



Direct Drive Blower Coils

HDY AND VDY TECHNICAL CATALOG



- 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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International Environmental Corporation (IEC) works continually to improve its products. As a result, the design and specifications of each product may be changed without notice and may not be as described herein. Please contact IEC for information regarding current design and product specifications. Statements and other information contained herein are not express warranties and do not form the basis of any bargain between the parties but are merely IEC's opinion or commendation of its products. Manufacturer's standard limited warranty applies.

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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" 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 expansion system cooling
- Direct expansion cooling with electric heat
- Direct expansion cooling with hot water heating

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, Cont'd.

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 tool-less filter access with magnetic panels and large size cabinet access panels make routine maintenance fast and efficient.
- Small footprint allows installation in variety of building constructions and applications
- Galvanized steel heavy gage cabinet construction enhances unit durability
- 1" duct collar enables quick field installation
- Durable filter rack designed to accept 1", 2" or 4" 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" 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, Cont'd.

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

Insulation

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

- T • TXV Valve (DX Only)
- Y • None

Unit Nomenclature, Cont'd.

EC MOTOR

Motor-Voltage/Phase/Hertz

- C • 115/1/50-60
- D • 208/1/50-60
- E • 230/1/50-60
- F • 277/1/50-60
- V • 220/1/50
- N • 208/3/50-60
- P • 230/3/50-60
- G • 460/3/50-60

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 -10 VDC)
- 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 0-10 VDC 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.

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 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, Cont'd.

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, Cont'd.

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, Cont'd.

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
	600	8	75 / 63	45	10	10.5	8.4	2.1	1.5
					12	9.5	8.0	1.6	1.0
		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
	800	8	75 / 63	45	10	15.3	12.2	3	2.7
					12	13.9	11.6	2.3	1.7
		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
	1000	8	75 / 63	45	10	23.1	18.1	4.6	6.5
					12	21.5	17.4	3.6	4.3
		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.

Cooling Capacity, Cont'd.

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, Cont'd.

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.

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
			180	40	19.0	105.2	1	1.5
		2	140	20	22.4	111.4	2.3	5.6
				40	14.6	97.1	0.7	0.4
			180	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
			180	40	9.9	85.3	0.5	0.6
		2	140	20	14.4	92.2	1.5	2.9
				40	21.3	102.9	1.1	1.8
			180	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
			180	40	35.3	124.5	1.8	1.3
		2	140	20	40.9	133.1	4.2	4.8
				40	10.9	84.4	0.5	0.7
	700	1	140	20	15.8	90.9	1.6	3.4
				40	23.4	100.9	1.2	2
			180	20	27.7	106.6	2.8	7.8
		2	140	40	18.5	94.5	0.9	0.5
				20	26.3	104.8	2.7	2.6
			180	40	39.2	121.9	2	1.5
08 (1 HP)	700	1	140	20	45.5	130.2	4.6	5.7
				40	10.0	83.3	0.5	0.6
			180	20	14.7	89.4	1.5	3
		2	140	40	21.7	98.7	1.1	1.8
				20	25.6	103.9	2.6	6.9
			180	40	17.3	92.9	0.9	0.5
	800	1	140	20	24.8	102.8	2.5	2.3
				40	36.8	118.7	1.9	1.4
			180	20	42.9	126.7	4.4	5.2
		2	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
900	800	1	140	20	28.3	102.8	2.9	8.1
				40	19.3	92.3	1	0.5
			180	20	27.5	101.8	2.8	2.7
		2	140	40	40.9	117.3	2.1	1.7
				20	47.7	125.2	4.9	6.2
			180	40	12.1	82.5	0.6	0.8
	900	1	140	20	17.6	88.2	1.8	4
				40	26.1	96.8	1.3	2.4
			180	20	30.9	101.8	3.2	9.3
		2	140	40	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
		2	140	20	52.3	123.8	5.3	7.1
				40	12.1	82.5	0.6	0.8
			180	20	17.6	88.2	1.8	4
		2	140	40	26.1	96.8	1.3	2.4
				20	30.9	101.8	3.2	9.3
			180	40	21.1	91.7	1.1	0.6
		2	140	20	30.1	101	3	3.2
				40	44.8	116.1	2.3	1.9
			180	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, Cont'd.

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	40	32.6	103.6	1.7	4.3
		2	140	20	37.8	108.9	3.9	15.9
				40	27.3	98.1	1.4	1.2
			180	20	36.2	107.2	3.6	5.3
	1000	1	140	40	54.1	125.7	2.8	3.2
				20	61.6	133.4	6.3	11.5
			180	40	17.1	85.9	0.9	1.7
		2	140	20	23.4	91.7	2.4	7.9
				40	34.8	102.2	1.8	4.8
			180	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
		1	140	20	66.3	131.4	6.8	13
				40	18.1	85.2	0.9	1.8
	1100	1	140	20	24.8	90.9	2.5	8.7
				40	36.8	101	1.9	5.2
			180	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
12 (1 HP)	1100	1	140	20	70.9	129.7	7.2	14.4
				40	18.1	85.2	0.9	1.8
			180	20	24.8	90.9	2.5	8.7
		2	140	40	36.8	101	1.9	5.2
				20	42.8	106	4.4	19.4
			180	40	31.2	96.2	1.6	1.4
	1200	1	140	20	41.5	105	4.2	6.5
				40	62.1	122.2	3.2	4
			180	20	70.9	129.7	7.2	14.4
		2	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
1300	1300	1	140	20	45.1	104.8	4.6	21
				40	33.0	95.4	1.7	1.6
			180	20	44.0	104	4.4	7.2
		2	140	40	65.8	120.7	3.3	4.4
				20	75.2	128	7.7	15.8
			180	40	19.9	84.2	1	2.1
	1300	1	140	20	27.4	89.5	2.8	10.1
				40	40.7	99	2.1	6.1
			180	20	-	-	-	-
		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
		2	140	20	79.4	126.6	8.1	17.2
				40	-	-	-	-
			180	20	-	-	-	-

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, Cont'd.

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
		1	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, Cont'd.

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
	2200	2	180	40	104.2	118.2	5.3	1.8
				20	121.7	126.3	12.4	6.9
		1	140	40	31.6	83.3	1.6	1
				20	44.7	88.8	4.5	5.2
		1	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
		2	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
		1	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
30 (3 HP)	2800	2	180	40	117.2	115.2	6	2.2
				20	137.3	123	14	8.3
		1	140	40	31.8	80.5	1.6	0.1
				20	58.0	89.2	5.8	1
		1	180	40	85.2	98.2	4.3	0.6
				20	104.1	104.4	10.6	2.5
	3000	2	140	40	71.4	93.6	3.6	0.5
				20	102.3	103.8	10.3	2.3
		2	180	40	152.3	120.4	7.7	1.4
				20	177.2	128.6	18.1	5.2
		1	140	40	33.6	80.4	1.7	0.2
				20	60.4	88.7	6.1	1.1
	3200	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
		2	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
		1	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
		2	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.

Heating Capacity, Cont'd.

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
		1	180	40	19.0	105.2	1	1.5
				20	22.4	111.4	2.3	5.6
		2	140	40	14.6	97.1	0.7	0.4
				20	20.8	108.6	2.1	1.8
	600	2	180	40	31.1	127.6	1.6	1.1
				20	35.8	136.4	3.7	3.9
		1	140	40	9.9	85.3	0.5	0.6
				20	14.4	92.2	1.5	2.9
		1	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
		2	180	40	35.3	124.5	1.8	1.3
				20	40.9	133.1	4.2	4.8
	700	1	140	40	10.9	84.4	0.5	0.7
				20	15.8	90.9	1.6	3.4
		1	180	40	23.4	100.9	1.2	2
				20	27.7	106.6	2.8	7.8
		2	140	40	18.5	94.5	0.9	0.5
				20	26.3	104.8	2.7	2.6
08 (1 HP)	700	2	180	40	39.2	121.9	2	1.5
				20	45.5	130.2	4.6	5.7
	800	1	140	40	10.0	83.3	0.5	0.6
				20	14.7	89.4	1.5	3
		1	180	40	21.7	98.7	1.1	1.8
				20	25.6	103.9	2.6	6.9
		2	140	40	17.3	92.9	0.9	0.5
				20	24.8	102.8	2.5	2.3
		2	180	40	36.8	118.7	1.9	1.4
				20	42.9	126.7	4.4	5.2
	900	1	140	40	11.1	82.9	0.6	0.7
				20	16.2	88.7	1.6	3.5
		1	180	40	23.9	97.7	1.2	2.1
				20	28.3	102.8	2.9	8.1
		2	140	40	19.3	92.3	1	0.5
				20	27.5	101.8	2.8	2.7
		2	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
		1	180	40	26.1	96.8	1.3	2.4
				20	30.9	101.8	3.2	9.3
		2	140	40	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, Cont'd.

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

Heating Capacity, Cont'd.

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
		1	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, Cont'd.

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
		2	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
		1	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
		2	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
		1	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
		2	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
		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
		2	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
		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
		2	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
		1	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
		2	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 @ .50" ESP	64	59	55	51	46	40	35	57	1/2
	DUCTED DISCHARGE NOTE 3			63	53	53	51	50	45	37	57	
08	CASING RADIATED NOTE 2	1,075	800 @ .50" ESP	64	60	60	58	56	54	45	64	1
	DUCTED DISCHARGE NOTE 3			64	61	58	56	50	43	36	60	
10	CASING RADIATED NOTE 2	1,140	1,000 @ .50" ESP	70	65	59	59	55	49	41	64	1/2
	DUCTED DISCHARGE NOTE 3			68	63	65	64	61	60	53	68	
12	CASING RADIATED NOTE 2	1,235	1,200@ .50" ESP	73	69	61	62	57	51	44	67	1
	DUCTED DISCHARGE NOTE 3			72	67	67	67	64	63	57	72	
16	CASING RADIATED NOTE 2	1,066	1,600@ .50" ESP	73	69	62	64	60	55	48	68	1
	DUCTED DISCHARGE NOTE 3			72	68	69	70	68	68	63	75	
20	CASING RADIATED NOTE 2	910	2,000@ .50" ESP	74	69	60	59	56	51	42	66	1
	DUCTED DISCHARGE NOTE 3			71	67	66	66	64	63	57	71	
22 NOTE 4	CASING RADIATED NOTE 2	950	2,200@ .50" ESP	73	69	60	60	58	53	45	66	1-1/2
	DUCTED DISCHARGE NOTE 3			73	68	65	67	64	63	57	72	
30 NOTE 4	CASING RADIATED NOTE 2	860	3,000@ .50" ESP	74	70	65	63	61	57	49	69	3
	DUCTED DISCHARGE NOTE 3			71	73	75	72	70	70	64	78	

- NOTES:** 1. 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.
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. 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.
5. Sound power data is expressed in decibels, dB RE: 1 x 10⁻¹² w (picowatts).

Sound Power Data, Cont'd.

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 @ .50" ESP	68	62	59	56	50	42	38	58	1/2
	DUCTED DISCHARGE NOTE 3			64	58	52	56	51	45	39	55	
8	CASING RADIATED NOTE 2	1,065	800 @ .50" ESP	69	64	62	62	54	47	40	61	1
	DUCTED DISCHARGE NOTE 3			67	62	59	63	58	54	46	61	
10 NOTE 4	CASING RADIATED NOTE 2	1,095	1,000 @ .50" ESP	70	63	61	62	55	49	42	61	1/2
	DUCTED DISCHARGE NOTE 3			67	66	63	65	60	55	49	63	
12 NOTE 4	CASING RADIATED NOTE 2	1,220	1,200 @ .50" ESP	70	73	64	66	59	52	45	65	1
	DUCTED DISCHARGE NOTE 3			69	70	65	68	64	60	54	67	
16 NOTE 5	CASING RADIATED NOTE 2	1,160	1,600 @ .50" ESP	75	68	65	67	61	54	46	65	1
	DUCTED DISCHARGE NOTE 3			72	69	67	72	67	63	57	69	
20 NOTE 5	CASING RADIATED NOTE 2	1,020	2,000 @ .50" ESP	76	67	67	65	58	51	42	65	1
	DUCTED DISCHARGE NOTE 3			72	67	69	70	63	61	53	68	
22 NOTE 5	CASING RADIATED NOTE 2	1,085	2,200 @ .50" ESP	79	73	72	69	62	57	48	69	1-1/2
	DUCTED DISCHARGE NOTE 3			75	71	74	76	68	66	61	73	
30 NOTE 5	CASING RADIATED NOTE 2	915	3,000 @ .50" ESP	77	67	71	67	61	57	48	67	3
	DUCTED DISCHARGE NOTE 3			71	72	77	74	68	67	59	72	

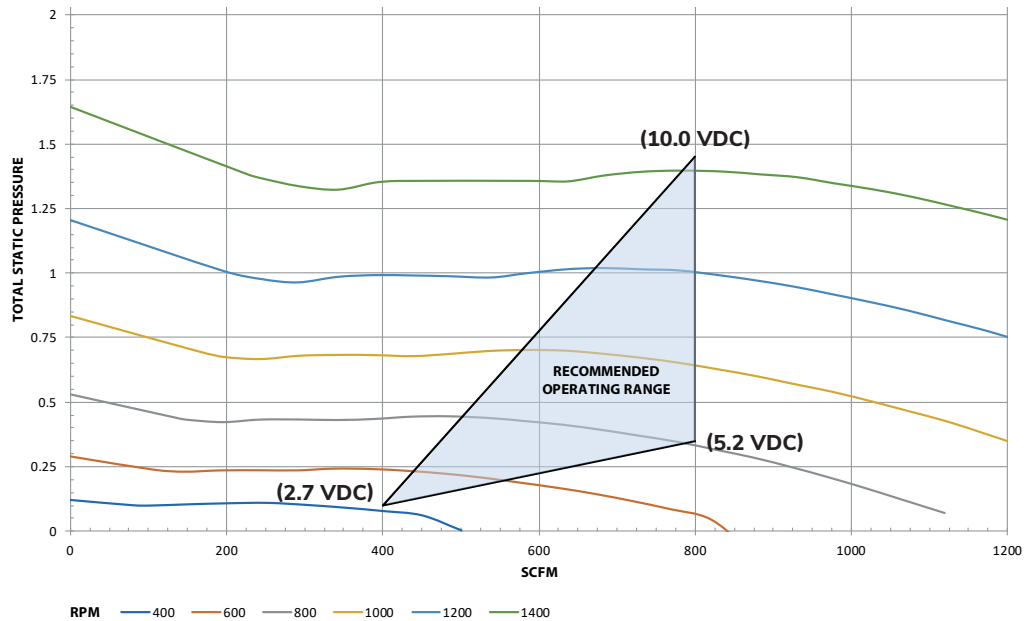
- NOTES: 1. Unit Test Configuration: Front Return/Top Supply, 4 Row, 10 FPI Coil, 115/1 PH/ 60 Hz VAC Motor, 2" Fiberglass Filter, 1" dual density fiberglass insulation.
2. Testing per AHRI 260-2001: 4.2.2.3 Casing radiated with free inlet, Sound Rating of Ducted Air Moving and Conditioning Equipment.
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

