

Maverick I Commercial Packaged Rooftop Systems

Heating & Cooling, Gas/Electric, Electric/Electric
Models MPS A03 – 025
3 to 25 Tons (10.6 to 87.9 kW)
R-410A Refrigerant



3-5 tons



7-12 tons



15-25 tons

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Introduction

The HVAC Solution for Low Rise Buildings

- All Maverick I models feature scroll compressors (R-410A refrigerant) offering maximum reliability, efficiency, and quiet operation.
- Aluminized steel heat exchanger with in-shot burners helps eliminate corrosion. Stainless steel heat exchangers are optional.
- Integrated blower/burner control board with built-in diagnostic capability permits on-site trouble shooting.
- One-piece top over the indoor section with drip lip, drawn base pan, and 1" (25.4 mm) raised flanges for supply/return air connections provides superior water management.
- Convertible horizontal and vertical airflow design allows maximum field flexibility.
- Drive options to accommodate a wide range of design conditions as high as 2" (0.50 kPa) of external static pressure.
- Access doors to mechanical components, which promotes routine maintenance and can reduce service costs.
- Number-coded and color-coded wiring helps facilitate service and maintenance.
- Freeze stat control offers evaporator coil freeze protection, on all models.
- Standard factory-installed compressor high and low-pressure safety switches.
- Externally mounted refrigerant gauge ports for easy service diagnostics.
- Side and base electric power and gas connection entry helps minimize roof penetrations.
- Easy-to-install, plug-in, slip-in, 100% fully modulating economizers with enthalpy control.
- Quality baked powder paint finish offers long lasting protection against extreme weather conditions and is able to withstand 1,000 hour salt spray test.
- DDC Controls with optional BACnet® or LONTALK® communications.

Agency Listed

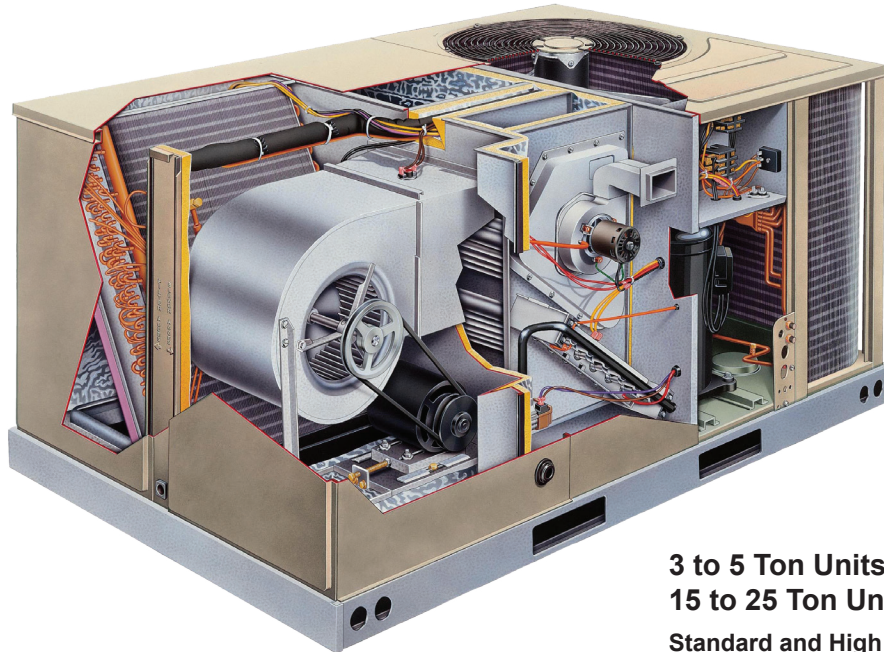


Nomenclature

MPS - A03 C Y C L 08 E XX B

<p>Product Category Daikin Package System</p> <p>Nominal Capacity (tons) <i>Standard Efficiency</i> A03 = 3 H08 = 8.5 020 = 20 A04 = 4 H10 = 10 025 = 25 A05 = 5 H12 = 12.5 <i>High Efficiency</i> H07 = 7.5 015 = 15 H15 = 15 H20 = 20</p> <p>Refrigerant B = R-410 D = R-410</p> <p>Type Y = Cooling only G = Gas</p> <p>Voltage C = 208/230V, 60Hz, 3Ø D = 460V, 60Hz, 3Ø Y = 575V, 60Hz, 3Ø</p>	<p>Economizer Option A = No economizer B = With economizer D = Economizer for DDC controls</p> <p>Factory Installed Options See page 7</p> <p>Controls Y = Electromechanical controls, cooling only E = Electromechanical controls, w/ gas heat D = DDC controls cooling only or cooling w/ gas heat R = Reheat with DDC controls, cooling only or cooling with gas heat</p> <p>Heating Capacity (MBh input) 08 = 80 MBh 15 = 150 MBh 35 = 350 MBh 10 = 100 MBh 20 = 205 MBh 40 = 400 MBh 12 = 120 MBh 22 = 225 MBh 30 = 300 MBh 13 = 135 MBh 25 = 250 MBh 00 = Cooling only or field installed electric heat</p> <p>Drive Package A = Belt drive – Low Static F = VFD – Low Static B = Belt drive – Medium Static G = VFD – Medium Static C = Belt drive – High Static H = VFD – High Static M = Belt drive – high static R = VFD – Low Static V = Direct drive –(5 ton only) S = VFD – High Static</p>
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Daikin's Unique Features and Options



3 to 5 Ton Units
15 to 25 Ton Units (Not Shown)

Standard and High Efficiency Units:
MPSA03D-A05D

MPS015B-MPS025B

MPSH15B-MPSH20B

1 External Refrigerant Gauge Ports

- Easy access for service

2 Durable Construction

- Exterior cabinet panels pass 1000-hour ASTM B 117 Salt Spray Test for durability
- 18 gauge sheet metal for durability and low leakage rates
- 3/4-inch, foil face insulation with mechanical fasteners helps prevent insulation damage and fibers in the airstream

3 Polymer/Composite, Double-Sloped Drain Pan

- Prevents corrosion
- Avoids standing water for high IAQ
- Sloped per ASHRAE Standard 62.1-2004
- Slide-out removal for easy periodic cleaning and maintenance for superior IAQ

4 Refrigerant Piping

- Thermal expansion valves

5 Evaporator

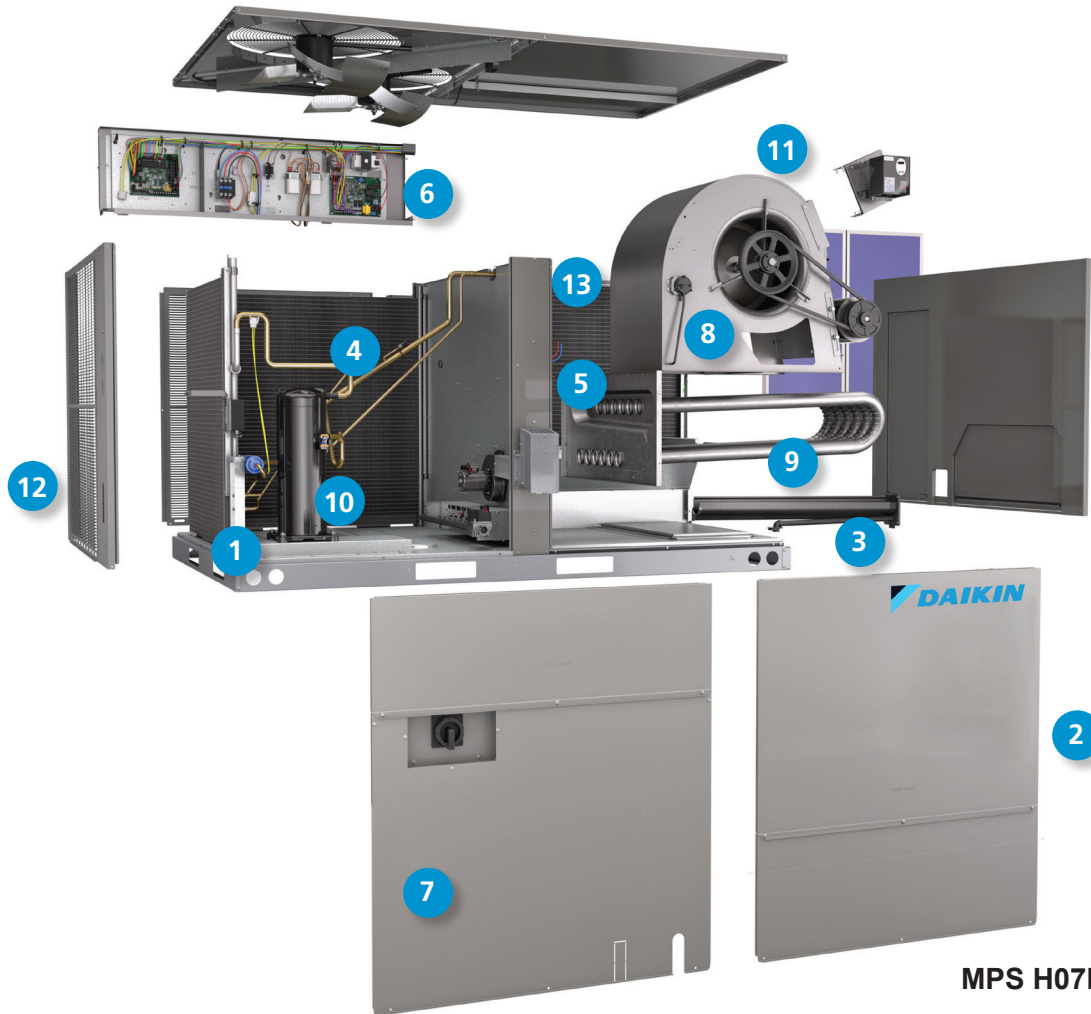
- Inside the blower compartment, the interlaced evaporator can be viewed. The evaporator uses copper tube and aluminum fin technology for maximum heat transfer (3-5 and 15-25 tons).
- The MPSH07D to 12D uses a microchannel evaporator coil which minimizes refrigerant use while maximizing heat transfer.

6 DDC Unit Controller (optional)

- Interoperability with BACnet® or LonMark® communications for easy integration into your building automation system of choice.

7 Easy Access Doors

- Provides easy access to system components for maintenance and serviceability
- Hinged access doors on the filter, fan, and control panel sections (7 to 25 ton units)



MPS H07D – H12D

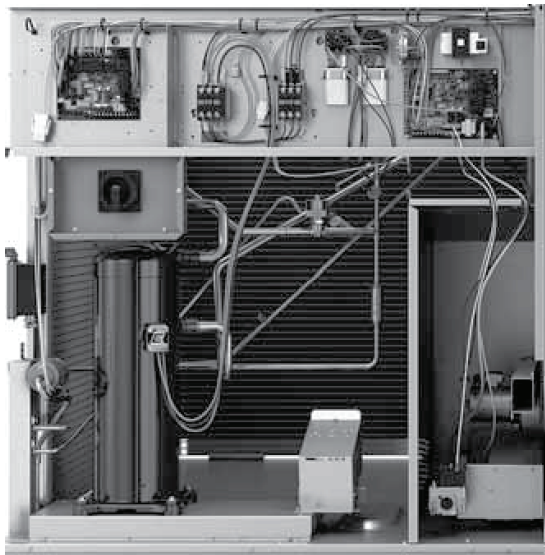
- 8 Slide Out Fan (7 to 25 Ton units)**
 - For easy access and serviceability.
- 9 Gas Heat Option**
 - Tubular heat exchanger with in-shot burners for maximum heat transfer
 - Two-stage gas valve with direct spark ignition provides greater efficiency on 7 ton and larger units
- 10 Scroll Compressors**
 - R-410A refrigerant
 - Provide maximum dependability, efficiency and quiet operation
 - Two refrigerant circuits on larger units provide efficient part load performance (15 to 25 ton units)
 - Standard low and high pressure safety switches
 - Filter driers on all refrigerant circuits for moisture removal and dependable operation
- 11 2-Speed SAF Motors (Optional)**
 - MPSH05C
 - All MPS 7 to 25 ton units
- 12 Optional Louvered Panels**
 - For added protection of the condensing coils from hail and other physical damage.
- 13 Optional Hot Gas Reheat**
 - Optional hot gas reheat used for dehumidification purposes

Features and Benefits

D Vintage Units (MPSA03D – H12D)

Compressor

The scroll compressor is known for its long life and for reliable, quiet, and efficient operation. The new Maverick units come equipped with a single, 2 stage scroll compressor. This offers two stages of efficient cooling operation in which the first stage is approximately 50% of second stage. The suction and discharge lines are designed with shock loops to absorb the strain and stress that the starting torque, steady state operation, and shut-down cycle impose on the refrigerant tubing.



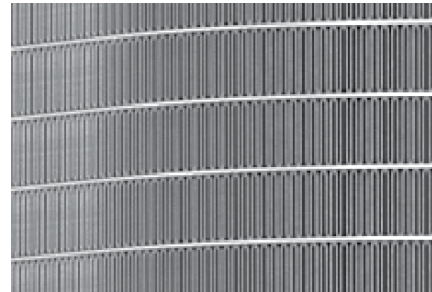
Drain Pan

The drain pan is made from a composite material that resists the growth of harmful bacteria. With both side and center drain options, the drain pan slides out completely for easy cleaning. It also features a standard overflow switch.



MicroChannel Condenser Technology

The outdoor coil uses the latest microchannel technology for the most effective method of heat transfer. The outdoor coil is protected by optional louvered panels, which allow unobstructed airflow while protecting the unit from both the environment and vandalism.



Condenser Fans

The condenser fan motors can easily be accessed and maintained through the top of the unit. A down-mount fan provides corrosion protection and easy removal. The polarized plug connection allows the motor to be changed quickly and eliminates the need to snake wires through the unit.



MicroChannel Evaporator & TXV

The Microchannel Evaporator is accessible through the blower compartment, and through the filter rack, to simplify cleaning. The evaporator uses microchannel technology for maximum heat transfer, light weight, fewer manually brazed connections and reduced refrigerant charge. The TXV metering device maintains superheat over a wide range of varying temperatures optimizing unit performance for all conditions.

Filter Rack

Located within the filter compartment, the new Maverick unit allows easy changeover between 2" and 4" standard size and readily available filters.

Coil Coating

Every unit offers the option of factory-applied condenser coil coating that delivers superior corrosion resistance for outdoor coils to operate in the harshest of environments.



Including All Units:

Unit Construction

Maverick I rooftop units are designed from the ground up with the latest features and benefits required to compete in today's market. The commercial rooftop design stands alone in the industry and is a testament to the quality, reliability, ease of installation and serviceability that goes into each unit.

Cabinet

The sheet-metal cabinet (1) uses nothing less than 18-gauge material for structural components with an underlying coat of G90. To ensure the leak-proof integrity of these units, the design utilizes a one-piece top with a 1/8" drip lip (4), gasket-protected panels and screws. The Maverick I hail guard (5) sets the standard for coil protection in the industry. Every unit has an electro deposition baked-on powder coat finish and is tested to withstand a rigorous 1000-hour salt spray test, per ASTM B117.

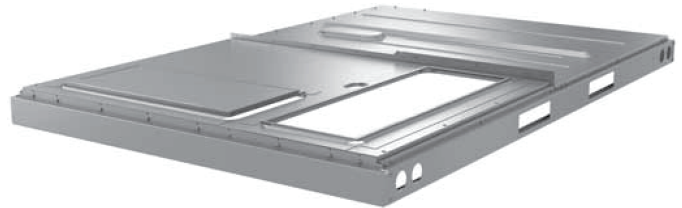
Figure 1: Maverick I Rooftop Unit



Base

Anything built to last must start with the right foundation. In this case, the foundation is 14-gauge, commercial-grade, full-perimeter base rails (3), which integrate fork slots and rigging holes to save set-up time on the job site. The base pan (right) is stamped, which forms a 1-1/8" flange around the supply and return opening to prevent water entering the conditioned space (7). The insulation has been placed on the underside of the basepan, removing areas that would allow for potential moisture accumulation, which can facilitate growth of harmful bacteria. All insulation is secured with both adhesive and mechanical fasteners, and all edges are hidden. Each unit has been tested to U.L. 1995, ANSI 21.47 and AHRI 340-370 standards. Each unit bears the U.L. and AHRI certification labels located on the unit nameplate area (15). Contractors can rest assured that when a Maverick I unit arrives at the job, it is ready to go with a factory charge and quality checks. Each unit also proudly displays the "Made in the USA" designation.

Figure 2: Rooftop Unit Base Assembly



Access Panels

Access to all major compartments is from the front of the unit, including the filter and electrical compartment, blower compartment, furnace section, and outdoor section. Each panel is permanently embossed with the compartment name (control/filter access, blower access and furnace access).

Electrical

Electrical compartment access is through a hinged-access panel (2) with 1/4-turn latches. On the outside of the panel is the unit nameplate, which contains the model and serial number, electrical data and other important unit information.

The unit charging chart is located on the inside of the electrical compartment door. Electrical wiring diagrams are found on the control box cover, which allows contractors to move them to more readable locations. To the right of the control box the model and serial number can be found. Having this information on the inside will assure model identification for the life of the product.

Inside the control enclosure (10), each electrical component is clearly identified with a label that matches the component to the wiring diagram for ease of troubleshooting. All wiring is numbered on each end of the termination and color-coded to match the wiring diagram.

Convenience Outlet and Disconnect Switch (Gas Heat Only)

For added convenience in the field, a factory-installed convenience outlet and power disconnect are available.

Low and high-voltage power supply can enter either from the side or through the base. Low-voltage connections are made through the low-voltage terminal strip. For ease of access, the U.L.-required low-voltage barrier can be temporarily removed for low-voltage termination and then reinstalled. The high-voltage connection is terminated at the contactor of the number 1 compressor.

Figure 3: Convenience Outlet/Disconnect Switch



Figure 4: Maverick I Access Doors



Gauge Ports

To the right of the electrical compartment are the externally mounted gauge ports, which are permanently identified by embossed wording that clearly identifies the compressor circuit, high pressure connection and low pressure connection (11, Figure 4). With the gauge ports mounted externally, an accurate diagnostic of system operation can be performed quickly and easily without disrupting airflow.

Electromechanical Controls

The new C and D vintage Maverick I units now offer the affordable option of Electromechanical Controls. This allows the unit to be completely controlled by a 3rd party controller. From a 7 day programmable thermostat, to a DDC controller, this permits the user total flexibility in controller options. Refer to the Sample wiring diagrams section for more details

DDC Controller

The optional DDC unit control system is pre-engineered and factory tested prior to shipment. Its features include:

- Stable, efficient temperature control.
- Comprehensive diagnostics.
- Alarm monitoring.
- Alarm-specific component shutdown if critical equipment conditions occur.

The DDC control system comes standard with a user interface, providing system operators with superior access to temperatures, operating states, alarm messages, and control parameters.

The DDC control system components include:

- DDC controller with keypad/display user interface.
- Unit-mounted temperature sensors.
- Field installed zone temperature sensor packages.
- Enthalpy sensors/controllers.

Communication Feature

The DDC control system is factory configured for either time clock operation or for incorporation into an independent Building Automation Systems (BAS). Field installed communication modules provide the means to configure DDC unit controls for interoperability with an independent BAS using Daikin's innovative Open Choices™ feature. Communication modules are available to support BACnet MS/TP, BACnet/IP, and LONMARK communication protocols.

BACnet communications conform to the BACnet Standard, ANSI/ASHRAE Standard 135-2004, and are supported by a protocol implementation conformance statement (PICS).

LONTALK communications are in accordance with the Space Comfort Controller (SCC) profiles and are LONMARK 3.4 certified.

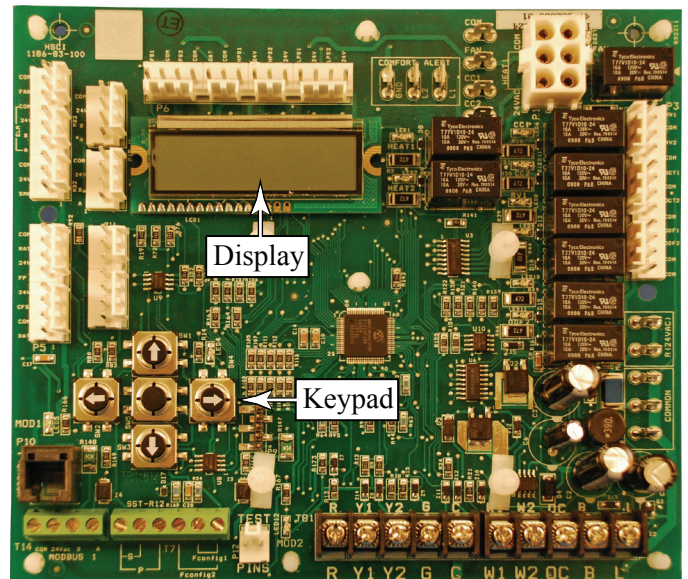
The building automation system can interact with one or more rooftop unit controllers in any of the following ways:

- Sets the unit's operating and occupancy modes.
- Monitors all controller inputs, outputs, set points, parameters, and alarms.
- Sets controller set points and parameters.
- Clears alarms.
- Sets the heat/cool changeover temperature.

Keypad/Display

The keypad/display provides a user interface with the main controller and has easy-to-use keys and control knob used for navigation and entering changes. The display is a 2-line by 16-character format with clear English display messages. All operating conditions, system alarms, control parameters and schedules can be monitored from the keypad/display.

Figure 5: Keypad/Display Interface



Unit Sensors

Temperature and Enthalpy Sensors

The return and outside air temperature sensors are factory installed. The zone temperature sensor package can be ordered as a field installed option.

Zone Temperature Sensors

Two optional zone temperature sensors are available:

1. Zone sensor with tenant override.
2. Zone sensor with tenant override and remote set point adjustment.

Timed tenant override is a standard DDC control feature.

Zone sensors are required for the controller's space reset of supply air set point and night setback features. All zone sensors are field installed with field wiring terminated at the unit controller.

Enthalpy Sensors

The optional comparative enthalpy control economizer package is provided with the enthalpy sensor for the return air and outside air factory installed.

Auto/Manual Operation Selection

Automatic or manual operation can be controlled at the keypad. The keypad provides a variety of occupancy and auto/manual control mode selections available to the operator:

Occupancy Modes	Control Modes
Auto	Off Manual
Occupied	Auto or Heat/Cool
Unoccupied	Cool Only
Bypass (tenant override)	Heat Only
	Fan Only

Cooling and Heating Lockout Control

All unit controls include separate keypad-programmable set points for locking out mechanical cooling and heating. Mechanical cooling is locked out when the outdoor temperature is below the cooling lockout set point. Heating is locked out when the outdoor temperature is above the heating lockout set point. This feature can save energy cost by eliminating unnecessary heating and cooling during periods when the outdoor air temperature is mild.

Night/Unoccupied Setback

When one of the zone temperature sensors is connected to the unit controller, night setback heating control and night setback cooling control are available. Separate, keypad-programmable, night heating and night cooling set points are used to start the unit when necessary. After the unit starts, night setback control is similar to normal occupied control except that the minimum outside air damper position is set to zero. If the outside air is suitable for free cooling, it is used during night setback operation.

Control by Thermostat

The DDC controller is compatible with a programmable 24 volt thermostat. Connections are made via conventional thermostat screw terminals. Extensive unit status and diagnostics are displayed on the LCD screen of the DDC Controller.

Timed Tenant Override

Off-hour operation flexibility is a must in today's office environments and Daikin's DDC controller handle it with ease. When unit operation is desired during unoccupied hours the tenant override button on either of the optional zone sensor packages is pressed to initiate the override operation. The unit then starts and runs in the occupied mode for a keypad-adjustable length of time (up to six hours). Tenant override operation can also be initiated by a BAS.

Compressor Control

Compressor Staging

Compressor staging is controlled directly by the control temperature. When the control temperature is warmer than the cooling set point, cooling is staged up; when the control temperature is cooler than the cooling set point, cooling is staged down. However, a stage change can only occur when the control temperature is outside the dead band. Staging is constrained by an inter-stage delay timer (five minute default setting). These constraints protect the compressors from short cycling while eliminating temperature variations near the diffusers.

Economizer Control

Economizer Changeover Selection

On units equipped with an economizer, there are two methods of determining whether the outdoor air is suitable for free cooling.

- The standard offering uses an outdoor enthalpy sensor. The unit controller compares the outdoor air enthalpy to a preprogrammed setpoint.
- The optional second method is a comparative enthalpy control. It uses a solid state device that compares the outdoor air ambient enthalpy to the return air enthalpy. When the outdoor air enthalpy is lower than the return air enthalpy, the unit will change to economizer operation.

Alarm Management and Control

Alarm Priority

The various alarms that can occur are prioritized according to the severity of the problem. Three alarm categories are used: 1-Faults, 2-Problems, and 3-Warnings.

1. Faults are the highest priority alarms. If a fault condition occurs, the complete unit is shut down until the alarm condition is gone and the fault is manually cleared at the keypad. A fault example is a "Fan Fail" alarm.
2. Problems are the next lower priority to faults. If a problem occurs, the complete unit does not shut down, but its operation is modified to compensate for the alarm condition. A problem automatically clears when the alarm condition that caused it is gone. "Lo Pres-Ckt1" is an example of a problem where only the affected compressor is shut down.
3. Warnings are the lowest priority alarms. No control action is taken when a warning occurs; it is simply indicated to alert the operator that the alarm condition needs attention. To remind the operator to read warnings, they must be manually cleared. "Dirty Filter" indication is an example of a warning.

Table 1: DDC Alarm Summary

Alarm Name	Fault	Problem	Warning
Emergency Off	X		
Control T Fail	X		
LCT	X		
Hi Return Tmp	X		
Hi Disch Tmp	X		
Lo Disch Tmp	X		
Fan Fail	X		
OAT Sensor		X	
Space Sensor		X	
Return Sensor		X	
Hi Pres-Ckt1		X	
Hi Pres-Ckt2		X	
Lo Pres-Ckt1		X	
Lo Pres-Ckt2		X	
Dirty Filter			X

Furnace Controller

The integrated furnace controller, used to control furnace operation, incorporates a flashing LED trouble-shooting device. Flash codes are clearly outlined on the unit wiring diagram. The control transformer has a low voltage circuit breaker that trips if a low voltage electrical short occurs. There is a blower contactor and compressor contactor for each compressor.

Blower Compartment

The blower compartment has a hinged access panel with 1/4 turn fasteners. To allow easy maintenance of the blower assembly, the entire assembly easily slides out by removing two 3/8" screws from the blower retention bracket.

Motor Pulley

The adjustable motor pulley (13, Figure 4) can easily be adjusted by loosening the bolts on either side of the motor mount. Removing the bolts allows for easy removal of the blower pulley by pushing the blower assembly up to loosen the belt. Once the belt is removed, the motor sheave can be adjusted to the desired number of turns, ranging from 0 to 6 turns open. Where the demands for the job require high static, Daikin has high-static drives available that deliver nominal airflow up to 2" of static. By referring to the airflow performance tables listed in the installation instructions, proper static pressure and CFM requirements can be dialed in.

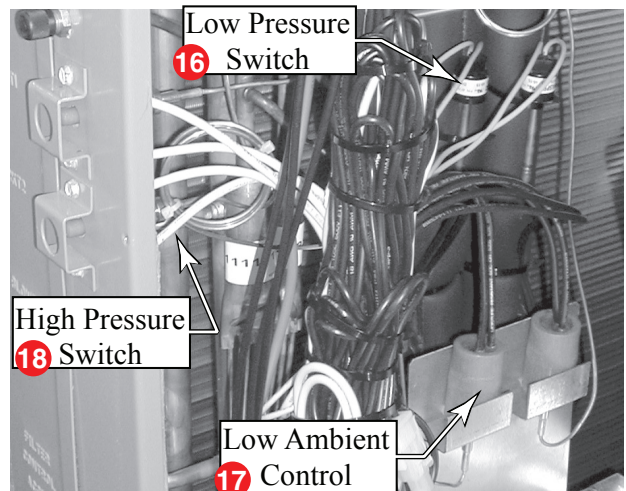
Scroll Housing

The scroll housing (12, page 7) and blower provide quiet and efficient airflow. The blower sheave is secured by an "H" bushing which firmly secures the pulley to the blower shaft for years of trouble-free operation. The "H" bushing allows for easy removal of the blower pulley from the shaft, as opposed to the use of a set screw, which can score the shaft, creating burrs that make blower-pulley removal difficult.

Low/High Pressure Switches

Also inside the blower compartment are the low-ambient control (17), low-pressure switch (16), high-pressure switch (18). The optional low-ambient control allows for operation of the compressor down to 0 degrees ambient temperature by cycling the outdoor fans on high pressure. The high-pressure switch will shut off the compressors if pressures exceeds, 450 PSIG are detected, this may occur if the outdoor fan motor fails. The low-pressure switch shuts off the compressors if low pressure is detected due to loss of charge.

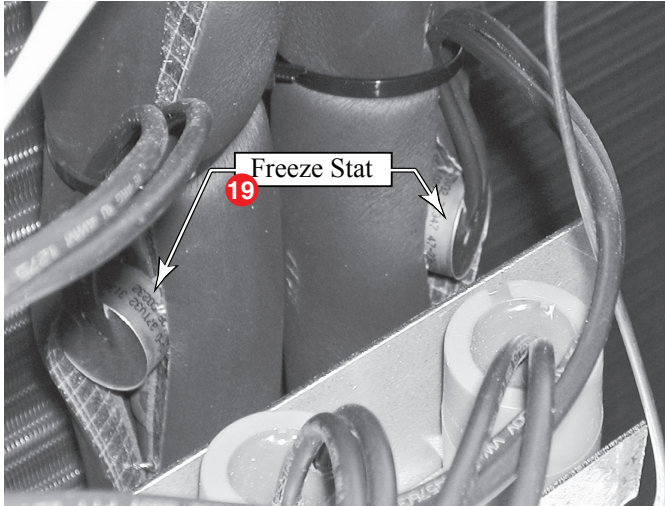
Figure 6: Pressure Switches



Freeze Stat

The optional freeze stat (19) safety device protects the compressor if the evaporator coil gets too cold (near freezing) due to low airflow. Each factory-installed option is brazed into the appropriate high or low side and wired appropriately.

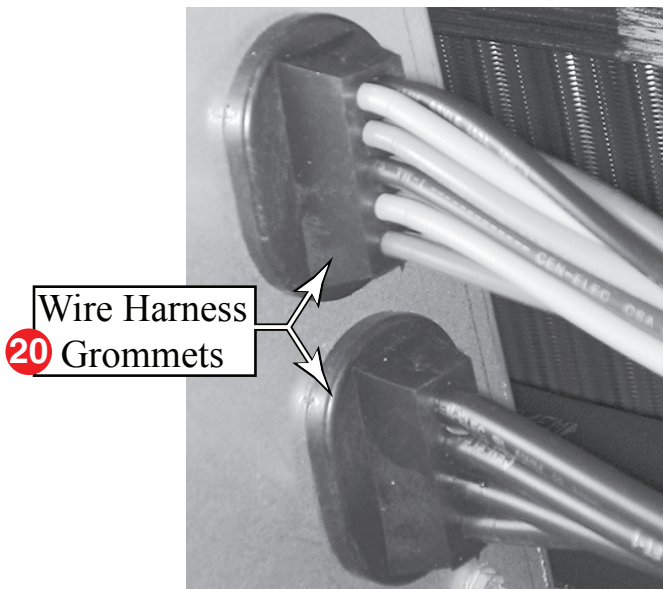
Figure 7: Freeze Stat



Wiring

Wiring throughout the unit is neatly bundled and routed. Where wire harnesses go through the condenser bulkhead or blower deck, a molded wire harness grommet assembly (20) provides an air-tight and water-tight seal, and provides strain relief.

Figure 8: Wiring Harness



Gas Heat Option

The furnace compartment contains the latest furnace technology on the market. The draft inducers (21) draw the flame from the in-shot burners (22) into the aluminized tubular heat exchanger (23) for clean, efficient gas heat. Stainless steel heat exchangers can be factory installed for those applications that have high fresh-air requirements, or applications in corrosive environments.

Each furnace on units 7 tons and above is equipped with a two-stage gas valve (24), which provides two stages of gas heat input. The first stage operates at 50% of the second stage (full fire). 81% steady state efficiency is maintained on both first and second stage by staging the multiple inducers (21) to optimize the combustion airflow and maintain a near stoichiometric burn at each stage.

The direct spark igniter (25) assures reliable ignition in the most adverse conditions. This is coupled with remote flame sense (26) to assure that the flame has carried across the entire length of the burner assembly. Gas supply can be routed from the side or up through the base.

Each furnace has the following safety devices to assure consistent and reliable operation after ignition:

- Pressures switches (27) to assure adequate combustion airflow before ignition.
- Rollout switches (28) to assure no obstruction or cracks in the heat exchanger.
- High limit device that protects the furnace from over-temperature problems.

Figure 9: Gas Heat Option

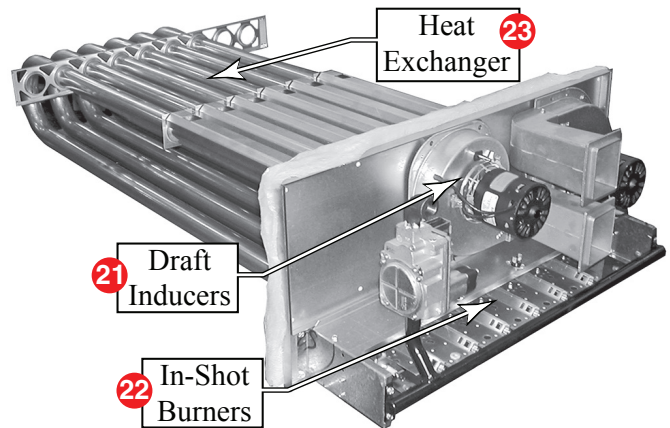
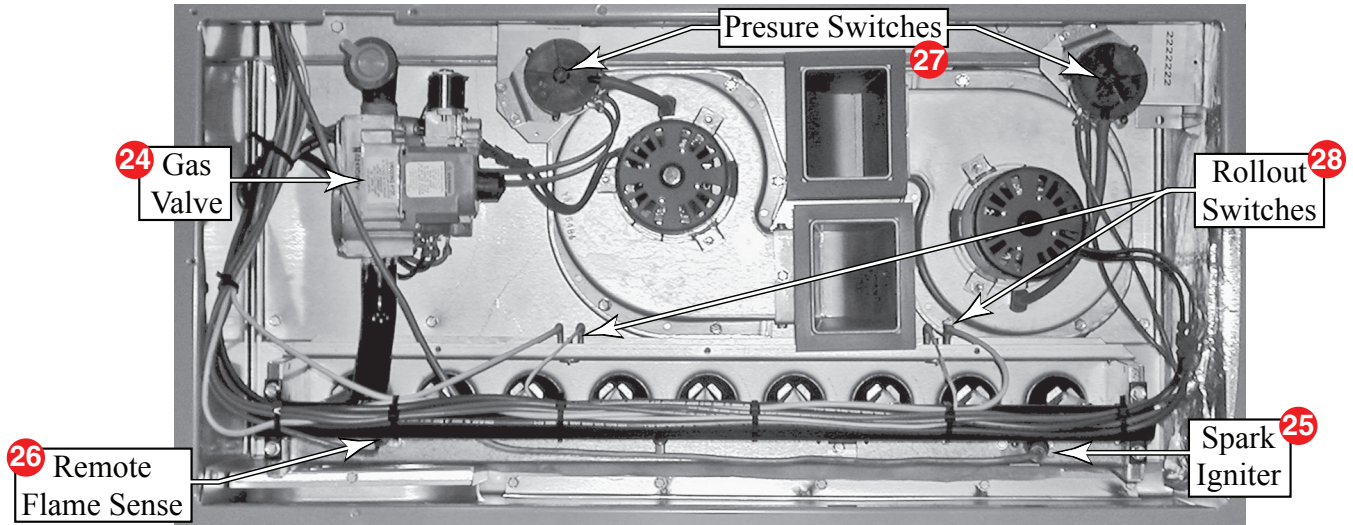


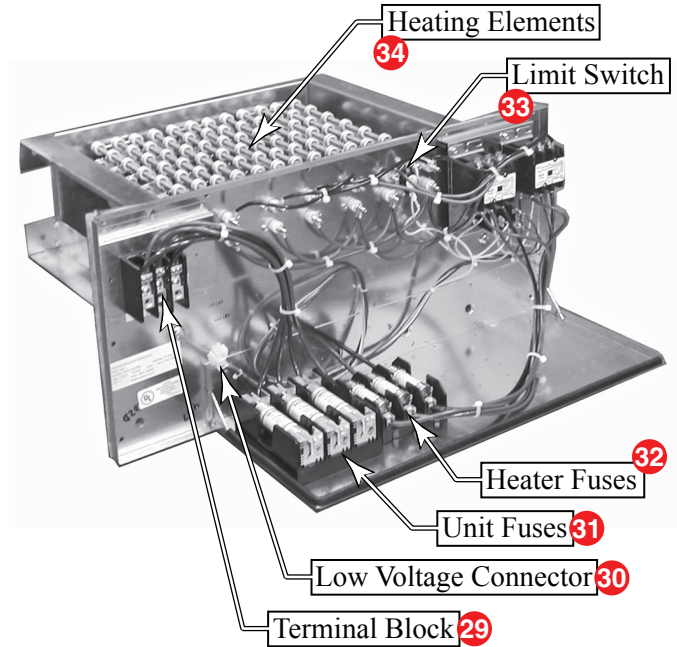
Figure 10: Gas Heat Assembly Detail



Electric Heat Option

The heating compartment contains the latest electric furnace technology on the market. Built with ease-of-installation in mind, the electric furnace is completely wired for slide-in, plug-and-play installation in the field. With choices of up to six kilowatt offerings, the contractor is assured to get the correct amount of heating output to meet the designed heating load. Power hook-up in the field is easy with single-point wiring to a terminal block (29) and a polarized plug for the low-voltage connection (30). The electric furnace comes with fuses for the unit (31) and for the electric furnace (32), and is UL certified. The electric heating elements (34) are of a wound-wire construction and isolated with ceramic bushings. The limit switch (35) protects the design from over-temperature conditions. Each electric furnace has the capability to be converted from single-stage operation to two-stage operation by removing a jumper on the low-voltage terminal strip.

Figure 11: Electric Heat Option

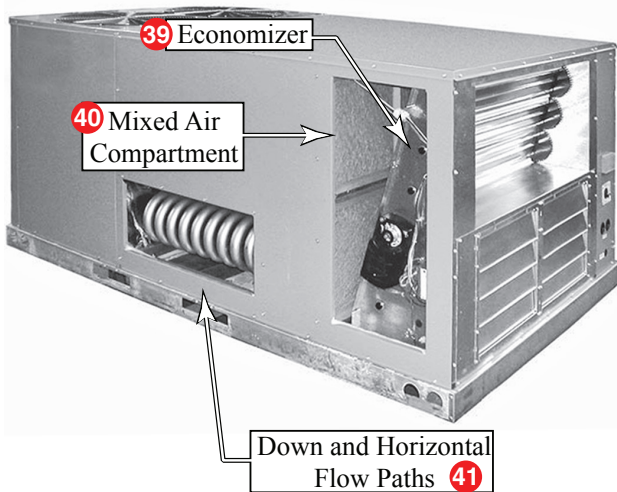


Return Air Compartment/Economizer

Each unit is designed for both downflow and horizontal applications (41) for job configuration flexibility. The return air compartment (40) can also contain an economizer (39, Figure 12 and Figure 13).

Two economizer models are available, one for downflow applications, and one for horizontal applications. Each unit is pre-wired for the economizer to allow quick plug-in installation. The economizer is also available as a factory-installed option. The economizer, which provides free cooling when outdoor conditions are suitable and also provides fresh air to meet local requirements, comes standard with single enthalpy controls (42). The controls can be upgraded to dual enthalpy easily in the field. The direct drive actuator combined with gear driven dampers has eliminated the need for linkage adjustment in the field. The economizer control has a minimum position setpoint, an outdoor-air setpoint, a mix-air setpoint, and a CO₂ setpoint. Barometric relief is standard on all economizers.

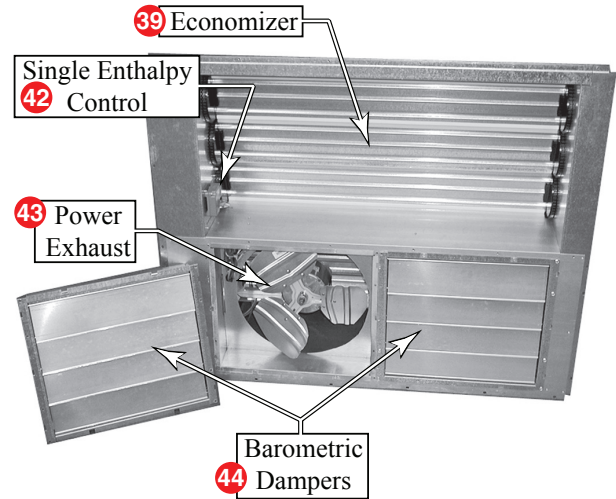
Figure 12: Return Air/Economizer



Power Exhaust

The power exhaust is housed in the barometric relief opening and is easily slipped in with a plug-in assembly. Power exhaust (43) is easily field installed. The system comes complete with a barometric exhaust dampers (44).

Figure 13: Power Exhaust and Economizer



Roof Curb

The Daikin roof curb is made for tool free assembly at the jobsite by hinge pin connection (45) on the adjacent curb sides which makes the assembly process quick and easy. The curb height is 14" and is applicable for all flat roof applications. Gasketing material is provided in the installation kit for an airtight and water-tight seal.

Figure 14: Roof Curb



Reheat/Dehumidification Operational Description

Maverick I rooftop units equipped with dehumidification control require both a space temperature sensor and a space humidity sensor. The demand for cooling will always be satisfied first before the rooftop unit will go into dehumidification control.

The rooftop has 2 types of dehumidification control modes, low dehumidification and high dehumidification control. Unit sizes 3–5 tons only have the high dehumidification control mode since they have only 1 stage of cooling and 1 supply fan speed. Unit sizes 7–25 tons have both the low and high dehumidification control modes since they have 2 stages of cooling and a 2 speed supply fan operation controlled by a VFD. If the space relative humidity is 2–5% above the setpoint the dehumidification control mode will be the “low” dehumidification control. If the space relative humidity is greater than 5% above the setpoint the unit will operate in the “high” dehumidification control mode.

In the low dehumidification control mode the supply fan will run at the low speed and the 1st stage of compressors will operate. In the high dehumidification control mode the supply fan will run at high or full speed and the 2nd stage of cooling will operate.

When the dehumidification control is initiated the liquid line solenoid valve going to the TXV valve closes and the valve from the reheat coil to the TXV opens. The bypass solenoid valve (discharge valve) at the condenser coil also opens. During the dehumidification mode some of the hot gas leaving the compressor goes through the bypass line and some continues to the condenser coil. The bypass gas and the liquid from the condenser come together in a 2 phase liquid/gas mixture and then goes to the reheat coil.

Figure 15: Cooling Mode

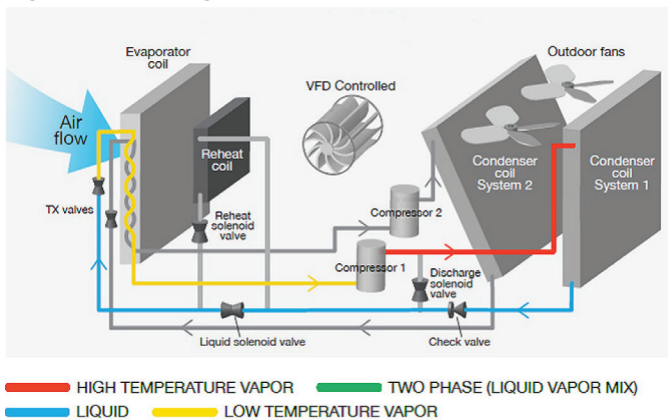
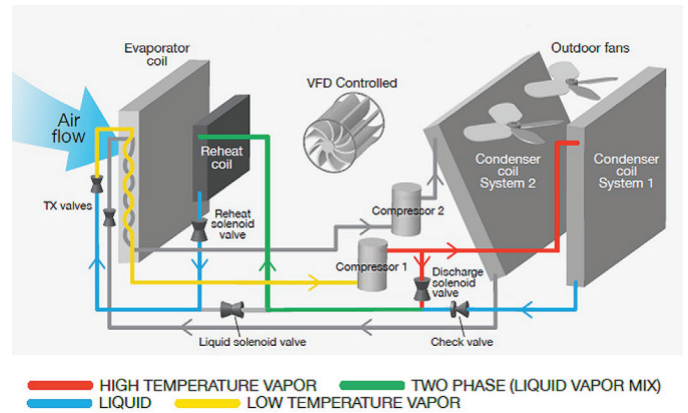


Figure 16: Dehumidification Mode



The amount of refrigerant going to the condenser coil and the amount of heat rejected at the condenser coil is controlled by the Outdoor Fan Motor Control—OFMC. The OFMC controls the outdoor fans based on the liquid line temperature sensor installed at the liquid line of the condenser coil. The OFMC has a temperature adjustment setting and can be controlled to increase or decrease the leaving air temperature (LAT) from the unit.

The default temperature for the OFMC is 90°F. Increasing this temperature setting will increase the leaving air temperature (LAT) of the unit and decreasing the OFMC temperature setting will decrease the LAT of the unit. The refrigerant system is balanced to produce about the same dry bulb temperature leaving the unit as the dry bulb temperature entering the cooling coil.

Thus, when the entering air temperature to the cooling coil is 70°F the LAT of the unit will be about 70°F also but with less moisture, lower dewpoint and drier/less humid air. The unit will operate in the dehumidification mode until the space humidity is satisfied.

Unit Selection Procedure

The following is an example of the selection process. The symbol () designates metric conversions

- A. Determine cooling and heating requirements at design conditions.
- | | |
|-------------------------------------|------------------------|
| Power Supply | 208/230-3 Phase |
| Total cooling capacity | 42,500 BTUH (12.44 kW) |
| Sensible cooling capacity | 34,000 BTUH (9.96 kW) |
| Heating capacity | 96,000 BTUH (28.13 kW) |
| Condenser entering air | 95°F (35°C) |
| Evaporator entering air | 63°F (17°C) |
| | wb/76°F (24°C) db |
| Indoor air flow | 1600 CFM (755 L/s) |
| External static pressure | 1.1 in wg |
| Required efficiency | 13 SEER |
- B. Select unit to meet cooling requirements.
- Since total cooling is within the range of 4 ton (14.07 kW) unit and requires 13 SEER efficiency level, enter cooling performance from the RKNL-A048 at 95°F (35°C) outdoor temperature, 63°F (17°C) wb entering indoor air, and 1600 CFM (755 L/s):
- | | |
|-----------------------------|------------------------|
| Total capacity | 45,100 BTUH (13.21 kW) |
| Sensible capacity | 44,100 BTUH (12.01 kW) |
| Power input | 3.6 kW |
- And also, at 76°F (24°C) db indoor entering air, and using the formula at the bottom of the table:
- | | |
|-----------------------------|------------------------|
| Sensible capacity | 38,327 BTUH (11.22 kW) |
|-----------------------------|------------------------|
- C. Select heating capacity of the unit.
- In the general data tables, note that the heating capacity of the 4 ton (14.07 kW) model with the 135,000 input heater can deliver 109,400 BTUH (32.03 kW), which is suitable for this application.

- D. Determine blower speed and power to meet the system requirements.

At the given external static pressure of 1.1 in wg, the belt model must be selected. Enter the belt drive blower performance data at 1600 CFM (755 L/s) and 1.1 in wg ESP:

RPM	1195
Watts	755
Drive	M

- E. Calculate indoor blower BTUH heat effect.
- $BTUH = Watts \times 3.413 = 2577$
- F. Calculate net cooling capacities.
- Net total cooling = 45,100 – 2577 = 42,523 BTUH (12.45 kW)
- Net sensible cooling = 41,708 – 2577 = 35,750 BTUH (10.47 kW)
- G. Select model

MPSA04BCM13E

NOTE: Computer selections at the project's design conditions can also be obtained from your Daikin sales representative.

Physical Data

Table 2: MPS A03D – A05D, Standard Efficiency (Cooling)

Model	A03D	A04D	A05D
Cooling Performance¹			
Gross Cooling Capacity Btu (kW)	36000 (10.55)	49000 (14.36)	59500 (17.43)
EER/SEER	11.2/14.0	11.2/14.0	11.2/14.0
Nominal CFM/AHRI Rated CFM (L/s)	1200/1300 (566/613)	1600/1730 (755/816)	2000/1950 (944/920)
AHRI Net Cooling Capacity Btu (kW)	35,400 (10.37)	47,500 (13.92)	57500 (16.85)
Net Sensible Capacity Btu (kW)	27,000 (7.91)	25,100 (10.28)	41,000 (12.01)
Net Latent Capacity Btu (kW)	8,400 (2.46)	12,400 (3.63)	16,500 (4.83)
Net System kW	3.16	4.24	5.13
Compressor(s)			
Type/number	Scroll/1	Scroll/1	Scroll/1
Sound⁴			
Outdoor Rating (dB)	88	88	88
Outdoor Coil			
Fin Type	Louvered	Louvered	Louvered
Tube Type	Microchannel	Microchannel	Microchannel
Microchannel Depth In. (mm)	0.71 (18)	0.71 (18)	0.71 (18)
Face Area sq. ft. (sq. m)	16.5 (1.53)	16.5 (1.53)	16.5 (1.53)
Rows / FPI (FPcm)	1 / 23 (9)	1 / 23 (9)	1 / 23 (9)
Indoor Coil			
Fin Type	Louvered	Louvered	Louvered
Tube Type	Microchannel	Microchannel	Microchannel
Microchannel Depth In. (mm)	1 (25.4)	1 (25.4)	1 (25.4)
Face Area sq. ft. (sq. m)	7.52 (0.7)	7.52 (0.7)	7.52 (0.7)
Rows / FPI (FPcm)	1 / 20 (8)	1 / 20 (8)	1 / 20 (8)
Refrigerant Control			
	TX Valves	TX Valves	TX Valves
Drain Connection No./Size In. (mm)	1/0.75 (19.05)	1/0.75 (19.05)	1/0.75 (19.05)
Outdoor Fan			
Type	Propeller	Propeller	Propeller
No. Used/Diameter In. (mm)	1/26 (660.4)	1/26 (660.4)	1/26 (660.4)
Drive Type/ No. Speeds	Direct/1	Direct/1	Direct/1
CFM (L/s)	4600 (2171)	4600 (2171)	4600 (2171)
No. Motors/HP	1 @ 1/5 HP	1 @ 1/5 HP	1 @ 1/5 HP
Motor RPM	820	820	820
Indoor Fan			
Type	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter In. (mm)	1/15×15 (381×381)	1/15×15 (381×381)	1/15×15 (381×381)
Drive Type/No. Speeds			
No. Motors/HP	1	1	1
Motor HP	2, 3	2, 3	2, 3
Motor RPM Direct Drive/Belt Drive	1725	1725	1725
Motor Frame Size	56	56	56
Filter			
Type	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes
[QTY] Size Recommended In. (mm x mm x mm)	[4] 2x16x16 (51x406x406)	[4] 2x16x16 (51x406x406)	[4] 2x16x16 (51x406x406)
Refrigerant Charge			
Charge Oz. (g)	68 (1928)	90 (2552)	88 (2495)

NOTE:

() Designates Metric Conversions

- Cooling Performance is rated at 95°F ambient, 80°F entering dry bulb, 67°F entering wet bulb. Gross capacity does not include the effect of fan motor heat. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to 20% of nominal cfm. Units are certified in accordance with the Unitary Air Conditioner Equipment certification program, which is based on AHRI Standard 210/240 or 360.
- EER is rated at AHRI conditions and in accordance with DOE test procedures.
- Heating Performance limit settings and rating data were established and approved under laboratory test conditions using ANSI standards.
- Ratings shown are for elevations up to 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

Table 3: MPS A03D – A05D, Standard Efficiency (Gas Heating)

Model	208/230V					
	A03D		A04D		A05D	
Gas Heating Performance¹						
AFUE %	81	81	81	81	81	81
Steady stage efficiency %	81	81	81	81	81	81
No. Stages	2	2	2	2	2	2
Gas Connection Size In. (mm)	0.5 (12.7)	0.5 (12.7)	0.5 (12.7)	0.5 (12.7)	0.5 (12.7)	0.5 (12.7)
Heating Input (BtuH) High-Fire/Low-Fire	75,000/52,500 (21.98/115.4)	100,000/70,000 (29.3/20.5)	75,000/52,500 (21.98/115.4)	120,000/84,000 (35.2/24.6)	75,000/52,500 (21.98/115.4)	120,000/84,000 (35.2/24.6)
Heating output (BtuH)	60,750/42,525 (17.8/12.5)	81,000/56,700 (23.74/16.6)	60,750/42,525 (17.8/12.5)	97,200/68,040 (28.5/19.9)	60,750/42,525 (17.8/12.5)	97,200/68,040 (28.5/19.9)
High-Fire Rise Range F (C)	25-55	35-65	25-55	40-70	25-55	40-70
	(13.9-30.6)	(19.4-36.1)	(16.7-33.3)	(22.2-38.9)	(16.7-33.3)	(22.2-38.9)
Low-Fire Rise Range F (C)	20-50	25-55	20-50	30-60	20-50	30-60
	(11.1-27.8)	(13.9-30.6)	(11.1-27.8)	(16-33)	(11.1-27.8)	(16-33)
Model	460V					
	A03D		A04D		A05D	
Gas Heating Performance¹						
AFUE %	81	81	81	81	81	81
Steady stage efficiency %	81	81	81	81	81	81
No. Stages	2	2	2	2	2	2
Gas Connection Size In. (mm)	0.5 (12.7)	0.5 (12.7)	0.5 (12.7)	0.5 (12.7)	0.5 (12.7)	0.5 (12.7)
Heating Input (BtuH) High-Fire/Low-Fire	75,000/52,500 (21.98/115.4)	100,000/70,000 (29.3/20.5)	75,000/52,500 (21.98/115.4)	120,000/84,000 (35.2/24.6)	75,000/52,500 (21.98/115.4)	120,000/84,000 (35.2/24.6)
Heating output (BtuH)	60,750/42,525 (17.8/12.5)	81,000/56,700 (23.74/16.6)	60,750/42,525 (17.8/12.5)	97,200/68,040 (28.5/19.9)	60,750/42,525 (17.8/12.5)	97,200/68,040 (28.5/19.9)
High-Fire Rise Range F (C)	30-60	35-65	30-60	40-70	30-60	40-70
	(16.7-33.3)	(19.4-36.1)	(16.7-33.3)	(22.2-38.9)	(16.7-33.3)	(22.2-38.9)
Low-Fire Rise Range F (C)	25-55	30-60	20-50	35-65	20-50	30-60
	(13.9-30.6)	(16.7-33.3)	(11.1-27.8)	(19.5-36.1)	(11.1-27.8)	(16-33)

NOTE:

() Designates Metric Conversions

1. Heating Performance limit settings and rating data were established and approved under laboratory test conditions using ANSI standards.

