

# 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

# Direct Drive Blower Coils

## HDY AND VDY TECHNICAL CATALOG

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

## 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

- Y • None

### Unit Nomenclature, Cont'd.

#### 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 -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 <sup>1</sup> (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 <sup>1</sup> (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](http://www.ahrinet.org).

# Direct Drive Blower Coils

## HDY AND VDY TECHNICAL CATALOG

### Cooling Capacity

#### Cooling Capacity – HDY

| Unit Size      | CFM     | Rows    | EAT (°F)<br>DB/WB | EWT (°F) | ΔT (°F) | Total (MBH) | Sensible<br>(MBH) | GPM  | WPD (ft. wg.) |
|----------------|---------|---------|-------------------|----------|---------|-------------|-------------------|------|---------------|
| 06<br>(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<br>(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<br>(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)<br>DB/WB | EWT (°F) | ΔT (°F) | Total (MBH) | Sensible (MBH) | GPM  | WPD (ft. wg.) |
|--------------|---------|---------|-------------------|----------|---------|-------------|----------------|------|---------------|
| 12<br>(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<br>(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<br>(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.

# Direct Drive Blower Coils

## HDY AND VDY TECHNICAL CATALOG

### Cooling Capacity, Cont'd.

#### Cooling Capacity – HDY

| Unit Size        | CFM          | Rows | EAT (°F)<br>DB/WB | EWT (°F) | ΔT (°F) | Total (MBH) | Sensible<br>(MBH) | GPM  | WPD (ft. wg.) |      |
|------------------|--------------|------|-------------------|----------|---------|-------------|-------------------|------|---------------|------|
| 22<br>(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<br>(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)<br>DB/WB | EWT (°F) | ΔT (°F) | Total (MBH) | Sensible (MBH) | GPM | WPD (ft. wg.) |
|----------------|---------|---------|-------------------|----------|---------|-------------|----------------|-----|---------------|
| 06<br>(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<br>(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<br>(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, Cont'd.

#### Cooling Capacity – VDY

| Unit Size    | CFM  | Rows | EAT (°F)<br>DB/WB | EWT (°F) | ΔT (°F) | Total (MBH) | Sensible (MBH) | GPM  | WPD (ft. wg.) |
|--------------|------|------|-------------------|----------|---------|-------------|----------------|------|---------------|
| 12<br>(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<br>(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<br>(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)<br>DB/WB | EWT (°F) | ΔT (°F) | Total (MBH) | Sensible (MBH) | GPM  | WPD (ft. wg.) |     |
|------------------|--------------|------|-------------------|----------|---------|-------------|----------------|------|---------------|-----|
| 22<br>(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<br>(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<br>(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           |
|                |     | 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           |
|                | 180 |      | 40       | 31.1    | 127.6 | 1.6      | 1.1 |               |
|                |     | 20   | 35.8     | 136.4   | 3.7   | 3.9      |     |               |
|                | 600 | 1    | 140      | 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           |
|                | 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           |
|                |     |      | 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           |
|                | 180 |      | 40       | 39.2    | 121.9 | 2        | 1.5 |               |
|                |     | 20   | 45.5     | 130.2   | 4.6   | 5.7      |     |               |
| 08<br>(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      | 40      | 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      | 40      | 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      | 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 – HDY

| Unit Size      | CFM  | Rows | EWT (°F) | ΔT (°F) | MBH   | LAT (°F) | GPM  | WPD (ft. wg.) |      |
|----------------|------|------|----------|---------|-------|----------|------|---------------|------|
| 10<br>(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<br>(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      | -     | -        | -    | -             |      |
|                | 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.

### Heating Capacity, Cont'd.

#### Heating Capacity – HDY

| Unit Size    | CFM  | Rows | EWT (°F) | ΔT (°F) | MBH   | LAT (°F) | GPM   | WPD (ft. wg.) |     |
|--------------|------|------|----------|---------|-------|----------|-------|---------------|-----|
| 16<br>(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<br>(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, Cont'd.

#### Heating Capacity – HDY

| Unit Size        | CFM  | Rows | EWT (°F) | ΔT (°F) | MBH   | LAT (°F) | GPM  | WPD (ft. wg.) |
|------------------|------|------|----------|---------|-------|----------|------|---------------|
| 22<br>(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<br>(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, Cont'd.

#### Heating Capacity – VDY

| Unit Size      | CFM | Rows | EWT (°F) | ΔT (°F) | MBH   | LAT (°F) | GPM   | WPD (ft. wg.) |     |
|----------------|-----|------|----------|---------|-------|----------|-------|---------------|-----|
| 06<br>(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      | 40      | 35.8  | 136.4    | 3.7   | 3.9           |     |
|                |     |      |          | 20      | 9.9   | 85.3     | 0.5   | 0.6           |     |
|                |     |      | 40       | 14.4    | 92.2  | 1.5      | 2.9   |               |     |
|                |     | 180  | 20       | 40      | 21.3  | 102.9    | 1.1   | 1.8           |     |
|                |     |      |          | 40      | 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           |     |
|                |     |      | 2        | 140     | 40    | 10.9     | 84.4  | 0.5           | 0.7 |
|                |     | 20   |          |         | 15.8  | 90.9     | 1.6   | 3.4           |     |
|                |     | 800  | 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           |     |
|                | 900 |      | 1        | 180     | 40    | 39.2     | 121.9 | 2             | 1.5 |
|                |     |      |          |         | 20    | 45.5     | 130.2 | 4.6           | 5.7 |
| 2              |     | 140  |          | 40      | 10.0  | 83.3     | 0.5   | 0.6           |     |
|                |     |      | 20       | 14.7    | 89.4  | 1.5      | 3     |               |     |
| 08<br>(1 HP)   |     | 700  | 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           |     |
|                |     |      | 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   |               |     |
|                |     | 2    | 180      | 40      | 23.9  | 97.7     | 1.2   | 2.1           |     |
|                | 20  |      |          | 28.3    | 102.8 | 2.9      | 8.1   |               |     |
|                | 140 |      | 40       | 19.3    | 92.3  | 1        | 0.5   |               |     |
|                |     | 20   | 27.5     | 101.8   | 2.8   | 2.7      |       |               |     |
| 900            | 1   | 180  | 40       | 40.9    | 117.3 | 2.1      | 1.7   |               |     |
|                |     |      | 20       | 47.7    | 125.2 | 4.9      | 6.2   |               |     |
|                |     | 2    | 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      |       |               |     |
| 06<br>(1/2 HP) | 1   | 140  | 40       | 21.1    | 91.7  | 1.1      | 0.6   |               |     |
|                |     |      | 20       | 30.1    | 101   | 3        | 3.2   |               |     |
|                |     | 2    | 140      | 40      | 30.1  | 101      | 3     | 3.2           |     |
|                | 20  |      |          | 44.8    | 116.1 | 2.3      | 1.9   |               |     |
|                | 180 |      | 40       | 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<br>(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        | 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  | 1        | 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  | 1        | 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<br>(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        | 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  | 1        | 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  | 1    | 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, Cont'd.

#### Heating Capacity – VDY

| Unit Size    | CFM  | Rows | EWT (°F) | ΔT (°F) | MBH   | LAT (°F) | GPM   | WPD (ft. wg.) |     |
|--------------|------|------|----------|---------|-------|----------|-------|---------------|-----|
| 16<br>(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<br>(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, Cont'd.

#### Heating Capacity – VDY

| Unit Size        | CFM  | Rows | EWT (°F) | ΔT (°F) | MBH   | LAT (°F) | GPM  | WPD (ft. wg.) |
|------------------|------|------|----------|---------|-------|----------|------|---------------|
| 22<br>(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<br>(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<br>NOTE 2  | 975       | 600 @<br>.50" ESP   | 64  | 59     | 55     | 51    | 46    | 40    | 35    | 57          | 1/2      |
|              | DUCTED DISCHARGE<br>NOTE 3 |           |                     | 63  | 53     | 53     | 51    | 50    | 45    | 37    |             |          |
| 08           | CASING RADIATED<br>NOTE 2  | 1,075     | 800 @<br>.50" ESP   | 64  | 60     | 60     | 58    | 56    | 54    | 45    | 64          | 1        |
|              | DUCTED DISCHARGE<br>NOTE 3 |           |                     | 64  | 61     | 58     | 56    | 50    | 43    | 36    |             |          |
| 10           | CASING RADIATED<br>NOTE 2  | 1,140     | 1,000 @<br>.50" ESP | 70  | 65     | 59     | 59    | 55    | 49    | 41    | 64          | 1/2      |
|              | DUCTED DISCHARGE<br>NOTE 3 |           |                     | 68  | 63     | 65     | 64    | 61    | 60    | 53    |             |          |
| 12           | CASING RADIATED<br>NOTE 2  | 1,235     | 1,200@<br>.50" ESP  | 73  | 69     | 61     | 62    | 57    | 51    | 44    | 67          | 1        |
|              | DUCTED DISCHARGE<br>NOTE 3 |           |                     | 72  | 67     | 67     | 67    | 64    | 63    | 57    |             |          |
| 16           | CASING RADIATED<br>NOTE 2  | 1,066     | 1,600@<br>.50" ESP  | 73  | 69     | 62     | 64    | 60    | 55    | 48    | 68          | 1        |
|              | DUCTED DISCHARGE<br>NOTE 3 |           |                     | 72  | 68     | 69     | 70    | 68    | 68    | 63    |             |          |
| 20           | CASING RADIATED<br>NOTE 2  | 910       | 2,000@<br>.50" ESP  | 74  | 69     | 60     | 59    | 56    | 51    | 42    | 66          | 1        |
|              | DUCTED DISCHARGE<br>NOTE 3 |           |                     | 71  | 67     | 66     | 66    | 64    | 63    | 57    |             |          |
| 22<br>NOTE 4 | CASING RADIATED<br>NOTE 2  | 950       | 2,200@<br>.50" ESP  | 73  | 69     | 60     | 60    | 58    | 53    | 45    | 66          | 1-1/2    |
|              | DUCTED DISCHARGE<br>NOTE 3 |           |                     | 73  | 68     | 65     | 67    | 64    | 63    | 57    |             |          |
| 30<br>NOTE 4 | CASING RADIATED<br>NOTE 2  | 860       | 3,000@<br>.50" ESP  | 74  | 70     | 65     | 63    | 61    | 57    | 49    | 69          | 3        |
|              | DUCTED DISCHARGE<br>NOTE 3 |           |                     | 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:  $1 \times 10^{-12}$  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<br>NOTE 2  | 960       | 600 @<br>.50" ESP   | 68  | 62     | 59     | 56    | 50    | 42    | 38    | 58          | 1/2      |
|              | DUCTED DISCHARGE<br>NOTE 3 |           |                     | 64  | 58     | 52     | 56    | 51    | 45    | 39    |             |          |
| 8            | CASING RADIATED<br>NOTE 2  | 1,065     | 800 @<br>.50" ESP   | 69  | 64     | 62     | 62    | 54    | 47    | 40    | 61          | 1        |
|              | DUCTED DISCHARGE<br>NOTE 3 |           |                     | 67  | 62     | 59     | 63    | 58    | 54    | 46    |             |          |
| 10<br>NOTE 4 | CASING RADIATED<br>NOTE 2  | 1,095     | 1,000 @<br>.50" ESP | 70  | 63     | 61     | 62    | 55    | 49    | 42    | 61          | 1/2      |
|              | DUCTED DISCHARGE<br>NOTE 3 |           |                     | 67  | 66     | 63     | 65    | 60    | 55    | 49    |             |          |
| 12<br>NOTE 4 | CASING RADIATED<br>NOTE 2  | 1,220     | 1,200@<br>.50" ESP  | 70  | 73     | 64     | 66    | 59    | 52    | 45    | 65          | 1        |
|              | DUCTED DISCHARGE<br>NOTE 3 |           |                     | 69  | 70     | 65     | 68    | 64    | 60    | 54    |             |          |
| 16<br>NOTE 5 | CASING RADIATED<br>NOTE 2  | 1,160     | 1,600@<br>.50" ESP  | 75  | 68     | 65     | 67    | 61    | 54    | 46    | 65          | 1        |
|              | DUCTED DISCHARGE<br>NOTE 3 |           |                     | 72  | 69     | 67     | 72    | 67    | 63    | 57    |             |          |
| 20<br>NOTE 5 | CASING RADIATED<br>NOTE 2  | 1,020     | 2,000@<br>.50" ESP  | 76  | 67     | 67     | 65    | 58    | 51    | 42    | 65          | 1        |
|              | DUCTED DISCHARGE<br>NOTE 3 |           |                     | 72  | 67     | 69     | 70    | 63    | 61    | 53    |             |          |
| 22<br>NOTE 5 | CASING RADIATED<br>NOTE 2  | 1,085     | 2,200@<br>.50" ESP  | 79  | 73     | 72     | 69    | 62    | 57    | 48    | 69          | 1-1/2    |
|              | DUCTED DISCHARGE<br>NOTE 3 |           |                     | 75  | 71     | 74     | 76    | 68    | 66    | 61    |             |          |
| 30<br>NOTE 5 | CASING RADIATED<br>NOTE 2  | 915       | 3,000@<br>.50" ESP  | 77  | 67     | 71     | 67    | 61    | 57    | 48    | 67          | 3        |
|              | DUCTED DISCHARGE<br>NOTE 3 |           |                     | 71  | 72     | 77     | 74    | 68    | 67    | 59    |             |          |

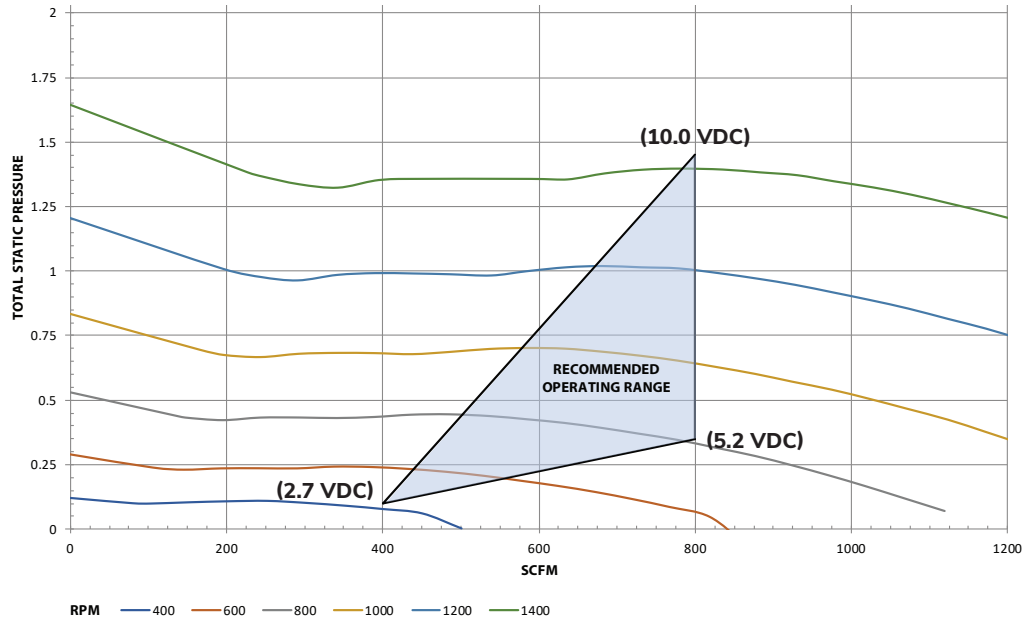
- NOTES: 1. Unit Test Configuration: Front Return/Top Supply, 4 Row, 10 FPI Coil, 115/1 PH/ 60 Hz VAC Motor, 2" Fiberglass Filter, 1" dual density fiberglass insulation.  
2. Testing per AHRI 260-2001: 4.2.2.3 Casing radiated with free inlet, Sound Rating of Ducted Air Moving and Conditioning Equipment.  
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:  $1 \times 10^{-12}$  w (picowatts).