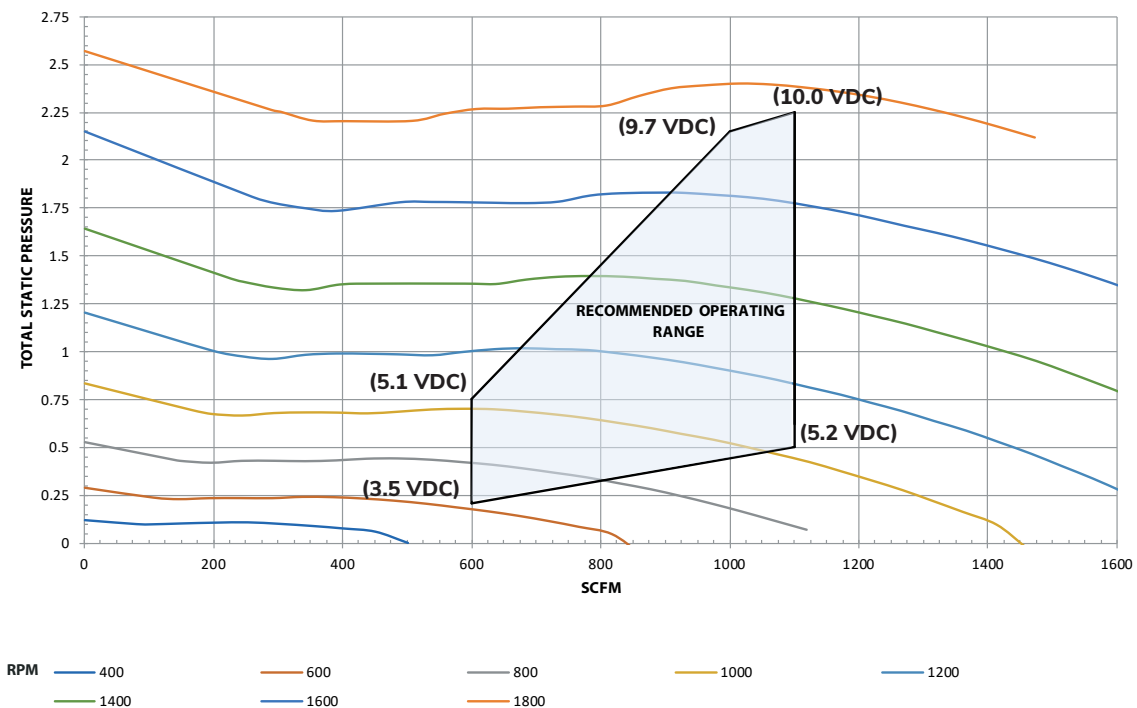
Operating units outside the recommended operating range can cause the electric heater nuisance tripping, condensate carryover and/or fan instability.

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

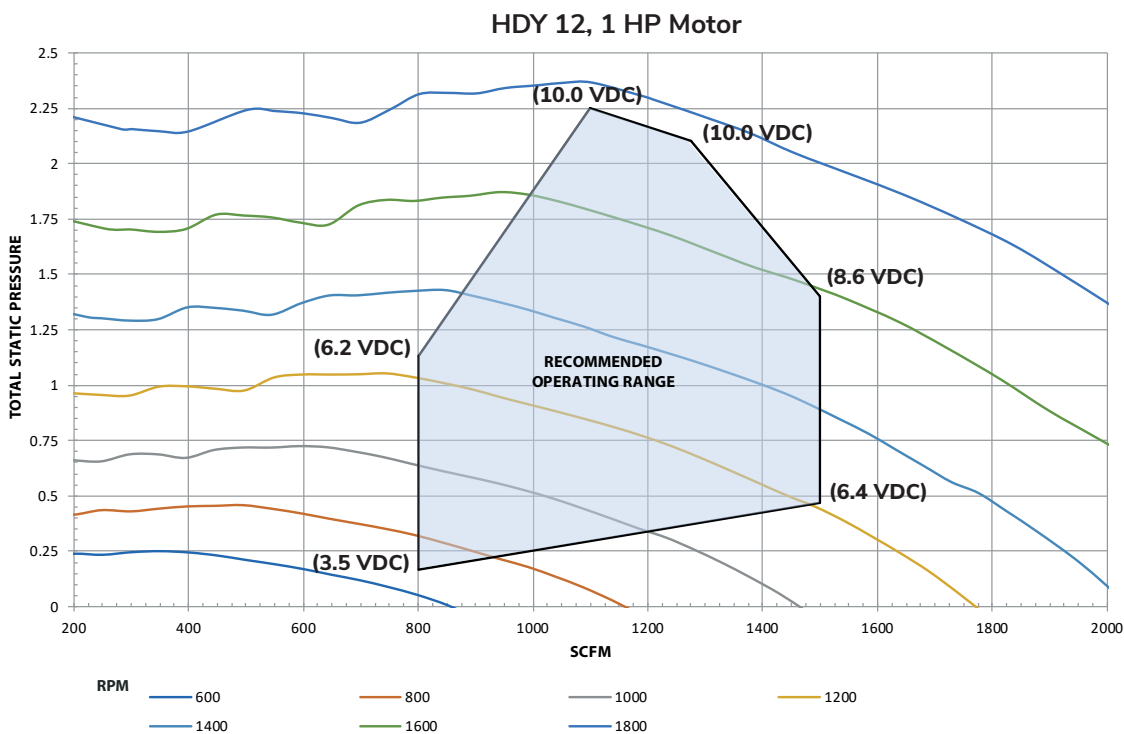
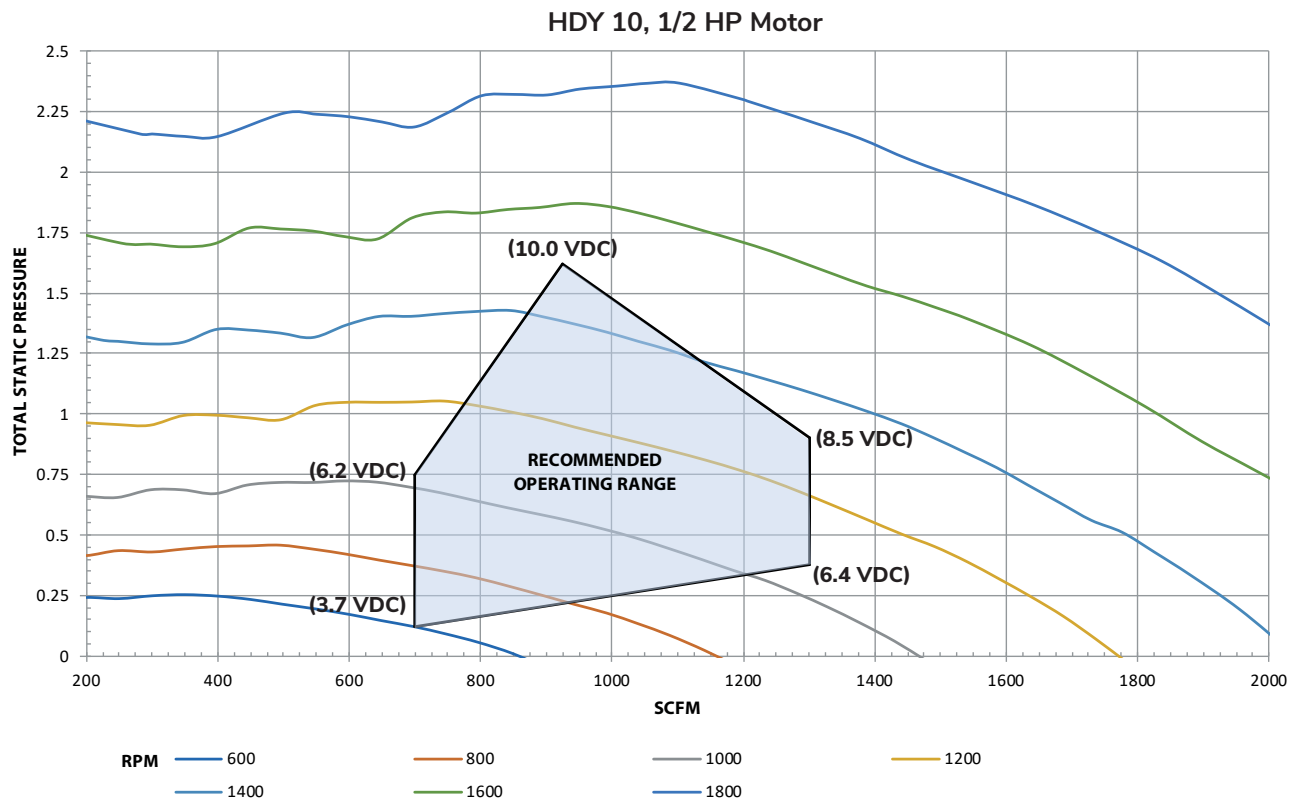
HDY 06, 1/2 HP Motor



HDY 08, 1 HP Motor

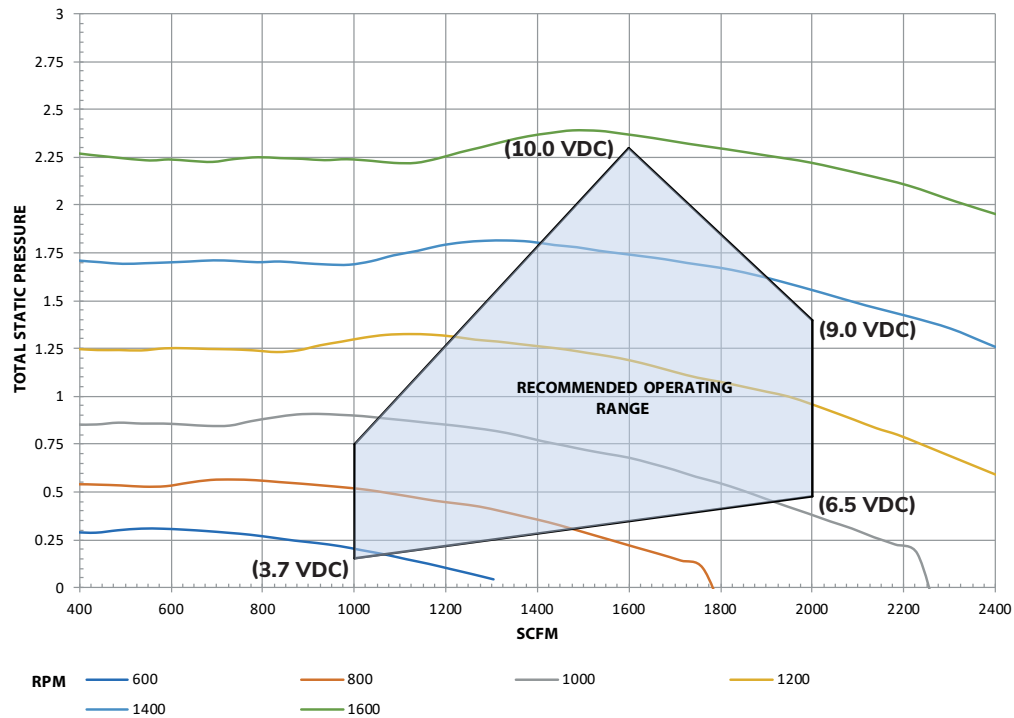


Fan Curves – HDY, Cont'd.

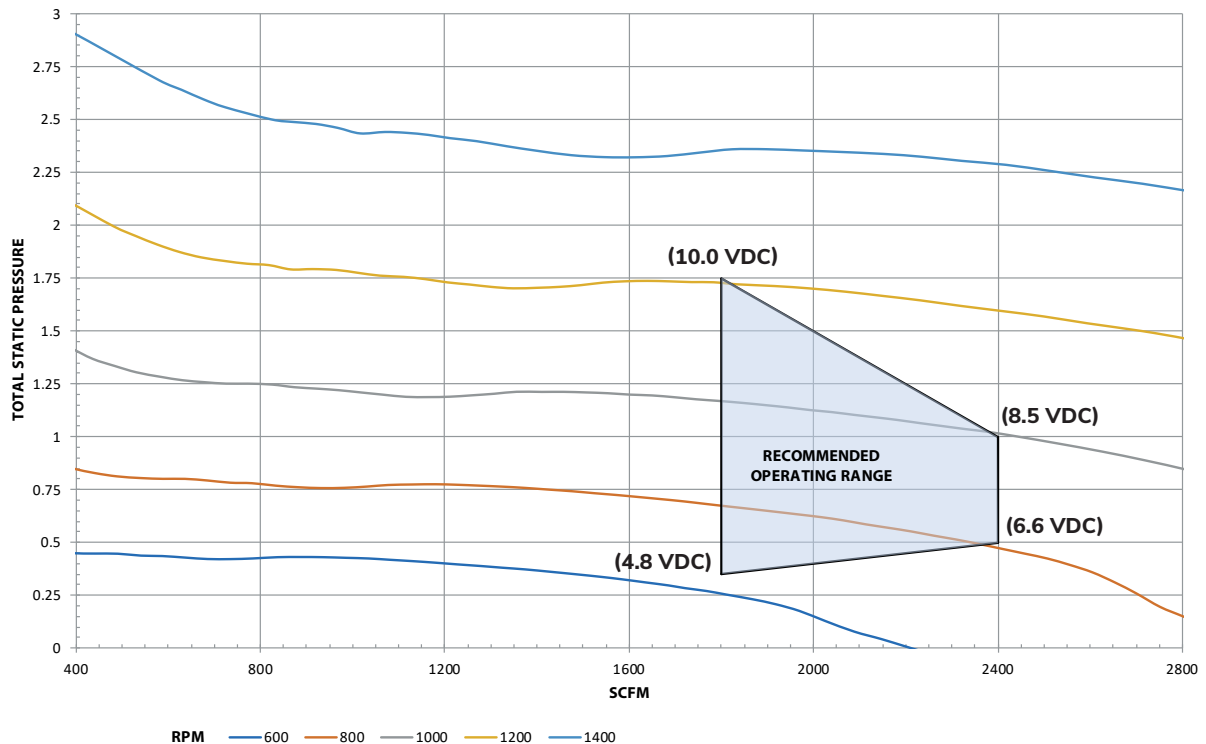


Fan Curves – HDY, Cont'd.