 4. Ratings shown are for elevations up to 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level.
 Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

Table 4: MPS H07D – H12D, Standard Efficiency (Cooling)

Model	H07D	H08D	H10D	H12D
Cooling Performance¹				
Gross cooling, BTU (kW)	88,000 (25.78)	99,000 (29.01)	118,000 (34.57)	148,000 (43.36)
EER ² /IEER—IEER with VFD	11/14.8	11/14.8	11/14.8	10.8/14.2
Nominal airflow/AHRI airflow, cfm (L/s)	3000/3175 (1416/1498)	3400/3225 (1604/1522)	4000/3480 (1888/1642)	5000/3750 (2360/1770)
Net cooling, BTU (kW)	85,000 (24.9)	96,000 (28.13)	114,000 (33.4)	142,000 (41.61)
Net sensible, BTU (kW)	62,700 (18.37)	68,300 (20.01)	79,600 (23.32)	98,600 (28.89)
Net latent, BTU (kW)	22,300 (6.53)	27,700 (8.12)	34,400 (10.08)	43,400 (12.72)
Net system power kW	7.35	7.35	9.83	13.69
Compressor(s)				
Refrigerant circuits	1	1	1	2
Type/number	Scroll/1	Scroll/1	Scroll/1	Scroll/2
Gas Heating Performance³				
AFUE %	80	80	80	80
Steady stage efficiency %	81	81	81	81
Number stages	2	2	2	2
Gas connection size, in.	3/4"	3/4"	3/4"	3/4"
Heating input (BtuH) low/high	150,000/205,000	150,000/225,000	150,000/225,000	150,000/225,000
Heating output (BtuH)	121,500/166,050	121,500/182,250	121,500/182,250	121,500/182,250
Temperature rise °F	20–65	15–65	15–65	10–55
Sound⁴				
Outdoor rating (dB)	88	88	88	88
Outdoor Coil				
Fin type	Louvered	Louvered	Louvered	Louvered
Tube type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth, in. (mm)	0.71 (18)	0.81 (20.6)	1 (25.4)	1 (25.4)
Face area, sq. ft (sq. m)	25.4 (2.36)	25.6 (2.38)	25.6 (2.38)	31.5 (2.93)
Rows/fpi (fpcm)	1/23 (9)	1/23 (9)	1/23 (9)	1/23 (9)
Indoor Coil				
Fin type	Louvered	Louvered	Louvered	Louvered
Tube type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth, in. (mm)	1 (25.4)	1.26 (32)	1.26 (32)	1 (25.4)
Face area, sq. ft (sq. m)	11 (1.02)	10.69 (1.01)	10.9 (1.01)	13.8 (1.28)
Rows/fpi (fpcm)	1/20 (8)	1/20 (8)	1/20 (8)	2/18 (7)
Refrigerant control	TX valves	TX valves	TX valves	TX valves
Drain connection, in. (mm)	3/4" (19.05)	3/4" (19.05)	3/4" (19.05)	3/4" (19.05)
Condenser Fan				
Type	Propeller	Propeller	Propeller	Propeller
Number used/diameter, in. (mm)	2/24 (609.6)	2/24 (609.6)	2/24 (609.6)	2/24 (609.6)
Drive type/Number of speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM (L/s)	8000 (3775)	8000 (3775)	8500 (4011)	9000 (3775)
Motor hp	2 at 1/5 HP	2 at 1/5 HP	2 at 1/3 HP	2 at 3/4 HP
Motor rpm	820	820	1075	1100
Indoor Fan				
Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
Number used/diameter, in. (mm)	1/15×15 (381×381)	1/15×15 (381×381)	1/15×15 (381×381)	1/15×15 (381×381)
Number motors	1	1	1	1
Motor hp	2, 3	2, 3	2, 3	3, 5
Motor rpm	1725	1725	1725	1725
Motor frame size	56	56	56	56

NOTE:

() Designates Metric Conversions

1. Cooling Performance is rated at 95°F ambient, 80°F entering dry bulb, 67°F entering wet bulb. Gross capacity does not include the effect of fan motor heat. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to 20% of nominal cfm. Units are certified in accordance with the Unitary Air Conditioner Equipment certification program, which is based on AHRI Standard 210/240 or 360.

2. EER is rated at AHRI conditions and in accordance with DOE test procedures.

3. Heating Performance limit settings and rating data were established and approved under laboratory test conditions using ANSI standards.

4. Ratings shown are for elevations up to 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

Model	H07D	H08D	H10D	H12D
Filter				
Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
[Number] Size, in. (mm)	[4] 2×20×20 (51×508×508)	[4] 2×20×20 (51×508×508)	[4] 2×20×20 (51×508×508)	[4] 2×20×25 (51×508×635)
Refrigerant				
Charge/HGRH Charge, oz. (g)	100/137 (2835/3884)	117/154 (3317/4366)	136/182 (4899/5160)	186/232 (5273/6577)
Weight				
Net weight, lbs. (kg)	839 (381)	868 (394)	896 (406)	1094 (496)
Shipping weight, lbs. (kg)	878 (398)	907 (411)	935 (424)	1133 (514)

NOTE:

() Designates Metric Conversions

- Cooling Performance is rated at 95°F ambient, 80°F entering dry bulb, 67°F entering wet bulb. Gross capacity does not include the effect of fan motor heat. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to 20% of nominal cfm. Units are certified in accordance with the Unitary Air Conditioner Equipment certification program, which is based on AHRI Standard 210/240 or 360.
- EER is rated at AHRI conditions and in accordance with DOE test procedures.
- Heating Performance limit settings and rating data were established and approved under laboratory test conditions using ANSI standards.
- Ratings shown are for elevations up to 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

Table 5: MPS 015B – 025B, Standard Efficiency (Cooling)

Model	015B	020B	025B
Cooling Performance¹			
Gross cooling, BTU (kW)	188,000 (55.08)	244,000 (71.49)	312,000 (91.42)
EER ² /IEER—IEER with VFD	11.1/12.4—14.6	11.1/11.4—14.8	10/10.1—14.1
Nominal airflow/AHRI airflow, cfm (L/s)	6000/5900 (2831/2784)	8000/7725 (3775/3645)	10000/9475 (4719/4471)
Net cooling, BTU (kW)	182,000 (53.33)	234,000 (68.56)	294,000 (86.14)
Net sensible, BTU (kW)	135,700 (39.76)	171,600 (50.28)	214,100 (62.73)
Net latent, BTU (kW)	46,300 (13.57)	62,400 (18.28)	79,900 (23.41)
Net system power kW	16.35	21.04	29.39
Compressor(s)			
Type/number	Scroll/2	Scroll/2	Scroll/2
Gas Heating Performance ³			
AFUE %	80	80	80
Steady stage efficiency %	81	81	81
Number stages	2	2	2
Gas connection size, in.	3/4	3/4	3/4
Heating input (BtuH) low/high	250,000/350,000	300,000/400,000	300,000/400,000
Heating output (BtuH)	203,000/284,000	243,000/324,000	243,000/324,000
Temperature rise °F	15–60	15–55	10–45
Sound⁴			
Outdoor rating (dB)	91	91	92
Outdoor Coil			
Fin type	Louvered	Louvered	Louvered
Tube type	Rifled	Rifled	Rifled
Tube size OD, in. (mm)	0.375 (9.5)	0.375 (9.5)	0.375 (9.5)
Face area, sq. ft (sq. m)	53.3 (4.95)	53.3 (4.95)	53.3 (4.95)
Rows, fpi (fpcm)	1/22 (9)	2/22 (9)	2/22 (9)
Indoor Coil			
Fin type	Louvered	Louvered	Louvered
Tube type	Rifled	Rifled	Rifled
Tube size OD, in. (mm)	0.375 (9.5)	0.375 (9.5)	0.375 (9.5)
Face area, sq. ft (sq. m)	26.67 (2.48)	26.67 (2.48)	26.67 (2.48)
Rows, fpi (fpcm)	2/18 (7)	3/13 (5)	4/15 (6)
Refrigerant control	TX valves	TX valves	TX valves
Drain connection, in. (mm)	1 (25.4)	1 (25.4)	1 (25.4)
Condenser Fan			
Type	Propeller	Propeller	Propeller
Number used/diameter, in. (mm)	4/24 (609.6)	6/24 (609.6)	6/24 (609.6)
Drive type/Number of speeds	Direct/1	Direct/1	Direct/1
CFM (L/s)	16000 (7550)	19800 (9344)	19800 (9344)
Motor hp	4 at 1/3 HP	6 at 1/3 HP	6 at 1/3 HP
Motor rpm	1075	1075	1075
Indoor Fan			
Type	FC Centrifugal	FC Centrifugal	FC Centrifugal
Number used/diameter, in. (mm)	2/18×9 (457×229)	2/18×9 (457×229)	2/18×9 (457×229)
Number motors	1	1	1
Motor hp	3, 5	5, 7-1/2	7-1/2, 10
Motor rpm	1725	1725	1725
Motor frame size	56/184	184/213	213/215

NOTE:

() Designates Metric Conversions

- Cooling Performance is rated at 95°F ambient, 80°F entering dry bulb, 67°F entering wet bulb. Gross capacity does not include the effect of fan motor heat. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to 20% of nominal cfm. Units are certified in accordance with the Unitary Air Conditioner Equipment certification program, which is based on AHRI Standard 210/240 or 360.
- EER is rated at AHRI conditions and in accordance with DOE test procedures.
- Heating Performance limit settings and rating data were established and approved under laboratory test conditions using ANSI standards.
- RATINGS SHOWN ARE FOR ELEVATIONS UP TO 2000 FEET. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

Model	015B	020B	025B
Filter			
Fin type	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes
[Number] Size, in. (mm)	[8] 2×25×20 (51×635×508)	[8] 2×25×20 (51×635×508)	[8] 2×25×20 (51×635×508)
Refrigerant			
Charge, oz. (g)	205/211 (5812/5982)	402/331 (11397/9384)	339/357 (9611/10121)
Weight			
Net weight, lbs. (kg)	2000 (907)	2341 (1062)	2433 (1104)
Shipping weight, lbs. (kg)	2100 (953)	2441 (1107)	2533 (1149)

NOTE:

() Designates Metric Conversions

- Cooling Performance is rated at 95°F ambient, 80°F entering dry bulb, 67°F entering wet bulb. Gross capacity does not include the effect of fan motor heat. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to 20% of nominal cfm. Units are certified in accordance with the Unitary Air Conditioner Equipment certification program, which is based on AHRI Standard 210/240 or 360.
- EER is rated at AHRI conditions and in accordance with DOE test procedures.
- Heating Performance limit settings and rating data were established and approved under laboratory test conditions using ANSI standards.
- Ratings shown are for elevations up to 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

Gas Pressures

The following table lists gas line and manifold pressures for natural gas and LP gas for all unit sizes.

Table 6: MPS A03D – 025B Gas Pressures

Gas Line	Pressure Area	Inches W.C.
Natural gas	Line pressure	5"–10.5"
	Manifold pressure	3.5"
LP gas ¹	Line pressure	11"–13"
	Manifold Pressure	10"

Note:

- Field installed conversion kit required. Contact Daikin Parts.

Options

Factory Installed Option Code

The following tables list options (codes) available for specific sized units.

Table 7: MPSH07 – H12D Selectable Options

Installed Component	Option Code											
	Code Item: 10					Code Item: 11						
	B	C	D	E	F	B	C	D	E	F	H	K
Low Pressure (LP)	X	X	X	X	X	X	X	X	X	X	X	X
High Pressure (HP)	X	X	X	X	X	X	X	X	X	X	X	X
Non-powered GFI outlet							X	X			X	X
Disconnect**									X	X	X	
Hail guard	X		X		X							
Coated condenser Coil				X	X							
Low ambient/Comfort alert						X		X		X		X
Hinged Access Doors		X	X		X							

NOTE: ** indicates the feature is only applicable for units with gas heat.

Table 8: MPS015B – 025B Cooling with Gas Heat

Installed Component	Option Code						
	AA	AP	AH1	JB1	CW1	AR	CY1
Low Pressure (LP)	X	X	X	X	X	X	X
High Pressure (HP)	X	X	X	X	X	X	X
Non-powered GFI outlet			X	X	X		X
Disconnect			X	X	X		X
Freeze stat/low ambient		X			X	X	X
SS heat exchanger				X	X		X

NOTE:

1. Disconnect and GFI outlet are not an option for 208/230 volt, 25 ton units.

Table 9: MPS015B – 025B Cooling Only

Installed Component	Option Code					
	AA	AG	AP	JC	AR	JE
Low Pressure (LP)	X	X	X	X	X	X
High Pressure (HP)	X	X	X	X	X	X
Non-powered GFI outlet		X		X		X
Freeze stat			X	X	X	X

NOTE: Low Ambient / Comfort Alert available with DDC controls only

Performance Data

System Performance—Standard Efficiency

Table 10: Gross System Performance—MPS H07D, 7 Tons Standard Efficiency

wbE		Entering Indoor Air @ 80°F (26.7°C) dbE ¹															
		71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)			61°F (16.1°C)			59°F (15.0°C)			
CFM (L/s)		3600 (1699)	2775 (1310)	2400 (1133)	3600 (1699)	2775 (1310)	2400 (1133)	3600 (1699)	2775 (1310)	2400 (1133)	3600 (1699)	2775 (1310)	2400 (1133)	3600 (1699)	2775 (1310)	2400 (1133)	
DR ¹		0.17	0.13	0.11	0.17	0.13	0.11	0.17	0.13	0.11	0.17	0.13	0.11	0.17	0.13	0.11	
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH kW	119.6 (35.0)	113.5 (33.2)	110.7 (32.4)	112.7 (33.0)	107.0 (31.3)	104.3 (30.6)	107.8 (31.6)	102.3 (30.0)	99.8 (29.2)	106.4 (31.2)	100.9 (29.6)	98.4 (28.8)	105.8 (31.0)	100.4 (29.4)	97.9 (28.7)
		Sens BTUH kW	70.3 (20.6)	61.8 (18.1)	57.9 (17.0)	83.3 (24.4)	73.2 (21.4)	68.5 (20.1)	96.0 (28.1)	84.3 (24.7)	79.0 (23.2)	102.2 (29.9)	89.7 (26.3)	84.1 (24.6)	105.8 (31.0)	94.9 (27.8)	88.9 (26.1)
		Power kW	5.2	5.1	5	5.1	5	4.9	5.1	4.9	4.9	5	4.9	4.9	5	4.9	4.8
	80 (26.7)	Total BTUH kW	116.1 (34.0)	110.1 (32.3)	107.4 (31.5)	109.2 (32.0)	103.6 (30.4)	101.1 (29.6)	104.3 (30.6)	99.0 (29.0)	96.5 (28.3)	102.9 (30.1)	97.6 (28.6)	95.2 (27.9)	102.3 (30.0)	97.1 (28.4)	94.7 (27.7)
		Sens BTUH kW	68.4 (20.1)	60.1 (17.6)	56.3 (16.5)	81.4 (23.9)	71.5 (20.9)	67.0 (19.6)	94.1 (27.6)	82.7 (24.2)	77.4 (22.7)	100.3 (29.4)	88.1 (25.8)	82.5 (24.2)	102.3 (30.0)	93.2 (27.3)	87.4 (25.6)
		Power kW	5.6	5.4	5.4	5.5	5.4	5.3	5.5	5.3	5.3	5.4	5.3	5.2	5.4	5.3	5.2
	85 (29.4)	Total BTUH kW	112.6 (33.0)	106.8 (31.3)	104.2 (30.5)	105.7 (31.0)	100.3 (29.4)	97.8 (28.7)	100.8 (29.5)	95.6 (28.0)	93.3 (27.3)	99.3 (29.1)	94.2 (27.6)	91.9 (26.9)	98.8 (28.9)	93.7 (27.5)	91.4 (26.8)
		Sens BTUH kW	66.6 (19.5)	58.5 (17.1)	54.8 (16.0)	79.5 (23.3)	69.8 (20.5)	65.4 (19.2)	92.3 (27.0)	81.0 (23.7)	75.9 (22.2)	98.4 (28.8)	86.4 (25.3)	81.0 (23.7)	98.8 (28.9)	91.6 (26.8)	85.8 (25.1)
		Power kW	6.0	5.9	5.8	6	5.8	5.8	5.9	5.8	5.7	5.9	5.7	5.7	5.9	5.7	5.6
	90 (32.2)	Total BTUH kW	109.0 (31.9)	103.4 (30.3)	100.9 (29.6)	102.1 (29.9)	96.9 (28.4)	94.5 (27.7)	97.2 (28.5)	92.2 (27.0)	90.0 (26.4)	95.8 (28.1)	90.9 (26.6)	88.6 (26.0)	95.2 (27.9)	90.3 (26.5)	88.1 (25.8)
		Sens BTUH kW	64.7 (19.0)	56.8 (16.7)	53.2 (15.6)	77.7 (22.8)	68.2 (20.0)	63.9 (18.7)	90.4 (26.5)	79.4 (23.3)	74.4 (21.8)	95.8 (28.1)	84.8 (24.8)	79.4 (23.3)	95.2 (27.9)	90.0 (26.4)	84.3 (24.7)
		Power kW	6.6	6.4	6.3	6.5	6.4	6.3	6.5	6.3	6.2	6.4	6.3	6.2	6.4	6.2	6.2
	95 (35.0)	Total BTUH kW	105.4 (30.9)	100.0 (29.3)	97.5 (28.6)	98.5 (28.9)	93.5 (27.4)	91.2 (26.7)	93.6 (27.4)	88.8 (26.0)	86.6 (25.4)	92.2 (27.0)	87.4 (25.6)	85.3 (25.0)	91.6 (26.8)	86.9 (25.5)	84.8 (24.8)
		Sens BTUH kW	62.9 (18.4)	55.2 (16.2)	51.7 (15.2)	75.8 (22.2)	66.6 (19.5)	62.4 (18.3)	88.6 (26.0)	77.8 (22.8)	72.9 (21.4)	92.2 (27.0)	83.2 (24.4)	77.9 (22.8)	91.6 (26.8)	86.9 (25.5)	82.8 (24.3)
		Power kW	7.2	7	6.9	7.2	7	6.9	7.1	6.9	6.8	7.1	6.9	6.8	7	6.9	6.8
	100 (37.8)	Total BTUH kW	101.7 (29.8)	96.5 (28.3)	94.2 (27.6)	94.9 (27.8)	90.0 (26.4)	87.8 (25.7)	90.0 (26.4)	85.4 (25.0)	83.3 (24.4)	88.5 (25.9)	84.0 (24.6)	81.9 (24.0)	88.0 (25.8)	83.4 (24.5)	81.4 (23.9)
		Sens BTUH kW	61.0 (17.9)	53.6 (15.7)	50.2 (14.7)	74.0 (21.7)	65.0 (19.0)	60.9 (17.8)	86.7 (25.4)	76.2 (22.3)	71.4 (20.9)	88.5 (25.9)	81.6 (23.9)	76.4 (22.4)	88.0 (25.8)	83.4 (24.5)	81.3 (23.8)
		Power kW	7.9	7.7	7.6	7.9	7.7	7.6	7.8	7.6	7.5	7.8	7.6	7.5	7.7	7.5	7.4
	105 (40.6)	Total BTUH kW	98.1 (28.7)	93.0 (27.3)	90.7 (26.6)	91.2 (26.7)	86.5 (25.4)	84.4 (24.7)	86.3 (25.3)	81.9 (24.0)	79.8 (23.4)	84.8 (24.9)	80.5 (23.6)	78.5 (23.0)	84.3 (24.7)	79.9 (23.4)	78.0 (22.9)
		Sens BTUH kW	59.3 (17.4)	52.0 (15.2)	48.8 (14.3)	72.2 (21.2)	63.4 (18.6)	59.4 (17.4)	84.9 (24.9)	74.6 (21.9)	69.9 (20.5)	84.8 (24.9)	80.0 (23.4)	74.9 (22.0)	84.3 (24.7)	79.9 (23.4)	78.0 (22.9)
		Power kW	8.7	8.5	8.4	8.6	8.4	8.3	8.6	8.4	8.3	8.5	8.3	8.2	8.5	8.3	8.2
	110 (43.3)	Total BTUH kW	94.3 (27.6)	89.5 (26.2)	87.3 (25.6)	87.5 (25.6)	83.0 (24.3)	81.0 (23.7)	82.6 (24.2)	78.3 (23.0)	76.4 (22.4)	81.1 (23.8)	76.9 (22.5)	75.1 (22.0)	80.5 (23.6)	76.4 (22.4)	74.5 (21.8)
		Sens BTUH kW	55.7 (16.3)	50.5 (14.8)	47.3 (13.9)	70.4 (20.6)	61.9 (18.1)	57.9 (17.0)	82.6 (24.2)	73.0 (21.4)	68.4 (20.1)	81.1 (23.8)	76.9 (22.5)	73.5 (21.5)	80.5 (23.6)	76.4 (22.4)	74.5 (21.8)
		Power kW	7.9	9.3	9.2	9.5	9.2	9.1	9.4	9.2	9.1	9.4	9.2	9	9.4	9.1	9
115 (46.1)	Total BTUH kW	84.3 (24.7)	85.9 (25.2)	83.8 (24.6)	83.7 (24.5)	79.4 (23.3)	77.5 (22.7)	78.8 (23.1)	74.8 (21.9)	72.9 (21.4)	77.3 (22.7)	73.4 (21.5)	71.6 (21.0)	76.8 (22.5)	72.8 (21.3)	71.1 (20.8)	
	Sens BTUH kW	59.3 (17.4)	48.9 (14.3)	45.8 (13.4)	68.7 (20.1)	60.3 (17.7)	56.5 (16.6)	78.8 (23.1)	71.5 (20.9)	67.0 (19.6)	77.3 (22.7)	73.4 (21.5)	71.6 (21.0)	76.8 (22.5)	72.8 (21.3)	71.1 (20.8)	
	Power kW	8.3	10.2	10.1	10.4	10.2	10.0	10.4	10.1	10.0	10.3	10.1	9.9	10.3	10	9.9	

NOTE: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—KW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 11: Gross System Performance—MPS H08D, 8 Tons Standard Efficiency

wbE		Entering Indoor Air @ 80°F (26.7°C) dbE ¹															
		71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)			61°F (16.1°C)			59°F (15.0°C)			
CFM (L/s)		4100 (6035)	3200 (1510)	2700 (1274)	4100 (6035)	3200 (1510)	2700 (1274)	4100 (6035)	3200 (1510)	2700 (1274)	4100 (6035)	3200 (1510)	2700 (1274)	4100 (6035)	3200 (1510)	2700 (1274)	
DR ¹		0.11	0.05	0.01	0.11	0.05	0.01	0.11	0.05	0.01	0.11	0.05	0.01	0.11	0.05	0.01	
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH kW	129.9 (38.1)	123.6 (36.2)	122.7 (36.0)	116.7 (34.2)	116.7 (34.2)	113.4 (33.2)	118.3 (34.7)	112.5 (33.0)	109.3 (32.0)	117.5 (34.4)	111.8 (32.8)	108.6 (31.8)	118.0 (34.6)	112.2 (32.9)	109.0 (32.0)
		Sens BTUH kW	81.3 (23.8)	71.9 (21.1)	96.4 (28.2)	85.2 (25.0)	85.2 (25.0)	79.0 (23.1)	110.1 (32.3)	97.3 (28.5)	90.2 (26.4)	116.1 (34.0)	102.6 (30.1)	95.2 (27.9)	118 (34.6)	107.3 (31.5)	99.5 (29.2)
		Power kW	6.2	6.1	6.1	6.0	6.0	5.9	6.1	5.9	5.8	6.0	5.9	5.8	6.0	5.9	5.8
	80 (26.7)	Total BTUH kW	121.4 (35.6)	119.5 (35.0)	118.5 (34.7)	112.7 (33.0)	112.7 (33.0)	109.5 (32.1)	114.0 (33.4)	108.5 (31.8)	105.4 (30.9)	113.3 (33.2)	107.8 (31.6)	104.7 (30.7)	113.7 (33.3)	108.2 (31.7)	105.1 (30.8)
		Sens BTUH kW	79.2 (23.2)	70.0 (20.5)	94.3 (27.6)	83.3 (24.4)	83.3 (24.4)	77.2 (22.6)	108.0 (31.6)	95.4 (28.0)	88.5 (25.9)	113.3 (33.2)	100.8 (29.5)	93.4 (27.4)	113.7 (33.3)	105.5 (30.9)	97.8 (28.7)
		Power kW	6.6	6.4	6.5	6.3	6.3	6.2	6.4	6.3	6.2	6.4	6.2	6.2	6.4	6.2	6.1
	85 (29.4)	Total BTUH kW	121.4 (35.6)	115.5 (33.8)	114.2 (33.5)	108.7 (31.8)	108.7 (31.8)	105.6 (30.9)	109.8 (32.2)	104.4 (30.6)	101.5 (29.7)	109.0 (31.9)	103.7 (30.4)	100.8 (29.5)	109.5 (32.1)	104.2 (30.5)	101.2 (29.7)
		Sens BTUH kW	77.0 (22.6)	68.1 (20.0)	92.1 (27.0)	81.4 (23.9)	81.4 (23.9)	75.5 (22.1)	105.8 (31.0)	93.5 (27.4)	86.7 (25.4)	109.0 (31.9)	98.9 (29.0)	91.7 (26.9)	109.5 (32.1)	103.6 (30.4)	96.0 (28.1)
		Power kW	6.9	6.8	6.9	6.7	6.7	6.6	6.8	6.6	6.6	6.8	6.6	6.5	6.7	6.6	6.5
	90 (32.2)	Total BTUH kW	117.1 (34.3)	111.4 (32.7)	110.0 (32.2)	104.6 (30.7)	104.6 (30.7)	101.6 (29.8)	105.5 (30.9)	100.4 (29.4)	97.5 (28.6)	104.8 (30.7)	99.7 (29.2)	96.8 (28.4)	105.2 (30.8)	100.1 (29.3)	97.3 (28.5)
		Sens BTUH kW	74.9 (21.9)	66.2 (19.4)	89.9 (26.4)	79.5 (23.3)	79.5 (23.3)	73.7 (21.6)	103.6 (30.4)	91.6 (26.8)	84.9 (24.9)	104.8 (30.7)	97.0 (28.4)	89.9 (26.3)	105.2 (30.8)	100.1 (29.3)	94.3 (27.6)
		Power kW	7.4	7.2	7.3	7.1	7.1	7.0	7.2	7.1	7.0	7.2	7.0	6.9	7.2	7.0	6.9
	95 (35.0)	Total BTUH kW	112.9 (33.1)	107.4 (31.5)	105.7 (31.0)	100.5 (29.5)	100.5 (29.5)	97.7 (28.6)	101.2 (29.7)	96.3 (28.2)	93.6 (27.4)	100.5 (29.4)	95.6 (28.0)	92.9 (27.2)	100.9 (29.6)	96.0 (28.1)	93.3 (27.3)
		Sens BTUH kW	72.6 (21.3)	64.2 (18.8)	87.7 (25.7)	77.5 (22.7)	77.5 (22.7)	71.9 (21.1)	101.2 (29.7)	89.7 (26.3)	83.1 (24.4)	100.5 (29.4)	95.0 (27.8)	88.1 (25.8)	100.9 (29.6)	96.0 (28.1)	92.4 (27.1)
		Power kW	7.8	7.6	7.7	7.6	7.6	7.4	7.7	7.5	7.4	7.6	7.5	7.4	7.6	7.4	7.3
	100 (37.8)	Total BTUH kW	108.6 (31.8)	103.3 (30.3)	101.4 (29.7)	96.5 (28.3)	96.5 (28.3)	93.7 (27.5)	97.0 (28.4)	92.2 (27.0)	89.6 (26.3)	96.2 (28.2)	91.5 (26.8)	88.9 (26.1)	96.7 (28.3)	92.0 (26.9)	89.3 (26.2)
		Sens BTUH kW	70.4 (20.6)	62.2 (18.2)	85.5 (25.0)	75.5 (22.1)	75.5 (22.1)	70.0 (20.5)	97.0 (28.4)	87.7 (25.7)	81.3 (23.8)	96.2 (28.2)	91.5 (26.8)	86.2 (25.3)	96.7 (28.3)	92.0 (26.9)	89.3 (26.2)
		Power kW	8.3	8.1	8.2	8.0	8.0	7.9	8.2	8.0	7.8	8.1	7.9	7.8	8.1	7.9	7.8
	105 (40.6)	Total BTUH kW	104.3 (30.6)	99.2 (29.1)	97.1 (28.4)	92.4 (27.1)	92.4 (27.1)	89.7 (26.3)	92.7 (27.2)	88.1 (25.8)	85.6 (25.1)	91.9 (26.9)	87.4 (25.6)	84.9 (24.9)	92.4 (27.1)	87.9 (25.7)	85.4 (25.0)
		Sens BTUH kW	68.1 (20.0)	60.2 (17.6)	83.2 (24.4)	73.5 (21.5)	73.5 (21.5)	68.1 (20.0)	92.7 (27.2)	85.6 (25.1)	79.4 (23.3)	91.9 (26.9)	87.4 (25.6)	84.3 (24.7)	92.4 (27.1)	87.9 (25.7)	85.4 (25.0)
		Power kW	8.8	8.6	8.7	8.5	8.5	8.4	8.7	8.5	8.3	8.6	8.4	8.3	8.6	8.4	8.3
	110 (43.3)	Total BTUH kW	99.9 (29.3)	95.1 (27.9)	92.8 (27.2)	88.2 (25.9)	88.2 (25.9)	85.7 (25.1)	88.3 (25.9)	84.0 (24.6)	81.6 (23.9)	87.6 (25.7)	83.3 (24.4)	80.9 (23.7)	88.0 (25.8)	83.7 (24.5)	81.4 (23.8)
		Sens BTUH kW	65.8 (19.3)	58.1 (17.0)	80.8 (23.7)	71.4 (20.9)	71.4 (20.9)	66.2 (19.4)	88.3 (25.9)	83.6 (24.5)	77.5 (22.7)	87.6 (25.7)	83.3 (24.4)	80.9 (23.7)	88.0 (25.8)	83.7 (24.5)	81.4 (23.8)
		Power kW	9.3	9.1	9.3	9.0	9.0	8.9	9.2	9.0	8.9	9.2	9.0	8.8	9.1	8.9	8.8
115 (46.1)	Total BTUH kW	95.6 (28.0)	91.0 (26.7)	88.4 (25.9)	84.1 (24.7)	84.1 (24.7)	81.7 (24.0)	84.0 (24.6)	79.9 (23.4)	77.6 (22.8)	83.2 (24.4)	79.2 (23.2)	76.9 (22.5)	83.7 (24.5)	79.6 (23.3)	77.4 (22.7)	
	Sens BTUH kW	63.4 (18.6)	56.0 (16.4)	78.4 (23.0)	69.3 (20.3)	69.3 (20.3)	64.3 (18.8)	84.0 (24.6)	79.9 (23.4)	75.5 (22.1)	83.2 (24.4)	79.2 (23.2)	76.9 (22.5)	83.7 (24.5)	79.6 (23.3)	77.4 (22.7)	
	Power kW	9.9	9.7	9.8	9.6	9.6	9.5	9.8	9.5	9.4	9.7	9.5	9.4	9.7	9.5	9.4	

NOTE: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—KW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 12: Gross System Performance—MPS H10D, 10 Tons Standard Efficiency

		Entering Indoor Air @ 80°F (26.7°C) dbE ¹															
		71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)			61°F (16.1°C)			59°F (15.0°C)			
wbE		4800 (2265)	3750 (1770)	3200 (1510)	4800 (2265)	3750 (1770)	3200 (1510)	4800 (2265)	3750 (1770)	3200 (1510)	4800 (2265)	3750 (1770)	3200 (1510)	4800 (2265)	3750 (1770)	3200 (1510)	
CFM (L/s)		4800 (2265)	3750 (1770)	3200 (1510)	4800 (2265)	3750 (1770)	3200 (1510)	4800 (2265)	3750 (1770)	3200 (1510)	4800 (2265)	3750 (1770)	3200 (1510)	4800 (2265)	3750 (1770)	3200 (1510)	
DR ¹		0.09	0.03	0.00	0.09	0.03	0.00	0.09	0.03	0.00	0.09	0.03	0.00	0.09	0.03	0.00	
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH kW)	155.3 (45.5)	147.8 (43.3)	143.8 (42.2)	147.8 (43.3)	140.7 (41.2)	136.9 (40.1)	142.8 (41.8)	135.8 (39.8)	132.2 (38.7)	141.5 (41.5)	134.7 (39.5)	131.1 (38.4)	141.4 (41.4)	134.5 (39.4)	130.9 (38.4)
		Sens BTUH kW)	97.3 (28.5)	86.1 (25.2)	80.2 (23.5)	115.8 (33.9)	102.4 (30.0)	95.4 (28.0)	132.9 (38.9)	117.5 (34.4)	109.5 (32.1)	140.6 (41.2)	124.3 (36.4)	115.8 (33.9)	141.4 (41.4)	130.4 (38.2)	121.4 (35.6)
		Power kW)	7.5	7.3	7.2	7.4	7.2	7.1	7.3	7.1	7.0	7.2	7.1	7.0	7.2	7.0	6.9
	80 (26.7)	Total BTUH kW)	150.6 (44.1)	143.4 (42.0)	139.5 (40.9)	143.2 (42.0)	136.2 (39.9)	132.6 (38.9)	138.1 (40.5)	131.4 (38.5)	27.9 (37.5)	136.9 (40.1)	130.2 (38.2)	126.8 (37.1)	136.7 (40.1)	130.1 (38.1)	126.6 (37.1)
		Sens BTUH kW)	94.9 (27.8)	84.0 (24.6)	78.2 (22.9)	113.5 (33.2)	100.3 (29.4)	93.5 (27.4)	130.5 (38.2)	115.4 (33.8)	107.5 (31.5)	136.9 (40.1)	122.2 (35.8)	113.8 (33.4)	136.7 (40.1)	128.3 (37.6)	119.5 (35.0)
		Power kW)	7.9	7.7	7.6	7.8	7.6	7.5	7.7	7.5	7.4	7.7	7.5	7.4	7.6	7.4	7.3
	85 (29.4)	Total BTUH kW)	146.0 (42.8)	138.9 (40.7)	135.2 (39.6)	138.5 (40.6)	131.8 (38.6)	128.3 (37.6)	133.5 (39.1)	127 (37.2)	123.6 (36.2)	132.2 (38.7)	125.8 (36.9)	122.5 (35.9)	132.1 (38.7)	125.7 (36.8)	122.3 (35.9)
		Sens BTUH kW)	92.5 (27.1)	81.8 (24.0)	76.2 (22.3)	111.0 (32.5)	98.2 (28.8)	91.5 (26.8)	128.1 (37.5)	113.3 (33.2)	105.5 (30.9)	132.2 (38.7)	120.1 (35.2)	111.9 (32.8)	132.1 (38.7)	125.7 (36.8)	117.5 (34.4)
		Power kW)	8.3	8.1	8.0	8.2	8.0	7.9	8.2	8.0	7.9	8.1	7.9	7.8	8.1	7.9	7.8
	90 (32.2)	Total BTUH kW)	141.4 (41.4)	134.5 (39.4)	131.0 (38.4)	133.9 (39.2)	127.4 (37.3)	124.0 (36.3)	128.8 (37.8)	122.6 (35.9)	119.3 (35.0)	127.6 (37.4)	121.4 (35.6)	118.2 (34.6)	127.5 (37.4)	121.3 (35.5)	118.1 (34.6)
		Sens BTUH kW)	90.1 (26.4)	79.7 (23.3)	74.2 (21.7)	108.6 (31.8)	96.0 (28.1)	89.5 (26.2)	125.6 (36.8)	111.1 (32.6)	103.5 (30.3)	127.6 (37.4)	117.9 (34.5)	109.8 (32.2)	127.5 (37.4)	121.3 (35.5)	115.5 (33.8)
		Power kW)	8.8	8.6	8.5	8.7	8.5	8.4	8.6	8.4	8.3	8.6	8.4	8.3	8.5	8.3	8.2
	95 (35.0)	Total BTUH kW)	136.8 (40.1)	130.2 (38.1)	126.7 (37.1)	129.3 (37.9)	123.0 (36.1)	119.7 (35.1)	124.2 (36.4)	118.2 (34.6)	115.1 (33.7)	123.0 (36.0)	117.0 (34.3)	113.9 (33.4)	122.9 (36.0)	116.9 (34.3)	113.8 (33.3)
		Sens BTUH kW)	87.6 (25.7)	77.5 (22.7)	72.2 (21.1)	106.1 (31.1)	93.8 (27.5)	87.4 (25.6)	123.1 (36.1)	108.9 (31.9)	101.5 (29.7)	123 (36.0)	115.7 (33.9)	107.8 (31.6)	122.9 (36.0)	116.9 (34.3)	113.4 (33.2)
		Power kW)	9.3	9.1	9.0	9.2	9.0	8.9	9.1	8.9	8.8	9.1	8.9	8.8	9.1	8.8	8.7
	100 (37.8)	Total BTUH kW)	132.2 (38.7)	125.8 (36.9)	122.4 (35.9)	124.7 (36.5)	118.7 (34.8)	115.5 (33.8)	119.6 (35.1)	113.8 (33.4)	110.8 (32.5)	118.4 (34.7)	112.7 (33.0)	109.7 (32.1)	118.3 (34.7)	112.5 (33.0)	109.5 (32.1)
		Sens BTUH kW)	85.1 (24.9)	75.2 (22.0)	70.1 (20.5)	103.6 (30.3)	91.6 (26.8)	85.3 (25.0)	119.6 (35.1)	106.7 (31.3)	99.4 (29.1)	118.4 (34.7)	112.7 (33.0)	105.7 (31.0)	118.3 (34.7)	112.5 (33.0)	109.5 (32.1)
		Power kW)	9.9	9.6	9.5	9.8	9.5	9.4	9.7	9.5	9.3	9.6	9.4	9.3	9.6	9.4	9.2
	105 (40.6)	Total BTUH kW)	127.6 (37.4)	121.4 (35.6)	118.2 (34.6)	120.1 (35.2)	114.3 (33.5)	111.2 (32.6)	115.1 (33.7)	109.5 (32.1)	106.6 (31.2)	113.8 (33.4)	108.3 (31.7)	105.4 (30.9)	113.7 (33.3)	108.2 (31.7)	105.3 (30.9)
		Sens BTUH kW)	82.5 (24.2)	73.0 (21.4)	68.0 (19.9)	101.0 (29.6)	89.3 (26.2)	83.2 (24.4)	115.1 (33.7)	104.4 (30.6)	97.3 (28.5)	113.8 (33.4)	108.3 (31.7)	103.6 (30.4)	113.7 (33.3)	108.2 (31.7)	105.3 (30.9)
		Power kW)	10.5	10.2	10.1	10.4	10.1	10.0	10.3	10.0	9.9	10.2	10.0	9.8	10.2	9.9	9.8
	110 (43.3)	Total BTUH kW)	123 (36.1)	117.1 (34.3)	114.0 (33.4)	115.5 (33.9)	109.9 (32.2)	107.0 (31.4)	110.5 (32.4)	105.1 (30.8)	102.3 (30.0)	109.3 (32.0)	104.0 (30.5)	101.2 (29.7)	109.1 (32.0)	103.8 (30.4)	101.1 (29.6)
		Sens BTUH kW)	79.9 (23.4)	70.6 (20.7)	65.8 (19.3)	98.4 (28.8)	87.0 (25.5)	81.1 (23.8)	110.5 (32.4)	102.1 (29.9)	95.1 (27.9)	109.3 (32.0)	104.0 (30.5)	101.2 (29.7)	109.1 (32.0)	103.8 (30.4)	101.1 (29.6)
		Power kW)	11.1	10.8	10.7	11.0	10.7	10.6	10.9	10.6	10.5	10.8	10.6	10.4	10.8	10.5	10.4
115 (46.1)	Total BTUH kW)	118.5 (34.7)	112.7 (33.0)	109.7 (32.2)	111.0 (32.5)	105.6 (31.0)	102.8 (30.1)	105.9 (31.0)	100.8 (29.5)	98.1 (28.8)	104.7 (30.7)	99.6 (29.2)	97.0 (28.4)	104.6 (30.6)	99.5 (29.2)	96.8 (28.4)	
	Sens BTUH kW)	77.2 (22.6)	68.3 (20.0)	63.6 (18.6)	95.7 (28.1)	84.7 (24.8)	78.9 (23.1)	105.9 (31.0)	99.8 (29.2)	92.9 (27.2)	104.7 (30.7)	99.6 (29.2)	97.0 (28.4)	104.6 (30.6)	99.5 (29.2)	96.8 (28.4)	
	Power kW)	11.7	11.4	11.3	11.6	11.3	11.2	11.5	11.2	11.1	11.5	11.2	11.1	11.4	11.2	11.0	

NOTE: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—KW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 13: Gross System Performance—MPS H12D, 12 Tons Standard Efficiency

			Entering Indoor Air @ 80°F (26.7°C) dbE ¹								
wbE			71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)		
CFM (L/s)			4500 (2124)	3750 (1770)	3000 (1416)	4500 (2124)	3750 (1770)	3000 (1416)	4500 (2124)	3750 (1770)	3000 (1416)
DR ¹			0.00	0.01	0.09	0.00	0.01	0.09	0.00	0.01	0.09
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH kW	179.6 (52.6)	173.3 (50.8)	167.0 (48.9)	172.2 (50.5)	166.2 (48.7)	160.2 (46.9)	167.3 (49.0)	161.4 (47.3)	155.5 (45.6)
		Sens BTUH kW	113.4 (33.2)	97.4 (28.5)	82.6 (24.2)	131.0 (38.4)	113.8 (33.3)	97.7 (28.6)	147.4 (43.2)	128.9 (37.8)	111.5 (32.7)
		Power kW	10.2	10	9.9	10.1	9.9	9.8	10	9.9	9.7
	80 (26.7)	Total BTUH kW	175.0 (51.3)	168.9 (49.5)	162.8 (47.7)	167.6 (49.1)	161.8 (47.4)	155.9 (45.7)	162.7 (47.7)	157.0 (46.0)	151.3 (44.3)
		Sens BTUH kW	110.9 (32.5)	95.3 (27.9)	80.9 (23.7)	128.5 (37.7)	111.7 (32.7)	95.9 (28.1)	144.9 (42.5)	126.8 (37.2)	109.8 (32.2)
		Power kW	10.6	10.4	10.3	10.5	10.4	10.2	10.4	10.3	10.1
	85 (29.4)	Total BTUH kW	170.5 (50.0)	164.5 (48.2)	158.5 (46.4)	163.1 (47.8)	157.4 (46.1)	151.6 (44.4)	158.1 (46.3)	152.5 (44.7)	147.0 (43.1)
		Sens BTUH kW	108.5 (31.8)	93.2 (27.3)	79.1 (23.2)	126.1 (36.9)	109.6 (32.1)	94.1 (27.6)	142.4 (41.7)	124.6 (36.5)	108.0 (31.6)
		Power kW	11.1	10.9	10.7	11	10.8	10.6	10.9	10.7	10.5
	90 (32.2)	Total BTUH kW	165.9 (48.6)	160.1 (46.9)	154.3 (45.2)	158.5 (46.4)	153.0 (44.8)	147.4 (43.2)	153.5 (45.0)	148.1 (43.4)	142.8 (41.8)
		Sens BTUH kW	105.8 (31.0)	91.0 (26.7)	77.2 (22.6)	123.4 (36.2)	107.4 (31.5)	92.3 (27.0)	139.7 (40.9)	122.4 (35.9)	106.2 (31.1)
		Power kW	11.6	11.4	11.2	11.5	11.3	11.1	11.4	11.2	11
	95 (35.0)	Total BTUH kW	161.4 (47.3)	155.7 (45.6)	150.0 (43.9)	154.0 (45.1)	148.6 (43.5)	143.2 (42.0)	149.0 (43.7)	143.8 (42.1)	138.5 (40.6)
		Sens BTUH kW	103.3 (30.3)	88.8 (26.0)	75.3 (22.1)	120.9 (35.4)	105.2 (30.8)	90.5 (26.5)	137.2 (40.2)	120.3 (35.2)	104.3 (30.6)
		Power kW	12.1	11.9	11.6	12	11.8	11.6	11.9	11.7	11.5
	100 (37.8)	Total BTUH kW	156.8 (45.9)	151.3 (44.3)	145.8 (42.7)	149.4 (43.8)	144.2 (42.3)	139.0 (40.7)	144.5 (42.3)	139.4 (40.8)	134.3 (39.3)
		Sens BTUH kW	100.6 (29.5)	86.5 (25.3)	73.4 (21.5)	118.2 (34.6)	102.9 (30.1)	88.6 (26.0)	134.6 (39.4)	118.0 (34.6)	102.4 (30.0)
		Power kW	12.6	12.4	12.2	12.5	12.3	12.1	12.4	12.2	12
	105 (40.6)	Total BTUH kW	152.3 (44.6)	147.0 (43.1)	141.6 (41.5)	144.9 (42.5)	139.8 (41.0)	134.8 (39.5)	139.9 (41.0)	135.0 (39.6)	130.1 (38.1)
		Sens BTUH kW	98.0 (28.7)	84.3 (24.7)	71.5 (20.9)	115.6 (33.9)	100.6 (29.5)	86.7 (25.4)	131.9 (38.6)	115.7 (33.9)	100.5 (29.4)
		Power kW	13.2	13	12.7	13.1	12.9	12.6	13	12.8	12.5
	110 (43.3)	Total BTUH kW	147.8 (43.3)	142.6 (41.8)	137.4 (40.3)	140.4 (41.1)	135.5 (39.7)	130.6 (38.3)	135.4 (39.7)	130.7 (38.3)	125.9 (36.9)
		Sens BTUH kW	95.3 (27.9)	82.0 (24.0)	69.6 (20.4)	112.9 (33.1)	98.4 (28.8)	84.8 (24.8)	129.2 (37.9)	113.5 (33.3)	98.6 (28.9)
		Power kW	13.8	13.5	13.3	13.7	13.5	13.2	13.6	13.4	13.1
115 (46.1)	Total BTUH kW	143.3 (42.0)	138.3 (40.5)	133.3 (39.1)	135.9 (39.8)	131.2 (38.4)	126.4 (37.0)	130.9 (38.4)	126.4 (37.0)	121.8 (35.7)	
	Sens BTUH kW	92.6 (27.1)	79.7 (23.4)	67.7 (19.8)	110.1 (32.3)	96.0 (28.1)	82.7 (24.2)	126.4 (37.0)	111.1 (32.6)	96.6 (28.3)	
	Power kW	14.4	14.2	13.9	14.3	14.1	13.8	14.2	14	13.7	

NOTE: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—KW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 14: Gross System Performance—MPS 015B, 15 Tons Standard Efficiency

		Entering Indoor Air @ 80°F (26.7°C) dbE ¹									
wbE		71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)			
CFM (L/s)		7200 (3398)	5900 (2784)	4800 (2265)	7200 (3398)	5900 (2784)	4800 (2265)	7200 (3398)	5900 (2784)	4800 (2265)	
DR ¹		0.04	0.08	0.13	0.04	0.08	0.13	0.04	0.08	0.13	
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH kW)	226.5 (66.4)	217.8 (63.8)	210.4 (61.7)	214.3 (62.8)	206.0 (60.4)	199.0 (58.3)	206.3 (60.5)	198.4 (58.1)	191.7 (56.2)
		Sens BTUH kW)	148.8 (43.6)	126.2 (37.0)	108.5 (31.8)	174.1 (51.0)	149.6 (43.9)	130.2 (38.2)	193.4 (56.7)	167.5 (49.1)	146.8 (43.0)
		Power kW)	12.6	12.3	12.1	12.4	12.2	12.0	12.2	12.0	11.8
	80 (26.7)	Total BTUH kW)	222.2 (65.1)	213.6 (62.6)	206.4 (60.5)	209.9 (61.5)	201.8 (59.1)	195.0 (57.1)	202.0 (59.2)	194.2 (56.9)	187.6 (55.0)
		Sens BTUH kW)	146.6 (43.0)	124.3 (36.4)	106.9 (31.3)	171.9 (50.4)	147.8 (43.3)	128.7 (37.7)	191.3 (56.1)	165.7 (48.6)	145.3 (42.6)
		Power kW)	13.1	12.9	12.7	13.0	12.7	12.5	12.8	12.6	12.4
	85 (29.4)	Total BTUH kW)	217.5 (63.7)	209.1 (61.3)	202.0 (59.2)	205.3 (60.2)	197.3 (57.8)	190.7 (55.9)	197.3 (57.8)	189.7 (55.6)	183.3 (53.7)
		Sens BTUH kW)	144.1 (42.2)	122.3 (35.9)	105.2 (30.8)	169.5 (49.7)	145.7 (42.7)	127.0 (37.2)	188.8 (55.3)	163.6 (48.0)	143.5 (42.1)
		Power kW)	13.8	13.5	13.3	13.6	13.4	13.1	13.5	13.2	13.0
	90 (32.2)	Total BTUH kW)	212.5 (62.3)	204.3 (59.9)	197.4 (57.9)	200.2 (58.7)	192.5 (56.4)	186.0 (54.5)	192.3 (56.4)	184.9 (54.2)	178.6 (52.3)
		Sens BTUH kW)	141.4 (41.5)	120.0 (35.2)	103.3 (30.3)	166.7 (48.9)	143.5 (42.1)	125.1 (36.7)	186.2 (54.6)	161.4 (47.3)	141.6 (41.5)
		Power kW)	14.5	14.2	14.0	14.3	14.0	13.8	14.2	13.9	13.7
	95 (35.0)	Total BTUH kW)	207.2 (60.7)	199.2 (58.4)	192.4 (56.4)	194.9 (57.1)	187.4 (54.9)	181.0 (53.0)	187.0 (54.8)	179.8 (52.7)	173.7 (50.9)
		Sens BTUH kW)	138.5 (40.6)	117.6 (34.5)	101.2 (29.7)	163.9 (48.0)	141.1 (41.4)	123.0 (36.1)	183.3 (53.7)	159.0 (46.6)	139.6 (40.9)
		Power kW)	15.2	14.9	14.7	15.1	14.8	14.5	14.9	14.6	14.4
	100 (37.8)	Total BTUH kW)	201.5 (59.1)	193.7 (56.8)	187.2 (54.9)	189.2 (55.4)	181.9 (53.3)	175.8 (51.5)	181.3 (53.1)	174.3 (51.1)	168.4 (49.4)
		Sens BTUH kW)	135.4 (39.7)	115.0 (33.7)	99.1 (29.1)	160.7 (47.1)	138.4 (40.6)	120.8 (35.4)	180.1 (52.8)	156.3 (45.8)	137.3 (40.2)
		Power kW)	16.0	15.7	15.4	15.9	15.6	15.3	15.7	15.4	15.1
	105 (40.6)	Total BTUH kW)	195.5 (57.3)	188.0 (55.1)	181.6 (53.2)	183.2 (53.7)	176.2 (51.6)	170.2 (49.9)	175.3 (51.4)	168.5 (49.4)	162.8 (47.7)
		Sens BTUH kW)	132.0 (38.7)	112.2 (32.9)	96.6 (28.3)	157.3 (46.1)	135.6 (39.8)	118.3 (34.7)	175.3 (51.4)	153.4 (45.0)	134.8 (39.5)
		Power kW)	16.9	16.5	16.3	16.7	16.4	16.1	16.5	16.2	16.0
	110 (43.3)	Total BTUH kW)	189.2 (55.4)	181.9 (53.3)	175.7 (51.5)	176.9 (51.8)	170.1 (49.9)	164.3 (48.2)	169.0 (49.5)	162.5 (47.6)	156.9 (46.0)
		Sens BTUH kW)	128.4 (37.6)	109.1 (32.0)	93.9 (27.5)	153.7 (45.1)	132.6 (38.9)	115.8 (33.9)	169.0 (49.5)	150.5 (44.1)	132.3 (38.8)
		Power kW)	17.8	17.4	17.1	17.6	17.3	17.0	17.5	17.1	16.8
115 (46.1)	Total BTUH kW)	182.5 (53.5)	175.5 (51.4)	169.5 (49.7)	170.2 (49.9)	163.7 (48.0)	158.1 (46.3)	162.3 (47.6)	156.0 (45.7)	150.8 (44.2)	
	Sens BTUH kW)	124.5 (36.5)	105.9 (31.0)	91.2 (26.7)	149.9 (43.9)	129.4 (37.9)	113.0 (33.1)	162.3 (47.6)	147.2 (43.2)	129.6 (38.0)	
	Power kW)	18.7	18.4	18.1	18.6	18.2	17.9	18.4	18.1	17.8	

Note: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—KW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 15: Gross System Performance—MPS 020B, 20 Tons Standard Efficiency

Entering Indoor Air @ 80°F (26.7°C) dbE ¹											
wbE		71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)			
CFM (L/s)		9600 (4531)	7725 (3646)	6400 (3020)	9600 (4531)	7725 (3646)	6400 (3020)	9600 (4531)	7725 (3646)	6400 (3020)	
DR ¹		0.06	0.11	0.15	0.06	0.11	0.15	0.06	0.11	0.15	
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH kW)	283.5 (83.1)	271.5 (79.6)	263.0 (77.1)	269.6 (79.0)	258.2 (75.7)	250.2 (73.3)	258.7 (75.8)	247.8 (72.6)	240.0 (70.3)
		Sens BTUH kW)	187.4 (54.9)	156.3 (45.8)	136.0 (39.9)	220.5 (64.6)	186.7 (54.7)	164.4 (48.2)	245.6 (72.0)	209.7 (61.5)	185.7 (54.4)
		Power kW)	15.4	15.1	14.9	15.3	15.0	14.7	15.1	14.8	14.6
	80 (26.7)	Total BTUH kW)	280.8 (82.3)	269.0 (78.8)	260.6 (76.4)	267.0 (78.2)	255.7 (74.9)	247.7 (72.6)	256.1 (75.1)	245.3 (71.9)	237.6 (69.6)
		Sens BTUH kW)	186.4 (54.6)	155.6 (45.6)	135.4 (39.7)	219.6 (64.4)	186.0 (54.5)	163.8 (48.0)	244.7 (71.7)	209.0 (61.3)	185.2 (54.3)
		Power kW)	16.2	15.9	15.6	16.0	15.7	15.5	15.9	15.5	15.3
	85 (29.4)	Total BTUH kW)	277.4 (81.3)	265.7 (77.9)	257.4 (75.4)	263.5 (77.2)	252.4 (74.0)	244.5 (71.7)	252.6 (74.0)	242.0 (70.9)	234.4 (68.7)
		Sens BTUH kW)	184.9 (54.2)	154.4 (45.3)	134.4 (39.4)	218.1 (63.9)	184.8 (54.2)	162.7 (47.7)	243.1 (71.3)	207.8 (60.9)	184.2 (54.0)
		Power kW)	17.0	16.7	16.4	16.9	16.5	16.3	16.7	16.3	16.1
	90 (32.2)	Total BTUH kW)	273.1 (80.0)	261.6 (76.7)	253.4 (74.3)	259.3 (76.0)	248.3 (72.8)	240.6 (70.5)	248.4 (72.8)	237.9 (69.7)	230.5 (67.6)
		Sens BTUH kW)	182.8 (53.6)	152.7 (44.8)	132.9 (39.0)	216.2 (63.4)	183.2 (53.7)	161.5 (47.3)	241.1 (70.7)	206.1 (60.4)	182.8 (53.6)
		Power kW)	17.9	17.5	17.3	17.7	17.4	17.1	17.6	17.2	16.9
	95 (35.0)	Total BTUH kW)	268.1 (78.6)	256.7 (75.2)	248.7 (72.9)	254.2 (74.5)	243.5 (71.4)	235.9 (69.1)	243.3 (71.3)	233.0 (68.3)	225.8 (66.2)
		Sens BTUH kW)	180.2 (52.8)	150.5 (44.1)	131.1 (38.4)	213.5 (62.6)	181.1 (53.1)	159.6 (46.8)	238.6 (69.9)	204.0 (59.8)	181.0 (53.1)
		Power kW)	18.8	18.4	18.2	18.7	18.3	18.0	18.5	18.1	17.8
	100 (37.8)	Total BTUH kW)	262.2 (76.8)	251.1 (73.6)	243.3 (71.3)	248.3 (72.8)	237.8 (69.7)	230.4 (67.5)	237.4 (69.6)	227.4 (66.6)	220.3 (64.6)
		Sens BTUH kW)	177.1 (51.9)	148.0 (43.4)	129.0 (37.8)	210.4 (61.7)	178.5 (52.3)	157.4 (46.1)	235.3 (69.0)	201.4 (59.0)	178.7 (52.4)
		Power kW)	19.8	19.4	19.1	19.6	19.2	18.9	19.5	19.1	18.8
	105 (40.6)	Total BTUH kW)	255.5 (74.9)	244.7 (71.7)	237.1 (69.5)	241.6 (70.8)	231.4 (67.8)	224.2 (65.7)	230.7 (67.6)	221.0 (64.8)	214.1 (62.7)
		Sens BTUH kW)	173.4 (50.8)	145.0 (42.5)	126.4 (37.1)	206.6 (60.6)	175.4 (51.4)	154.7 (45.3)	230.7 (67.6)	198.4 (58.2)	176.2 (51.6)
		Power kW)	20.8	20.4	20.1	20.7	20.2	19.9	20.5	20.1	19.8
	110 (43.3)	Total BTUH kW)	248.0 (72.7)	237.5 (69.6)	230.1 (67.4)	234.1 (68.6)	224.2 (65.7)	217.2 (63.7)	223.2 (65.4)	213.8 (62.7)	207.1 (60.7)
		Sens BTUH kW)	169.2 (49.6)	141.5 (41.5)	123.4 (36.2)	202.4 (59.3)	171.9 (50.4)	151.7 (44.5)	223.2 (65.4)	194.9 (57.1)	173.1 (50.7)
		Power kW)	21.9	21.5	21.1	21.7	21.3	21.0	21.6	21.1	20.8
115 (46.1)	Total BTUH kW)	239.6 (70.2)	229.5 (67.3)	222.3 (65.1)	225.8 (66.2)	216.2 (63.4)	209.5 (61.4)	214.9 (63.0)	205.8 (60.3)	199.4 (58.4)	
	Sens BTUH kW)	164.3 (48.2)	137.5 (40.3)	119.9 (35.1)	197.7 (58.0)	168.0 (49.2)	148.4 (43.5)	214.9 (63.0)	191.0 (56.0)	169.8 (49.8)	
	Power kW)	23.1	22.6	22.2	22.9	22.4	22.1	22.7	22.2	21.9	