### Fan Curves – HDY

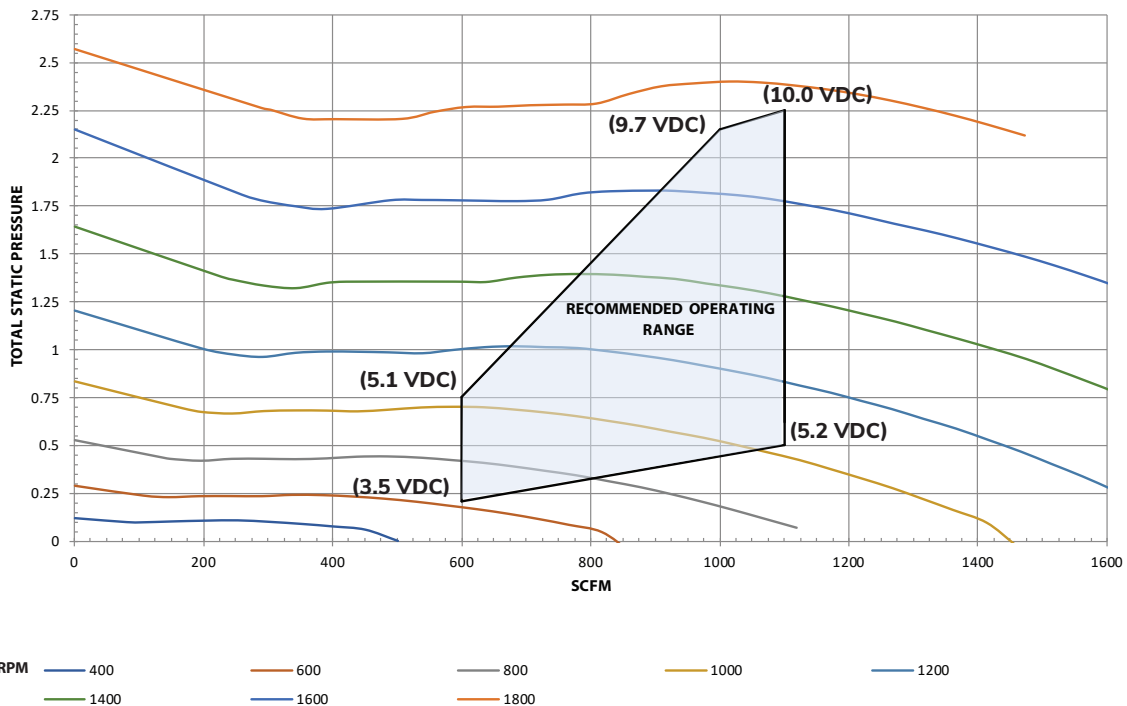
Operating units outside the recommended operating range can cause the electric heater nuisance tripping, condensate carryover and/or fan instability.

