26	0.11	0.14	0.08
	2000	0.27	0.33	0.39	0.45	0.50	0.21	0.20	0.13	0.28	0.12	0.15	0.09
	2100	0.29	0.36	0.42	0.49	0.55	0.22	0.21	0.13	0.30	0.13	0.16	0.10
	2200	0.31	0.39	0.46	0.53	0.59	0.24	0.23	0.14	0.32	0.14	0.17	0.11
	2300	0.34	0.42	0.49	0.57	0.64	0.25	0.25	0.15	0.34	0.15	0.18	0.12
	2400	0.36	0.44	0.53	0.60	0.68	0.27	0.26	0.16	0.36	0.16	0.20	0.13
22	1800	0.22	0.27	0.32	0.37	0.42	0.18	0.17	0.11	0.24	0.10	0.13	0.07
	1900	0.24	0.30	0.36	0.41	0.46	0.19	0.18	0.12	0.26	0.11	0.14	0.08
	2000	0.27	0.33	0.39	0.45	0.50	0.21	0.20	0.13	0.28	0.12	0.15	0.09
	2100	0.29	0.36	0.42	0.49	0.55	0.22	0.21	0.13	0.30	0.13	0.16	0.10
	2200	0.31	0.39	0.46	0.53	0.59	0.24	0.23	0.14	0.32	0.14	0.17	0.11
	2300	0.34	0.42	0.49	0.57	0.64	0.25	0.25	0.15	0.34	0.15	0.18	0.12
	2400	0.36	0.44	0.53	0.60	0.68	0.27	0.26	0.16	0.36	0.16	0.20	0.13
30	2400	0.17	0.21	0.24	0.28	0.33	0.15	0.14	0.10	0.19	0.07	0.11	0.07
	2600	0.20	0.24	0.28	0.33	0.38	0.16	0.16	0.11	0.22	0.08	0.13	0.09
	2800	0.23	0.27	0.32	0.38	0.43	0.18	0.17	0.12	0.24	0.09	0.14	0.10
	3000	0.26	0.31	0.36	0.42	0.49	0.20	0.19	0.14	0.26	0.10	0.16	0.11
	3200	0.29	0.34	0.40	0.47	0.54	0.22	0.21	0.15	0.28	0.12	0.18	0.13
	3400	0.32	0.38	0.44	0.52	0.59	0.24	0.23	0.16	0.31	0.13	0.19	0.15

Sound Power Data

Sound Power Data – HDY

UNIT SIZE	RATING	FAN SPEED	CFM	SOUND POWER LEVEL, Lw (dB reference one picowatt)							A-wgt (dBA)	Motor HP
				125 Hz	250 Hz	500 Hz	1K Hz	2K Hz	4K Hz	8K Hz		
06	CASING RADIATED NOTE 2	975	600@	64	59	55	51	46	40	35	57	1/2
	DUCTED DISCHARGE NOTE 3		0.50" ESP	63	53	53	51	50	45	37		
08	CASING RADIATED NOTE 2	1,075	800@	64	60	60	58	56	54	45	64	1
	DUCTED DISCHARGE NOTE 3		0.50" ESP	64	61	58	56	50	43	36		
10	CASING RADIATED NOTE 2	1,140	1,000@	70	65	59	59	55	49	41	64	1/2
	DUCTED DISCHARGE NOTE 3		0.50" ESP	68	63	65	64	61	60	53		
12	CASING RADIATED NOTE 2	1,235	1,200@	73	69	61	62	57	51	44	67	1
	DUCTED DISCHARGE NOTE 3		0.50" ESP	72	67	67	67	64	63	57		
16	CASING RADIATED NOTE 2	1,066	1,600@	73	69	62	64	60	55	48	68	1
	DUCTED DISCHARGE NOTE 3		0.50" ESP	72	68	69	70	68	68	63		
20	CASING RADIATED NOTE 2	910	2,000@	74	69	60	59	56	51	42	66	1
	DUCTED DISCHARGE NOTE 3		0.50" ESP	71	67	66	66	64	63	57		
22 NOTE 4	CASING RADIATED NOTE 2	950	2,200@	73	69	60	60	58	53	45	66	1-1/2
	DUCTED DISCHARGE NOTE 3		0.50" ESP	73	68	65	67	64	63	57		
30 NOTE 4	CASING RADIATED NOTE 2	860	3,000@	74	70	65	63	61	57	49	69	3
	DUCTED DISCHARGE NOTE 3		0.50" ESP	71	73	75	72	70	70	64		

- NOTES:**
- Unit Test Configuration: Rear Return/Front Supply, 4 Row, 10 FPI Coil, 115/1 PH/ 60 Hz VAC Motor, 2" Fiberglass Filter, 1" dual density fiberglass insulation.
 - Testing per AHRI 260-2001: 4.2.2.3 Casing radiated with free inlet, Sound Rating of Ducted Air Moving and Conditioning Equipment.
 - Testing per AHRI 260-2001: 4.2.2.1 Ducted discharge, Sound Rating of Ducted Air Moving and Conditioning Equipment.
 - Size 22 & 30 Unit Test Configuration: Rear Return/Front Supply, 4 Row, 10 FPI Coil, 460/3 PH/ 60 Hz VAC Motor, 2" Fiberglass Filter, 1" dual density fiberglass insulation.
 - Sound power data is expressed in decibels, dB RE: 1 x 10⁻¹² w (picowatts).

Direct Drive Blower Coils

HDY AND VDY TECHNICAL CATALOG

Sound Power Data

Sound Power Data – VDY

UNIT SIZE	RATING	FAN SPEED	CFM	SOUND POWER LEVEL, Lw (dB reference one picowatt)							A-wgt (dBA)	Motor HP
				125 Hz	250 Hz	500 Hz	1K Hz	2K Hz	4K Hz	8K Hz		
6	CASING RADIATED NOTE 2	960	600@	68	62	59	56	50	42	38	58	1/2
	DUCTED DISCHARGE NOTE 3		0.50" ESP	64	58	52	56	51	45	39	55	
8	CASING RADIATED NOTE 2	1,065	800@	69	64	62	62	54	47	40	61	1
	DUCTED DISCHARGE NOTE 3		0.50" ESP	67	62	59	63	58	54	46	61	
10 NOTE 4	CASING RADIATED NOTE 2	1,095	1,000@	70	63	61	62	55	49	42	61	1/2
	DUCTED DISCHARGE NOTE 3		0.50" ESP	67	66	63	65	60	55	49	63	
12 NOTE 4	CASING RADIATED NOTE 2	1,220	1,200@	70	73	64	66	59	52	45	65	1
	DUCTED DISCHARGE NOTE 3		0.50" ESP	69	70	65	68	64	60	54	67	
16 NOTE 5	CASING RADIATED NOTE 2	1,160	1,600@	75	68	65	67	61	54	46	65	1
	DUCTED DISCHARGE NOTE 3		0.50" ESP	72	69	67	72	67	63	57	69	
20 NOTE 5	CASING RADIATED NOTE 2	1,020	2,000@	76	67	67	65	58	51	42	65	1
	DUCTED DISCHARGE NOTE 3		0.50" ESP	72	67	69	70	63	61	53	68	
22 NOTE 5	CASING RADIATED NOTE 2	1,085	2,200@	79	73	72	69	62	57	48	69	1-1/2
	DUCTED DISCHARGE NOTE 3		0.50" ESP	75	71	74	76	68	66	61	73	
30 NOTE 5	CASING RADIATED NOTE 2	915	3,000@	77	67	71	67	61	57	48	67	3
	DUCTED DISCHARGE NOTE 3		0.50" ESP	71	72	77	74	68	67	59	72	

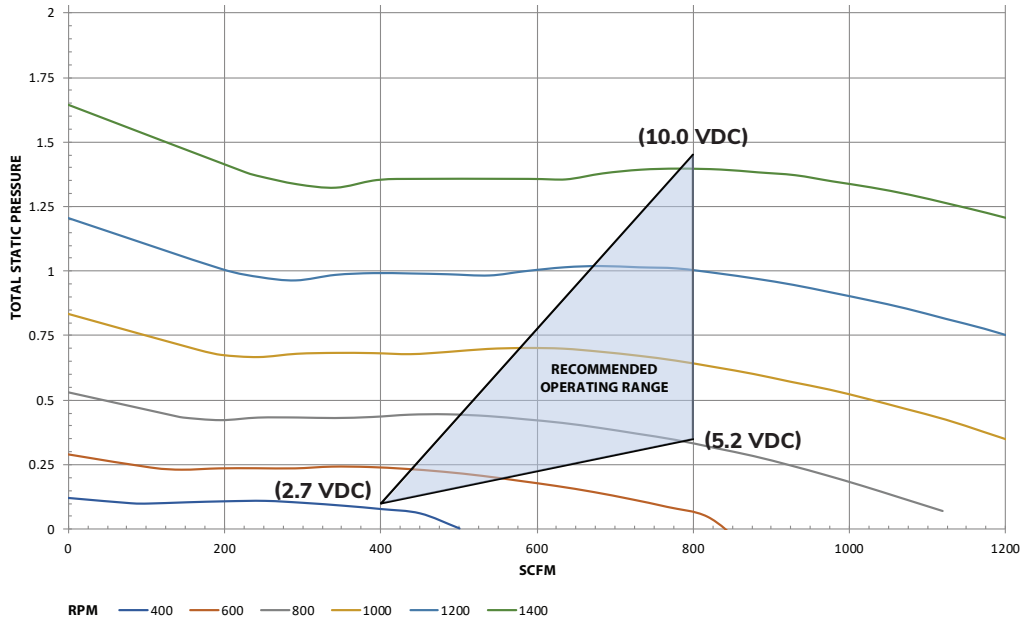
- NOTES: 1. Unit Test Configuration: Front Return/Top Supply, 4 Row, 10 FPI Coil, 115/1 PH/ 60 Hz VAC Motor, 2" Fiberglass Filter, 1" dual density fiberglass insulation.
 2. Testing per AHRI 260-2001: 4.2.2.3 Casing radiated with free inlet, Sound Rating of Ducted Air Moving and Conditioning Equipment.
 3. Testing per AHRI 260-2001: 4.2.2.1 Ducted discharge, Sound Rating of Ducted Air Moving and Conditioning Equipment.
 4. Unit Test Configuration: Front Return/Top Supply, 4 Row, 10 FPI Coil, 230/1 PH/ 60 Hz VAC Motor, 2" Fiberglass Filter, 1" dual density fiberglass insulation.
 5. Unit Test Configuration: Front Return/Top Supply, 4 Row, 10 FPI Coil, 230/3 PH/ 60 Hz VAC Motor, 2" Fiberglass Filter, 1" dual density fiberglass insulation.
 6. Sound power data is expressed in decibels, dB RE: 1×10^{-12} w (picowatts).

Fan Curves – HDY

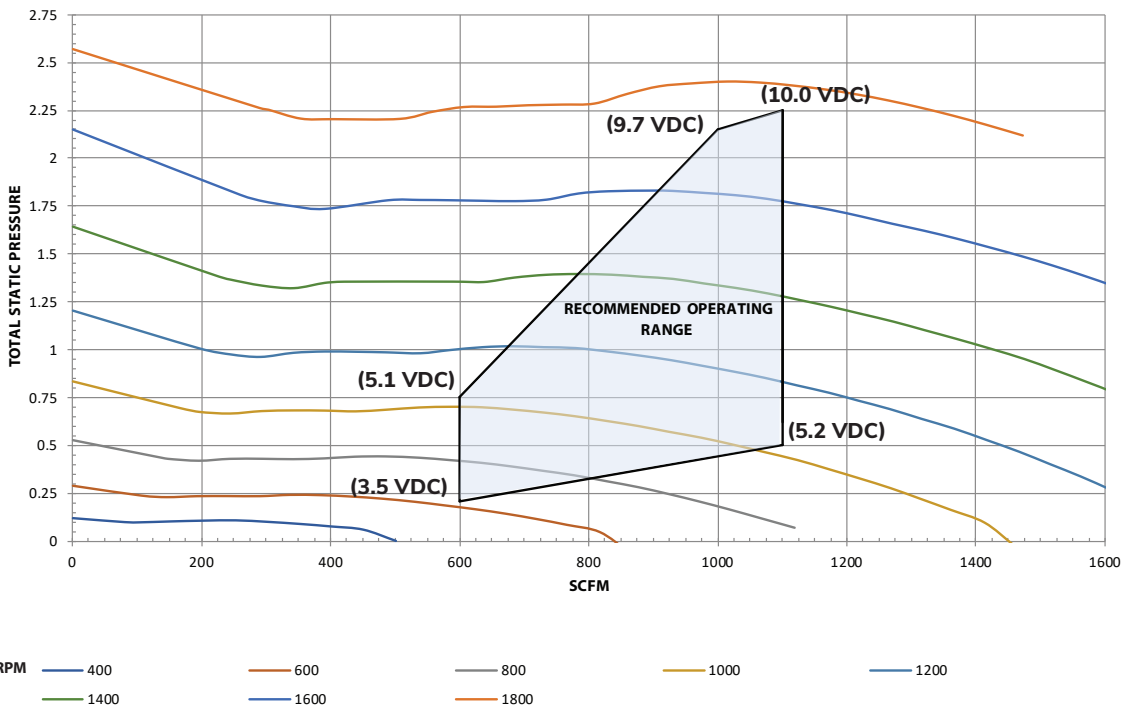
Operating units outside the recommended operating range can cause the electric heater nuisance tripping, condensate carryover and/or fan instability.

Recommended operating range control voltage settings shown for reference only. Consult factory for specific voltage settings per application.