Note: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—kW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 16: Gross System Performance—MPS 025B, 25 Tons Standard Efficiency

Entering Indoor Air @ 80°F (26.7°C) dbE ¹											
wbE		71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)			
CFM (L/s)		12000 (5663)	9475 (4472)	8000 (3776)	12000 (5663)	9475 (4472)	8000 (3776)	12000 (5663)	9475 (4472)	8000 (3776)	
DR ¹		0.02	0.08	0.11	0.02	0.08	0.11	0.02	0.08	0.11	
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH kW)	376.4 (110.3)	359.0 (105.2)	348.9 (102.3)	358.0 (104.9)	341.5 (100.1)	331.8 (97.2)	347.0 (101.7)	330.9 (97.0)	321.6 (94.3)
		Sens BTUH kW)	251.6 (73.7)	206.4 (60.5)	182.0 (53.3)	294.2 (86.2)	245.2 (71.9)	218.4 (64.0)	326.2 (95.6)	274.0 (80.3)	245.5 (72.0)
		Power kW)	20.8	20.3	20.0	20.5	20.0	19.7	20.2	19.7	19.5
	80 (26.7)	Total BTUH kW)	369.9 (108.4)	352.8 (103.4)	342.8 (100.5)	351.5 (103.0)	335.2 (98.2)	325.7 (95.5)	340.4 (99.8)	324.6 (95.1)	315.5 (92.5)
		Sens BTUH kW)	248.1 (72.7)	203.6 (59.7)	179.5 (52.6)	290.8 (85.2)	242.3 (71.0)	215.9 (63.3)	322.6 (94.6)	271.1 (79.5)	243.0 (71.2)
		Power kW)	21.7	21.2	21.0	21.4	21.0	20.7	21.2	20.7	20.4
	85 (29.4)	Total BTUH kW)	362.5 (106.2)	345.7 (101.3)	335.9 (98.4)	344.1 (100.8)	328.2 (96.2)	318.9 (93.5)	333.0 (97.6)	317.6 (93.1)	308.6 (90.4)
		Sens BTUH kW)	244.2 (71.6)	200.4 (58.7)	176.8 (51.8)	286.8 (84.1)	239.2 (70.1)	213.2 (62.5)	318.6 (93.4)	268.0 (78.6)	240.2 (70.4)
		Power kW)	22.8	22.2	21.9	22.5	22.0	21.7	22.2	21.7	21.4
	90 (32.2)	Total BTUH kW)	354.3 (103.8)	338.0 (99.1)	328.4 (96.2)	335.9 (98.4)	320.4 (93.9)	311.3 (91.2)	324.9 (95.2)	309.8 (90.8)	301.1 (88.2)
		Sens BTUH kW)	239.8 (70.3)	197.0 (57.7)	173.8 (50.9)	282.4 (82.8)	235.7 (69.1)	210.1 (61.6)	314.4 (92.2)	264.5 (77.5)	237.2 (69.5)
		Power kW)	23.9	23.3	23.0	23.6	23.0	22.7	23.3	22.7	22.4
	95 (35.0)	Total BTUH kW)	345.4 (101.2)	329.4 (96.5)	320.1 (93.8)	327.0 (95.8)	311.9 (91.4)	303.1 (88.8)	315.9 (92.6)	301.3 (88.3)	292.8 (85.8)
		Sens BTUH kW)	235.2 (68.9)	193.2 (56.6)	170.5 (50.0)	277.8 (81.4)	232.0 (68.0)	207.0 (60.7)	309.7 (90.8)	260.8 (76.4)	234.0 (68.6)
		Power kW)	25.0	24.4	24.1	24.7	24.1	23.8	24.4	23.9	23.5
	100 (37.8)	Total BTUH kW)	335.7 (98.4)	320.2 (93.8)	311.1 (91.2)	317.3 (93.0)	302.6 (88.7)	294.1 (86.2)	306.2 (89.7)	292.1 (85.6)	283.8 (83.2)
		Sens BTUH kW)	230.3 (67.5)	189.3 (55.5)	167.1 (49.0)	272.9 (80.0)	228.0 (66.8)	203.6 (59.7)	304.7 (89.3)	256.9 (75.3)	230.5 (67.6)
		Power kW)	26.2	25.6	25.3	25.9	25.3	25.0	25.6	25.1	24.7
	105 (40.6)	Total BTUH kW)	325.2 (95.3)	310.2 (90.9)	301.4 (88.3)	306.8 (89.9)	292.6 (85.8)	284.3 (83.3)	295.7 (86.7)	282.0 (82.6)	274.1 (80.3)
		Sens BTUH kW)	224.9 (65.9)	185.0 (54.2)	163.4 (47.9)	267.5 (78.4)	223.7 (65.6)	199.8 (58.6)	295.7 (86.7)	252.5 (74.0)	226.8 (66.5)
		Power kW)	27.5	26.9	26.5	27.2	26.6	26.2	26.9	26.3	25.9
	110 (43.3)	Total BTUH kW)	313.9 (92.0)	299.4 (87.7)	290.9 (85.3)	295.5 (86.6)	281.9 (82.6)	273.9 (80.3)	284.4 (83.3)	271.3 (79.5)	263.6 (77.3)
		Sens BTUH kW)	219.3 (64.3)	180.5 (52.9)	159.5 (46.8)	261.9 (76.8)	219.3 (64.3)	195.9 (57.4)	284.4 (83.3)	248.1 (72.7)	222.9 (65.3)
		Power kW)	28.9	28.2	27.8	28.6	27.9	27.5	28.3	27.6	27.2
115 (46.1)	Total BTUH kW)	301.8 (88.4)	287.9 (84.4)	279.7 (82.0)	283.4 (83.1)	270.4 (79.2)	262.7 (77.0)	272.4 (79.8)	259.8 (76.1)	252.4 (74.0)	
	Sens BTUH kW)	213.2 (62.5)	175.7 (51.5)	155.3 (45.5)	255.8 (75.0)	214.5 (62.9)	191.8 (56.2)	272.4 (79.8)	243.3 (71.3)	218.8 (64.1)	
	Power kW)	30.3	29.6	29.2	30.0	29.3	28.9	29.7	29.0	28.6	

Note: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—KW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

System Performance—with Reheat

Table 17: Gross System Performance—MPS H07D, 7.5 Tons with Low Reheat

Entering Indoor Air @ 75°F (23.9°C) dbE ¹											
wbE		65.3°F (18.5°C)			64°F (17.8°C)			62.5°F (16.9°C)			
CFM (L/s)		1800 (850)	1700 (802)	1200 (566)	1800 (850)	1700 (802)	1200 (566)	1800 (850)	1700 (802)	1200 (566)	
Outdoor Dry Bulb Temperature °F (°C)	60 (15.6)	Total BTUH kW	29.7 (8.7)	29.4 (8.6)	27.9 (8.2)	27.0 (7.9)	26.7 (7.8)	25.3 (7.4)	26.6 (7.8)	26.4 (7.7)	24.9 (7.3)
		Sens BTUH kW	6.5 (1.9)	6.3 (1.8)	5.4 (1.6)	9.0 (2.6)	8.7 (2.6)	7.5 (2.2)	11.4 (3.4)	11.1 (3.3)	9.6 (2.8)
		Power kW	3.2	3.1	3.1	3.2	3.2	3.1	3.2	3.2	3.2
	65 (18.3)	Total BTUH kW	29.5 (8.6)	29.2 (8.5)	27.6 (8.1)	26.7 (7.8)	26.4 (7.7)	25.0 (7.3)	26.4 (7.7)	26.1 (7.6)	24.7 (7.2)
		Sens BTUH kW	5.0 (1.5)	4.9 (1.4)	4.2 (1.2)	7.6 (2.2)	7.4 (2.2)	6.3 (1.9)	10.0 (2.9)	9.7 (2.9)	8.4 (2.5)
		Power kW	3.2	3.2	3.1	3.3	3.2	3.2	3.2	3.2	3.2
	70 (21.1)	Total BTUH kW	28.8 (8.4)	28.5 (8.4)	27.0 (7.9)	26.0 (7.6)	25.8 (7.6)	24.4 (7.1)	25.7 (7.5)	25.4 (7.5)	24.1 (7.1)
		Sens BTUH kW	3.7 (1.1)	3.6 (1.0)	3.1 (0.9)	6.2 (1.8)	6.0 (1.8)	5.2 (1.5)	8.6 (2.5)	8.4 (2.5)	7.2 (2.1)
		Power kW	3.2	3.2	3.1	3.3	3.3	3.2	3.3	3.3	3.2
	75 (23.9)	Total BTUH kW	27.8 (8.1)	27.5 (8.1)	26.0 (7.6)	25.0 (7.3)	24.7 (7.2)	23.4 (6.9)	24.7 (7.2)	24.4 (7.2)	23.1 (6.8)
		Sens BTUH kW	2.3 (0.7)	2.3 (0.7)	2.0 (0.6)	4.9 (1.4)	4.7 (1.4)	4.1 (1.2)	7.3 (2.1)	7.1 (2.1)	6.1 (1.8)
		Power kW	3.3	3.3	3.2	3.4	3.4	3.3	3.4	3.4	3.3
	80 (26.7)	Total BTUH kW	26.3 (7.7)	26.0 (7.6)	24.6 (7.2)	23.5 (6.9)	23.3 (6.8)	22.1 (6.5)	23.2 (6.8)	23.0 (6.7)	21.7 (6.4)
		Sens BTUH kW	1.1 (0.3)	1.0 (0.3)	0.9 (0.3)	3.6 (1.0)	3.5 (1.0)	3.0 (0.9)	6.0 (1.8)	5.9 (1.7)	5.1 (1.5)
		Power kW	3.4	3.4	3.3	3.5	3.5	3.4	3.5	3.5	3.4
	85 (29.4)	Total BTUH kW	24.5 (7.2)	24.2 (7.1)	22.9 (6.7)	21.7 (6.4)	21.5 (6.3)	20.3 (6.0)	21.4 (6.3)	21.1 (6.2)	20.0 (5.9)
		Sens BTUH kW	-0.2 (-0.1)	-0.2 (0.0)	-0.1 (0.0)	2.4 (0.7)	2.3 (0.7)	2.0 (0.6)	4.8 (1.4)	4.7 (1.4)	4.0 (1.2)
		Power kW	3.6	3.6	3.5	3.7	3.6	3.6	3.6	3.6	3.5
	90 (32.2)	Total BTUH kW	22.2 (6.5)	22.0 (6.4)	20.8 (6.1)	19.5 (5.7)	19.3 (5.6)	18.2 (5.3)	19.1 (5.6)	18.9 (5.5)	17.9 (5.3)
		Sens BTUH kW	-1.3 (-0.4)	-1.3 (-0.4)	-1.1 (-0.3)	1.2 (0.3)	1.1 (0.3)	1.0 (0.3)	3.6 (1.1)	3.5 (1.0)	3.0 (0.9)
		Power kW	3.8	3.7	3.6	3.8	3.8	3.7	3.8	3.8	3.7

NOTE: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—KW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 18: Gross System Performance—MPS H07D, 7.5 Tons with High Reheat

Entering Indoor Air @ 75°F (23.9°C) dbE ¹											
wbE		65.3°F (18.5°C)			64°F (17.8°C)			62.5°F (16.9°C)			
CFM (L/s)		3600 (1699)	2900 (1369)	2400 (1133)	3600 (1699)	2900 (1369)	2400 (1133)	3600 (1699)	2900 (1369)	2400 (1133)	
Outdoor Dry Bulb Temperature °F (°C)	60 (15.6)	Total BTUH kW	41.7 (12.2)	39.9 (11.7)	38.7 (11.3)	40.1 (11.8)	38.4 (11.3)	37.2 (10.9)	40.0 (11.7)	38.3 (11.2)	37.1 (10.9)
		Sens BTUH kW	8.9 (2.6)	8.0 (2.4)	7.4 (2.2)	12.8 (3.7)	11.5 (3.4)	10.5 (3.1)	18.5 (5.4)	16.7 (4.9)	15.3 (4.5)
		Power kW	5	4.9	4.8	4.9	4.8	4.8	4.9	4.8	4.8
	70 (21.1)	Total BTUH kW	39.8 (11.7)	38.1 (11.2)	36.9 (10.8)	38.3 (11.2)	36.7 (10.7)	35.5 (10.4)	38.1 (11.2)	36.5 (10.7)	35.4 (10.4)
		Sens BTUH kW	5.9 (1.7)	5.3 (1.6)	4.9 (1.4)	9.8 (2.9)	8.8 (2.6)	8.1 (2.4)	15.5 (4.6)	14.0 (4.1)	12.8 (3.8)
		Power kW	5.1	5	4.9	5.1	5	4.9	5	4.9	4.9
	80 (26.7)	Total BTUH kW	36.7 (10.7)	35.1 (10.3)	34.0 (10.0)	35.1 (10.3)	33.7 (9.9)	32.6 (9.6)	35.0 (10.3)	33.5 (9.8)	32.5 (9.5)
		Sens BTUH kW	2.1 (0.6)	1.9 (0.5)	1.7 (0.5)	5.9 (1.7)	5.3 (1.6)	4.9 (1.4)	11.7 (3.4)	10.5 (3.1)	9.6 (2.8)
		Power kW	5.4	5.3	5.2	5.3	5.2	5.1	5.3	5.2	5.1
	90 (32.2)	Total BTUH kW	32.3 (9.5)	30.9 (9.1)	30.0 (8.8)	30.8 (9.0)	29.5 (8.6)	28.5 (8.4)	30.6 (9.0)	29.3 (8.6)	28.4 (8.3)
		Sens BTUH kW	-2.7 (-0.8)	-2.4 (-0.7)	-2.2 (-0.6)	1.2 (0.3)	1.0 (0.3)	1.0 (0.3)	6.9 (2.0)	6.2 (1.8)	5.7 (1.7)
		Power kW	5.8	5.6	5.6	5.7	5.6	5.5	5.7	5.6	5.5
	100 (37.8)	Total BTUH kW	26.7 (7.8)	25.5 (7.5)	24.7 (7.3)	25.1 (7.4)	24.1 (7.1)	23.3 (6.8)	25.0 (7.3)	23.9 (7.0)	23.2 (6.8)
		Sens BTUH kW	-8.3 (-2.4)	-7.4 (-2.2)	-6.8 (-2.0)	-4.4 (-1.3)	-4.0 (-1.2)	-3.7 (-1.1)	1.3 (0.4)	1.2 (0.4)	1.1 (0.3)
		Power kW	6.3	6.2	6.1	6.2	6.1	6	6.2	6.1	6
	110 (43.3)	Total BTUH kW	19.8 (5.8)	19.0 (5.6)	18.4 (5.4)	18.3 (5.4)	17.5 (5.1)	17.0 (5.0)	18.1 (5.3)	17.4 (5.1)	16.8 (4.9)
		Sens BTUH kW	-14.7 (-4.3)	-13.2 (-3.9)	-12.2 (-3.6)	-10.9 (-3.2)	-9.8 (-2.9)	-9.0 (-2.6)	-5.1 (-1.5)	-4.6 (-1.4)	-4.2 (-1.2)
		Power kW	6.9	6.8	6.7	6.9	6.7	6.6	6.9	6.7	6.6
	120 (48.9)	Total BTUH kW	11.7 (3.4)	11.2 (3.3)	10.8 (3.2)	10.1 (3.0)	9.7 (2.8)	9.4 (2.8)	10.0 (2.9)	9.6 (2.8)	9.3 (2.7)
		Sens BTUH kW	-22.1 (-6.5)	-19.8 (-5.8)	-18.2 (-5.3)	-18.2 (-5.3)	-16.4 (-4.8)	-15.1 (-4.4)	-12.5 (-3.7)	-11.2 (-3.3)	-10.3 (-3.0)
		Power kW	7.8	7.6	7.5	7.7	7.5	7.4	7.7	7.5	7.4

NOTE: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—KW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 19: Gross System Performance—MPS H08D, 8 Tons with Low Reheat

Entering Indoor Air @ 75°F (23.9°C) dbE ¹											
wbE		65.3°F (18.5°C)			64°F (17.8°C)			62.5°F (16.9°C)			
CFM (L/s)		2100 (991)	1700 (802)	1400 (661)	2100 (991)	1700 (802)	1400 (661)	2100 (991)	1700 (802)	1400 (661)	
Outdoor Dry Bulb Temperature °F (°C)	60 (15.6)	Total BTUH kW	36.6 (10.7)	35.1 (10.3)	33.9 (9.9)	34.5 (10.1)	33.1 (9.7)	32.1 (9.4)	31.9 (9.3)	30.6 (9.0)	29.6 (8.7)
		Sens BTUH kW	7.1 (2.1)	6.4 (1.9)	5.9 (1.7)	9.0 (2.6)	8.1 (2.4)	7.4 (2.2)	10.7 (3.1)	9.7 (2.8)	8.9 (2.6)
		Power kW	3.9	3.8	3.7	3.8	3.8	3.7	3.8	3.8	3.8
	65 (18.3)	Total BTUH kW	35.5 (10.4)	34.0 (10.0)	32.9 (9.6)	33.4 (9.8)	32.1 (9.4)	31.0 (9.1)	30.8 (9.0)	29.5 (8.6)	28.6 (8.4)
		Sens BTUH kW	6.1 (1.8)	5.5 (1.6)	5.0 (1.5)	8.0 (2.3)	7.2 (2.1)	6.6 (1.9)	9.7 (2.8)	8.7 (2.6)	8.0 (2.4)
		Power kW	3.9	3.8	3.8	3.9	3.8	3.8	3.9	3.8	3.8
	70 (21.1)	Total BTUH kW	34.1 (10.0)	32.7 (9.6)	31.7 (9.3)	32.1 (9.4)	30.8 (9.0)	29.8 (8.7)	29.5 (8.6)	28.3 (8.3)	27.4 (8.0)
		Sens BTUH kW	4.8 (1.4)	4.3 (1.3)	4.0 (1.2)	6.7 (2.0)	6.0 (1.8)	5.5 (1.6)	8.5 (2.5)	7.6 (2.2)	7.0 (2.0)
		Power kW	4	3.9	3.9	4	3.9	3.9	4	3.9	3.9
	75 (23.9)	Total BTUH kW	32.7 (9.6)	31.3 (9.2)	30.3 (8.9)	30.6 (9.0)	29.4 (8.6)	28.4 (8.3)	28.0 (8.2)	26.8 (7.9)	26.0 (7.6)
		Sens BTUH kW	3.3 (1.0)	3.0 (0.9)	2.8 (0.8)	5.2 (1.5)	4.7 (1.4)	4.3 (1.3)	7.0 (2.0)	6.3 (1.8)	5.8 (1.7)
		Power kW	4.1	4	4	4.1	4	4	4.1	4	4
	80 (26.7)	Total BTUH kW	31.0 (9.1)	29.7 (8.7)	28.8 (8.4)	29.0 (8.5)	27.8 (8.1)	26.9 (7.9)	26.3 (7.7)	25.2 (7.4)	24.4 (7.2)
		Sens BTUH kW	1.7 (0.5)	1.5 (0.4)	1.4 (0.4)	3.6 (1.0)	3.2 (0.9)	2.9 (0.9)	5.3 (1.6)	4.8 (1.4)	4.4 (1.3)
		Power kW	4.3	4.2	4.1	4.3	4.2	4.1	4.3	4.2	4.1
	85 (29.4)	Total BTUH kW	29.1 (8.5)	27.9 (8.2)	27.0 (7.9)	27.1 (7.9)	26.0 (7.6)	25.1 (7.4)	24.4 (7.2)	23.4 (6.9)	22.7 (6.6)
		Sens BTUH kW	-0.2 (-0.1)	-0.2 (-0.1)	-0.2 (-0.1)	1.7 (0.5)	1.5 (0.4)	1.4 (0.4)	3.4 (1.0)	3.1 (0.9)	2.8 (0.8)
		Power kW	4.4	4.3	4.3	4.4	4.3	4.3	4.4	4.3	4.3
	90 (32.2)	Total BTUH kW	27.1 (7.9)	26.0 (7.6)	25.1 (7.4)	25.0 (7.3)	24.0 (7.0)	23.2 (6.8)	22.4 (6.6)	21.5 (6.3)	20.8 (6.1)
		Sens BTUH kW	-2.3 (-0.7)	-2.1 (-0.6)	-1.9 (-0.6)	-0.4 (-0.1)	-0.4 (-0.1)	-0.4 (-0.1)	1.3 (0.4)	1.2 (0.3)	1.1 (0.3)
		Power kW	4.6	4.5	4.4	4.6	4.5	4.4	4.6	4.5	4.4

NOTE: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—KW input 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 20: Gross System Performance—MPS H08D, 8 Tons with High Reheat

Entering Indoor Air @ 75°F (23.9°C) dbE ¹											
wbE		65.3°F (18.5°C)			64°F (17.8°C)			62.5°F (16.9°C)			
CFM (L/s)		4100 (1935)	2900 (1369)	2700 (1274)	4100 (1935)	2900 (1369)	2700 (1274)	4100 (1935)	2900 (1369)	2700 (1274)	
Outdoor Dry Bulb Temperature °F (°C)	60 (15.6)	Total BTUH kW	57.6 (16.9)	53.6 (15.7)	52.9 (15.5)	45.7 (13.4)	42.5 (12.5)	42.0 (12.3)	51.3 (15.0)	47.7 (14.0)	47.1 (13.8)
		Sens BTUH kW	12.7 (3.7)	10.7 (3.1)	10.3 (3.0)	14.6 (4.3)	12.2 (3.6)	11.8 (3.5)	20.5 (6.0)	17.2 (5.0)	16.6 (4.9)
		Power kW	6.6	6.4	6.3	5.2	5	5	6.3	6.1	6
	70 (21.1)	Total BTUH kW	52.7 (15.5)	49.1 (14.4)	48.4 (14.2)	40.9 (12.0)	38.0 (11.1)	37.5 (11.0)	46.4 (13.6)	43.2 (12.7)	42.6 (12.5)
		Sens BTUH kW	10.1 (3.0)	8.5 (2.5)	8.2 (2.4)	11.9 (3.5)	10.0 (2.9)	9.7 (2.8)	17.9 (5.2)	15.0 (4.4)	14.5 (4.2)
		Power kW	6.4	6.1	6.1	5	4.8	4.8	6	5.8	5.8
	80 (26.7)	Total BTUH kW	46.3 (13.6)	43.1 (12.6)	42.6 (12.5)	34.5 (10.1)	32.1 (9.4)	31.6 (9.3)	40.0 (11.7)	37.2 (10.9)	36.7 (10.8)
		Sens BTUH kW	5.6 (1.6)	4.7 (1.4)	4.5 (1.3)	7.4 (2.2)	6.2 (1.8)	6.0 (1.8)	13.3 (3.9)	11.2 (3.3)	10.8 (3.2)
		Power kW	6.4	6.1	6.1	5	4.8	4.8	6.1	5.8	5.8
	90 (32.2)	Total BTUH kW	38.4 (11.2)	35.7 (10.5)	35.2 (10.3)	26.5 (7.8)	24.7 (7.2)	24.3 (7.1)	32.1 (9.4)	29.8 (8.7)	29.4 (8.6)
		Sens BTUH kW	-0.9 (-0.3)	-0.7 (-0.2)	-0.7 (-0.2)	0.9 (0.3)	0.8 (0.2)	0.8 (0.2)	6.9 (2.0)	5.8 (1.7)	5.6 (1.6)
		Power kW	6.6	6.4	6.4	5.2	5.1	5	6.3	6.1	6.1
	100 (37.8)	Total BTUH kW	28.9 (8.5)	26.9 (7.9)	26.5 (7.8)	17.0 (5.0)	15.8 (4.6)	15.6 (4.6)	22.6 (6.6)	21.0 (6.1)	20.7 (6.1)
		Sens BTUH kW	-9.2 (-2.7)	-7.7 (-2.3)	-7.5 (-2.2)	-7.4 (-2.2)	-6.2 (-1.8)	-6.0 (-1.8)	-1.5 (-0.4)	-1.2 (-0.4)	-1.2 (-0.4)
		Power kW	7.2	6.9	6.9	5.8	5.6	5.5	6.8	6.6	6.6
	110 (43.3)	Total BTUH kW	17.9 (5.2)	16.6 (4.9)	16.4 (4.8)	6.0 (1.8)	5.6 (1.6)	5.5 (1.6)	11.5 (3.4)	10.7 (3.1)	10.6 (3.1)
		Sens BTUH kW	-19.5 (-5.7)	-16.3 (-4.8)	-15.8 (-4.6)	-17.7 (-5.2)	-14.8 (-4.3)	-14.3 (-4.2)	-11.7 (-3.4)	-9.8 (-2.9)	-9.5 (-2.8)
		Power kW	7.9	7.7	7.6	6.5	6.3	6.3	7.6	7.4	7.3
	120 (48.9)	Total BTUH kW	5.3 (1.5)	4.9 (1.4)	4.9 (1.4)	-6.6 (-1.9)	-6.1 (-1.8)	-6.0 (-1.8)	-1.0 (-0.3)	-1.0 (-0.3)	-1.0 (-0.3)
		Sens BTUH kW	-31.6 (-9.3)	-26.5 (-7.8)	-25.7 (-7.5)	-29.8 (-8.7)	-25.0 (-7.3)	-24.2 (-7.1)	-23.9 (-7.0)	-20.0 (-5.9)	-19.4 (-5.7)
		Power kW	9	8.7	8.6	7.6	7.3	7.3	8.7	8.4	8.3

NOTE: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—KW input 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 21: Gross System Performance—MPS H10D, 10 Tons with Low Reheat

Entering Indoor Air @ 75°F (23.9°C) dbE ¹											
wbE		65.3°F (18.5°C)			64°F (17.8°C)			62.5°F (16.9°C)			
CFM (L/s)		3000(1416)	2400(1133)	2000(944)	3000(1416)	2400(1133)	2000(944)	3000(1416)	2400(1133)	2000(944)	
Outdoor Dry Bulb Temperature °F (°C)	60(15.6)	Total BTUH kW	46.5 (13.6)	44.4 (13.0)	43.1 (12.6)	43.1 (12.6)	41.2 (12.1)	40.0 (11.7)	40.3 (11.8)	38.6 (11.3)	37.4 (11.0)
		Sens BTUH kW	12.9 (3.8)	11.6 (3.4)	10.7 (3.1)	13.8 (4.0)	12.3 (3.6)	11.4 (3.3)	18.5 (5.4)	16.5 (4.8)	15.3 (4.5)
		Power kW	4.6	4.5	4.4	4.5	4.4	4.3	4.5	4.4	4.3
	65(18.3)	Total BTUH kW	45.7 (13.4)	43.7 (12.8)	42.4 (12.4)	42.3 (12.4)	40.5 (11.9)	39.3 (11.5)	39.6 (11.6)	37.8 (11.1)	36.7 (10.8)
		Sens BTUH kW	10.5 (3.1)	9.4 (2.8)	8.7 (2.5)	11.4 (3.3)	10.2 (3.0)	9.4 (2.8)	16.1 (4.7)	14.4 (4.2)	13.3 (3.9)
		Power kW	4.6	4.5	4.5	4.6	4.5	4.4	4.5	4.4	4.4
	70(21.1)	Total BTUH kW	44.7 (13.1)	42.7 (12.5)	41.4 (12.1)	41.3 (12.1)	39.5 (11.6)	38.3 (11.2)	38.5 (11.3)	36.9 (10.8)	35.7 (10.5)
		Sens BTUH kW	8.3 (2.4)	7.4 (2.2)	6.9 (2.0)	9.2 (2.7)	8.2 (2.4)	7.6 (2.2)	13.9 (4.1)	12.4 (3.6)	11.4 (3.4)
		Power kW	4.7	4.6	4.6	4.7	4.6	4.5	4.6	4.5	4.5
	75(23.9)	Total BTUH kW	43.4 (12.7)	41.5 (12.2)	40.2 (11.8)	40.0 (11.7)	38.3 (11.2)	37.1 (10.9)	37.2 (10.9)	35.6 (10.4)	34.5 (10.1)
		Sens BTUH kW	6.3 (1.8)	5.6 (1.7)	5.2 (1.5)	7.2 (2.1)	6.4 (1.9)	5.9 (1.7)	11.9 (3.5)	10.6 (3.1)	9.8 (2.9)
		Power kW	4.9	4.8	4.7	4.8	4.7	4.7	4.8	4.7	4.6
	80(26.7)	Total BTUH kW	41.8 (12.2)	40.0 (11.7)	38.8 (11.4)	38.4 (11.3)	36.8 (10.8)	35.6 (10.4)	35.7 (10.5)	34.1 (10.0)	33.1 (9.7)
		Sens BTUH kW	4.5 (1.3)	4.0 (1.2)	3.7 (1.1)	5.4 (1.6)	4.8 (1.4)	4.4 (1.3)	10.1 (2.9)	9.0 (2.6)	8.3 (2.4)
		Power kW	5.1	5	4.9	5	4.9	4.9	5	4.9	4.8
	85(29.4)	Total BTUH kW	40.0 (11.7)	38.2 (11.2)	37.1 (10.9)	36.6 (10.7)	35.0 (10.3)	33.9 (9.9)	33.8 (9.9)	32.4 (9.5)	31.4 (9.2)
		Sens BTUH kW	2.9 (0.8)	2.6 (0.8)	2.4 (0.7)	3.8 (1.1)	3.4 (1.0)	3.1 (0.9)	8.5 (2.5)	7.6 (2.2)	7.0 (2.0)
		Power kW	5.4	5.3	5.2	5.3	5.2	5.1	5.3	5.2	5.1
	90(32.2)	Total BTUH kW	37.9 (11.1)	36.2 (10.6)	35.1 (10.3)	34.5 (10.1)	33.0 (9.7)	32.0 (9.4)	31.7 (9.3)	30.4 (8.9)	29.4 (8.6)
		Sens BTUH kW	1.5 (0.4)	1.3 (0.4)	1.2 (0.4)	2.4 (0.7)	2.1 (0.6)	2.0 (0.6)	7.1 (2.1)	6.3 (1.9)	5.8 (1.7)
		Power kW	5.7	5.6	5.5	5.6	5.5	5.4	5.6	5.5	5.4

NOTE: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—KW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 22: Gross System Performance—MPS H10D, 10 Tons with High Reheat

Entering Indoor Air @ 75°F (23.9°C) dbE ¹											
wbE		65.3°F (18.5°C)			64°F (17.8°C)			62.5°F (16.9°C)			
CFM (L/s)		4800 (2265)	3800 (1793)	3200 (1510)	4800 (2265)	3800 (1793)	3200 (1510)	4800 (2265)	3800 (1793)	3200 (1510)	
Outdoor Dry Bulb Temperature °F (°C)	60(15.6)	Total BTUH kW	58.1 (17.0)	55.4 (16.2)	53.9 (15.8)	55.5 (16.3)	53.0 (15.5)	51.4 (15.1)	53.1 (15.6)	50.7 (14.9)	49.2 (14.4)
		Sens BTUH kW	10.5 (3.1)	9.3 (2.7)	8.6 (2.5)	15.6 (4.6)	13.9 (4.1)	12.9 (3.8)	19.9 (5.8)	17.7 (5.2)	16.4 (4.8)
		Power kW	7	6.9	6.8	6.9	6.8	6.7	6.9	6.8	6.7
	70(21.1)	Total BTUH kW	53.4 (15.7)	51.0 (14.9)	49.5 (14.5)	50.8 (14.9)	48.5 (14.2)	47.1 (13.8)	48.4 (14.2)	46.2 (13.5)	44.9 (13.2)
		Sens BTUH kW	8.3 (2.4)	7.4 (2.2)	6.8 (2.0)	13.4 (3.9)	12.0 (3.5)	11.1 (3.2)	17.7 (5.2)	15.8 (4.6)	14.6 (4.3)
		Power kW	7.1	7	6.9	7	6.9	6.8	7	6.9	6.8
	80(26.7)	Total BTUH kW	48.4 (14.2)	46.2 (13.5)	44.9 (13.2)	45.8 (13.4)	43.7 (12.8)	42.5 (12.4)	43.4 (12.7)	41.5 (12.1)	40.3 (11.8)
		Sens BTUH kW	4.5 (1.3)	4.0 (1.2)	3.7 (1.1)	9.7 (2.8)	8.6 (2.5)	8.0 (2.3)	14.0 (4.1)	12.5 (3.6)	11.5 (3.4)
		Power kW	7.4	7.3	7.2	7.3	7.2	7.1	7.3	7.2	7.1
	90(32.2)	Total BTUH kW	43.1 (12.6)	41.1 (12.0)	39.9 (11.7)	40.5 (11.9)	38.6 (11.3)	37.5 (11.0)	38.1 (11.2)	36.3 (10.6)	35.3 (10.3)
		Sens BTUH kW	-0.8 (-0.2)	-0.7 (-0.2)	-0.6 (-0.2)	4.4 (1.3)	3.9 (1.1)	3.6 (1.1)	8.7 (2.5)	7.7 (2.3)	7.2 (2.1)
		Power kW	7.9	7.7	7.6	7.8	7.7	7.5	7.8	7.6	7.5
	100(37.8)	Total BTUH kW	37.4 (11.0)	35.7 (10.5)	34.6 (10.2)	34.8 (10.2)	33.2 (9.7)	32.2 (9.4)	32.4 (9.5)	30.9 (9.1)	30.0 (8.8)
		Sens BTUH kW	-7.6 (-2.2)	-6.8 (-2.0)	-6.3 (-1.8)	-2.5 (-0.7)	-2.2 (-0.6)	-2.0 (-0.6)	1.8 (0.5)	1.6 (0.5)	1.5 (0.4)
		Power kW	8.6	8.4	8.3	8.5	8.3	8.2	8.5	8.3	8.2
	110(43.3)	Total BTUH kW	31.3 (9.2)	29.9 (8.8)	29.0 (8.5)	28.7 (8.4)	27.4 (8.0)	26.6 (7.8)	26.3 (7.7)	25.1 (7.4)	24.4 (7.1)
		Sens BTUH kW	-16.0 (-4.7)	-14.3 (-4.2)	-13.2 (-3.9)	-10.9 (-3.2)	-9.7 (-2.8)	-9.0 (-2.6)	-6.6 (-1.9)	-5.9 (-1.7)	-5.5 (-1.6)
		Power kW	9.5	9.3	9.2	9.4	9.2	9.1	9.4	9.2	9
	120(48.9)	Total BTUH kW	24.9 (7.3)	23.8 (7.0)	23.1 (6.8)	22.3 (6.5)	21.3 (6.2)	20.7 (6.1)	19.9 (5.8)	19.0 (5.6)	18.5 (5.4)
		Sens BTUH kW	-26.0 (-7.6)	-23.2 (-6.8)	-21.5 (-6.3)	-20.9 (-6.1)	-18.6 (-5.5)	-17.2 (-5.0)	-16.6 (-4.9)	-14.8 (-4.3)	-13.7 (-4.0)
		Power kW	10.6	10.3	10.2	10.5	10.2	10.1	10.5	10.2	10.1

NOTE: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—KW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 23: Gross System Performance—MPS H12D, 12.5 Tons with Low Reheat

Entering Indoor Air @ 75°F (23.9°C) dbE ¹											
wbE		65.3°F (18.5°C)			64°F (17.8°C)			62.5°F (16.9°C)			
CFM (L/s)		3000 (1416)	2400 (1133)	2000 (944)	3000 (1416)	2400 (1133)	2000 (944)	3000 (1416)	2400 (1133)	2000 (944)	
Outdoor Dry Bulb Temperature °F (°C)	60 (15.6)	Total BTUH kW	46.5 (13.6)	44.4 (13.0)	43.1 (12.6)	43.1 (12.6)	41.2 (12.1)	40.0 (11.7)	40.3 (11.8)	38.6 (11.3)	37.4 (11.0)
		Sens BTUH kW	12.9 (3.8)	11.6 (3.4)	10.7 (3.1)	13.8 (4.0)	12.3 (3.6)	11.4 (3.3)	18.5 (5.4)	16.5 (4.8)	15.3 (4.5)
		Power kW	4.6	4.5	4.4	4.5	4.4	4.3	4.5	4.4	4.3
	65 (18.3)	Total BTUH kW	45.7 (13.4)	43.7 (12.8)	42.4 (12.4)	42.3 (12.4)	40.5 (11.9)	39.3 (11.5)	39.6 (11.6)	37.8 (11.1)	36.7 (10.8)
		Sens BTUH kW	10.5 (3.1)	9.4 (2.8)	8.7 (2.5)	11.4 (3.3)	10.2 (3.0)	9.4 (2.8)	16.1 (4.7)	14.4 (4.2)	13.3 (3.9)
		Power kW	4.6	4.5	4.5	4.6	4.5	4.4	4.5	4.4	4.4
	70 (21.1)	Total BTUH kW	44.7 (13.1)	42.7 (12.5)	41.4 (12.1)	41.3 (12.1)	39.5 (11.6)	38.3 (11.2)	38.5 (11.3)	36.9 (10.8)	35.7 (10.5)
		Sens BTUH kW	8.3 (2.4)	7.4 (2.2)	6.9 (2.0)	9.2 (2.7)	8.2 (2.4)	7.6 (2.2)	13.9 (4.1)	12.4 (3.6)	11.4 (3.4)
		Power kW	4.7	4.6	4.6	4.7	4.6	4.5	4.6	4.5	4.5
	75 (23.9)	Total BTUH kW	43.4 (12.7)	41.5 (12.2)	40.2 (11.8)	40.0 (11.7)	38.3 (11.2)	37.1 (10.9)	37.2 (10.9)	35.6 (10.4)	34.5 (10.1)
		Sens BTUH kW	6.3 (1.8)	5.6 (1.7)	5.2 (1.5)	7.2 (2.1)	6.4 (1.9)	5.9 (1.7)	11.9 (3.5)	10.6 (3.1)	9.8 (2.9)
		Power kW	4.9	4.8	4.7	4.8	4.7	4.7	4.8	4.7	4.6
	80 (26.7)	Total BTUH kW	41.8 (12.2)	40.0 (11.7)	38.8 (11.4)	38.4 (11.3)	36.8 (10.8)	35.6 (10.4)	35.7 (10.5)	34.1 (10.0)	33.1 (9.7)
		Sens BTUH kW	4.5 (1.3)	4.0 (1.2)	3.7 (1.1)	5.4 (1.6)	4.8 (1.4)	4.4 (1.3)	10.1 (2.9)	9.0 (2.6)	8.3 (2.4)
		Power kW	5.1	5	4.9	5	4.9	4.9	5	4.9	4.8
	85 (29.4)	Total BTUH kW	40.0 (11.7)	38.2 (11.2)	37.1 (10.9)	36.6 (10.7)	35.0 (10.3)	33.9 (9.9)	33.8 (9.9)	32.4 (9.5)	31.4 (9.2)
		Sens BTUH kW	2.9 (0.8)	2.6 (0.8)	2.4 (0.7)	3.8 (1.1)	3.4 (1.0)	3.1 (0.9)	8.5 (2.5)	7.6 (2.2)	7.0 (2.0)
		Power kW	5.4	5.3	5.2	5.3	5.2	5.1	5.3	5.2	5.1
	90 (32.2)	Total BTUH kW	37.9 (11.1)	36.2 (10.6)	35.1 (10.3)	34.5 (10.1)	33.0 (9.7)	32.0 (9.4)	31.7 (9.3)	30.4 (8.9)	29.4 (8.6)
		Sens BTUH kW	1.5 (0.4)	1.3 (0.4)	1.2 (0.4)	2.4 (0.7)	2.1 (0.6)	2.0 (0.6)	7.1 (2.1)	6.3 (1.9)	5.8 (1.7)
		Power kW	5.7	5.6	5.5	5.6	5.5	5.4	5.6	5.5	5.4

NOTE: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—kW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 24: Gross System Performance—MPS H12D, 12.5 Tons with High Reheat

Entering Indoor Air @ 75°F (23.9°C) dbE ¹											
wbE		65.3°F (18.5°C)			64°F (17.8°C)			62.5°F (16.9°C)			
CFM (L/s)		6000 (2832)	4100 (1935)	4000 (1888)	6000 (2832)	4100 (1935)	4000 (1888)	6000 (2832)	4100 (1935)	4000 (1888)	
Outdoor Dry Bulb Temperature °F (°C)	60 (15.6)	Total BTUH kW	99.3 (29.1)	91.5 (26.8)	91.1 (26.7)	101.6 (29.8)	93.7 (27.4)	93.2 (27.3)	92.7 (27.2)	85.5 (25.1)	85.2 (25.0)
		Sens BTUH kW	33.3 (9.7)	27.4 (8.0)	27.0 (7.9)	40.1 (11.8)	33.0 (9.7)	32.6 (9.6)	46.4 (13.6)	38.1 (11.2)	37.7 (11.0)
		Power kW	9.5	9.1	9.1	9.3	8.9	8.9	9.3	8.9	8.9
	70 (21.1)	Total BTUH kW	94.4 (27.7)	87.1 (25.5)	86.7 (25.4)	96.7 (28.3)	89.2 (26.1)	88.8 (26.0)	87.9 (25.8)	81.1 (23.8)	80.7 (23.7)
		Sens BTUH kW	27 (7.9)	22.2 (6.5)	21.9 (6.4)	33.9 (9.9)	27.9 (8.2)	27.5 (8.1)	40.1 (11.7)	33.0 (9.7)	32.6 (9.5)
		Power kW	9.7	9.3	9.3	9.5	9.2	9.2	9.5	9.2	9.1
	80 (26.7)	Total BTUH kW	87.6 (25.7)	80.8 (23.7)	80.4 (23.6)	89.9 (26.3)	82.9 (24.3)	82.5 (24.2)	81.1 (23.8)	74.8 (21.9)	74.4 (21.8)
		Sens BTUH kW	20.1 (5.9)	16.5 (4.8)	16.3 (4.8)	27.0 (7.9)	22.2 (6.5)	21.9 (6.4)	33.2 (9.7)	27.3 (8.0)	27.0 (7.9)
		Power kW	10.2	9.8	9.8	10	9.6	9.6	10	9.6	9.6
	90 (32.2)	Total BTUH kW	78.7 (23.1)	72.6 (21.3)	72.3 (21.2)	81.0 (23.7)	74.7 (21.9)	74.4 (21.8)	72.2 (21.2)	66.6 (19.5)	66.3 (19.4)
		Sens BTUH kW	12.5 (3.7)	10.3 (3.0)	10.2 (3.0)	19.4 (5.7)	15.9 (4.7)	15.8 (4.6)	25.6 (7.5)	21.0 (6.2)	20.8 (6.1)
		Power kW	11	10.5	10.5	10.8	10.4	10.3	10.8	10.3	10.3
	100 (37.8)	Total BTUH kW	67.8 (19.9)	62.5 (18.3)	62.3 (18.2)	70.1 (20.5)	64.7 (18.9)	64.4 (18.9)	61.3 (18.0)	56.5 (16.6)	56.3 (16.5)
		Sens BTUH kW	4.3 (1.3)	3.5 (1.0)	3.5 (1.0)	11.2 (3.3)	9.2 (2.7)	9.1 (2.7)	17.4 (5.1)	14.3 (4.2)	14.1 (4.1)
		Power kW	11.9	11.5	11.4	11.8	11.3	11.3	11.8	11.3	11.3
	110 (43.3)	Total BTUH kW	54.9 (16.1)	50.6 (14.8)	50.4 (14.8)	57.2 (16.8)	52.7 (15.5)	52.5 (15.4)	48.4 (14.2)	44.6 (13.1)	44.4 (13.0)
		Sens BTUH kW	-4.6 (-1.3)	-3.8 (-1.1)	-3.7 (-1.1)	2.3 (0.7)	1.9 (0.5)	1.9 (0.5)	8.5 (2.5)	7.0 (2.0)	6.9 (2.0)
		Power kW	13.2	12.6	12.6	13	12.5	12.4	13	12.5	12.4
	120 (48.9)	Total BTUH kW	40.0 (11.7)	36.8 (10.8)	36.7 (10.8)	42.3 (12.4)	39.0 (11.4)	38.8 (11.4)	33.4 (9.8)	30.8 (0.9)	30.7 (9.0)
		Sens BTUH kW	-14.1 (-4.1)	-11.6 (-3.4)	-11.5 (-3.4)	-7.2 (-2.1)	-6.0 (-1.7)	-5.9 (-1.7)	-1.0 (-0.3)	-0.9 (-0.2)	-0.8 (-0.2)
		Power kW	14.6	14.1	14	14.5	13.9	13.9	14.4	13.9	13.8

NOTE: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—kW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 25: Gross System Performance—MPS 015B, 15 Tons with Reheat

Entering Indoor Air @ 80°F (26.7°C) dbE ¹											
wbE		71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)			
CFM (L/s)		7200 (3398)	5900 (2784)	4800 (2265)	7200 (3398)	5900 (2784)	4800 (2265)	7200 (3398)	5900 (2784)	4800 (2265)	
DR ¹		0.12	0.08	0.04	0.12	0.08	0.04	0.12	0.08	0.04	
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH kW)	229.8 (67.3)	220.9 (64.7)	213.5 (62.5)	214.3 (62.8)	206 (60.4)	199 (58.3)	205.3 (60.1)	197.4 (57.8)	190.7 (55.9)
		Sens BTUH kW)	134.3 (39.4)	121.8 (35.7)	111.2 (32.6)	165.1 (48.4)	149.7 (43.9)	136.7 (40.1)	189.9 (55.6)	172.2 (50.5)	157.2 (46.1)
		Power kW)	12.6	12.3	12.1	12.4	12.2	12.0	12.2	12.0	11.8
	80 (26.7)	Total BTUH kW)	225.5 (66.1)	216.8 (63.5)	209.4 (61.4)	209.9 (61.5)	201.9 (59.2)	195 (57.1)	200.9 (58.9)	193.2 (56.6)	186.7 (54.7)
		Sens BTUH kW)	132.1 (38.7)	119.8 (35.1)	109.4 (32.1)	163 (47.8)	147.8 (43.3)	134.9 (39.5)	187.7 (55.0)	170.2 (49.9)	155.4 (45.5)
		Power kW)	13.2	12.9	12.7	13.0	12.7	12.5	12.8	12.6	12.4
	85 (29.4)	Total BTUH kW)	220.8 (64.7)	212.3 (62.2)	205.1 (60.1)	205.3 (60.2)	197.4 (57.8)	190.7 (55.9)	196.3 (57.5)	188.7 (55.3)	182.3 (53.4)
		Sens BTUH kW)	129.8 (38.1)	117.7 (34.5)	107.5 (31.5)	160.7 (47.1)	145.7 (42.7)	133.0 (39.0)	185.4 (54.3)	168.1 (49.3)	153.5 (45)
		Power kW)	13.8	13.5	13.3	13.6	13.4	13.1	13.4	13.2	13.0
	90 (32.2)	Total BTUH kW)	215.8 (63.2)	207.5 (60.8)	200.4 (58.7)	200.3 (58.7)	192.5 (56.4)	186 (54.5)	191.3 (56.0)	183.9 (53.9)	177.7 (52.1)
		Sens BTUH kW)	127.4 (37.3)	115.5 (33.9)	105.5 (30.9)	158.2 (46.4)	143.5 (42)	131 (38.4)	183 (53.6)	165.9 (48.6)	151.5 (44.4)
		Power kW)	14.5	14.2	14.0	14.3	14.0	13.8	14.1	13.9	13.6
	95 (35.0)	Total BTUH kW)	210.4 (61.7)	202.3 (59.3)	195.5 (57.3)	194.9 (57.1)	187.4 (54.9)	181.0 (53.1)	185.9 (54.5)	178.7 (52.4)	172.7 (50.6)
		Sens BTUH kW)	124.8 (36.6)	113.2 (33.2)	103.3 (30.3)	155.6 (45.6)	141.1 (41.3)	128.8 (37.7)	180.4 (52.9)	163.6 (47.9)	149.3 (43.8)
		Power kW)	15.2	14.9	14.7	15.1	14.8	14.5	14.9	14.6	14.4
	100 (37.8)	Total BTUH kW)	204.7 (60.0)	196.9 (57.7)	190.2 (55.7)	189.2 (55.4)	181.9 (53.3)	175.8 (51.5)	180.2 (52.8)	173.3 (50.8)	167.4 (49.1)
		Sens BTUH kW)	122.0 (35.8)	110.7 (32.4)	101.0 (29.6)	152.9 (44.8)	138.6 (40.6)	126.5 (37.1)	177.6 (52.0)	161.1 (47.2)	147.0 (43.1)
		Power kW)	16.0	15.7	15.5	15.8	15.5	15.3	15.7	15.4	15.1
	105 (40.6)	Total BTUH kW)	198.7 (58.2)	191.0 (56.0)	184.6 (54.1)	183.2 (53.7)	176.1 (51.6)	170.1 (49.9)	174.2 (51.0)	167.5 (49.1)	161.8 (47.4)
		Sens BTUH kW)	119.1 (34.9)	108.0 (31.7)	98.6 (28.9)	149.9 (43.9)	136.0 (39.8)	124.1 (36.4)	174.2 (51.0)	158.4 (46.4)	144.6 (42.4)
		Power kW)	16.9	16.5	16.3	16.7	16.4	16.1	16.5	16.2	15.9
	110 (43.3)	Total BTUH kW)	192.3 (56.4)	184.9 (54.2)	178.6 (52.3)	176.8 (51.8)	170.0 (49.8)	164.2 (48.1)	167.8 (49.2)	161.3 (47.3)	155.8 (45.7)
		Sens BTUH kW)	116.1 (34.0)	105.2 (30.8)	96.1 (28.2)	146.9 (43.0)	133.2 (39.0)	121.6 (35.6)	167.8 (49.2)	155.6 (45.6)	142.1 (41.6)
		Power kW)	17.8	17.4	17.1	17.6	17.3	17.0	17.4	17.1	16.8
115 (46.1)	Total BTUH kW)	185.6 (54.4)	178.4 (52.3)	172.4 (50.5)	170.0 (49.8)	163.5 (47.9)	158.0 (46.3)	161.0 (47.2)	154.8 (45.4)	149.6 (43.8)	
	Sens BTUH kW)	112.9 (33.1)	102.3 (30.0)	93.4 (27.4)	143.7 (42.1)	130.3 (38.2)	118.9 (34.9)	161.0 (47.2)	152.7 (44.8)	139.4 (40.9)	
	Power kW)	18.7	18.4	18.1	18.5	18.2	17.9	18.4	18.0	17.7	
120 (48.9)	Total BTUH kW)	178.5 (52.3)	171.6 (50.3)	165.8 (48.6)	163 (47.8)	156.7 (45.9)	151.4 (44.4)	154.0 (45.1)	148.0 (43.4)	143.0 (41.9)	
	Sens BTUH kW)	109.5 (32.1)	99.3 (29.1)	90.6 (26.6)	140.3 (41.1)	127.2 (37.3)	116.2 (34.0)	154.0 (45.1)	148.0 (43.4)	136.7 (40.0)	
	Power kW)	19.7	19.3	19.0	19.5	19.2	18.9	19.4	19.0	18.7	
125 (51.7)	Total BTUH kW)	171.1 (50.1)	164.5 (48.2)	158.9 (46.6)	155.5 (45.6)	149.6 (43.8)	144.5 (42.3)	146.5 (42.9)	140.9 (41.3)	136.1 (39.9)	
	Sens BTUH kW)	106.0 (31.1)	96.1 (28.2)	87.7 (25.7)	136.8 (40.1)	124.0 (36.3)	113.2 (33.2)	146.5 (42.9)	140.9 (41.3)	133.7 (39.2)	
	Power kW)	20.8	20.4	20.0	20.6	20.2	19.9	20.4	20.0	19.7	

Note: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—kW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 26: Gross System Performance—MPS 020B, 20 Tons with Reheat