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

HDY 06, 1/2 HP Motor

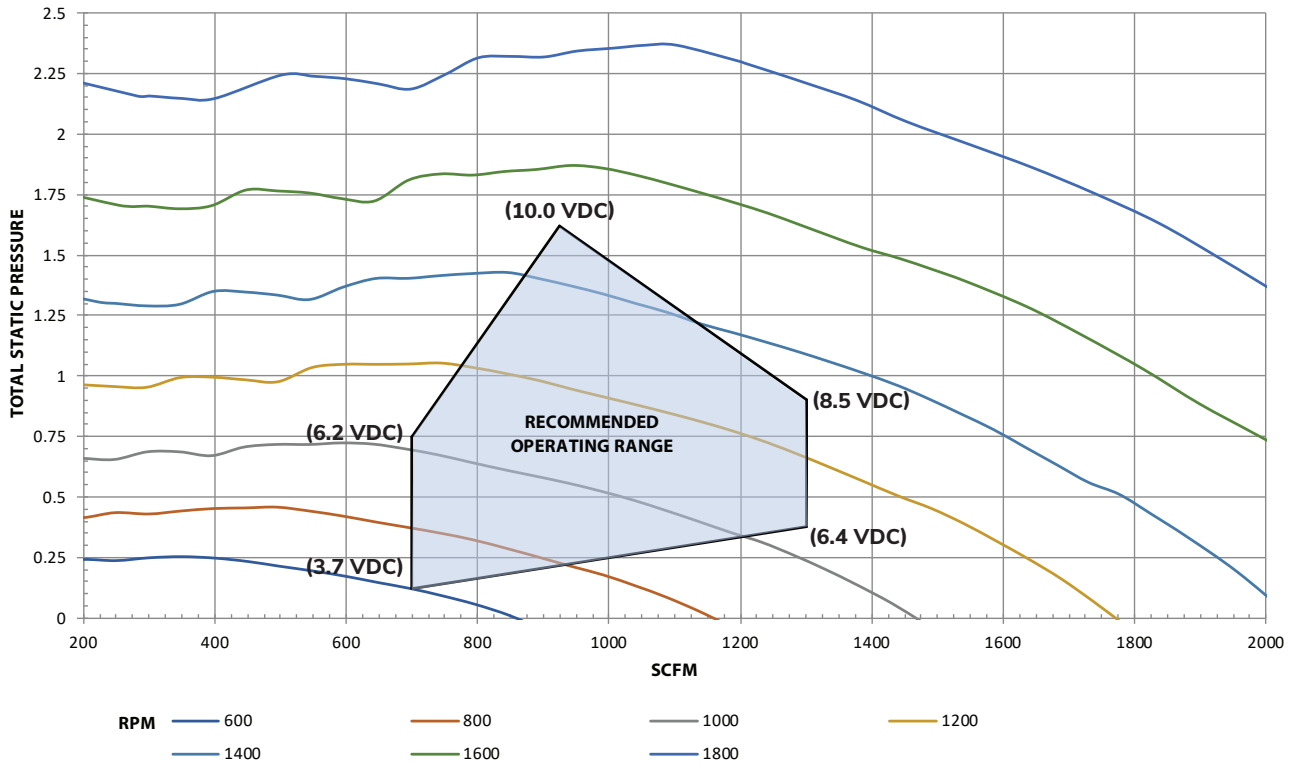


HDY 08, 1 HP Motor

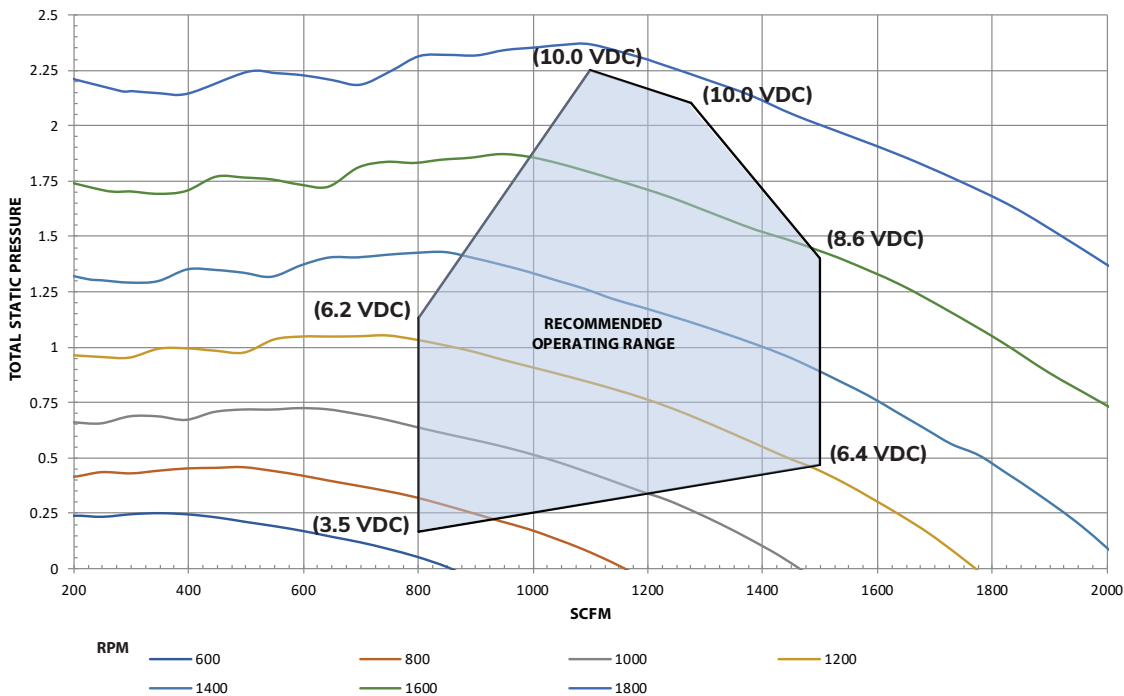


### Fan Curves – HDY, Cont'd.

HDY 10, 1/2 HP Motor

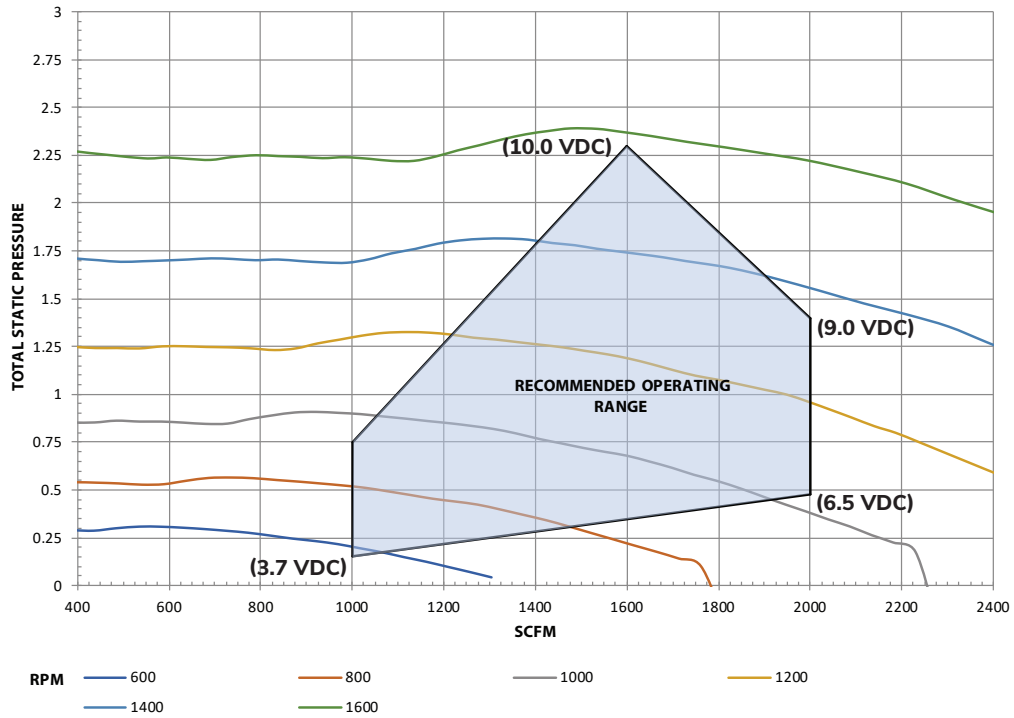


HDY 12, 1 HP Motor

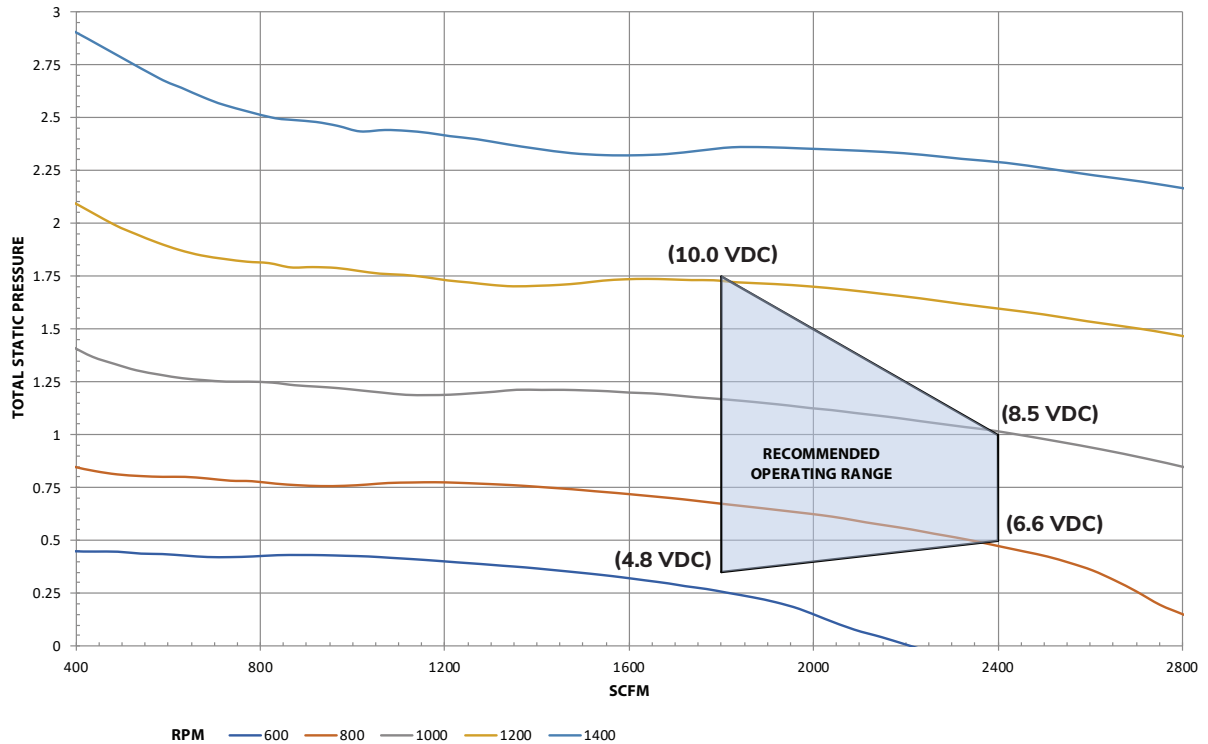


**Fan Curves – HDY, Cont'd.**

HDY 16, 1 HP Motor

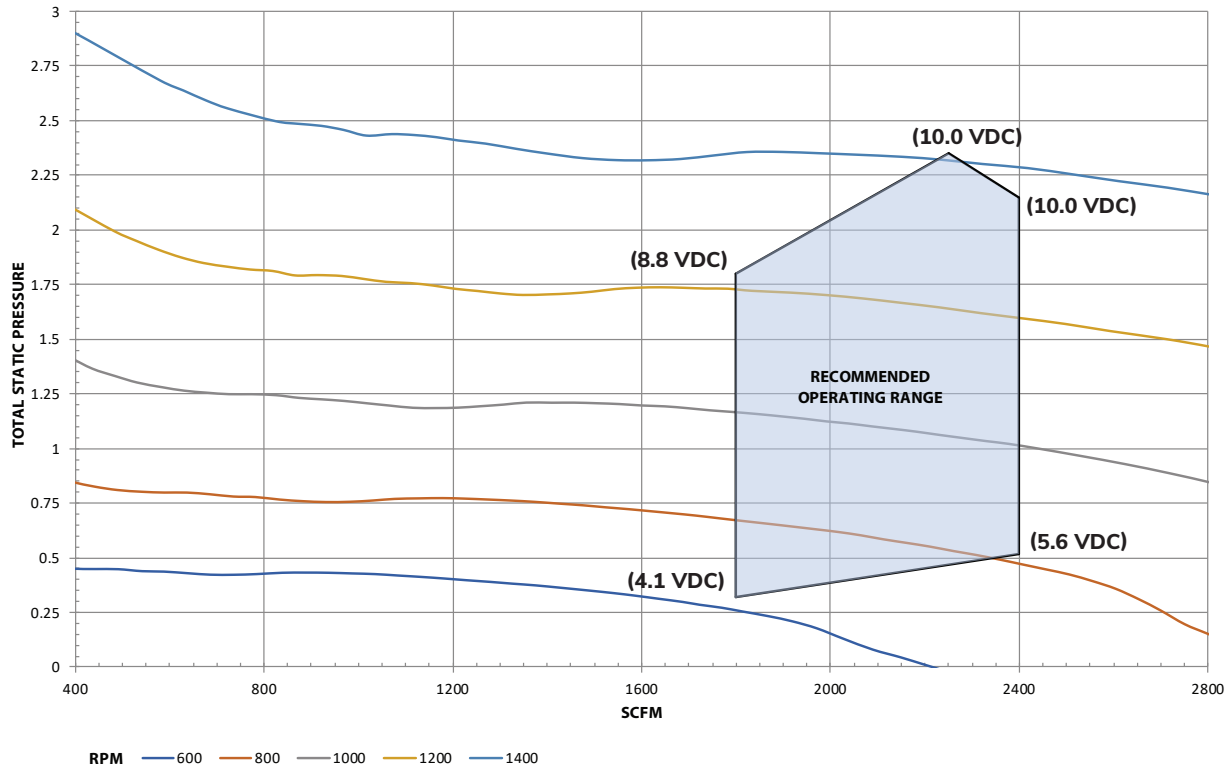


HDY 20, 1 HP Motor

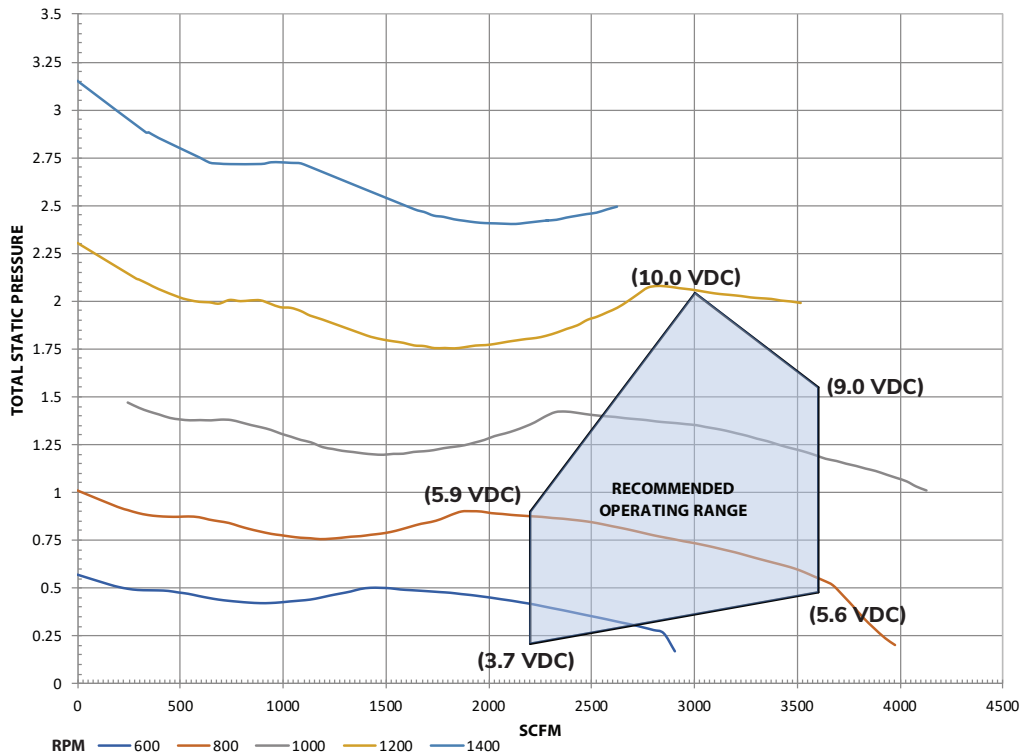


### Fan Curves – HDY, Cont'd.

HDY 22, 1-1/2 HP Motor

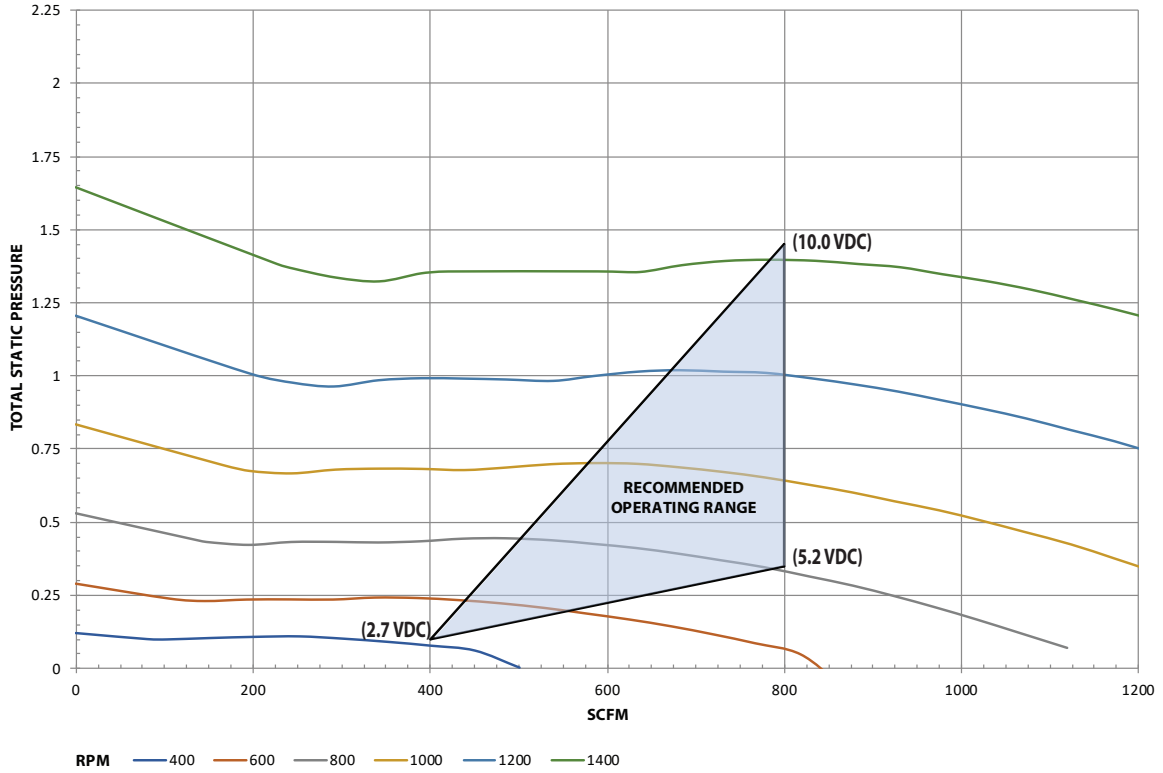


HDY 30, 3 HP Motor

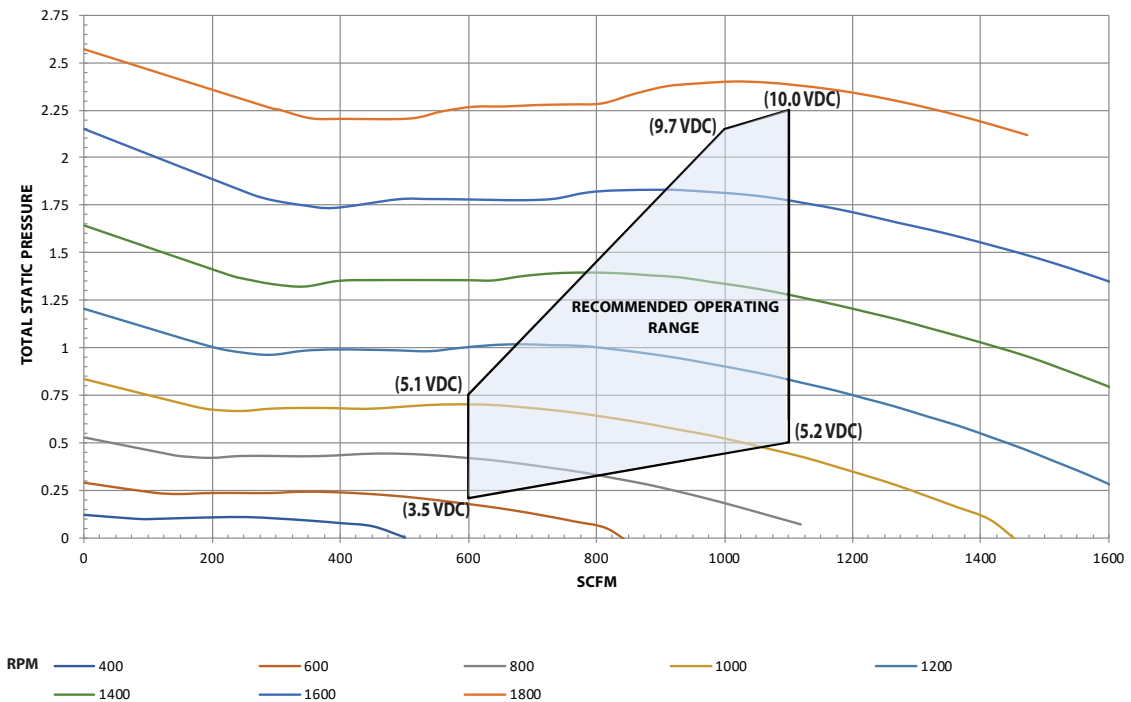


### Fan Curves – VDY

**VDY06, 1/2 HP Motor**

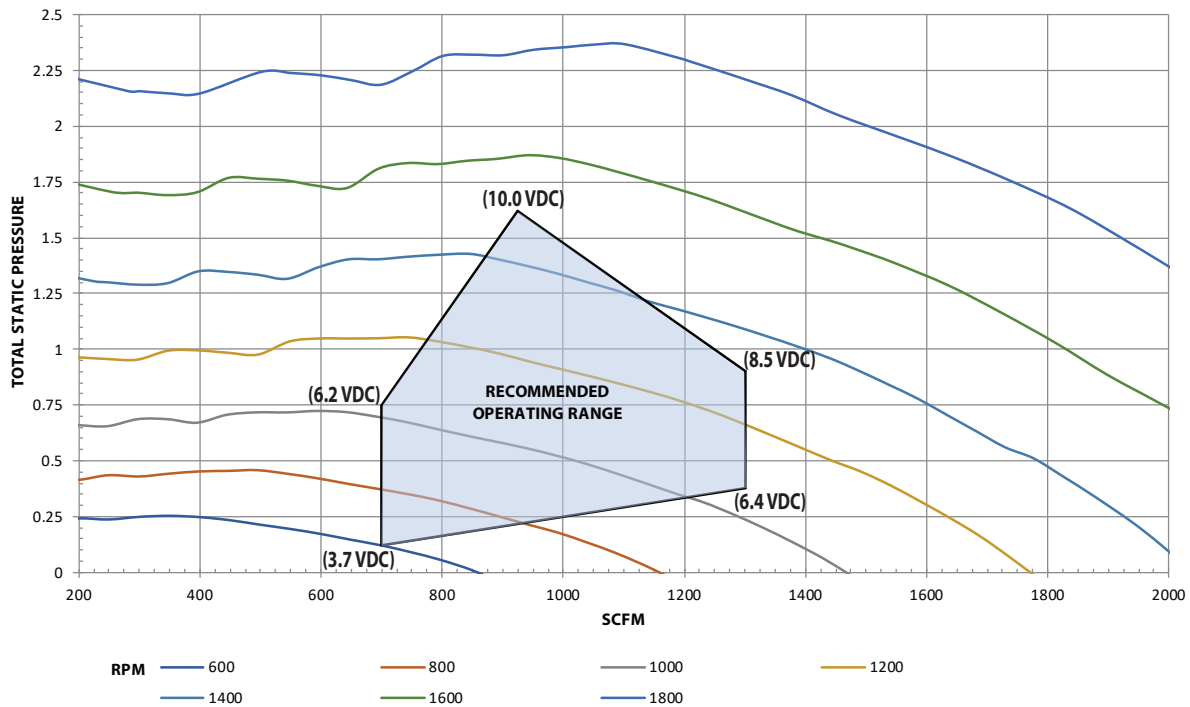


**VDY08, 1 HP Motor**

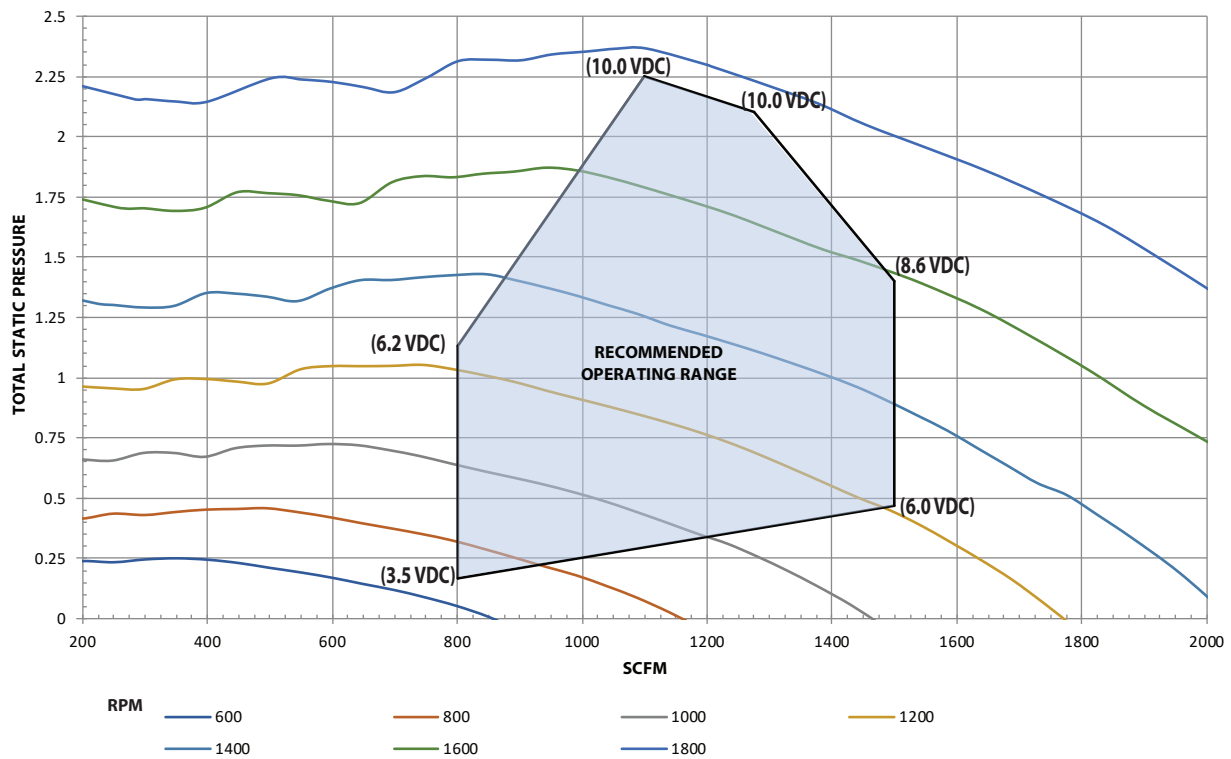


### Fan Curves – VDY, Cont'd.

**VDY10, 1/2 HP Motor**



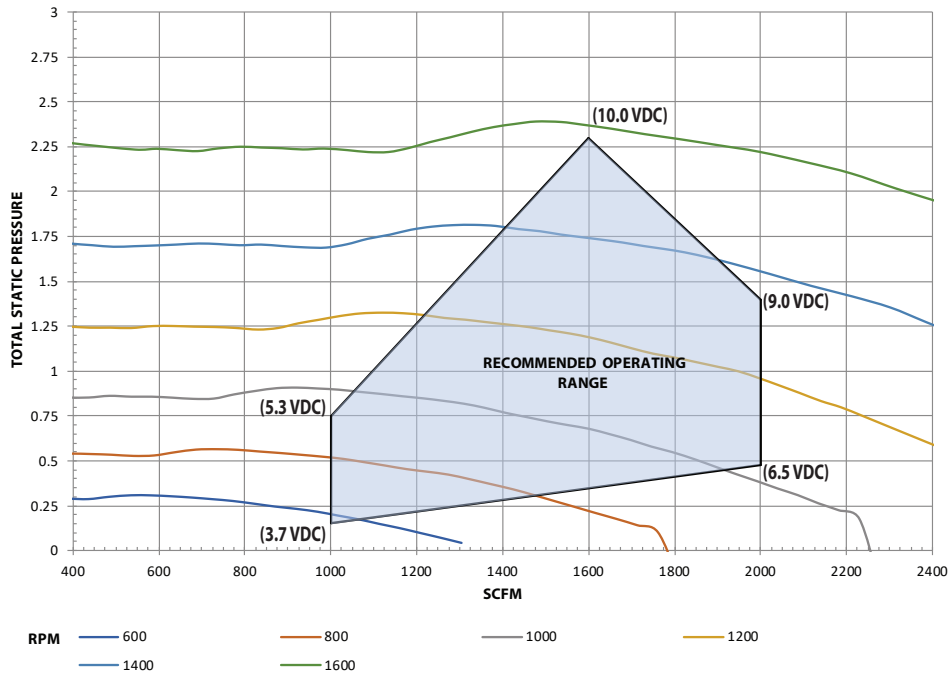
**VDY12, 1 HP Motor**



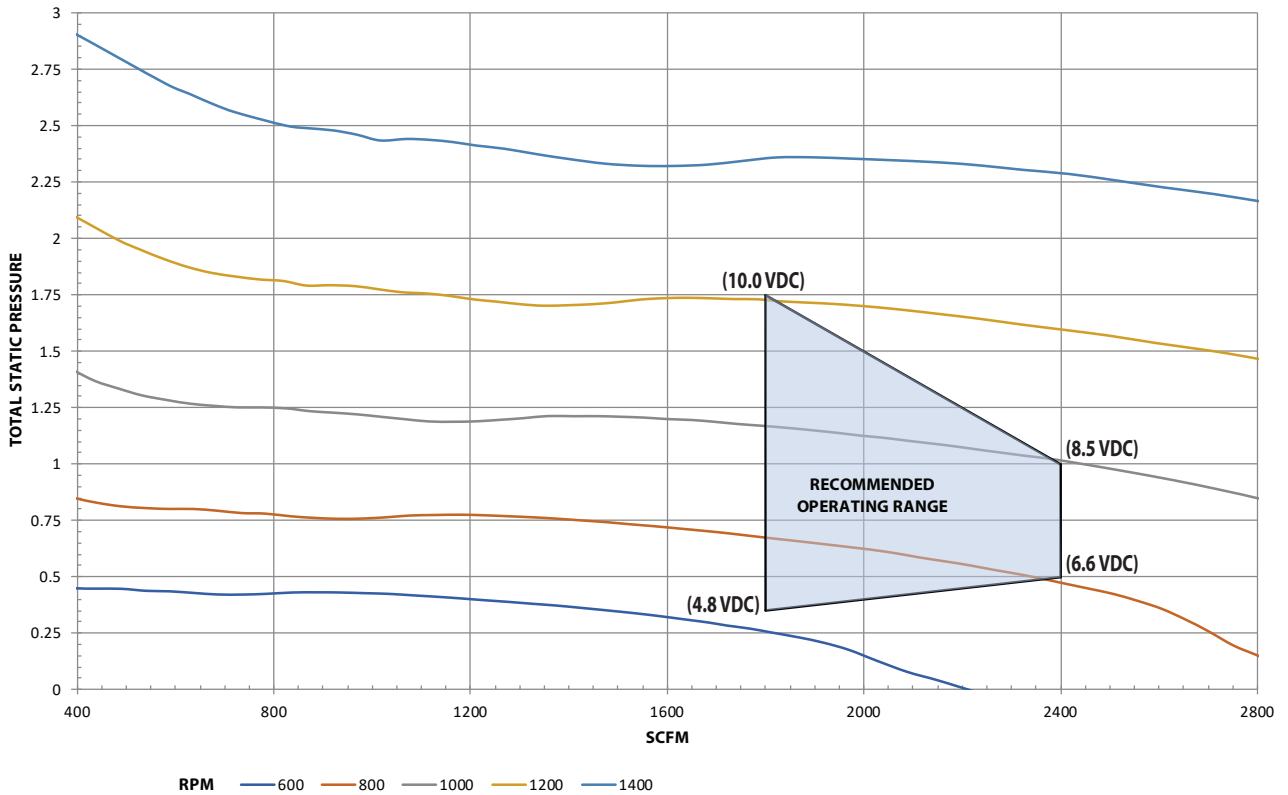


### Fan Curves – VDY, Cont'd.

**VDY16, 1 HP Motor**

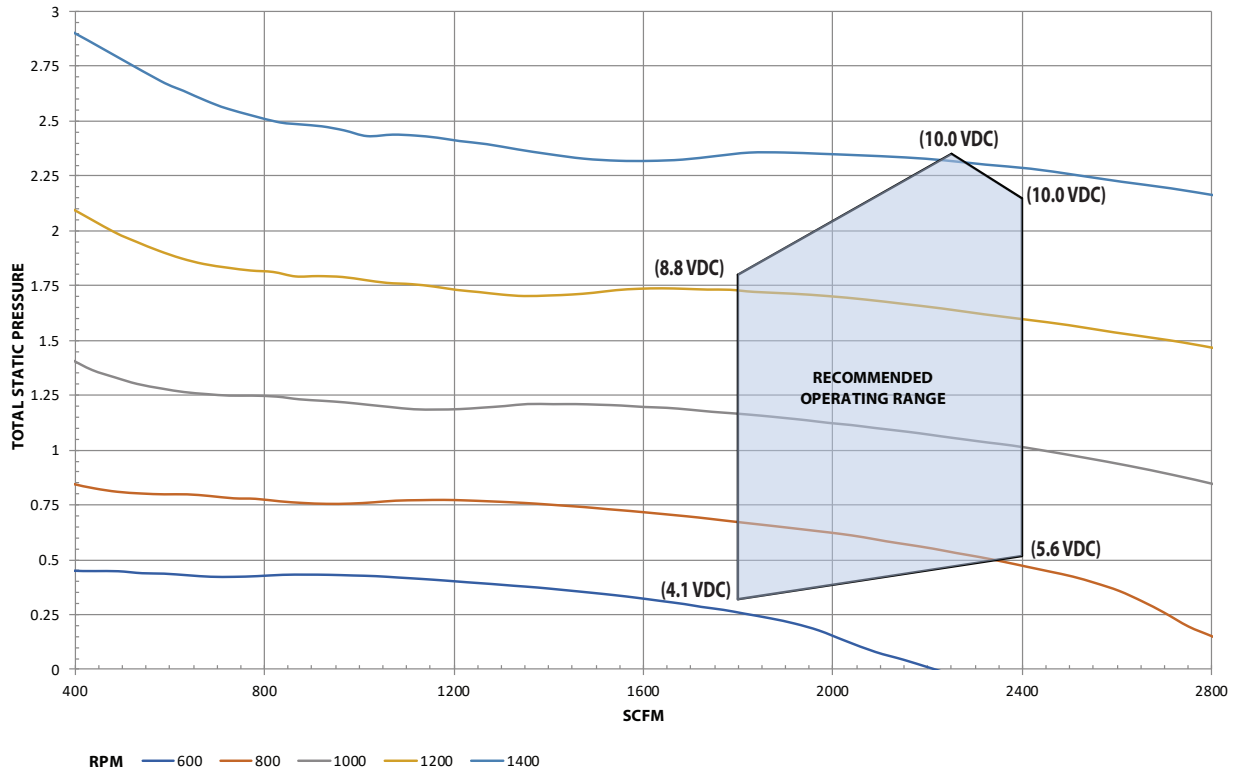


**VDY20, 1 HP Motor**

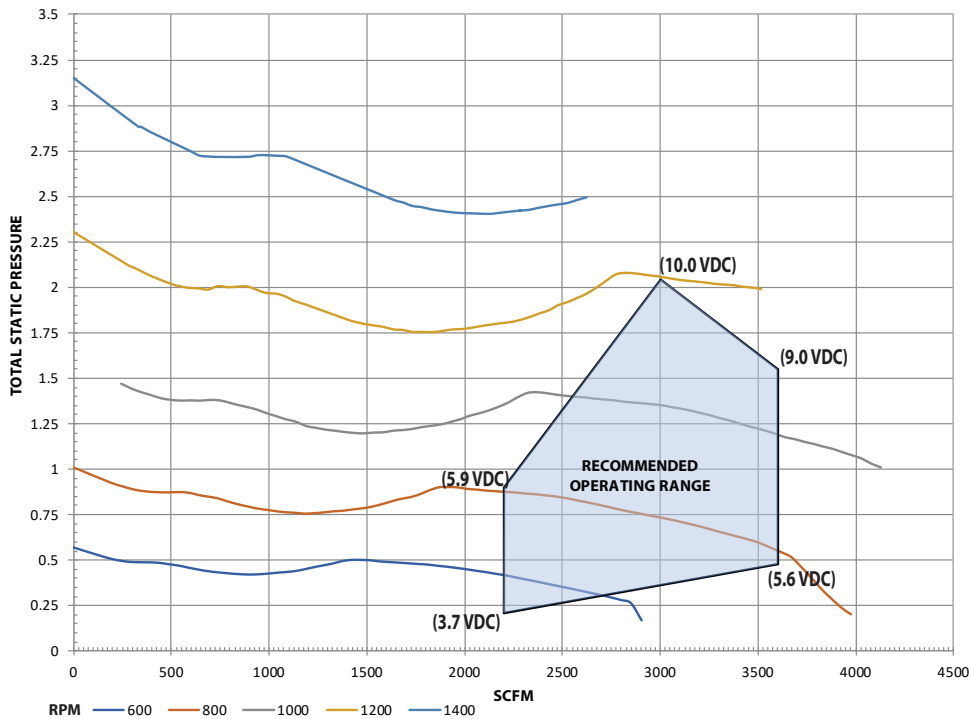


### Fan Curves – VDY, Cont'd.

VDY22, 1.5 HP Motor

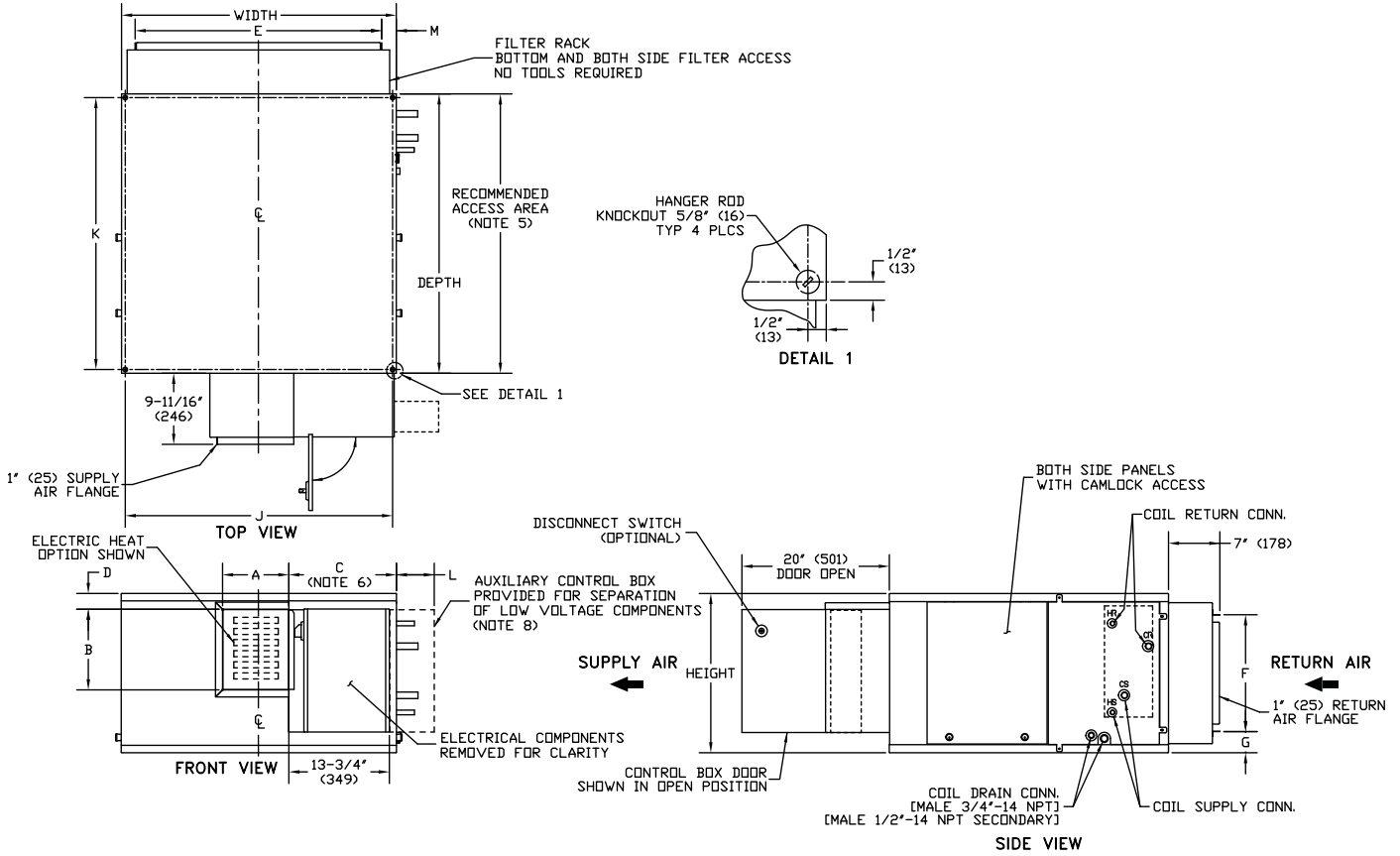


VDY30, 3 HP Motor



### 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.

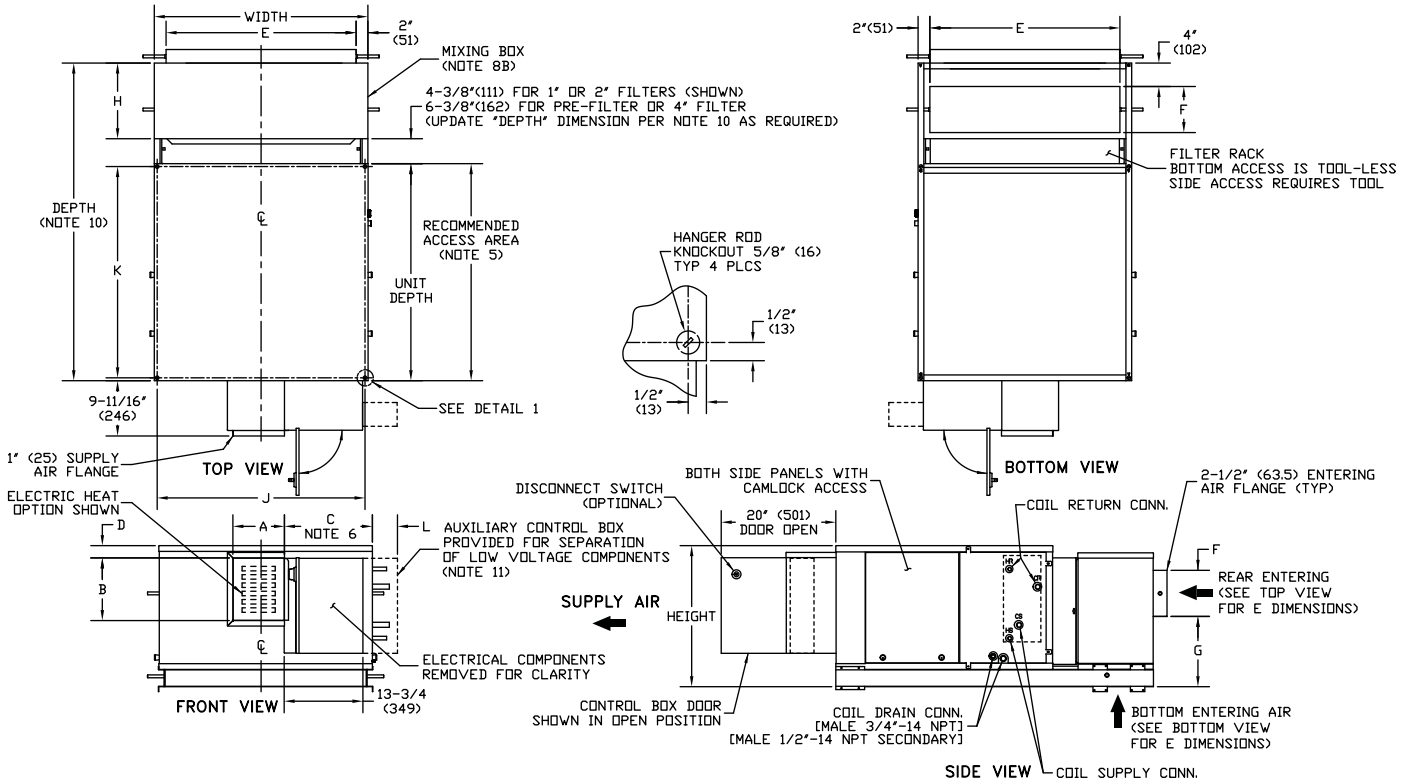
Drawing is provided for reference only. Dimensions may vary with options ordered. Consult IEC website for submittal drawings.