HDY06, ½ HP Motor

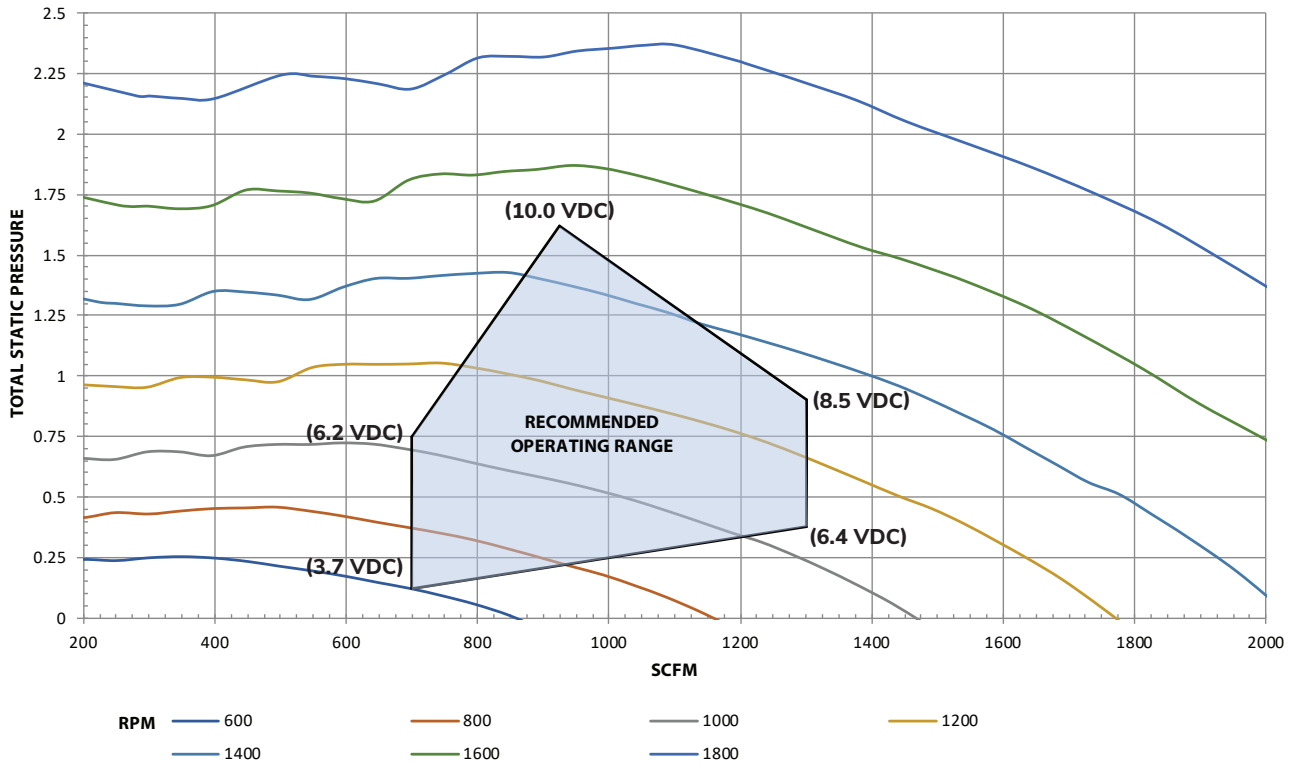


HDY08, 1 HP Motor

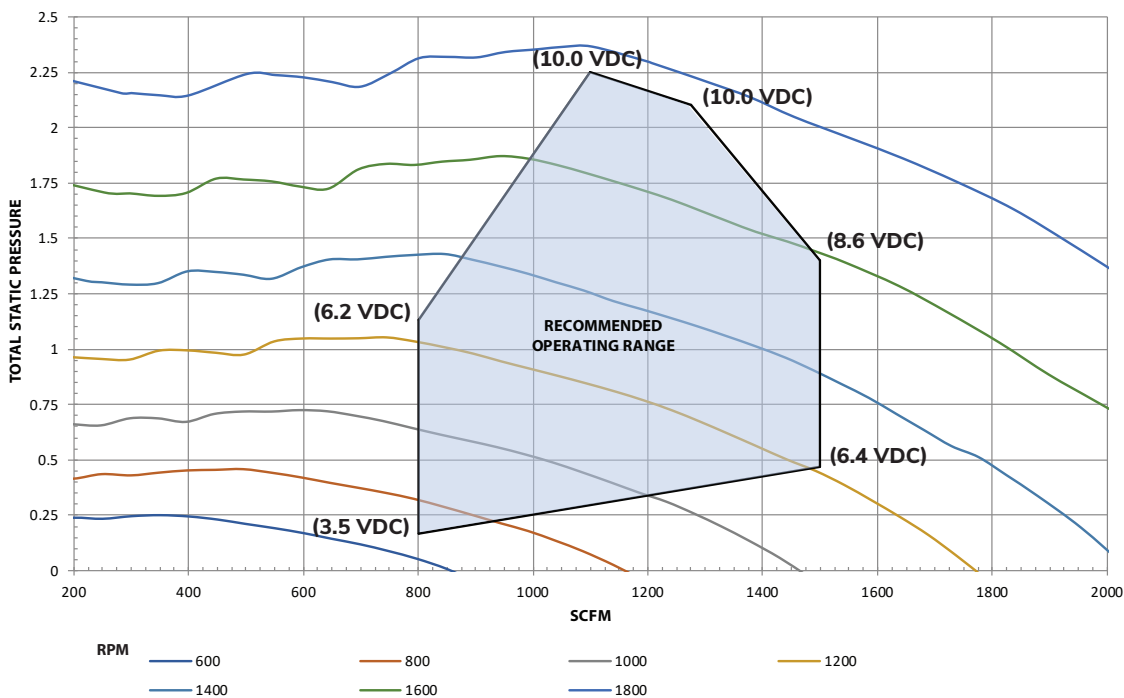


Fan Curves – HDY

HDY10, ½ HP Motor

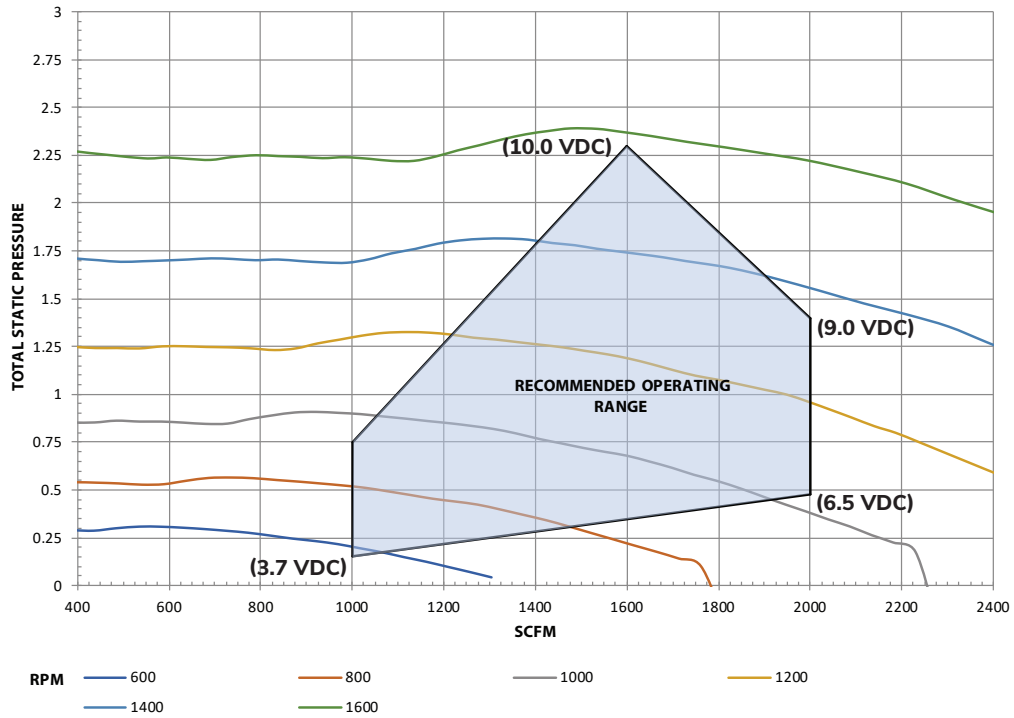


HDY12, 1 HP Motor

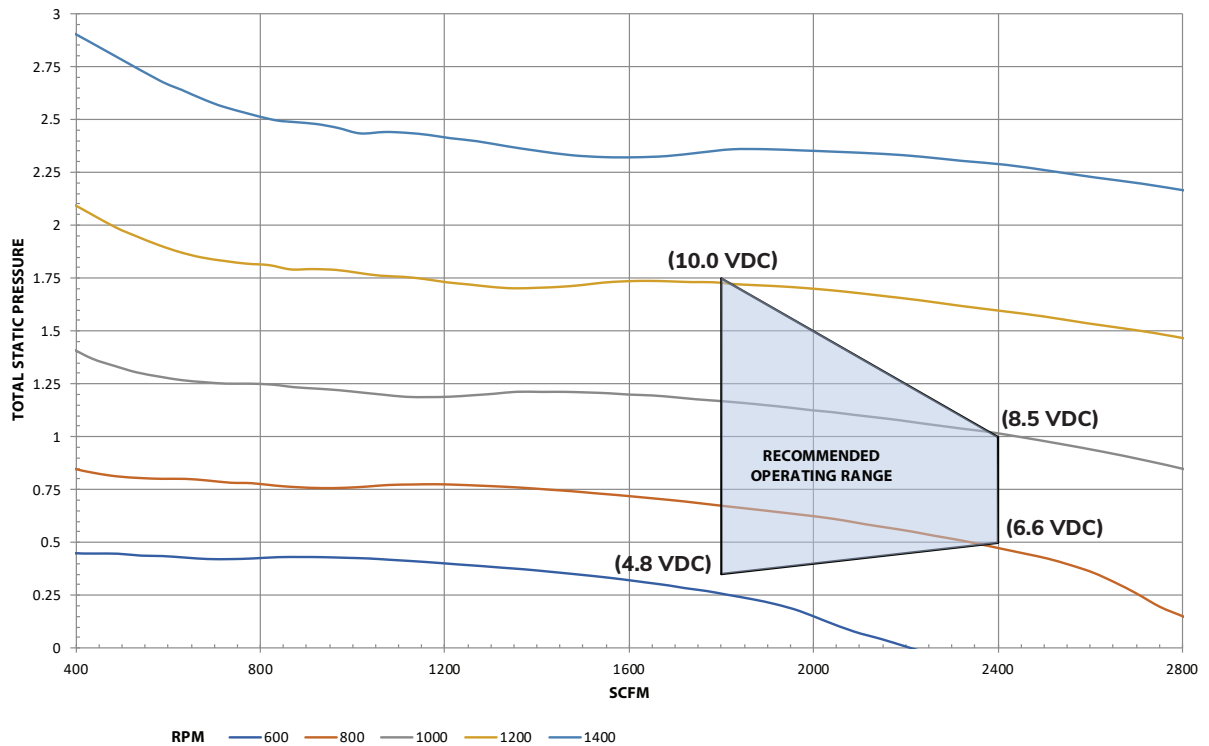


Fan Curves – HDY

HDY16, 1 HP Motor

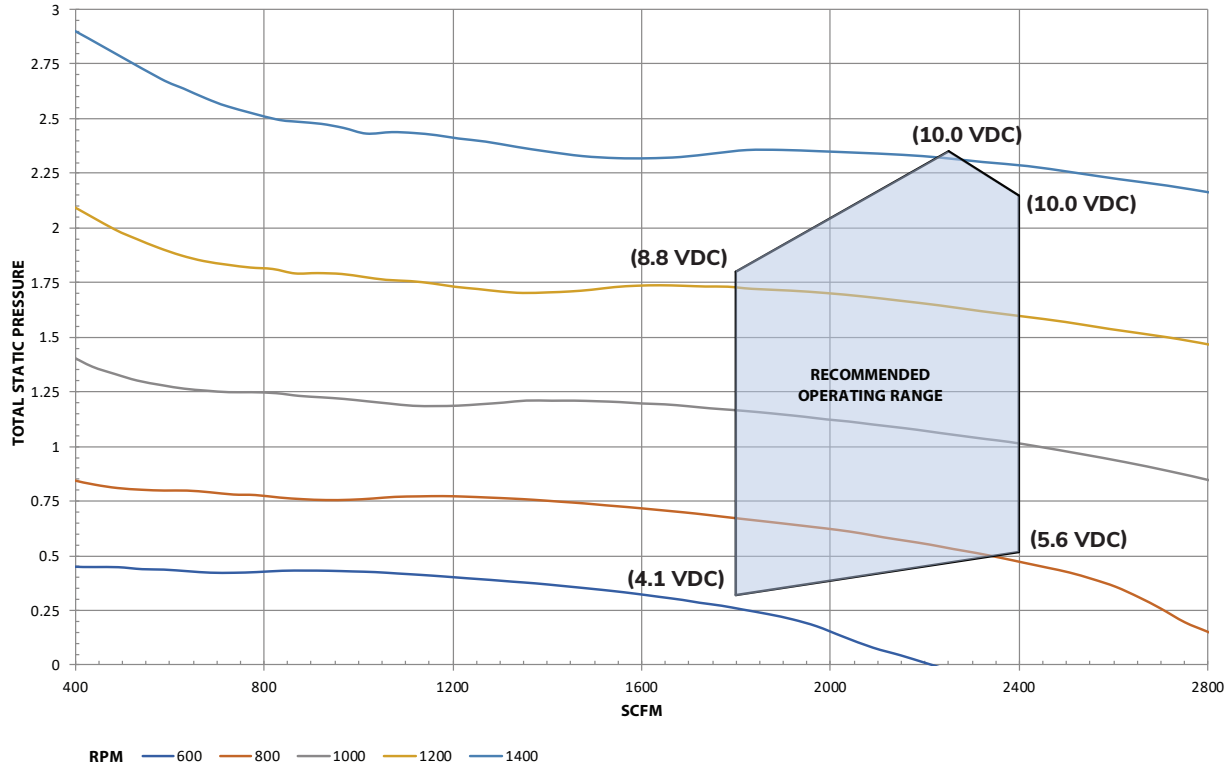


HDY20, 1 HP Motor

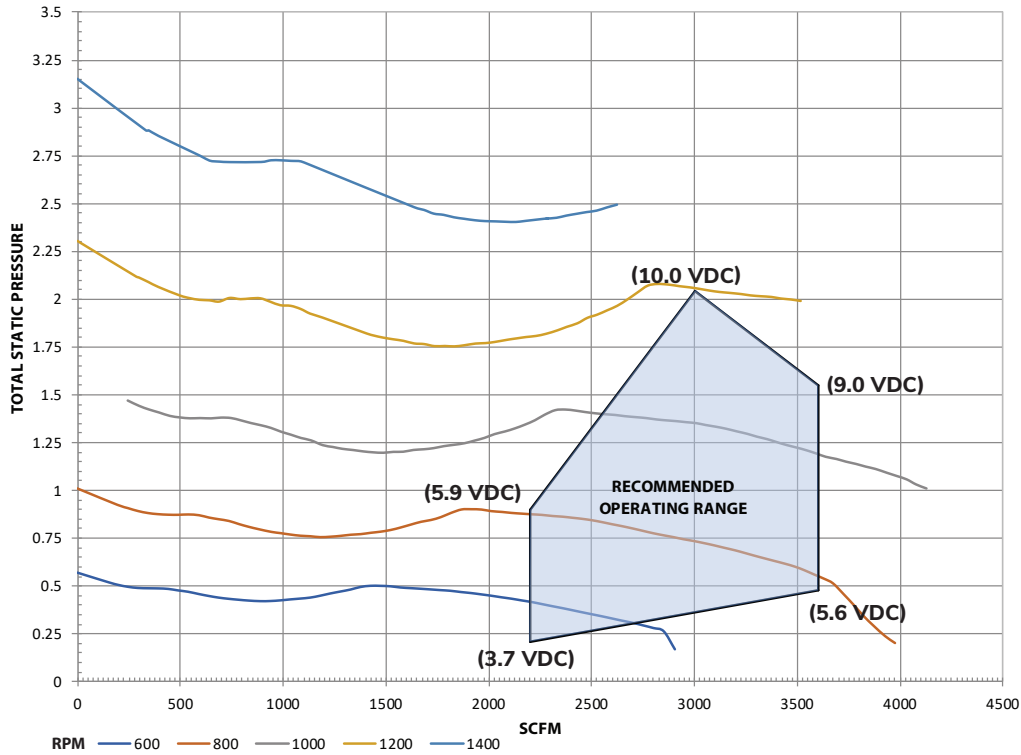


Fan Curves – HDY

HDY22, 1-½ HP Motor

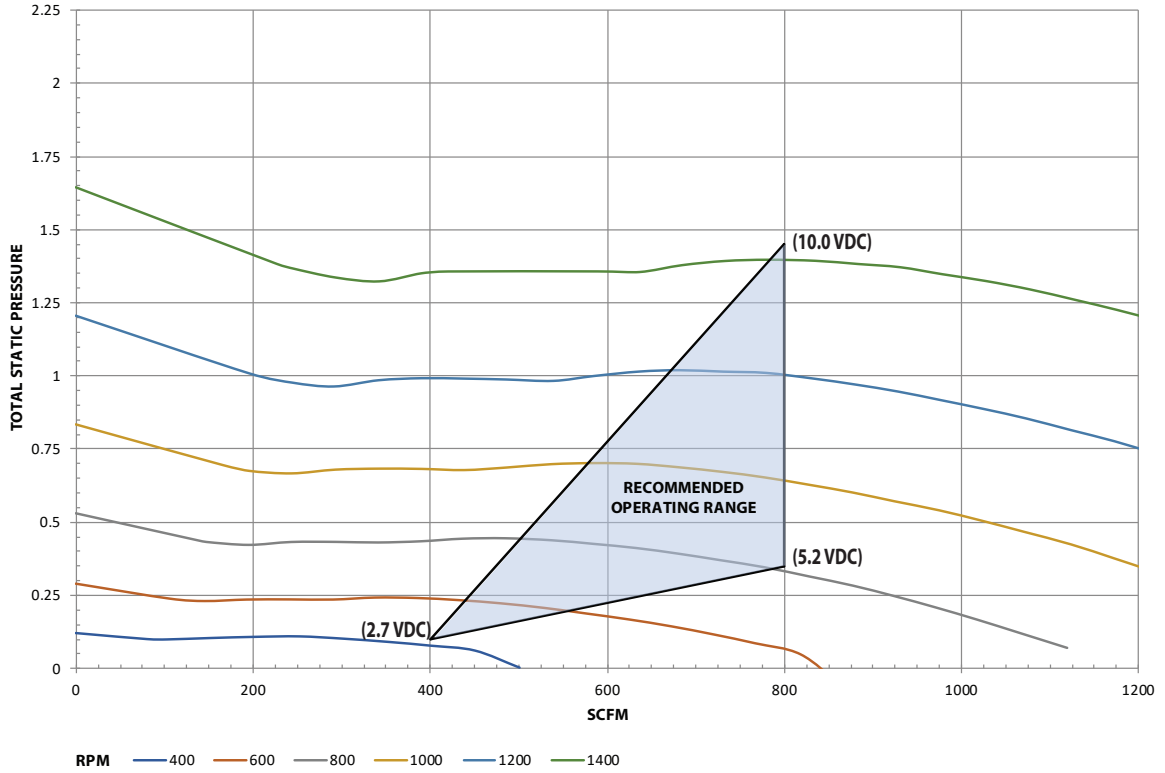


HDY30, 3 HP Motor

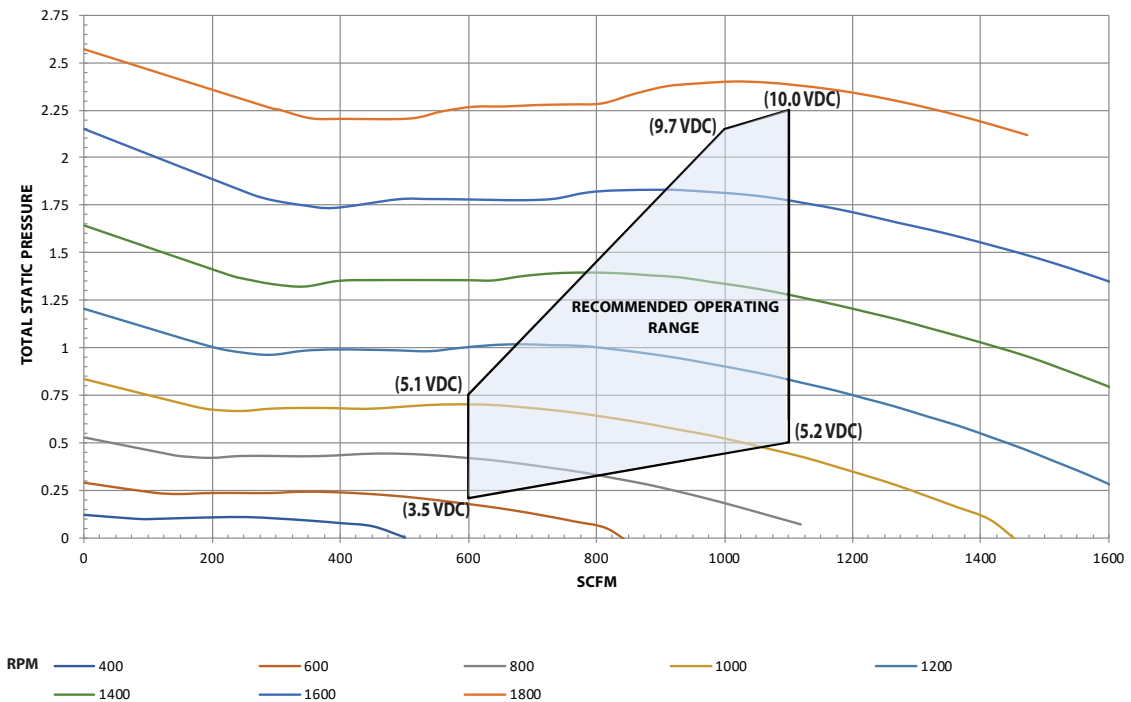


Fan Curves – VDY

VDY06, 1/2 HP Motor

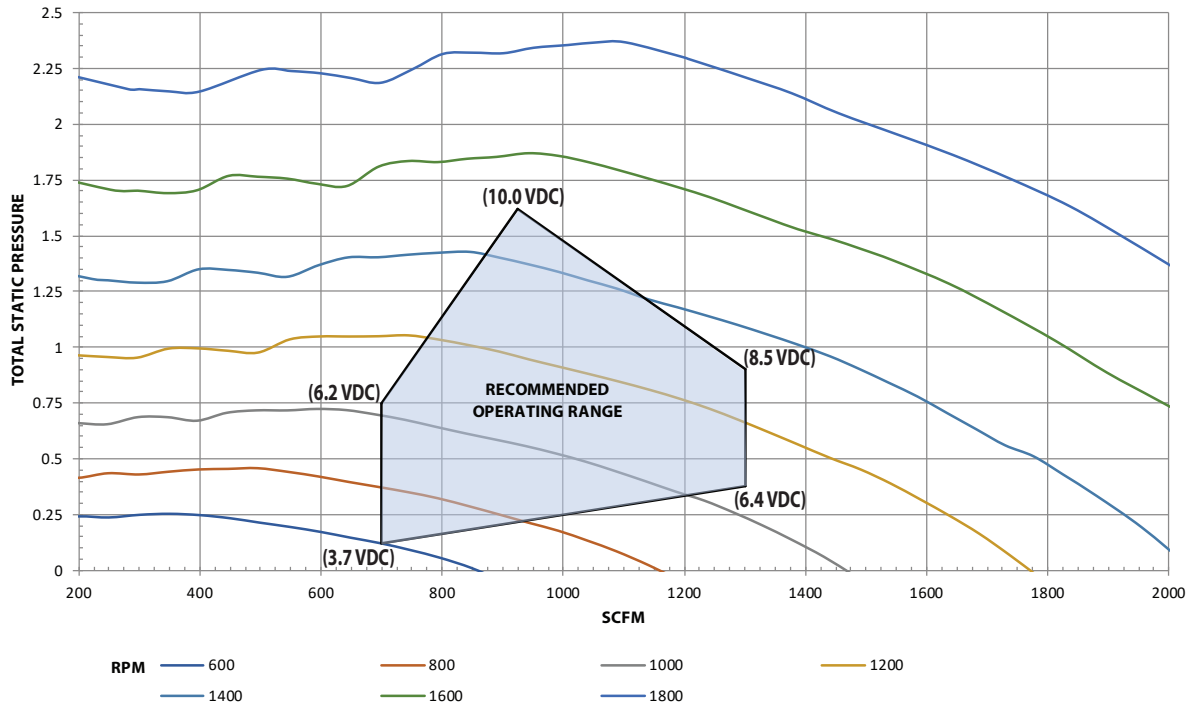


VDY08, 1 HP Motor

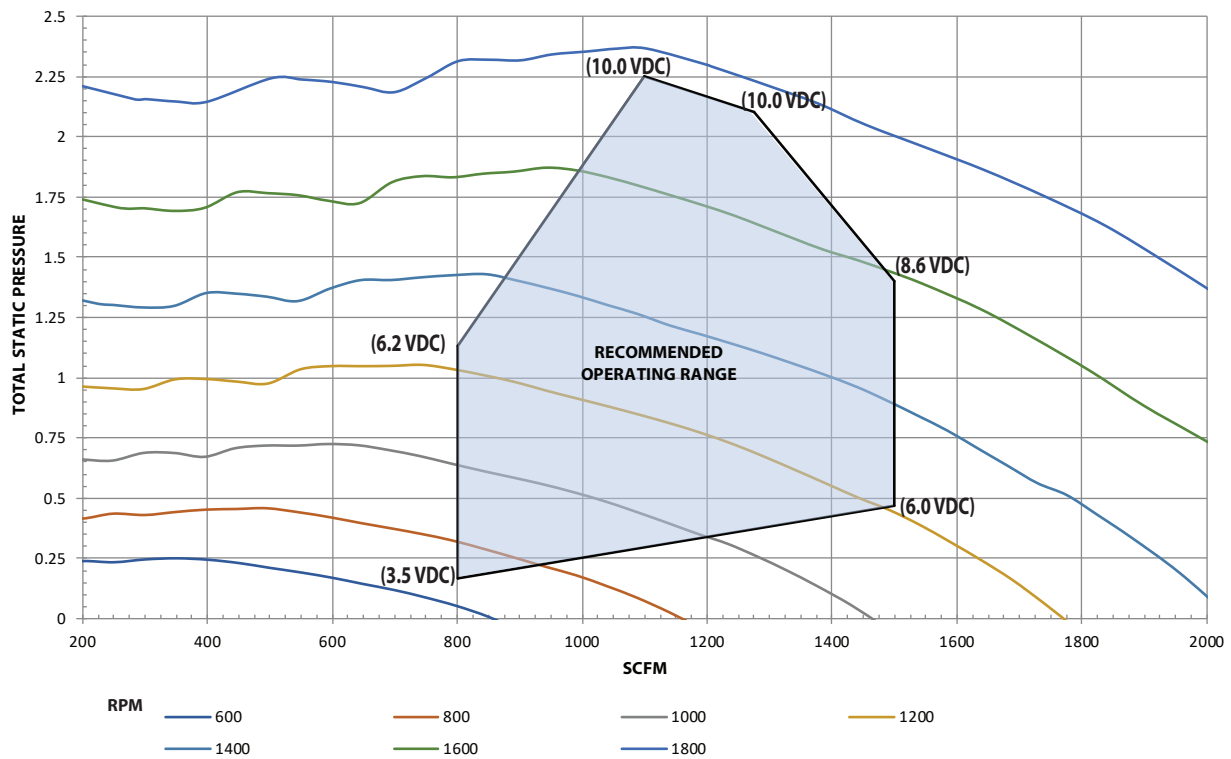


Fan Curves – VDY

VDY10, ½ HP Motor

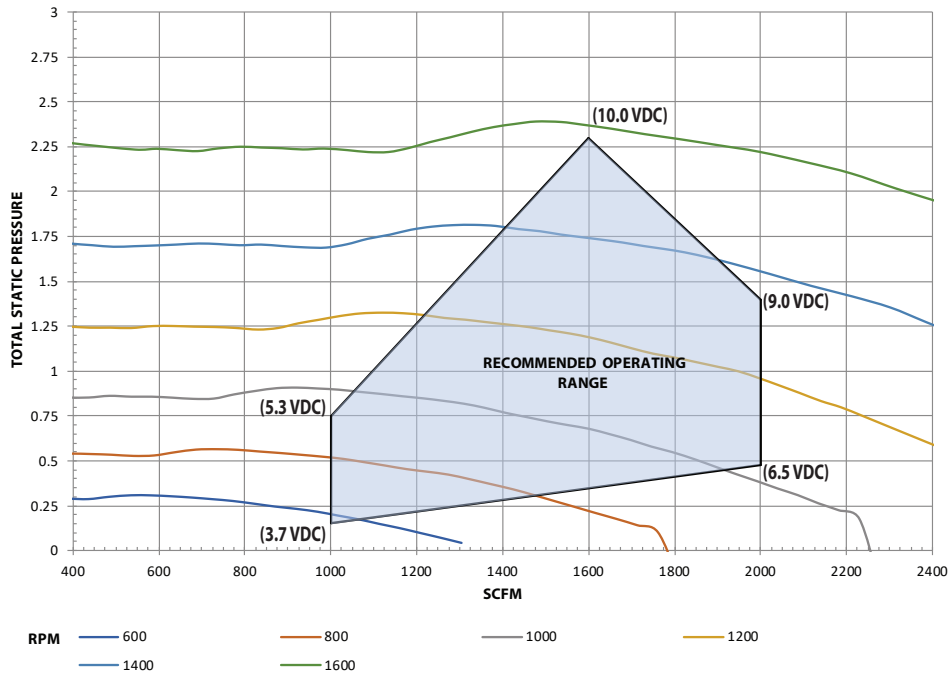


VDY12, 1 HP Motor

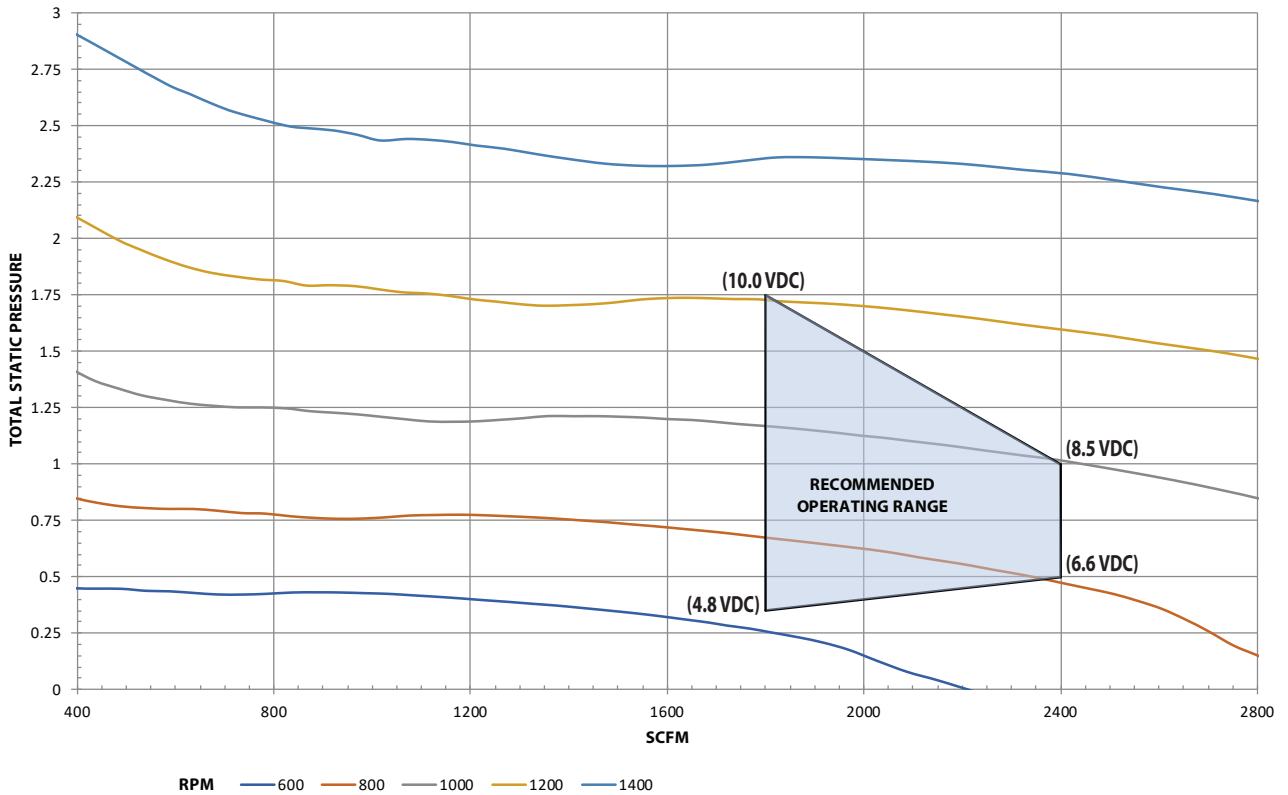


Fan Curves – VDY

VDY16, 1 HP Motor

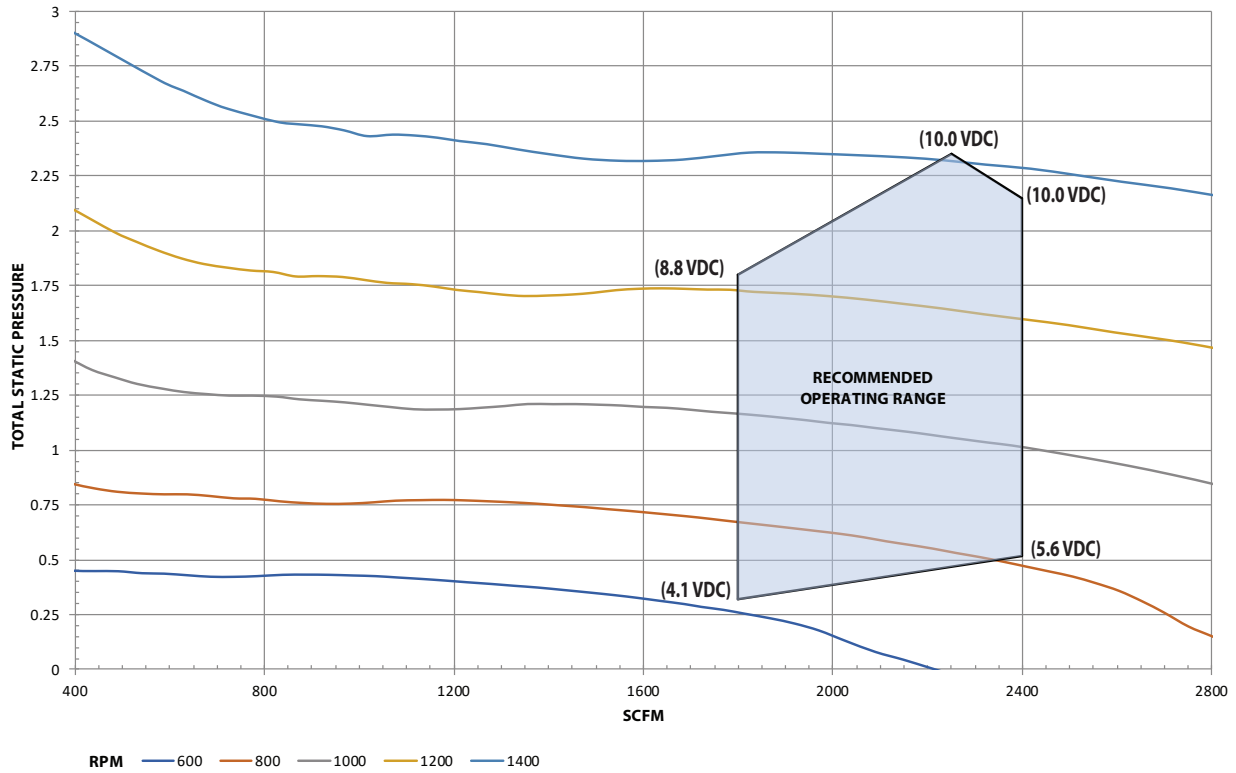


VDY20, 1 HP Motor

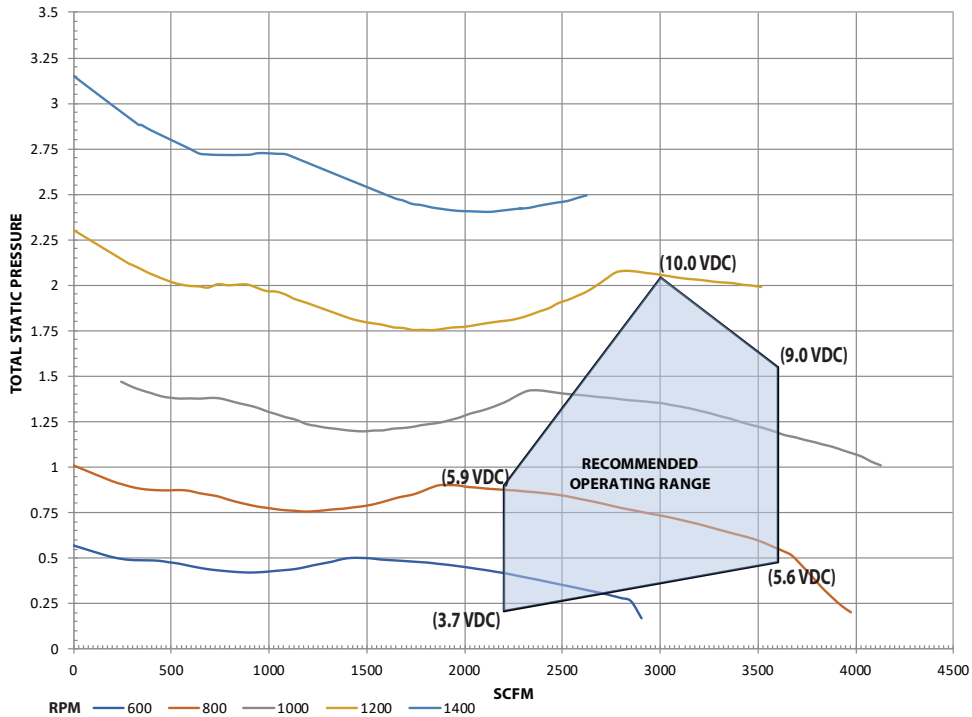


Fan Curves – VDY

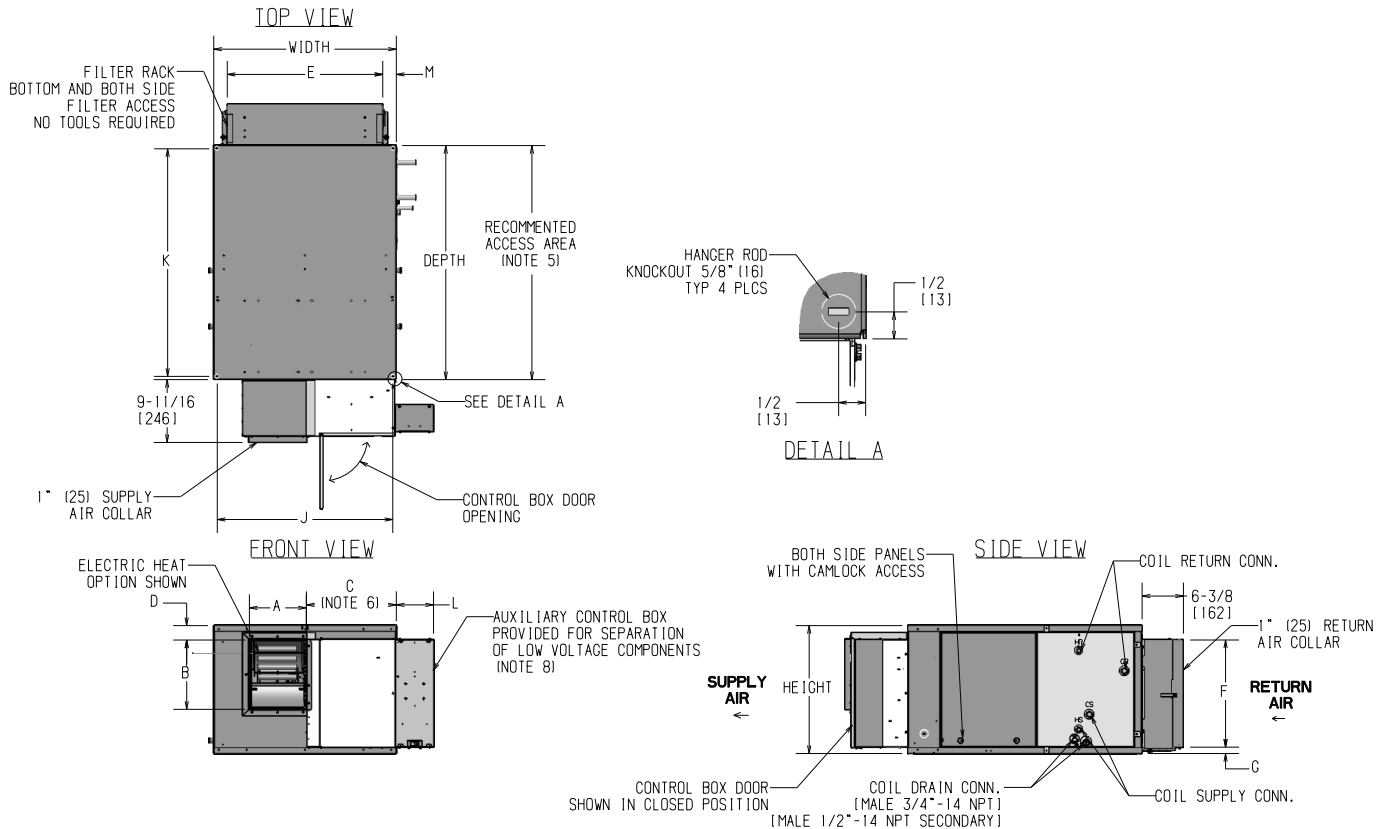
VDY22, 1.5 HP Motor



VDY30, 3 HP Motor



HDY – Horizontal Direct Drive



Size	Fan Size	Depth	Width	Height	Supply Duct Flanges				Return Duct Flanges			Mounting Holes		Aux. Ctrl. Box	M
					A	B	C	D	E	F	G	J	K		
HDY06	9x6	36 (914)	28 (711)	19-3/4 (502)	8-7/8 (225)	10-7/8 (276)	13-3/4 (349)	2-1/4 (57)	24 (610)	16-1/2 (419)	1 (25)	27-1/4 (686)	35-1/4 (895)	5-3/4 (146)	2 (51)
HDY08	9x6	36 (914)	28 (711)	19-3/4 (502)	8-7/8 (225)	10-7/8 (276)	13-3/4 (349)	2-1/4 (57)	24 (610)	16-1/2 (419)	1 (25)	27-1/4 (686)	35-1/4 (895)	5-3/4 (146)	2 (51)
HDY10	9x6	37-1/2 (953)	37 (940)	21-1/2 (546)	10-1/4 (260)	10-7/8 (276)	14-1/2 (368)	2-1/4 (57)	33 (838)	18-1/4 (464)	1 (25)	36-1/4 (921)	37 (940)	5 (124)	2 (51)
HDY12	9x6	37-1/2 (953)	37 (940)	21-1/2 (546)	10-1/4 (260)	10-7/8 (276)	14-1/2 (368)	2-1/4 (57)	33 (838)	18-1/4 (464)	1 (25)	36-1/4 (921)	37 (940)	5 (124)	2 (51)