Entering Indoor Air @ 80°F (26.7°C) dbE ¹											
wbE		71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)			
CFM (L/s)		7200 (3398)	5900 (2784)	4800 (2265)	7200 (3398)	5900 (2784)	4800 (2265)	7200 (3398)	5900 (2784)	4800 (2265)	
DR ¹		0.12	0.08	0.04	0.12	0.08	0.04	0.12	0.08	0.04	
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH kW)	286.7 (84.0)	274.6 (80.5)	266.0 (78.0)	269.6 (79.0)	258.2 (75.7)	250.1 (73.3)	257.6 (75.5)	246.7 (72.3)	239.0 (70.0)
		Sens BTUH kW)	167.1 (49.0)	150.1 (44.0)	138.1 (40.5)	208.0 (61.0)	186.8 (54.8)	171.9 (50.4)	240.7 (70.5)	216.2 (63.4)	198.9 (58.3)
		Power kW)	15.5	15.1	14.9	15.3	15.0	14.7	15.1	14.8	14.5
	80 (26.7)	Total BTUH kW)	284.1 (83.3)	272.1 (79.7)	263.6 (77.3)	267.0 (78.2)	255.7 (74.9)	247.7 (72.6)	255.0 (74.7)	244.2 (71.6)	236.6 (69.3)
		Sens BTUH kW)	166.1 (48.7)	149.2 (43.7)	137.3 (40.2)	207.0 (60.7)	186.0 (54.5)	171.1 (50.1)	239.7 (70.2)	215.3 (63.1)	198.1 (58.1)
		Power kW)	16.2	15.9	15.6	16.0	15.7	15.5	15.9	15.5	15.3
	85 (29.4)	Total BTUH kW)	280.7 (82.3)	268.8 (78.8)	260.5 (76.3)	263.6 (77.2)	252.4 (74.0)	244.6 (71.7)	251.6 (73.7)	241.0 (70.6)	233.4 (68.4)
		Sens BTUH kW)	164.7 (48.3)	147.9 (43.4)	136.1 (39.9)	205.6 (60.3)	184.7 (54.1)	169.9 (49.8)	238.3 (69.8)	214.1 (62.7)	196.9 (57.7)
		Power kW)	17.1	16.7	16.4	16.9	16.5	16.3	16.7	16.3	16.1
	90 (32.2)	Total BTUH kW)	276.4 (81.0)	264.8 (77.6)	256.5 (75.2)	259.3 (76.0)	248.3 (72.8)	240.6 (70.5)	247.3 (72.5)	236.9 (69.4)	229.5 (67.3)
		Sens BTUH kW)	162.9 (47.7)	146.3 (42.9)	134.6 (39.4)	203.8 (59.7)	183.1 (53.7)	168.4 (49.4)	236.5 (69.3)	212.4 (62.3)	195.4 (57.3)
		Power kW)	17.9	17.5	17.3	17.7	17.4	17.1	17.5	17.2	16.9
	95 (35.0)	Total BTUH kW)	271.4 (79.5)	259.9 (76.2)	251.8 (73.8)	254.2 (74.5)	243.5 (71.3)	235.9 (69.1)	242.2 (71.0)	232.0 (68.0)	224.8 (65.9)
		Sens BTUH kW)	160.7 (47.1)	144.3 (42.3)	132.8 (38.9)	201.6 (59.1)	181.1 (53.1)	166.6 (48.8)	234.3 (68.7)	210.4 (61.7)	193.6 (56.7)
		Power kW)	18.8	18.5	18.2	18.7	18.3	18.0	18.5	18.1	17.8
	100 (37.8)	Total BTUH kW)	265.4 (77.8)	254.2 (74.5)	246.3 (72.2)	248.3 (72.8)	237.8 (69.7)	230.4 (67.5)	236.3 (69.3)	226.3 (66.3)	219.3 (64.3)
		Sens BTUH kW)	158.0 (46.3)	141.9 (41.6)	130.6 (38.3)	198.9 (58.3)	178.7 (52.4)	164.4 (48.2)	231.6 (67.9)	208.1 (61.0)	191.4 (56.1)
		Power kW)	19.8	19.4	19.1	19.6	19.2	18.9	19.4	19.0	18.7
	105 (40.6)	Total BTUH kW)	258.7 (75.8)	247.8 (72.6)	240 (70.3)	241.6 (70.8)	231.3 (67.8)	224.1 (65.7)	229.6 (67.3)	219.9 (64.4)	213.0 (62.4)
		Sens BTUH kW)	154.9 (45.4)	139.2 (40.8)	128 (37.5)	195.8 (57.4)	175.9 (51.6)	161.8 (47.4)	228.5 (67.0)	205.3 (60.2)	188.9 (55.3)
		Power kW)	20.8	20.4	20.1	20.7	20.2	19.9	20.5	20.0	19.7
	110 (43.3)	Total BTUH kW)	251.1 (73.6)	240.5 (70.5)	233.0 (68.3)	234 (68.6)	224.1 (65.7)	217.1 (63.6)	222.0 (65.1)	212.6 (62.3)	206.0 (60.4)
		Sens BTUH kW)	151.4 (44.4)	136.0 (39.9)	125.1 (36.7)	192.3 (56.4)	172.8 (50.6)	158.9 (46.6)	222.0 (65.1)	202.1 (59.2)	186.0 (54.5)
		Power kW)	21.9	21.5	21.1	21.7	21.3	21.0	21.5	21.1	20.8
115 (46.1)	Total BTUH kW)	242.7 (71.1)	232.5 (68.1)	225.2 (66)	225.6 (66.1)	216.0 (63.3)	209.3 (61.3)	213.6 (62.6)	204.6 (60.0)	198.2 (58.1)	
	Sens BTUH kW)	147.5 (43.2)	132.5 (38.8)	121.9 (35.7)	188.4 (55.2)	169.3 (49.6)	155.7 (45.6)	213.6 (62.6)	198.6 (58.2)	182.7 (53.5)	
	Power kW)	23.1	22.6	22.2	22.9	22.4	22.0	22.7	22.2	21.9	
120 (48.9)	Total BTUH kW)	233.5 (68.4)	223.6 (65.5)	216.6 (63.5)	216.3 (63.4)	207.2 (60.7)	200.7 (58.8)	204.4 (59.9)	195.7 (57.4)	189.6 (55.6)	
	Sens BTUH kW)	143.2 (41.9)	128.6 (37.7)	118.3 (34.7)	184.1 (53.9)	165.4 (48.5)	152.1 (44.6)	204.4 (59.9)	194.7 (57.1)	179.1 (52.5)	
	Power kW)	24.2	23.7	23.4	24.0	23.5	23.2	23.9	23.4	23.0	
125 (51.7)	Total BTUH kW)	223.4 (65.5)	214.0 (62.7)	207.3 (60.7)	206.3 (60.4)	197.6 (57.9)	191.4 (56.1)	194.3 (56.9)	186.1 (54.5)	180.3 (52.8)	
	Sens BTUH kW)	138.4 (40.6)	124.3 (36.4)	114.4 (33.5)	179.3 (52.5)	161.1 (47.2)	148.2 (43.4)	194.3 (56.9)	186.1 (54.5)	175.2 (51.3)	
	Power kW)	25.5	24.9	24.7	25.3	24.8	24.4	25.1	24.6	24.2	

Note: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—kW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 27: Gross System Performance—MPS 025B, 25 Tons with Reheat

			Entering Indoor Air @ 80°F (26.7°C) dbE ¹								
wbE			71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)		
CFM (L/s)			10615 (5010)	9650 (4554)	8202 (3871)	10615 (5010)	9650 (4554)	8202 (3871)	10615 (5010)	9650 (4554)	8202 (3871)
DR ¹			0.13	0.11	0.08	0.13	0.11	0.08	0.13	0.11	0.08
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH kW)	343.6 (100.7)	337.4 (98.9)	328.2 (96.2)	326.8 (95.8)	321.0 (94.1)	312.2 (91.5)	315.2 (92.4)	309.5 (90.7)	301.1 (88.2)
		Sens BTUH kW)	205.7 (60.3)	196.5 (57.6)	182.7 (53.5)	244.1 (71.5)	233.3 (68.4)	216.9 (63.6)	274.9 (80.5)	262.6 (77.0)	244.2 (71.6)
		Power kW)	21.3	21.2	20.9	21.2	21.0	20.7	21.0	20.8	20.5
	80 (26.7)	Total BTUH kW)	341.0 (99.9)	334.9 (98.1)	325.8 (95.5)	324.3 (95)	318.5 (93.3)	309.8 (90.8)	312.6 (91.6)	307.0 (90.0)	298.7 (87.5)
		Sens BTUH kW)	204.7 (60.0)	195.6 (57.3)	181.9 (53.3)	243.2 (71.3)	232.4 (68.1)	216.1 (63.3)	274.0 (80.3)	261.7 (76.7)	243.4 (71.3)
		Power kW)	22.1	21.9	21.6	21.9	21.7	21.4	21.7	21.5	21.2
	85 (29.4)	Total BTUH kW)	337.7 (99.0)	331.6 (97.2)	322.6 (94.5)	321.0 (94.1)	315.2 (92.4)	306.6 (89.9)	309.3 (90.6)	303.8 (89.0)	295.5 (86.6)
		Sens BTUH kW)	203.4 (59.6)	194.4 (57.0)	180.7 (53)	241.9 (70.9)	231.1 (67.7)	214.9 (63.0)	272.6 (79.9)	260.5 (76.3)	242.2 (71)
		Power kW)	22.9	22.7	22.4	22.7	22.5	22.2	22.5	22.3	22.0
	90 (32.2)	Total BTUH kW)	333.5 (97.7)	327.6 (96.0)	318.6 (93.4)	316.8 (92.8)	311.1 (91.2)	302.7 (88.7)	305.1 (89.4)	299.7 (87.8)	291.5 (85.4)
		Sens BTUH kW)	201.7 (59.1)	192.7 (56.5)	179.2 (52.5)	240.2 (70.4)	229.5 (67.2)	213.4 (62.5)	270.9 (79.4)	258.9 (75.9)	240.7 (70.5)
		Power kW)	23.8	23.6	23.2	23.6	23.4	23.1	23.4	23.2	22.9
	95 (35.0)	Total BTUH kW)	328.6 (96.3)	322.7 (94.6)	313.9 (92.0)	311.8 (91.4)	306.3 (89.8)	297.9 (87.3)	300.2 (88)	294.8 (86.4)	286.8 (84.0)
		Sens BTUH kW)	199.6 (58.5)	190.7 (55.9)	177.4 (52.0)	238.1 (69.8)	227.5 (66.7)	211.5 (62.0)	268.8 (78.8)	256.8 (75.3)	238.9 (70.0)
		Power kW)	24.7	24.5	24.1	24.5	24.3	24.0	24.3	24.1	23.8
	100 (37.8)	Total BTUH kW)	322.8 (94.6)	317.0 (92.9)	308.4 (90.4)	306.1 (89.7)	300.6 (88.1)	292.4 (85.7)	294.4 (86.3)	289.1 (84.7)	281.3 (82.4)
		Sens BTUH kW)	197.1 (57.8)	188.3 (55.2)	175.1 (51.3)	235.6 (69)	225.1 (66.0)	209.3 (61.3)	266.3 (78.0)	254.5 (74.6)	236.6 (69.3)
		Power kW)	25.6	25.4	25.1	25.5	25.2	24.9	25.3	25.0	24.7
	105 (40.6)	Total BTUH kW)	316.2 (92.7)	310.6 (91.0)	302.1 (88.5)	299.5 (87.8)	294.2 (86.2)	286.1 (83.8)	287.8 (84.3)	282.7 (82.8)	275.0 (80.6)
		Sens BTUH kW)	194.2 (56.9)	185.6 (54.4)	172.6 (50.6)	232.7 (68.2)	222.3 (65.1)	206.8 (60.6)	263.4 (77.2)	251.7 (73.8)	234.1 (68.6)
		Power kW)	26.7	26.4	26.1	26.5	26.2	25.9	26.3	26.1	25.7
	110 (43.3)	Total BTUH kW)	308.8 (90.5)	303.3 (88.9)	295.0 (86.5)	292.1 (85.6)	286.9 (84.1)	279.1 (81.8)	280.4 (82.2)	275.4 (80.7)	267.9 (78.5)
		Sens BTUH kW)	190.9 (55.9)	182.4 (53.5)	169.6 (49.7)	229.4 (67.2)	219.2 (64.2)	203.8 (59.7)	260.1 (76.2)	248.5 (72.8)	231.1 (67.7)
		Power kW)	27.7	27.5	27.1	27.5	27.3	26.9	27.3	27.1	26.8
115 (46.1)	Total BTUH kW)	300.6 (88.1)	295.3 (86.5)	287.2 (84.2)	283.9 (83.2)	278.8 (81.7)	271.2 (79.5)	272.2 (79.8)	267.4 (78.4)	260.1 (76.2)	
	Sens BTUH kW)	187.2 (54.9)	178.9 (52.4)	166.4 (48.8)	225.7 (66.1)	215.7 (63.2)	200.6 (58.8)	256.5 (75.2)	245.0 (71.8)	227.9 (66.8)	
	Power kW)	28.8	28.6	28.2	28.7	28.4	28.0	28.5	28.2	27.8	
120 (48.9)	Total BTUH kW)	291.6 (85.5)	286.4 (83.9)	278.6 (81.6)	274.9 (80.6)	270.0 (79.1)	262.6 (77.0)	263.2 (77.1)	258.5 (75.8)	251.5 (73.7)	
	Sens BTUH kW)	183.2 (53.7)	175 (51.3)	162.7 (47.7)	221.6 (64.9)	211.8 (62.1)	196.9 (57.7)	252.4 (74)	241.1 (70.7)	224.2 (65.7)	
	Power kW)	30.0	29.7	29.4	29.8	29.6	29.2	29.6	29.4	29.0	
125 (51.7)	Total BTUH kW)	281.8 (82.6)	276.8 (81.1)	269.2 (78.9)	265.1 (77.7)	260.4 (76.3)	253.3 (74.2)	253.4 (74.3)	248.9 (72.9)	242.1 (70.9)	
	Sens BTUH kW)	178.7 (52.4)	170.7 (50.0)	158.8 (46.5)	217.2 (63.6)	207.5 (60.8)	193.0 (56.5)	247.9 (72.6)	236.8 (69.4)	220.3 (64.5)	
	Power kW)	31.2	31.0	30.5	31.0	30.8	30.4	30.9	30.6	30.2	

Note: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—kW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 28: Gross System Performance—MPS 015H, 15 Tons High Efficiency

Entering Indoor Air @ 80°F (26.7°C) dbE ¹											
wbE		71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)			
CFM (L/s)		6050 (2855)	5500 (2596)	4675 (2206)	6050 (2855)	5500 (2596)	4675 (2206)	6050 (2855)	5500 (2596)	4675 (2206)	
DR ¹		0.11	0.09	0.06	0.11	0.09	0.06	0.11	0.09	0.06	
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH kW)	215.9 (63.3)	212.1 (62.1)	206.3 (60.4)	202.4 (59.3)	198.8 (58.2)	193.3 (56.7)	192.6 (56.4)	189.2 (55.4)	184.0 (53.9)
		Sens BTUH kW)	111.3 (32.6)	106.4 (31.2)	98.9 (29.0)	147.8 (43.3)	141.2 (41.4)	131.3 (38.5)	181.0 (53)	172.9 (50.7)	160.8 (47.1)
		Power kW)	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8
	80 (26.7)	Total BTUH kW)	212.0 (62.1)	208.2 (61.0)	202.5 (59.3)	198.4 (58.1)	194.8 (57.1)	189.5 (55.5)	188.6 (55.3)	185.3 (54.3)	180.2 (52.8)
		Sens BTUH kW)	109.8 (32.2)	104.9 (30.7)	97.5 (28.6)	146.2 (42.8)	139.7 (40.9)	129.9 (38.1)	179.4 (52.6)	171.4 (50.2)	159.4 (46.7)
		Power kW)	10.4	10.3	10.2	10.1	10.0	9.9	9.8	9.7	9.6
	85 (29.4)	Total BTUH kW)	207.2 (60.7)	203.5 (59.6)	198.0 (58.0)	193.7 (56.8)	190.2 (55.7)	185.0 (54.2)	183.9 (53.9)	180.6 (52.9)	175.7 (51.5)
		Sens BTUH kW)	107.8 (31.6)	103.0 (30.2)	95.8 (28.1)	144.2 (42.3)	137.8 (40.4)	128.1 (37.5)	177.4 (52.0)	169.5 (49.7)	157.6 (46.2)
		Power kW)	11.3	11.2	11.0	11.0	10.9	10.7	10.7	10.6	10.5
	90 (32.2)	Total BTUH kW)	201.8 (59.1)	198.2 (58.1)	192.8 (56.5)	188.2 (55.2)	184.9 (54.2)	179.8 (52.7)	178.5 (52.3)	175.3 (51.4)	170.5 (50.0)
		Sens BTUH kW)	105.4 (30.9)	100.7 (29.5)	93.6 (27.4)	141.8 (41.6)	135.5 (39.7)	126.0 (36.9)	175.0 (51.3)	167.2 (49.0)	155.5 (45.6)
		Power kW)	12.2	12.1	11.9	11.9	11.8	11.6	11.6	11.5	11.4
	95 (35.0)	Total BTUH kW)	195.6 (57.3)	192.1 (56.3)	186.9 (54.8)	182.1 (53.4)	178.8 (52.4)	173.9 (51.0)	172.3 (50.5)	169.2 (49.6)	164.6 (48.2)
		Sens BTUH kW)	102.6 (30.1)	98.0 (28.7)	91.2 (26.7)	139.0 (40.7)	132.8 (38.9)	123.5 (36.2)	172.2 (50.5)	164.5 (48.2)	153.0 (44.8)
		Power kW)	13.1	13.0	12.8	12.9	12.7	12.6	12.6	12.5	12.3
	100 (37.8)	Total BTUH kW)	188.7 (55.3)	185.3 (54.3)	180.3 (52.8)	175.2 (51.3)	172.0 (50.4)	167.3 (49.0)	165.4 (48.5)	162.4 (47.6)	158.0 (46.3)
		Sens BTUH kW)	99.4 (29.1)	95.0 (27.8)	88.3 (25.9)	135.8 (39.8)	129.8 (38.0)	120.7 (35.4)	165.4 (48.5)	161.5 (47.3)	150.2 (44.0)
		Power kW)	14.2	14.0	13.8	13.9	13.7	13.6	13.6	13.5	13.3
	105 (40.6)	Total BTUH kW)	181.1 (53.1)	177.8 (52.1)	173.0 (50.7)	167.5 (49.1)	164.5 (48.2)	160.0 (46.9)	157.7 (46.2)	154.9 (45.4)	150.7 (44.2)
		Sens BTUH kW)	95.8 (28.1)	91.6 (26.8)	85.1 (25.0)	132.2 (38.8)	126.3 (37.0)	117.5 (34.4)	157.7 (46.2)	154.9 (45.4)	147.0 (43.1)
		Power kW)	15.2	15.1	14.9	14.9	14.8	14.6	14.6	14.5	14.3
	110 (43.3)	Total BTUH kW)	172.7 (50.6)	169.6 (49.7)	165.0 (48.3)	159.1 (46.6)	156.3 (45.8)	152.0 (44.5)	149.4 (43.8)	146.7 (43.0)	142.7 (41.8)
		Sens BTUH kW)	91.9 (26.9)	87.8 (25.7)	81.6 (23.9)	128.3 (37.6)	122.5 (35.9)	114.0 (33.4)	149.4 (43.8)	146.7 (43.0)	142.7 (41.8)
		Power kW)	16.3	16.2	16.0	16.1	15.9	15.7	15.8	15.6	15.4
115 (46.1)	Total BTUH kW)	163.6 (47.9)	160.6 (47.1)	156.3 (45.8)	150.0 (44.0)	147.3 (43.2)	143.3 (42.0)	140.2 (41.1)	137.7 (40.4)	134.0 (39.3)	
	Sens BTUH kW)	87.5 (25.6)	83.6 (24.5)	77.7 (22.8)	123.9 (36.3)	118.4 (34.7)	110.1 (32.3)	140.2 (41.1)	137.7 (40.4)	134.0 (39.3)	
	Power kW)	17.5	17.4	17.1	17.2	17.1	16.8	16.9	16.8	16.6	
120 (48.9)	Total BTUH kW)	153.7 (45.0)	151.0 (44.2)	146.9 (43.0)	140.2 (41.1)	137.7 (40.3)	133.9 (39.2)	130.4 (38.2)	128.1 (37.5)	124.6 (36.5)	
	Sens BTUH kW)	82.7 (24.2)	79.0 (23.2)	73.5 (21.5)	119.1 (34.9)	113.8 (33.3)	105.8 (31.0)	130.4 (38.2)	128.1 (37.5)	124.6 (36.5)	
	Power kW)	18.7	18.6	18.3	18.4	18.3	18.0	18.2	18.0	17.8	
125 (51.7)	Total BTUH kW)	143.1 (41.9)	140.6 (41.2)	136.7 (40.1)	129.6 (38.0)	127.3 (37.3)	123.8 (36.3)	119.8 (35.1)	117.7 (34.5)	114.5 (33.5)	
	Sens BTUH kW)	77.5 (22.7)	74.1 (21.7)	68.9 (20.2)	113.9 (33.4)	108.9 (31.9)	101.2 (29.7)	119.8 (35.1)	117.7 (34.5)	114.5 (33.5)	
	Power kW)	20.0	19.8	19.6	19.7	19.5	19.3	19.4	19.3	19.0	

Note: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—kW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 29: Gross System Performance—MPS 020H, 20 Tons High Efficiency

Entering Indoor Air @ 80°F (26.7°C) dbE ¹											
wbE		71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)			
CFM (L/s)		8113 (3829)	7375 (3481)	6269 (2959)	8113 (3829)	7375 (3481)	6269 (2959)	8113 (3829)	7375 (3481)	6269 (2959)	
DR ¹		0.11	0.09	0.06	0.11	0.09	0.06	0.11	0.09	0.06	
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH kW)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)
		Sens BTUH kW)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)
		Power kW)	16.5	16.4	16.2	16.5	16.4	16.2	16.5	16.4	16.2
	80 (26.7)	Total BTUH kW)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)
		Sens BTUH kW)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)
		Power kW)	16.5	16.4	16.2	16.5	16.4	16.2	16.5	16.4	16.2
	85 (29.4)	Total BTUH kW)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)
		Sens BTUH kW)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)
		Power kW)	16.5	16.4	16.2	16.5	16.4	16.2	16.5	16.4	16.2
	90 (32.2)	Total BTUH kW)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)
		Sens BTUH kW)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)
		Power kW)	16.5	16.4	16.2	16.5	16.4	16.2	16.5	16.4	16.2
	95 (35.0)	Total BTUH kW)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)
		Sens BTUH kW)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)
		Power kW)	16.5	16.4	16.2	16.5	16.4	16.2	16.5	16.4	16.2
	100 (37.8)	Total BTUH kW)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9) ¹	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)
		Sens BTUH kW)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	86.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)
		Power kW)	16.5	16.4	16.2	16.5	16.4	16.2	16.5	16.4	16.2
	105 (40.6)	Total BTUH kW)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)
		Sens BTUH kW)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)
		Power kW)	16.5	16.4	16.2	16.5	16.4	16.2	16.5	16.4	16.2
	110 (43.3)	Total BTUH kW)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)
		Sens BTUH kW)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)
		Power kW)	16.5	16.4	16.2	16.5	16.4	16.2	16.5	16.4	16.2
115 (46.1)	Total BTUH kW)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	
	Sens BTUH kW)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	
	Power kW)	16.5	16.4	16.2	16.5	16.4	16.2	16.5	16.4	16.2	
120 (48.9)	Total BTUH kW)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	
	Sens BTUH kW)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	
	Power kW)	16.5	16.4	16.2	16.5	16.4	16.2	16.5	16.4	16.2	
125 (51.7)	Total BTUH kW)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	245.4 (71.9)	241.0 (70.6)	234.4 (68.7)	
	Sens BTUH kW)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	186.3 (54.6)	178.0 (52.2)	165.5 (48.5)	
	Power kW)	16.5	16.4	16.2	16.5	16.4	16.2	16.5	16.4	16.2	

Note: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power—kW input
 1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Airflow Performance—Standard Efficiency

Table 30: Airflow Performance—MPS H07D

AirFlow CFM [L/s]	Model MPS H07D																																								
	External Static Pressure—Inches of Water [kPa]																																								
	0.1 [0.2]		0.2 [0.5]		0.3 [0.7]		0.4 [1.0]		0.5 [1.2]		0.6 [1.5]		0.7 [1.7]		0.8 [2.0]		0.9 [2.2]		1.0 [2.5]		1.1 [2.7]		1.2 [3.0]		1.3 [3.2]		1.4 [3.5]		1.5 [3.7]		1.6 [4.0]		1.7 [4.2]		1.8 [4.5]		1.9 [4.7]		2.0 [5.0]		
RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W
2400 [1133]	—	—	551	782	585	814	619	848	652	885	684	926	717	969	748	1016	780	1065	810	1118	841	1174	870	1233	900	1294	929	1359	957	1427	985	1498	1012	1572	1039	1649	1065	1729	1091	1813	
2500 [1180]	—	—	562	816	596	848	629	884	661	923	693	964	725	1009	756	1057	787	1108	817	1162	846	1219	876	1279	904	1343	933	1409	960	1478	987	1550	1014	1626	1040	1704	1066	1786	1092	1870	
2600 [1227]	—	—	574	851	607	885	639	922	671	962	702	1006	733	1052	764	1101	794	1153	823	1209	852	1267	881	1329	909	1393	937	1461	964	1531	990	1605	1016	1682	1042	1762	1067	1844	1092	1930	
2700 [1274]	553	857	585	889	618	925	650	963	681	1004	712	1049	742	1096	772	1147	801	1201	830	1258	858	1317	886	1380	914	1446	941	1515	967	1587	993	1662	1019	1740	1044	1821	1068	1905	1092	1993	
2800 [1321]	565	896	597	930	629	966	660	1006	691	1049	721	1095	751	1144	780	1196	808	1251	837	1309	864	1370	892	1434	919	1501	945	1572	971	1645	996	1721	1021	1801	1045	1883	1069	1969	1093	2057	
2900 [1368]	577	937	609	972	640	1010	670	1051	701	1096	730	1143	759	1193	788	1246	816	1303	843	1362	871	1425	897	1490	923	1559	949	1630	974	1705	999	1783	1023	1864	1047	1948	1070	2035	1093	2124	
3000 [1416]	590	981	621	1017	651	1057	681	1099	710	1145	739	1193	768	1245	796	1300	823	1357	850	1418	877	1482	903	1549	928	1619	953	1692	978	1768	1002	1847	1026	1929	1049	2014	1072	2103	1094	2194	
3100 [1463]	602	1027	633	1065	662	1105	692	1149	720	1196	749	1246	777	1299	804	1355	831	1414	857	1476	883	1541	908	1610	933	1681	958	1755	982	1833	1005	1913	1028	1997	1051	2083	1073	2173	1094	2266	
3200 [1510]	615	1075	645	1114	674	1157	702	1202	731	1250	758	1301	785	1356	812	1413	838	1473	864	1537	889	1603	914	1673	938	1746	962	1821	986	1900	1008	1982	1031	2067	1053	2155	1074	2246	1095	2340	
3300 [1557]	628	1126	657	1166	685	1210	713	1256	741	1306	768	1359	794	1414	820	1473	846	1535	871	1600	896	1668	920	1739	944	1813	967	1890	989	1970	1012	2053	1033	2139	1055	2229	1075	2321	1096	2416	
3400 [1604]	640	1179	669	1221	697	1266	724	1314	751	1365	777	1419	803	1476	829	1536	854	1599	878	1665	902	1734	926	1807	949	1882	971	1960	993	2042	1015	2126	1036	2214	1057	2305	1077	2398	1097	2495	
3500 [1652]	653	1235	681	1278	708	1324	735	1373	761	1425	787	1481	812	1539	837	1601	861	1665	885	1733	909	1803	932	1877	954	1954	976	2034	997	2116	1018	2202	1039	2291	1059	2383	1078	2478	1097	2576	
3600 [1699]	666	1292	693	1337	720	1384	746	1435	771	1489	797	1545	821	1605	845	1668	869	1734	892	1803	915	1875	938	1950	959	2028	981	2109	1001	2193	1022	2280	1042	2371	1061	2464	1080	2560	1098	2660	

NOTE: A/F—Drive left of 1st bold line, B/G—Drive in middle of bold lines, C/H—Drive right of 2nd bold line

Drive Package	A/F										B/G										C/H					
Motor H.P. [W]	2.0 [1491.4]										3.0 [2237.1]										3.0 [2237.1]					
Blower Sheave	AK84H										AK84H										AK84H					
Motor Sheave	1VL40*7/8										1VP50*7/8										1VP56*7/8					
Turns Open	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5		
RPM	767	721	678	635	590	548	992	949	908	866	823	782	1108	1067	1029	987	946	905								

NOTES:

1. Factory sheave settings are shown in bold type.
2. Do not set motor sheave below minimum or maximum turns open shown.
3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure.
4. Add component resistance (below) to duct resistance to determine total External Static Pressure.

Airflow Correction Factors – 7.5 Ton

Actual – CFM [L/s]	2400 [1133]	2600 [1227]	2800 [1321]	3000 [1416]	3200 [1510]	3400 [1605]	3600 [1699]
Total MBH	0.96	0.97	0.98	0.99	1.00	1.01	1.02
Sensible MBH	0.89	0.92	0.95	0.97	1.00	1.03	1.06
Power kW	0.98	0.99	0.99	1.00	1.01	1.01	1.02

Component Air Resistance, IWC – 7.5 Ton

Component	2400 [1133]	2600 [1227]	2800 [1321]	3000 [1416]	3200 [1510]	3400 [1605]	3600 [1699]
	Resistance – Inches Water [kPa]						
Wet Coil	0.04 [0.01]	0.05 [0.01]	0.06 [0.01]	0.07 [0.02]	0.07 [0.02]	0.08 [0.02]	0.09 [0.02]
Vertical Economizer 100% R.A. Damper Open	0.01 [0.00]	0.02 [0.01]	0.04 [0.01]	0.05 [0.01]	0.07 [0.02]	0.09 [0.02]	0.11 [0.03]

NOTES:

1. Multiply correction factor times gross performance data.
2. Resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

NOTE: Add component resistance to duct resistance to determine total external static pressure.

DNA = Data not Available.

Table 31: Side Airflow Performance—MPS H07D

AirFlow CFM [L/s]	Model MPS H07D																																								
	External Static Pressure—Inches of Water [kPa]																																								
	0.1 [0.2]		0.2 [0.5]		0.3 [0.7]		0.4 [1.0]		0.5 [1.2]		0.6 [1.5]		0.7 [1.7]		0.8 [2.0]		0.9 [2.2]		1.0 [2.5]		1.1 [2.7]		1.2 [3.0]		1.3 [3.2]		1.4 [3.5]		1.5 [3.7]		1.6 [4.0]		1.7 [4.2]		1.8 [4.5]		1.9 [4.7]		2.0 [5.0]		
	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM
2700 [1274]	—	—	561	894	596	934	631	975	665	1018	698	1062	730	1108	762	1155	793	1203	823	1253	853	1304	882	1357	910	1411	937	1467	964	1524	990	1583	1015	1643	1039	1704	1063	1767	1086	1832	
2800 [1321]	—	—	573	927	608	969	642	1013	676	1058	708	1104	740	1152	771	1201	802	1252	832	1304	861	1358	889	1413	917	1470	943	1528	970	1587	995	1648	1020	1711	1044	1775	1067	1840	1090	1907	
2900 [1368]	—	—	586	964	620	1008	654	1054	687	1101	719	1150	750	1200	781	1252	811	1305	840	1360	869	1416	897	1473	924	1532	950	1593	976	1654	1001	1718	1025	1782	1048	1848	1071	1916	1093	1985	
3000 [1416]	564	959	599	1004	633	1051	666	1099	698	1149	730	1200	761	1253	791	1307	820	1362	849	1419	877	1477	904	1537	931	1598	957	1661	982	1725	1006	1791	1030	1858	1053	1926	1075	1996	1097	2067	
3100 [1463]	578	1001	612	1048	645	1098	678	1148	710	1200	741	1254	771	1308	801	1365	830	1423	858	1482	886	1542	912	1605	939	1668	964	1733	989	1800	1012	1868	1036	1937	1058	2008	1080	2080	1101	2154	
3200 [1510]	592	1046	625	1096	658	1148	690	1201	721	1255	752	1311	782	1368	811	1427	840	1487	867	1548	894	1611	921	1676	946	1742	971	1809	995	1878	1019	1948	1041	2020	1063	2093	1085	2168	1105	2244	
3300 [1557]	605	1096	638	1148	671	1202	702	1257	733	1314	763	1372	793	1432	821	1493	849	1555	877	1619	903	1684	929	1751	954	1819	979	1889	1002	1960	1025	2033	1047	2107	1069	2182	1090	2259	1110	2337	
3400 [1604]	619	1149	652	1204	684	1260	715	1317	745	1376	775	1437	804	1499	832	1562	860	1627	886	1693	912	1761	938	1830	962	1900	986	1972	1009	2046	1032	2121	1053	2197	1074	2275	1095	2354	1114	2435	
3500 [1652]	634	1206	666	1263	697	1322	728	1382	758	1443	787	1506	815	1570	843	1635	870	1702	896	1771	922	1841	946	1912	970	1985	994	2060	1017	2135	1038	2213	1060	2291	1080	2371	1100	2453	1119	2536	
3600 [1699]	648	1267	680	1326	711	1387	741	1449	770	1513	799	1578	827	1645	854	1713	880	1782	906	1853	931	1925	955	1999	979	2074	1002	2151	1024	2229	1045	2308	1066	2389	1086	2472	1105	2556	1124	2641	
3700 [1746]	663	1332	694	1393	724	1456	754	1521	783	1587	811	1654	838	1723	865	1793	891	1865	916	1938	941	2013	965	2089	988	2167	1010	2246	1032	2326	1053	2408	1073	2491	1092	2576	1111	2662	1129	2750	
3800 [1793]	678	1400	708	1464	738	1529	767	1596	795	1665	823	1734	850	1805	876	1878	902	1952	926	2028	951	2105	974	2183	996	2263	1018	2344	1039	2427	1060	2511	1080	2597	1099	2684	1117	2772	1134	2862	
3900 [1840]	693	1472	723	1538	752	1606	781	1675	808	1746	836	1818	862	1892	888	1966	913	2043	937	2121	961	2200	983	2281	1005	2363	1027	2447	1048	2532	1067	2618	1087	2706	1105	2796	1123	2886	1140	2979	
4000 [1888]	708	1548	737	1617	766	1687	794	1758	822	1831	848	1906	874	1981	900	2059	924	2137	948	2218	971	2299	993	2382	1015	2467	1036	2553	1056	2640	1075	2729	1094	2819	1112	2911	1129	3004	1146	3099	
4100 [1935]	723	1628	752	1699	781	1771	808	1845	835	1920	861	1997	887	2075	911	2155	935	2236	959	2318	981	2402	1003	2488	1024	2574	1045	2663	1064	2752	1083	2844	1101	2936	1119	3030	1136	3126	1152	3223	

NOTE: A/F-Drive left of 1st bold line, B/G-Drive in middle of bold lines, C/H-Drive right of 2nd bold line.

Drive Package	A/F										B/G										C/H									
Motor H.P. [W]	2.0 [1491.4]										3.0 [2237.1]										3.0 [2237.1]									
Blower Sheave	AK79H										AK79H										AK79H									
Motor Sheave	1VL40*7/8										1VP50*7/8										1VP56*7/8									
Turns Open	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5						
RPM	804	758	710	661	616	559	1048	1003	959	914	872	826	1168	1128	1087	1044	1002	957												

NOTES:

1. Factory sheave settings are shown in bold type.
2. Do not set motor sheave below minimum or maximum turns open shown.
3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure
4. Add component resistance (below) to duct resistance to determine total External Static Pressure.

Airflow Correction Factors – 7.5 Ton

Actual – CFM [L/s]	2400 [1133]	2600 [1227]	2800 [1321]	3000 [1416]	3200 [1510]	3400 [1605]	3600 [1699]
Total MBH	0.96	0.97	0.98	0.99	1.00	1.01	1.02
Sensible MBH	0.89	0.92	0.95	0.97	1.00	1.03	1.06
Power kW	0.98	0.99	0.99	1.00	1.01	1.01	1.02

Component Air Resistance, IWC – 7.5 Ton

Component	2400 [1133]	2600 [1227]	2800 [1321]	3000 [1416]	3200 [1510]	3400 [1604]	3600 [1699]
	Resistance – Inches Water [kPa]						
Wet Coil	0.04 [0.01]	0.05 [0.01]	0.06 [0.01]	0.07 [0.02]	0.07 [0.02]	0.08 [0.02]	0.09 [0.02]
"Horizontal Economizer 100% R.A. Damper Open	0.01 [0.00]	0.02 [0.00]	0.04 [0.01]	0.05 [0.01]	0.07 [0.02]	0.09 [0.02]	0.11 [0.03]

NOTES:

1. Multiply correction factor times gross performance data.
2. Resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

NOTE: Add component resistance to duct resistance to determine total external static pressure.

DNA = Data not Available.

Table 32: Airflow Performance—MPS H08D

AirFlow CFM [L/s]	Model MPS H08D																																							
	External Static Pressure—Inches of Water [kPa]																																							
	0.1 [.02]		0.2 [.05]		0.3 [.07]		0.4 [.10]		0.5 [.12]		0.6 [.15]		0.7 [.17]		0.8 [.20]		0.9 [.22]		1.0 [.25]		1.1 [.27]		1.2 [.30]		1.3 [.32]		1.4 [.35]		1.5 [.37]		1.6 [.40]		1.7 [.42]		1.8 [.45]		1.9 [.47]		2.0 [.50]	
RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W			
2700 [1274]	—	—	561	894	596	934	631	975	665	1018	698	1062	730	1108	762	1155	793	1203	823	1253	853	1304	882	1357	910	1411	937	1467	964	1524	990	1583	1015	1643	1039	1704	1063	1767	1086	1832
2800 [1321]	—	—	573	927	608	969	642	1013	676	1058	708	1104	740	1152	771	1201	802	1252	832	1304	861	1358	889	1413	917	1470	943	1528	970	1587	995	1648	1020	1711	1044	1775	1067	1840	1090	1907
2900 [1368]	—	—	586	964	620	1008	654	1054	687	1101	719	1150	750	1200	781	1252	811	1305	840	1360	869	1416	897	1473	924	1532	950	1593	976	1654	1001	1718	1025	1782	1048	1848	1071	1916	1093	1985
3000 [1416]	564	959	599	1004	633	1051	666	1099	698	1149	730	1200	761	1253	791	1307	820	1362	849	1419	877	1477	904	1537	931	1598	957	1661	982	1725	1006	1791	1030	1858	1053	1926	1075	1996	1097	2067
3100 [1463]	578	1001	612	1048	645	1098	678	1148	710	1200	741	1254	771	1308	801	1365	830	1423	858	1482	886	1542	912	1605	939	1668	964	1733	989	1800	1012	1868	1036	1937	1058	2008	1080	2080	1101	2154
3200 [1510]	592	1046	625	1096	658	1148	690	1201	721	1255	752	1311	782	1368	811	1427	840	1487	867	1548	894	1611	921	1676	946	1742	971	1809	995	1878	1019	1948	1041	2020	1063	2093	1085	2168	1105	2244
3300 [1557]	605	1096	638	1148	671	1202	702	1257	733	1314	763	1372	793	1432	821	1493	849	1555	877	1619	903	1684	929	1751	954	1819	979	1889	1002	1960	1025	2033	1047	2107	1069	2182	1090	2259	1110	2337
3400 [1604]	619	1149	652	1204	684	1260	715	1317	745	1376	775	1437	804	1499	832	1562	860	1627	886	1693	912	1761	938	1830	962	1900	986	1972	1009	2046	1032	2121	1053	2197	1074	2275	1095	2354	1114	2435
3500 [1652]	634	1206	666	1263	697	1322	728	1382	758	1443	787	1506	815	1570	843	1635	870	1702	896	1771	922	1841	946	1912	970	1985	994	2060	1017	2135	1038	2213	1060	2291	1080	2371	1100	2453	1119	2536
3600 [1699]	648	1267	680	1326	711	1387	741	1449	770	1513	799	1578	827	1645	854	1713	880	1782	906	1853	931	1925	955	1999	979	2074	1002	2151	1024	2229	1045	2308	1066	2389	1086	2472	1105	2556	1124	2641
3700 [1746]	663	1332	694	1393	724	1456	754	1521	783	1587	811	1654	838	1723	865	1793	891	1865	916	1938	941	2013	965	2089	988	2167	1010	2246	1032	2326	1053	2408	1073	2491	1092	2576	1111	2662	1129	2750
3800 [1793]	678	1400	708	1464	738	1529	767	1596	795	1665	823	1734	850	1805	876	1878	902	1952	926	2028	951	2105	974	2183	996	2263	1018	2344	1039	2427	1060	2511	1080	2597	1099	2684	1117	2772	1134	2862
3900 [1840]	693	1472	723	1538	752	1606	781	1675	808	1746	836	1818	862	1892	888	1966	913	2043	937	2121	961	2200	983	2281	1005	2363	1027	2447	1048	2532	1067	2618	1087	2706	1105	2796	1123	2886	1140	2979
4000 [1888]	708	1548	737	1617	766	1687	794	1758	822	1831	848	1906	874	1981	900	2059	924	2137	948	2218	971	2299	993	2382	1015	2467	1036	2553	1056	2640	1075	2729	1094	2819	1112	2911	1129	3004	1146	3099
4100 [1935]	723	1628	752	1699	781	1771	808	1845	835	1920	861	1997	887	2075	911	2155	935	2236	959	2318	981	2402	1003	2488	1024	2574	1045	2663	1064	2752	1083	2844	1101	2936	1119	3030	1136	3126	1152	3223

NOTE: A/F-Drive left of 1st bold line, B/G-Drive in middle of bold lines, C/H-Drive right of 2nd bold line.

Drive Package	A/F					B/G					C/H							
Motor H.P. [W]	2.0 [1491.4]					3.0 [2237.1]					3.0 [2237.1]							
Blower Sheave	AK79H					AK79H					AK79H							
Motor Sheave	1VL40*7/8					1VP50*7/8					1VP56*7/8							
Turns Open	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
RPM	804	758	710	661	616	559	1048	1003	959	914	872	826	1168	1128	1087	1044	1002	957

NOTES:

- 1. Factory sheave settings are shown in bold type.
- 2. Do not set motor sheave below minimum or maximum turns open shown.
- 3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure.
- 4. Add component resistance (below) to duct resistance to determine total External Static Pressure.

Airflow Correction Factors – 8 Ton

Actual – CFM [L/s]	2700 [1274]	2900 [1368]	3100 [1463]	3300 [1557]	3500 [1652]	3700 [1746]	3900 [1840]	4100 [1935]
Total MBH	0.97	0.98	0.99	1.01	1.02	1.03	1.04	1.05
Sensible MBH	0.93	0.96	0.99	1.01	1.04	1.07	1.10	1.13
Power kW	0.99	0.99	1.00	1.00	1.01	1.02	1.02	1.03

Component Air Resistance, IWC – 8 Ton

Component	2700 [1274]	2900 [1368]	3100 [1463]	3300 [1557]	3500 [1652]	3700 [1746]	3900 [1840]	4100 [1935]
	Resistance – Inches Water [kPa]							
Wet Coil	0.07 [0.02]	0.08 [0.02]	0.09 [0.02]	0.10 [0.03]	0.11 [0.03]	0.13 [0.03]	0.14 [0.04]	0.15 [0.04]
Vertical Economizer 100% R.A. Damper Open	0.03 [0.01]	0.04 [0.01]	0.06 [0.01]	0.08 [0.02]	0.10 [0.02]	0.12 [0.03]	0.15 [0.04]	0.17 [0.04]

NOTES:

- 1. Multiply correction factor times gross performance data.
- 2. Resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

NOTE: Add component resistance to duct resistance to determine total external static pressure.

DNA = Data not Available.

Table 33: Side Airflow Performance—MPS H08D

AirFlow CFM [L/s]	Model MPS H08D																																								
	External Static Pressure—Inches of Water [kPa]																																								
	0.1 [.02]		0.2 [.05]		0.3 [.07]		0.4 [.10]		0.5 [.12]		0.6 [.15]		0.7 [.17]		0.8 [.20]		0.9 [.22]		1.0 [.25]		1.1 [.27]		1.2 [.30]		1.3 [.32]		1.4 [.35]		1.5 [.37]		1.6 [.40]		1.7 [.42]		1.8 [.45]		1.9 [.47]		2.0 [.50]		
RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W
2700 [1274]	—	—	—	—	577	932	611	969	644	1009	677	1052	710	1098	742	1147	774	1199	806	1254	837	1312	868	1373	898	1437	929	1505	959	1575	988	1648	1017	1725	1046	1804	1074	1886	1102	1972	
2800 [1321]	—	—	556	926	589	962	622	1000	655	1042	687	1087	719	1134	751	1185	783	1239	814	1295	844	1355	875	1418	905	1484	934	1553	963	1624	992	1699	1021	1777	1049	1858	1077	1942	1105	2029	
2900 [1368]	—	—	568	958	601	995	633	1036	666	1079	697	1125	729	1174	760	1227	791	1282	821	1340	851	1402	881	1466	911	1533	940	1604	968	1677	997	1754	1025	1834	1052	1916	1080	2002	1107	2090	
3000 [1416]	—	—	580	994	613	1033	645	1074	676	1119	708	1167	738	1218	769	1272	799	1329	829	1389	859	1452	888	1518	917	1587	945	1659	973	1734	1001	1812	1029	1894	1056	1978	1082	2065	1109	2155	
3100 [1463]	561	996	593	1033	624	1073	656	1117	687	1163	718	1213	748	1265	778	1321	808	1379	837	1441	866	1506	895	1573	923	1644	951	1718	978	1794	1006	1874	1033	1957	1059	2043	1085	2132	1111	2224	
3200 [1510]	574	1037	605	1076	636	1118	667	1163	698	1211	728	1262	758	1316	787	1373	816	1434	845	1497	873	1563	902	1632	929	1705	957	1780	984	1858	1010	1940	1037	2024	1063	2112	1088	2202	1113	2296	
3300 [1557]	587	1082	618	1122	648	1166	679	1212	709	1262	738	1315	767	1371	796	1430	825	1491	853	1556	881	1624	908	1695	936	1769	962	1846	989	1926	1015	2009	1041	2095	1066	2184	1091	2276	1116	2372	
3400 [1604]	600	1130	630	1172	660	1217	690	1266	720	1317	749	1371	777	1429	806	1489	834	1553	861	1619	888	1689	915	1761	942	1837	968	1916	994	1997	1020	2082	1045	2170	1070	2260	1094	2354	1118	2451	
3500 [1652]	613	1182	643	1226	672	1273	702	1323	730	1376	759	1432	787	1491	815	1553	842	1618	869	1686	896	1757	922	1831	948	1909	974	1989	999	2072	1024	2158	1049	2248	1073	2340	1097	2436	1121	2534	
3600 [1699]	626	1238	656	1283	685	1332	713	1383	741	1438	769	1495	797	1556	824	1620	851	1687	877	1756	904	1829	929	1905	955	1984	980	2066	1005	2151	1029	2238	1053	2329	1077	2423	1100	2520	1123	2621	
3700 [1746]	640	1297	668	1344	697	1394	725	1447	753	1504	780	1563	807	1625	833	1690	860	1759	886	1830	911	1905	937	1982	961	2063	986	2146	1010	2233	1034	2322	1057	2415	1081	2510	1103	2609	1126	2711	
3800 [1793]	653	1360	681	1409	709	1460	737	1515	764	1573	790	1634	817	1698	843	1765	869	1835	894	1908	919	1984	944	2063	968	2145	992	2230	1016	2318	1039	2410	1062	2504	1084	2601	1107	2701	1128	2805	
3900 [1840]	667	1426	694	1477	721	1530	748	1587	775	1646	801	1709	827	1774	852	1843	878	1914	902	1989	927	2067	951	2147	975	2231	998	2318	1021	2408	1044	2500	1066	2596	1088	2695	1110	2797	1131	2902	
4000 [1888]	680	1496	707	1548	734	1604	760	1662	786	1723	812	1787	837	1854	862	1924	887	1998	911	2074	935	2153	958	2235	981	2321	1004	2409	1027	2501	1049	2595	1071	2693	1092	2793	1113	2897	1134	3003	
4100 [1935]	694	1570	720	1624	746	1681	772	1740	797	1803	822	1869	847	1938	872	2009	896	2084	919	2162	943	2243	965	2327	988	2414	1010	2504	1032	2597	1054	2693	1075	2792	1096	2895	1116	3000	1137	3108	

NOTE: A/F-Drive left of 1st bold line, B/G-Drive in middle of bold lines, C/H-Drive right of 2nd bold line.

Drive Package	A/F															B/G					C/H				
Motor H.P. [W]	2.0 [1491.4]															3.0 [2237.1]					3.0 [2237.1]				
Blower Sheave	AK79H															AK79H					AK79H				
Motor Sheave	1VL40*7/8															1VP50*7/8					1VP56*7/8				
Turns Open	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5							
RPM	800	754	707	662	616	555	1048	1005	960	916	870	827	1170	1126	1085	1044	1000	956							

NOTES:

1. Factory sheave settings are shown in bold type.
2. Do not set motor sheave below minimum or maximum turns open shown.
3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure.
4. Add component resistance (below) to duct resistance to determine total External Static Pressure.

Airflow Correction Factors – 8 Ton

Actual – CFM [L/s]	2700 [1274]	2900 [1368]	3100 [1463]	3300 [1557]	3500 [1652]	3700 [1746]	3900 [1840]	4100 [1935]
Total MBH	0.97	0.98	0.99	1.01	1.02	1.03	1.04	1.05
Sensible MBH	0.93	0.96	0.99	1.01	1.04	1.07	1.10	1.13
Power kW	0.99	0.99	1.00	1.00	1.01	1.02	1.02	1.03

Component Air Resistance, IWC – 8 Ton

Component	2700 [1274]	2900 [1368]	3100 [1463]	3300 [1557]	3500 [1652]	3700 [1746]	3900 [1840]	4100 [1935]
	Resistance – Inches Water [kPa]							
Wet Coil	0.07 [0.02]	0.08 [0.02]	0.09 [0.02]	0.10 [0.03]	0.11 [0.03]	0.13 [0.03]	0.14 [0.04]	0.15 [0.04]
Horizontal Economizer 100% R.A. Damper Open	0.03 [0.01]	0.04 [0.01]	0.06 [0.01]	0.08 [0.02]	0.10 [0.02]	0.12 [0.03]	0.15 [0.04]	0.17 [0.04]

NOTES:

1. Multiply correction factor times gross performance data.
2. Resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

NOTE: Add component resistance to duct resistance to determine total external static pressure.

DNA = Data not Available.

Table 38: Airflow Performance—MPS 015B

AirFlow CFM (L/s)	Model MPS 015 — Voltage 208/230, 460, 575 3phase																																																
	External Static Pressure Inches of Water (kPa)																																																
	0.1 (0.02)		0.2 (0.05)		0.3 (0.07)		0.4 (0.10)		0.5 (0.12)		0.6 (0.15)		0.7 (0.17)		0.8 (0.20)		0.9 (0.22)		1.0 (0.25)		1.1 (0.27)		1.2 (0.30)		1.3 (0.32)		1.4 (0.35)		1.5 (0.37)		1.6 (0.40)		1.7 (0.42)		1.8 (0.45)		1.9 (0.47)		2.0 (0.50)										
RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS				
4800 (2265)	—	—	—	—	—	—	—	—	—	—	—	583	1393	608	1508	632	1621	656	1732	679	1841	701	1947	723	2052	744	2154	764	2254	785	2326	805	2430	825	2537	844	2647	863	2761	881	2878								
5000 (2359)	—	—	—	—	—	—	—	—	—	—	—	591	1476	616	1593	640	1707	663	1820	686	1930	708	2038	729	2145	750	2248	771	2350	791	2420	811	2528	830	2640	850	2755	868	2873	887	2995								
5200 (2454)	—	—	—	—	—	—	—	—	—	—	—	575	1442	600	1562	624	1681	648	1797	671	1911	693	2023	715	2133	736	2241	757	2346	777	2410	797	2520	817	2633	836	2749	855	2869	874	2992	892	3118						
5400 (2548)	—	—	—	—	—	—	—	—	—	—	—	583	1530	608	1652	632	1772	655	1890	678	2005	701	2119	722	2231	743	2340	764	2447	784	2512	804	2626	823	2744	842	2865	861	2989	879	3117	897	3248						
5600 (2643)	—	—	—	—	—	—	—	—	—	—	—	592	1621	616	1745	640	1866	663	1986	686	2103	708	2218	729	2331	750	2442	770	2551	791	2620	810	2739	830	2861	849	2987	867	3116	885	3248	903	3384						
5800 (2737)	—	—	—	—	—	—	—	—	—	—	—	576	1588	601	1715	625	1840	649	1964	672	2085	694	2204	716	2321	737	2436	757	2548	778	2614	798	2735	817	2858	836	2985	855	3116	873	3249	891	3386	909	3527				
6000 (2831)	—	—	—	—	—	—	—	—	—	—	—	585	1683	610	1813	634	1940	657	2065	680	2187	702	2308	724	2426	744	2543	765	2657	785	2731	805	2856	824	2984	843	3116	861	3251	879	3389	897	3531	914	3676				
6200 (2926)	—	—	—	—	—	—	—	—	—	—	—	570	1650	595	1783	619	1913	643	2042	666	2169	688	2293	710	2415	731	2535	752	2653	773	2728	792	2854	812	2984	831	3116	850	3253	868	3392	886	3535	903	3682	920	3832		
6400 (3020)	—	—	—	—	—	—	—	—	—	—	—	579	1750	604	1885	628	2017	652	2148	674	2276	697	2402	718	2526	739	2648	760	2767	780	2852	800	2983	819	3118	838	3255	856	3396	875	3541	892	3688	909	3839	926	3994		
6600 (3114)	—	—	—	—	—	—	—	—	—	—	—	589	1854	614	1991	637	2125	661	2257	683	2386	705	2514	727	2640	748	2763	768	2884	788	2984	808	3119	827	3258	845	3400	863	3546	881	3695	899	3847	916	4003	—	—		
6800 (3209)	—	—	—	—	—	—	—	—	—	—	—	574	1822	599	1961	623	2099	647	2235	670	2369	692	2500	714	2629	735	2756	756	288	2776	2984	796	3121	815	3262	834	3405	853	3552	871	3702	888	3856	905	4013	922	4173	—	—
7000 (3303)	—	—	—	—	—	—	—	—	—	—	—	584	1930	609	2072	633	2211	656	2349	679	2484	701	2617	723	2748	744	2877	764	3003	785	3124	804	3265	823	3410	842	3559	860	3710	878	3865	895	4024	912	4185	929	4350	—	—
7200 (3398)	570	1897	595	2042	619	2185	643	2327	666	2466	689	2602	711	2737	732	2870	753	3000	773	3127	793	3270	812	3416	831	3566	849	3719	868	3875	885	4035	902	4198	919	4364	—	—	—	—	—	—	—	—					

NOTE: L-Drive left of bold line, M-Drive right of bold line; WTS = Watts; () Designates Metric Conversions

Drive Package	L						M					
Motor H.P. (W)	3.0 (2237.1)						5.0 (3728.5)					
Blower Sheave	BK105H						BK105 H					
Motor Sheave	1VL-44						1VP-56					
Turns Open	1	2	3	4	5	6	1	2	3	4	5	6
RPM	733	701	669	640	605	572	927	903	873	840	808	775

- NOTES:
1. Factory sheave settings are shown in bold type.
 2. Do not set motor sheave below minimum turns open shown.
 3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure.
 4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

Airflow Correction Factors 15 Ton

CFM [L/s]	4800 (2265)	5000 (2359)	5200 (2454)	5400 (2548)	5600 (2643)	5800 (2737)	6000 (2831)	6200 (2926)	6400 (3020)	6600 (3114)	6800 (3209)	7000 (3303)	7200 (3398)
Total MBH	0.97	0.97	0.98	0.98	0.99	1.00	1.00	1.01	1.02	1.02	1.03	1.03	1.04
Sensible MBH	0.87	0.90	0.92	0.94	0.97	0.99	1.02	1.04	1.06	1.09	1.11	1.14	1.16
Power kW	0.98	0.98	0.99	0.99	0.99	1.00	1.00	1.00	1.01	1.01	1.01	1.02	1.02

NOTE: Multiply correction factor times gross performance data resulting sensible capacity cannot exceed total capacity.