# Direct Drive Blower Coils

## HDY AND VDY TECHNICAL CATALOG

### Submittal Data, Cont'd.

#### HDY - with Optional Mixing Box



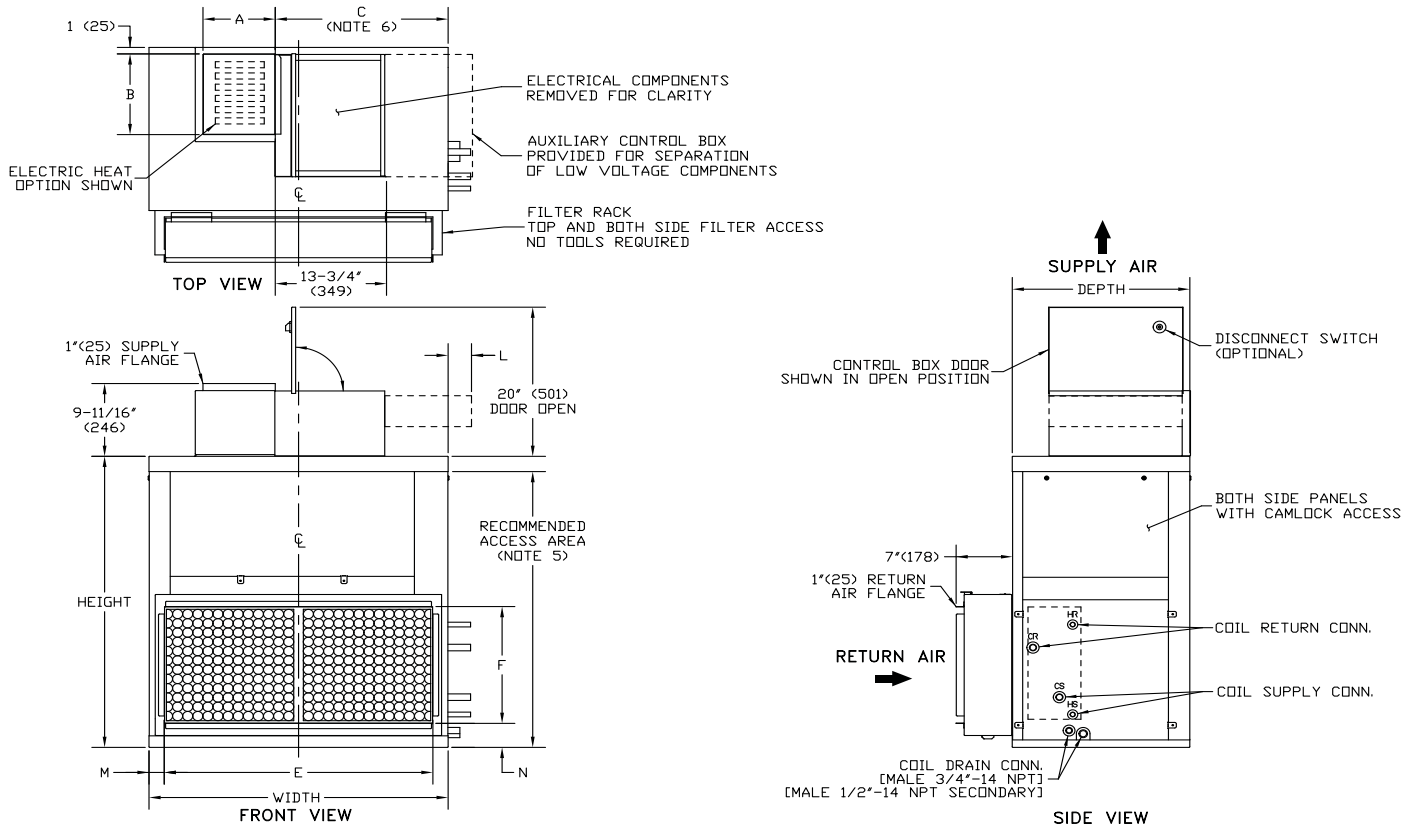
| Size  | Fan Size | Depth            | Unit Depth       | Width        | Height          | Supply Duct     |                 |                 |                | Return Duct (Note 7) |             |                 | Mix Box     | Mounting Holes   |                  |                | Aux. Box |
|-------|----------|------------------|------------------|--------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



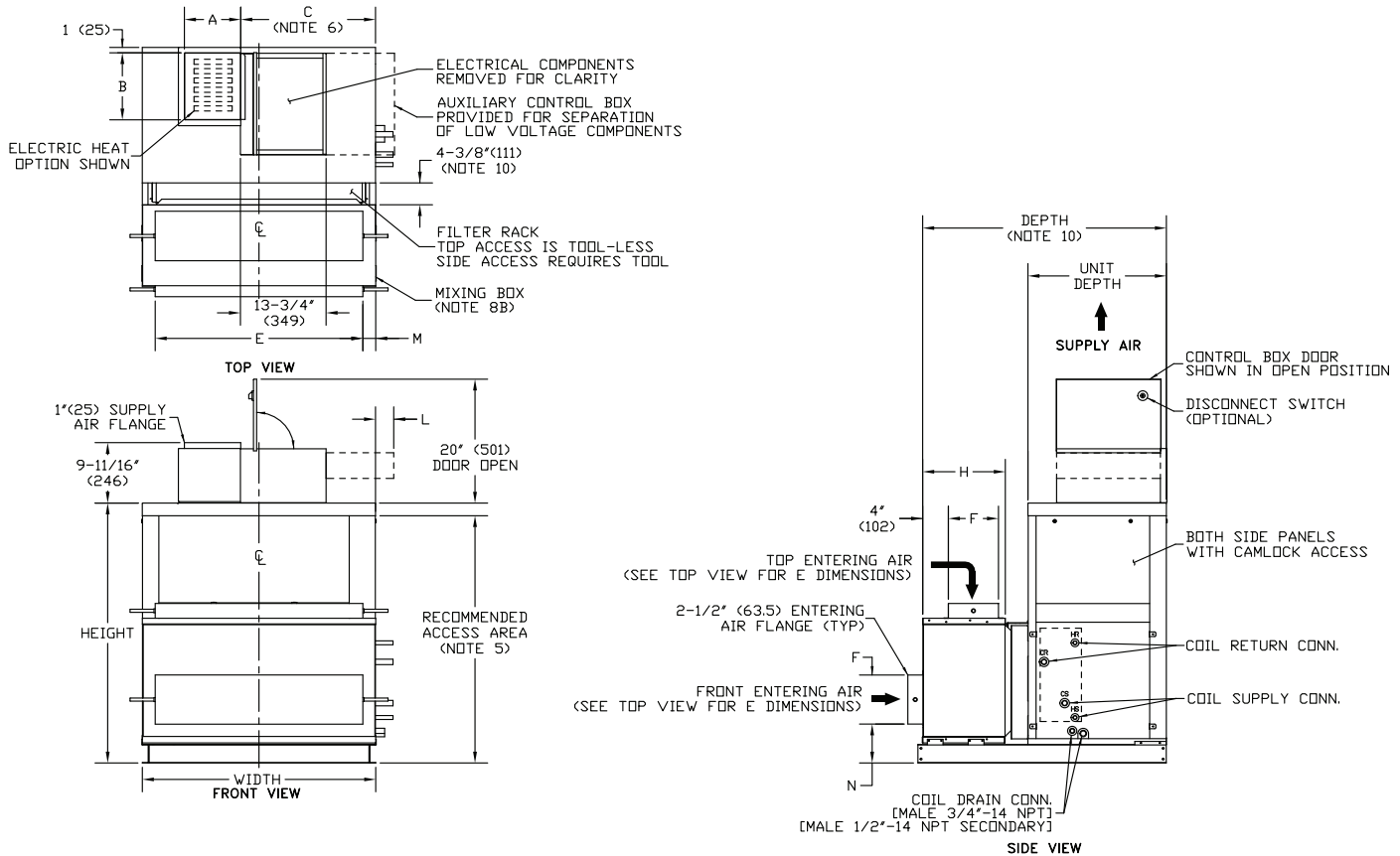
| Size  | Fan Size | Depth       | Width        | Height           | Supply Duct     |                 |                 | Return Duct      |                 | Aux. Ctrl. Box | Unit side to duct flange | Unit bottom to duct flange |
|-------|----------|-------------|--------------|------------------|-----------------|-----------------|-----------------|------------------|-----------------|----------------|--------------------------|----------------------------|
|       |          |             |              |                  | A               | B               | C               | E                | F               |                |                          |                            |
| 06    | 9x6      | 20<br>(508) | 28<br>(711)  | 36-1/2<br>(927)  | 8-7/8<br>(225)  | 10-7/8<br>(276) | 15-1/8<br>(384) | 24-1/4<br>(616)  | 14<br>(356)     | 4-1/2<br>(114) | 1-7/8<br>(48)            | 2-7/8<br>(73)              |