HDY 16, 1 HP Motor

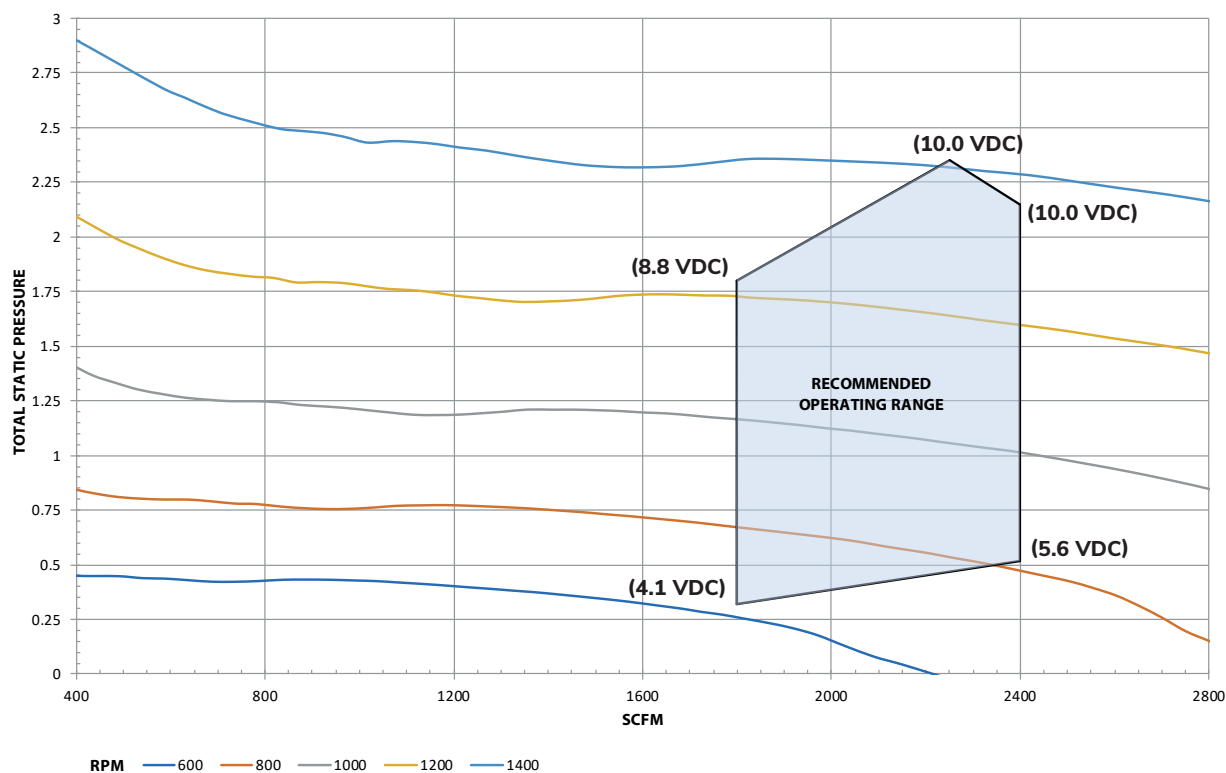


HDY 20, 1 HP Motor

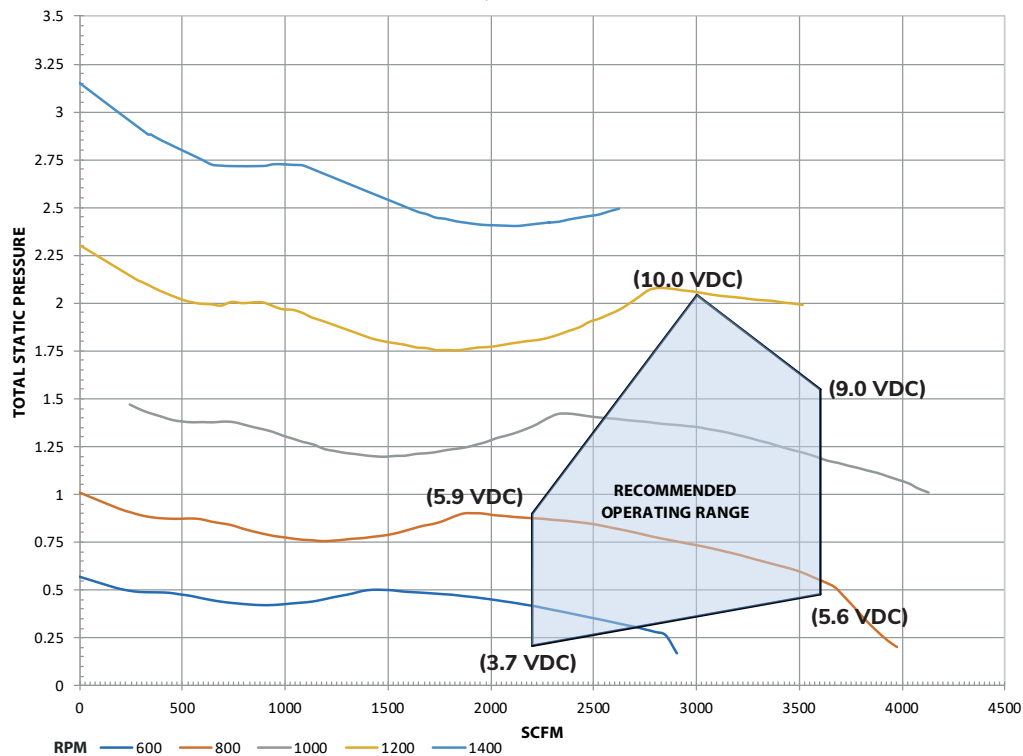


Fan Curves – HDY, Cont'd.