Component Airflow Resistance 15 Ton

CFM (L/s)	4800 (2265)	5000 (2359)	5200 (2454)	5400 (2548)	5600 (2643)	5800 (2737)	6000 (2831)	6200 (2926)	6400 (3020)	6600 (3114)	6800 (3209)	7000 (3303)	7200 (3398)
	Resistance Inches of Water (kPa)												
Wet Coil	0.03 (0.01)	0.04 (0.01)	0.05 (0.01)	0.06 (0.01)	0.06 (0.01)	0.07 (0.02)	0.08 (0.02)	0.09 (0.02)	0.10 (0.02)	0.10 (0.02)	0.11 (0.03)	0.12 (0.03)	0.13 (0.03)
Downflow	0.05 (0.01)	0.05 (0.01)	0.05 (0.01)	0.05 (0.01)	0.05 (0.01)	0.05 (0.01)	0.05 (0.01)	0.06 (0.01)	0.06 (0.01)	0.06 (0.01)	0.07 (0.02)	0.08 (0.02)	0.08 (0.02)
Downflow Economizer RA Damper Open	0.09 (0.02)	0.10 (0.02)	0.10 (0.02)	0.11 (0.03)	0.12 (0.03)	0.13 (0.03)	0.13 (0.03)	0.14 (0.03)	0.15 (0.04)	0.16 (0.04)	0.16 (0.04)	0.17 (0.04)	0.18 (0.04)
Horizontal Economizer RA Damper Open	0.00 (0.00)	0.01 (0.00)	0.01 (0.00)	0.02 (0.00)	0.02 (0.00)	0.03 (0.01)	0.03 (0.01)	0.04 (0.01)	0.04 (0.01)	0.05 (0.01)	0.05 (0.01)	0.06 (0.01)	0.06 (0.01)

Airflow Performance—with Reheat

Table 41: Reheat Airflow Performance, 3 Ton — Belt-Drive

Airflow CFM (L/s)	Capacity 3 Ton (10.55 kW) Packaged Air Conditioner (13 SEER)																															
	3 PH—208-230/460 Volt—External Static Pressure—Inches of Water (kPa)																															
	0.1 (.02)		0.2 (.05)		0.3 (.07)		0.4 (.10)		0.5 (.12)		0.6 (.15)		0.7 (.17)		0.8 (.20)		0.9 (.22)		1.0 (.25)		1.1 (.27)		1.2 (.30)		1.3 (.32)		1.4 (.35)		1.5 (.37)			
	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS
900 (425)	—	—	—	—	665	290	730	300	780	315	830	330	875	360	920	375	960	390	990	410	1040	445	1080	470	1140	510	1190	540	1235	590		
1000 (472)	—	—	625	275	680	295	750	310	805	325	850	345	895	375	935	390	970	410	1015	435	1065	465	1100	500	1160	530	1210	560	1255	610		
1100 (519)	—	—	640	300	710	315	780	325	830	340	875	365	915	390	955	405	990	430	1040	450	1080	485	1115	540	1180	540	1230	600	1270	630		
1200 (566)	—	—	670	315	735	330	800	345	850	365	890	385	935	410	975	430	1010	450	1060	475	1100	520	1145	560	1200	600	1250	630	1285	660		
1300 (614)	625	315	700	330	770	350	830	370	875	400	915	415	955	440	990	450	1040	495	1085	530	1125	565	1165	590	1220	645	1260	675	1305	710		
1400 (661)	655	340	730	365	795	385	850	400	890	430	935	445	975	470	1010	500	1070	540	1110	575	1150	615	1195	645	1230	685	1280	725	1325	760		
1500 (708)	685	380	755	390	825	415	870	435	915	450	955	480	990	505	1040	545	1090	590	1135	630	1180	660	1220	720	1255	740	1295	785	1350	820		

Bold lines separate L, M and N drives respectively; WTS = Watts; () Designates Metric Conversions

Drive Package	L								M								N (Field-Supplied)	
Motor H.P. (w)	1/2 (373)								3/4 (559)								3/4 (559)	
Blower Sheave	6.9 Pitch Diameter								6.4 Pitch Diameter								6.4 Pitch Diameter	
Motor Sheave	Adjustable 2.4-3.4 Pitch Diameter								Adjustable 3.4-4.4 Pitch Diameter								Adjustable 4.0-5.0 Pitch Diameter	
Turns Open	0	1	2	3	4	5	6	0	1	2	3	4	5	6				
RPM	935	875	830	780	730	680	625	1295	1230	1185	1135	1085	1000	955	RPM Range 1090-1365			

- NOTES:
 1. Performance shown with dry coil & standard 2" (50.8 mm) filters.
 2. Standard CFM @ .075 lbs./cu. ft.
 3. Motor efficiency = 80%
 4. BHP = $\frac{\text{Watts} \times \text{Motor Eff.}}{746}$
 5. Add component resistance to duct static to determine E.S.P. as shown on charts

Table 42: Reheat Airflow Performance, 4 Ton — Belt-Drive

Airflow CFM (L/s)	Capacity 4 Ton (14.06 kWTS)—Packaged Air Conditioner (13 SEER)																															
	3 PH—208-230/460 Volt—External Static Pressure—Inches of Water (kPa)																															
	0.1 (0.02)		0.2 (0.05)		0.3 (0.07)		0.4 (0.10)		0.5 (0.12)		0.6 (0.15)		0.7 (0.17)		0.8 (0.20)		0.9 (0.22)		1.0 (0.25)		1.1 (0.27)		1.2 (0.30)		1.3 (0.32)		1.4 (0.35)		1.5 (0.37)			
	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS
1200 (566)	—	—	—	—	745	340	810	375	865	390	900	400	945	420	1000	440	1040	460	1075	490	1115	540	1170	580	1215	620	1260	650	1300	685		
1300 (614)	—	—	695	330	770	365	835	395	880	415	920	435	975	455	1010	470	1060	490	1100	530	1140	570	1190	600	1235	640	1270	685	1315	740		
1400 (661)	—	—	725	350	795	395	855	420	895	435	945	455	995	470	1030	500	1070	520	1115	560	1160	600	1205	640	1250	685	1290	745	1335	810		
1500 (708)	690	360	750	390	820	425	875	450	920	465	970	480	1010	500	1055	560	1100	580	1140	630	1180	660	1230	700	1270	760	1315	815	1350	865		
1600 (755)	720	390	780	430	850	460	895	480	945	500	990	530	1035	565	1075	590	1115	635	1160	680	1205	725	1250	770	1290	830	1335	890	1365	935		
1700 (802)	750	430	810	465	870	485	920	500	970	530	1015	570	1055	600	1090	645	1140	695	1180	735	1225	790	1270	845	1315	910	1350	960	—	—		
1800 (850)	780	475	840	515	895	540	945	555	990	600	1035	625	1080	660	1115	710	1155	740	1205	800	1250	860	1295	930	1340	995	1365	1030	—	—		
1900 (897)	820	520	870	560	925	580	970	600	1015	640	1060	690	1115	750	1145	790	1185	835	1225	880	1275	900	1315	1010	1355	1060	—	—	—	—		
2000 (944)	850	585	900	610	950	630	1000	665	1045	715	1090	760	1130	810	1170	865	1205	900	1255	965	1300	1050	1340	1100	1365	1140	—	—	—	—		

Bold lines separate L, M and N drives respectively; WTS = Watts; () Designates Metric Conversions

Drive Package	L								M								N (Field-Supplied)	
Motor H.P. (w)	1/2 (373)								3/4 (559)								3/4 (559)	
Blower Sheave	6.9 Pitch Diameter								6.4 Pitch Diameter								6.4 Pitch Diameter	
Motor Sheave	Adjustable 2.8-3.8 Pitch Diameter								Adjustable 3.4-4.4 Pitch Diameter								Adjustable 4.0-5.0 Pitch Diameter	
Turns Open	0	1	2	3	4	5	6	0	1	2	3	4	5	6				
RPM	990	945	895	800	750	695	625	1270	1225	1170	1115	1065	1015	965	RPM Range 1090-1365			

- NOTES:
 1. Performance shown with dry coil & standard 2" (50.8 mm) filters.
 2. Standard CFM @ .075 lbs./cu. ft.
 3. Motor efficiency = 80%
 4. BHP = $\frac{\text{Watts} \times \text{Motor Eff.}}{746}$
 5. Add component resistance to duct static to determine E.S.P. as shown on charts

Table 43: Reheat Airflow Performance, 5 Ton — Belt-Drive

Airflow CFM (L/s)	Capacity 5 Ton (17.58 kW)—Package Air Conditioner (13 SEER)																													
	3 PH—208-230/460 Volt—External Static Pressure—Inches of Water (kPa)																													
	0.1 (0.02)		0.2 (0.05)		0.3 (0.07)		0.4 (0.10)		0.5 (0.12)		0.6 (0.15)		0.7 (0.17)		0.8 (0.20)		0.9 (0.22)		1.0 (0.25)		1.1 (0.27)		1.2 (0.30)		1.3 (0.32)		1.4 (0.35)		1.5 (0.37)	
RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	RPM	WTS	
1400 (661)	—	—	—	—	780	370	815	385	875	425	930	460	970	490	1030	540	1065	570	1105	595	1150	615	1195	645	1235	660	1300	705	1340	745
1500 (708)	—	—	—	—	795	405	840	415	895	440	945	500	995	540	1045	595	1080	615	1135	650	1165	675	1215	700	1255	735	1320	775	1355	805
1600 (755)	—	—	780	390	805	425	870	470	915	510	965	560	1015	600	1060	640	1105	680	1145	705	1180	730	1225	750	1275	790	1340	840	1365	880
1700 (802)	—	—	795	450	840	490	895	530	940	570	990	605	1035	640	1075	680	1120	725	1160	755	1200	790	1245	815	1300	855	1355	905	1375	940
1800 (850)	780	455	815	470	870	540	915	540	965	675	1010	660	1055	710	1100	760	1140	785	1175	810	1225	850	1260	880	1320	930	1365	985	1390	1020
1900 (897)	800	485	850	530	895	590	945	640	995	675	1035	720	1070	775	1120	810	1160	850	1200	890	1245	915	1290	960	1335	1000	1375	1050	1405	1100
2000 (944)	830	550	880	605	930	655	970	700	1015	730	1055	790	1105	830	1145	875	1180	910	1225	950	1260	980	1320	1035	1350	1075	1385	1120	—	—
2100 (991)	860	615	915	655	955	705	1005	760	1040	820	1090	870	1130	910	1170	950	1210	995	1250	1020	1290	1060	1335	1100	1370	1150	1400	1200	—	—
2200 (1038)	895	680	945	735	995	780	1030	830	1060	880	1120	940	1155	980	1195	1020	1240	1055	1275	1100	1320	1140	1360	1180	1385	1225	—	—	—	—
2300 (1085)	940	755	975	795	1015	830	1065	910	1100	965	1150	1025	1180	1050	1225	1095	1265	1125	1310	1175	1350	1230	1375	1260	1405	1320	—	—	—	—
2400 (1133)	970	825	1015	880	1040	925	1100	1005	1145	1055	1175	1085	1225	1140	1260	1175	1300	1210	1340	1255	1370	1315	1400	1375	—	—	—	—	—	—

NOTE: L-Drive left of bold line, M-Drive right of bold line; WTS = Watts; () Designates Metric Conversions

Drive Package	L							M						
Motor H.P. (w)	3/4 (559)							1 (746)						
Blower Sheave	6.9 Pitch Diameter							6.9 Pitch Diameter						
Motor Sheave	Adjustable 2.8-3.8 Pitch Diameter							Adjustable 4.0-5.0 Pitch Diameter						
Turns Open	0	1	2	3	4	5	0	1	2	3	4	5		
RPM	1007	963	922	880	833	785	1272	1242	1210	1172	1130	1089		

Factory sheave settings are shown in bold print.

Component Air Resistance

Component	Standard Indoor Airflow—CFM (L/s)											
	2200 (944)		2400 (1133)		2600 (1227)		2800 (1321)		3200 (1510)		3400 (1605)	
	Resistance—Inches Water (kPa)											
Wet Coil	0.079		0.090		0.102		0.118		0.128		0.135	
Downflow	0.061		0.079		0.089		0.100		0.108		0.112	
R.S.I. Economizer R.A. Damper	0.09		0.10		0.11		0.12		0.13		0.15	

NOTES:

- Performance shown with dry coil & standard 2" (50.8 mm) filters.
- Standard CFM @ .075 lbs./cu. ft.
- Motor efficiency = 80%
- BHP = $\frac{\text{Watts} \times \text{Motor Eff.}}{746}$
- Add component resistance to duct static to determine E.S.P. as shown on charts

Table 44: Reheat Airflow Performance, H07D — Sideflow

AirFlow CFM [L/s]	Model MPS H07D																																								
	External Static Pressure—Inches of Water [kPa]																																								
	0.1 [.02]		0.2 [.05]		0.3 [.07]		0.4 [.10]		0.5 [.12]		0.6 [.15]		0.7 [.17]		0.8 [.20]		0.9 [.22]		1.0 [.25]		1.1 [.27]		1.2 [.30]		1.3 [.32]		1.4 [.35]		1.5 [.37]		1.6 [.40]		1.7 [.42]		1.8 [.45]		1.9 [.47]		2.0 [.50]		
	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM
2400 [1133]	—	—	—	—	558	822	594	853	629	887	663	925	697	965	730	1009	763	1056	794	1106	826	1159	856	1216	886	1275	915	1338	943	1404	971	1474	998	1546	1025	1622	1051	1700	1076	1782	
2500 [1180]	—	—	—	—	568	848	604	881	638	917	672	956	705	998	738	1044	769	1092	801	1144	831	1199	861	1258	890	1319	919	1384	947	1452	974	1523	1001	1597	1027	1674	1052	1755	1077	1838	
2600 [1227]	—	—	543	846	579	877	613	912	647	950	681	991	713	1035	745	1082	777	1132	807	1186	837	1243	867	1303	895	1366	923	1433	951	1502	978	1575	1004	1651	1029	1730	1054	1812	1078	1898	
2700 [1274]	—	—	554	877	589	910	623	946	657	986	689	1029	722	1074	753	1124	784	1176	814	1231	844	1290	872	1352	901	1417	928	1485	955	1556	981	1631	1007	1708	1032	1789	1056	1873	1079	1961	
2800 [1321]	—	—	566	911	600	946	634	984	666	1026	699	1070	730	1118	761	1169	792	1223	821	1280	850	1340	878	1404	906	1470	933	1540	959	1613	985	1690	1010	1769	1034	1852	1058	1938	1081	2027	
2900 [1368]	543	916	577	949	611	989	644	1026	676	1069	708	1115	739	1164	770	1217	799	1273	828	1332	857	1394	885	1459	912	1528	938	1599	964	1674	989	1752	1014	1833	1037	1918	1061	2005	1083	2096	
3000 [1416]	555	955	589	990	622	1029	655	1070	687	1115	718	1163	748	1214	778	1269	807	1326	836	1387	864	1451	891	1518	918	1588	944	1662	969	1738	994	1818	1017	1901	1041	1987	1063	2077	1085	2169	
3100 [1463]	568	998	601	1035	634	1075	666	1118	697	1165	728	1215	758	1268	787	1324	816	1383	844	1445	871	1511	898	1580	924	1652	949	1727	974	1806	998	1887	1022	1972	1044	2060	1066	2151	1088	2245	
3200 [1510]	581	1044	614	1083	646	1125	677	1170	708	1218	738	1270	768	1324	796	1382	824	1443	852	1507	879	1575	905	1646	931	1719	955	1796	980	1876	1003	1960	1026	2046	1048	2136	1070	2229	1091	2325	
3300 [1557]	594	1093	626	1134	658	1178	689	1225	719	1275	749	1328	778	1384	806	1444	833	1507	860	1573	887	1642	912	1714	937	1790	962	1869	985	1951	1008	2036	1031	2124	1052	2216	1073	2310	1094	2408	
3400 [1604]	607	1146	639	1189	670	1234	701	1283	730	1335	759	1390	788	1448	815	1509	843	1574	869	1642	895	1713	920	1787	944	1864	968	1945	991	2028	1014	2115	1036	2205	1057	2298	1077	2395	1097	2494	
3500 [1652]	621	1203	652	1247	683	1294	713	1344	742	1398	770	1455	798	1515	825	1578	852	1644	878	1714	903	1786	928	1862	952	1941	975	2024	997	2109	1019	2198	1041	2290	1061	2385	1081	2483	1101	2584	
3600 [1699]	635	1262	666	1308	696	1357	725	1409	754	1465	782	1523	809	1585	836	1650	862	1718	887	1789	912	1864	936	1941	959	2022	982	2106	1004	2194	1025	2284	1046	2378	1066	2474	1086	2574	1104	2677	

NOTE: A/F-Drive left of 1st bold line, B/G-Drive in middle of bold lines, C/H-Drive right of 2nd bold line.

Drive Package	A/F					B/G					C/H							
Motor H.P. [W]	2.0 [1491.4]					3.0 [2237.1]					3.0 [2237.1]							
Blower Sheave	AK84H					AK84H					AK84H							
Motor Sheave	1VL40*7/8					1VP50*7/8					1VP56*7/8							
Turns Open	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
RPM	765	720	676	633	589	544	989	949	908	865	823	780	1108	1067	1029	987	946	905

NOTES:

1. Factory sheave settings are shown in bold type.
2. Do not set motor sheave below minimum or maximum turns open shown.
3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure.
4. Add component resistance (below) to duct resistance to determine total External Static Pressure.

Airflow Correction Factors – 7.5 Ton

Actual – CFM [L/s]	2400 [1133]	2600 [1227]	2800 [1321]	3000 [1416]	3200 [1510]	3400 [1605]	3600 [1699]
Total MBH	0.96	0.97	0.98	0.99	1.00	1.01	1.02
Sensible MBH	0.89	0.92	0.95	0.97	1.00	1.03	1.06
Power kW	0.98	0.99	0.99	1.00	1.01	1.01	1.02

Component Air Resistance, IWC – 7.5 Ton

Component	2400 [1133]	2600 [1227]	2800 [1321]	3000 [1416]	3200 [1510]	3400 [1604]	3600 [1699]
	Resistance – Inches Water [kPa]						
Wet Coil	0.04 [0.01]	0.05 [0.01]	0.06 [0.01]	0.07 [0.02]	0.07 [0.02]	0.08 [0.02]	0.09 [0.02]
Horizontal Economizer 100% R.A. Damper Open	0.01 [0.00]	0.02 [0.00]	0.04 [0.01]	0.05 [0.01]	0.07 [0.02]	0.09 [0.02]	0.11 [0.03]

NOTES:

1. Multiply correction factor times gross performance data.
2. Resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

NOTE: Add component resistance to duct resistance to determine total external static pressure.

DNA = Data not Available.

Table 49: Reheat Airflow Performance, 20 Ton — Sideflow

Table with columns for Airflow CFM (L/s), Capacity 20 Tons (70.3 kW), External Static Pressure—Inches of Water (kPa), and various RPM/WTS values for different drive packages.

NOTE: R-Drive left of bold line, S-Drive right of bold line; WTS = Watts; () Designates Metric Conversions

Table with columns for Drive Package, Motor H.P. (W), Blower Sheave, Motor Sheave, Turns Open, and RPM values for R, S, and T drive packages.

- NOTES: 1. Factory sheave settings are shown in bold type. 2. Do not set motor sheave below minimum turns open shown. 3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure. 4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

Airflow Correction Factors—20 Ton

Table with columns for Actual CFM (L/s) and rows for Total MBH, Sensible MBH, and Power kW, showing correction factors for various CFM values.

NOTES: Multiply correction factor times gross performance data—resulting sensible capacity cannot exceed total capacity.

Reheat Unit Component Airflow Resistance—20 Ton

Table with columns for CFM (L/s) and rows for Wet Coil, Downflow, Downflow Economizer R.A. Damper Open, Horizontal Economizer R.A. Damper Open, and Concentric Grill RXRN-AD86 & Transition RXMC-CK08, showing resistance values in inches of water (kPa).

MCA and MROPD

Table 53: Standard Efficiency MCA and MROPD Data

MPS Model		Voltage					
		208/230		460		575	
		Low*	High	Low*	High	Low*	High
H07D	MCA	41	44	17	19	N/A	N/A
	MROPD	60	60	25	25	N/A	N/A
H08D	MCA	46	51	21	24	N/A	N/A
	MROPD	70	70	30	35	N/A	N/A
H10D	MCA	54	58	26	28	N/A	N/A
	MROPD	80	90	40	49	N/A	N/A
H12D	MCA	70	75	34	37	N/A	N/A
	MROPD	90	90	40	45	N/A	N/A
015B	MCA	78	81	38	49	N/A	N/A
	MROPD	100	199	45	59	N/A	N/A
020B	MCA	101	198	52	56	N/A	N/A
	MROPD	125	125	60	70	N/A	N/A
025B	MCA	147	149	60	63	N/A	N/A
	MROPD	175	175	70	80	N/A	N/A

MCA and MCOP

Table 54: Standard Efficiency MCA and MCOP Data

MPS Model		Voltage					
		208/230		460		575	
		Low*	High	Low*	High	Low*	High
H07D	MCA	41.0	44.0	17.0	19.0	N/A	N/A
	MCOP	60.0	60.0	25.0	25.0	N/A	N/A
H08D	MCA	46.0	51.0	21.0	24.0	N/A	N/A
	MCOP	70.0	70.0	30.0	35.0	N/A	N/A
H10D	MCA	54.0	58.0	26.0	28.0	N/A	N/A
	MCOP	80.0	90.0	40.0	40.0	N/A	N/A
H12D	MCA	70.0	75.0	34.0	37.0	N/A	N/A
	MCOP	90.0	90.0	40.0	45.0	N/A	N/A
015B	MCA	78.0	81.0	38.0	40.0	N/A	N/A
	MCOP	100.0	100.0	45.0	50.0	N/A	N/A
020B	MCA	101.0	109.0	52.0	56.0	N/A	N/A
	MCOP	125.0	125.0	60.0	70.0	N/A	N/A
025B	MCA	147.0	149.0	60.0	63.0	N/A	N/A
	MCOP	175.0	175.0	70.0	80.0	N/A	N/A

NOTE: *Low static option is a direct drive motor for models A03 and A04

Table 55: High Efficiency MCA and MCOP Data

MPS Model		Voltage			
		208/230		460	
		Low*	High**	Low*	High**
MPSH15	MCA	75	79	38	40
	MCOP	100	100	50	50
MPSH020	MCA	95	103	49	52
	MCOP	110	125	60	60

* 3 to 5 tons low static is direct-drive value

** 3 to 5 tons high static is belt-drive value

Compressor and Condenser Motor

Table 56: Compressor and Condenser Motor Data — 208/230 Volt

Data	MPS A03D	MPS A04D	MPS A05D	MPS H07D	MPS H08D	MPS H10D	MPS H12D	MPS 015B	MPS 020B	MPS 025B	
	Compressor Motor										
Number							2				
Phase											
RPM											
HP, Compressor 1	2.5	3.5	4	7	7-1/2	10	6	7-1/2	10	11-1/2	
Amps (RLA), Comp. 1	10	14.6	17.7	25.3	28.8	32.6	22.4	25	33.3	48.1	
Amps (LRA), Comp. 1	71	83.1	110	184	191	240	164	164	239	245	
HP, Compressor 2	N/A	N/A	N/A	N/A	N/A	N/A	6	7-1/2	7-1/2	11-1/2	
Amps (RLA), Comp. 2	N/A	N/A	N/A	N/A	N/A	N/A	22.4	25	33.3	48.1	
Amps (LRA), Comp. 2	N/A	N/A	N/A	N/A	N/A	N/A	164	164	239	245	
Condenser Motor											
Number				2				4	6		
Phase											
HP	1/5	1/2	1/2	1/5		1/3	3/4	1/3			
Amps (FLA, each)	1.2	2.5	2.5	1.2		2.4	4.2	1.2/1.2			
Amps (LRA, each)	2.3	5.6	5.6	2.3		4.7	10.1	4.7/4.7			

NOTE: *Unit operating voltage range is 187–253

Table 57: Compressor, Supply Fan, and Condenser Electrical Data — 208/230 Volt

Data	MPSH15		MPSH20	
	Low Static	High Static	Low Static	High Static
Compressor Motor				
Number	2			
Phase	3			
RPM				
HP, Comp.1	7-1/2		10	
Amps (RLA), Comp. 1	25/25		30.1/30.1	
Amps (LRA), Comp. 1	164/164		225/225	
HP, Compressor 2	7-1/2			
Amps (RLA), Comp. 2	25/25		27.6/27.6	
Amps (LRA), Comp. 2	164/164		191/191	
Condenser Motor				
Number	2			
Phase				
HP				
Amps (FLA)	2.4/2.4			
Amps (LRA)	4.7/4.7			
Evaporator Fan				
Number				
Phase	3			
HP	3	5	5	7 1/2
Amps (FLA)	11.5/11.5	14.9/14.9	14.7/14.7	23.1/23.1
Amps (LRA)	74.5/74.5	82.6/82.6	82.6/82.6	136/136

NOTE: Operating Voltage is 187-253

Table 58: Compressor and Condenser Motor Data — 460 Volt

Data							
	MPS H07D	MPS H08D	MPS H10D	MPS H12D	MPS 015B	MPS 020B	MPS 025B
Compressor Motor							
Number				2			
Phase							
RPM							
HP, Compressor 1	7	7-1/2	10	6	7-1/2	10	11-1/2
Amps (RLA), Comp. 1	9.6	12.5	14.8	10.6	12.2	17.9	18.6
Amps (LRA), Comp. 1	84	100	130	100	100	125	125
HP, Compressor 2	N/A	N/A	N/A	6	7-1/2	7-1/2	11-1/2
Amps (RLA), Comp. 2	N/A	N/A	N/A	10.6	12.2	14.7	18.6
Amps (LRA), Comp. 2	N/A	N/A	N/A	100	100	95	125
Condenser Motor							
Number	2			4	6		
Phase							
HP	1/5		1/3	3/4		1/3	
Amps (FLA, each)	0.8		1.4	2.3		0.7	
Amps (LRA, each)	1.4		2.4	4.9		2.4	

NOTE: *Unit operating voltage range is 414–506

Table 59: Compressor, Supply Fan, and Condenser Electrical Data — 460 Volt

Data	MPSH03B	MPSH03C	MPSH04B	MPSH04C	MPSH05B	MPSH05C	MPSH15		MPSH20	
	Belt-Drive		Belt-Drive		Belt-Drive	Direct-Drive	Low Static	High Static	Low Static	High Static
Compressor Motor										
Number	1						2			
Phase	3									
RPM	3450									
HP, Comp. 1	3		4		5		7-1/2		10	
Amps (RLA), Comp. 1	5.6	5.8	6.1	6.2	7.6	7.8	25/25		30.1/30.1	
Amps (LRA), Comp. 1	36	38	41		52		164/164		225/225	
HP, Compressor 2	—									
Amps (RLA), Comp. 2	—									
Amps (LRA), Comp. 2	—									
							164/164		191/191	
Condenser Motor										
Number	1						2			
Phase	1									
HP	1/3									
Amps (FLA)	1				1		2.4/2.4			
Amps (LRA)	1.9				2.4	1.9	4.7/4.7			
Evaporator Fan										
Number					1					
Phase	3		3		3		3			
HP	1/2	3/4	3/4		1		3	5	5	7-1/2
Amps (FLA)	1.4	1.6	1.6		1.9	4.6	11.5/11.5	14.9/14.9	14.7/14.7	23.1/23.1
Amps (LRA)	8.4		8.4		12	0	74.5/74.5	82.6/82.6	82.6/82.6	136/136

NOTE: Operating Voltage is 414-506

Auxiliary Heater Kit Performance

Table 60: Auxiliary Heater Kits Characteristics and Application: 208/240V — 3 Phase

Unit Model Number MPS-	Heater Kit Model No. RXJJ-	Heater kW @ 208/240V, 3 Phase	Heater Kit FLA	Unit Min. Ckt. Ampacity	Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must Be HACR Type for USA)	Single Point- Power Kit
MPS-H07D Low Static Drive	NONE	—	—	17	25	RXJX-AC0605
	DD10CP	9.9	11.9	19	20	RXJX-AC0605
	DD15CP	14.4	17.3	26	30	RXJX-AC0605
	DD20CP	19.8	23.8	34	35	RXJX-AC0605
	DD30CP	28.8	34.6	48	50	RXJX-AC0605
	DD40CP	39.6	47.6	64	70	RXJX-AC0605
MPS-H07D Medium-High Static Drive	NONE	—	—	19	25	RXJX-AC0605
	DD10CP	9.9	11.9	27	30	RXJX-AC0605
	DD15CP	14.4	17.3	33	35	RXJX-AC0605
	DD20CP	19.8	23.8	42	45	RXJX-AC0605
	DD30CP	28.8	34.6	55	60	RXJX-AC0605
	DD40CP	39.6	47.6	71	80	RXJX-AC0605
MPS-H08D Low Static Drive	NONE	—	—	21	30	RXJX-AC0605
	DD10CP	9.9	11.9	21	25	RXJX-AC0605
	DD15CP	14.4	17.3	26	30	RXJX-AC0605
	DD20CP	19.8	23.8	35	35	RXJX-AC0605
	DD30CP	28.8	34.6	48	50	RXJX-AC0605
	DD40CP	39.6	47.6	64	70	RXJX-AC0605
MPS-H08D Medium-High Static Drive	NONE	—	—	22-24	30-35	RXJX-AC0605
	DD10CP	9.9	11.9	27	30	RXJX-AC0605
	DD15CP	14.4	17.3	33	35	RXJX-AC0605
	DD20CP	19.8	23.8	42	45	RXJX-AC0605
	DD30CP	28.8	34.6	55	60	RXJX-AC0605
	DD40CP	39.6	47.6	71	80	RXJX-AC0605
MPS-H10D Low Static Drive	NONE	—	—	26	40	RXJX-AC0805
	DD10CP	9.9	11.9	26	30	RXJX-AC0805
	DD15CP	14.4	17.3	27	30	RXJX-AC0805
	DD20CP	19.8	23.8	35	35	RXJX-AC0805
	DD30CP	28.8	34.6	49	50	RXJX-AC0805
	DD40CP	39.6	47.6	65	70	RXJX-AC0805
MPS-H10D Medium-High Static Drive	NONE	—	—	32-34	45	RXJX-AC0805
	DD10CP	9.9	11.9	32-34	40	RXJX-AC0805
	DD15CP	14.4	17.3	35-37	40	RXJX-AC0805
	DD20CP	19.8	23.8	43-45	45-50	RXJX-AC0805
	DD30CP	28.8	34.6	56-59	60	RXJX-AC0805
	DD40CP	39.6	47.6	73-75	80	RXJX-AC0805
MPS-H12D Low Static Drive	NONE	—	—	34	40	RXJX-AC0909
	DD10CP	9.9	11.9	34	40	RXJX-AC0909
	DD15CP	14.4	17.3	34	40	RXJX-AC0909
	DD20CP	19.8	23.8	37	40	RXJX-AC0909
	DD30CP	28.8	34.6	50	50	RXJX-AC0909
	DD40CP	39.6	47.6	66	70	RXJX-AC0909
MPS-H12D Medium Static Drive	NONE	—	—	37	45	RXJX-AC0909
	DD10CP	9.9	11.9	37	45	RXJX-AC0909
	DD15CP	14.4	17.3	37	45	RXJX-AC0909
	DD20CP	19.8	23.8	40	45	RXJX-AC0909
	DD30CP	28.8	34.6	54	60	RXJX-AC0909
	DD40CP	39.6	47.6	70	70	RXJX-AC0909

NOTE: When selecting a heater for the 7-12 ton D vintage units, you will not be able to operate the electric heat without the corresponding single point power kit.

Unit Model Number MPS-	Heater Kit Model No. RXJJ-	Heater kW @ 208/240V, 3 Phase	Heater Kit FLA	Unit Min. Ckt. Ampacity	Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must Be HACR Type for USA)	Single Point- Power Kit
015B Low Static Drive	NONE	—	—	78/78	100/100	—
	CE20C	14.4/19.2	40.0/46.2	78/78	100/100	—
	CE40C	28.8/38.3	79.9/92.2	115/130	125/150	—
	CE60C	43.2/57.5	119.9/138.3	165/188	175/200	—
	CE75C	54/71.9	149.8/172.8	202/231	225/250	—
015B High Static Drive	NONE	—	—	81/81	100/100	—
	CE20C	14.4/19.2	40.0/46.2	81/81	100/100	—
	CE40C	28.8/38.3	79.9/92.2	119/134	125/150	—
	CE60C	43.2/57.5	119.9/138.3	169/192	175/200	—
	CE75C	54/71.9	149.8/172.8	206/235	225/250	—
020B Low Static Drive	NONE	—	—	101/101	125/125	—
	CE20C	14.4/19.2	40.0/46.2	101/101	125/125	—
	CE40C	28.8/38.3	79.9/92.2	119/134	125/150	—
	CE60C	43.2/57.5	119.9/138.3	169/192	175/200	—
	CE75C	54/71.9	149.8/172.8	206/235	225/250	—
020B High Static Drive	NONE	—	—	109/109	125/125	—
	CE20C	14.4/19.2	40.0/46.2	109/109	125/125	—
	CE40C	28.8/38.3	79.9/92.2	129/145	150/150	—
	CE60C	43.2/57.5	119.9/138.3	179/202	200/225	—
	CE75C	54/71.9	149.8/172.8	217/245	225/250	—
025B Low Static Drive	NONE	—	—	147/147	175/175	—
	CE20C	14.4/19.2	40.0/46.2	147/147	175/175	—
	CE40C	28.8/38.3	79.9/92.2	147/147	175/175	—
	CE60C	43.2/57.5	119.9/138.3	181/204	200/225	—
	CE75C	54/71.9	149.8/172.8	218/247	225/250	—
025B High Static Drive	NONE	—	—	149/149	175/175	—
	CE20C	14.4/19.2	40.0/46.2	149/149	175/175	—
	CE40C	28.8/38.3	79.9/92.2	149/151	175/175	—
	CE60C	43.2/57.5	119.9/138.3	186/209	200/225	—
	CE75C	54/71.9	149.8/172.8	223/252	225/300	—

NOTE: When selecting a heater for the 7-12 ton D vintage units, you will not be able to operate the electric heat without the corresponding single point power kit.

Table 61: Auxiliary Heater Kits Characteristics and Application: High Efficiency —208/240V— 60 Hz — 3 Phase

Model	RXJJ Heater Kit Nominal kW	Rated Heater kW @ 208/240V	Heater Amp. @ 208/240V	Unit Min. Ckt. Ampacity @ 208/240V	Over Current Protective Device Size	
					Min./Max 208V	Min./Max. 240V
MPSH15 Low Static Drive	CE20C	14.4/19.2	40/46.2	75/75	90/100	90/100
	CE40C	28.8/38.3	79.9/92.2	115/130	125/125	150/150
	CE60C	43.2/57.5	119.9/138.3	165/188	175/175	200/200
	CE75C	54/71.9	149.8/172.8	202/231	225/225	250/250
MPSH15 High Static Drive	CE20C	14.4/19.2	40/46.2	79/79	90/100	90/100
	CE40C	28.8/38.3	79.9/92.2	119/134	125/125	150/150
	CE60C	43.2/57.5	119.9/138.3	169/192	175/175	200/200
	CE75C	54/71.9	149.8/172.8	206/235	225/225	250/250
MPSH20 Low Static Drive	CE20C	14.4/19.2	40/46.2	95/95	110/110	110/110
	CE40C	28.8/38.3	79.9/92.2	119/134	125/125	150/150
	CE60C	43.2/57.5	119.9/138.3	169/192	175/175	200/200
	CE75C	54/71.9	149.8/172.8	206/235	225/225	250/250
MPSH20 High Static Drive	CE20C	14.4/19.2	40/46.2	103/103	125/125	125/125
	CE40C	28.8/38.3	79.9/92.2	129/145	150/150	150/150
	CE60C	43.2/57.5	119.9/138.3	179/202	200/200	225/225
	CE75C	54/71.9	149.8/172.8	217/245	225/225	250/250

Table 62: Auxiliary Heater Kits Characteristics and Application: 480V — 3 Phase

Unit Model Number MPS-	Heater Kit Model No. RXJJ-	Heater kW @ 480V, 3 Phase	Heater Kit FLA	Unit Min. Ckt. Ampacity	Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must Be HACR Type for USA)	Single Point- Power Kit
H07D Low Static Drive	NONE	—	—	21	30	RXJX-AD0605
	DD10DNV	9.6	11.5	21	30	RXJX-AD0605
	DD15DNV	14.4	17.3	27	30	RXJX-AD0605
	DD20DNV	19.2	23.1	34	35	RXJX-AD0605
	DD30DNV	28.8	34.6	49	50	RXJX-AD0605
	DD40DNV	38.4	46.2	63	70	RXJX-AD0605
H07D High Static Drive	NONE	—	—	24	35	RXJX-AD0605
	DD10DNV	9.6	11.5	24	35	RXJX-AD0605
	DD15DNV	14.4	17.3	34	35	RXJX-AD0605
	DD20DNV	19.2	23.1	45	45	RXJX-AD0605
	DD30DNV	28.8	34.6	57	60	RXJX-AD0605
	DD40DNV	38.4	46.2	68	70	RXJX-AD0605
H08D Low Static Drive	NONE	—	—	23	25	RXJX-AD0605
	DD10DNV	9.6	11.5	23	25	RXJX-AD0605
	DD15DNV	14.4	17.3	27	30	RXJX-AD0605
	DD20DNV	19.2	23.1	34	35	RXJX-AD0605
	DD30DNV	28.8	34.6	49	50	RXJX-AD0605
	DD40DNV	38.4	46.2	63	70	RXJX-AD0605
H08D High Static Drive	NONE	—	—	26	30	RXJX-AD0605
	DD10DNV	9.6	11.5	26	30	RXJX-AD0605
	DD15DNV	14.4	17.3	31	35	RXJX-AD0605
	DD20DNV	19.2	23.1	38	40	RXJX-AD0605
	DD30DNV	28.8	34.6	52	60	RXJX-AD0605
	DD40DNV	38.4	46.2	67	70	RXJX-AD0605
H10D Low Static Drive	NONE	—	—	25	30	RXJX-AD0605
	DD10DNV	9.6	11.5	25	30	RXJX-AD0605
	DD15DNV	14.4	17.3	27	30	RXJX-AD0605
	DD20DNV	19.2	23.1	34	35	RXJX-AD0605
	DD30DNV	28.8	34.6	49	50	RXJX-AD0605
	DD40DNV	38.4	46.2	63	70	RXJX-AD0605
H10D High Static Drive	NONE	—	—	28	35	RXJX-AD0605
	DD10DNV	9.6	11.5	28	35	RXJX-AD0605
	DD15DNV	14.4	17.3	31	35	RXJX-AD0605
	DD20DNV	19.2	23.1	38	40	RXJX-AD0605
	DD30DNV	28.8	34.6	52	60	RXJX-AD0605
	DD40DNV	38.4	46.2	67	70	RXJX-AD0605
H12D Low Static Drive	NONE	—	—	33	40	RXJX-AD0609
	DD10DNV	9.6	11.5	33	40	RXJX-AD0609
	DD15DNV	14.4	17.3	33	40	RXJX-AD0609
	DD20DNV	19.2	23.1	38	40	RXJX-AD0609
	DD30DNV	28.8	34.6	52	60	RXJX-AD0609
	DD40DNV	38.4	46.2	67	70	RXJX-AD0609
H12D Medium Static Drive	NONE	—	—	36	45	RXJX-AD0609
	DD10DNV	9.6	11.5	36	45	RXJX-AD0609
	DD15DNV	14.4	17.3	36	45	RXJX-AD0609
	DD20DNV	19.2	23.1	42	45	RXJX-AD0609
	DD30DNV	28.8	34.6	56	60	RXJX-AD0609
	DD40DNV	38.4	46.2	71	80	RXJX-AD0609
015B Low Static Drive	NONE	—	—	38	45	—
	CE20D	19.2	23.1	38	45	—
	CE40D	38.4	46.2	64	70	—
	CE60D	57.6	69.3	93	100	—
	CE75D	72	86.6	114	125	—

NOTE: When selecting a heater for the 7-12 ton D vintage units, you will not be able to operate the electric heat without the corresponding single point power kit.

Unit Model Number MPS-	Heater Kit Model No. RXJJ-	Heater kW @ 480V, 3 Phase	Heater Kit FLA	Unit Min. Ckt. Ampacity	Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must Be HACR Type for USA)	Single Point- Power Kit
015B High Static Drive	NONE	—	—	40	50	—
	CE20D	19.2	23.1	40	50	—
	CE40D	38.4	46.2	67	70	—
	CE60D	57.6	69.3	95	100	—
	CE75D	72	86.6	117	125	—
020B Low Static Drive	NONE	—	—	52	60	—
	CE20D	19.2	23.1	52	60	—
	CE40D	38.4	46.2	67	70	—
	CE60D	57.6	69.3	95	100	—
	CE75D	72	86.6	117	125	—
020B High Static Drive	NONE	—	—	56	70	—
	CE20D	19.2	23.1	56	70	—
	CE40D	38.4	46.2	70	70	—
	CE60D	57.6	69.3	99	100	—
	CE75D	72	86.6	121	125	—
025B Low Static Drive	NONE	—	—	60	70	—
	CE20D	19.2	23.1	60	70	—
	CE40D	38.4	46.2	70	70	—
	CE60D	57.6	69.3	99	100	—
	CE75D	72	86.6	121	125	—
025B High Static Drive	NONE	—	—	63	80	—
	CE20D	19.2	23.1	63	80	—
	CE40D	38.4	46.2	74	80	—
	CE60D	57.6	69.3	103	110	—
	CE75D	72	86.6	124	125	—

NOTE: When selecting a heater for the 7-12 ton D vintage units, you will not be able to operate the electric heat without the corresponding single point power kit.

Table 63: Auxiliary Heater Kits Characteristics and Application: High Efficiency — 480V — 60 Hz — 3 Phase

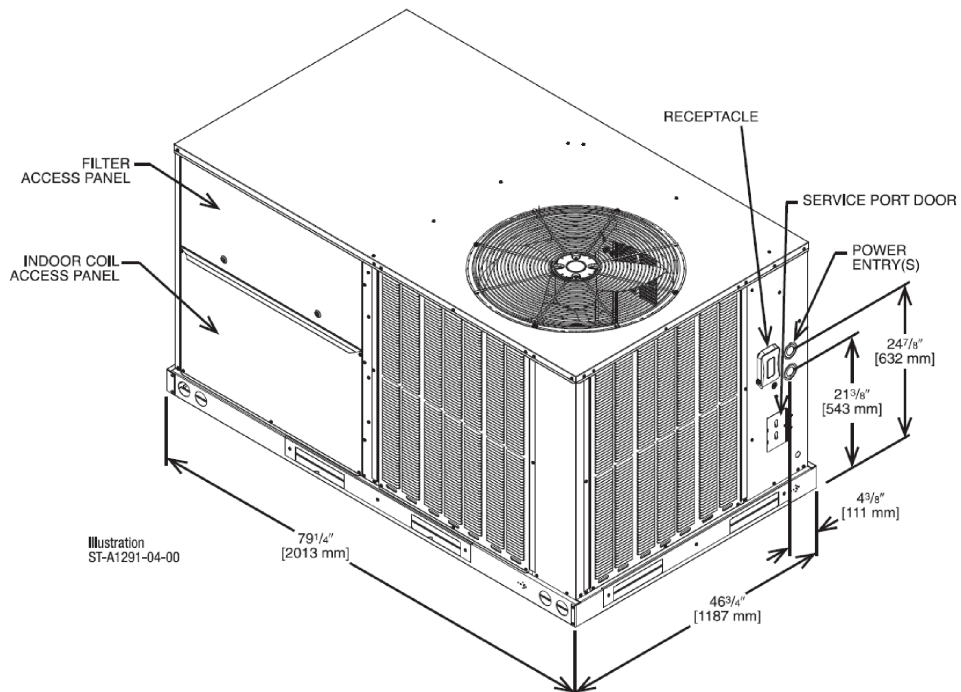
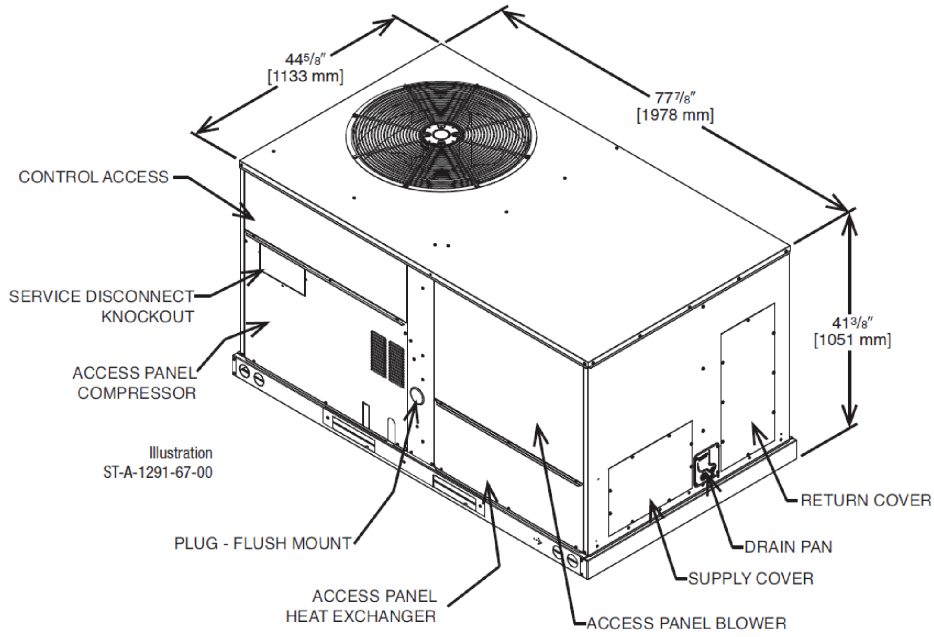
Model	RXJJ Heater Kit Nominal kW	Rated Heater kW @ 480V	Heater Amp. @ 480V	Unit Min. Ckt. Ampacity @ 480V	MOP Min./Max @ 480V
MPSH15 Low Static Drive	CE20D	19.2	23.1	38	45/50
	CE40D	38.4	46.2	64	70/70
	CE60D	57.6	69.3	93	100/100
	CE75D	72	86.6	114	125/125
MPSH15 High Static Drive	CE20D	19.2	23.1	40	45/50
	CE40D	38.4	46.2	67	70/70
	CE60D	57.6	69.3	95	100/100
	CE75D	72	86.6	117	125/125
MPSH20 Low Static Drive	CE20D	19.2	23.1	49	60/60
	CE40D	38.4	46.2	67	70/70
	CE60D	57.6	69.3	95	100/100
	CE75D	72	86.6	117	125/125
MPSH20 High Static Drive	CE20D	19.2	23.1	52	60/60
	CE40D	38.4	46.2	70	70/70
	CE60D	57.6	69.3	99	100/100
	CE75D	72	86.6	121	125/125

Dimensional Data

3–5 Ton Cooling Only Standard and High Efficiency

Figure 17: MPS A03D – A05D Dimensions (Cooling Only)

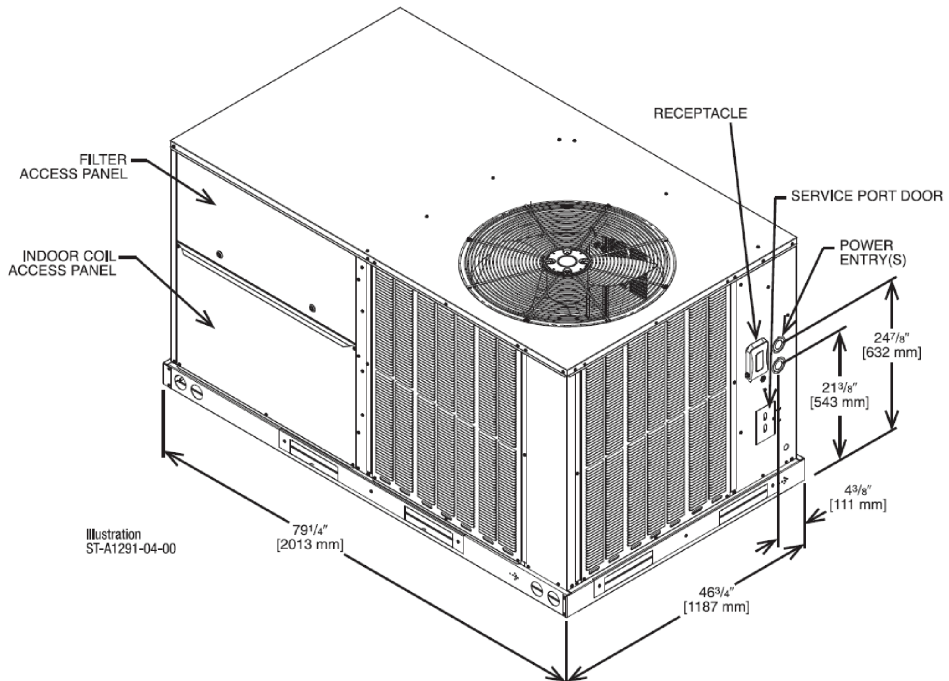
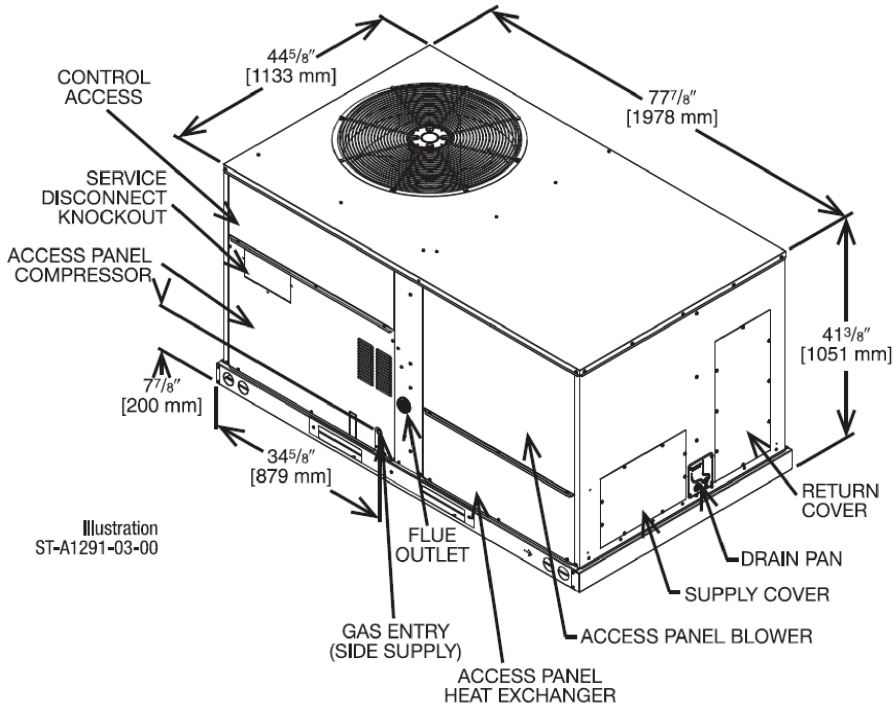
Corner Weights by Percentage			
A	B	C	D
21%	40%	12%	27%



3–5 Ton Gas Heat Standard and High Efficiency

Figure 18: MPS A03D – A05D Dimensions (Gas Heat)

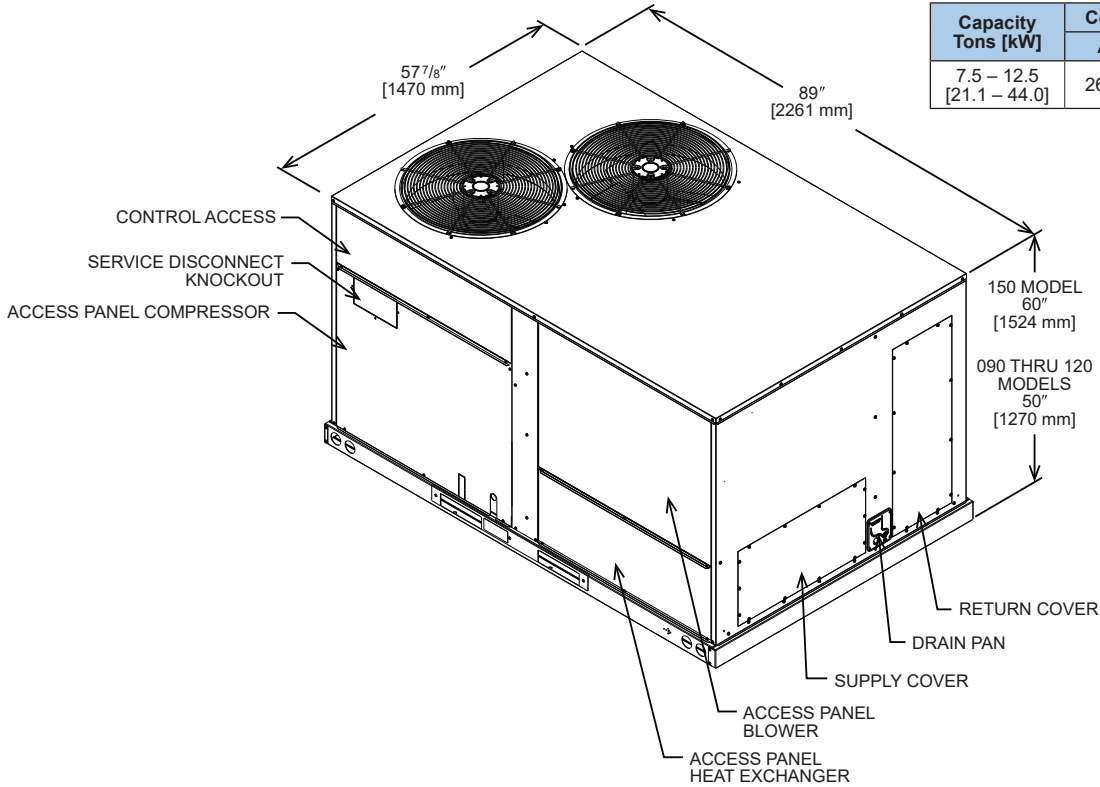
Corner Weights by Percentage			
A	B	C	D
21%	40%	12%	27%