| 08    | 9x6      | 20<br>(508) | 28<br>(711)  | 36-1/2<br>(927)  | 8-7/8<br>(225)  | 10-7/8<br>(276) | 15-1/8<br>(384) | 24-1/4<br>(616)  | 14<br>(356)     | 4-1/2<br>(114) | 1-7/8<br>(48)            | 2-7/8<br>(73)              |
| 10    | 9x6      | 22<br>(559) | 37<br>(940)  | 39-3/8<br>(1000) | 10-1/4<br>(260) | 10-7/8<br>(276) | 21-1/2<br>(546) | 33-1/4<br>(845)  | 15-3/4<br>(401) | 0<br>(0)       | 1-7/8<br>(48)            | 2-7/8<br>(73)              |
| 12    | 9x6      | 22<br>(559) | 37<br>(940)  | 39-3/8<br>(1000) | 10-1/4<br>(260) | 10-7/8<br>(276) | 21-1/2<br>(546) | 33-1/4<br>(845)  | 15-3/4<br>(401) | 0<br>(0)       | 1-7/8<br>(48)            | 2-7/8<br>(73)              |
| 16    | 10x7     | 22<br>(559) | 47<br>(1194) | 39-3/8<br>(1000) | 13<br>(330)     | 12<br>(305)     | 16-5/8<br>(422) | 43-7/8<br>(1115) | 15-3/4<br>(401) | 3(76)          | 1-5/8<br>(48)            | 2-7/8<br>(73)              |
| 20/22 | 11x10    | 24<br>(610) | 48<br>(1219) | 45-1/8<br>(1146) | 16-1/4<br>(413) | 13<br>(330)     | 17-1/8<br>(435) | 44-1/4<br>(1124) | 18<br>(457)     | 2-1/2<br>(64)  | 1-7/8<br>(48)            | 3-1/8<br>(79)              |
| 30    | 12x12    | 28<br>(711) | 48<br>(1219) | 54-1/4<br>(1378) | 16-1/4<br>(413) | 14<br>(356)     | 16<br>(406)     | 44-1/4<br>(1124) | 26-1/2<br>(673) | 3-5/8<br>(92)  | 1-7/8<br>(48)            | 2-3/4<br>(70)              |