HDY 22, 1-1/2 HP Motor

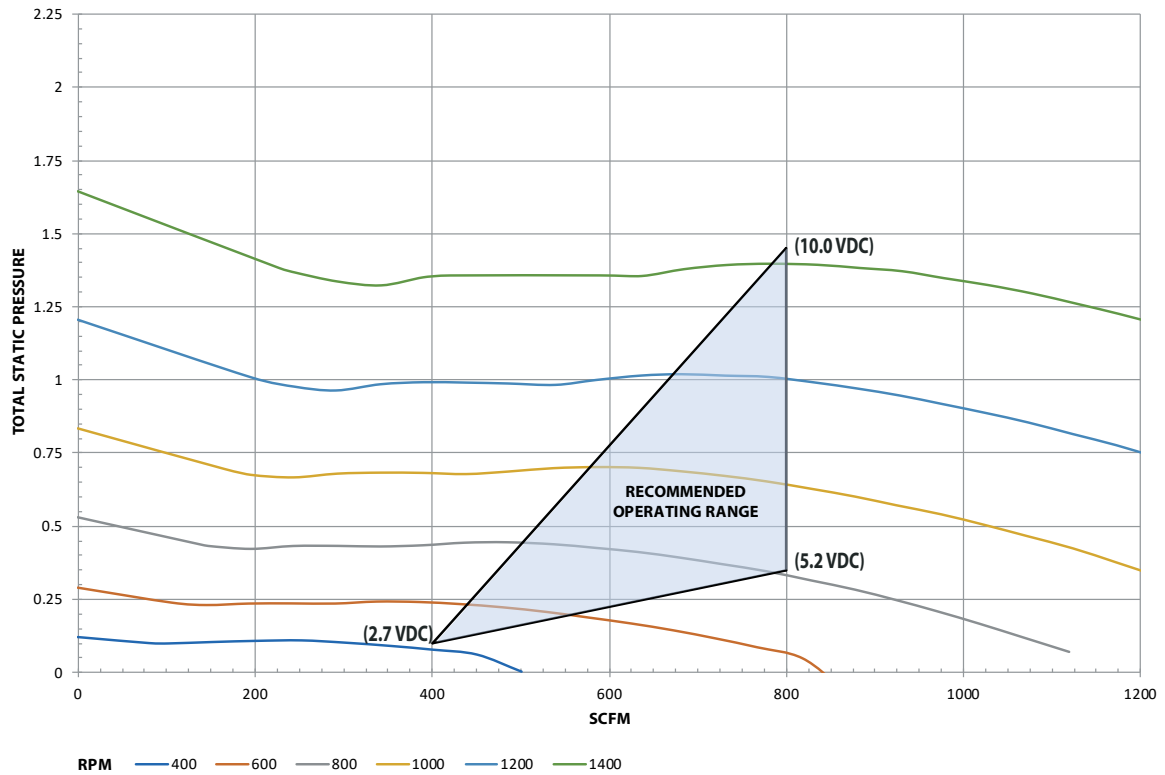


HDY 30, 3 HP Motor

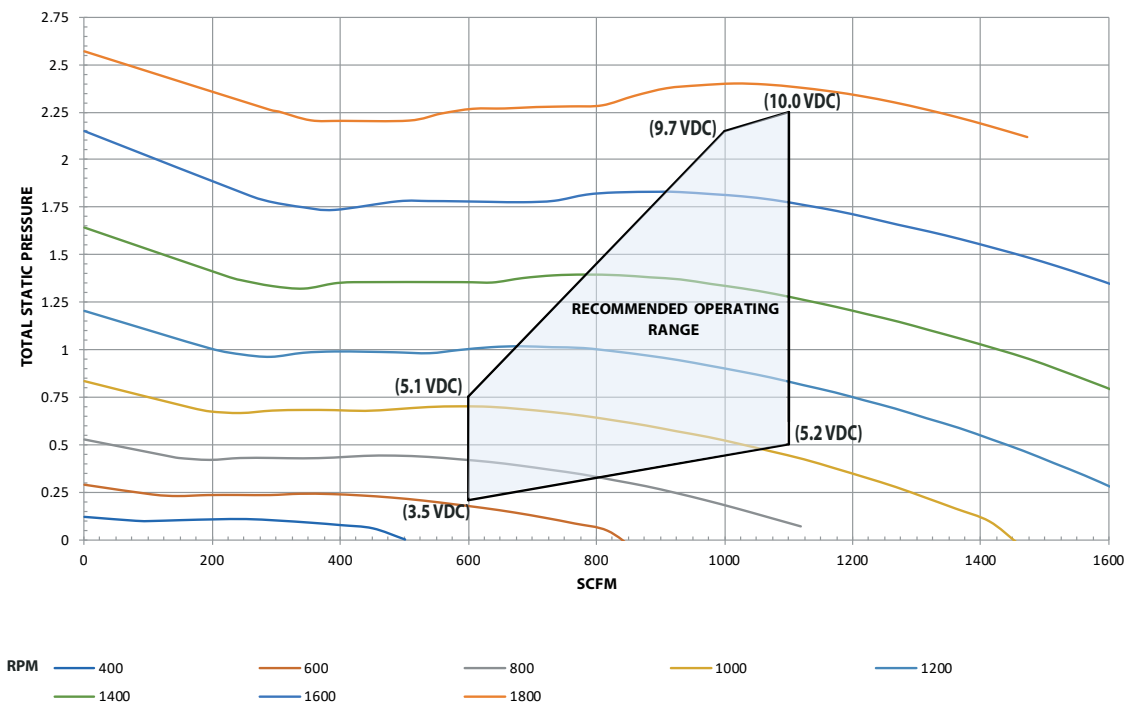


Fan Curves – VDY

VDY06, 1/2 HP Motor

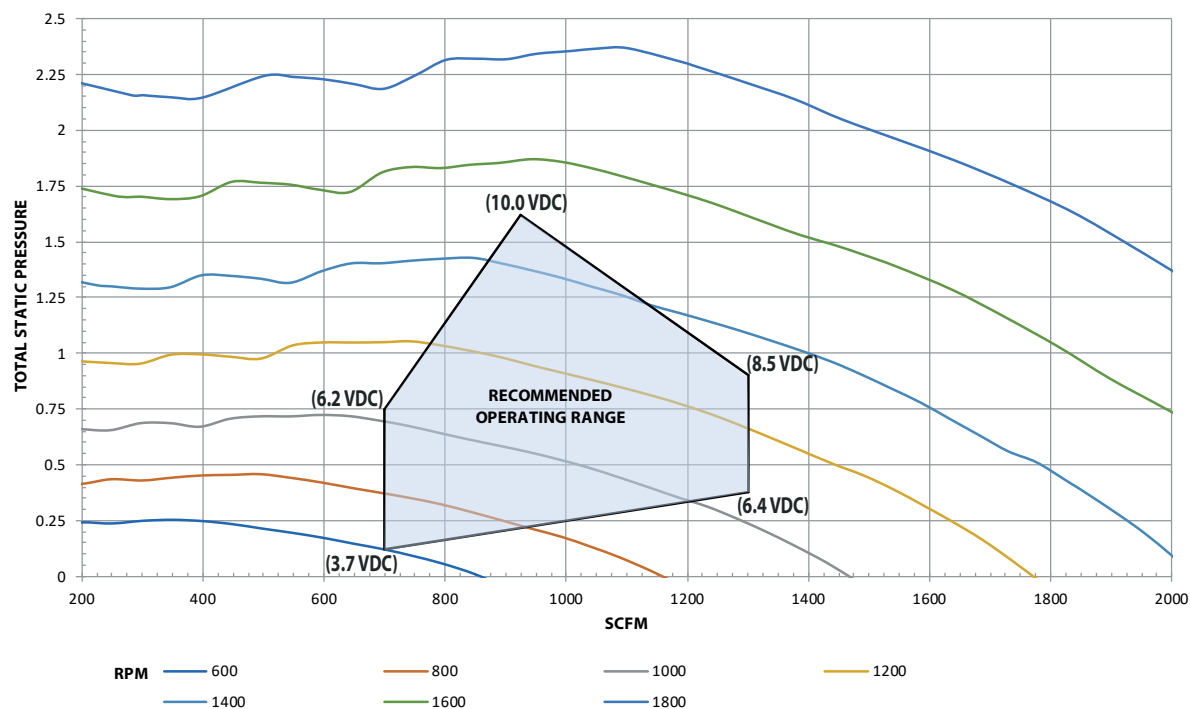


VDY08, 1 HP Motor

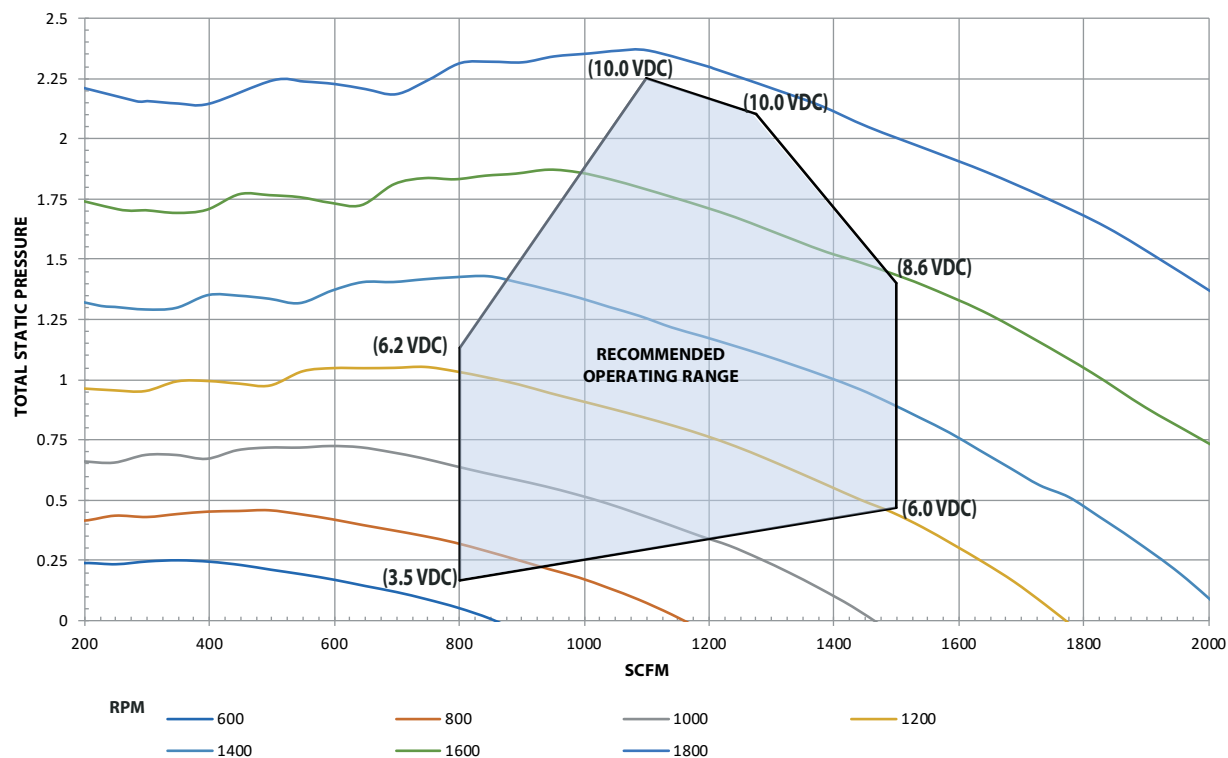


Fan Curves – VDY, Cont'd.

VDY10, 1/2 HP Motor

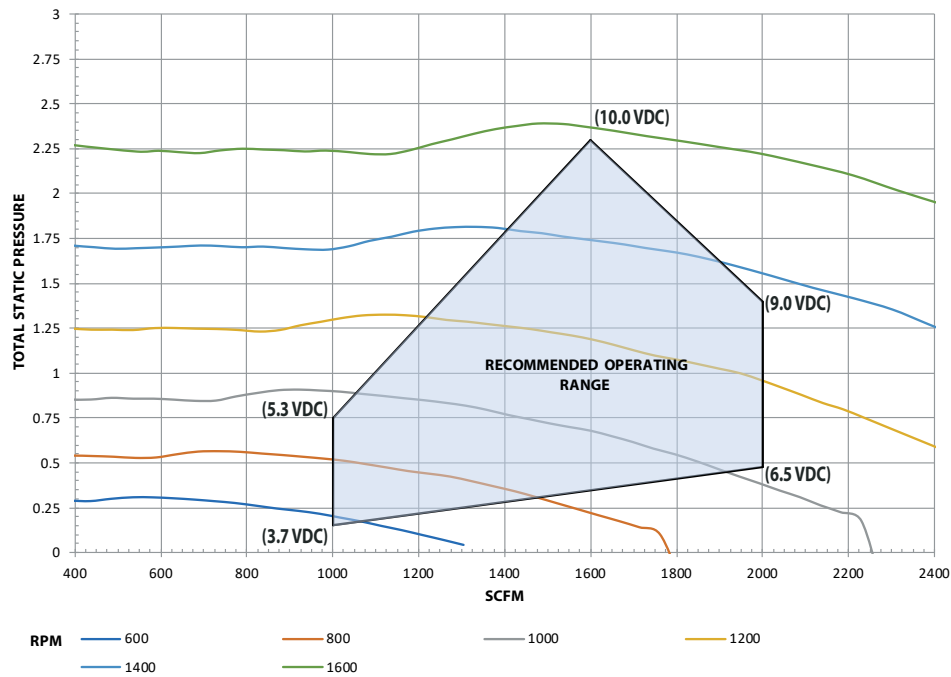


VDY12, 1 HP Motor

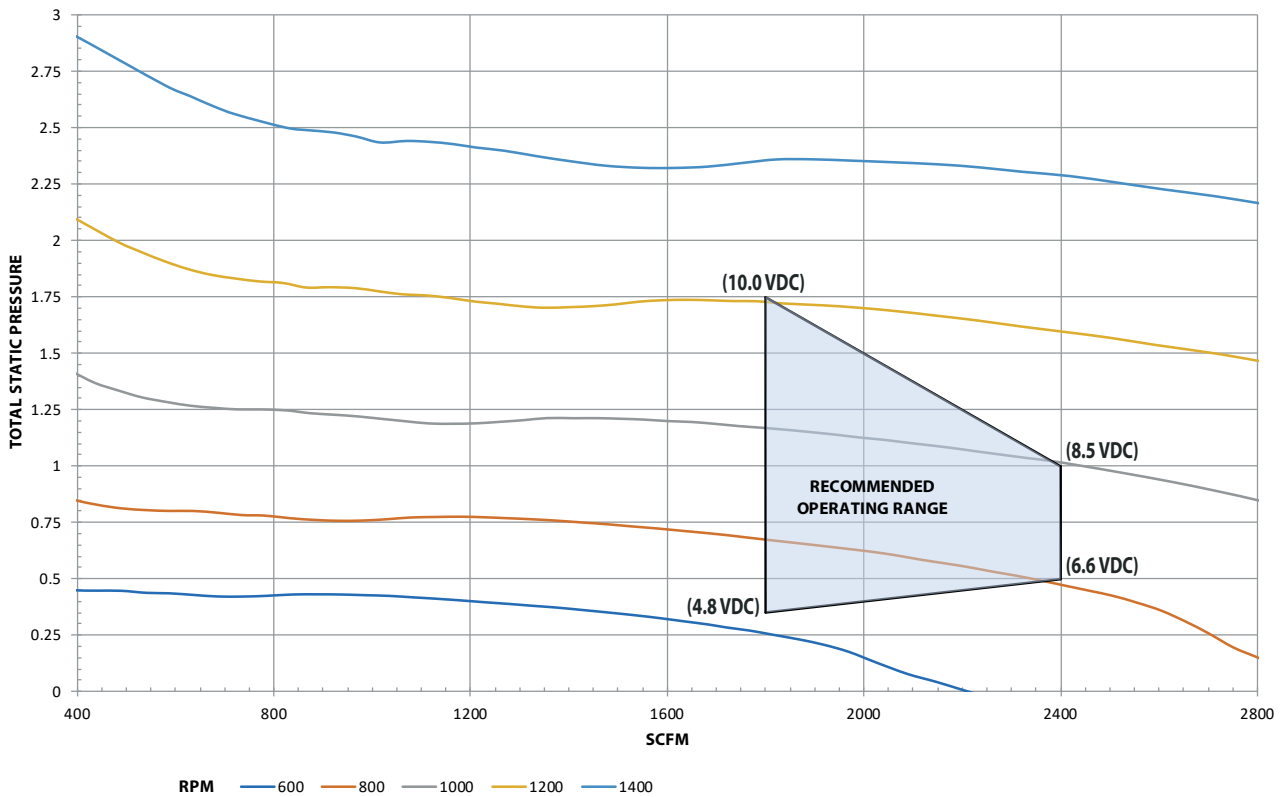


Fan Curves – VDY, Cont'd.

VDY16, 1 HP Motor

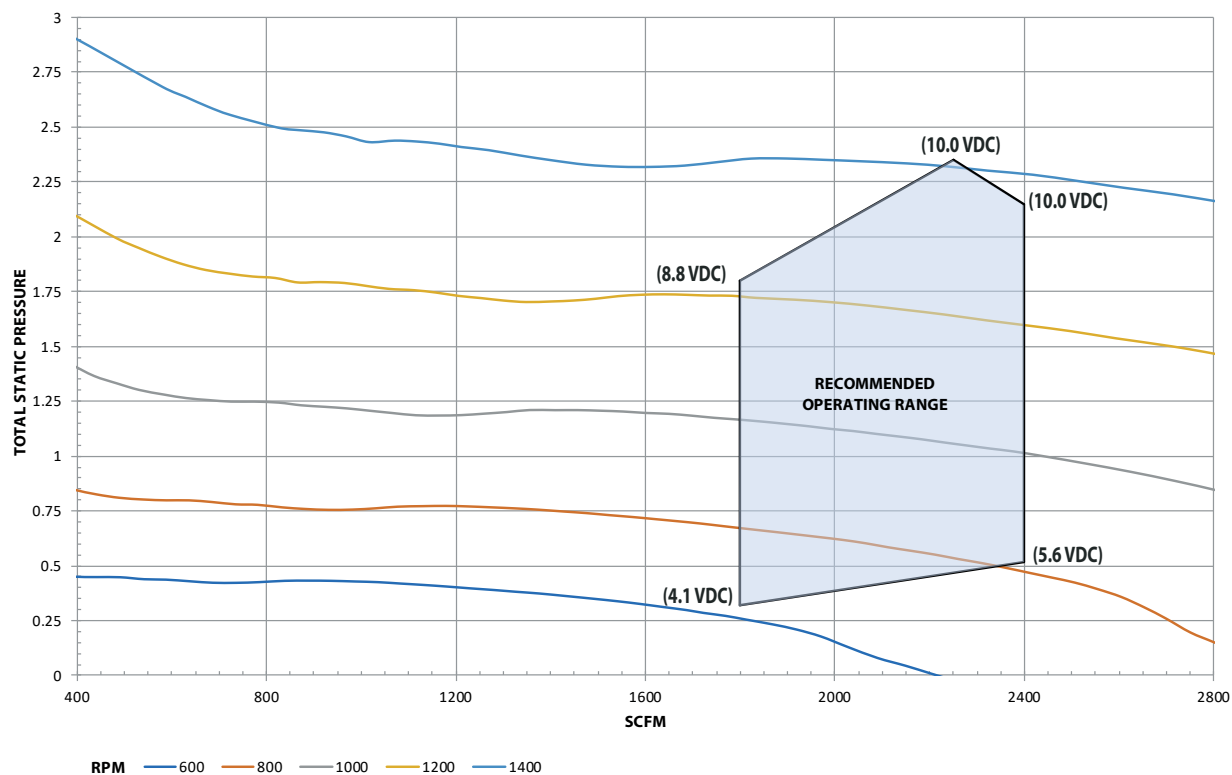


VDY20, 1 HP Motor

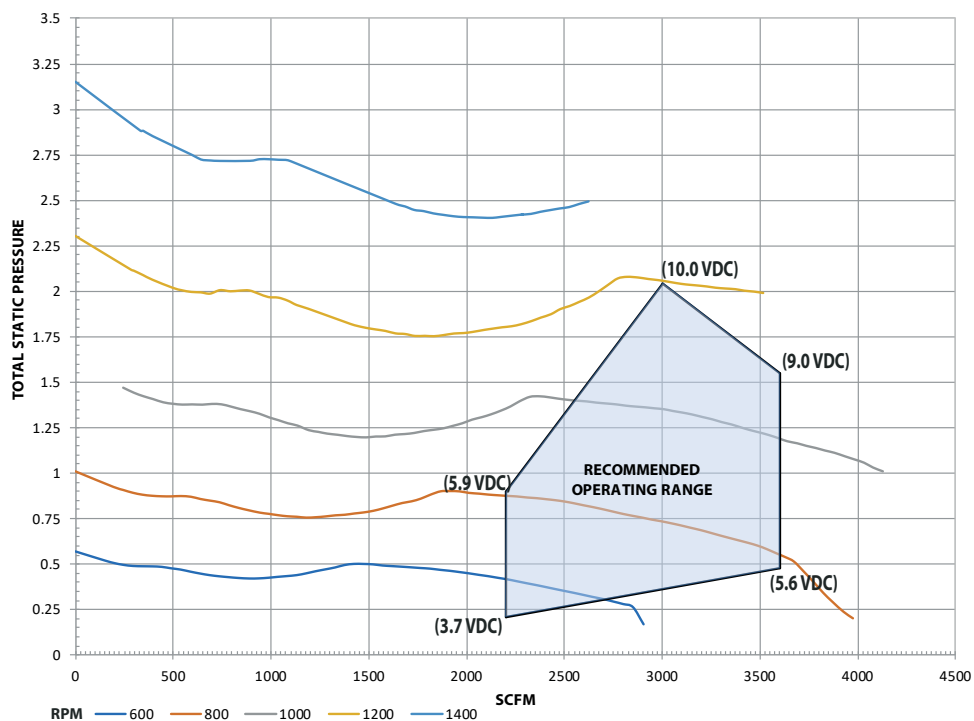


Fan Curves – VDY, Cont'd.