HDY16	10x7	37-3/4 (959)	47 (1194)	21-1/2 (546)	13 (330)	12 (305)	18-3/8 (467)	2-1/4 (57)	43 (1092)	18-1/4 (464)	1 (25)	46-1/4 (1175)	37 (940)	1-1/4 (32)	1-1/2 (38)
HDY20	11x10	40-1/4 (1022)	48 (1219)	24 (610)	16-1/4 (413)	13 (330)	17-1/4 (438)	2-1/4 (57)	44 (1118)	20-3/4 (527)	1 (25)	47-1/4 (1200)	39-1/2 (1033)	2-3/8 (60)	2 (51)
HDY22		40-1/4 (1022)	48 (1219)	32-1/4 (819)	16-1/4 (413)	14 (356)	16 (406)	7-1/8 (181)	44 (1118)	29 (737)	1 (25)	47-1/4 (1200)	39-1/2 (1033)	3-3/4 (95)	2 (51)

- NOTES: 1. RH shown, LH opposite.
 2. All dimensions are +/- 1/4" (6 mm).
 3. Product specifications are subject to changes without notice.
 4. Dimensions in parenthesis are shown in millimeters.
 5. Allow adequate spacing or maneuverability around unit to allow service through recommended access area.
 6. "C" dimension is measured from coil side of unit.
 7. Mixing Box option will vary return duct dimensions, refer to mixing box submittal.
 8. Auxiliary control box required with 3-speed EC motors and/or cabinet lighting option, not required with low voltage (0-10V) controls.

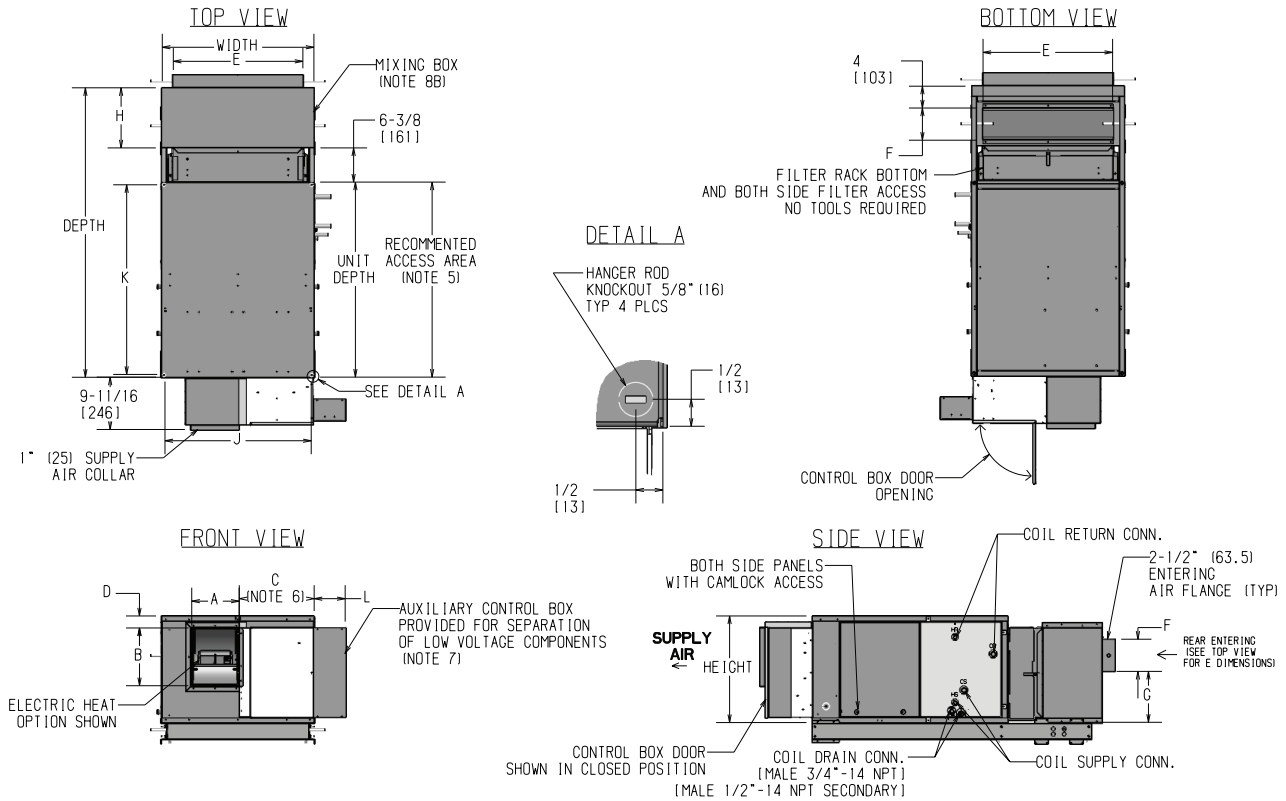
Drawing is provided for reference only. Dimensions may vary with options ordered. Consult IEC website for submittal drawings.

Direct Drive Blower Coils

HDY AND VDY TECHNICAL CATALOG

Submittal Data

HDY – with Optional Mixing Box



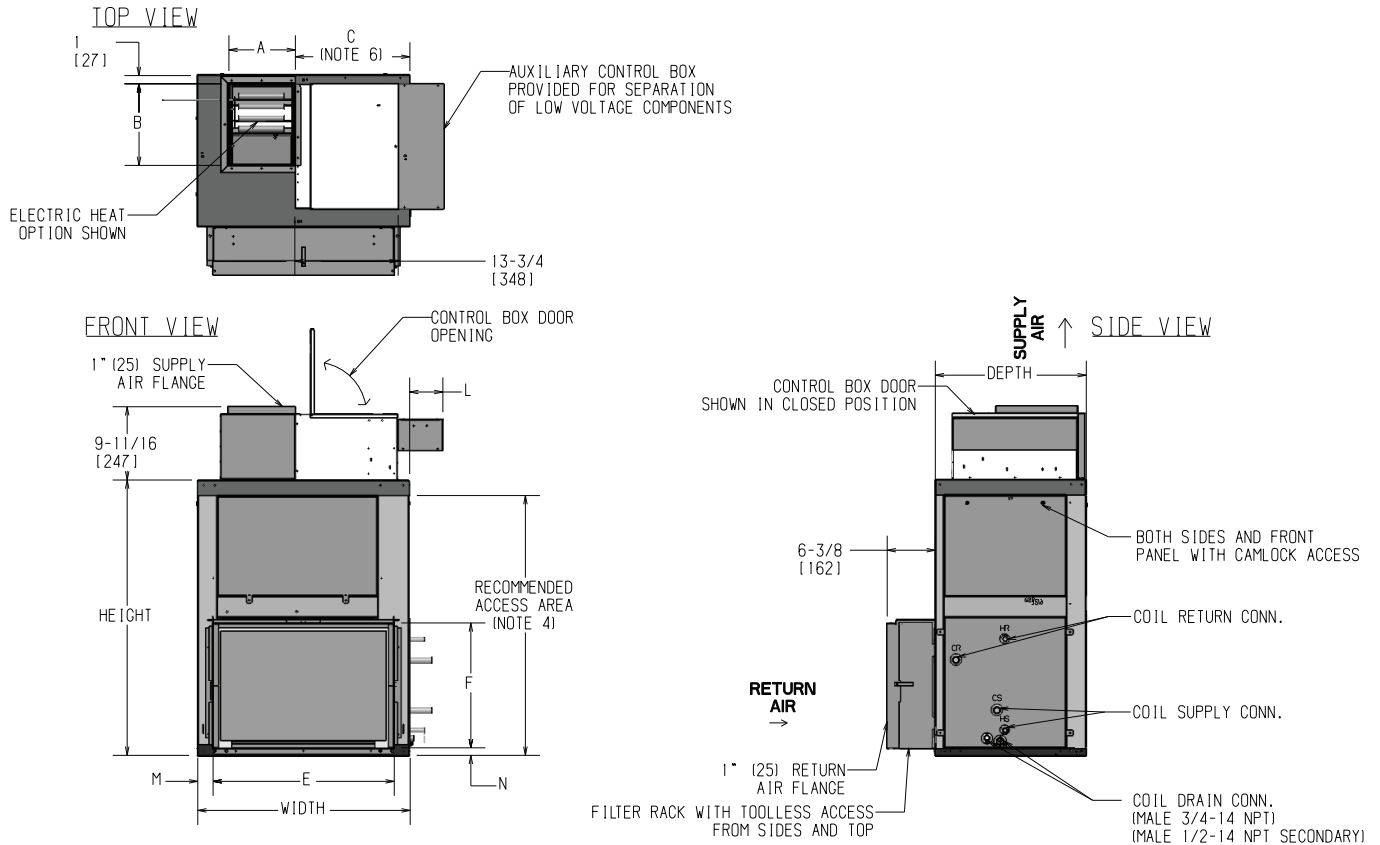
Size	Fan Size	Depth	Unit Depth	Width	Height	Supply Duct				Return Duct (Note 7)			Mix Box	Mounting Holes			Aux. Box
						A	B	C	D	E	F	G		H	J	K	
HDY06	9x6	51-5/8 (1311)	36 (914)	28 (711)	22-3/4 (578)	8-7/8 (225)	10-7/8 (276)	13-3/4 (349)	2-1/4 (57)	24 (610)	6 (152)	12-1/2 (318)	11 (279)	27-1/4 (686)	35-1/4 (895)	5-3/4 (146)	
HDY08	9x6	51-5/8 (1311)	36 (914)	28 (711)	22-3/4 (578)	8-7/8 (225)	10-7/8 (276)	13-3/4 (349)	2-1/4 (57)	24 (610)	6 (152)	12-1/2 (318)	11 (279)	27-1/4 (686)	35-1/4 (895)	5-3/4 (146)	