- NOTES:
1. RH shown, LH opposite.
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  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



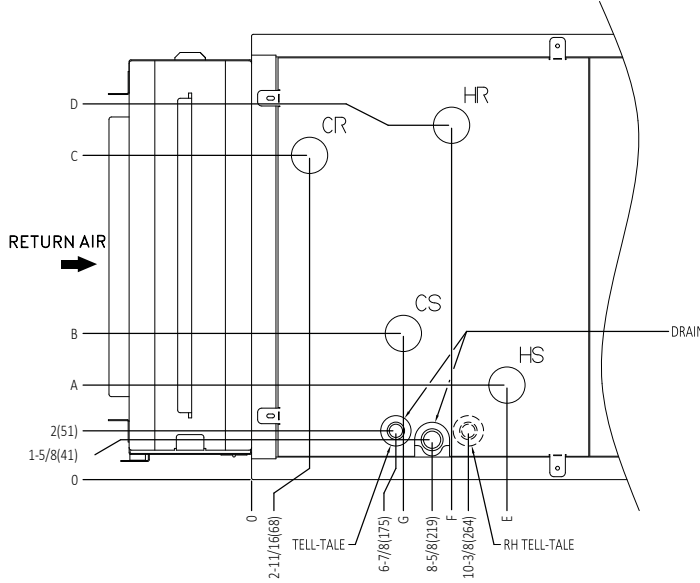
| Size  | Fan Size | Depth            | Unit Depth  | Width        | Height           | Supply Duct     |                 |                 | Return Duct  |             | Mix Box     | Aux. Box       | Unit side to duct flange | Unit bottom to duct flange |
|-------|----------|------------------|-------------|--------------|------------------|-----------------|-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

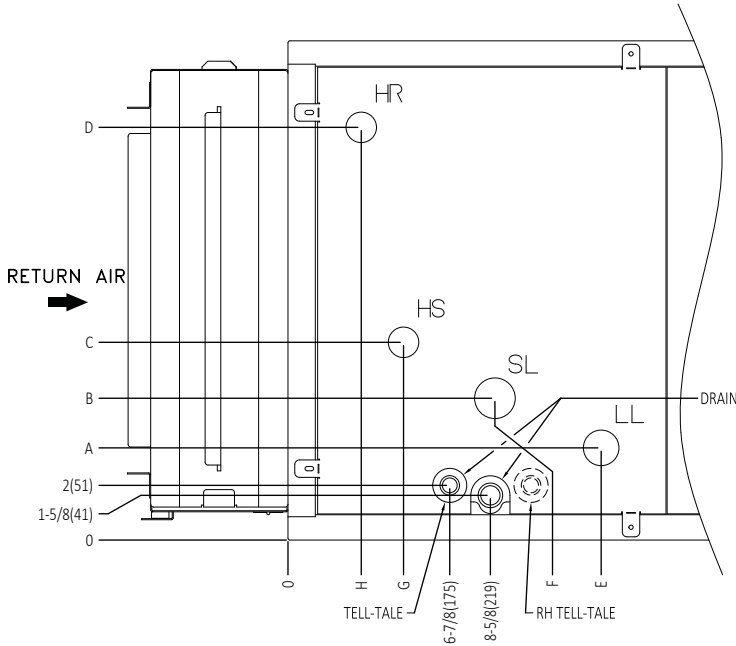
CR - Cold Water Return  
 HR - Hot Water Return  
 CS - Cold Water Supply  
 HS - Hot Water Supply  
 RH - Right Hand  
 LH - Left Hand

**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  | -        | -       | -              | 5-15/16              |
|           |           | 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<br>RH 13-3/8     |         |         | 7-3/4    | 12      | 9-5/8<br>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<br>RH 13-3/8     |         |         | 7-3/4    | 15-5/8  | 12             | 11-13/16<br>11-13/16 |
| 20/22     | 4         | -    | -                          | 7-13/16 | 18-3/16 | -        | -       | -              | 5-15/16              |
|           |           | 1    | LH 11-15/16<br>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  | 9-3/16         |                      |
|           |           | 1    | LH 11-15/16<br>RH 14-11/16 |         |         | 7-13/16  | 13-5/16 | 11-13/16       | 11-1/4               |
| 30        | 4         | -    | -                          | 5-15/16 | 26-5/16 | -        | -       | -              | 5-15/16              |
|           |           | 1    | 7-1/16                     |         |         | 25-13/16 | 9       | 7              |                      |
|           | 6         | -    | -                          | 7-1/16  | 10-1/4  | 23-13/16 | 9-1/8   | 9-1/8          |                      |
|           |           | 1    | 10-5/16                    |         |         | 25-13/16 | 11-1/8  | 11-5/16        |                      |

### 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) |       |           |       |           |       |           |       |
|-----------|--|-------|-----------|-------|-----------|-------|-----------|-------|
|           | 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

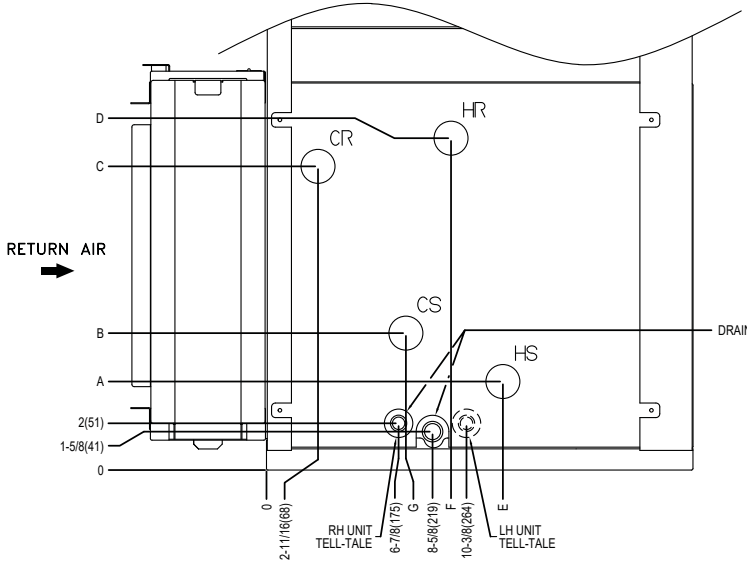
**HORIZONTAL**, left hand unit with pre-heat coil shown.

| 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         | 2              |       |       |   |   |        |       |   |   |
| 10/12 | 4         | -              | 6-1/2 | 7-1/8 | - | - | 12-1/2 | 2-3/4 | - | - |
|       | 6         | 1              |       |       |   |   |        |       |   |   |
|       | 4         | 2              |       |       |   |   |        |       |   |   |
|       | 6         | 2              |       |       |   |   |        |       |   |   |
| 16    | 4         | -              | 6-1/2 | 7-1/8 | - | - | 12-1/2 | 2-3/4 | - | - |
|       | 6         | 1              |       |       |   |   |        |       |   |   |
|       | 4         | 2              |       | 6-3/8 |   |   |        |       |   |   |
|       | 6         | 2              |       |       |   |   |        |       |   |   |
| 20/22 | 4         | -              | 6-1/2 | 7-1/8 | - | - | 12-1/2 | 2-3/4 | - | - |
|       | 6         | 1              |       |       |   |   |        |       |   |   |
|       | 4         | 2              |       |       |   |   |        |       |   |   |
|       | 6         | 2              |       |       |   |   |        |       |   |   |
| 30    | 4         | -              | 4-7/8 | 5-3/8 | - | - | 12-1/2 | 2-3/4 | - | - |
|       | 6         | 1              |       |       |   |   |        |       |   |   |
|       | 4         | 2              |       | 5-3/8 |   |   |        |       |   |   |
|       | 6         | 2              |       |       |   |   |        |       |   |   |



### 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 |

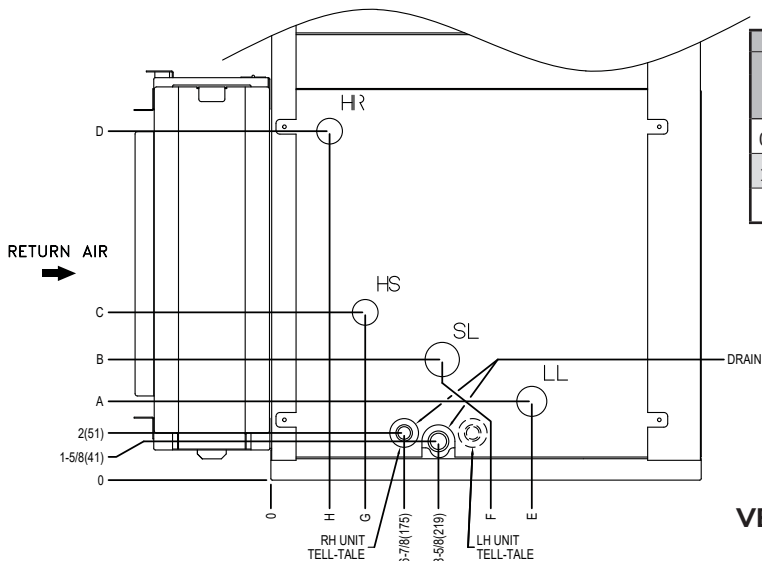
CR - Cold Water Return  
 HR - Hot Water Return  
 CS - Cold Water Supply  
 HS - Hot Water Supply  
 RH - Right Hand  
 LH - Left Hand

**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                      | 8-1/8   | 15-1/2   | 9-3/16   | 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         | 1    | 5-1/8                      | 8-1/8   | 17-1/8   | 9-3/16   | 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<br>RH 13-3/8     |         |          | 7-3/4    | 12       | 9-5/8<br>9-5/8       |                  | 7<br>7   |         |
|           |           | 2    | 12                         |         |          | 7        | 13-5/8   | 10-3/8               |                  | 7-9/16   |         |
|           | 6         | 1    | LH 10-5/8<br>RH 13-3/8     | 7-3/4   | 15-5/8   | 15-5/8   | 12       | 11-13/16<br>11-13/16 | 9-3/16<br>9-3/16 | 8-1/8    |         |
|           |           | 2    | 12                         | 7       |          |          | 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<br>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<br>RH 14-11/16 | 7-13/16 | 15-13/16 | 11-13/16 | 11-1/4   | 9-3/16               | 8-1/8            |          |         |
|           |           | 2    | 11-9/16                    | 7-7/8   |          |          |          |                      |                  | 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                     | 8-1/8   | 25-13/16 | 11-1/8   | 11-5/16  | 9-1/8                | 7-1/16           |          |         |
|           |           | 2    | 10-5/16                    |         |          |          |          |                      |                  | 23-13/16 | 11-5/16 |
|           |           | -    | -                          |         |          |          |          |                      |                  | -        | -       |
| 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 | -      | -      | 12-1/2 | 2-3/4 | -      | -      |        |        |       |       |       |
|       | 6         | 1              |       |       |        |        |        | 3-3/4 | 2-5/8  | 2-5/8  |        |        |       |       |       |
|       | 4         | 2              |       |       |        |        |        | 6     | 18     | 4-7/8  | 3-1/4  | 3-1/4  |       |       |       |
|       | 6         | -              |       |       |        |        |        | -     | -      | 2-3/4  | -      | -      |       |       |       |
|       | 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 |
| 10/12 | 6         | 2              | 6-1/2 | 7-1/8 | -      | -      | 12-1/2 | 4-7/8 | 3-1/4  | 3-1/4  |        |        |       |       |       |
|       | 4         | -              |       |       |        |        |        | 2-3/4 | -      | -      |        |        |       |       |       |
|       | 6         | 1              |       |       |        |        |        | 5-1/8 | 17-1/8 | 12-1/2 | 3-3/4  | 2-5/8  | 2-5/8 |       |       |
|       | 4         | 2              |       |       |        |        |        | 6-3/8 | 10     | 13-5/8 | 12-1/2 | 6-6/8  | 4-1/8 | 2-5/8 |       |
|       | 6         | -              |       |       |        |        |        | -     | -      | -      | 2-3/4  | -      | -     |       |       |
| 16    | 4         | 1              | 6-1/2 | 7-1/8 | -      | -      | 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              |       |       |        |        |        | 5-1/4 | 19-3/4 | 12-1/2 | 3-3/4  | 2-5/8  | 2-5/8 |       |       |
|       | 4         | 2              |       |       |        |        |        | 6-3/4 | 7-1/4  | 11-5/8 | 15-7/8 | 12-1/2 | 6-3/4 | 4-1/4 | 2-5/8 |
| 20/22 | 6         | -              | 6-1/2 | 7-1/8 | -      | -      | 12-1/2 | 2-3/4 | -      | -      |        |        |       |       |       |
|       | 4         | 1              |       |       |        |        |        | 6-3/8 | 10     | 13-5/8 | 12-1/2 | 6-3/4  | 4-1/4 | 2-5/8 |       |
|       | 6         | 2              |       |       |        |        |        | 4-5/8 | 5-3/8  | -      | -      | 2-3/4  | -     | -     |       |
|       | 4         | -              |       |       |        |        |        | 4-5/8 | 5-3/8  | -      | -      | 2-3/4  | -     | -     |       |
|       | 6         | 1              |       |       |        |        |        | 4-7/8 | 6      | 12-1/8 | 25-7/8 | 12-1/2 | 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         | -              |       |       |        |        |        | 4-5/8 | 5-3/8  | -      | -      | 2-3/4  | -     | -     |       |
|       | 4         | 1              |       |       |        |        |        | 4-5/8 | 5-3/8  | -      | -      | 2-3/4  | -     | -     |       |
|       | 6         | 2              |       |       |        |        |        | 4-7/8 | 6      | 12-1/8 | 25-7/8 | 12-1/2 | 6-1/8 | 4-1/2 | 2-5/8 |
|       | 4         | -              |       |       |        |        |        | 4-5/8 | 5-3/8  | -      | -      | 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

# 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<br>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<br>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:

- 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.