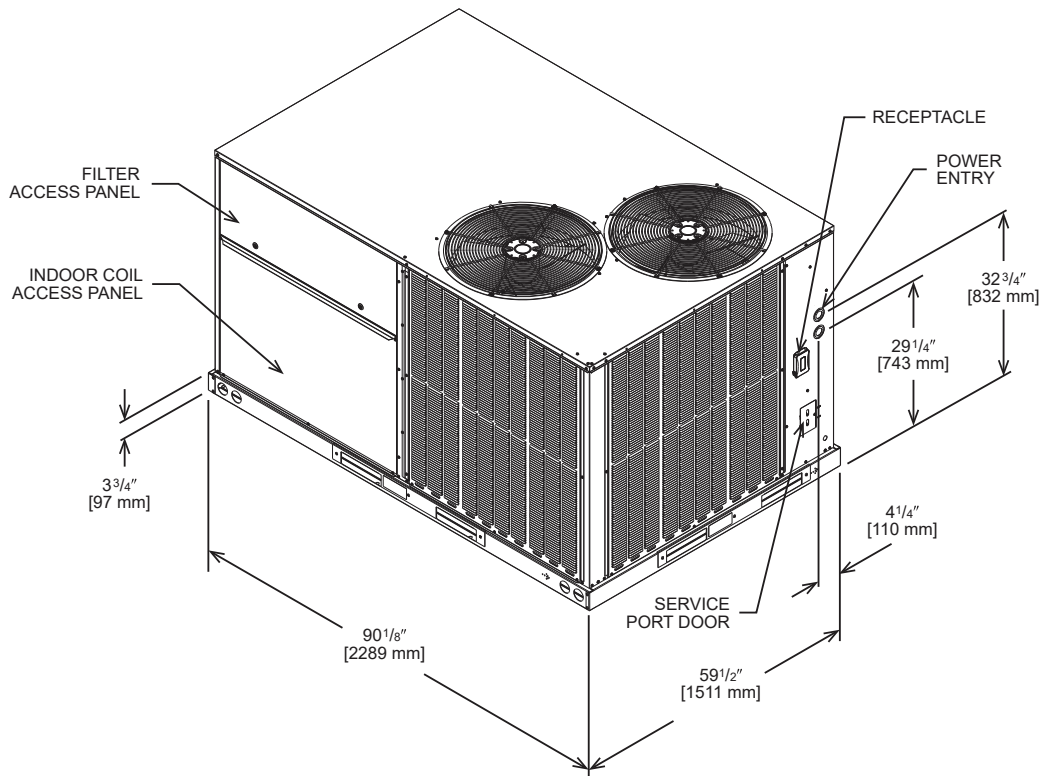
7-12 Ton Cooling Only Standard Efficiency

Figure 19: MPS H07D – H12D Dimensions (Cooling Only)

Capacity Tons [kW]	Corner Weights by Percentage			
	A	B	C	D
7.5 – 12.5 [21.1 – 44.0]	26%	34%	17%	23%



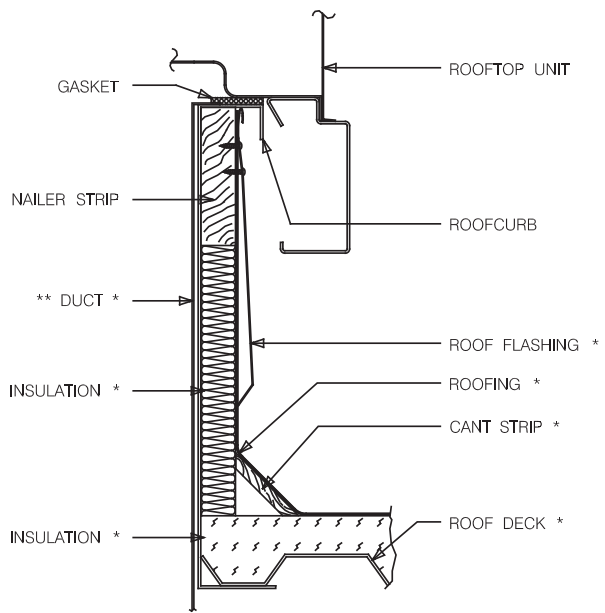
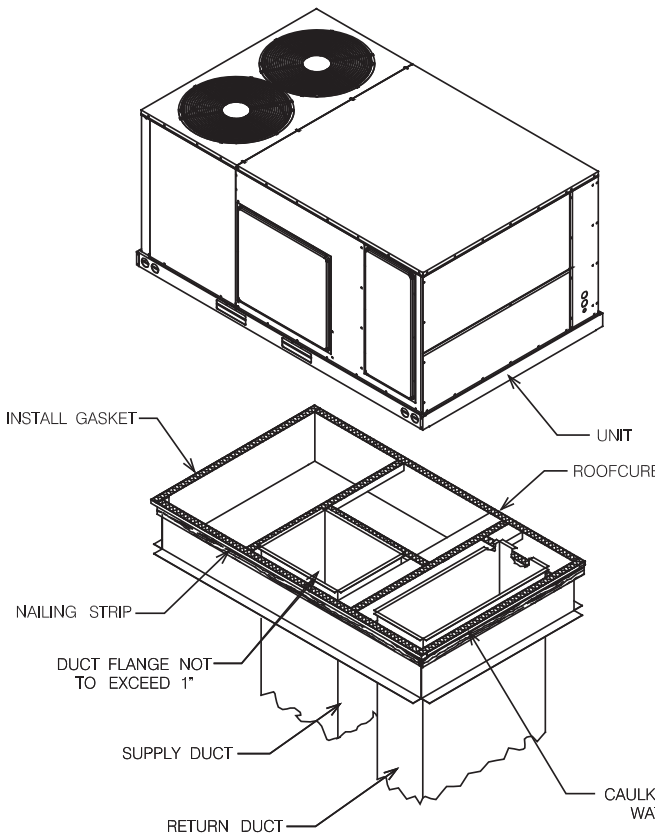
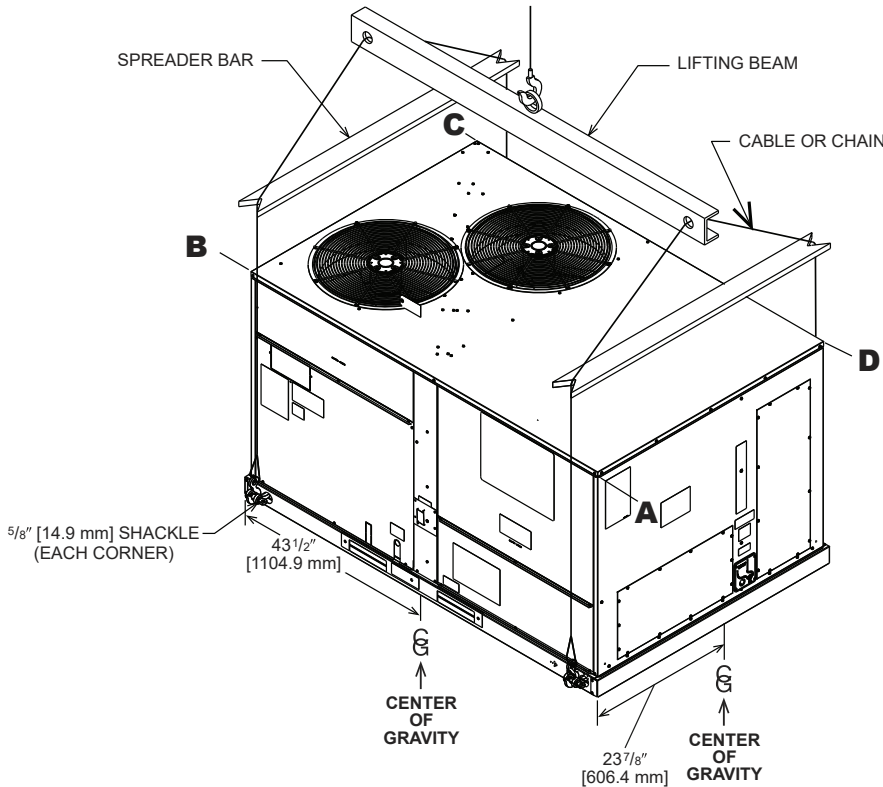
[] Designates Metric Conversions



7-12 Ton Gas Heat Standard Efficiency

Figure 20: MPS H07D – H12D Dimensions

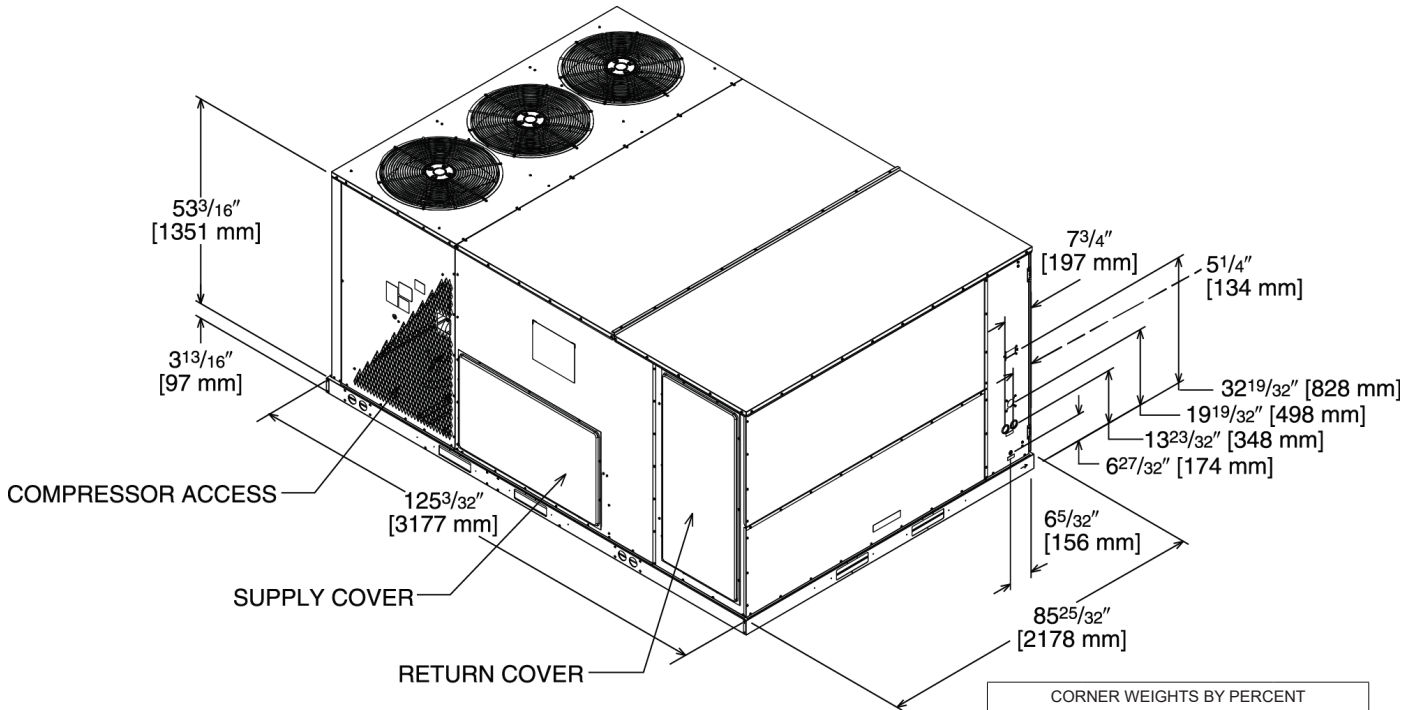
Capacity Tons [kW]	Corner Weights by Percentage			
	A	B	C	D
7.5 – 12.5 [21.1 – 44.0]	26%	34%	17%	23%



* BY CONTRACTOR
 ** FOR INSTALLATION OF DUCT AS SHOWN, USE RECOMMENDED DUCT SIZES FROM ROOFCURB INSTALLATION INSTRUCTIONS. FOR DUCT FLANGE ATTACHMENT TO UNIT, SEE UNIT INSTALLATION INSTRUCTIONS FOR RECOMMENDED DUCT SIZES.

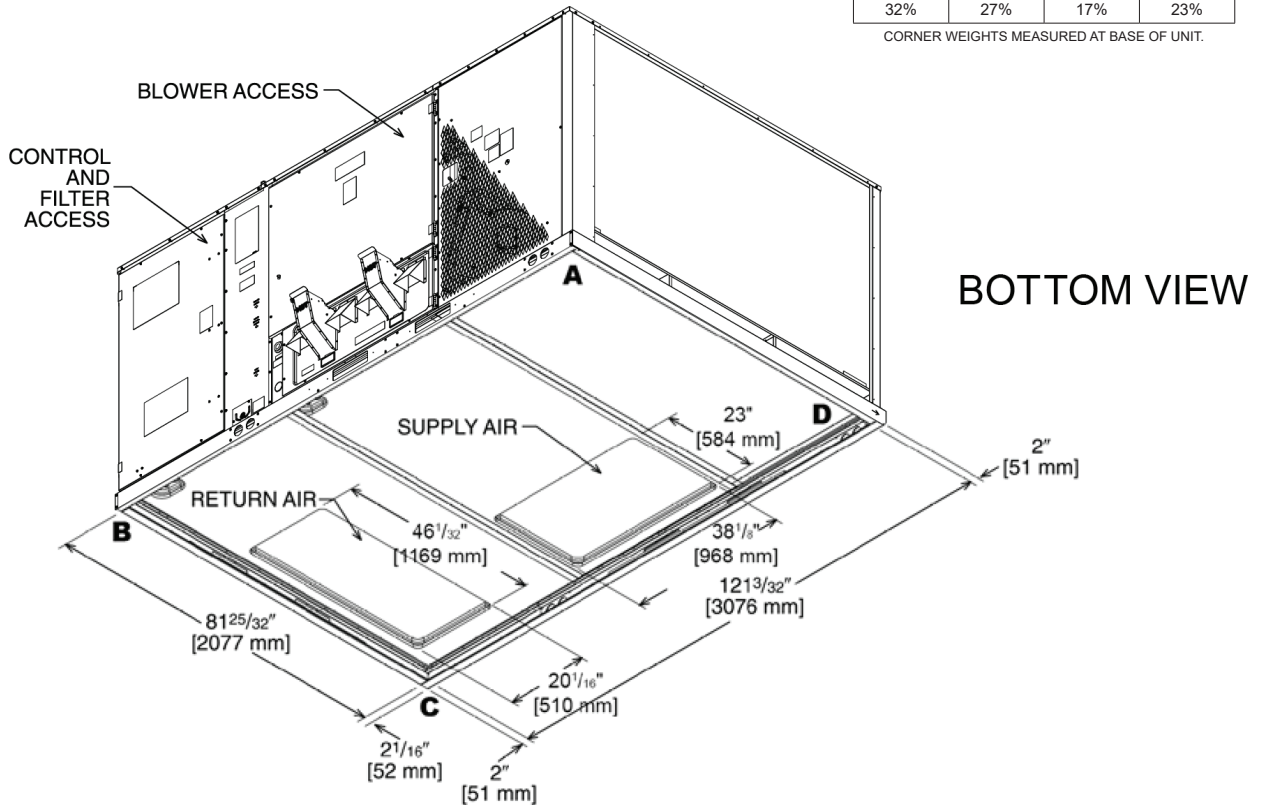
15 Ton Gas Heat High Efficiency

Figure 21: MPS 15B Dimensions (Gas Heat)



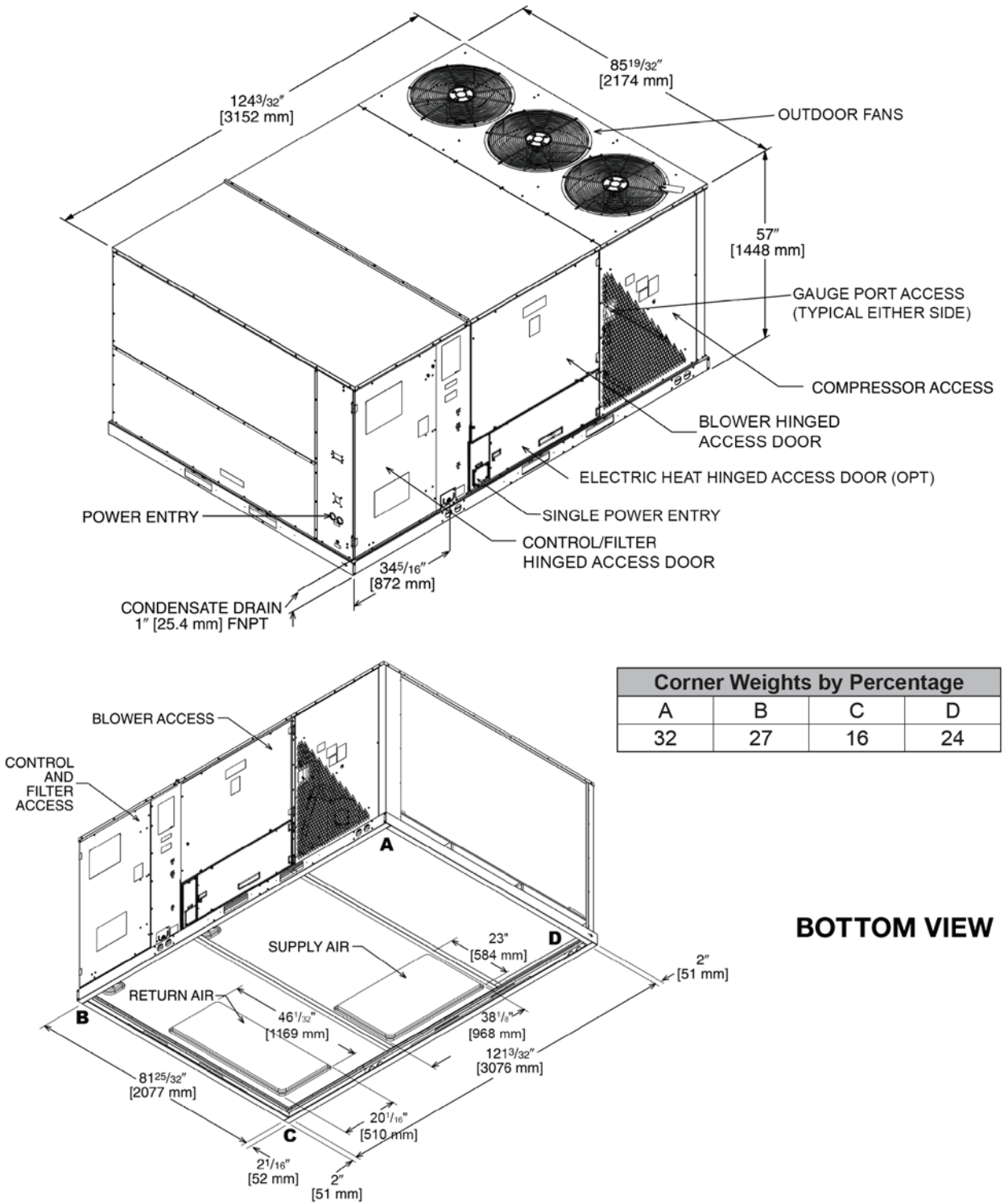
CORNER WEIGHTS BY PERCENT			
A	B	C	D
32%	27%	17%	23%

CORNER WEIGHTS MEASURED AT BASE OF UNIT.



[] Designates Metric Conversions

Figure 22: MPS 015H Dimensions (Cooling Only, High Efficiency)



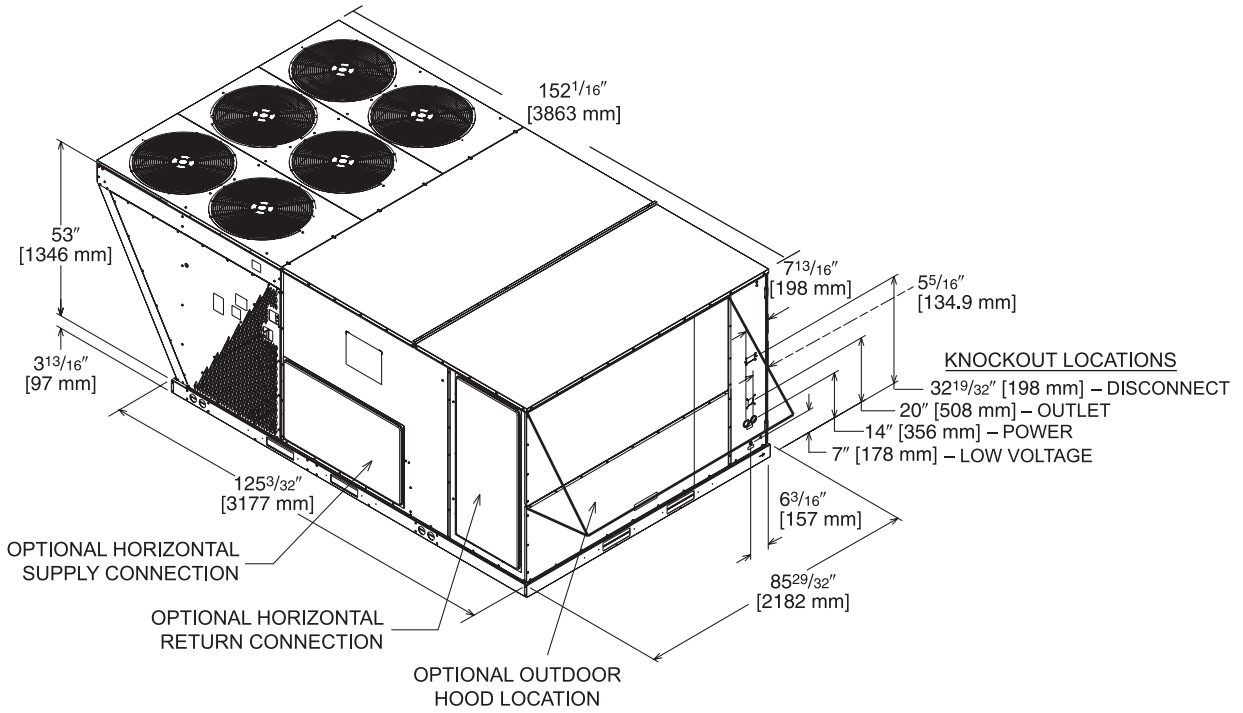
Corner Weights by Percentage			
A	B	C	D
32	27	16	24

BOTTOM VIEW

[] Designates Metric Conversions

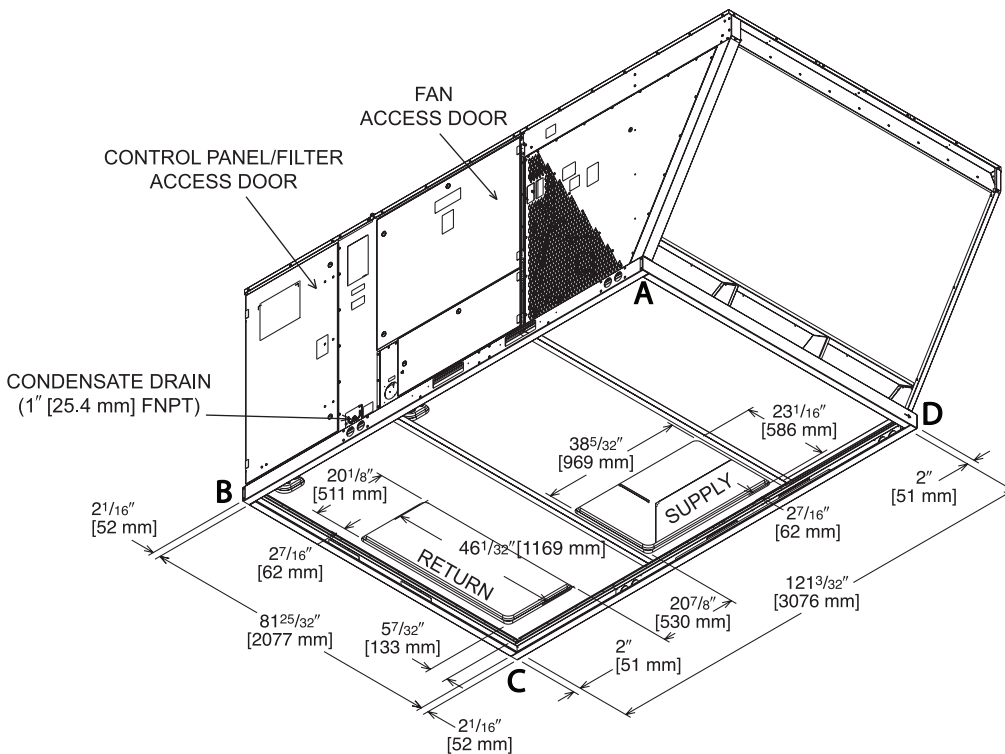
15–25 Ton Cooling Only Standard Efficiency and 20 Ton High Efficiency

Figure 23: MPS 0015B – 025B Dimensions (Cooling Only)



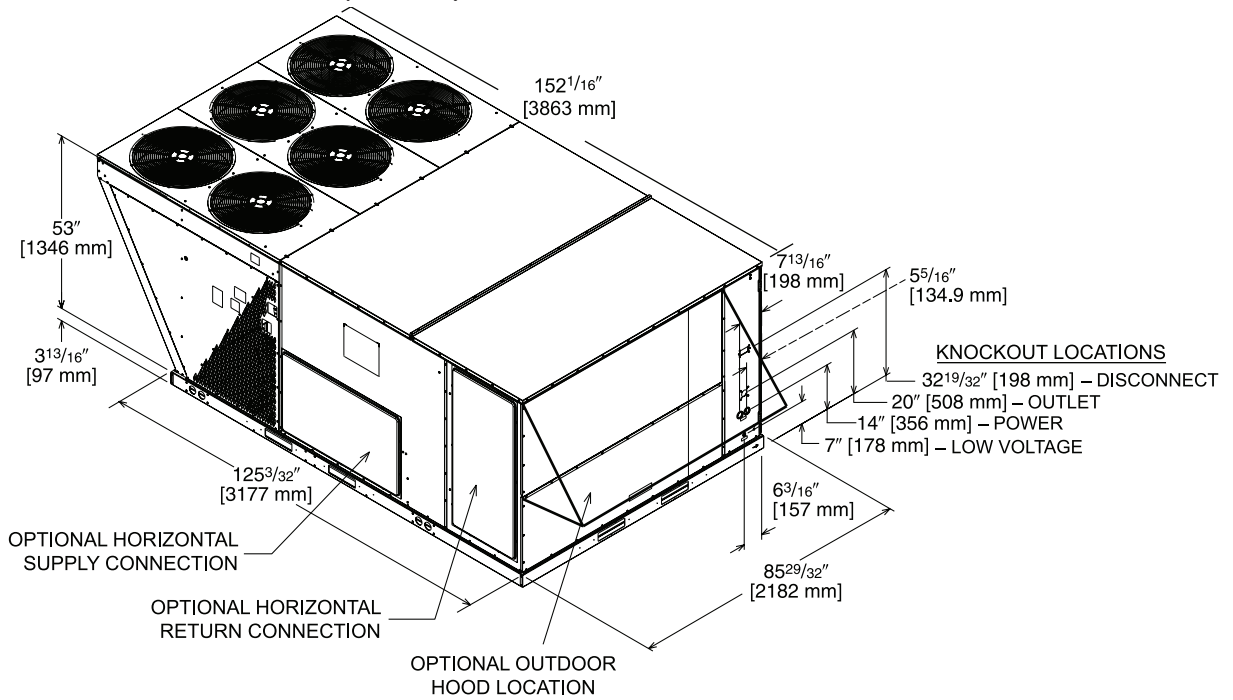
CORNER WEIGHTS BY PERCENTAGE			
A	B	C	D
32%	27%	16%	24%

CORNER WEIGHTS MEASURED AT BASE OF UNIT.



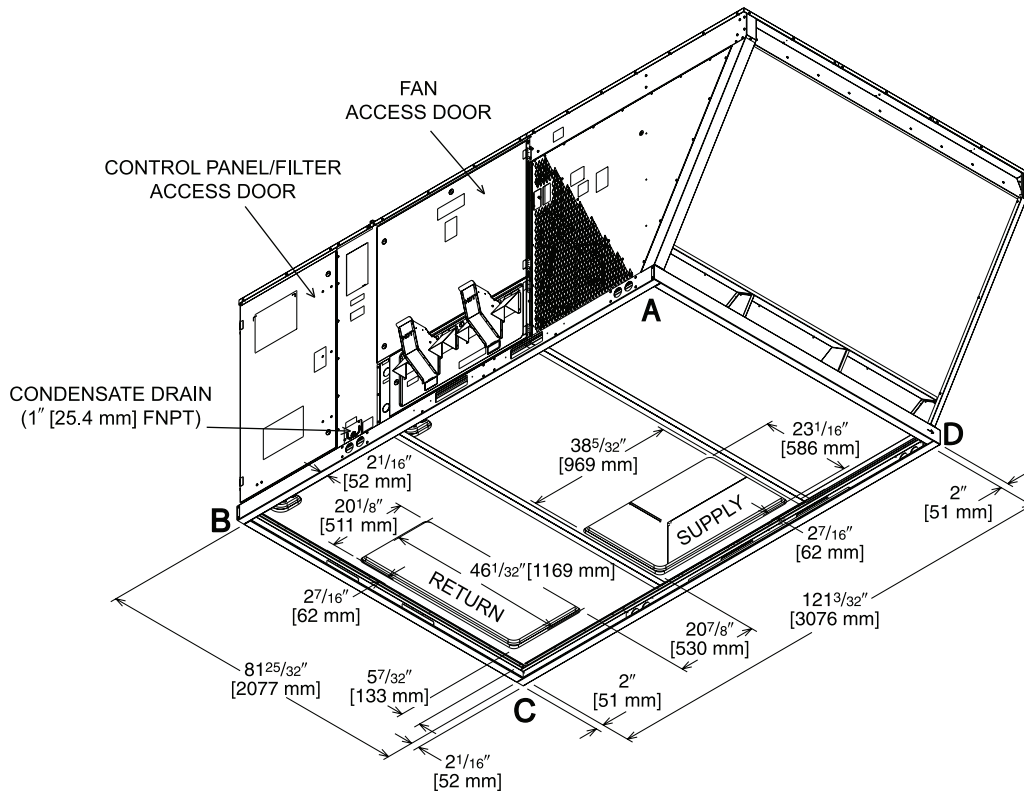
15–25 Ton Gas Heat Standard Efficiency and 20 Ton High Efficiency

Figure 24: MPS 015B – 025B Dimensions (Gas Heat)



CORNER WEIGHTS BY PERCENTAGE			
A	B	C	D
32%	27%	16%	24%

CORNER WEIGHTS MEASURED AT BASE OF UNIT.



Through-the-Base Knockout Locations

Figure 25: MPS H07D – H12D Through-the-Base Knockout Locations (Standard Efficiency)

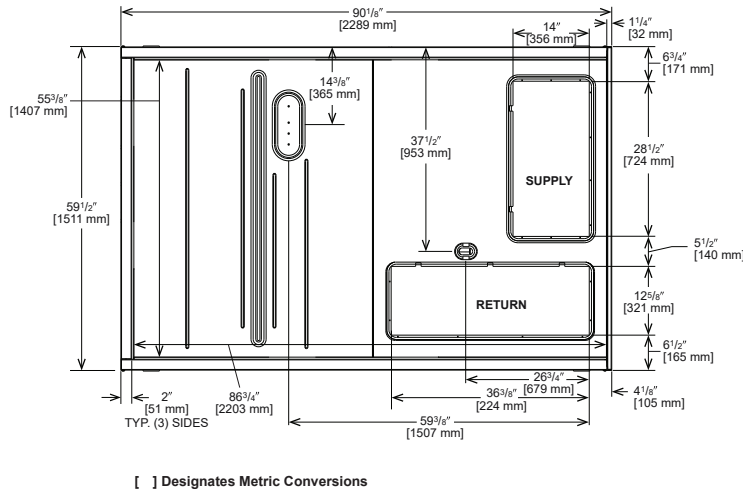


Figure 26: MPS 015B Through-the-Base Knockout Locations (High Efficiency)

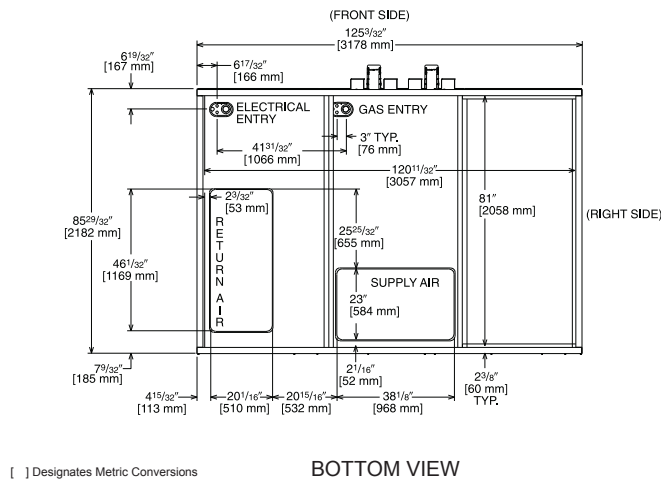
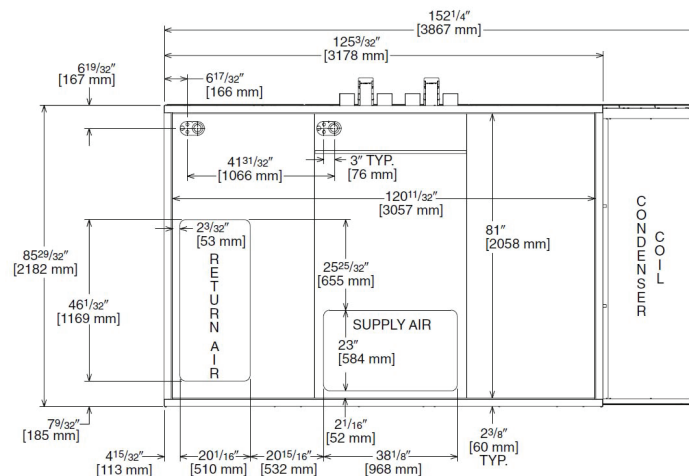


Figure 27: MPS 015B – 025B Through the Base Knockout Locations (15–25 Ton Standard Efficiency and 20 Ton High Efficiency)



Horizontal Duct Dimensions

Figure 28: MPS (O, A, H) 03 (C, D) through (O, A, H) 05 (C, D) Horizontal Duct Dimensions (Standard and High Efficiency)

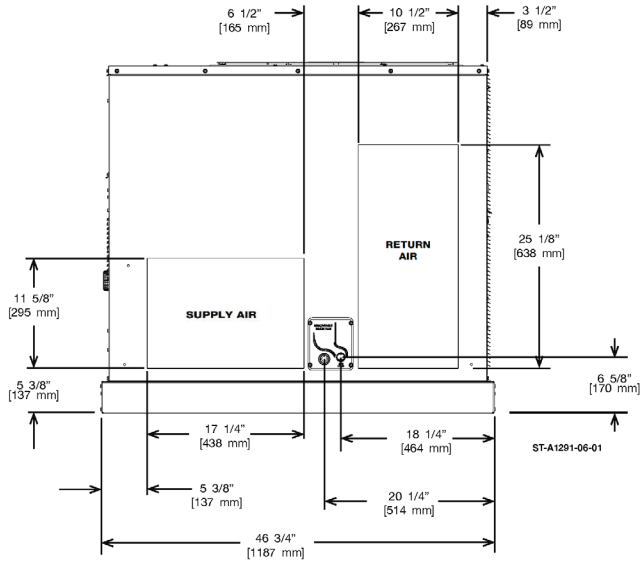
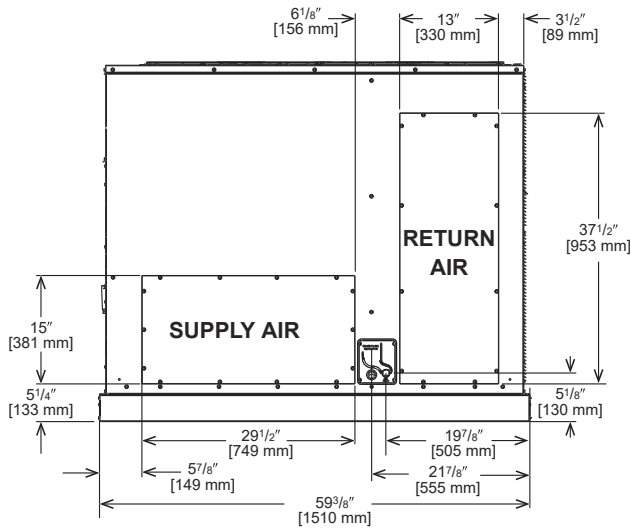


Figure 29: MPS H07D – H12D Horizontal Duct Dimensions (Standard Efficiency)



[] Designates Metric Conversions

Figure 30: MPS 015B Horizontal Duct Dimensions (High Efficiency)

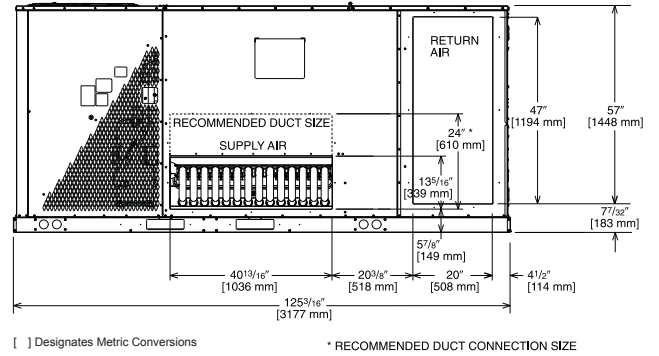
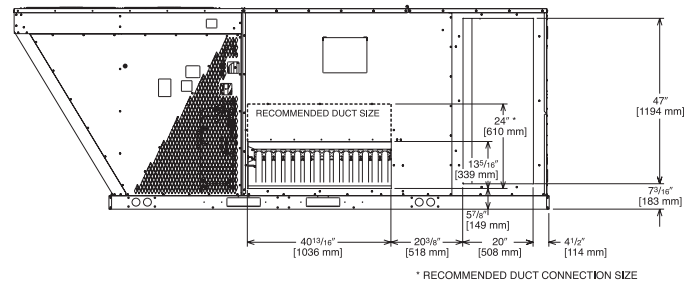


Figure 31: MPS 015B – 025B Horizontal Duct Dimensions (Standard Efficiency and 20 Ton High Efficiency)



Curb Dimensions

Figure 32: MPS (O, A, H) 03 (B, C) Curb Dimensions (Standard and High Efficiency)

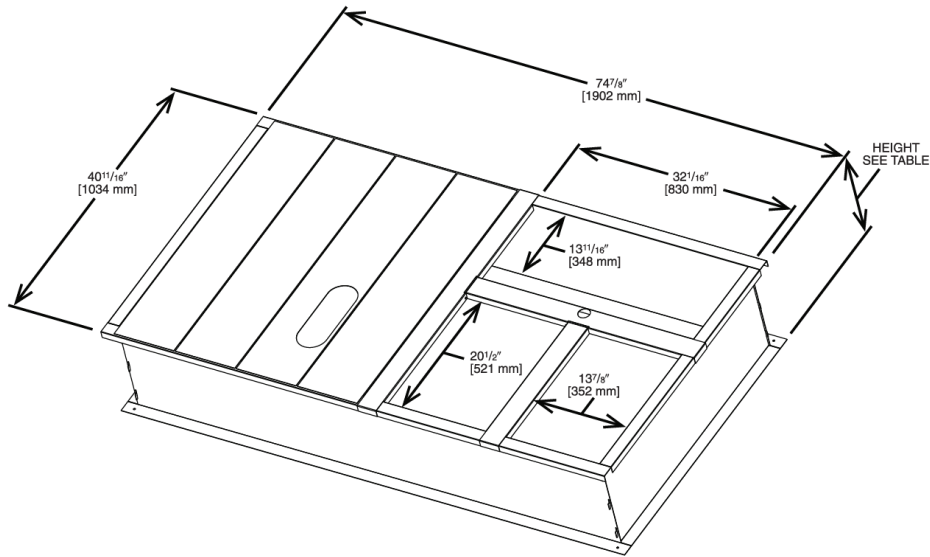


Figure 33: MPS H07D – H12D Curb Dimensions (Standard Efficiency)

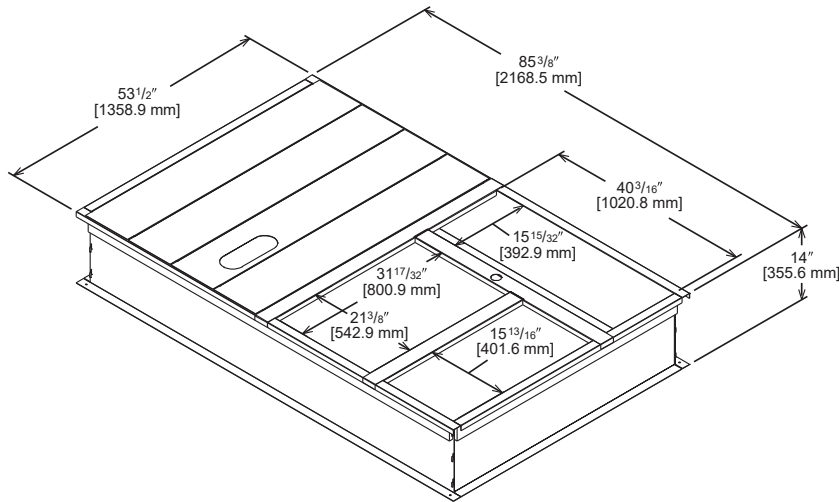
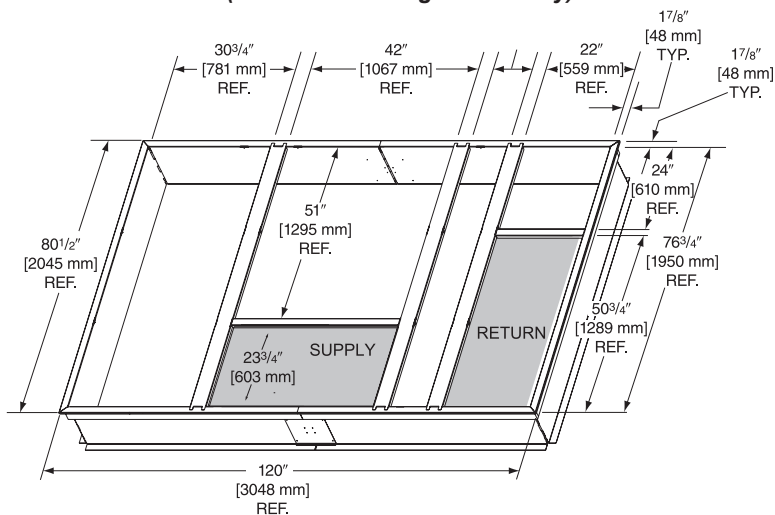


Figure 34: MPS 015B – 025B Curb Dimensions (Standard and High Efficiency)



Accessories

Table 64: Accessory Weights

Accessory	Daikin Part Number	Shipping Weight lbs (kg)	Operating Weight lbs (kg)
Economizer, Analog Controls, 3–5 ton, Vert/Horiz	MXRD-01RECAM3	70 (32)	60 (27)
Economizer, Analog Controls, 7–12 ton, Vertical	RXRD-01MDDAM3	84 (39)	57 (26)
Economizer, Analog Controls, 7–12 ton, Horizontal	RXRD-01MDHBM3	84 (38)	55 (25)
Economizer, Analog Controls, 15–25 ton, Vertical	MXRD-PGCM3	155 (70)	146 (66)
Economizer, Analog Controls, 15–25 ton, Horizontal	MXRD-RGCM3	155 (70)	146 (66)
Economizer, DDC Controls, 3–5 ton, Vert/Horiz	MXRD-TKCM3	70 (32)	60 (27)
Economizer, DDC Controls, 7–12 ton, Vertical	RXRD-01MDDBM3	86 (39)	57 (26)
Economizer, DDC Controls, 7–12 ton, Horizontal	RXRD-01MDHBM3	84 (38)	55 (25)
Economizer, DDC Controls, 15–25 ton, Vertical	MXRD-PMCM3	155 (70)	146 (66)
Economizer, DDC Controls, 15–25 ton, Horizontal	MXRD-RMCM3	155 (70)	146 (66)
OA damper, 3–5 ton, Manual	MXRF-FGA1	11 (5)	9 (4)
OA damper, Analog Controls, 3–5 ton, Motorized	MXRF-FGB1	13 (6)	11 (5)
OA damper, 7–12 ton, Manual	RXRF-ADA1	15 (6.8)	12 (5.4)
OA damper, Analog Controls, 7–12 ton, Motorized	RXRF-ADB1	38 (17.2)	31 (14.1)
OA damper, DDC Controls, 7–12 ton, Motorized	RXRF-ADC1	38 (17.2)	31 (14.1)
OA damper, 15–25 ton, Manual	MXRF-KFA1	46 (21)	35 (16)
OA damper, DDC Controls, 15–25 ton, Motorized	MXRF-AW05	51 (23)	40 (18)
Power Exhaust Kit, 3–5 Ton 208/230V	MXRX-BGF06C	70 (32)	60 (27)
Power Exhaust Kit, 3–5 Ton 460V	MXRX-BGF06D	70 (32)	60 (27)
Power Exhaust Kit, 7–12 Ton 208/230V	RXRX-CDF01C	58 (26)	48 (22)
Power Exhaust Kit, 7–12 Ton 460V	RXRX-CDF01D	50 (23)	44 (20)
Power Exhaust Kit, 15–25 Ton 208/230V	RXRX-BGF05C	44 (20)	42 (19)
Power Exhaust Kit, 15–25 Ton 460V	RXRX-BGF05D	44 (20)	42 (19)
Power Exhaust Kit, 15–25 Ton 575V	RXRX-BGF05Y	44 (20)	42 (19)
14" Roof Curb, 3–5 Ton	RXKG-CBH14	92 (42)	88 (40)
14" Roof Curb, 7–12 Ton	RXKG-DDD14	109 (49)	104 (47)
14" Roof Curb, 15–25 Ton	RXKG-CAE14	170 (77)	164 (74)
Receptacle Outlet	RXRX-AN01	N/A	N/A
Thermostat Guard	113130101	N/A	N/A
7-Day Programmable Stat	113129901	N/A	N/A
Ionization Smoke Detector	113126601	N/A	N/A
CO ₂ Sensor	RXRX-AR02	N/A	N/A
Dual Enthalpy Kit	RXRX-AV02	N/A	N/A

Fresh Air Dampers

Fresh Air Damper Kits for 3–5 Ton Units

Figure 35: Manual Damper Kit (Downflow): MPS A03D – A05D

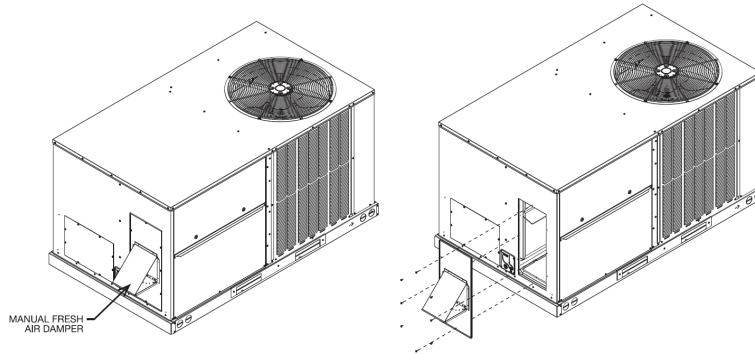


Figure 36: Manual Damper Kit (Horizontal): MPS A03D – A05D

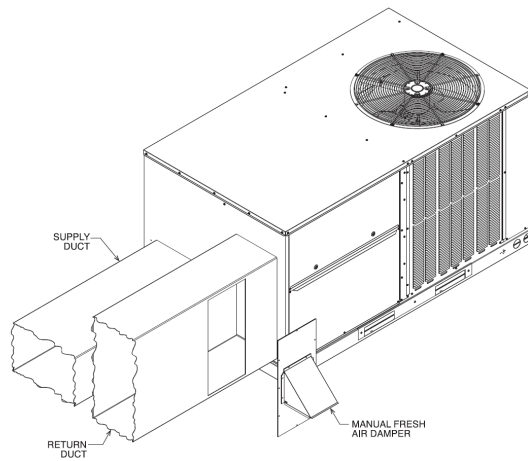
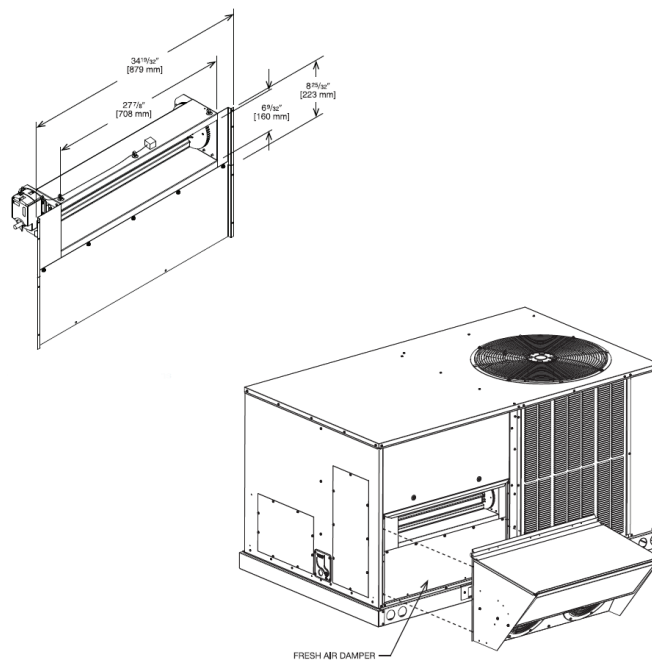


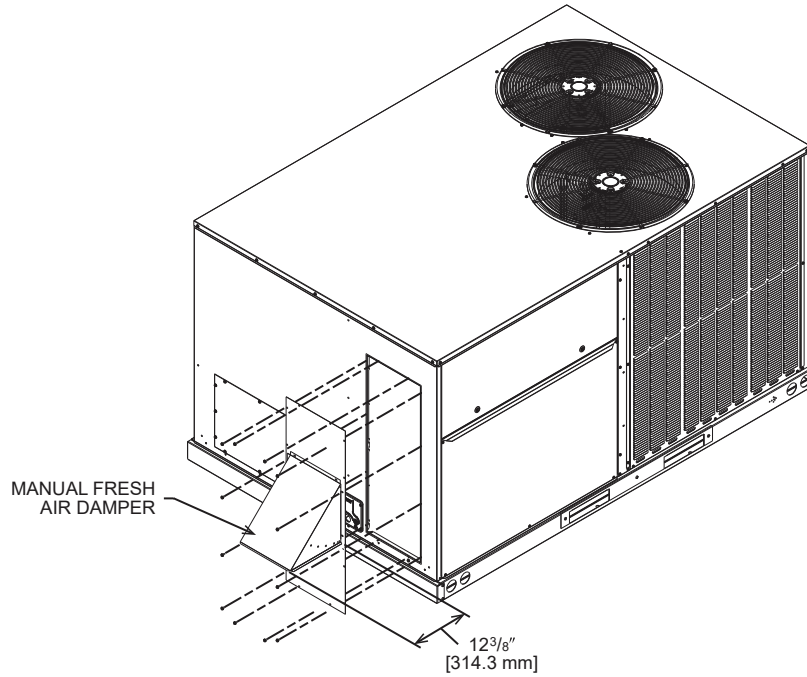
Figure 37: Motorized Damper Kit: MPS A03D – A05D



Fresh Air Damper Kit for 7–12 Ton Units

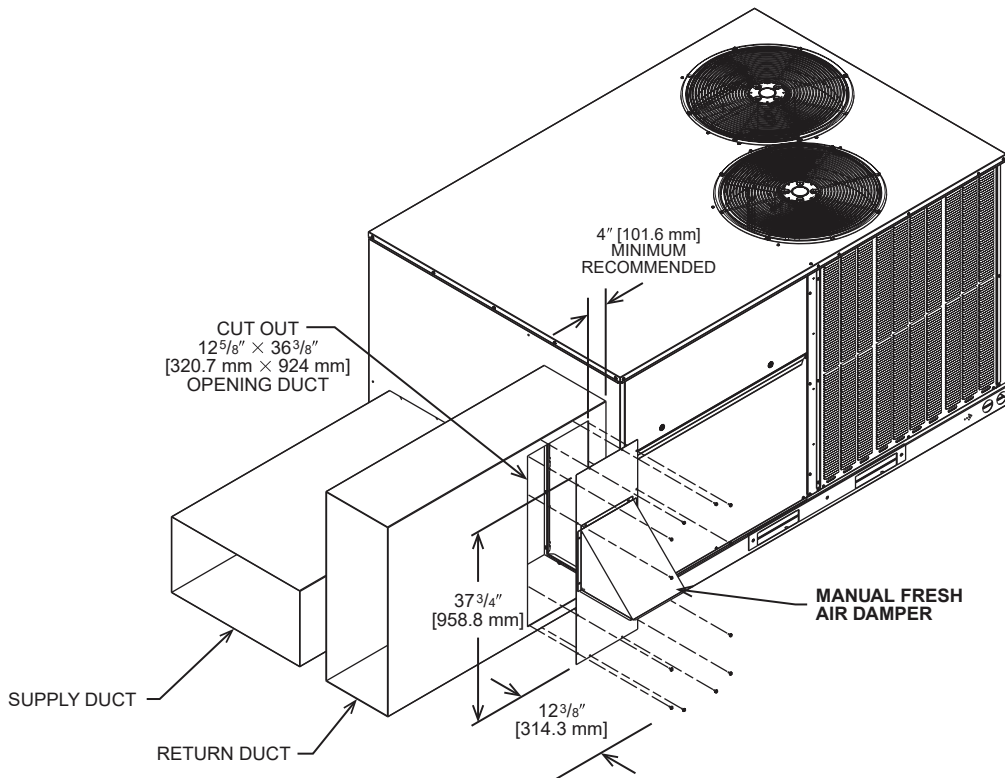
Figure 38: Downflow and Horizontal Application: MPS H07D – H12D