HDY10	9x6	55-1/8 (1400)	37-1/2 (953)	37 (940)	24-1/2 (622)	10-1/4 (260)	10-7/8 (276)	14-1/2 (368)	2-1/4 (57)	33 (838)	8 (203)	14-1/4 (362)	13 (330)	36-1/4 (921)	37 (940)	5 (124)	
HDY12	9x6	55-1/8 (1400)	37-1/2 (953)	37 (940)	24-1/2 (622)	10-1/4 (260)	10-7/8 (276)	14-1/2 (368)	2-1/4 (57)	33 (838)	8 (203)	14-1/4 (362)	13 (330)	36-1/4 (921)	37 (940)	5 (124)	
HDY16	10x7	55-3/8 (1407)	37-3/4 (959)	47 (1194)	24-1/2 (622)	13 (330)	12 (305)	18-3/8 (467)	2-1/4 (57)	43 (1092)	8 (203)	14-1/4 (362)	13 (330)	46-1/4 (1175)	37 (940)	1-1/4 (32)	
HDY20	11x10	57-3/4 (1467)	40-1/4 (1022)	48 (1219)	27 (686)	16-1/4 (413)	13 (330)	17-1/4 (438)	2-1/4 (57)	44 (1118)	8 (203)	16-3/4 (425)	13 (330)	47-1/4 (1200)	39-1/2 (1033)	2-3/8 (60)	
HDY22																	
HDY30	12x12	59-3/4 (1518)	40-1/4 (1022)	48 (1219)	35-1/4 (895)	16-1/4 (413)	14 (356)	16 (406)	7-1/8 (181)	44 (1118)	10 (254)	15 (381)	15 (381)	47-1/4 (1200)	39-1/2 (1033)	3-3/4 (95)	

- NOTES:**
1. RH shown, LH opposite.
 2. All dimensions are +/- 1/4" (6 mm).
 3. Product specifications are subject to changes without notice.
 4. Dimensions in parenthesis are shown in millimeters.
 5. Allow adequate spacing or maneuverability around unit to allow service through recommended access area.
 6. "C" dimension is measured from coil side of unit.
 7. Mixing Box option will vary return duct dimensions, refer to mixing box submittal.
 8. Mixing Box options include: a) Knockdown base rails for field assembly; b) Pre-assembled Mixing Box.
 9. Linkage kit supplied with Mixing Box is provided for field installation of actuator.
 10. Add 2" (51) if using a Prefilter, or 4" (102) filter.
 11. Auxiliary control box required with 3-speed EC motors and/or cabinet lighting option, not required with low voltage (0-10V) controls.

Drawing is provided for reference only. Dimensions may vary with options ordered. Consult IEC website for submittal drawings.