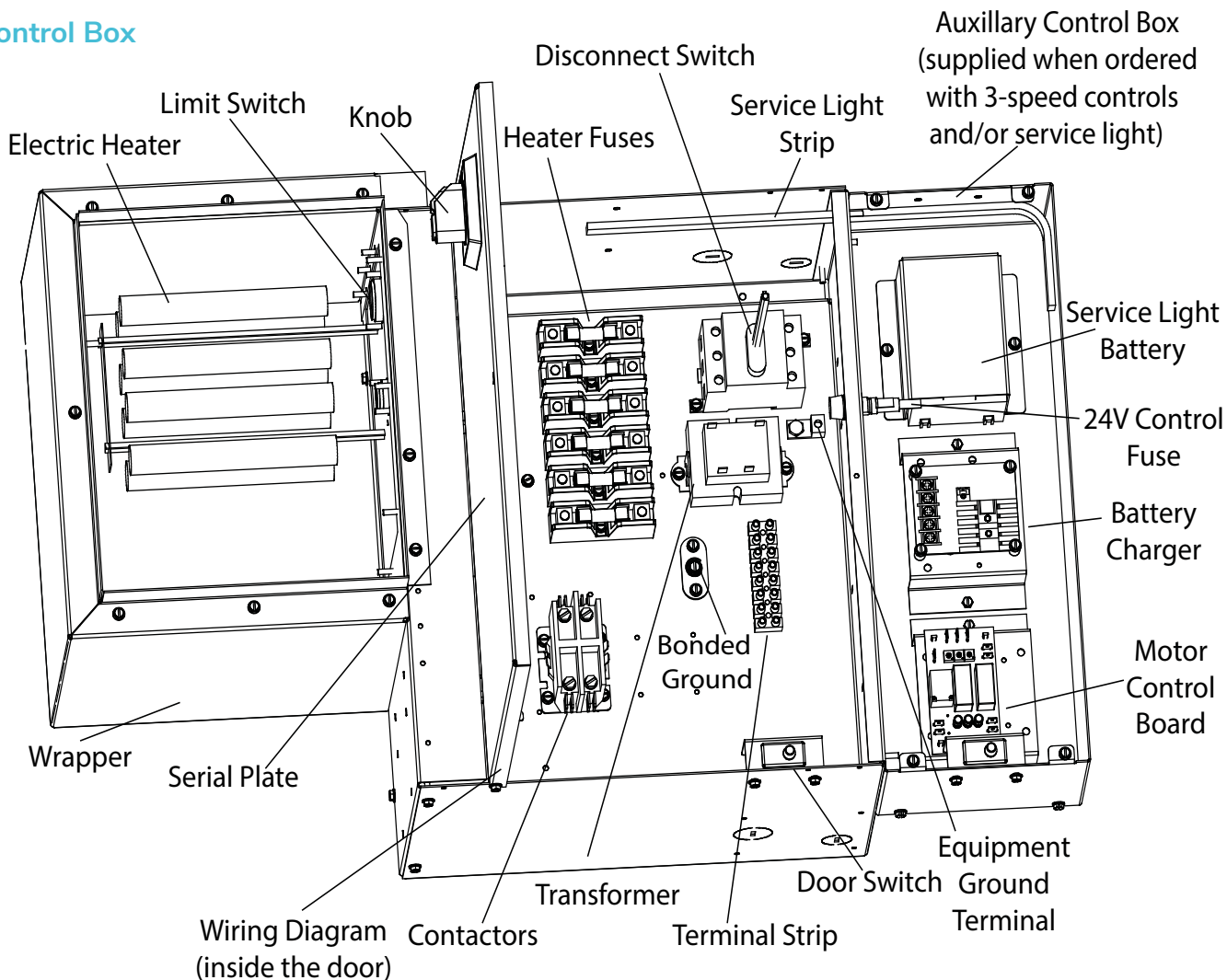
##### Condensate Float Switch

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

##### 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, 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 <sup>1</sup> |          |          |
|--|---------------------------|----------|----------|
|  | 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

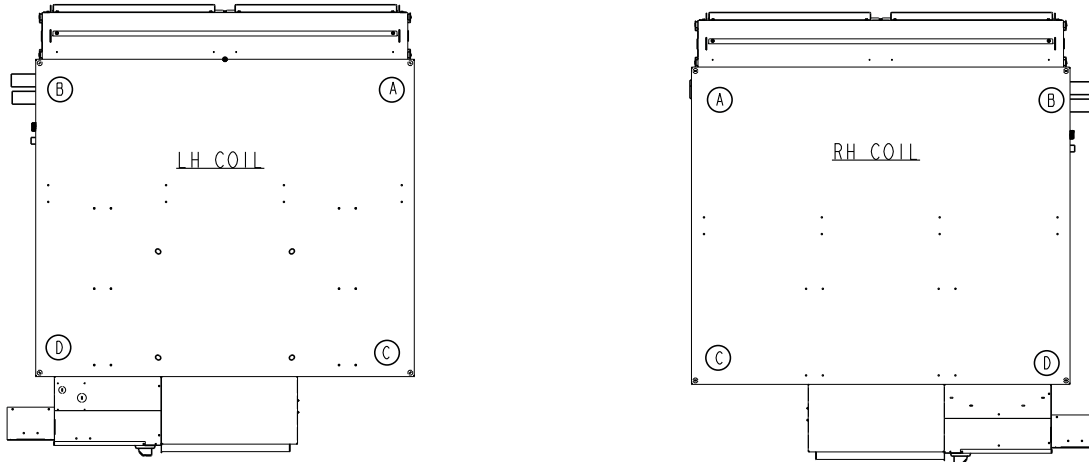


### Unit Weight Calculations

#### 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 |

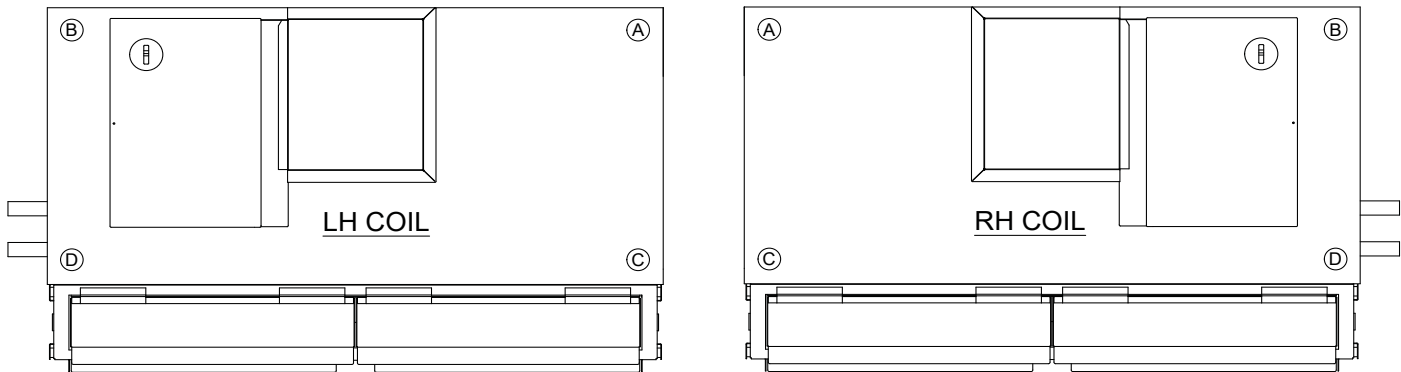
NOTES: 1. Unit weights (shown in pounds), +/- 10 percent, are based on the largest water-filled coil.

### 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

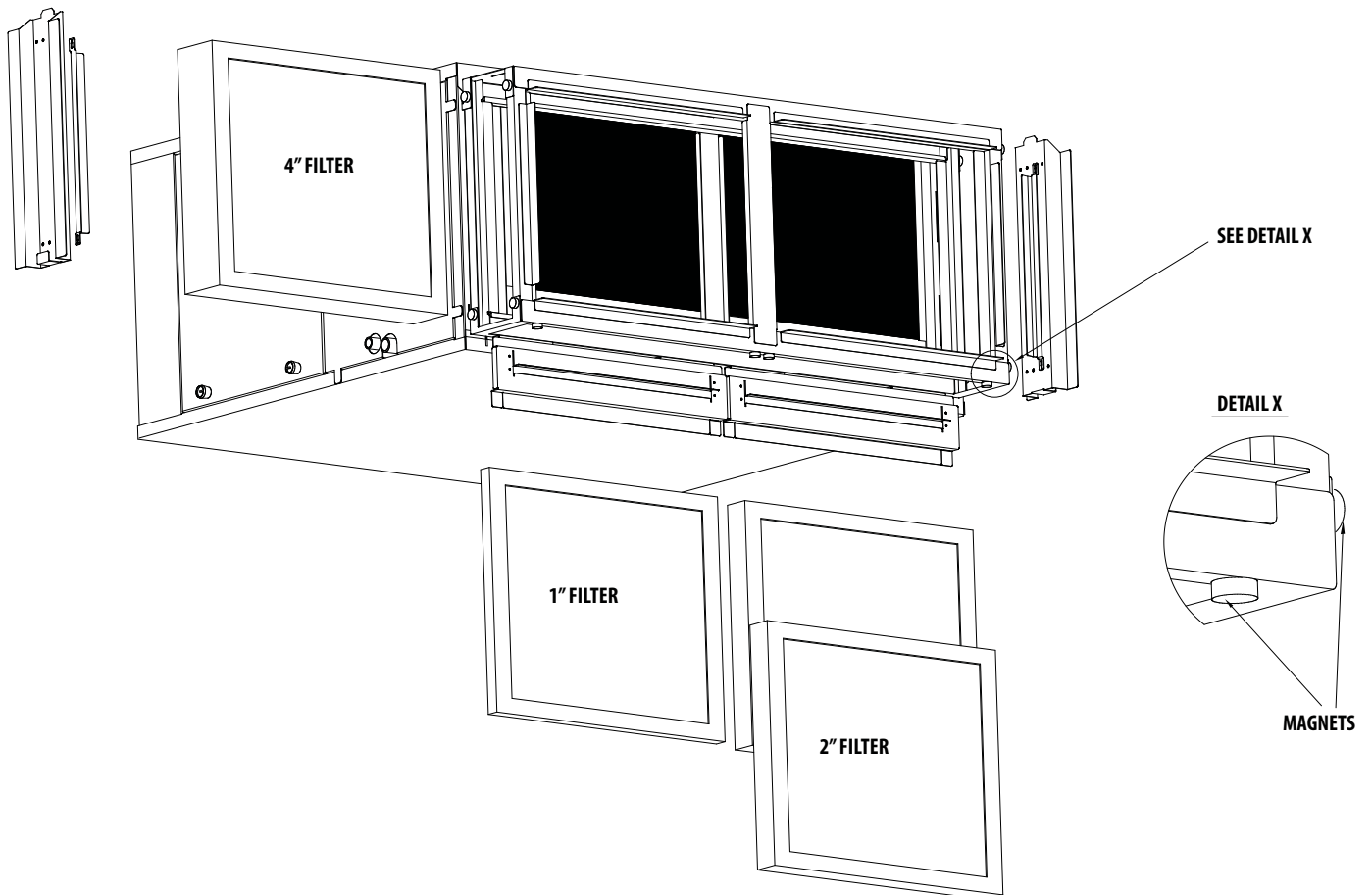
#### Filters – HDY

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.

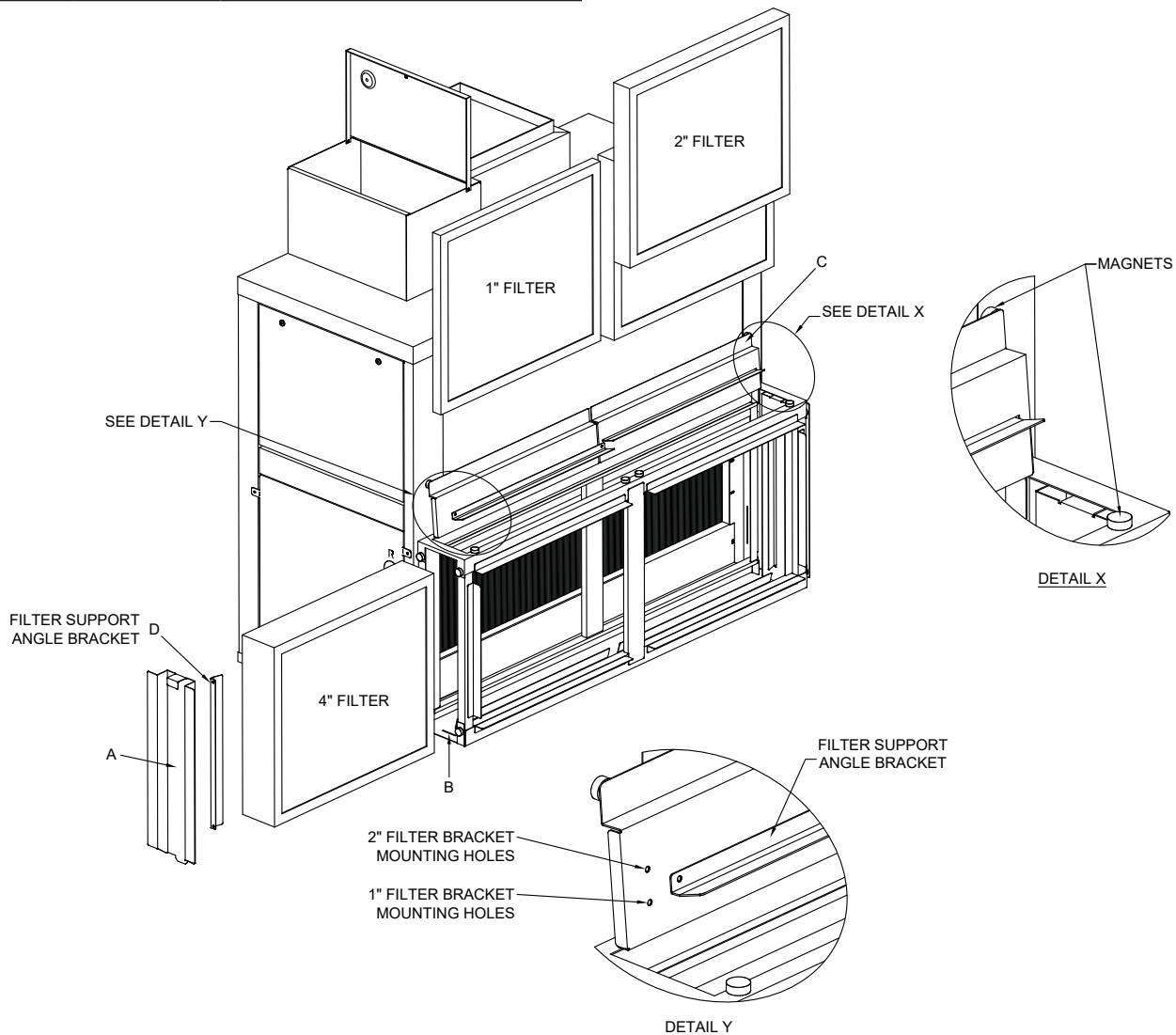
#### Filters – VDY

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) |
|-----------|-----------------|---|
|           |                 | VDY   |
| 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 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