VDY22, 1.5 HP Motor

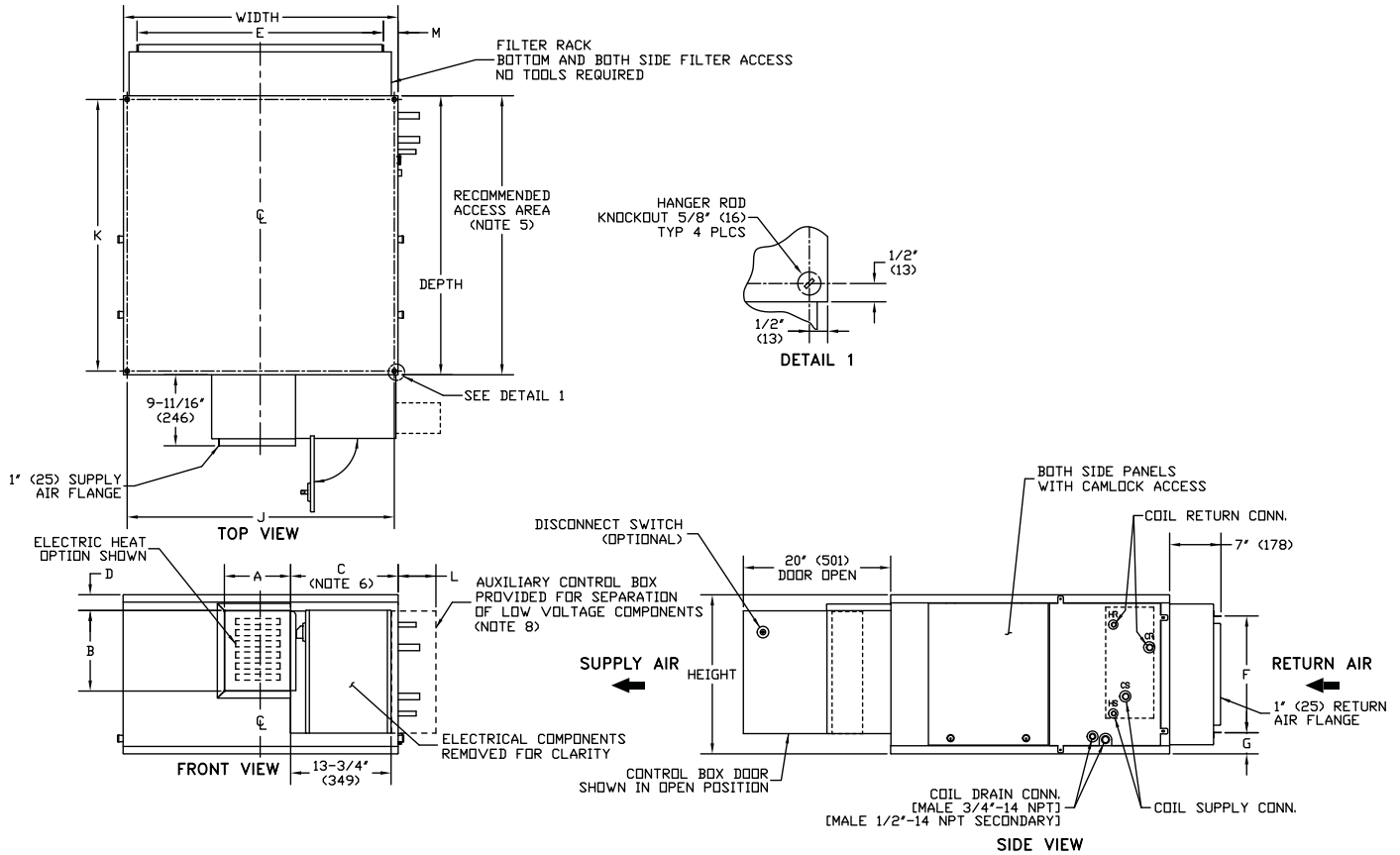


VDY30, 3 HP Motor



Submittal Data

HDY – Horizontal Direct Drive



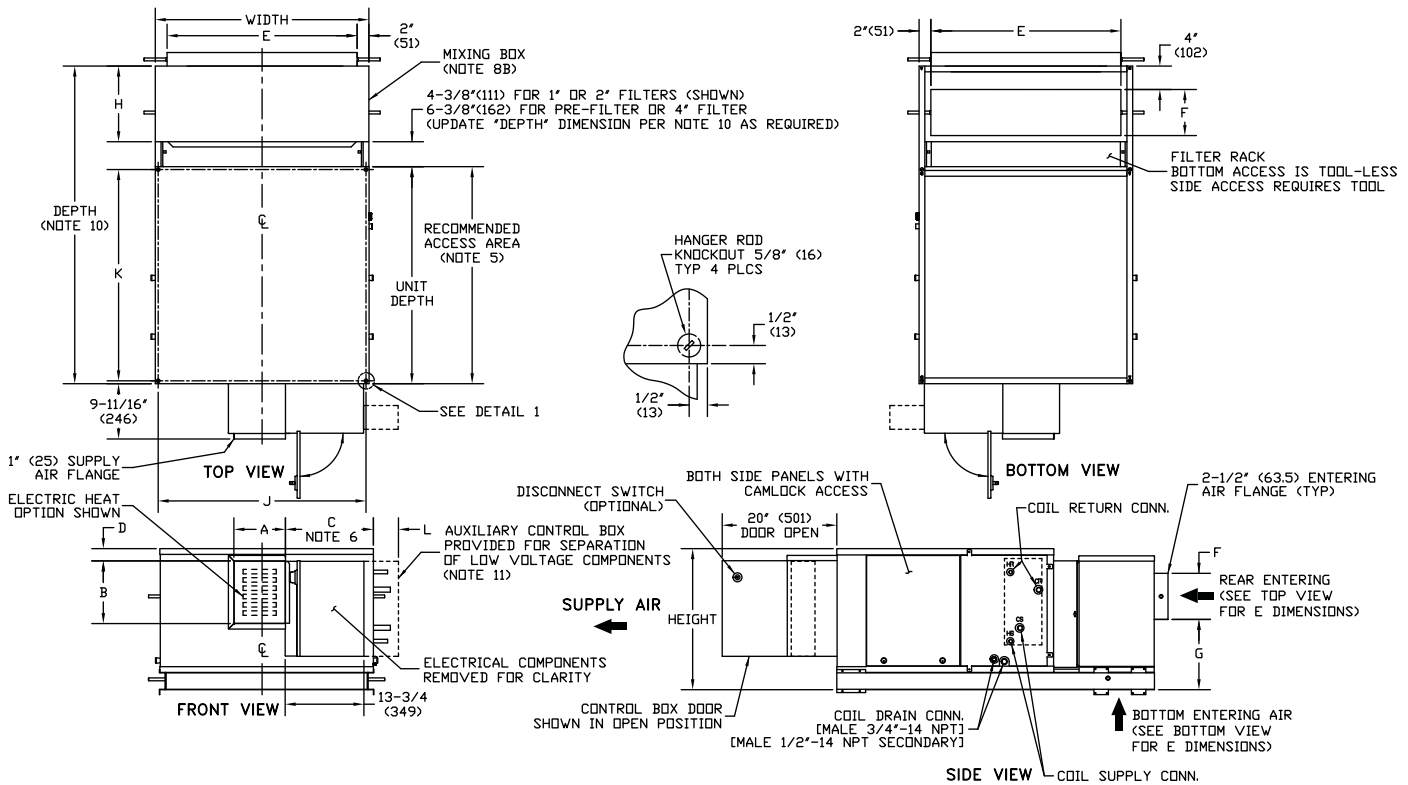
Size	Fan Size	Depth	Width	Height	Supply Duct Flanges				Return Duct Flanges			Mounting Holes		Aux. Ctrl. Box	M
					A	B	C	D	E	F	G	J	K		
HDY06	9x6	36 (914)	28 (711)	19-3/4 (502)	8-7/8 (225)	10-7/8 (276)	13-3/4 (349)	2-1/4 (57)	24-1/4 (616)	14 (356)	2-3/4 (70)	27-1/4 (686)	35-1/4 (895)	5-3/4 (146)	2 (51)
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)	24-1/4 (616)	14 (356)	2-3/4 (70)	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)	33-1/4 (845)	15-3/4 (401)	2-7/8 (73)	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)	33-1/4 (845)	15-3/4 (401)	2-7/8 (73)	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)	43-7/8 (1115)	15-3/4 (401)	2-7/8 (73)	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)	44-1/4 (1124)	18 (457)	2-7/8 (73)	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)	44-1/4 (1124)	26-1/2 (673)	1-1/4 (32)	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.

Submittal Data, Cont'd.

HDY – with Optional Mixing Box



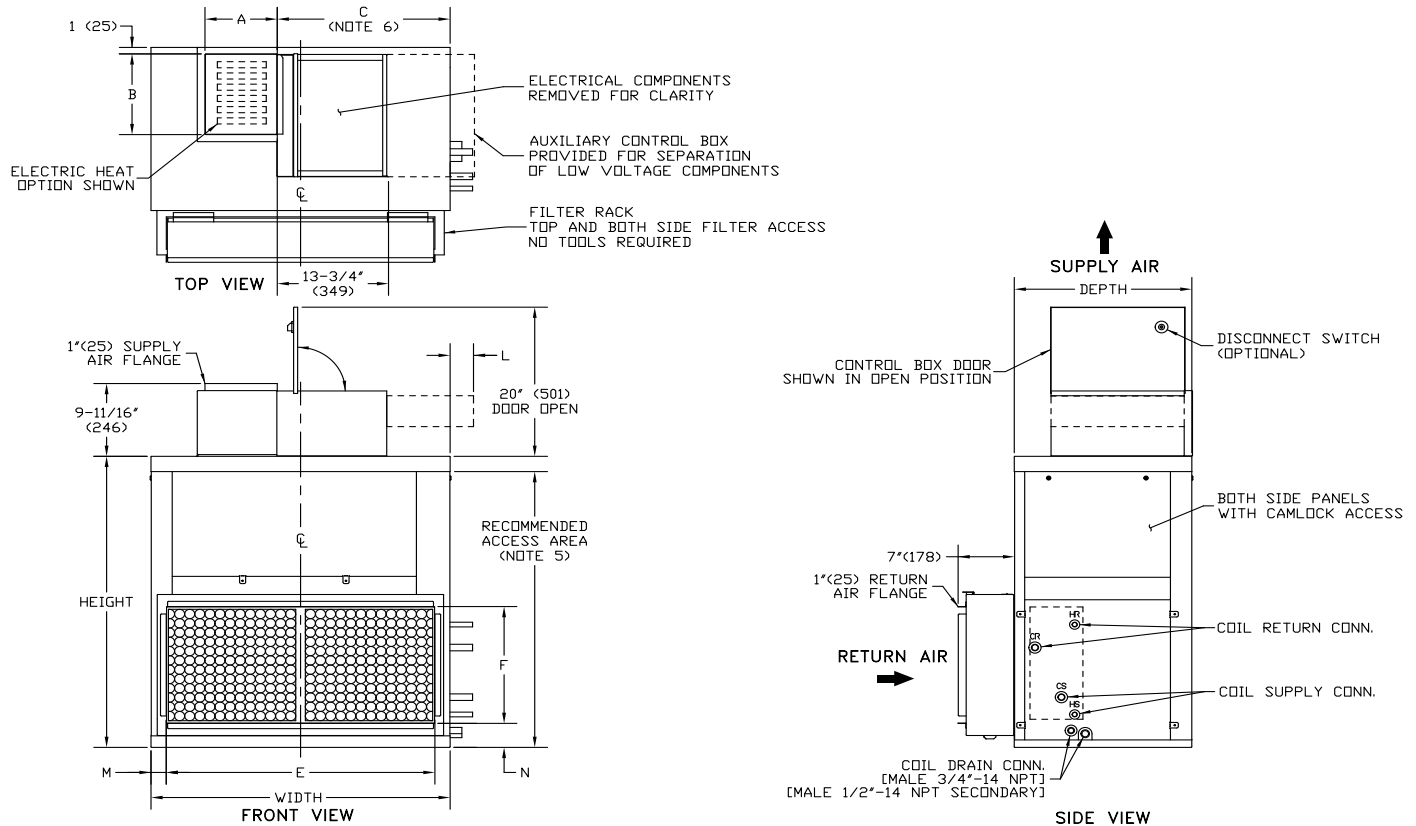
Size	Fan Size	Depth	Unit Depth	Width	Height	Supply Duct				Return Duct (Note 7)			Mix Box	Mounting Holes		Aux. Box
						A	B	C	D	E	F	G		H	J	
HDY06	9x6	51-5/8 (1311)	36 (914)	28 (711)	22-3/4 (578)	8-7/8 (225)	10-7/8 (276)	13-3/4 (349)	2-1/4 (57)	24 (610)	6 (152)	12-1/2 (318)	11 (279)	27-1/4 (686)	35-1/4 (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, Cont'd.

VDY – Vertical Direct Drive



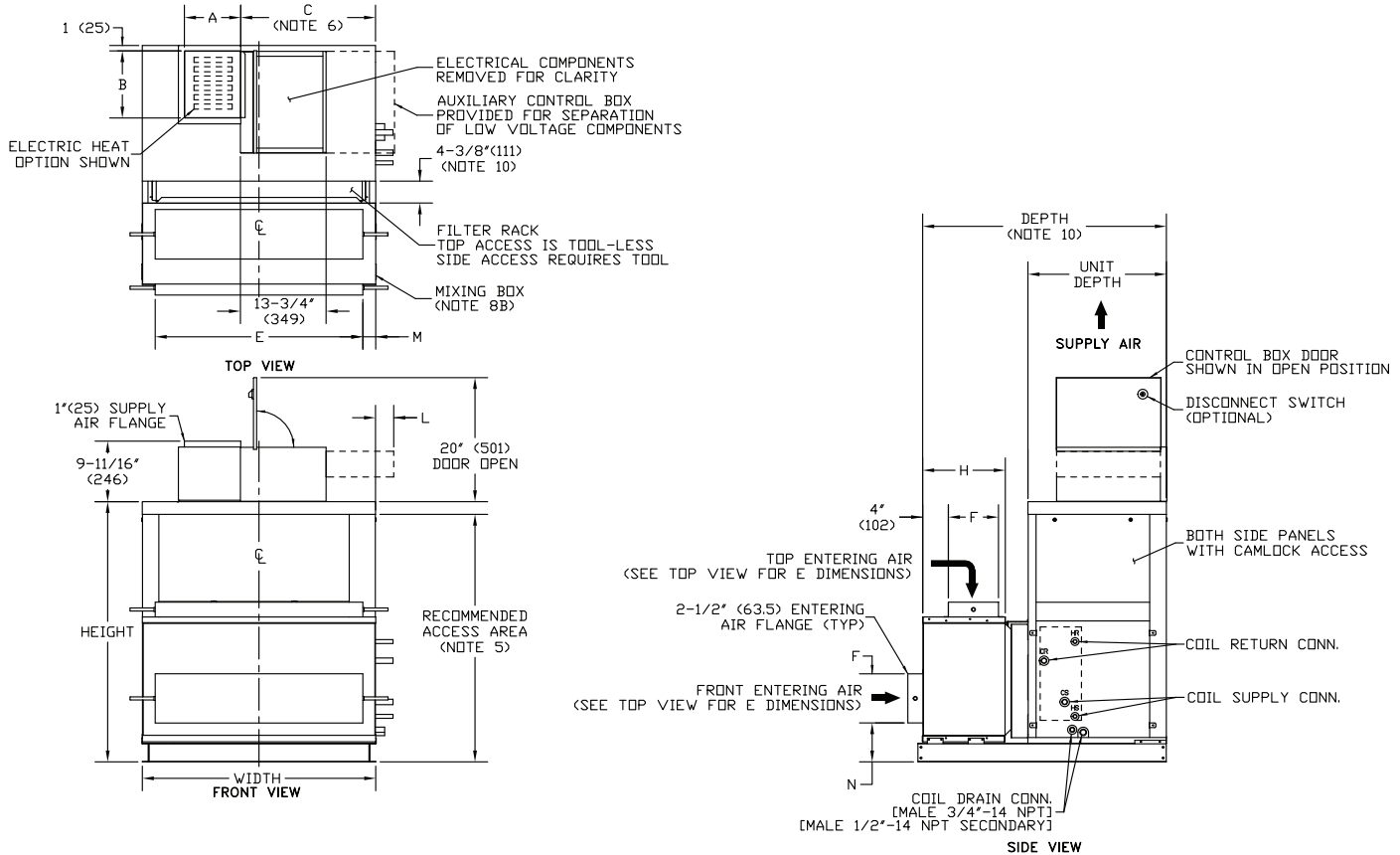
Size	Fan Size	Depth	Width	Height	Supply Duct			Return Duct		Aux. Ctrl. Box	Unit side to duct flange	Unit bottom to duct flange
					A	B	C	E	F			
06	9x6	20 (508)	28 (711)	36-1/2 (927)	8-7/8 (225)	10-7/8 (276)	15-1/8 (384)	24-1/4 (616)	14 (356)	4-1/2 (114)	1-7/8 (48)	2-7/8 (73)
08	9x6	20 (508)	28 (711)	36-1/2 (927)	8-7/8 (225)	10-7/8 (276)	15-1/8 (384)	24-1/4 (616)	14 (356)	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)	33-1/4 (845)	15-3/4 (401)	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)	33-1/4 (845)	15-3/4 (401)	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)	43-7/8 (1115)	15-3/4 (401)	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)	44-1/4 (1124)	18 (457)	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)	44-1/4 (1124)	26-1/2 (673)	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, Cont'd.