Submittal Data

VDY – Vertical Direct Drive



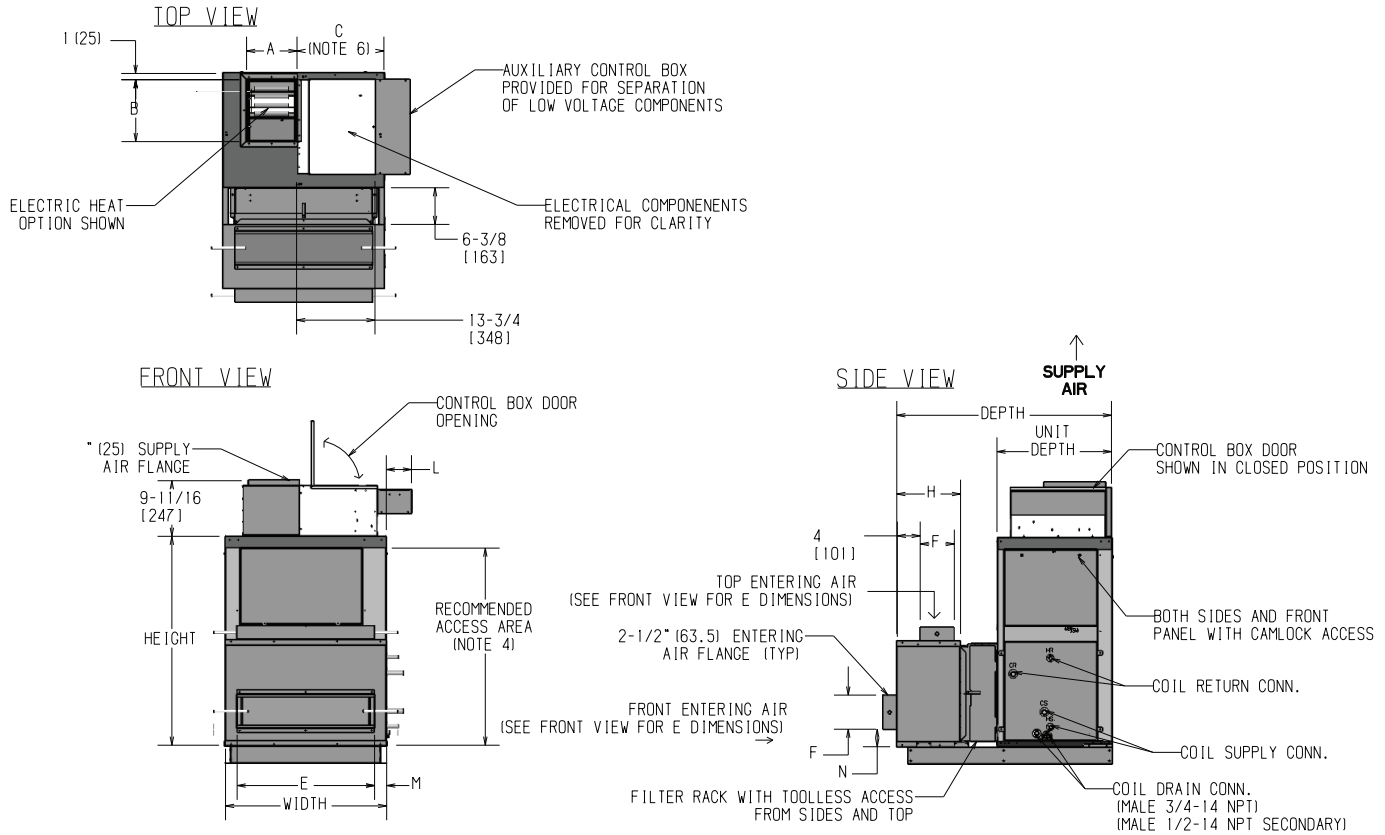
Size	Fan Size	Depth	Width	Height	Supply Duct			Return Duct		Aux. Ctrl. Box	Unit side to duct flange	Unit bottom to duct flange
					A	B	C	E	F			
06	9x6	20 (508)	28 (711)	36-1/2 (927)	8-7/8 (225)	10-7/8 (276)	15-1/8 (384)	24 (610)	16-1/2 (419)	4-1/2 (114)	1-7/8 (48)	2-7/8 (73)
08	9x6	20 (508)	28 (711)	36-1/2 (927)	8-7/8 (225)	10-7/8 (276)	15-1/8 (384)	24 (610)	16-1/2 (419)	4-1/2 (114)	1-7/8 (48)	2-7/8 (73)
10	9x6	22 (559)	37 (940)	39-3/8 (1000)	10-1/4 (260)	10-7/8 (276)	21-1/2 (546)	33 (838)	18-1/4 (464)	0 (0)	1-7/8 (48)	2-7/8 (73)
12	9x6	22 (559)	37 (940)	39-3/8 (1000)	10-1/4 (260)	10-7/8 (276)	21-1/2 (546)	33 (838)	18-1/4 (464)	0 (0)	1-7/8 (48)	2-7/8 (73)
16	10x7	22 (559)	47 (1194)	39-3/8 (1000)	13 (330)	12 (305)	16-5/8 (422)	43 (1092)	18-1/4 (464)	3(76)	1-5/8 (48)	2-7/8 (73)
20/22	11x10	24 (610)	48 (1219)	45-1/8 (1146)	16-1/4 (413)	13 (330)	17-1/8 (435)	44 (1118)	20-3/4 (527)	2-1/2 (64)	1-7/8 (48)	3-1/8 (79)
30	12x12	28 (711)	48 (1219)	54-1/4 (1378)	16-1/4 (413)	14 (356)	16 (406)	44 (1118)	29 (737)	3-5/8 (92)	1-7/8 (48)	2-3/4 (70)

- NOTES:
1. RH shown, LH opposite.
 2. All dimensions are +/- 1/4" (6 mm).
 3. Product specifications are subject to changes without notice.
 4. Dimensions in parenthesis are shown in millimeters.
 5. Allow adequate spacing or maneuverability around unit to allow service through recommended access area.
 6. "C" dimension is measured from coil side of unit.
 7. Mixing Box option will vary return duct dimensions, refer to mixing box submittal.

Drawing is provided for reference only. Dimensions may vary with options ordered. Consult IEC website for submittal drawings.

Submittal Data

VDY – with Optional Mixing Box



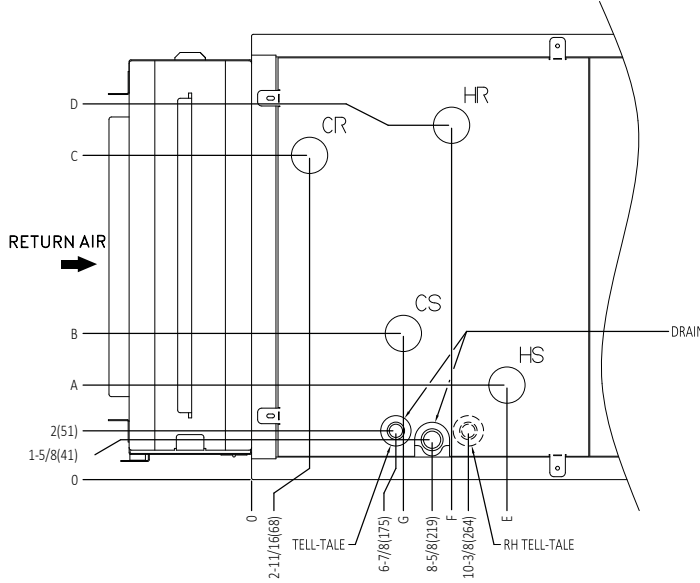
Size	Fan Size	Depth	Unit Depth	Width	Height	Supply Duct			Return Duct		Mix Box	Aux. Box	Unit side to duct flange	Unit bottom to duct flange
						A	B	C	E	F				
06	9x6	35-1/2 (902)	20 (508)	28 (711)	36-1/2 (927)	8-7/8 (225)	10-7/8 (276)	15-1/8 (384)	24 (610)	6 (152)	11 (279)	4-1/2 (114)	1-7/8 (48)	2-7/8 (73)
08	9x6	35-1/2 (902)	20 (508)	28 (711)	36-1/2 (927)	8-7/8 (225)	10-7/8 (276)	15-1/8 (384)	24 (610)	6 (152)	11 (279)	4-1/2 (114)	1 (25)	2-7/8 (73)
10	9x6	39-1/2 (1003)	22 (559)	37 (940)	39-3/8 (1000)	10-1/4 (260)	10-7/8 (276)	21-1/2 (546)	33 (838)	8 (203)	13 (330)	0 (0)	1-7/8 (48)	2-7/8 (73)
12	9x6	39-1/2 (1003)	22 (559)	37 (940)	39-3/8 (1000)	10-1/4 (260)	10-7/8 (276)	21-1/2 (546)	33 (838)	8 (203)	13 (330)	0 (0)	1-7/8 (48)	2-7/8 (73)
16	10x7	39-1/2 (1003)	22 (559)	47 (1194)	39-3/8 (1000)	13 (330)	12 (305)	16-5/8 (422)	43 (1092)	8 (203)	13 (330)	3 (76)	1-5/8 (41)	2-7/8 (73)
20/22	11x10	41-1/2 (1054)	24 (610)	48 (1219)	45-1/8 (1146)	16-1/4 (413)	13 (330)	17-1/8 (435)	44 (1118)	8 (203)	13 (330)	2-1/2 (64)	1-7/8 (48)	3-1/8 (79)
30	12x12	47-1/2 (1207)	28 (711)	48 (1219)	54-1/4 (1378)	16-1/4 (413)	14 (356)	16 (406)	44 (1118)	10 (254)	15 (381)	3-5/8 (92)	1-7/8 (48)	2-7/8 (73)

- NOTES:**
1. RH shown, LH opposite.
 2. All dimensions are +/- 1/4" (6 mm).
 3. Product specifications are subject to changes without notice.
 4. Dimensions in parenthesis are shown in millimeters.
 5. Allow adequate spacing or maneuverability around unit to allow service through recommended access area.
 6. "C" dimension is measured from coil side of unit.
 7. Mixing Box option will vary return duct dimensions, refer to mixing box submittal.
 8. Mixing Box options include: a) Knockdown base rails for field assembly; b) Pre-assembled Mixing Box.
 9. Linkage kit supplied with Mixing Box is provided for field installation of actuator, consisting of 2 crank arms, 2 swivels, and either a 25" (sizes 06-16) or 34" (sizes 20-30) length of 5/16" rod.
 10. Add 2" (51) if using a Prefilter, or 4" (102) filter..

Drawing is provided for reference only. Dimensions may vary with options ordered. Consult IEC website for submittal drawings.

Piping Connections – HDY

Piping Connection Location (Centerline to Centerline) – Hydronic Cooling & Heating Coils



Unit Size	Coil Header Connection Size									
	8 Row		6 Row		4 Row		2 Row HW		1 Row HW	
	Nom. Size	OD	Nom. Size	OD	Nom. Size	OD	Nom. Size	OD	Nom. Size	OD
06-12	1	1.125	3/4	0.875	3/4	0.875	1/2	0.625	1/2	0.625
16-22	1	1.125	1	1.125	1	1.125	1	1.125	1/2	0.625
30	1-1/2	1.625	1-1/2	1.625	1-1/2	1.625	1-1/2	1.625	1-1/2	1.625

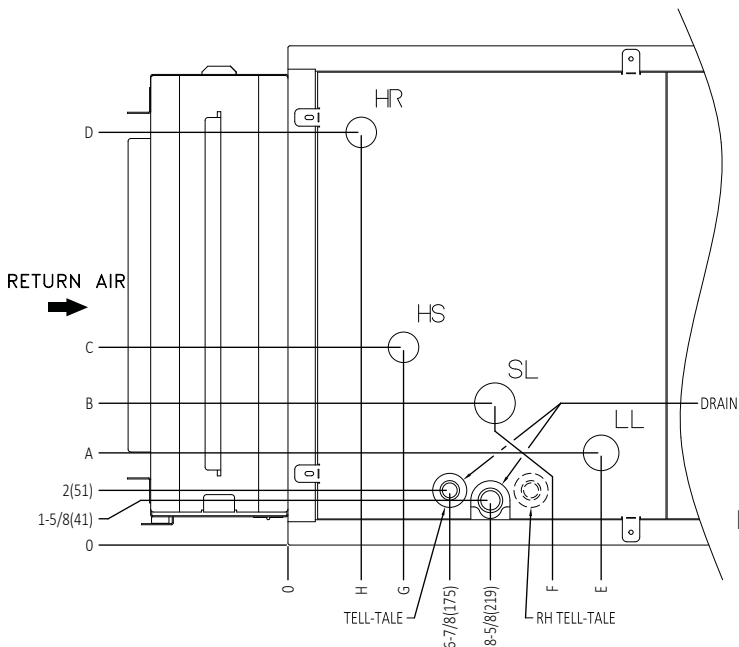
CR - Cold Water Return
 HR - Hot Water Return
 CS - Cold Water Supply
 HS - Hot Water Supply
 RH - Right Hand
 LH - Left Hand

HORIZONTAL, left hand unit with re-heat coil shown.

Unit Size	Coil Rows		A	B	C	D	E	F	G
	Cool	Heat							
06/08	4	-	-	6-1/8	12-3/4	-	-	-	5-15/16
		1	3-1/2			15-13/16	7	7	
	6	-	-	8-1/8	10-1/4	15-13/16	7-9/16	7-9/16	
		1	3-1/2			15-1/2	9-3/16	9-3/16	
10/12	4	-	-	7-3/4	14-3/8	-	-	-	8-1/8
		1	5-1/8			17-1/8	7	7	
	6	-	-	8-1/8	10-1/4	17-7/16	7-9/16	7-9/16	
		1	5-1/8			17-1/8	9-3/16	9-3/16	
16	4	-	-	7-3/4	15-5/8	-	-	-	5-15/16
		1	LH 10-5/8 RH 13-3/8			7-3/4	12	9-5/8 9-5/8	
	6	-	-	8-1/8	10-1/4	16-3/8	13-5/8	10-3/8	7-9/16
		1	LH 10-5/8 RH 13-3/8			7-3/4	15-5/8	12	11-13/16 11-13/16
20/22	4	-	-	7-13/16	18-3/16	-	-	-	5-15/16
		1	LH 11-15/16 RH 14-11/16			7-13/16	13-5/16	9-5/8	
	6	-	-	8-1/8	10-1/4	15-13/16	9-1/16	9-1/16	
		1	LH 11-15/16 RH 14-11/16			7-13/16	13-5/16	11-13/16	9-3/16
30	4	-	-	5-15/16	26-5/16	-	-	-	5-15/16
		1	7-1/16			25-13/16	9	7	
	6	-	-	8-1/8	10-1/4	23-13/16	9-1/8	9-1/8	
		1	7-1/16			25-13/16	11-1/8	9-1/8	7-1/16
8	-	-	10-1/4	23-13/16	11-5/16	-	-		

Piping Connections – HDY

Piping Connection Location (Centerline to Centerline) – R-410A Cooling w/Hot Water Heating



Unit Size	Coil Header Connection Size (Nominal OD in Inches)							
	LL		SL		2 Row HW		1 Row HW	
	Nom. Size	OD	Nom. Size	OD	Nom. Size	OD	Nom. Size	OD
06-12	1/4	0.375	3/4	0.875	1/2	0.625	1/2	0.625
16-22	1/4	0.375	1	1.125	1	1.125	1/2	0.625
30	1/2	0.625	1-1/2	1.625	1-1/2	1.625	1-1/2	1.625

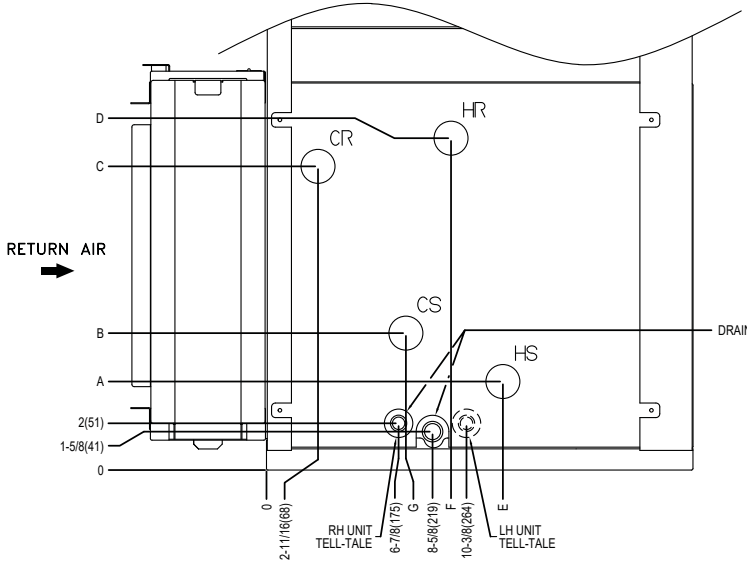
HR - Hot Water Return
 HS - Hot Water Supply
 LL - Liquid Line
 SL - Suction Line

HORIZONTAL, left hand unit with pre-heat coil shown.

SIZE	COIL ROWS		A	B	C	D	E	F	G	H
	DX ONLY	WATER PRE-HEAT								
06/08	4	-	4-3/4	5-1/2	-	-	12-1/2	2-3/4	-	-
	6	1								
	4	2								
	6									
10/12	4	-	6-1/2	7-1/8	-	-	12-1/2	2-3/4	-	-
	6	1								
	4	2								
	6									
16	4	-	6-1/2	7-1/8	-	-	12-1/2	2-3/4	-	-
	6	1								
	4	2								
	6									
20/22	4	-	6-1/2	7-1/8	-	-	12-1/2	2-3/4	-	-
	6	1								
	4	2								
	6									
30	4	-	4-7/8	5-3/8	-	-	12-1/2	2-3/4	-	-
	6	1								
	4	2								
	6									

Piping Connections – VDY

Piping Connection Location (Centerline to Centerline) – Hydronic Cooling & Heating Coils



Unit Size	Coil Header Connection Size									
	8 Row		6 Row		4 Row		2 Row HW		1 Row HW	
	Nom. Size	OD	Nom. Size	OD	Nom. Size	OD	Nom. Size	OD	Nom. Size	OD
06-12	1	1.125	3/4	0.875	3/4	0.875	1/2	0.625	1/2	0.625
16-22	1	1.125	1	1.125	1	1.125	1	1.125	1/2	0.625
30	1-1/2	1.625	1-1/2	1.625	1-1/2	1.625	1-1/2	1.625	1-1/2	1.625

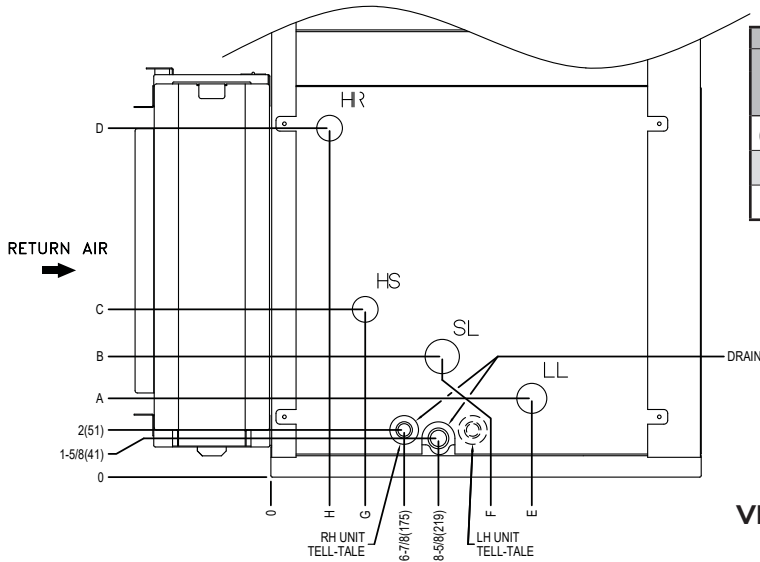
CR - Cold Water Return
 HR - Hot Water Return
 CS - Cold Water Supply
 HS - Hot Water Supply
 RH - Right Hand
 LH - Left Hand

VERTICAL, right hand unit with re-heat coil shown.