DOWNFLOW APPLICATION



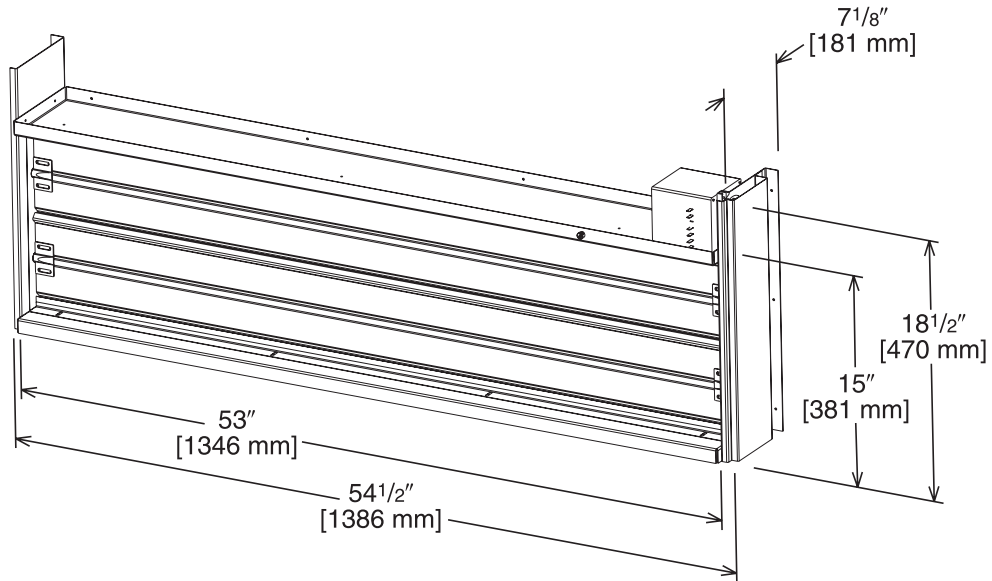
[] Designates Metric Conversions

HORIZONTAL APPLICATION



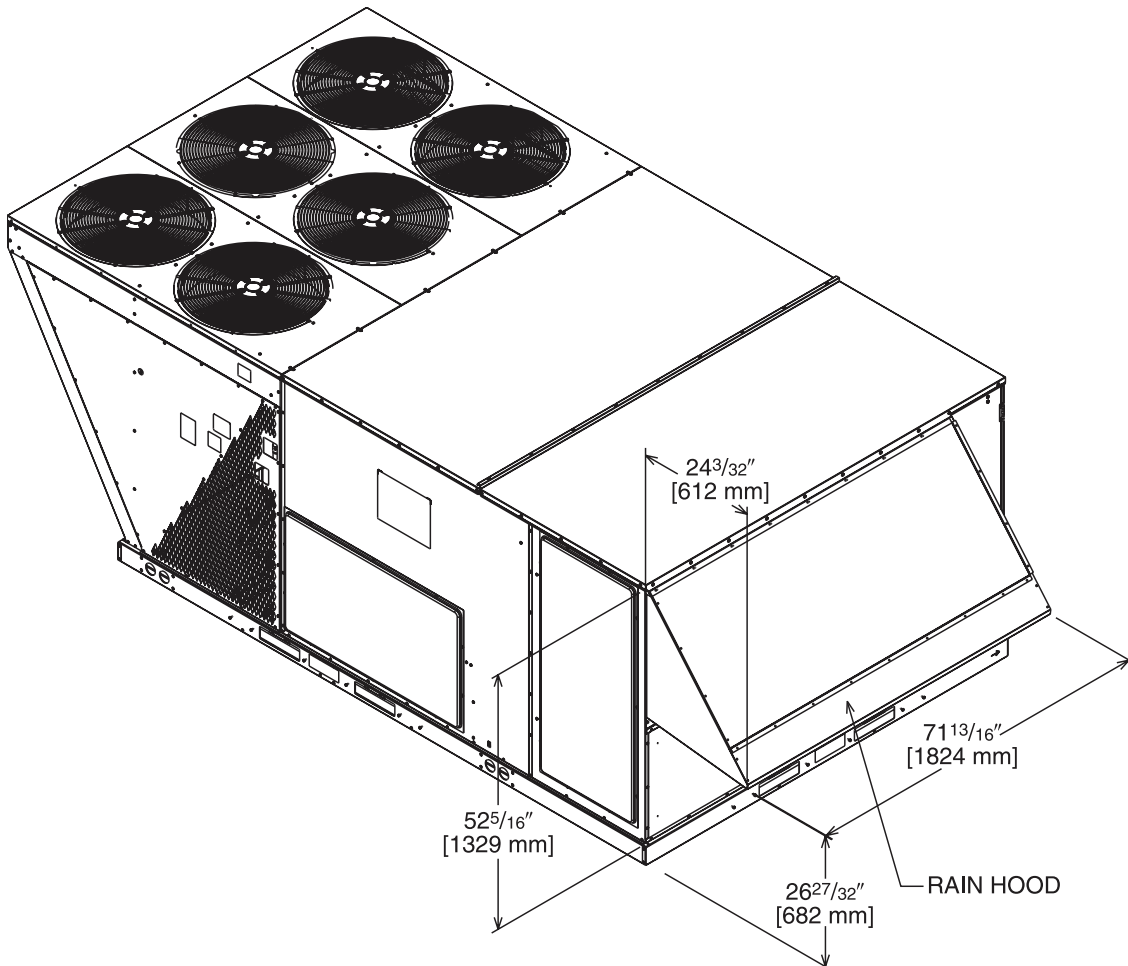
Fresh Air Damper Kit for 15–25 Ton Units

Figure 39: Damper Kit: MPS 015B – 025B



NOTE: Outdoor air hood must also be ordered with this kit

Figure 40: Outdoor Air Hood: MPS 015B – 025B



Economizers

Economizers: 3–5 Tons

- Features economizer controller
- Pre-configured—no field adjustments necessary
- Available factory installed or field accessory
- Standard barometric relief damper provided
- Gear driven direct drive actuator
- Single enthalpy with dual enthalpy upgrade kit
- Fully modulating (0-100%)
- CO₂ input sensor available (field installed)
- Low leakage dampers
- Economizer slips in complete for downflow or horizontal
- Horizontal or downflow applications duct application
- Slip-in design for easy installations
- Field assembled hood ships with economizer
- Plug-in polarized electrical connections
- Field installed power exhaust available

Figure 41: Economizer (Downflow): MPS A03D – A05D

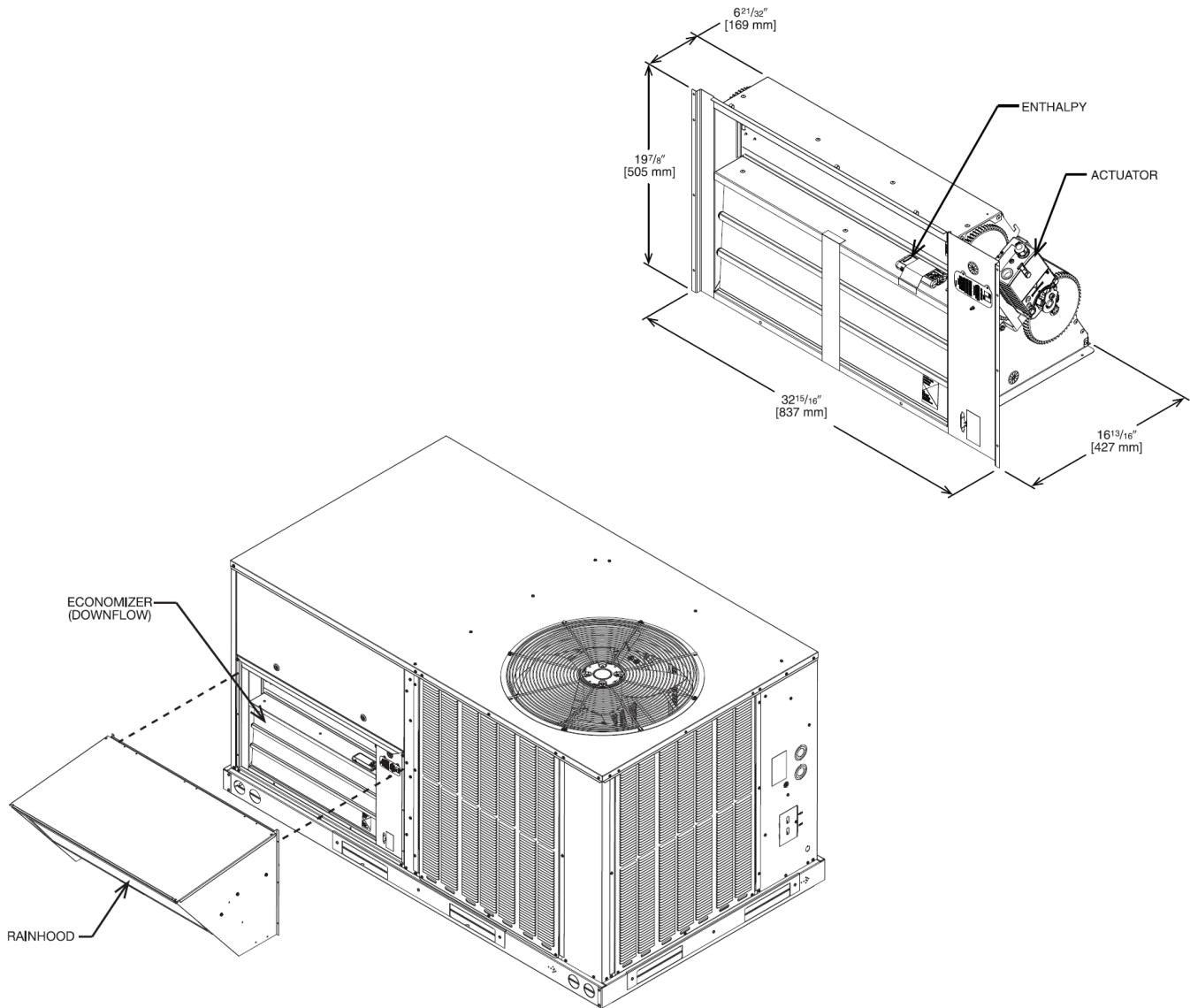
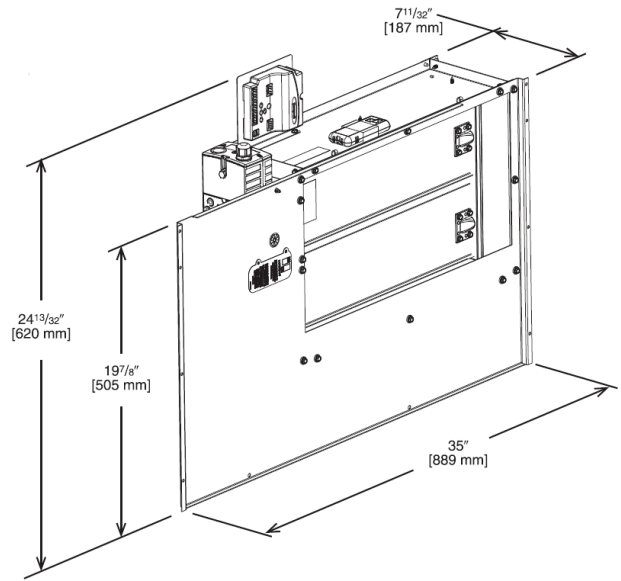
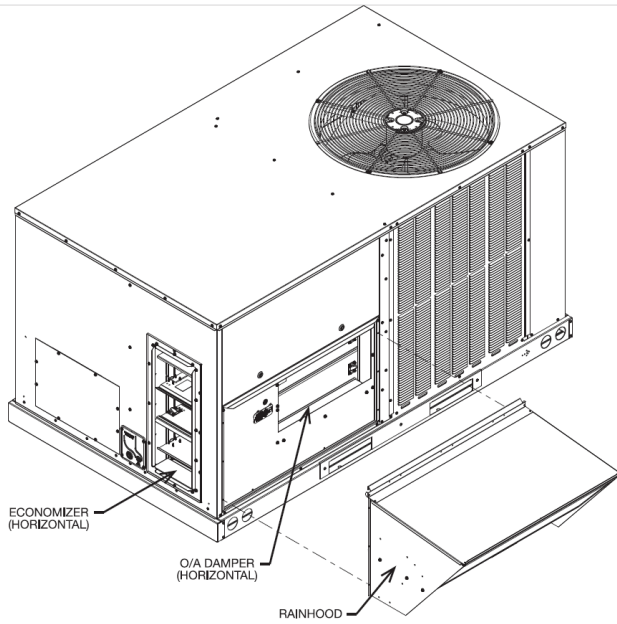


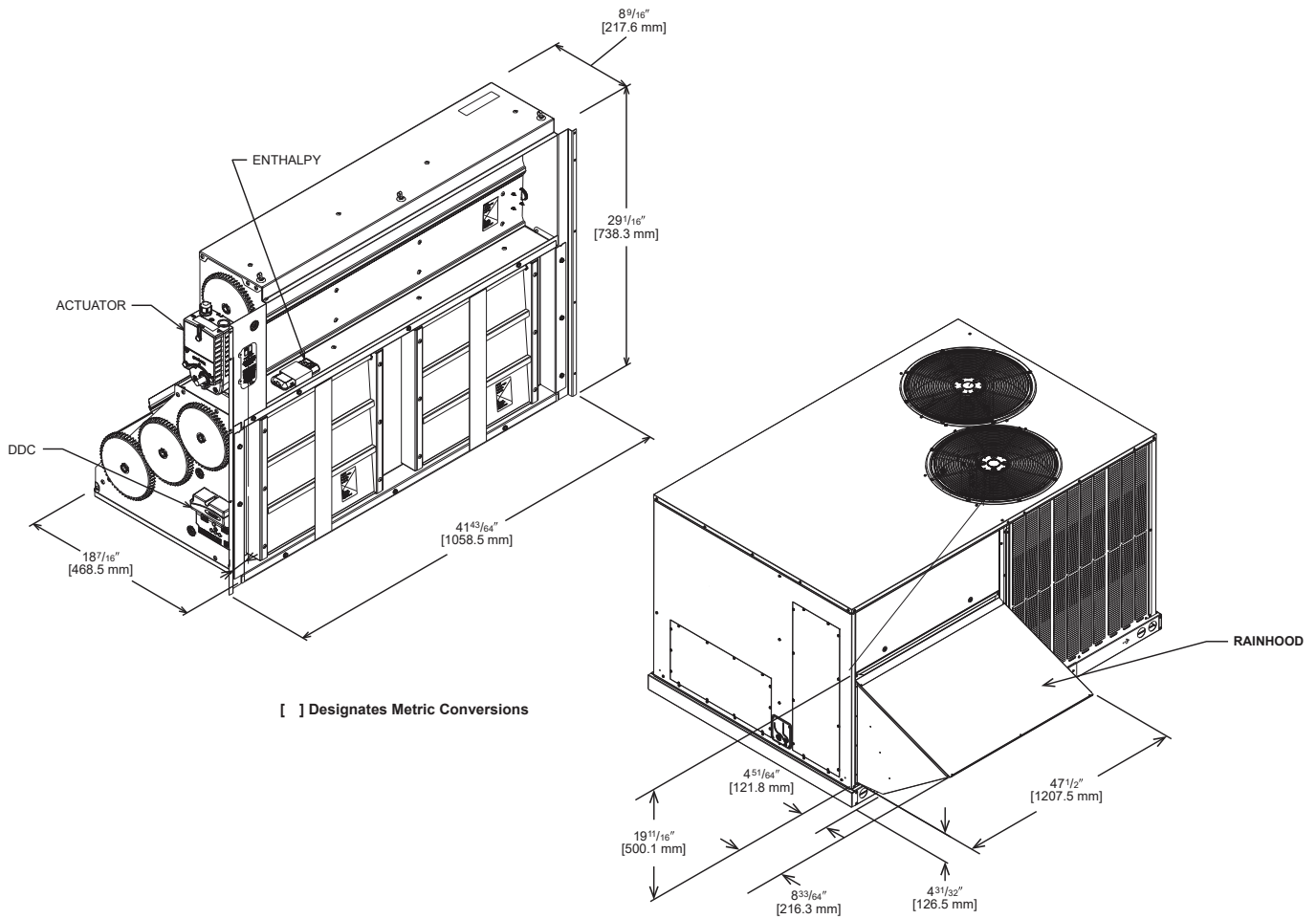
Figure 42: Economizer (Horizontal): MPS A03D – A05D



Economizers: 7–12 Tons

- Features Honeywell controls
- Available factory installed or field accessory
- Gear driven direct drive actuator
- Fully modulating (0–100%)
- Ultra low leak dampers meet California Title 24 requirements
- Slip-in design for easy installation
- Standard barometric relief damper
- Single enthalpy
- CO₂ input sensor available
- Field assembled hood ships with economizer
- Economizer ships complete for downflow duct application
- Field installed power exhaust available
- Prewired for smoke detector
- If connected to a Building Automation System (BAS), all economizer functions can be viewed on the (BAS), or 16 × 2 LCD screen
- If connected to thermostat, all economizer functions can be viewed on 16 × 2 LCD screen

Figure 43: Economizer: MPS H07D – H12D

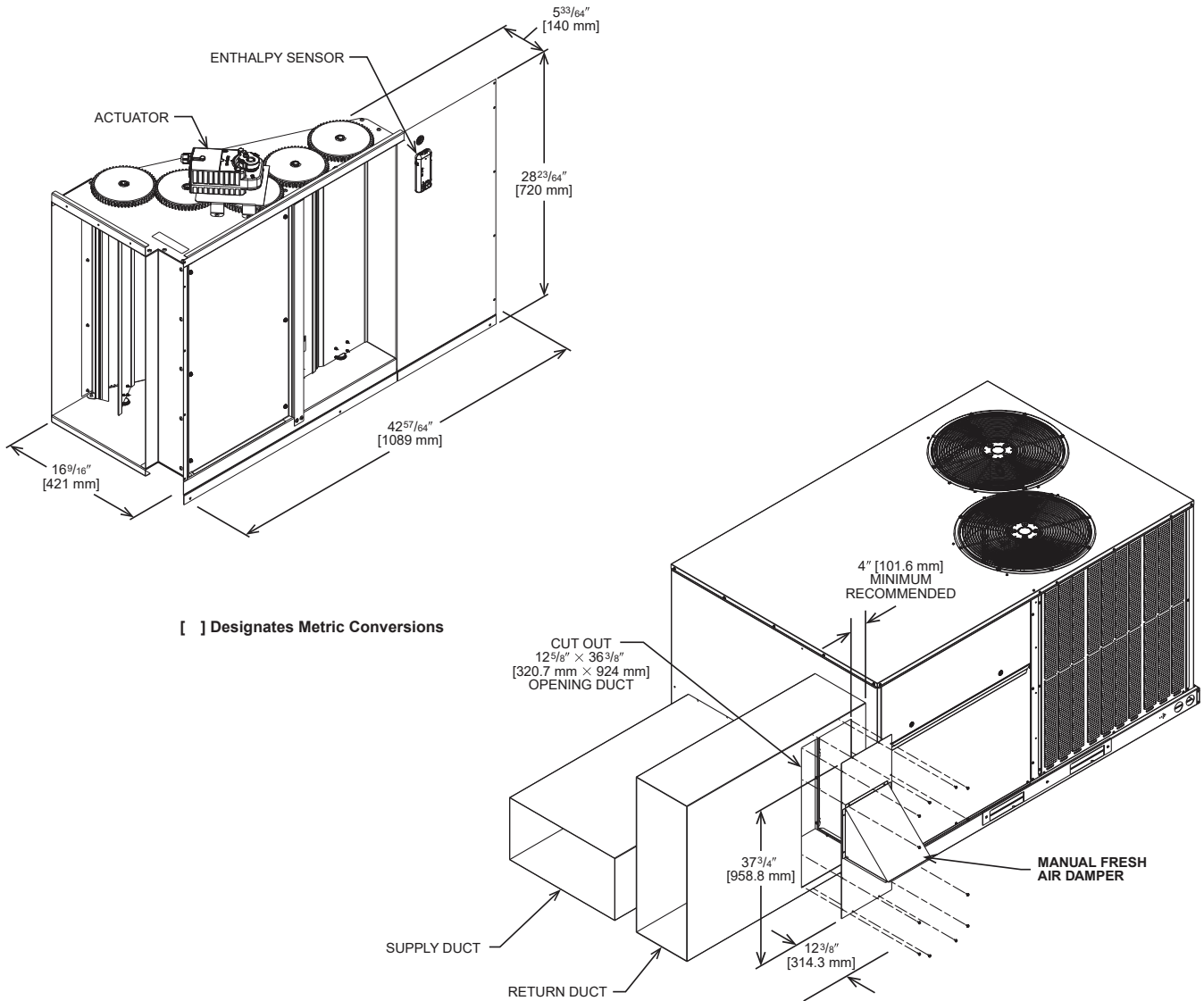


Horizontal Duct Installation

Economizers: 7–12 Tons

- Features Honeywell controls
- Available as a field installed accessory only
- Gear driven direct drive actuator
- Fully modulating (0–100%)
- Ultra low leak dampers meet California Title 24 requirements
- Slip-in design for easy installation
- Standard barometric relief damper
- Single enthalpy
- CO₂ input sensor available
- Field assembled hood ships with economizer
- Economizer ships complete for horizontal duct application
- Field installed power exhaust available
- If connected to a Building Automation System (BAS), all economizer functions can be viewed on the (BAS), or 16 × 2 LCD screen
- If connected to thermostat, all economizer functions can be viewed on 16 × 2 LCD screen

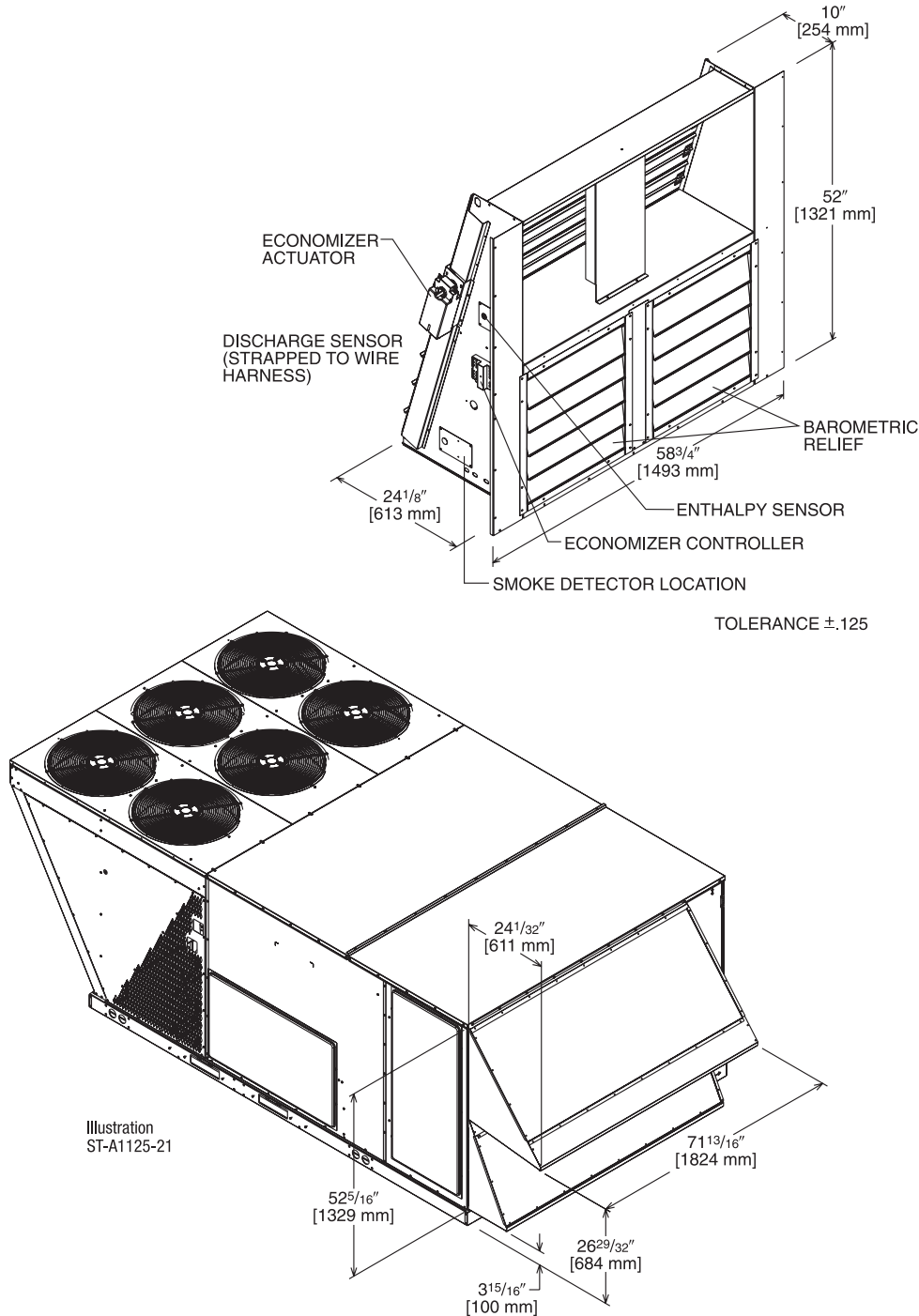
Figure 44: Economizer: MPS H07D – H12D



Economizers: 15–25 Tons

- Features economizer controller
- Available factory installed or field accessory
- Gear driven direct drive actuator
- Fully modulating (0-100%)
- Low leakage dampers
- Slip-in design for easy installation
- Plug-in polarized electrical connections
- Pre-configured—no field adjustments necessary
- Standard barometric relief damper
- Single enthalpy with dual enthalpy upgrade kit available
- CO₂ input sensor available
- Field assembled hood ships with economizer
- Economizer ships complete for downflow duct application
- Field installed power exhaust available

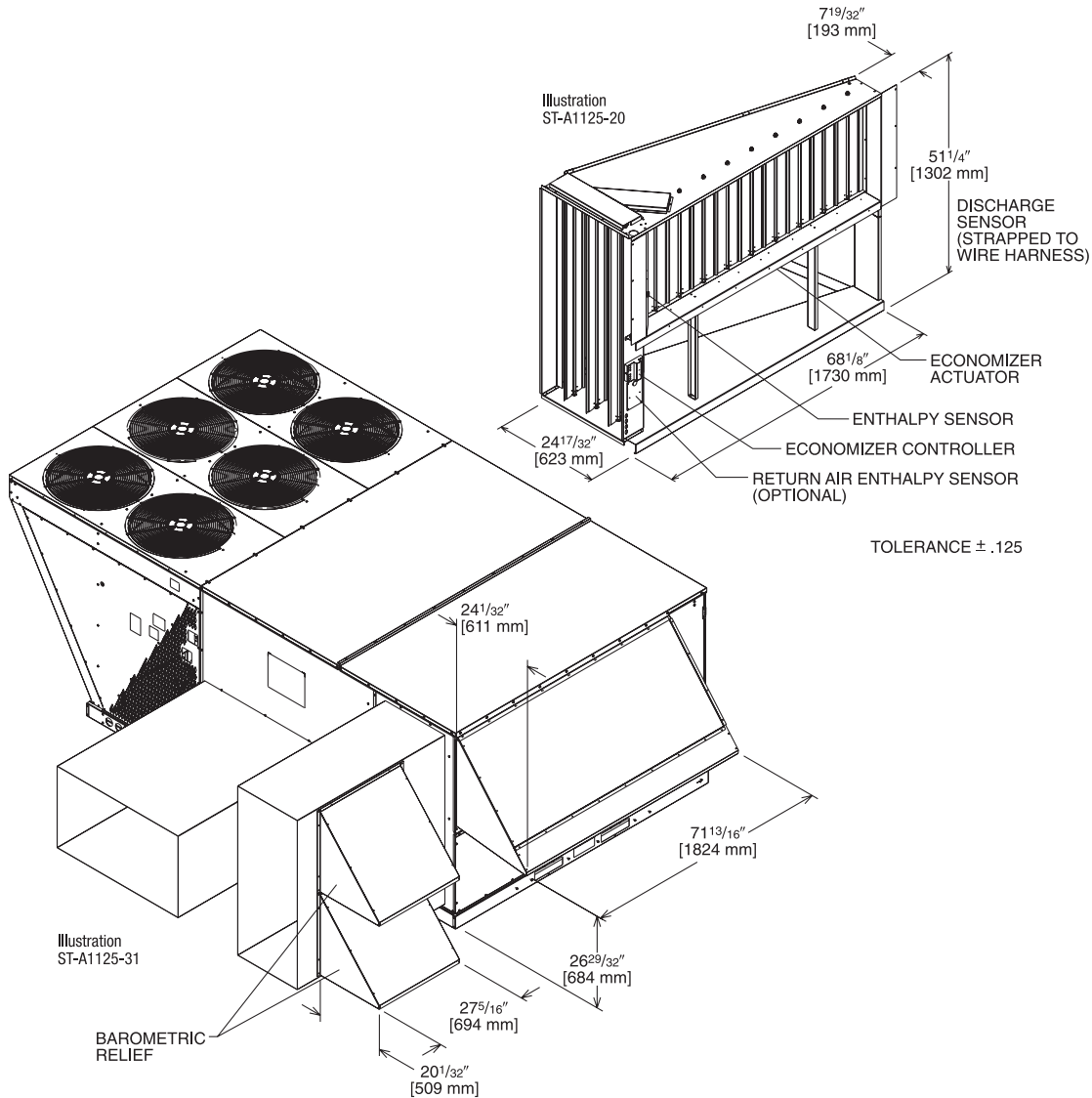
Figure 45: Economizer: MPS 015B – 025B



Economizers: 15–25 Tons

- Features economizer controller
- Available factory installed or field accessory
- Gear driven direct drive actuator
- Gully modulating (0-100%)
- Low leakage dampers
- Slip-in design for easy installation
- Plug-in polarized 12 pin electrical connections
- Pre-configured—no field adjustments necessary
- Standard barometric relief damper
- Single enthalpy with dual enthalpy upgrade kit available
- CO₂ input sensor available
- Field assembled hood ships with economizer
- Economizer ships complete for downflow duct application
- Field installed power exhaust available

Figure 46: Economizer: MPS 015B – 025B



Power Exhaust

Table 65: Air Damper and Exhaust Accessories

Model Number	Number of Fans	Volts	Phase	HP (ea.)	High Speed		FLA (ea.)	LRA (ea.)
					CFM (L/s) ¹	RPM		
RXRX-CDF01C	2	208-230	1	0.47	2200 (1038)	3000	1.55	1.1
RXRX-CDF01D	2	460	3	0.40	1970 (930)	2750	0.51	1.9

NOTE:

1. CFM is at 0" W.C. external static pressure.

Integral Power Exhaust For Economizer: 3–5 Tons (Field Installed Only)

MPS-A03D-A05D—MXRX-CGF04 (C,D,Y Voltages)

- For economizer controller
- Downflow or horizontal applications
- Requires separate power supply with disconnect
- Adjustable switch on economizer, factory preset to energize power exhaust at 95% outside air position
- Polarized plug connects power exhaust relay to economizer
- Adjustable switch on economizer, factory preset to

Table 66: Power Exhaust Kit for MXRD-NECM Economizers

Model No.	No. of Fans	Volts	Phase	Watts (ea.)	High Speed		FLA (ea.)	LRA (ea.)
					CFM (L/s) ¹	RPM		
MXRX-BGF06C	1	208-230	1	1000	2500 (1179)	1725	4.4	23.7
MXRX-BGF06D	1	460	1	800	2370 (1118)	1620	1.8	4.1
MXRX-BGF06Y ²	1	575	1	800	2370 (1118)	1620	1.5	3.3
RXRX-CCF02C	2	208-230	1	350	2200 (1038)	3000	1.55	1.1
RXRX-CCF02D	2	460	3	300	1970 (930)	2750	0.51	1.9

Note:

1. CFM is at 0" W.C. external static pressure.
 2. Unit includes 575 to 460 Volt step-down transformer.

Figure 47: Integral Power Exhaust Economizer (Downflow): MPS A03D - A05D

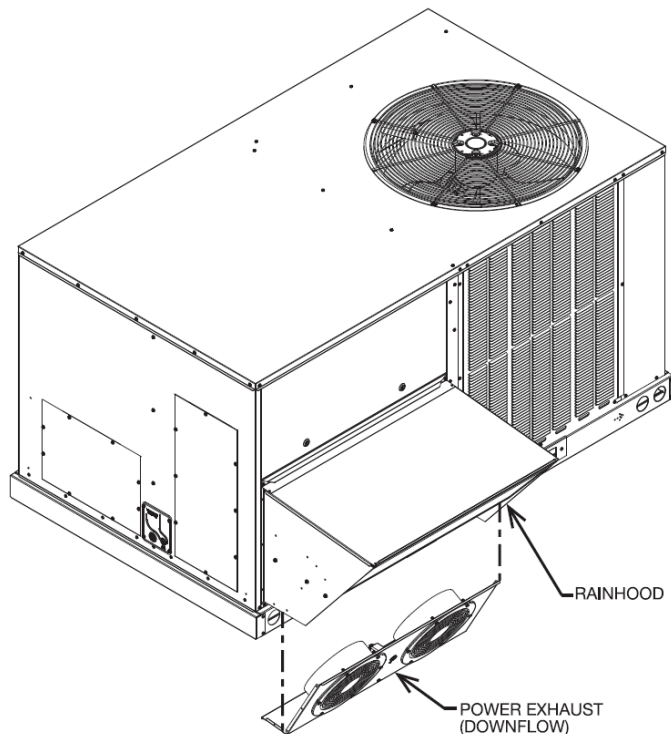
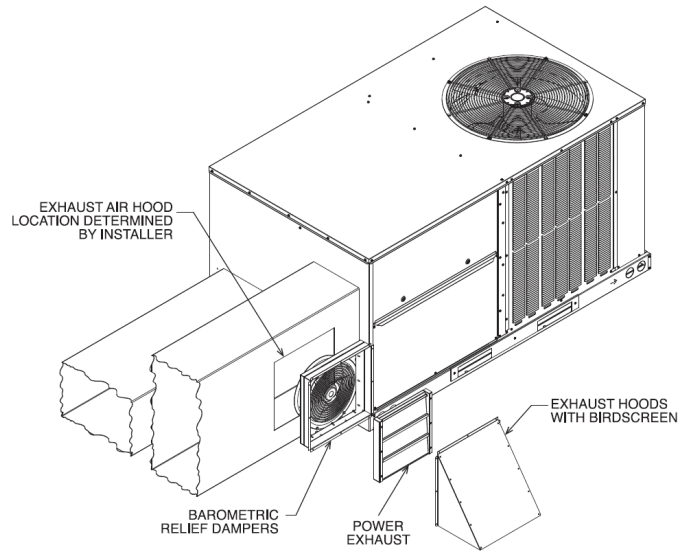


Figure 48: Integral Power Exhaust Economizer (Horizontal): MPS A03D - A05D



Power Exhaust Kit For Economizers: 7–12 Tons

- For economizer controller
- Downflow or horizontal applications
- Polarized plug connects power exhaust relay to economizer

Table 67: Power Exhaust Data for 7–12 Ton Units

Model Number	Number of Fans	Volts	Phase	HP (ea.)	High Speed		FLA (ea.)	LRA (ea.)
					CFM (L/s) ¹	RPM		
RXRX-CDF01C	2	208-230	1	0.47	2200 (1038)	3000	1.55	1.1
RXRX-CDF01D	2	460	3	0.40	1970 (930)	2750	0.51	1.9

NOTE:

1. CFM is at 0" W.C. external static pressure.

Figure 49: Vertical Airflow Power Exhaust Economizer: MPS H07D – H12D

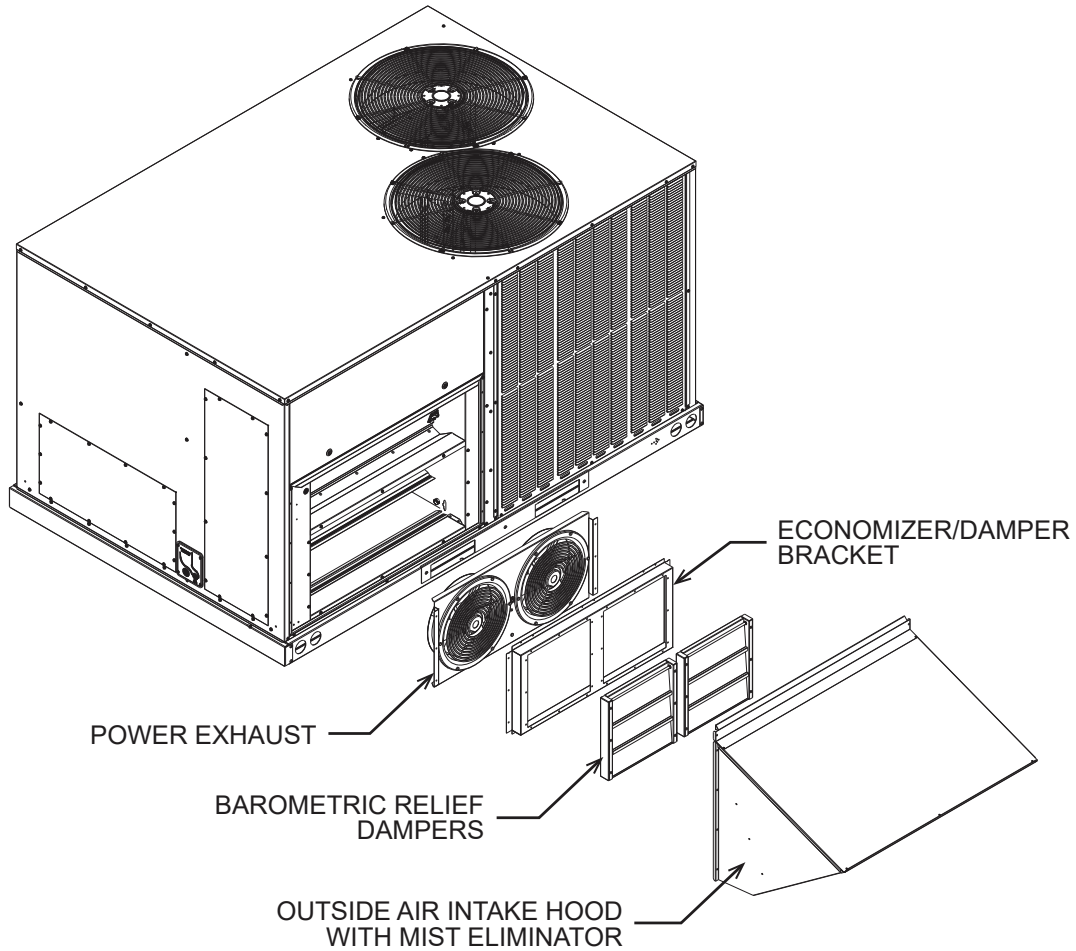
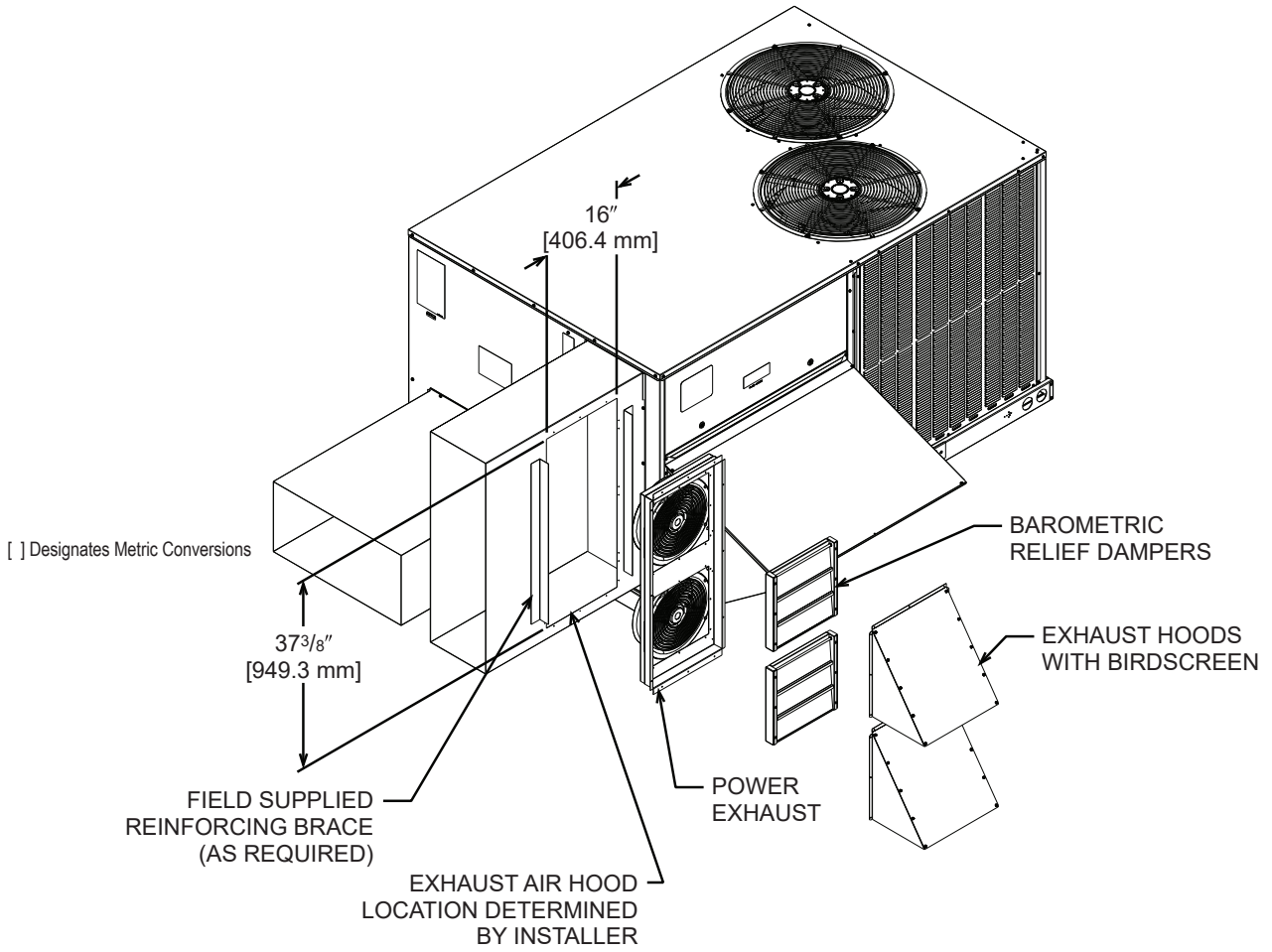


Figure 50: Horizontal Airflow Power Exhaust Economizer: MPS H07D – H12D



Power Exhaust Kit For Economizers: 15–25 Tons

- For economizer controller
- Adjustable switch on economizer, factory preset to energize power exhaust at 95% outside air position
- Polarized plug connects power exhaust relay to economizer

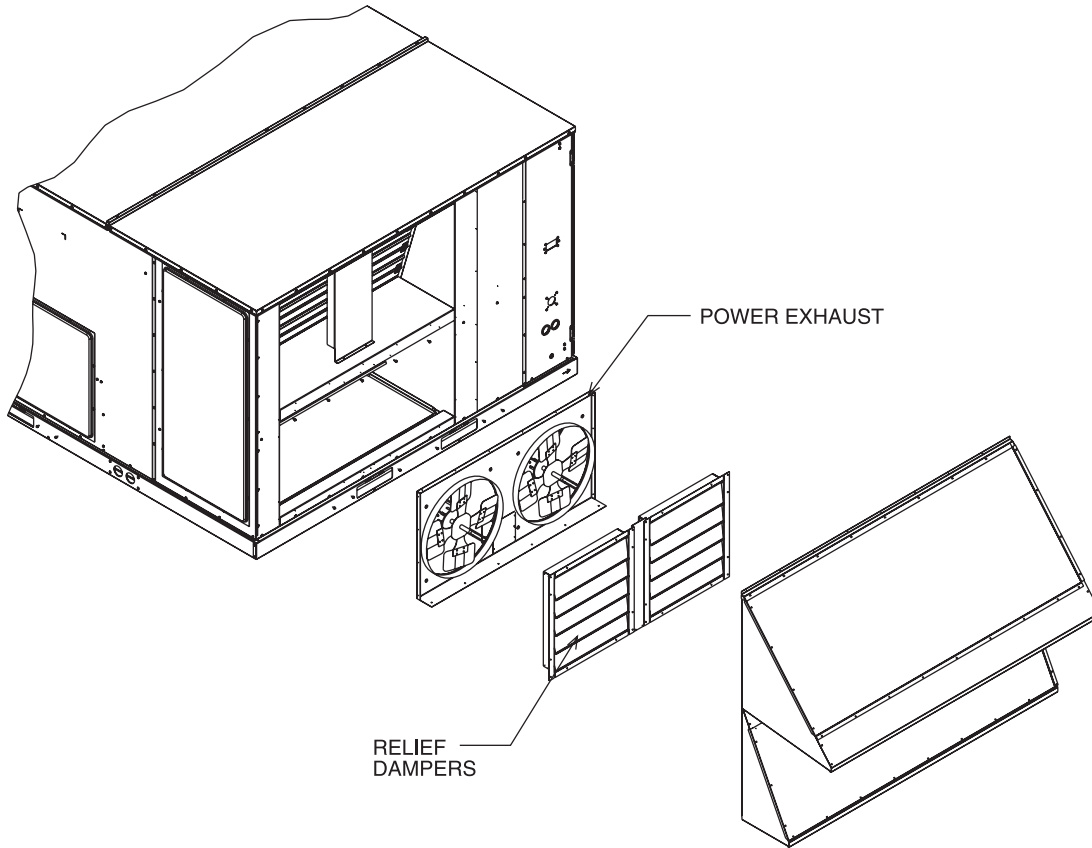
Table 68: Power Exhaust Data for 15–25 Ton Units

Model Number	Number of Fans	Volts	Phase	HP (ea.)	Low Speed		High Speed ³		FLA (ea.)	LRA (ea.)
					CFM [L/s] ¹	RPM	CFM [L/s] ¹	RPM		
RXRX-BGF05	2	208-230	1	0.75	4100 [1935]	850	5200 [2454]	1050	5.0	4.97
RXRX-BGF05D	2	460	1	0.7	4100 [1935]	850	5200 [2454]	1050	2.2	3.4
RXRX-BGF05Y ²	2	575	1	0.75	4100 [1935]	850	5200 [2454]	1050	1.5	2.84

Note:

1. CFM is at 0" W.C. external static pressure.
2. Unit includes 575 to 460 Volt step-down transformer.
3. Power exhaust is factory set on high speed motor tap.

Figure 51: Vertical Airflow Power Exhaust Economizer: MPS 015B – 025B



Roofcurbs

Roofcurbs (Full Perimeter): 3–5 Tons

- Two available height for all models, 14" (356 mm) and 24" (610 mm).
- 1"×4" (25 mm × 102 mm) nailer provided.
- Quick assembly corners for easy installation.
- Insulating panels provided.
- Opening provided in bottom pan to match the through-the-curb electrical connection opening provided on the unit.
- Sealing gasket provided with roofcurb, 28" (711 mm) .
- 18 gauge galvanized steel base pan.

Table 69: Roofcurb Accessories

Daikin Model Number	Description
RXKG-DCC14 and RXKG-DCC24	MPS-A03D through -A05D
RXKG-DDD14	MPS-H07D through -H12D
RXKG-CBH14	MPS-015B through -025B

Figure 52: Typical Roofcurb Installation: MPS A03D-A05D

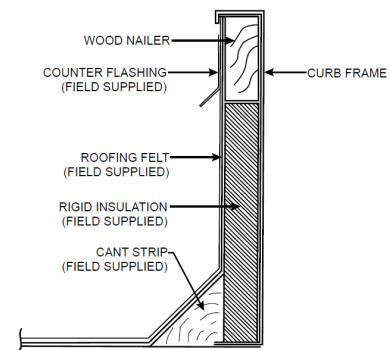
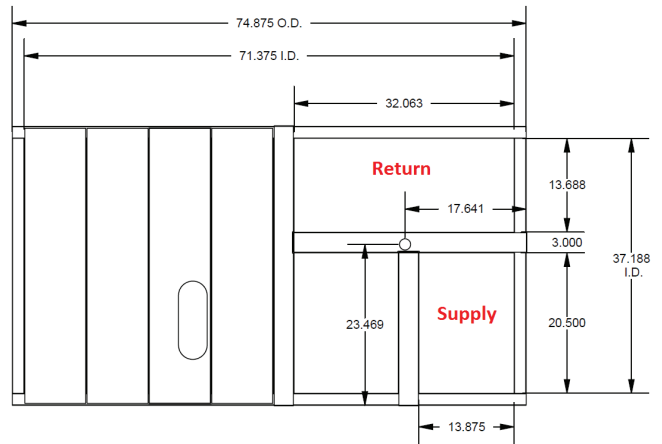
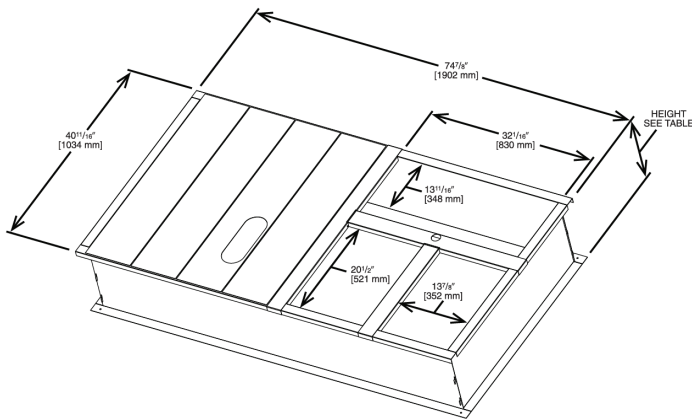


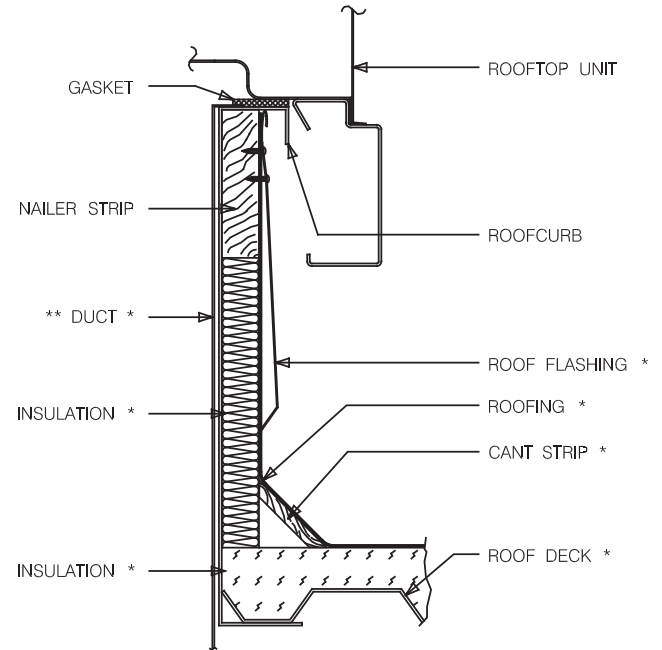
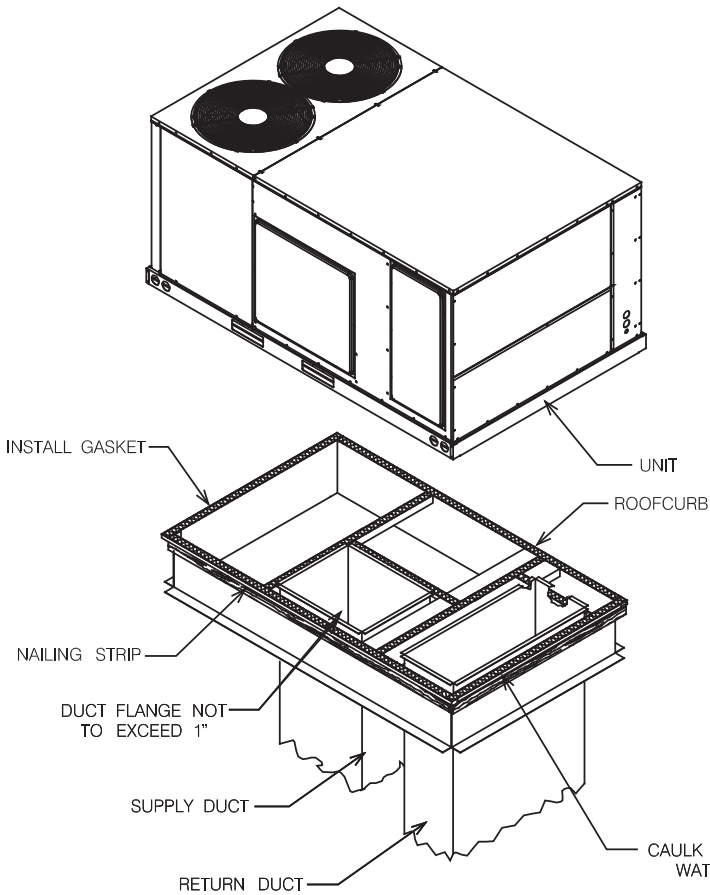
Figure 7

Roofcurbs (Full Perimeter): 7–12 Tons

- One available height for all models, 14" (356 mm) .
- Quick assembly corners for easy installation.
- Opening provided in bottom pan to match the through-the-curb electrical connection opening provided on the unit base pan.

- 1"×4" (25 mm × 102 mm) nailer provided.
- Insulating panels provided.
- Sealing gasket provided with roofcurb, 28" (711 mm) .
- 18 gauge galvanized steel.

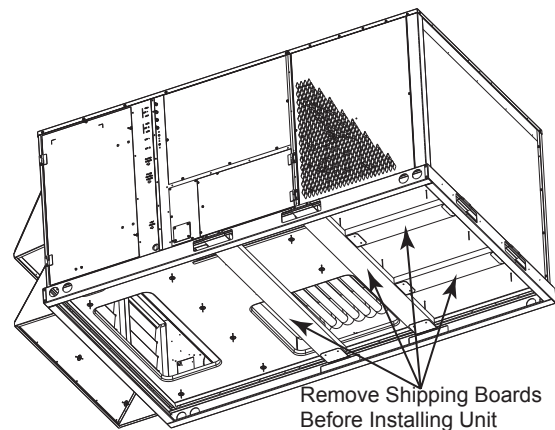
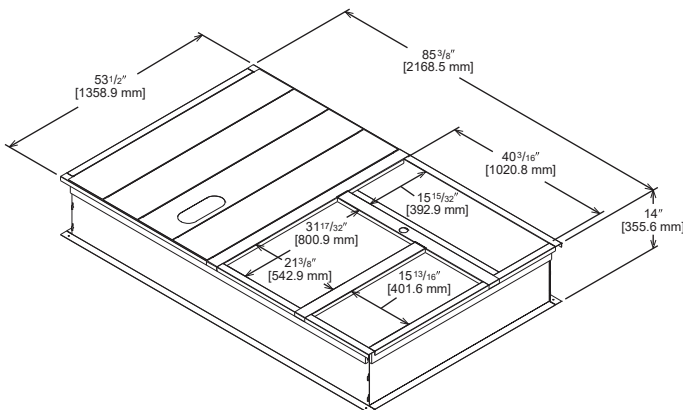
Figure 53: Typical Roofcurb Installation: MPS H07D – H12D



* BY CONTRACTOR

** FOR INSTALLATION OF DUCT AS SHOWN, USE RECOMMENDED DUCT SIZES FROM ROOFCURB INSTALLATION INSTRUCTIONS. FOR DUCT FLANGE ATTACHMENT TO UNIT, SEE UNIT INSTALLATION INSTRUCTIONS FOR RECOMMENDED DUCT SIZES.