VDY – with Optional Mixing Box



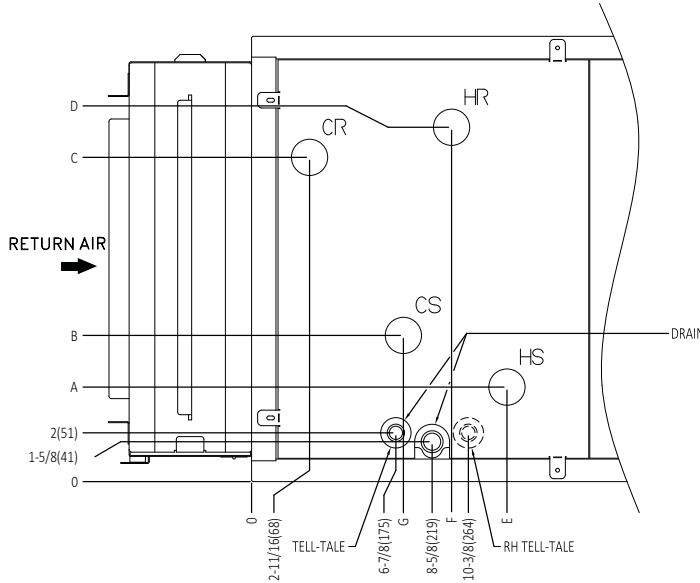
Size	Fan Size	Depth	Unit Depth	Width	Height	Supply Duct			Return Duct		Mix Box	Aux. Box	Unit side to duct flange	Unit bottom to duct flange
						A	B	C	E	F				
06	9x6	35-1/2 (902)	20 (508)	28 (711)	36-1/2 (927)	8-7/8 (225)	10-7/8 (276)	15-1/8 (384)	24 (610)	6 (152)	11 (279)	4-1/2 (114)	1-7/8 (48)	2-7/8 (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

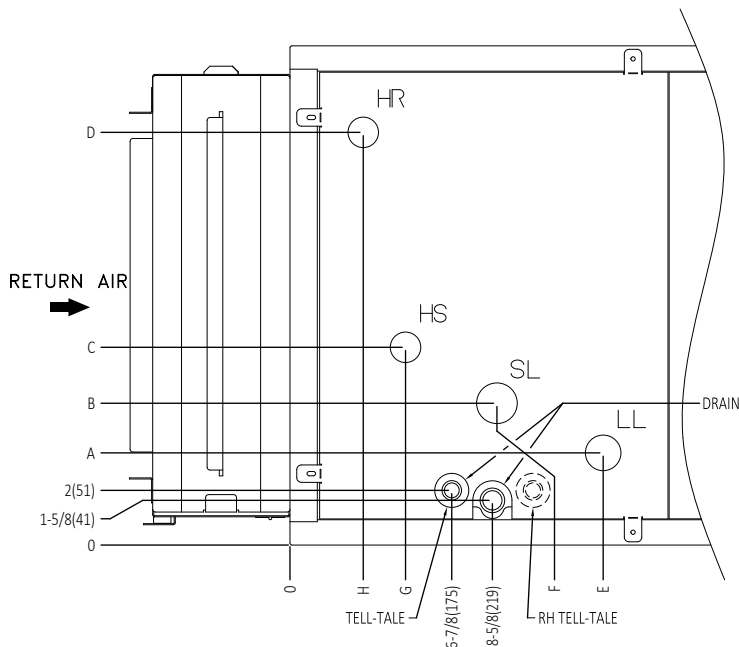
CR - Cold Water Return
 HR - Hot Water Return
 CS - Cold Water Supply
 HS - Hot Water Supply
 RH - Right Hand
 LH - Left Hand

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			15-1/2	7	7	
		2	3-13/16			15-13/16	7-9/16	7-9/16	
	6	—	—			—	—	—	8-1/8
		1	3-1/2			15-1/2	9-3/16	9-3/16	
		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	—	—			—	—	—	8-1/8
		1	5-1/8			17-1/8	9-3/16	9-3/16	
		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			12	9-5/8 9-5/8	7 7	
		2	12			13-5/8	10-3/8	7-9/16	
	6	—	—			—	—	—	8-1/8
		1	LH 10-5/8 RH 13-3/8			12	11-13/16 11-13/16	9-3/16 9-3/16	
		2	12			13-5/8	12-1/2	9-3/4	
20/22	4	—	—	7-13/16	18-3/16	—	—	—	5-15/16
		1	LH 11-15/16 RH 14-11/16			13-5/16	9-5/8	7	
		2	11-9/16			15-13/16	9-1/16	—	
	6	—	—			—	—	—	8-1/8
		1	LH 11-15/16 RH 14-11/16			13-5/16	11-13/16	9-3/16	
		2	11-9/16			15-13/16	11-1/4	—	
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	—	—			—	—	—	8-1/8
		1	7-1/16			25-13/16	11-1/8	9-1/8	
		2	10-5/16			23-13/16	11-5/16	—	
30	8	—	—			—	—	—	10-1/4
		—	—			—	—	—	

Piping Connections – HDY, Cont'd.

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



Unit Size	Coil Header Connection Size (Nominal OD in Inches)							
	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

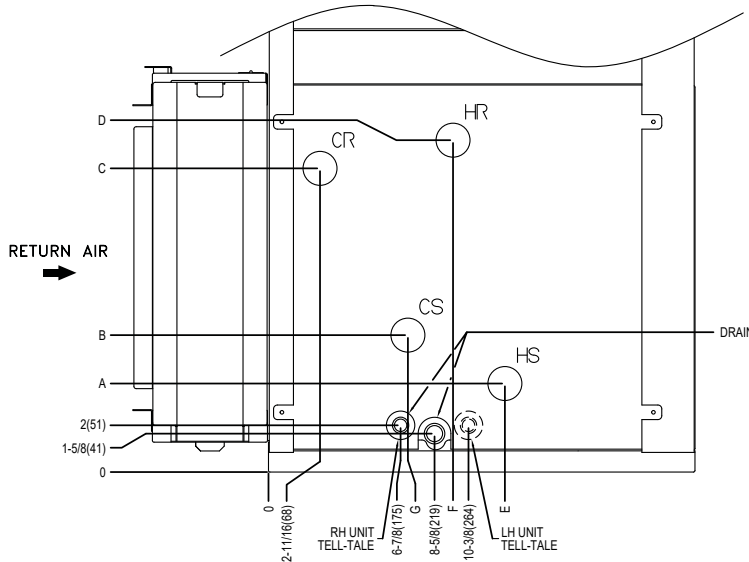
HR - Hot Water Return
 HS - Hot Water Supply
 LL - Liquid Line
 SL - Suction Line

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									
	4	1			6	18		3-3/4	2-5/8	2-5/8
	6									
	4	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									
	4	1			5-1/8	17-1/8		3-3/4	2-5/8	2-5/8
	6									
	4	2						4-7/8	3-1/4	3-1/4
16	4	-	6-1/2	7-1/8	-	-	12-1/2	2-3/4	-	-
	6									
	4	1			5-1/8	17-1/8		3-3/4	2-5/8	2-5/8
	6									
	4	2		6-3/8	10	13-5/8		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									
	4	1			5-1/4	19-3/4		3-3/4	2-5/8	2-5/8
	6									
	4	2			6-3/4	7-1/4		11-5/8	15-7/8	6-3/4
30	4	-	4-5/8	5-3/8	-	-	12-1/2	2-3/4	-	-
	6									
	4	1	4-7/8	6	12-1/8	25-7/8		6-1/8	4-1/2	2-5/8
	6									
	4	2	5-3/8	10-3/8	23-7/8	6-3/8				

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

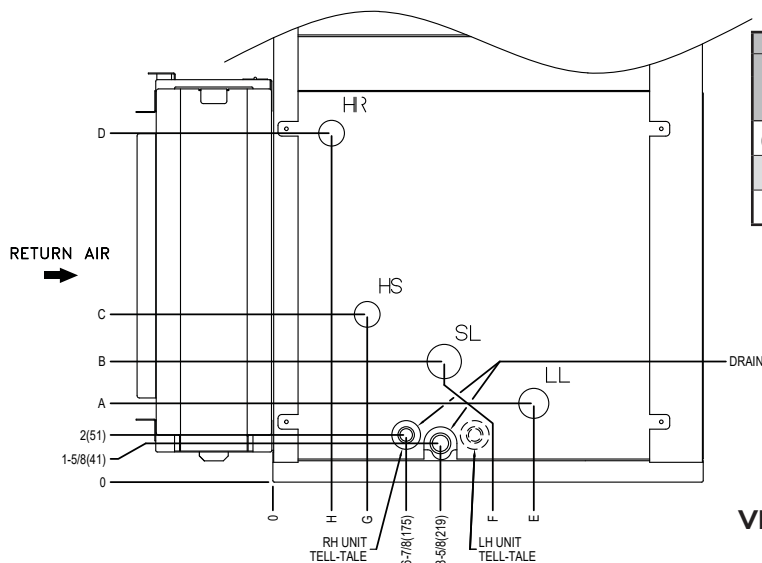
CR - Cold Water Return
 HR - Hot Water Return
 CS - Cold Water Supply
 HS - Hot Water Supply
 RH - Right Hand
 LH - Left Hand

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	—	—			—	—	—	8-1/8
		1	3-1/2			15-1/2	9-3/16	9-3/16	
		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	—	—			—	—	—	8-1/8
		1	5-1/8			17-1/8	9-3/16	9-3/16	
		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			12	9-5/8 9-5/8	7 7	
		2	12			13-5/8	10-3/8	7-9/16	
	6	—	—			—	—	—	8-1/8
		1	LH 10-5/8 RH 13-3/8			12	11-13/16 11-13/16	9-3/16 9-3/16	
		2	12			13-5/8	12-1/2	9-3/4	
20/22	4	—	—	7-13/16	18-3/16	—	—	—	5-15/16
		1	LH 11-15/16 RH 14-11/16			13-5/16	9-5/8	7	
		2	11-9/16			15-13/16	9-1/16	—	
	6	—	—			—	—	—	8-1/8
		1	LH 11-15/16 RH 14-11/16			13-5/16	11-13/16	9-3/16	
		2	11-9/16			15-13/16	11-1/4	—	
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	—	—			—	—	—	8-1/8
		1	7-1/16			25-13/16	11-1/8	9-1/8	
		2	10-5/16			23-13/16	11-5/16	—	
30	8	—	—			—	—	—	10-1/4
		—	—			—	—	—	

Piping Connections – VDY, Cont'd.