### 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 Consumption: ..... Less than 1 watt  
 Frequency: ..... 50/60 hertz  
 Over Current Protection:.. 500mA Glass Cartridge Fuse  
 Lead Wires ..... 50"(L)

##### Ionization Output:

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

**DIMENSIONS:** See Figure 1

##### APPROVALS:

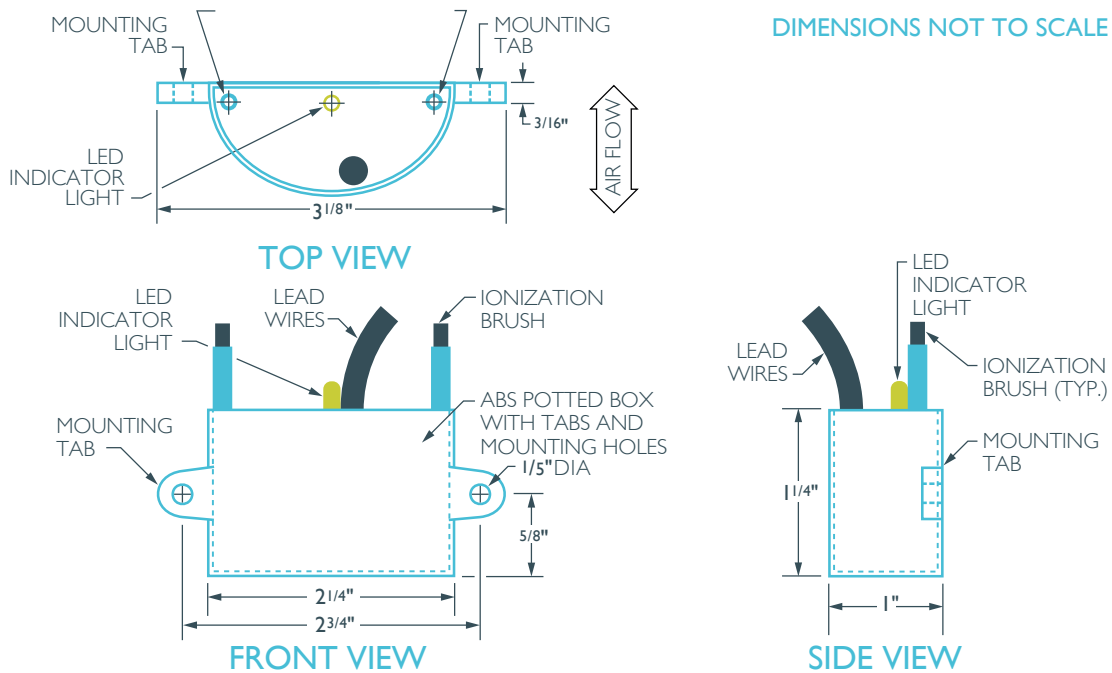
Intertek/ETL tested in accordance with:

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

UL Validated:

- 2998: Zero Ozone Emissions

Figure 1.



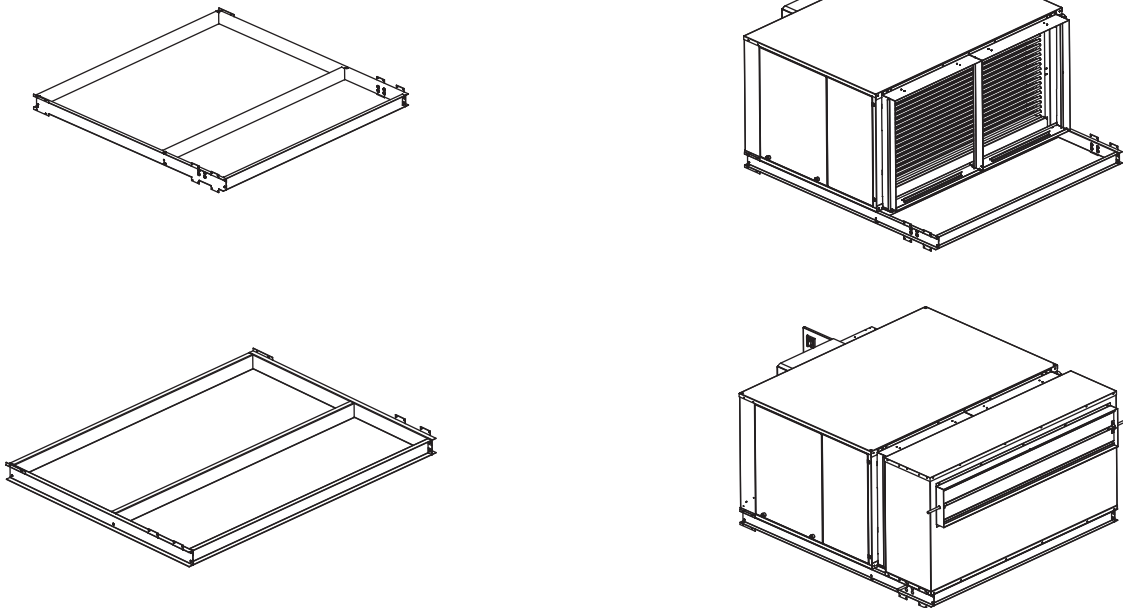
### Mixing Boxes

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

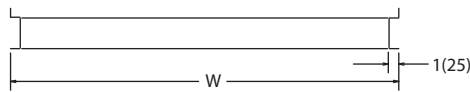
#### Mixing Box with Base Rails – HDY

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

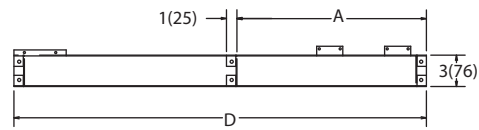
hardware required for assembly is included. Linkage kit consists of 2 crank arms, 2 swivels, and either a 25" (sizes 06-16) or a 34" (sizes 20-30) length of 5/16" rod provided for field installation of actuator. Consult factory for the 24 V damper actuator option. Mixing box option adds 3" to the unit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



#### Base Rail Details – HDY



FRONT VIEW



SIDE VIEW

| 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.

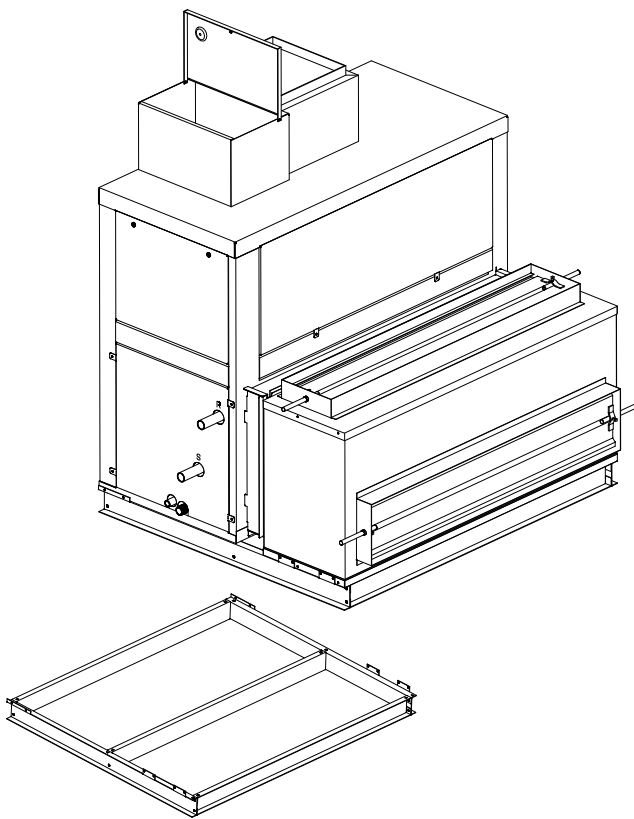
Mixing boxes can be used when outside air is required. Mixing boxes come with base rails. Refer to the drawings on pages 53 to 55 for additional information.

#### Mixing Box with Base Rails – VDY

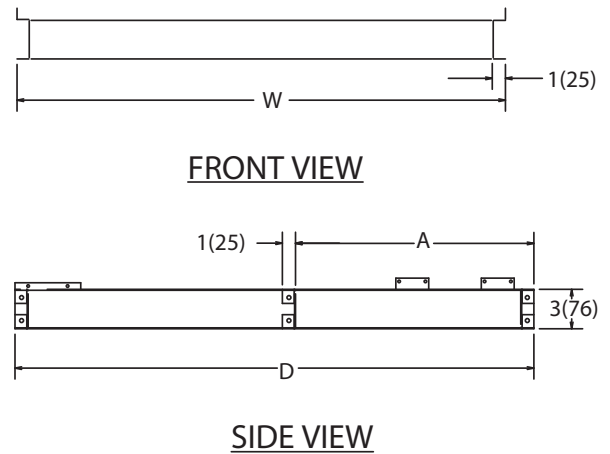
Mixing box option includes: 1) knockdown base rails for field assembly, and 2) pre-assembled mixing box. Base rails are letter coded for ease of assembly and all

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

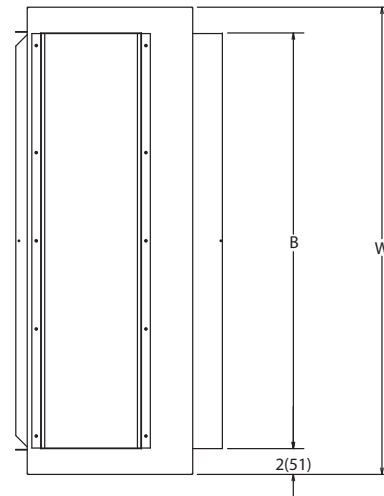
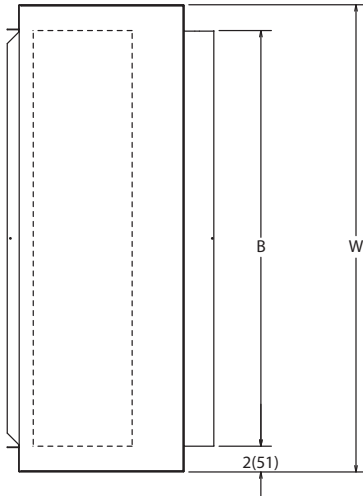


| Vertical Units – Dimensions - Inches (Millimeters) |           |             |            |
|--|-----------|-------------|------------|
| Unit Type and Size                                 | W         | D           | A          |
| VDY06  | 28 (711)  | 35.5 (902)  | 16.1 (409) |
| VDY08  | 28 (711)  | 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) |

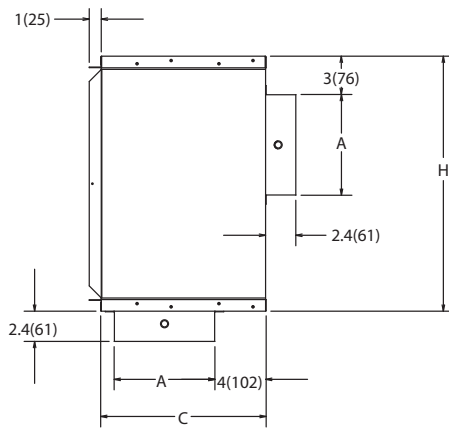
NOTE: Dimensions are in inches (millimeters).

### Mixing Boxes, Cont'd.

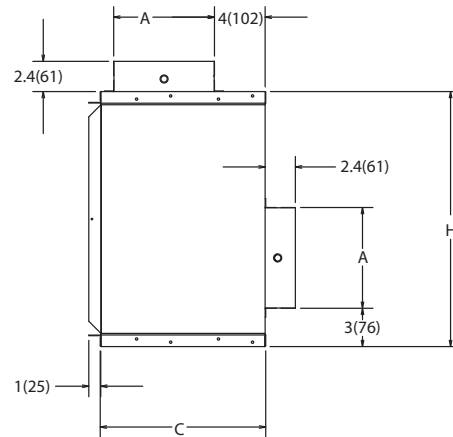
#### Mixing Box Details – HDY & VDY



TOP VIEWS



BTM/REAR INLET - HDY  
BTM/FRONT INLET - VDY



TOP/REAR INLET - HDY  
TOP/FRONT INLET - VDY

| 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.



## Standard Features and Options

| Features and Options  | Standard | Factory  | Field Installed | Factory Special |
|---|----------|----------|-----------------|-----------------|
| <b>Air Flow Arrangement</b>                                 |          |          |                 |                 |
| Rear Return/Front Supply (HDY)                              | X        |          |                 |                 |
| Front Return/Top Supply (VDY)                               | X        |          |                 |                 |
| <b>Coil Options</b>   |          |          |                 |                 |
| 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        |                 |                 |
| <b>Connection</b>   |          |          |                 |                 |
| Right   | X        |          |                 |                 |
| Left  | X        |          |                 |                 |
| <b>Drain Pan</b>  |          |          |                 |                 |
| Removable, double sloped, stainless steel                   | X        |          |                 |                 |
| <b>Fin Material</b>   |          |          |                 |                 |
| Aluminum w/ Galvanized End Sheets                           | X        |          |                 |                 |
| Copper w/ Stainless Steel End Sheets and Bottom Coil Baffle |          | X        |                 | X               |
| Alternate fins per inch                                     |          | X        |                 | X               |
| <b>Electric Heat (1-40 KW, Controls, Stages)</b>            |          | <b>X</b> |                 |                 |
| <b>Indoor Air Quality</b>                                   |          |          |                 |                 |
| 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        |                 |                 |
| <b>Insulation</b>   |          |          |                 |                 |
| 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        |                 |                 |
| <b>Cabinet Construction</b>                                 |          |          |                 |                 |
| 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, Cont'd.

| Features and Options  | Standard | Factory | Field Installed | Factory Special |
|---|----------|---------|-----------------|-----------------|
| <b>Motor Type</b>   |          |         |                 |                 |
| EC Motor 1-Phase (not available on sizes 22 and 30)                               | X        |         |                 |                 |
| EC Motor 3-Phase  | X        |         |                 |                 |
| <b>Motor Voltage</b>  |          |         |                 |                 |
| 120-208-230-277/1/60 (1-Phase only)   | X        |         |                 |                 |
| 208-230-460/3/60 (3-Phase only)   | X        |         |                 |                 |
| <b>Paint Options</b>  |          |         |                 |                 |
| Arctic White, Polar White, Flat Black, Ermine Gray, Champagne Beige, Toffee Brown |          | X       |                 |                 |
| Special Color   |          |         |                 | X               |
| <b>Options</b>  |          |         |                 |                 |
| 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       |                 |                 |
| <b>Thermostats</b>  |          |         |                 |                 |
| 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](http://iec-okc.com)) to find your local IEC Sales Rep.

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