Unit Size	Coil Rows		A	B	C	D	E	F	G	
	Cool	Heat								
06/08	4	-	-	6-1/8	12-3/4	-	-	-	5-15/16	
		1	3-1/2			15-1/2	7	7		
		2	3-13/16			15-13/16	7-9/16	7-9/16		
	6	1	3-1/2	15-1/2	9-3/16	9-3/16	8-1/8			
		2	3-13/16	15-13/16	9-3/4	9-3/4				
		-	-	-	-	-				
10/12	4	-	-	7-3/4	14-3/8	-	-	-	5-15/16	
		1	5-1/8			17-1/8	7	7		
		2	5-7/16			17-7/16	7-9/16	7-9/16		
	6	1	5-1/8	17-1/8	9-3/16	9-3/16	8-1/8			
		2	5-27/61	17-7/16	9-3/4	9-3/4				
		-	-	-	-	-				
16	4	-	-	7-3/4	15-5/8	-	-	-	5-15/16	
		1	LH 10-5/8 RH 13-3/8			7-3/4	12	9-5/8 9-5/8		7
		2	12			16-3/8	13-5/8	10-3/8		7-9/16
	6	1	LH 10-5/8 RH 13-3/8	7-3/4	15-5/8	12	11-13/16 11-13/16	9-3/16 9-3/16	8-1/8	
		2	12	7	16-3/8	13-5/8	12-1/2	9-3/4		
		-	-	9-1/2	15-5/8	-	-	-		
20/22	4	-	-	7-13/16	18-3/16	-	-	-	5-15/16	
		1	LH 11-15/16 RH 14-11/16			7-13/16	13-5/16	9-5/8		7
		2	11-9/16			7-7/8	15-13/16	9-1/16		-
	6	1	LH 11-15/16 RH 14-11/16	7-13/16	15-5/8	13-5/16	11-13/16	9-3/16	8-1/8	
		2	11-9/16	7-7/8	16-3/8	15-13/16	11-1/4	-		
		-	-	7-13/16	-	-	-	-		
30	4	-	-	5-15/16	26-5/16	-	-	-	5-15/16	
		1	7-1/16			25-13/16	9	7		
		2	10-5/16			23-13/16	9-1/8	-		-
	6	1	7-1/16	25-13/16	11-1/8	9-1/8	7-1/16			
		2	10-5/16	23-13/16	11-5/16	-				
		-	-	-	-	-				
8	-	-	-	-	-	-	-	10-1/4		

Piping Connections – VDY

Piping Connection Location (Centerline to Centerline) – R-410A Cooling w/Hot Water Heating



Unit Size	Coil Header Connection Size (Nominal OD in Inches)							
	LL		SL		2 Row HW		1 Row HW	
	Nom. Size	OD	Nom. Size	OD	Nom. Size	OD	Nom. Size	OD
06-12	1/4	0.375	3/4	0.875	1/2	0.625	1/2	0.625
16-22	1/4	0.375	1	1.125	1	1.125	1/2	0.625
30	1/2	0.625	1-1/2	1.625	1-1/2	1.625	1-1/2	1.625

HR - Hot Water Return
 HS - Hot Water Supply
 LL - Liquid Line
 SL - Suction Line

VERTICAL, right hand unit with pre-heat coil shown.

SIZE	COIL ROWS		A	B	C	D	E	F	G	H										
	DX ONLY	WATER PRE-HEAT																		
06/08	4	-	4-3/4	5-1/2	-	-	12-1/2	2-3/4	-	-										
	6	1						3-3/4	2-5/8	2-5/8										
	4							6	18	4-7/8	3-1/4	3-1/4								
	6									6	18	12-1/2	3-3/4	2-5/8	2-5/8					
	4									6	18	12-1/2	4-7/8	3-1/4	3-1/4					
10/12	4	-	6-1/2	7-1/8	-	-	12-1/2	2-3/4	-	-										
	6	1						3-3/4	2-5/8	2-5/8										
	4							5-1/8	17-1/8	12-1/2	4-7/8	3-1/4	3-1/4							
	6										5-1/8	17-1/8	12-1/2	3-3/4	2-5/8	2-5/8				
	4										6-3/8	10	13-5/8	12-1/2	6-6/8	4-1/8	2-5/8			
16	4	-	6-1/2	7-1/8	-	-	12-1/2	2-3/4	-	-										
	6	1						3-3/4	2-5/8	2-5/8										
	4							5-1/8	17-1/8	12-1/2	4-7/8	3-1/4	3-1/4							
	6										5-1/8	17-1/8	12-1/2	3-3/4	2-5/8	2-5/8				
	4										6-3/8	10	13-5/8	12-1/2	6-6/8	4-1/8	2-5/8			
20/22	4	-	6-1/2	7-1/8	-	-	12-1/2	2-3/4	-	-										
	6	1						3-3/4	2-5/8	2-5/8										
	4							5-1/4	19-3/4	12-1/2	4-7/8	3-1/4	3-1/4							
	6										5-1/4	19-3/4	12-1/2	3-3/4	2-5/8	2-5/8				
	4										6-3/4	7-1/4	11-5/8	15-7/8	12-1/2	6-3/4	4-1/4	2-5/8		
30	4	-	4-5/8	5-3/8	-	-	12-1/2	2-3/4	-	-										
	6	1						6-1/8	4-1/2	2-5/8										
	4							4-7/8	6	12-1/8	25-7/8	12-1/2	6-1/8	4-1/2	2-5/8					
	6												4-7/8	6	12-1/8	25-7/8	12-1/2	6-1/8	4-1/2	2-5/8
	4												5-3/8	10-3/8	23-7/8	12-1/2	6-3/8	4-1/2	2-5/8	

Electric Heat

Electric heaters are available on IEC Direct Drive blower coils for total electric heat.

Total Electric Heat

Total electric heat eliminates the requirement for a boiler and provides heating and/or cooling on an individual basis throughout the year. Electric heat is available only for single source power (motor and heater voltage the same).

Heater Construction

The heater coils of high-grade resistance wire are supported by ceramic insulators on plated steel brackets. These heat elements are suspended directly in front of the outlet after the blower and the coil. An auto and a manual thermal limit switch protect the heater in the event of airflow failure. For electric heat control options refer to page 46.

Single Phase Electric Heater Availability

kW	El. Heat Amps				Unit Size Heater Stages											
	Single Phase (1 or 2 stage)				6		8		10		12		16		20	
	120V	208V	240V	277V	1stg	2stg	1stg	2stg	1stg	2stg	1stg	2stg	1stg	2stg	1stg	2stg
1.0	8.3	4.8	4.2	3.6	X	-	X	-	-	-	-	-	-	-	-	-
1.5	12.5	7.2	6.3	5.4	X	-	X	-	X	-	X	-	-	-	-	-
2.0	16.7	9.6	8.3	7.2	X	-	X	-	X	-	X	-	-	-	-	-
2.5	20.8	12.0	10.4	9.0	X	-	X	-	X	-	X	-	X	-	-	-
3.0	25.0	14.4	12.5	10.8	X	X	X	X	X	X	X	X	X	X	-	-
3.5	29.2	16.8	14.6	12.6	X	X	X	X	X	X	X	X	X	X	X	X
4.0	33.3	19.2	16.7	14.4	X	X	X	X	X	X	X	X	X	X	X	X
4.5	37.5	21.6	18.8	16.2	X	X	X	X	X	X	X	X	X	X	X	X
5.0	-	24.0	20.8	18.1	X	X	X	X	X	X	X	X	X	X	X	X
6.0	-	28.8	25.0	21.7	X	X	X	X	X	X	X	X	X	X	X	X
7.0	-	33.7	29.2	25.3	-	-	X	X	X	X	X	X	X	X	X	X
8.0	-	38.5	33.3	28.9	-	-	X	X	X	X	X	X	X	X	X	X
9.9	-	-	-	35.7	-	-	-	-	X	X	X	X	X	X	X	X
12.0	-	-	-	43.3	-	-	-	-	-	-	X	X	X	X	X	X

X Available option
 - Not available option

NOTES: 1. Electric Heating Capacities (Btuh) = Heater kW x 3413
 2. Electric Heater Amperage for Single-phase Power = (Heater kW x 1000)/Applied Voltage

Direct Drive Blower Coils

HDY AND VDY TECHNICAL CATALOG

Electric Heat

Three Phase Electric Heater Availability

kW	Electric Heat Amps			Unit Size Heater Stages																	
	Three Phase (1, 2 or 3 stage)			6		8		10		12			16			20/22			30		
	208V	240V	480V	1stg	2stg	1stg	2stg	1stg	2stg	1stg	2stg	3stg	1stg	2stg	3stg	1stg	2stg	3stg	1stg	2stg	3stg
1.0	2.8	2.4	1.2	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5	4.2	3.6	1.8	X	-	X	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-
2.0	5.6	4.8	2.4	X	-	X	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-
2.5	6.9	6.0	3.0	X	-	X	-	X	-	X	-	-	X	-	-	-	-	-	-	-	-
3.0	8.3	7.2	3.6	X	-	X	-	X	-	X	-	-	X	-	-	-	-	-	-	-	-
3.5	9.7	8.4	4.2	X	-	X	-	X	-	X	-	-	X	-	-	X	-	-	-	-	-
4.0	11.1	9.6	4.8	X	X	X	X	X	X	X	X	-	X	X	-	X	X	-	-	-	-
4.5	12.5	10.8	5.4	X	X	X	X	X	X	X	X	-	X	X	-	X	X	-	-	-	-
5.0	13.9	12.0	6.0	X	X	X	X	X	X	X	X	-	X	X	-	X	X	-	-	-	-
6.0	16.7	14.4	7.2	X	X	X	X	X	X	X	X	-	X	X	-	X	X	-	X	X	-
7.0	19.4	16.8	8.4	-	-	X	X	X	X	X	X	-	X	X	-	X	X	-	X	X	-
8.0	22.2	19.2	9.6	-	-	X	X	X	X	X	X	-	X	X	-	X	X	-	X	X	-
9.9	27.5	23.8	11.9	-	-	-	-	X	X	X	X	-	X	X	-	X	X	-	X	X	-
12.0	33.3	28.9	14.4	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X
14.0	38.9	33.7	16.8	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X
15.0	41.6	36.1	18.0	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X
16.0	-	38.5	19.2	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X
18.0	-	-	21.7	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X
19.9	-	-	23.9	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X
25.0	-	-	30.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X
30.0	-	-	36.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X

X Available option
 - Not available option

NOTES: 1. Electric Heating Capacities (Btuh) = Heater kW x 3413
 2. Electric Heater Amperage for Single-phase Power = (Heater kW x 1000)/Applied Voltage

Motor Data

Thermal Overload Protection

All standard motors on Direct Drive units furnished by IEC contain internal thermal overload protection. The overload automatically resets when the temperature returns to a safe limit. These thermal overloads replace the need for motor starters.

MOTOR TYPE	VOLTAGE	UNIT SIZE			
		06, 10	08, 12, 16, 20	22	30
		MOTOR HORSEPOWER AND FLA			
		1/2 HP	1 HP	1-1/2 HP	3 HP
1-PHASE STANDARD EFFICIENCY	115V/1 PHASE/60 HZ	6.4	10.7	N/A	N/A
	208V/1 PHASE/60 HZ	3.8	6.3	N/A	N/A
	230V/1 PHASE/60 HZ	3.6	5.8	N/A	N/A
	277V/1 PHASE/60 HZ	3.2	5.1	N/A	N/A
3-PHASE STANDARD EFFICIENCY	208V/3 PHASE/60 HZ	2.0	3.7	4.4	8.9
	230V/3 PHASE/60 HZ	1.85	3.3	4.4	8.9
	460V/3 PHASE/60 HZ	1.0	1.75	2.2	4.4

Factory Installed Options

Controls:

Motor Controls – Units without electric heat:

Two controls schemes are available:

- Three-speed adjustable.
- Proportional (0 - 10VDC).

Electric Heat Controls

Electric heaters come standard with a transformer, heater contactors, motor and electric heat fusing, and a terminal strip.

An optional interlocking disconnect switch is available.

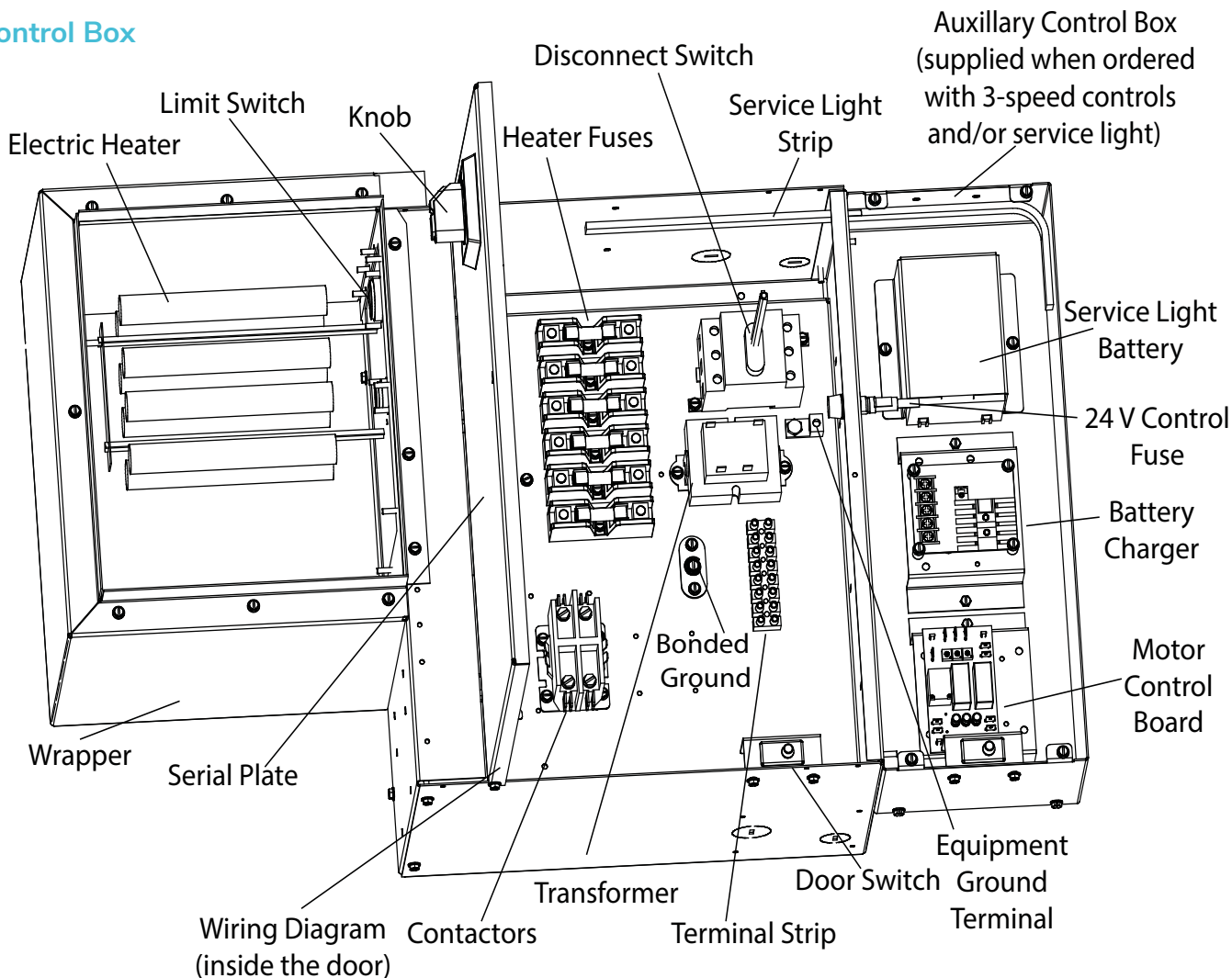
Condensate Float Switch

A water-level sensing device designed to prevent drain pan overflow. The standard switch is wired normally closed. Switches are available only in 24V.

Cabinet/Control Box Maintenance Light

Optional LED Service Light provides a source of illumination in the main unit cabinet and the control box during routine maintenance and troubleshooting in the dark ceiling spaces.

Control Box



Above picture is the example of Control box with electric heat, disconnect switch and service light.