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	6	18	12-1/2	2-3/4	–	–
	6	1						3-3/4	2-5/8	2-5/8
	4	2						4-7/8	3-1/4	3-1/4
	6	–						2-3/4	–	–
	4	1						3-3/4	2-5/8	2-5/8
10/12	6	2	6-1/2	7-1/8	5-1/8	17-1/8	12-1/2	4-7/8	3-1/4	3-1/4
	4	–						2-3/4	–	–
	6	1						3-3/4	2-5/8	2-5/8
	4	2						4-7/8	3-1/4	3-1/4
	6	–						2-3/4	–	–
16	4	1	6-1/2	7-1/8	5-1/8	17-1/8	12-1/2	3-3/4	2-5/8	2-5/8
	6	2						6-6/8	4-1/8	2-5/8
	4	–						2-3/4	–	–
	6	1						3-3/4	2-5/8	2-5/8
	4	2						6-6/8	4-1/8	2-5/8
20/22	6	–	6-1/2	7-1/8	5-1/4	19-3/4	12-1/2	2-3/4	–	–
	4	1						3-3/4	2-5/8	2-5/8
	6	2						6-3/4	4-1/4	2-5/8
	4	–						2-3/4	–	–
	6	1						6-1/8	4-1/2	2-5/8
30	4	2	4-7/8	5-3/8	10-3/8	23-7/8	12-1/2	6-3/8	4-1/2	2-5/8
	6	–						2-3/4	–	–
	4	1						6-1/8	4-1/2	2-5/8
	6	2						6-3/8	4-1/2	2-5/8
	4	–						2-3/4	–	–

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

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 SINGLE SPEED STANDARD EFFICIENCY	115V/1 PHASE/50-60 HZ	6.4	10.7	N/A	N/A
	208V/1 PHASE/50-60 HZ	3.8	6.3	N/A	N/A
	230V/1 PHASE/50-60 HZ	3.6	5.8	N/A	N/A
	277V/1 PHASE/50-60 HZ	3.2	5.1	N/A	N/A
3-PHASE SINGLE SPEED STANDARD EFFICIENCY	208V/3 PHASE/50-60 HZ	2.0	3.7	4.4	8.9
	230V/3 PHASE/50-60 HZ	1.85	3.3	4.4	8.9
	460V/3 PHASE/50-60 HZ	1.0	1.75	2.2	4.4

Factory Installed Options

Controls:

Motor Controls – Units without electric heat:

Two controls schemes are available:

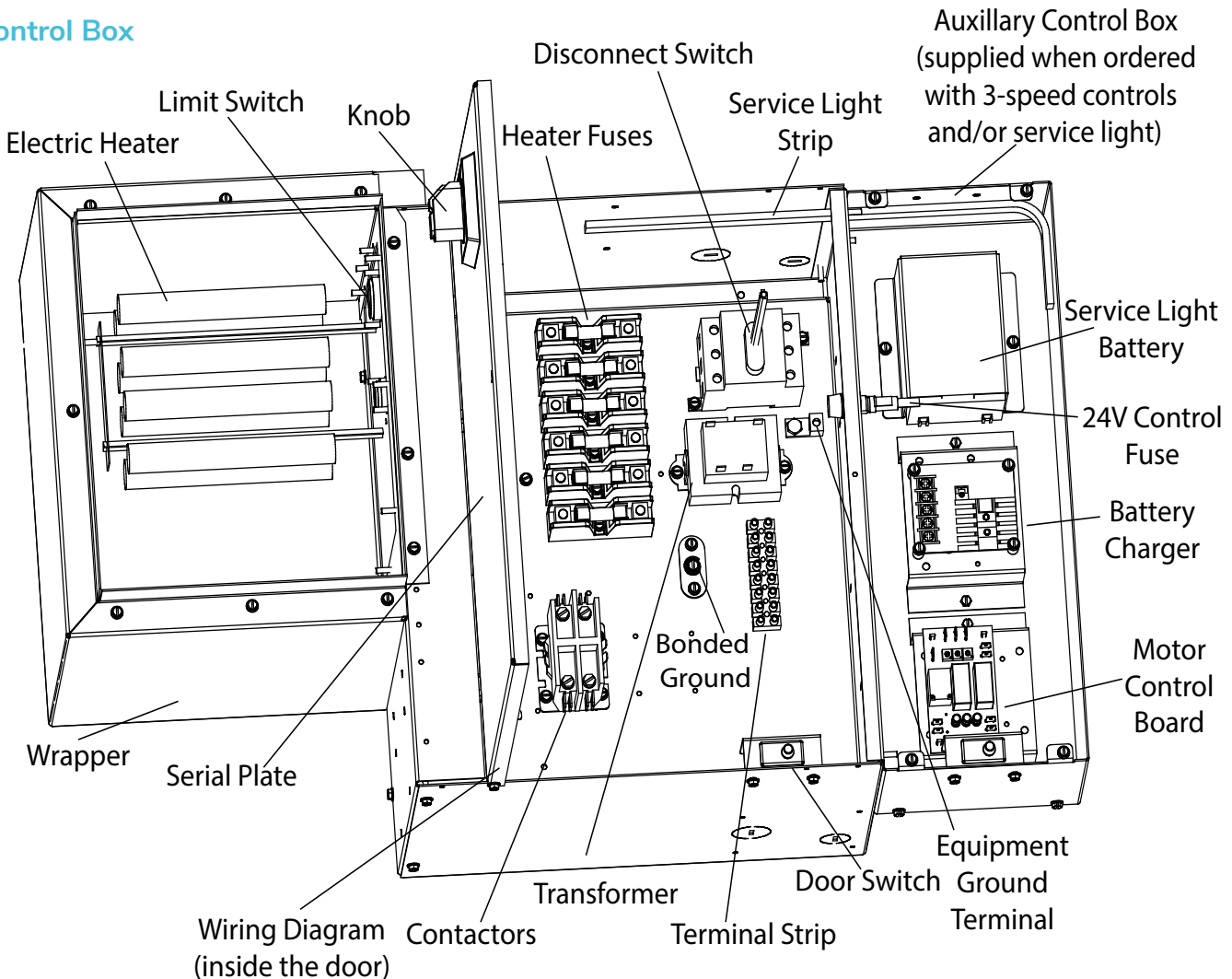
- 3 - Speed adjustable.
- Proportional (0 - 10 VDC).

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.

Control Box



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

Factory Installed Options, Cont'd.

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, Cont'd.

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.

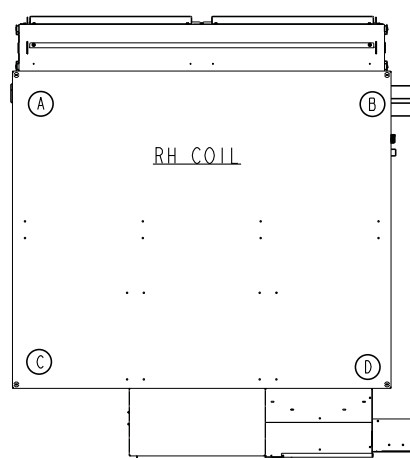
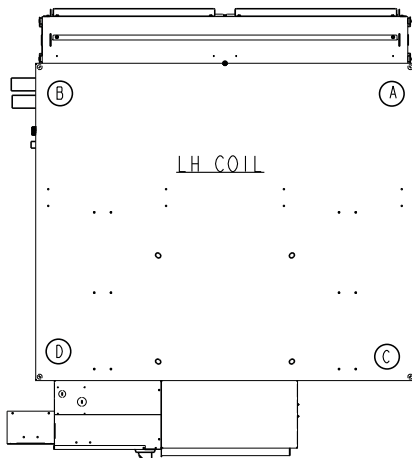
***LEGEND:** P • Basic 24 V Digital, 7-Day Programmable
 N • Basic 24 V Digital, Non-Programmable
 W • Venture 24 V Wi-Fi Programmable

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	42	46	36	47	171	42	58	36	66	202
08	41	47	38	45	171	41	58	36	67	202
10	51	53	49	63	217	51	60	56	83	250
12	50	52	51	64	217	50	58	57	85	250
16	65	70	64	75	274	70	69	66	104	309
20	78	90	77	95	340	81	96	77	107	378
22	83	105	80	99	367	86	111	81	111	389
30	103	113	97	117	430	104	120	96	149	469

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

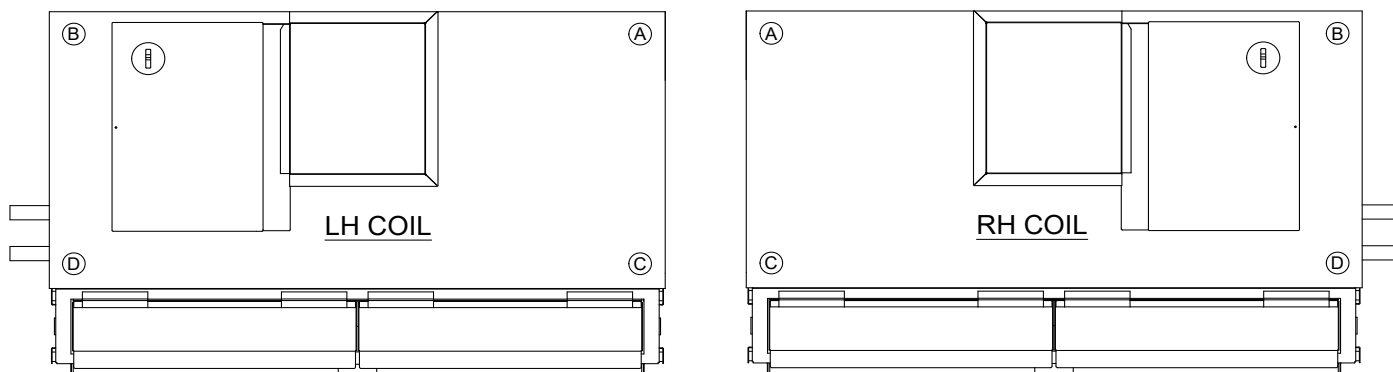
NOTES: 1. Unit weights (shown in pounds), +/- 10 percent, are based on the largest water-filled coil.

Unit Weight Calculations, Cont'd.

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	35	42	191	85	40	44	49	218
08	85	39	37	38	199	94	48	44	47	234
10	78	45	44	78	245	86	58	55	84	283
12	84	45	46	80	255	97	62	58	92	309
16	85	74	62	82	306	105	79	70	92	346
20	90	84	77	88	339	111	88	81	99	379
22	110	90	73	90	363	133	88	92	99	412
30	147	140	113	128	528	160	140	131	137	568

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

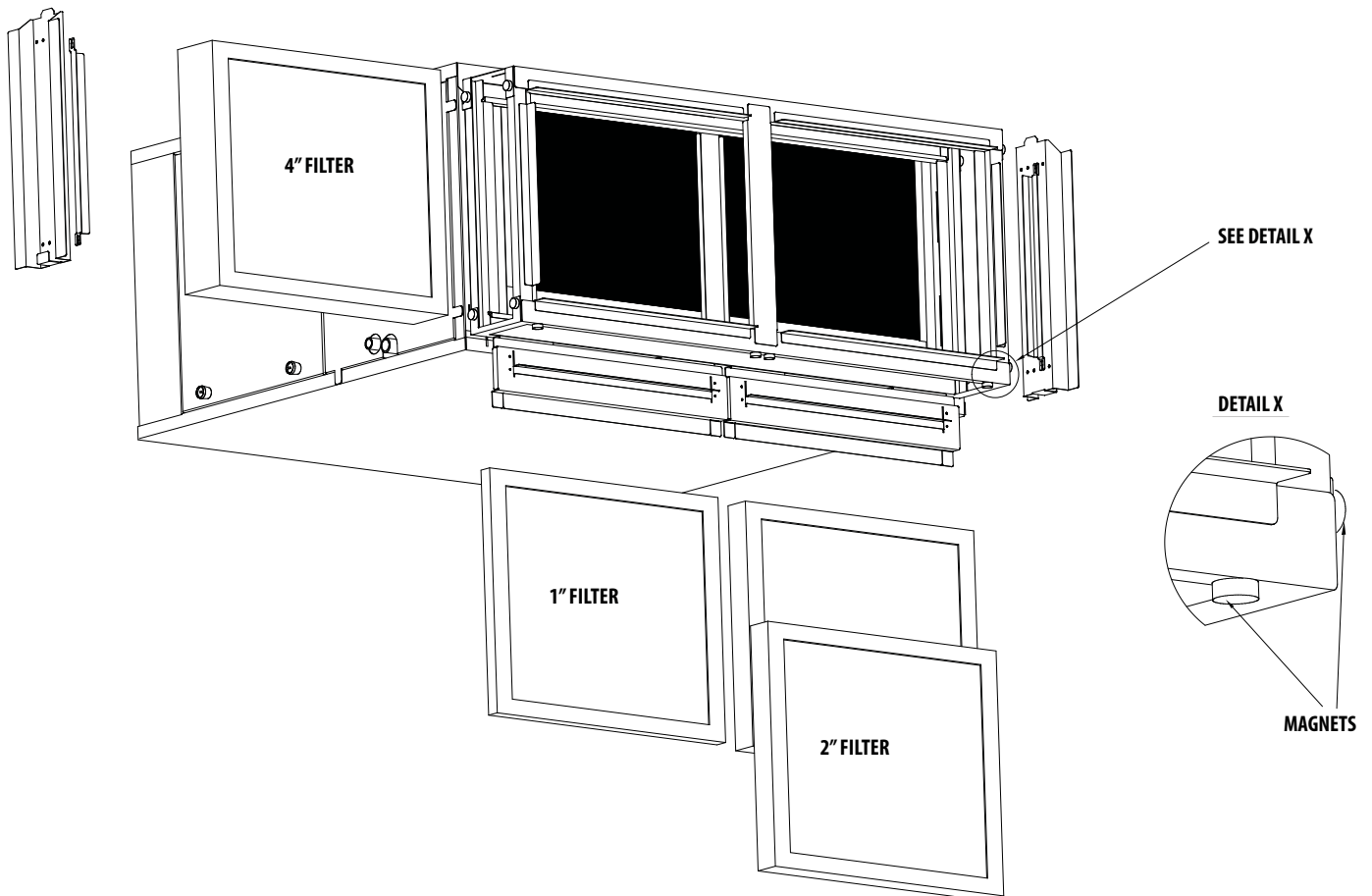
Filters – HDY

The standard Direct Drive Blower Coils are furnished with a set of 2" 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, usage of strong magnets in place of hardware
- Choice of 1", 2" or 4" filters
- Easy to modify in the field for either 1", 2" or 4" filters
- Robust design eliminates unit's sagging



Filters, Cont'd.

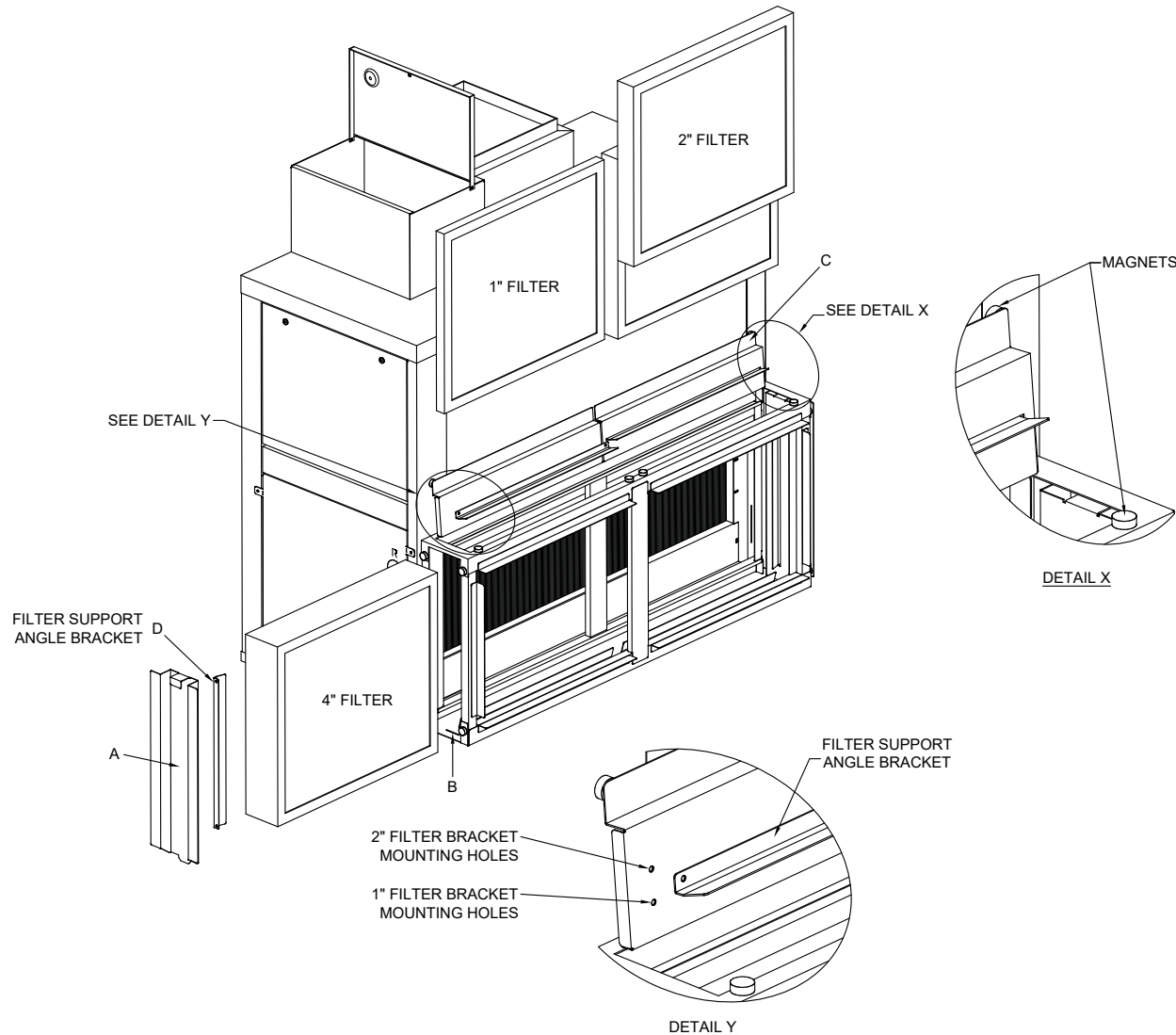
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06	1	16-1/2" x 24" (419 x 610)
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12	1	18-1/4" x 33" (464 x 838)
16	2	18-1/4" x 21-1/2" (464 x 546)
20/22	2	20-1/2" x 22" (521 x 559)
30	2	29" x 22" (737 x 559)

Universal Filter Rack Design - Features & Benefits

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



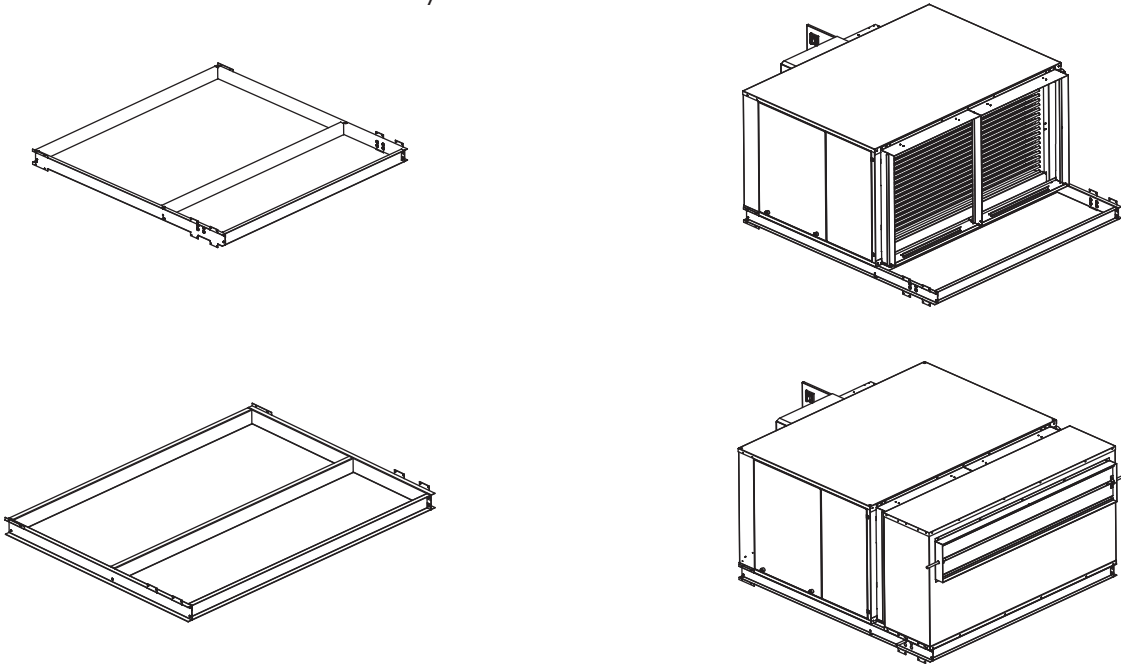
Mixing Boxes

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.

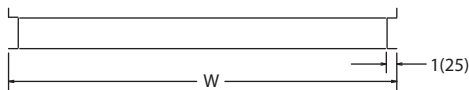
Mixing Box with Base Rails – HDY

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

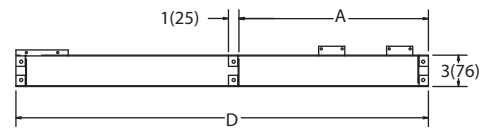
hardware required for assembly is included. Linkage kit consists of 2 crank arms, 2 swivels, and either a 25" (sizes 06-16) or a 34" (sizes 20-30) length of 5/16" rod provided for field installation of actuator. Consult factory for the 24 V damper actuator option. Mixing box option adds 3" to the unit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



Base Rail Details – HDY



FRONT VIEW



SIDE VIEW

Horizontal Units – Dimensions - Inches (Millimeters)			
Unit Type and Size	W	D	A
HDY06	28 (711)	51.6 (1311)	16.1 (409)
HDY08	28 (711)	51.6 (1311)	16.1 (409)
HDY10	37 (940)	55.2 (1402)	18.1 (460)
HDY12	37 (940)	55.2 (1402)	18.1 (460)
HDY16	47 (1194)	55.4 (1407)	18.1 (460)
HDY20/22	48 (1219)	57.8 (1468)	18.1 (460)
HDY30	48 (1219)	59.8 (1519)	20.1 (511)

NOTE: Dimensions are in inches (millimeters).

Mixing Boxes, Cont'd.

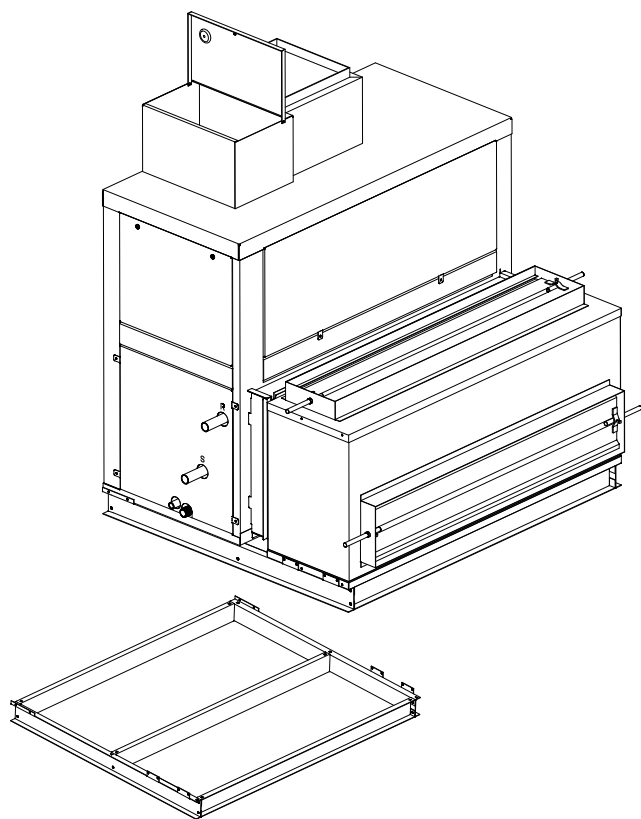
Mixing boxes can be used when outside air is required. Mixing boxes come with base rails. Refer to the drawings on pages 53 to 55 for additional information.

Mixing Box with Base Rails – VDY

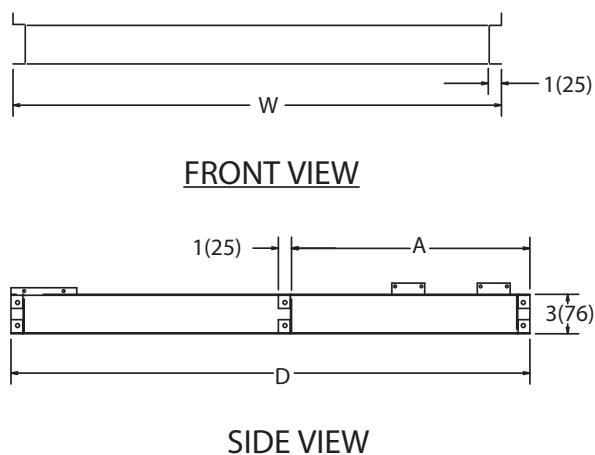
Mixing box option includes: 1) knockdown base rails for field assembly, and 2) pre-assembled mixing box. Base rails are letter coded for ease of assembly and all

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

Top/Front Inlet Mixing Box – VDY



Base Rail Details – VDY

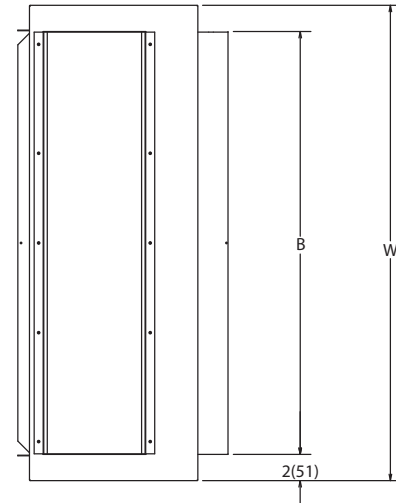
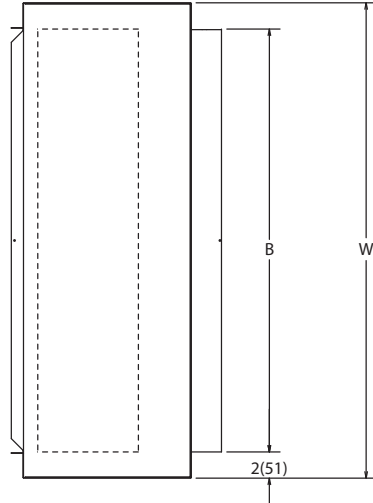


Vertical Units – Dimensions - Inches (Millimeters)			
Unit Type and Size	W	D	A
VDY06	28 (711)	35.5 (902)	16.1 (409)
VDY08	28 (711)	35.5 (902)	16.1 (409)
VDY10	37 (940)	39.5 (1003)	18.1 (460)
VDY12	37 (940)	39.5 (1003)	18.1 (460)
VDY16	47 (1194)	39.5 (1003)	18.1 (460)
VDY20/22	48 (1219)	41.5(1054)	18.1 (460)
VDY30	48 (1219)	47.5(1207)	20.1 (511)

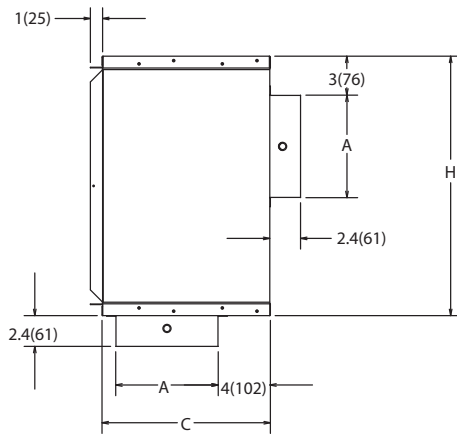
NOTE: Dimensions are in inches (millimeters).

Mixing Boxes, Cont'd.

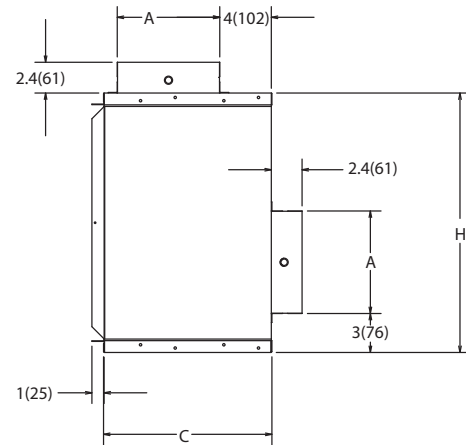
Mixing Box Details – HDY & VDY



TOP VIEWS



BTM/REAR INLET - HDY



TOP/REAR 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: 1. Dimensions are in inches (millimeters).
2. Add 2" (51) to total unit length if using 2" prefilter or 4" filter with mixing box option.


Serial Plate Example

INTERNATIONAL ENVIRONMENTAL CORP

For Replacement Parts Call 1-866-432-7278

Model No: HDY2000414324

Unit Serial No: 776004-60-1

ELECTRICAL	ENV/PERF	 Intertek 3061627 HEATING AND COOLING EQUIPMENT
Motor(s): E020-71537402	Max ESP: 1.65	
QTY of Motor(s): 1	Max Inlet Water Temp: 190F	
Motor VPH: 277/1/60	Max Outlet Air Temp: -	
Motor FLA: 5.10A	Max Hot Water or Steam: 2 PSIG	
Motor Current: 5.10A	High Side Coil Design: -	
Motor HP: 1 HP	Low Side Coil Design: -	
Min Circ Amps: 29.0A	Coil Test: 300 PSIG	
Heater AMPS: 18.1A	Refrigerant Type: -	
Heater Kw: 5.0 kW	ARI Model: HDY20B	
Heater VPH: 277/1/60		

Max Water Coil Leaving Air or Max Motor AMB: -

Max Fuse or Max Circ Breaker (HACR Type NEC): 25A - SCCR: 5KA



Replacement Parts:

Manufactured in the USA



Unit Intended for Indoor Use Only & Suited For 0.00 Clearance From Combustible Surfaces

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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.

IEC Part Number: I100-90034462

CA-092 Revision 1 (2/2020)

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5000 W. I-40 Service Rd.
Oklahoma City, OK 73128
P: 405.605.5000
F: 405.605.5001
www.iec-okc.com