Factory Installed Options

Control Package Applications

Unit Type	Control Option	System Type	Changeover Type	W	P	N
-	Manual Fan	Manual1	None	-	-	-
2-Pipe	Valve Cycle*	Heat Only	None	•	•	•
		Cool Only	None	•	•	•
		Heat/Cool	Manual	-	-	-
			Automatic	•	•	•
		Heat/Cool with Auxiliary Electric Heat	Manual	-	-	-
			Automatic	•	•	•
Cool with Total Electric Heat	Manual	-	-	-		
	Automatic	•	•	•		
4-Pipe		Heat/Cool	Manual	-	-	-
			Automatic	•	•	•

NOTES: 1. Fan switch only; no thermostat



Venture 24V,
Wi-Fi Programmable



Basic 24V Digital
7-Day Programmable and
Non-Programmable Series

Factory Installed Options

Thermostat Features

All listed controls include fan switching.	Control Type ¹		
	W	P	N
24V, 115V, 208V, 240V, 277V	24V only	24V only	24V only
Wi-Fi Enabled	•	-	-
Mobile and Web App for Remote Control	•	-	-
Staged Cooling	•	-	-
Programmable	•	•	-
Remote Wall Mounted	•	•	•
Manual Fan Switch Operation	•	•	•
Auto Fan Speed Control	•	•	•
Continuous 3-Speed Fan	•	•	•
Cycling Fan	•	•	•
O.A Damper Signal	•	•	•
Remote Temperature Sensor	Opt	Opt	Opt
Digital Display & Buttons	•	•	•
Local Temperature Set-Back	•	•	•
Water Temperature Purge Cycle	•	•	•
Proportional Control Valves	-	-	-
Floating Control Valves	-	-	-
Pipe Sensor	•	•	•

- NOTES:**
1. Control packages with valve cycle control are continuous fan operation only.
 2. All wall-mount control packages are shipped loose for field installation. (Boxes, tile rings, plaster rings, etc. are not provided).
 3. Aquastats are included in control packages, as required.

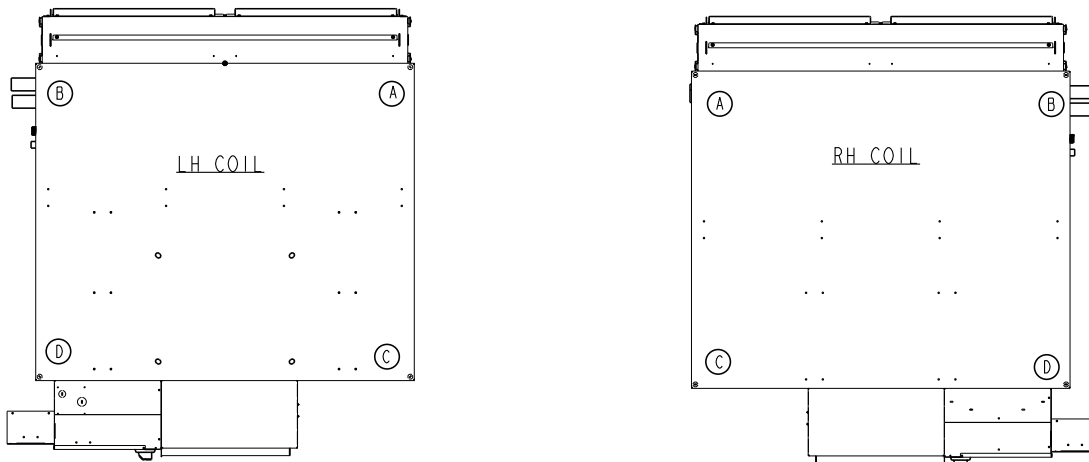
- *LEGEND:**
- P • Basic 24V Digital, 7-Day Programmable
 - N • Basic 24V Digital, Non-Programmable
 - W • Venture 24V Wi-Fi Programmable

Unit Weight Calculations

Distributed Weight Calculations – HDY

The following operating weight information is based on 8-row water-filled coils and double wall cabinet construction. For a different coil and cabinet options, use the weight correction factor table.

Horizontal Units (Top View)



HDY Unit	No Electric Heat (lb.)					With Electric Heat (lb.)				
	A	B	C	D	Total	A	B	C	D	Total
06	33	36	36	47	152	33	48	36	66	183
08	32	37	38	45	152	32	48	36	67	183
10	38	39	49	63	190	38	46	56	83	223
12	37	38	51	64	190	37	44	57	85	223
16	51	56	64	75	246	56	55	66	104	281
20	63	75	77	95	310	66	81	77	107	348
22	68	90	80	99	337	71	96	81	111	359
30	90	99	97	117	403	91	106	96	149	442

Total Weight Unit Correction Factor (lb.) – HDY

The weights in the table above are for 8-row water-filled coils with double wall construction. For a different number of rows, total unit weight can be determined by following steps below:

- Identify the size of unit and number of rows
- From the previous table, identify the total weight of the unit
- From the table below, identify the correction factor and deduct this factor from the total weight.

Options	6	8	10	12	16	20	22	30
4-Row Coil	-21	-21	-28	-28	-39	-46	-46	-98
5-Row Coil	-16	-16	-21	-21	-29	-35	-35	-74
6-Row Coil	-11	-11	-14	-14	-20	-23	-23	-49
7-Row Coil	-5	-5	-7	-7	-10	-12	-12	-25
Single Wall Construction	-31	-31	-40	-40	-47	-58	-58	-67

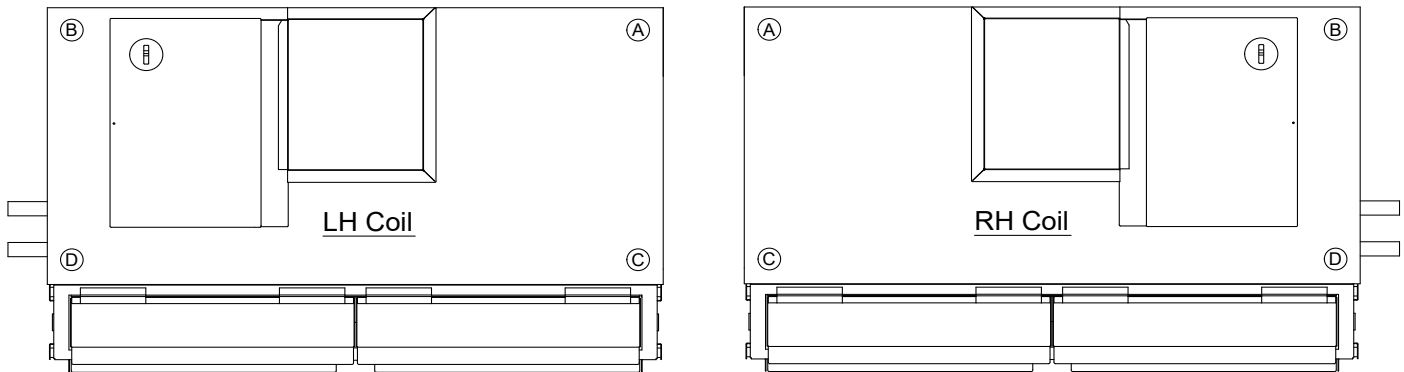
NOTES: 1. Unit weights (shown in pounds), +/- 10 percent, are based on the largest water-filled coil.

Unit Weight Calculations

Unit Total Weight – VDY

The following operating weight information is based on 8-row water-filled coils and double wall cabinet construction. For a different coil and cabinet options, use the weight correction factor table.

Vertical Units (Top View)



NOTE: Some unit components are removed for clarity.

Vertical Unit Corner Weight

VDY Unit	No Electric Heat (lb.)					With Electric Heat (lb.)				
	A	B	C	D	Total	A	B	C	D	Total
06	76	38	26	32	172	85	40	35	39	199
08	85	39	28	28	180	94	48	35	37	215
10	78	45	31	64	218	86	58	42	70	256
12	84	45	33	66	228	97	62	45	78	282
16	85	74	48	68	278	105	79	56	78	318
20	90	84	62	73	309	111	88	66	84	349
22	110	90	58	75	333	133	88	77	84	382
30	147	140	100	114	501	160	140	118	123	541

Total Unit Weight Adjustment (lb.) – VDY

These weights are for 8-row water-filled coils with double wall construction. For a different number of rows, total unit weight can be determined by following steps below:

- Identify the size of unit and number of rows
- From the previous table, identify the total weight of the unit
- From the table below, identify the correction factor and deduct this factor from the total weight.

Options	6	8	10	12	16	20	22	30
4-Row Coil	-21	-21	-28	-28	-39	-46	-46	-98
5-Row Coil	-16	-16	-21	-21	-29	-35	-35	-74
6-Row Coil	-11	-11	-14	-14	-20	-23	-23	-49
7-Row Coil	-5	-5	-7	-7	-10	-12	-12	-25
Single Wall Construction	-31	-31	-40	-40	-47	-58	-58	-67

NOTES: 1. Unit weights (shown in pounds), +/- 10 percent, are based on the largest water-filled coil.

Filters

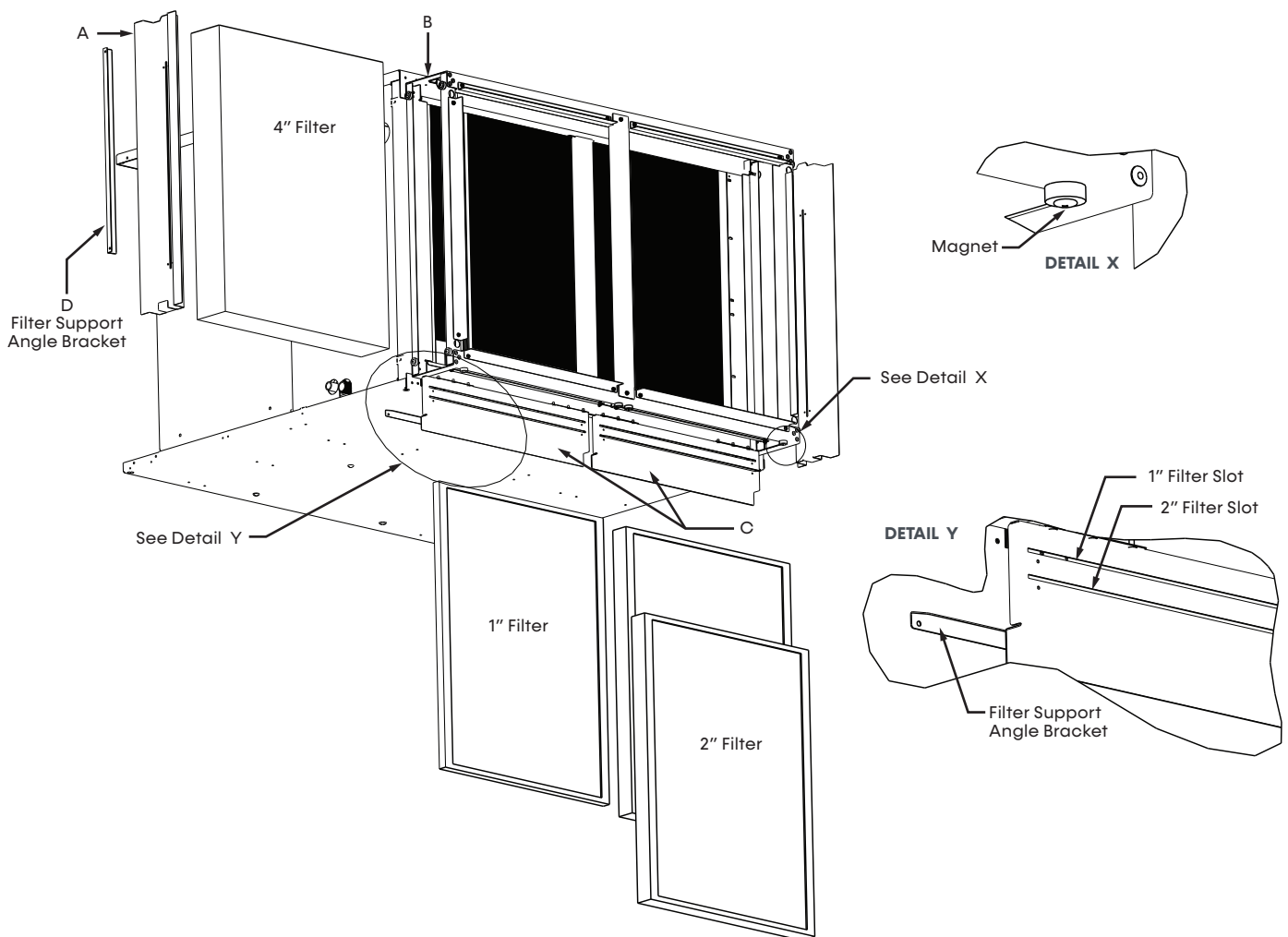
Filters – HDY

The standard Direct Drive Blower Coils are furnished with a set of 2-inch pleated MERV 8 filters.

Unit Size	Filter Quantity	Nominal Filter Sizes – Inches (Millimeters)
		HDY
06	1	16-1/2" x 24" (419 x 610)
08	1	16-1/2" x 24" (419 x 610)
10	1	18-1/4" x 33" (464 x 838)
12	1	18-1/4" x 33" (464 x 838)
16	2	18-1/4" x 21-1/2" (464 x 546)
20/22	2	20-1/2" x 22" (521 x 559)
30	2	29" x 22" (737 x 559)

Universal Filter Rack Design - Features & Benefits

- Side and bottom filter removal
- No tools needed for easy filter change
- Choice of 1-, 2- or 4-inch filters
- Easy to modify in the field for either 1-, 2- or 4-inch filters
- Robust design eliminates unit's sagging



Filters

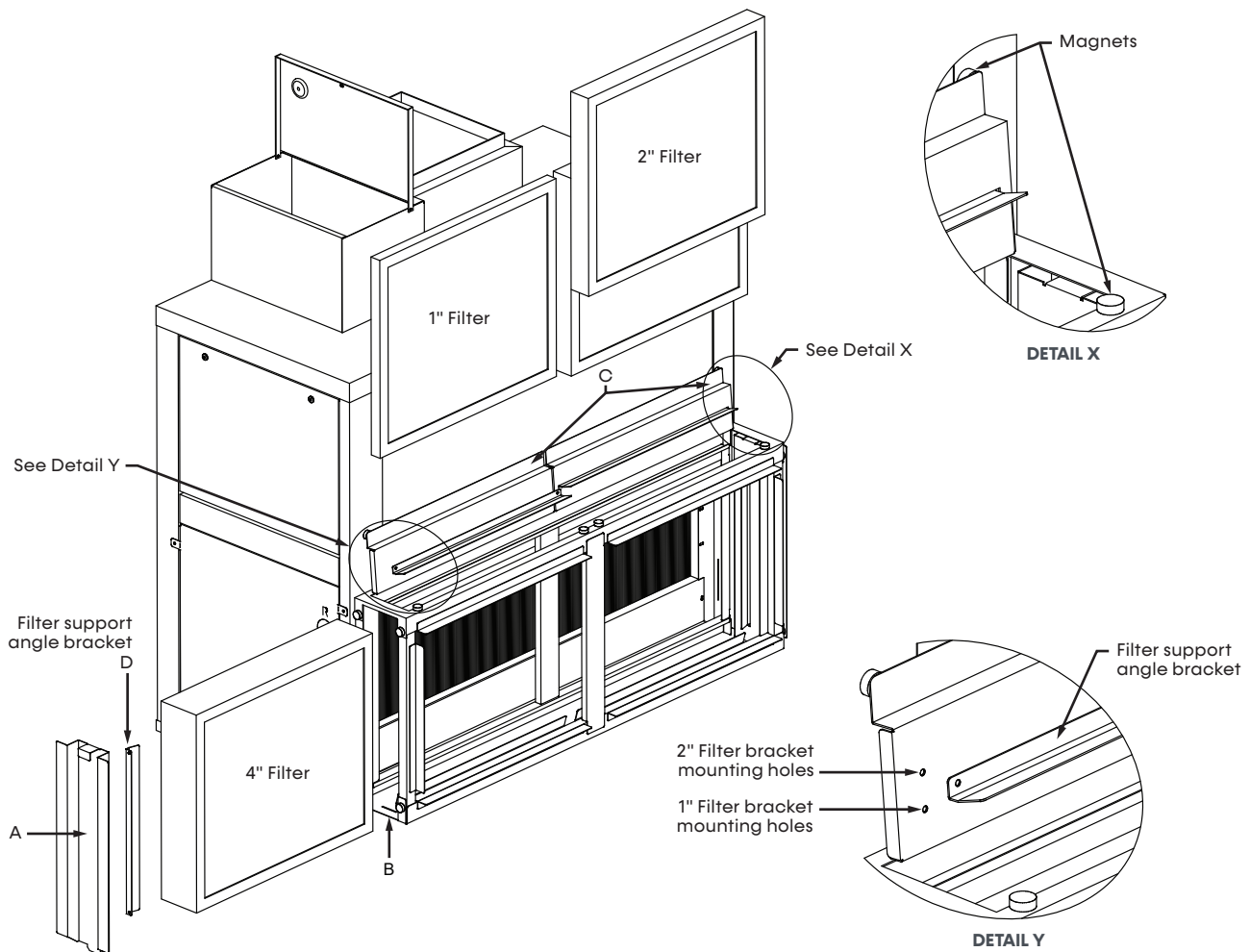
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16	2	18-1/4" x 21-1/2" (464 x 546)
20/22	2	20-1/2" x 22" (521 x 559)
30	2	29" x 22" (737 x 559)

Universal Filter Rack Design - Features & Benefits

- Side and top filter removal
- No tools needed for easy filter change
- Choice of 1-, 2- or 4-inch filters
- Easy to modify in the field for either 1-, 2- or 4-inch filters
- Robust design eliminates unit's sagging



Bipolar Ionizer

Bipolar Ionizer Specifications

SPECIFICATIONS:

Airflow Capacity: 2,400 CFM
 Pressure Drop: Less than 0.01 In. WG
 Housing Material: ABS
 Weight: 0.2 lbs.
 Maximum Operating Temperature: 200° F (93°C)

Electrical:

Voltage: 24V AC (602)
 Power Consumptions: Less than 1 watt
 Frequency: 50/60 hertz
 Over Current Protection:.. 500mA Glass Cartridge Fuse
 Lead Wires 50 inches(L)

Ionization Output:

Mode of Operation.....Needlepoint Type
 Needle Configuration: Brush Type

DIMENSIONS: See Figure 1

APPROVALS:

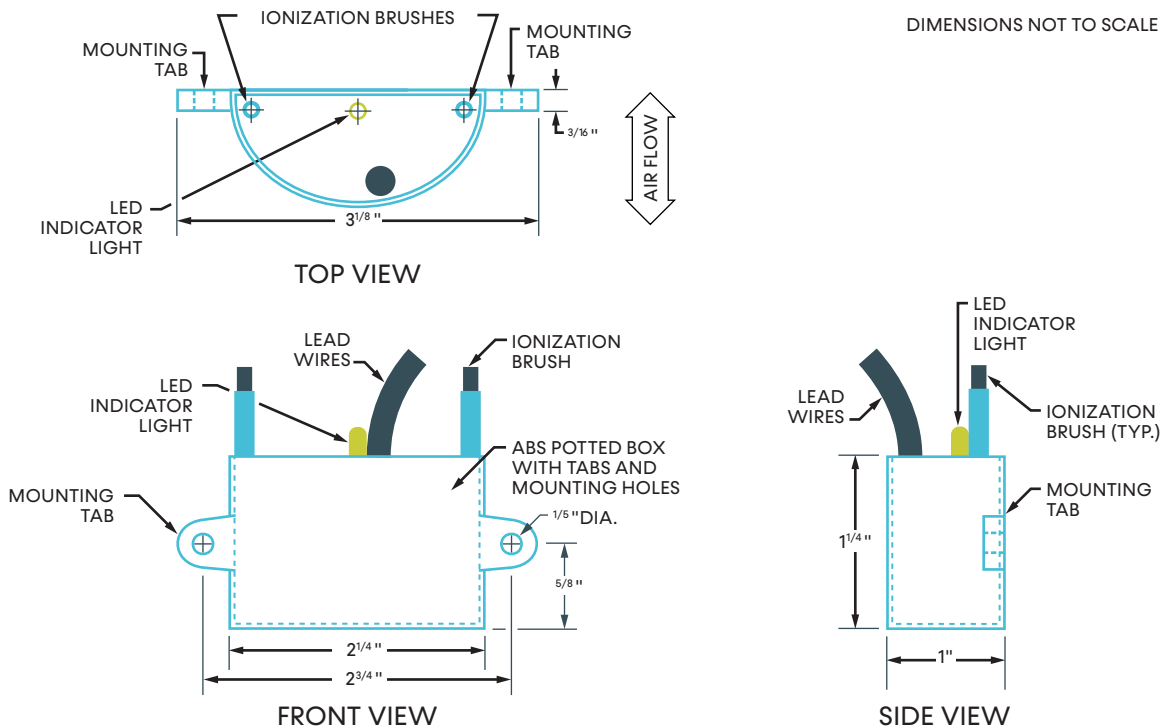
Intertek/ETL tested in accordance with:

- UL 867: Electrostatic Air Cleaners
- UL 2043: Fire Test for Heat and Visible Smoke

UL Validated:

- 2998: Zero Ozone Emissions

Figure 1.



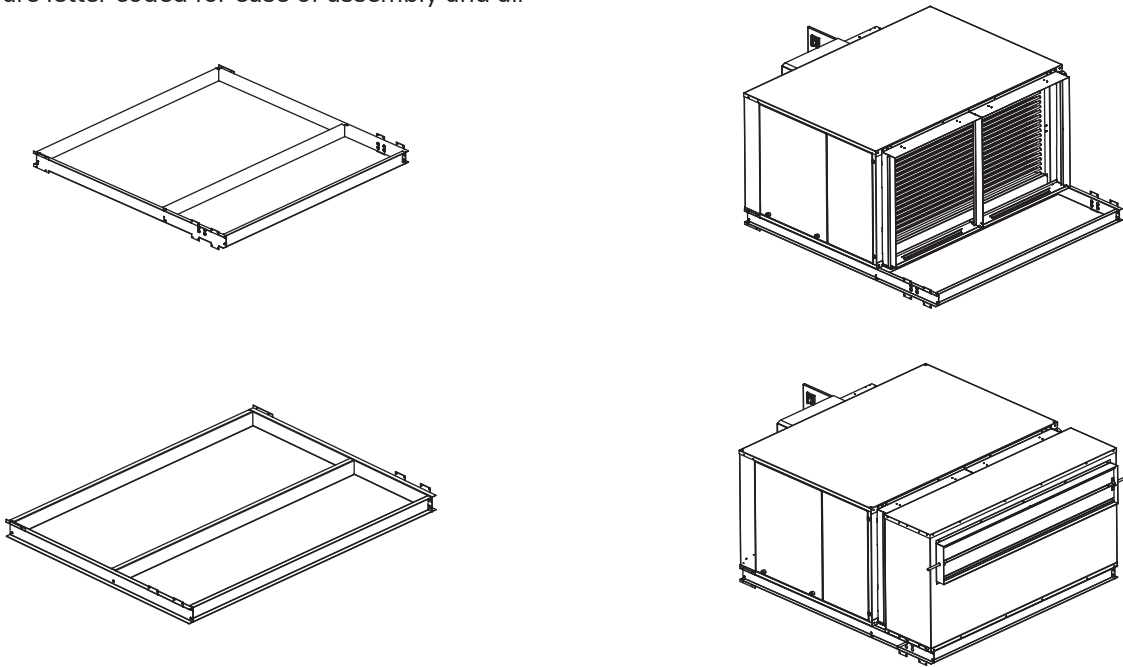
Mixing Boxes

Mixing boxes can be used when outside air is required. Mixing boxes come with base rails. Refer to the drawings on pages 54 to 56 for additional information.

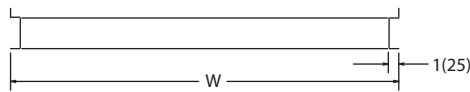
Mixing Box with Base Rails – HDY

Mixing box option includes: 1) knockdown base rails for field assembly, and 2) pre-assembled mixing box. Base rails are letter coded for ease of assembly and all

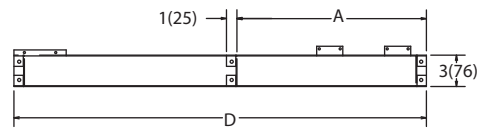
hardware required for assembly is included. Linkage kit consists of 2 crank arms, 2 swivels, and either a 25-inch (sizes 06-16) or a 34-inch (sizes 20-30) length of 5/16-inch rod provided for field installation of actuator. Consult factory for the 24V damper actuator option. Mixing box option adds 3 inches to the unit height due to the base rails.



Base Rail Details – HDY



FRONT VIEW



SIDE VIEW

Vertical Units – Dimensions - Inches (Millimeters)			
Unit Type and Size	W	D	A
VDY06	28 (711)	53.6 (1361)	18.1 (460)
VDY08	28 (711)	53.6 (1361)	18.1 (460)
VDY10	37 (940)	57.2 (1453)	20.1 (511)
VDY12	37 (940)	57.2 (1453)	20.1 (511)
VDY16	47 (1194)	57.4 (1458)	20.1 (511)
VDY20/22	48 (1219)	59.8 (1519)	20.1 (511)
VDY30	48 (1219)	61.8 (1570)	22.1 (561)

NOTE: Dimensions are in inches (millimeters).

Mixing Boxes

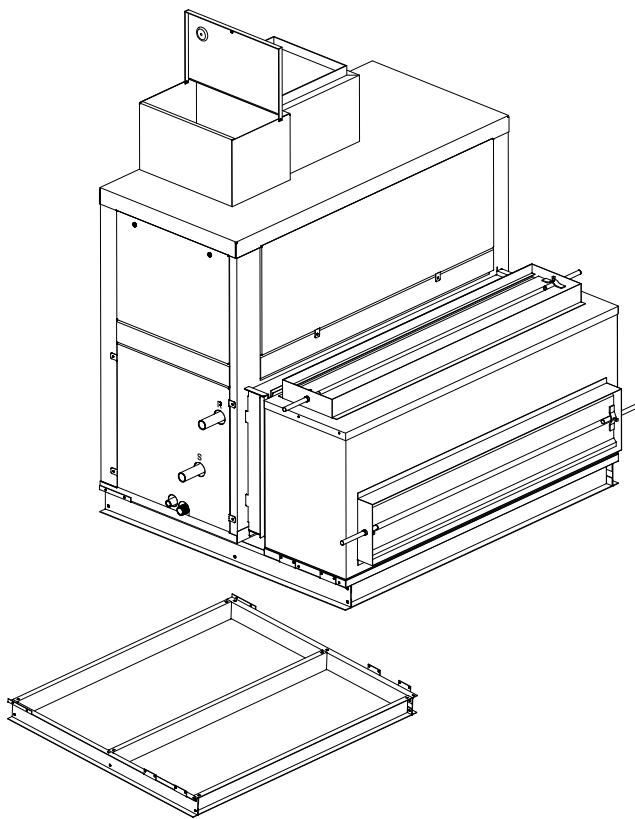
Mixing boxes can be used when outside air is required. Mixing boxes come with base rails. Refer to the drawings on pages 53 to 55 for additional information.

Mixing Box with Base Rails – VDY

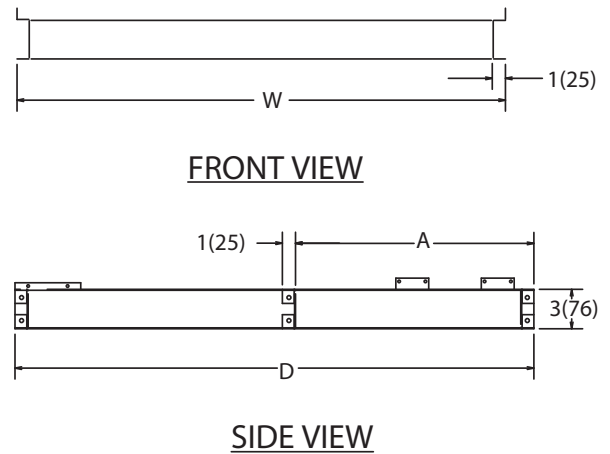
Mixing box option includes: 1) knockdown base rails for field assembly, and 2) pre-assembled mixing box. Base rails are letter coded for ease of assembly and all

hardware required for assembly is included. Linkage kit consists of 2 crank arms, 2 swivels, and either a 25-inch (sizes 06-16) or a 34-inch (sizes 20-30) length of 5/16-inch rod provided for field installation of actuator. Consult factory for the 24V damper actuator option. Mixing box option adds 3 inches to the unit height due to the base rails.

Top/Front Inlet Mixing Box – VDY



Base Rail Details – VDY

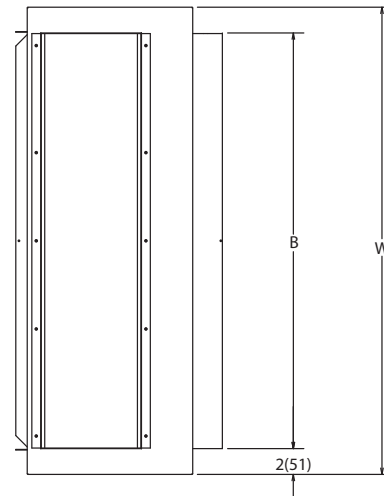
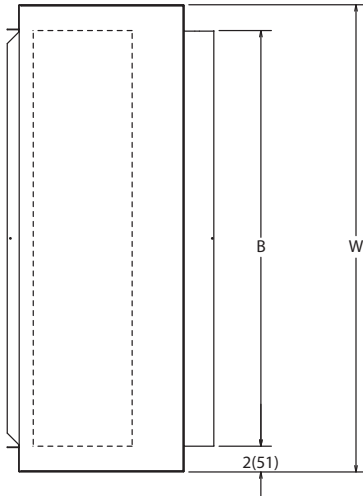


Vertical Units – Dimensions - Inches (Millimeters)			
Unit Type and Size	W	D	A
VDY06	28 (711)	37.5 (953)	18.1 (460)
VDY08	28 (711)	37.5 (953)	18.1 (460)
VDY10	37 (940)	41.5 (1054)	20.1 (511)
VDY12	37 (940)	41.5 (1054)	20.1 (511)
VDY16	47 (1194)	41.5 (1054)	20.1 (511)
VDY20/22	48 (1219)	43.5 (1105)	20.1 (561)
VDY30	48 (1219)	49.5 (1257)	22.1 (561)

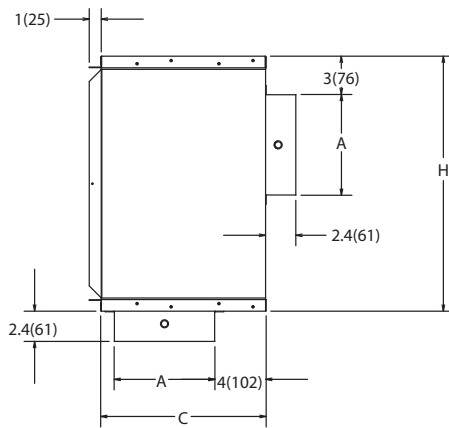
NOTE: Dimensions are in inches (millimeters).

Mixing Boxes

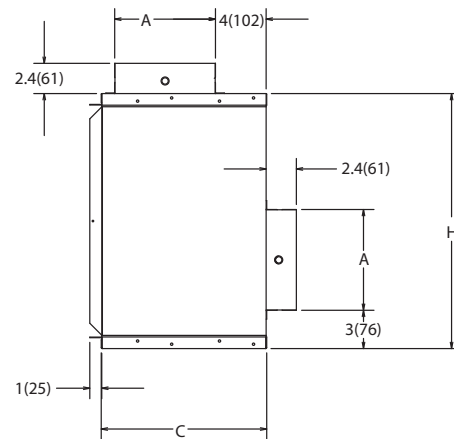
Mixing Box Details – HDY & VDY



TOP VIEWS



BTM/REAR INLET - HDY
BTM/Front INLET - HDY



TOP/REAR INLET - HDY
TOP/Front INLET - HDY

Dimensions - Inches (Millimeters)					
Unit Size	H	W	A	B	C
06	18.5 (470)	28 (711)	6 (152)	24 (610)	11 (279)
08	18.5 (470)	28 (711)	6 (152)	24 (610)	11 (279)
10	20.25 (514)	37 (940)	8 (203)	33 (838)	13 (330)
12	20.25 (514)	37 (940)	8 (203)	33 (838)	13 (330)
16	20.25 (514)	47 (1194)	8 (203)	43 (1092)	13 (330)
20/22	22.75 (578)	48 (1219)	8 (203)	44 (1118)	13 (330)
30	31 (787)	48 (1219)	10 (254)	44 (1118)	15 (381)

NOTE: Dimensions are in inches (millimeters).

Standard Features and Options

Features and Options	Standard	Factory	Field Installed	Factory Special
Air Flow Arrangement				
Rear Return/Front Supply (HDY)	X			
Front Return/Top Supply (VDY)	X			
Coil Options				
4-Row 2-Pipe	X			
6 or 8-Row 2-Pipe		X		
4/1 or 4/2-Row 4-Pipe (CW/HW)		X		
6/1 or 6/2-Row 4-Pipe (CW/HW)		X		
Hydronic Heating Coils in preheat position		X		X
4/1 or 4/2-Row 4-Pipe (CW/Steam)		X		X
6/1 or 6/2-Row 4-Pipe (CW/Steam)		X		X
Direct Expansion (DX) – 2-Pipe Systems Only		X		
Anti-Corrosive Epoxy Coating		X		
Connection				
Right	X			
Left	X			
Drain Pan				
Removable, double sloped, stainless steel	X			
Fin Material				
Aluminum w/ Galvanized End Sheets	X			
Copper w/ Stainless Steel End Sheets and Bottom Coil Baffle		X		X
Alternate fins per inch		X		X
Electric Heat (1-40 KW, Controls, Stages)		X		
Indoor Air Quality				
2 Sets of 1" Throwaway		X		
1" MERV 8 Pleated		X		
2" MERV 8 Pleated	X			
2" MERV 11 + 2" Pleated Prefilter		X		
4" MERV 11		X	X	
4" MERV 13		X	X	
Biopolar Ionization		X		
Insulation				
1" Standard Fiberglass	X			
1" Premium IAQ Fiberglass (not available with Double Wall)		X		
1" Foil Face (not available with Double Wall)		X		
1" Closed Cell		X		
Cabinet Construction				
18-gauge Single Wall	X			
Double Wall (with solid or perforated liner)		X		
Double Wall with antimicrobial treatment				X

table continued on next page

Standard Features and Options

Features and Options	Standard	Factory	Field Installed	Factory Special
Motor Type				
EC Motor 1-Phase (not available on sizes 22 and 30)	X			
EC Motor 3-Phase	X			
Motor Voltage				
120-208-230-277/1/60 (1-Phase only)	X			
208-230-460/3/60 (3-Phase only)	X			
Paint Options				
Bright White, Arctic White, Polar White, Flat Black, Ermine Gray, Champagne Beige, Toffee Brown		X		
Special Color				X
Options				
Mixing Box			X	
24V Damper Actuator for mixing box			X	X
24V Condensate Float Switch		X		
Low Temperature Limit Switch		X		X
LED Service Light		X		X
Basic Motor Controls		X		
Deluxe Motor Controls		X		
Interlocking Disconnect Switch		X		
Thermostats				
Unit Mount		X		
Remote Mount			X	
Custom Controls (DDC)		X		X

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Direct Drive Blower Coils

HDY AND VDY TECHNICAL CATALOG



Contact your local IEC Sales Representative for further details and pricing applicable to this product. Visit our website (iec-okc.com) to find your local IEC Sales Rep.

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