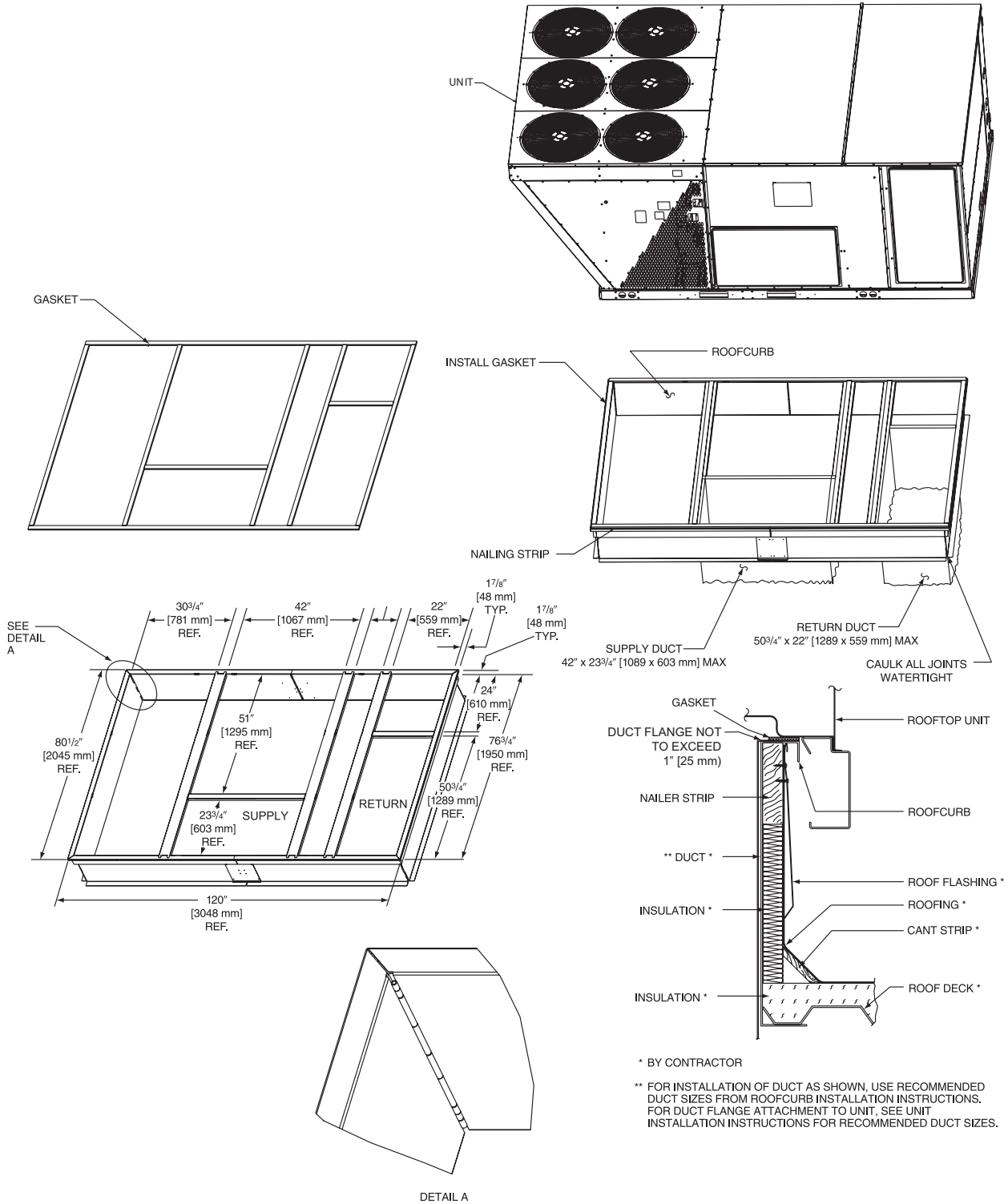
[] Designates Metric Conversions



Roofcurbs (Full Perimeter): 15–25 Tons

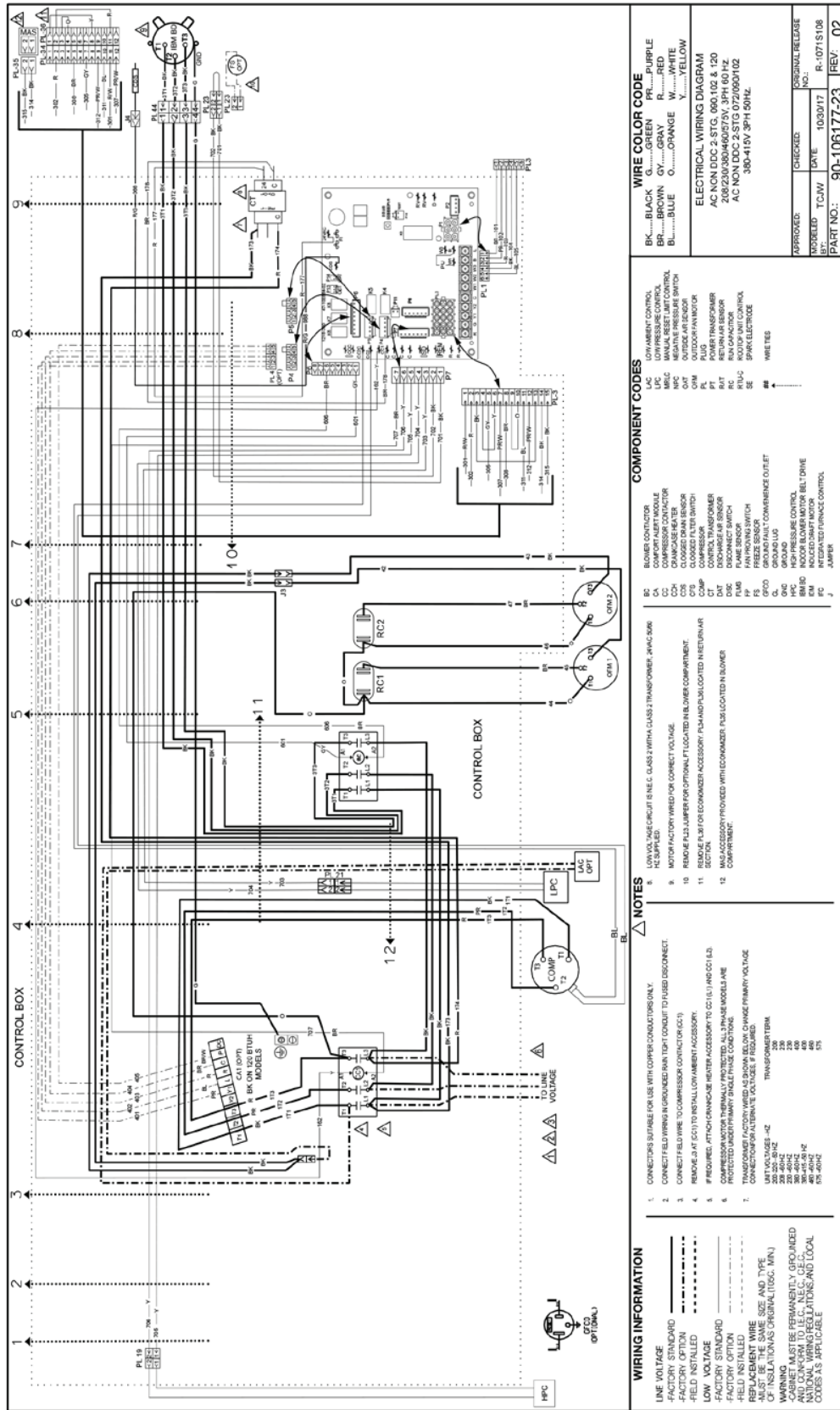
- One available height for all models, 14" (356 mm) .
- Quick assembly corners for easy installation.
- 1"x4" (25 mm x 102 mm) nailer provided.
- Insulating panels not required because of insulated outdoor base pan.
- Sealing gasket provided with roofcurb, 28" (711 mm) .
- 18 gauge galvanized steel.

Figure 54: Typical Roofcurb Installation: MPS 015B – 020B



Electrical Data

Figure 55: MPS H07D-H10D, 208-230/460 Volt (CAV, Cooling Only – Electromechanical Controls)



WIRING INFORMATION	
LINE VOLTAGE	SOLID LINE
FACTORY STANDARD	DASHED LINE
FACTORY OPTION	DOTTED LINE
FIELD INSTALLED	DOTTED LINE WITH CIRCLES
LOW VOLTAGE	DOTTED LINE WITH SQUARES
FACTORY STANDARD	SOLID LINE WITH WAVE DASHES
FACTORY OPTION	DASHED LINE WITH WAVE DASHES
REPLACEMENT WIRE SIZE AND TYPE	SOLID LINE WITH HORIZONTAL DASHES
WIRING MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., AND LOCAL REGULATIONS AND LOCAL CODES AS APPLICABLE.	

NOTES	
1.	CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2.	CONNECT FIELD WIRING IN GROUNDED MAIN TRIP CONDUIT TO USB DISCONNECT.
3.	CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR (CC1).
4.	REMOVE J2 AT (C1) TO INSTALL LOW AMBIENT ACCESSORY.
5.	IF REQUIRED, ATTACH CRANKCASE REVERSE ACCESSORY TO CC (1) AND CC2 (L).
6.	COMPRESSOR MOTOR THERMALLY PROTECTED: ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY PHASE CONDITIONS.
7.	TRANSFORMER FACTORY WIRING AS SHOWN BELOW: BELOW CHARGE PRIMARY VOLTAGE UNIT/AC STAGES — TRANSFORMER TERNAL 208/240/280/2 208/240/280/4 230/240/280/4 380/415V/3P/50/60/4 480/500V/3P/50/60/4 600/690V/3P/50/60/4
8.	LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITHIN CLASS 2 TRANSFORMER. #4KC 500V.
9.	MOTOR FACTORY WIRING OR CORRECT VOLTAGE.
10.	REMOVE FUSE FOR OPTIONAL FT LOCATED IN BLOWER COMPARTMENT.
11.	SECTION
12.	WAS ACCESSORY PROVIDED WITH ECONOMIZER FUSE LOCATED IN BLOWER COMPARTMENT.

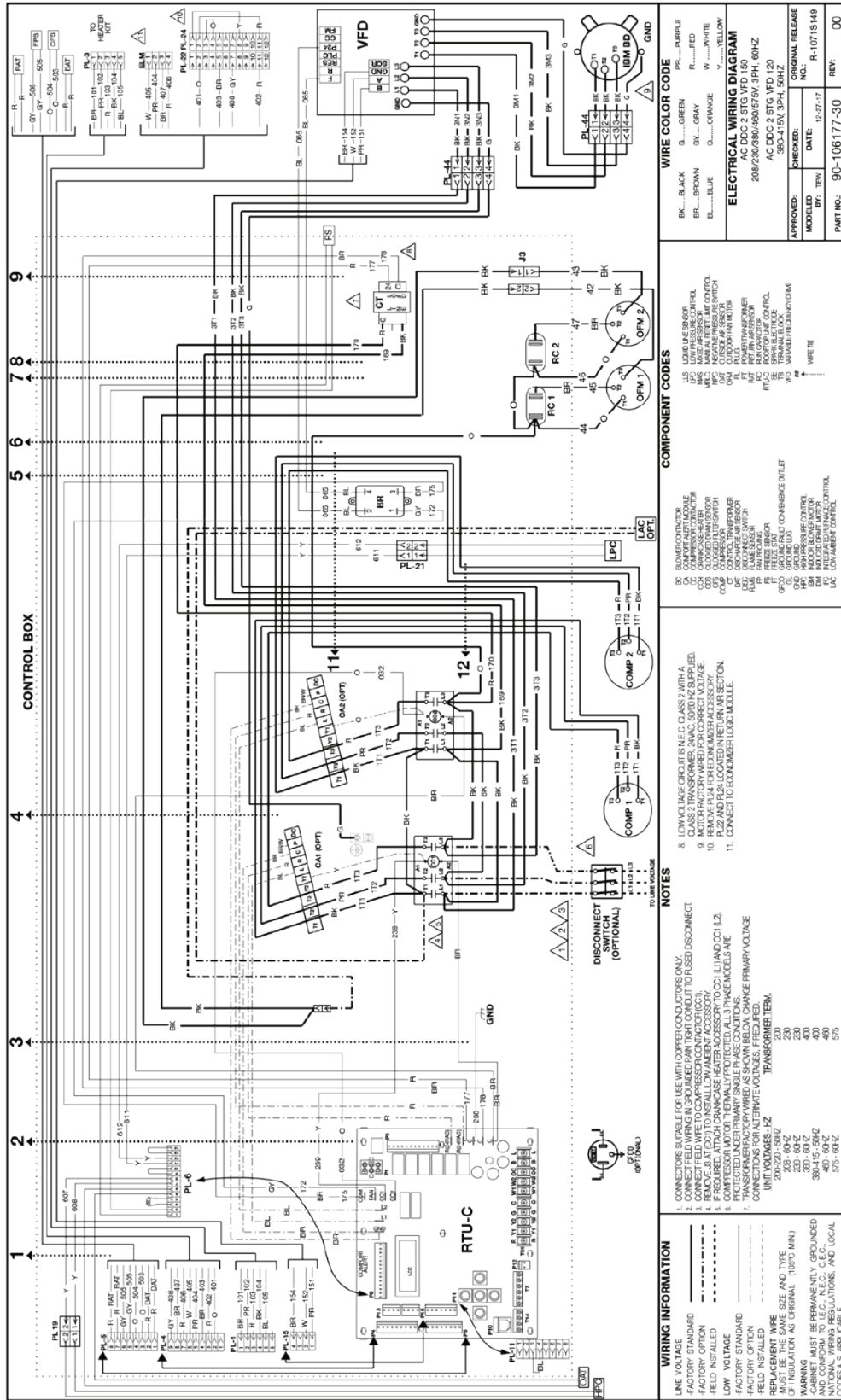
COMPONENT CODES	
BA	BLOWER MOTOR CONTROL
CA	COMPRESSOR CONTACTOR
CC	COMPRESSOR CONTACTOR
CC1	COMPRESSOR CONTACTOR
CC2	COMPRESSOR CONTACTOR
CF	CLASSIFIED FILTER SWITCH
CM	CONTACTOR
CT	CONTACT TRANSFORMER
CT1	CONTACT TRANSFORMER
CT2	CONTACT TRANSFORMER
DAT	DISCHARGE AIR SENSOR
DAG	DIFFERENTIAL AIR PRESSURE SWITCH
DT	DIFFERENTIAL TEMPERATURE SWITCH
FF	FAN PROTECT SWITCH
FR	FREZE SENSOR
FT	FUSE
OL	OVERLOAD
QED	GROUND GASKET CONTROL
RM	ROOM BLOWER MOTOR BELT DRIVE
BM	BLUETOOTH MOTOR BELT DRIVE
J	JAMBER
LAC	LOW AMBIENT CONTROL
MAL	MANUAL RESET LIMIT CONTROL
MP	MAGNETIC PRESSURE SWITCH
OCM	OUTDOOR FAN MOTOR
PL	PLUG
PL1	OUTDOOR FAN MOTOR
RA	RETURN AIR SENSOR
RC	ROOM BLOWER MOTOR
RC1	ROOM BLOWER MOTOR BELT DRIVE
RC2	ROOM BLOWER MOTOR BELT DRIVE
SE	SPARK ELECTRODE
WF	WIRE TIES

WIRE COLOR CODE	
BK.....BLACK	G.....GREEN
BR.....BROWN	GR.....GRAY
BU.....BLUE	GN.....GREEN
CH.....CHANCE	RD.....RED
OR.....ORANGE	WT.....WHITE
PK.....PURPLE	YL.....YELLOW

ELECTRICAL WIRING DIAGRAM	
MODEL:	MPS H07D-H10D
DATE:	2008/03/04
DESIGNER:	208230/460/230V/3P/50/60/4
CHECKED:	AC NON DDC 2-STRG 072/050/10Z
DATE:	380-415V/3P/50/60/4
APPROVED:	
DATE:	10/20/12
ISSUE NO.:	01
REVISION RELEASE NO.:	R-1071S108

APPROVED:	CHECKED:	ISSUE NO.:
DATE:	DATE:	REVISION RELEASE NO.:
PART NO.: 90-106177-23		REV: 02

Figure 56: MPSH12D, 208-230/460 Volt (Two-Speed SAF Cooling only – DDC Controls)



WIRE COLOR CODE	
BK...	BLACK
GR...	GREEN
PR...	PURPLE
RD...	RED
BR...	BROWN
GY...	GRAY
BL...	BLUE
OR...	ORANGE
WH...	WHITE
Y...	YELLOW

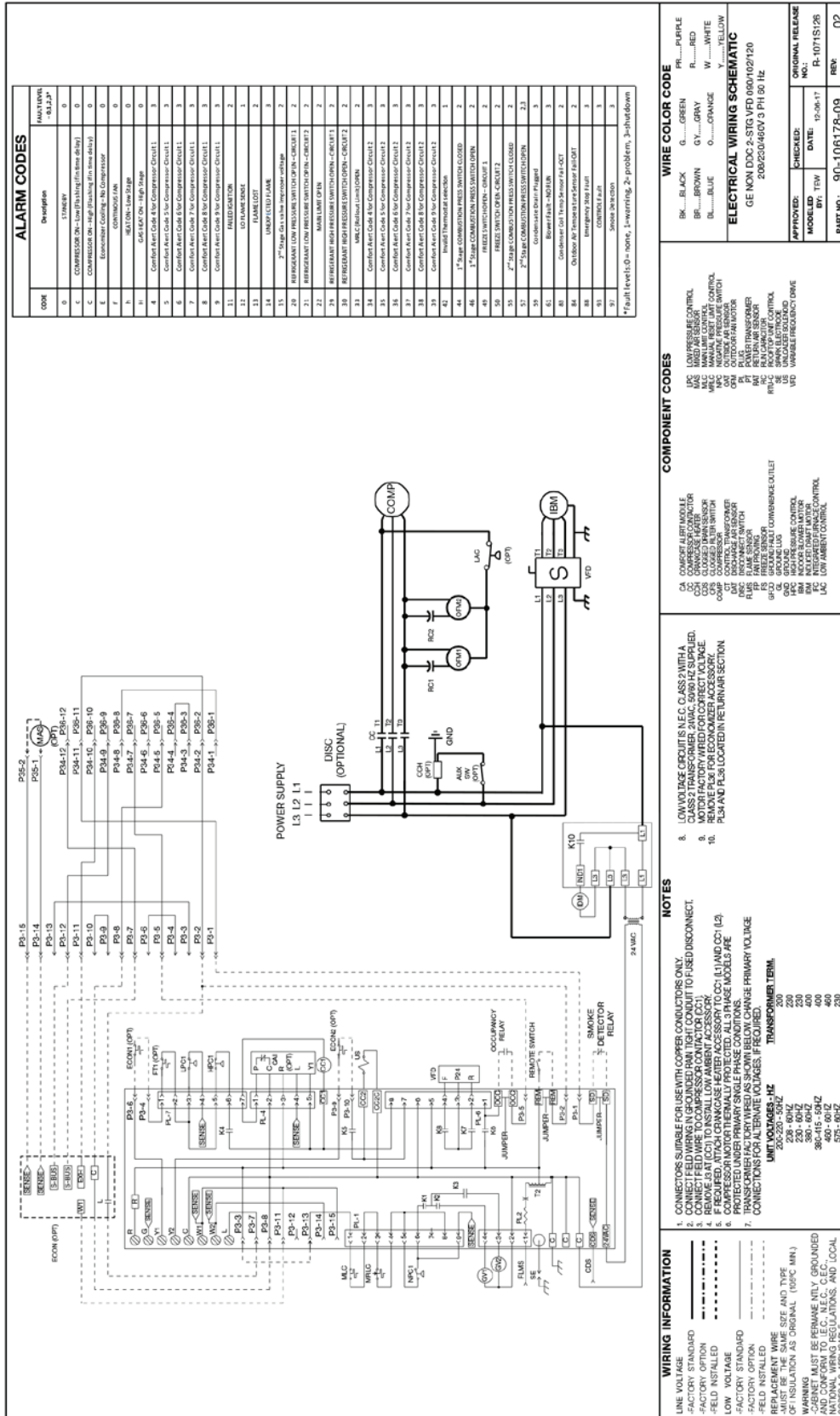
ELECTRICAL WIRING DIAGRAM	
AC DDC 2 STG VFD 120	208/230/460/480/575V, 3PH, 60HZ
AC DDC 2 STG VFD 120	380-415V, 3PH, 50HZ
APPROVED:	DATE: 12-27-17
MODELED BY: TEW	NO. R-1071S149
PART NO.:	90-106177-30
REV.:	00

COMPONENT CODES	
UIS	ULS LIQUID SENSOR
WAS	WATER SENSOR
MAS	MAGNETIC CONTACTOR
MED	MANUAL RESETTABLE CONTROL
OUT	OUTER AIR SENSOR
COA	COIL AIR SENSOR
FLS	FREZE SENSOR
PLS	PLATEAU SENSOR
RFI	REFRIGERANT FLOW SENSOR
RFV	REFRIGERANT VOLUME SENSOR
PT/C	PT/CT ROOFTOP WIRE CONTROL
TRM	TRIP
VIP	UNAVAILABLE/LOAD/TORQUE
WIRE	WIRE

NOTES	
8.	LOW VOLTAGE CIRCUIT (N.E.C. CLASS 2) WITH A
9.	MOTOR FACTORY WIRE FOR CORRECT VOLTAGE
10.	PLZ AND FLD LOCATED IN RETURN AIR ELECTRICAL
11.	CONNECT TO EQUIPPED LOGS MODULE

WIRING INFORMATION	
LINE VOLTAGE	200-230-50HZ
FACTORY OPTION	230-60HZ
FIELD INSTALLED	380-415V-50HZ
LOW VOLTAGE	200-230-50HZ
FACTORY STANDARD	230-60HZ
FIELD INSTALLED	380-415V-50HZ
FACTORY OPTION	200-230-50HZ
FIELD INSTALLED	230-60HZ
FACTORY STANDARD	380-415V-50HZ
FIELD INSTALLED	200-230-50HZ
FACTORY OPTION	230-60HZ
FIELD INSTALLED	380-415V-50HZ
FACTORY STANDARD	200-230-50HZ
FIELD INSTALLED	230-60HZ
FACTORY OPTION	380-415V-50HZ
FIELD INSTALLED	200-230-50HZ
FACTORY STANDARD	230-60HZ
FIELD INSTALLED	380-415V-50HZ
FACTORY OPTION	200-230-50HZ
FIELD INSTALLED	230-60HZ
FACTORY STANDARD	380-415V-50HZ
FIELD INSTALLED	200-230-50HZ
FACTORY OPTION	230-60HZ
FIELD INSTALLED	380-415V-50HZ

Figure 57: MPS H07D-H10D, 208-230/460V (Two Speed SAF Gas Heat – Electromechanical Controls)



WIRE COLOR CODE

BL	BLACK	G	GREEN	PR	PURPLE
BR	BROWN	GY	GRAY	R	RED
BU	BLUE	OR	ORANGE	W	WHITE
Y	YELLOW				

ELECTRICAL WIRING SCHEMATIC
GE NON DDC 2-STG VFD 090102P120
208/230/460V 3 PH 50 Hz

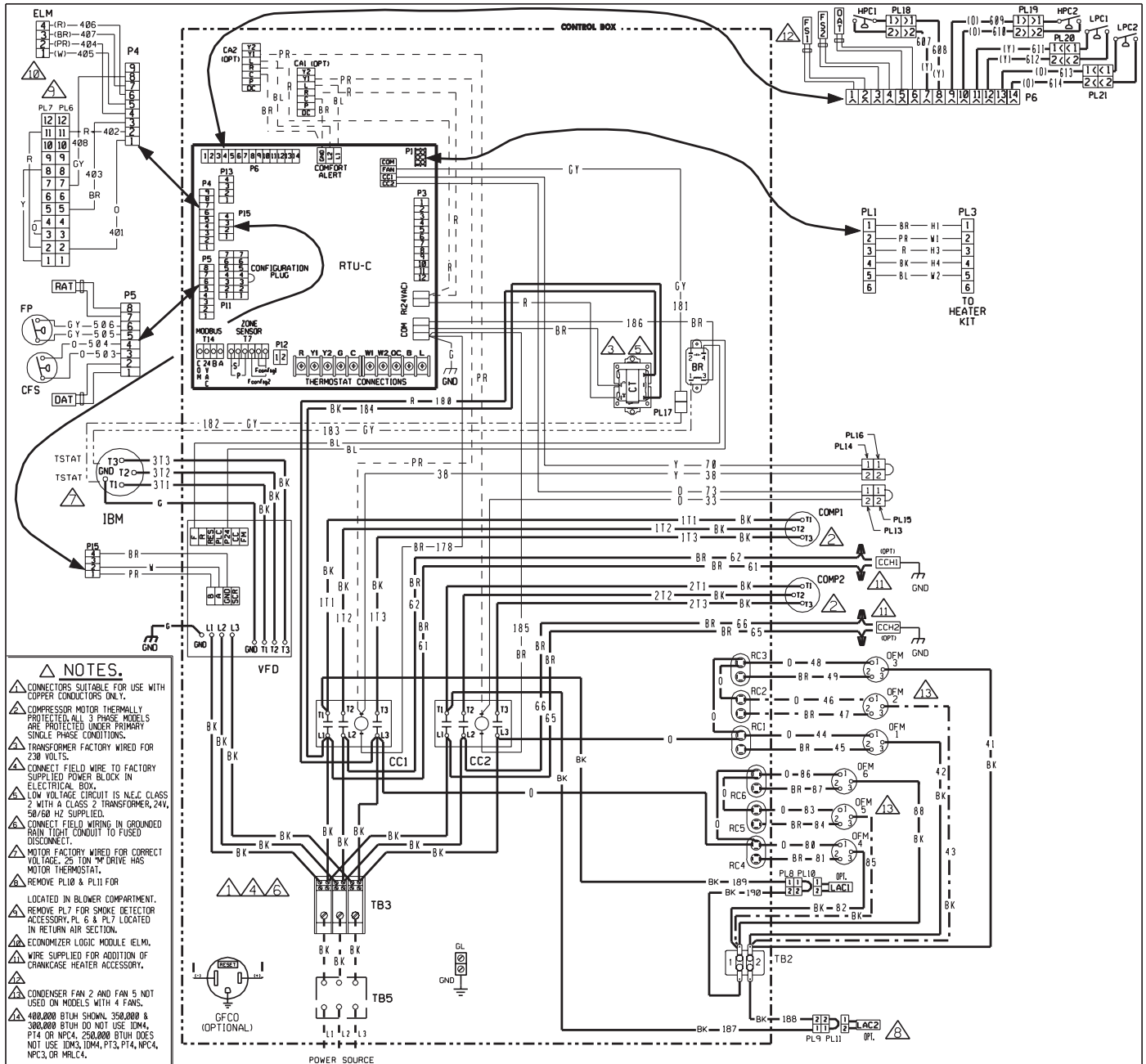
APPROVED: _____
MODELED BY: TEW
DATE: 12-06-17
ORIGINAL RELEASE NO.: R-1071S126
PART NO.: 90-106178-09
REV: 02

- COMPONENT CODES**
- CA COMPACT ALERT MODULE
 - CO1 COIL
 - CO2 COIL
 - CO3 COIL
 - CO4 COIL
 - CO5 COIL
 - CO6 COIL
 - CO7 COIL
 - CO8 COIL
 - CO9 COIL
 - CO10 COIL
 - CO11 COIL
 - CO12 COIL
 - CO13 COIL
 - CO14 COIL
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 - CO92 COIL
 - CO93 COIL
 - CO94 COIL
 - CO95 COIL
 - CO96 COIL
 - CO97 COIL
 - CO98 COIL
 - CO99 COIL
 - CO100 COIL

- NOTES**
- CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
 - CONNECT FELD WIRE TO COMPRESSOR CONTACTOR (CC1).
 - REMOVE AS AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
 - REMOVE AS AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
 - COMPRESSOR MOTOR IS MANUALLY PROTECTED. ALL PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
 - TRANSFORMER (PAC) WIRING AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE CONNECTIONS AND PHASES, IF REQUIRED.
 - CONNECTIONS FOR TRANSFORMER (PAC) WIRING AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE CONNECTIONS AND PHASES, IF REQUIRED.
- UNIT VOLTAGES, Hz**
- | | |
|--------------|-----------------|
| 208-230-460V | TRANSFORMER TAP |
| 200 | 200 |
| 228-60Hz | 228 |
| 230-60Hz | 230 |
| 380-60Hz | 380 |
| 380-60Hz | 400 |
| 380-15-50Hz | 400 |
| 500-60Hz | 400 |
| 500-60Hz | 400 |
| 500-60Hz | 400 |

- WIRING INFORMATION**
- LINE VOLTAGE
 - FACTORY STANDARD
 - FIELD INSTALLED
 - LOW VOLTAGE
 - FACTORY STANDARD
 - FIELD INSTALLED
 - REPLACEMENT WIRE SIZE AND TYPE
 - WARNING: MUST BE PERMANENTLY GROUNDED
 - AGENCY MUST BE PERMANENTLY GROUNDED
 - NATIONAL WIRING REGULATIONS AND LOCAL CODES AS APPLICABLE.

Figure 60: MPS 015B – 025B DDC, 208-230/460V, 3 phase, 2-Speed SAF Cooling only



- NOTES.**
- ▲ CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
 - ▲ COMPRESSOR MOTOR THERMALLY PROTECTED, ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
 - ▲ TRANSFORMER FACTORY WIRED FOR 230 VOLTS.
 - ▲ CONNECT FIELD WIRE TO FACTORY SUPPLIED POWER BLOCK IN ELECTRICAL BOX.
 - ▲ LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24V, 50/60 HZ SUPPLIED.
 - ▲ CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT.
 - ▲ MOTOR FACTORY WIRED FOR CORRECT VOLTAGE, 25 TON HP DRIVE HAS MOTOR THERMOSTAT.
 - ▲ REMOVE PL10 & PL11 FOR
 - ▲ LOCATED IN BLOWER COMPARTMENT. REMOVE PL7 FOR SMOKE DETECTOR ACCESSORY, PL 6 & PL7 LOCATED IN RETURN AIR SECTION.
 - ▲ ECONOMIZER LOGIC MODULE (ELMO).
 - ▲ WIRE SUPPLIED FOR ADDITION OF CRANKCASE HEATER ACCESSORY.
 - ▲ CONDENSER FAN 2 AND FAN 5 NOT USED ON MODELS WITH 4 FANS.
 - ▲ 400,000 BTUH SHOWS 350,000 & 300,000 BTUH DO NOT USE 10M4, P14 OR NPC4. 250,000 BTUH DOES NOT USE 10M3, 10M4, PT3, P14, NPC4, NPC3, OR MRL4.

COMPONENT CODE

BR	BLOWER RELAY	HPC	HIGH PRESSURE CONTROL
CA	COMFORT ALERT MODULE	IBM	INDOOR BLOWER MOTOR BELT DRIVE
CC	COMPRESSOR CONTACTOR	LAC	LOW AMBIENT COOLING CONTROL
CCH	CRANKCASE HEATER	LPC	LOW PRESSURE CONTROL
CFS	CLOSED FILTER SWITCH	LPC1	LIMIT CONTROL
COMP	COMPRESSOR	LSA	LOW SIDE AIR SENSOR
CT	CONTROL TRANSFORMER	OPM	OUTDOOR FAN MOTOR
DAT	DISCHARGE AIR SENSOR	PL	PLUG
DISC	DISCONNECT SWITCH	RAT	RETURN AIR SENSOR
FP	FAN FROVING	RC	RUN CAPACITOR
FS	FREEZE SENSOR	RTU-C	ROOFTOP UNIT CONTROL
GFCO	GROUND FAULT CONVENIENCE OUTLET	TB	TERMINAL BLOCK
GL	GROUND LUG	TBD	VARIABLE FREQUENCY DRIVE
GND	GROUND	W	WIRE NUT

WIRING INFORMATION

LINE VOLTAGE

- FACTORY STANDARD
- FACTORY OPTION
- FIELD INSTALLED

LOW VOLTAGE

- FACTORY STANDARD
- FACTORY OPTION
- FIELD INSTALLED

REPLACEMENT WIRE

- MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105° C MIN.)

WARNING

- CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., AND LOCAL CODES AS APPLICABLE.

WIRE COLOR CODE

BK	BLACK	O	ORANGE
BR	BROWN	PR	PURPLE
BL	BLUE	R	RED
G	GREEN	W	WHITE
GY	GRAY	Y	YELLOW

WIRING DIAGRAM

VFD MODELS

208-230/460V 3 PH, 60 HZ.

SELF-CONTAINED/PACKAGE A/C W/RTU-C

DR. BY	APP. BY	DATE	DWG. NO.	REV
MCB		01-04-12	90-103079-09	02

Figure 61: MPS 015B – 025B DDC, 208-230/460V, 3 phase, 2-Speed SAF Gas Heat

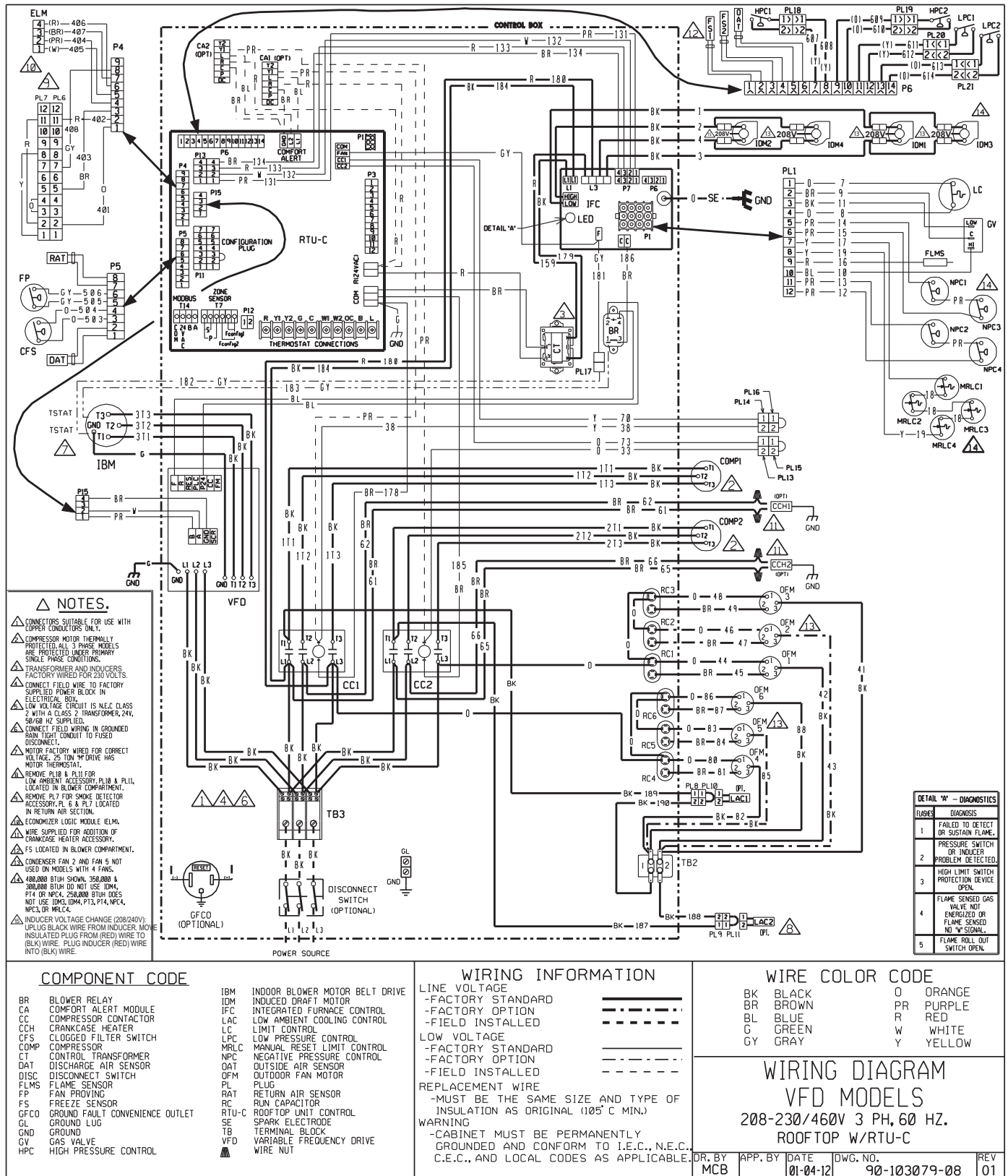
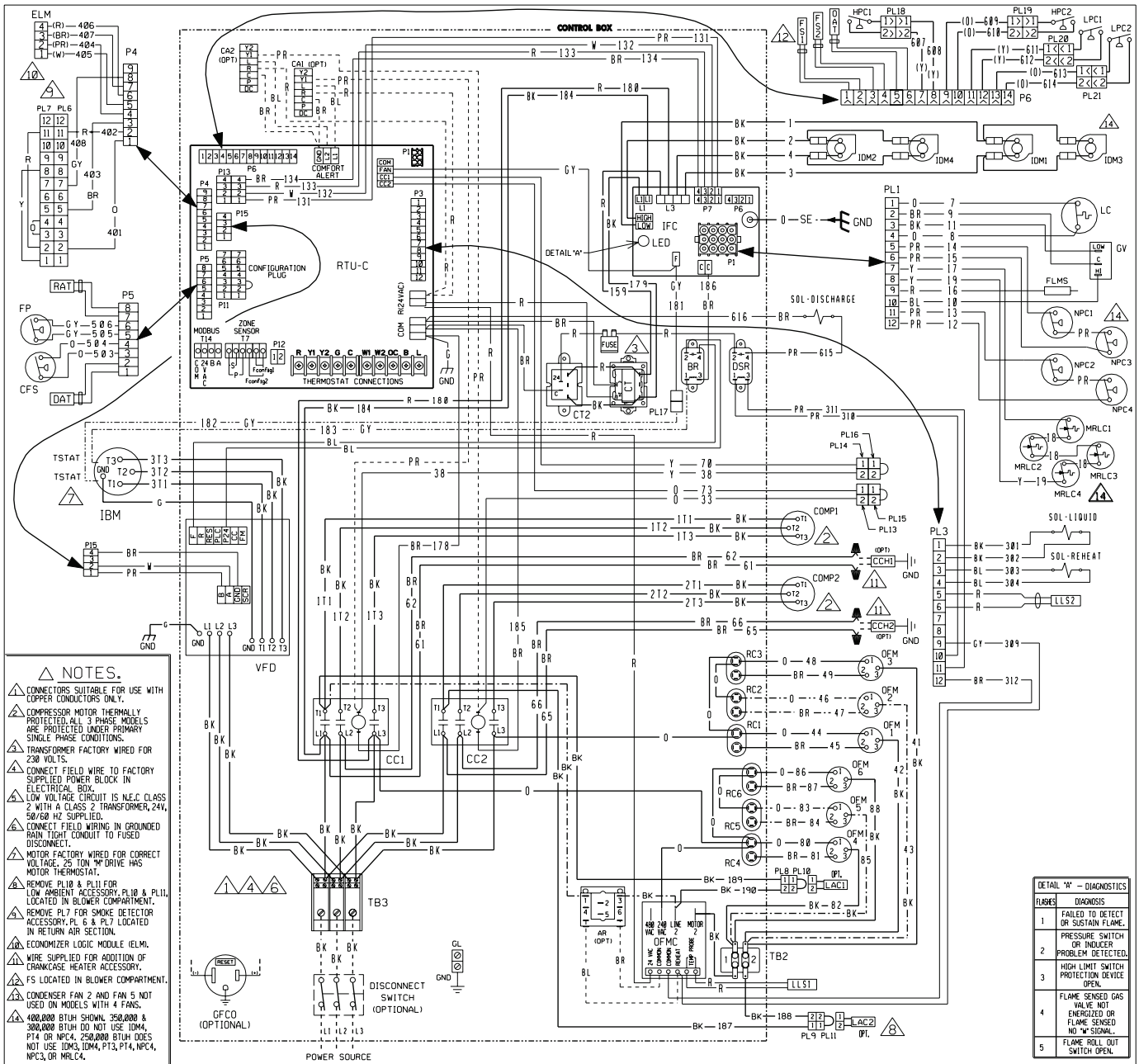


Figure 62: MPS 015B – 025B DDC, 208-230/460V, 3 phase, Gas Heat with Reheat



COMPONENT CODE	
AR	ACCESSORY RELAY
BR	BLOWER RELAY
CA	COMFORT ALERT MODULE
CC	COMPRESSOR CONTACTOR
CCH	CRANKCASE HEATER
CFS	CLOSED FILTER SWITCH
COMP	COMPRESSOR
CT	CONTROL TRANSFORMER
DAT	DISCHARGE AIR SENSOR
DSR	DISCHARGE SOLENOID RELAY
DISC	DISCONNECT SWITCH
FLMS	FLAME SENSOR
FP	FAN PROVING
FS	FREEZE SENSOR
GFCO	GROUND FAULT CONVENIENCE OUTLET
GL	GROUND LUG
GND	GROUND
GV	GAS VALVE
HPC	HIGH PRESSURE CONTROL
IBM	INDOOR BLOWER MOTOR BELT DRIVE
IDM	INDUCED DRAFT MOTOR
IFC	INTEGRATED FURNACE CONTROL
LAC	LOW AMBIENT COOLING CONTROL
LAC2	LOW AMBIENT COOLING CONTROL
LIM	LIMIT CONTROL
LLS	LIQUID LINE SENSOR
LPC	LOW PRESSURE CONTROL
MRLC	MANUAL RESET LIMIT CONTROL
NPC	NEGATIVE PRESSURE CONTROL
OAT	OUTSIDE AIR SENSOR
OFM	OUTDOOR FAN MOTOR
OFMC	OUTDOOR FAN MOTOR CONTROLLER
PL	PLUG
RAT	RETURN AIR SENSOR
RC	RUN CAPACITOR
RTU-C	ROOFTOP UNIT CONTROL
SE	SPARK ELECTRODE
TB	TERMINAL BLOCK
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE NUT

WIRING INFORMATION

LINE VOLTAGE
 -FACTORY STANDARD
 -FACTORY OPTION
 -FIELD INSTALLED

LOW VOLTAGE
 -FACTORY STANDARD
 -FACTORY OPTION
 -FIELD INSTALLED

REPLACEMENT WIRE
 -MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105° C MIN.)

WARNING
 -CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., AND LOCAL CODES AS APPLICABLE.

WIRE COLOR CODE	
BK	BLACK
BR	BROWN
BL	BLUE
G	GREEN
GY	GRAY
O	ORANGE
P	PURPLE
R	RED
W	WHITE
Y	YELLOW

WIRING DIAGRAM REHEAT MODELS
 208-230/460V 3 PH, 60 HZ.
 ROOFTOP W/RTU-C

DR. BY	APP. BY	DATE	DWG. NO.	REV
MCB		10-21-11	90-103079-04	01

Reference IM 972 for remaining wiring diagrams.

Engineering Guide Specifications

Part 1: General

1.01 Section Includes:

- A. Commercial Packaged Rooftop air conditioners.

1.02 References

- A. AFBMA 9-Load Ratings and Fatigue Life for Ball Bearings.
- B. AMCA 99-Standards Handbook
- C. AMCA 210-Laboratory Methods of Testing Fans for Rating Purposes
- D. AMCA 300-Test Code for Sound Rating Air Moving Devices
- E. AMCA 500-Test Methods for Louver, Dampers, and Shutters.
- F. AHRI 410-Forced-Circulation Air-Cooling and Air-Heating Coils.
- G. AHRI 430-Central-Station Air-Handling Units.
- H. AHRI 435-Application of Central-Station Air-Handling Units.
 - I. IBC 2000 - International Building Code
 - J. NEMA MG1-Motors and Generators
 - K. National Electrical Code.
 - L. NFPA 70-National Fire Protection Agency.
 - M. SMACNA-HVAC Duct Construction Standards-Metal and Flexible.
 - N. UL 900-Test Performance of Air Filter Units.

1.03 Submittals

- A. Shop Drawings: Indicate assembly, unit dimensions, weight loading, required clearances, construction details, field connection details, electrical characteristics and connection requirements.
- B. Product Data:
 - 1. Provide literature that indicates dimensions, weights, capacities, ratings, fan performance, and electrical characteristics and connection requirements.
 - 2. Manufacturer's Installation Instructions.

1.04 Operation And Maintenance Data

- A. Maintenance Data: Provide instructions for installation, maintenance and service

1.05 Qualifications

- A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum five years documented experience, who issues complete catalog data on total product.
- B. Startup must be done by trained personnel experienced with rooftop equipment.
- C. Do not operate units for any purpose, temporary or permanent, until ductwork is clean, filters and remote controls are in place, bearings lubricated, and manufacturers' installation instructions have been followed.

1.06 Delivery, Storage, And Handling

- A. Deliver, store, protect and handle products to site.
- B. Accept products on site and inspect for damage.
- C. Store in clean dry place and protect from weather and construction traffic. Handle carefully to avoid damage to components, enclosures, and finish.

Part 2: Products

2.01 Manufacturers

- A. The following manufacturers will be considered provided they comply with the contract documents. No substitutions will be permitted.
 1. Daikin Applied
 2. Trane
 3. Carrier
 4. York

2.02 General Description

- A. Furnish as shown on plans, Daikin Packaged Systems, Singlezone Heating and Cooling Unit(s) model MPS. Unit performance and electrical characteristics shall be per the job schedule.
- B. Configuration: Fabricate as detailed on prints and drawings:
 1. Return plenum / economizer section
 2. Filter section
 3. Cooling coil section
 4. Supply fan section
 5. Gas heating section
 6. Condensing unit section
- C. The complete unit shall be cULus listed. Gas furnace units shall be UL listed and classified in accordance with ANSIZ 21.47.
- D. Unit shall comply with ASHRAE 90.1-2007 standards for efficiency and EER.

- E. Each unit shall be specifically designed for outdoor rooftop application and include a weatherproof cabinet. Each unit shall be completely factory assembled and shipped in one piece. MPS packaged units shall be shipped fully charged with Refrigerant 410A and POE oil.
- F. The unit shall undergo a complete factory run test prior to shipment. The factory test shall include final balancing of the supply fan assemblies, a refrigeration circuit run test, a unit control system operations checkout, a unit refrigerant leak test and a final unit inspection.
- G. All units shall have decals and tags to indicate caution areas and aid unit service. Unit nameplates shall be fixed to the main control panel door. Electrical wiring diagrams shall be attached to the control panels. Installation, operating and maintenance bulletins and start-up forms shall be supplied with each unit.
- H. Performance: All scheduled capacities and face areas are minimum accepted values. All scheduled amps, kW, and HP are maximum accepted values that allow scheduled capacity to be met.
- I. Warranty: The manufacturer shall provide 12-month parts only warranty. Defective parts will be repaired or replaced during the warranty period at no charge. The warranty period shall commence at startup or six months after shipment, whichever occurs first.
- J. The manufacturer shall provide extended 48-month, parts only, warranty on the compressor. Defective parts will be repaired or replaced during the warranty period at no charge. The warranty period shall commence at startup or six months after shipment, whichever occurs first.

2.03 Cabinet, Casing, And Frame

- A. Panel construction shall be 18 GA single wall construction with a baked powder coat finish. Insulation shall be a minimum of 3/4" thick fiberglass with a foil face surface. Insulation shall be glued to the panel as well as mechanically fastened. In lieu of foil face insulation with mechanical fasteners, double wall construction may be substituted. Panel design shall not have any exposed insulation edges.
- B. Exterior surfaces shall be constructed of 18 GA, G90 galvanized, with a baked powder coat finish of a neutral beige color. Finished panel surfaces to withstand a minimum 1000-hour salt spray test in accordance with ASTM B117 standard for salt spray resistance
- C. Base frame shall be 14 GA galvanized steel and be a full perimeter design. The base frame shall have integral forklift slots and rigging holes. The unit base shall overhang the roof curb for positive water runoff and shall seat on the roof curb gasket to provide a positive, weather tight seal.

- D. The full unit base pan shall be a one-piece stamped design. The base pan shall have a stamped 1-1/8" flange around the supply and return air openings to prevent any water to penetrate into the building. The base pan shall be insulated with foil face insulation with mechanical fasteners on the underside of the pan. The rooftop base pan shall not have insulation on the air stream side of the equipment
- E. Service doors shall be provided on the filter section, supply fan, and the electrical control panel section . [MPSH07D - MPS025 only]. All service access doors shall be mounted on multiple hinges and shall be secured by a 1/4 turn latch system. Removable panels secured by multiple mechanical fasteners are not acceptable.

2.04 Supply Fan

- A. Supply fan shall be a double width double inlet (DWDI) forward curved centrifugal fan. The supply fan shall be mounted using solid-steel shafts and wheel hubs with mating keyways.
- B. [MPSA03D and MPSA04B only] Unit shall come equipped with a direct drive fan. The fan shall be a double inlet, centrifugal wheel and shall rotate in permanently lubricated ball bearings. The wheel shall be made from steel with a corrosion resistant finish. The fan / motor assembly shall be statically and dynamically balanced.
- C. The fan assembly shall have adjustable pitched sheaves on the motor. Bushings shall be used on all sheaves to allow for easy removal of the pulleys from the fan and motor shaft. Fixed bore pulleys fastened to the shaft by setscrews will not be allowed. The drives shall be selected with a 1.2 service factor.
- D. All fan assemblies shall be statically and dynamically balanced at the factory, including a final trim balance, prior to shipment. All fan assemblies shall employ solid steel fan shafts. Bearings shall be sized to provide a L-50 life of 250,000 hours.
- E. Fan motors shall be heavy-duty, 1800 rpm, open drip-proof (ODP). Motors efficiencies shall meet EPAct efficiencies. Motors shall be mounted on an adjustable base that provides for proper alignment and belt tension adjustment.
- F. The fan design shall allow for the fan and motor assembly to slide out of the rooftop unit for ease of servicing the equipment.

2.05 Electrical

- A. Unit wiring shall comply with NEC requirements and with all applicable UL standards. All electrical components shall be UL recognized where applicable. All wiring and electrical components provided with the unit shall be number and color-coded and labeled according to the electrical diagram provided for easy identification. The unit shall be provided with a factory wired weatherproof control panel. Unit shall have a single point power connection for main power connection. A terminal board shall be provided for low voltage control wiring. Each compressor and condenser fan motor shall be furnished with contactors and thermal overload protection. Supply fan motors shall have a factory installed and wired control contactor. Knockouts shall be provided in the bottom of the main control panels for field wiring entrance.
- B. A single non-fused disconnect switch shall be provided for disconnecting electrical power at the unit. Disconnect switches shall be mounted internally to the control panel and operated by an externally mounted handle

2.06 Heating And Cooling Sections

- A. [MPS015B - MPS025B ton units] Direct expansion (DX) cooling coils shall be fabricated of seamless high efficiency copper tubing that is mechanically expanded into high efficiency aluminum plate fins. Coils shall be a multi-row design. Units shall have two independent refrigerant circuits and shall use an interlaced coil circuiting that keeps the full coil face active at all load conditions. All coils shall be factory leak tested with high pressure air under water.
- B. [MPSA03D - MPSA05D units] Direct expansion (DX) cooling coils shall be fabricated of seamless high efficiency copper tubing that is mechanically expanded into high efficiency aluminum plate fins. Coils shall be a multi-row design. All coils shall be factory leak tested with high pressure air under water.
- C. [MPSH07D – MPS A10 units] Direct expansion (DX) cooling coils shall be fabricated of Aluminum Micro Channel Coils that shall be leak tested to 150psig, pressure tested to 550 psig, and qualified to UL 1995 burst test at 2,200 psig. Units shall be provided with one two stage refrigerant circuit and shall use a single row microchannel cooling coil.
- D. [MPS A12 units] Direct expansion (DX) cooling coils shall be fabricated of Aluminum Micro Channel Coils that shall be leak tested to 150psig, pressure tested to 550 psig, and qualified to UL 1995 burst test at 2,200 psig. Units shall be provided with two independent refrigerant circuits and shall use a single row microchannel cooling coil per refrigerant circuit.

- E. A non-corrosive ceramic or polymer positively sloped drain pan shall be provided with the cooling coil. The drain pan shall extend beyond the leaving side of the coil and underneath the cooling coil connections. The drain pan shall have a minimum slope of 1/8" per foot to provide positive draining. The slope of the drain pan shall be in two directions and comply with ASHRAE Standard 62.1 The drain pan shall be connected to a threaded drain connection extending through the unit base.
- F. The rooftop unit shall include a natural gas heating section. The heating module shall be a tubular design with in-shot gas burners. The heat exchanger tubes shall be constructed of aluminized steel. The module shall have an induced draft fan that will maintain a negative pressure in the heat exchanger tubes for the removal of the flue gases.
- G. The heater shall have an electronic direct spark ignition system with a remote flame sensor. The gas furnace shall have a flame rollout safety protection switches and a high temperature limit switch that will shut the gas valve off upon detection of improper burner manifold operation. The induced draft fan shall have an airflow safety switch that will prevent the gas valve from turning on in the event of no airflow in the flue chamber.
- H. A factory-installed DDC control system shall control the gas heat furnace. The control system shall shut down the entire heating system after two unsuccessful attempts at start-up and require a manual reset. Field installed heating systems shall require a field UL/ETL certification. The manufacturer's rooftop unit UL/ETL certification shall cover the complete unit including the gas heating modules.
- I. The heating modules shall have a field installed kit for conversion of the unit to LP gas.

2.07 Filters

- A. Unit shall be provided with a draw-through filter section. The filter rack shall be designed to accept a 2" filter. The unit design shall have a hinged access door for the filter section.

2.08 Outdoor / Return Air Section

- A. Unit shall be provided with an outdoor air economizer section. The 0 to 100% outside air economizer section shall include outdoor, return, and exhaust air dampers. The outside and return air dampers shall be sized to handle 100% of the supply air volume. Damper blades shall be gasketed with side seals and jamb seals to provide an air leakage rate of 4 cfm / square foot of damper area at 1" differential pressure per ASHRAE 90.1 Energy Standard. Leakage rate to be tested in accordance with AMCA Standard 500. A barometric exhaust damper shall be provided to exhaust air out of the back of the unit. A bird screen shall be provided to prevent infiltration of rain and foreign materials. Exhaust damper blades shall be lined with vinyl gasketing on contact edges. Control of the dampers shall be by a factory installed direct coupled actuator. Damper actuator shall be of the modulating, spring return type. An adjustable enthalpy control shall be provided to sense the dry-bulb temperature and relative humidity of the outdoor air stream to determine if outdoor air is suitable for "free" cooling. If outdoor air is suitable for "free" cooling, the outdoor air dampers shall modulate in response to the unit's temperature control system.

2.09 Condensing Section

- A. Condenser coils shall be multi-row and fabricated from high efficiency rifled copper tubing mechanically bonded to high efficiency aluminum fins. Each condenser coil shall be factory leak tested with high-pressure air under water. Condenser coils shall be protected from incidental contact to coil fins by a coil guard.
- B. [MPS H07D - MPS A12 only] Condenser coils shall be an all aluminum design. The aluminum tube shall be a micro channel design with high efficiency aluminum fins. Fins shall be brazed to the tubing for a direct bond. Each condenser coil shall be leak tested to 150psig, pressure tested to 550 psig, and qualified to UL 1995 burst test at 2,200 psig.
- C. Condenser fans shall be direct drive, axial type designed for low tip speed and vertical air discharge. Condenser fan rpm shall be 1140 rpm maximum. Fan blades shall be constructed of steel and riveted to a steel center hub. Condenser fan motors shall be heavy-duty, non-reversing type with permanently lubricated ball bearing and thermal protection. Motor design shall be totally enclosed air over (TEAO) to protect the motors from rain and damage by water.
- D. Optional low ambient cooling to 0 degrees F shall be provided.
- E. Refrigeration circuit shall be complete with a thermal expansion valve and liquid line filter drier.
- F. Refrigerant gauge ports shall be external to the cabinet for both low and high pressure for ease of service.
- G. Each unit shall have multiple, heavy-duty scroll compressors. Each compressor shall be complete with gauge ports, anti-slug protection, motor overload protection and a time delay to prevent short cycling and simultaneous starting of compressors following a power failure. Compressors shall be isolated with resilient rubber isolators to decrease noise transmission.
- H. All units 12 through 25 tons shall have two independent refrigeration circuits. Each circuit shall be dehydrated and factory charged with Refrigerant 410A and oil.

2.10 Roof Curb

- A. A prefabricated 14-gauge galvanized steel, mounting curb shall be provided for field assembly on the roof decking prior to unit shipment. The roof curb shall be a full perimeter type with complete perimeter support of the air handling section and condensing section. The curb shall be a minimum of 14" high and include a nominal 2"x4" wood nailing strip. Gasket shall be provided for field mounting between the unit base and roof curb.

2.11 Controls (Analog)

- A. [MPSH07D - MPS025 Units] Control system shall have 2 stages for cooling and 2 stages for heating.
- B [MPSA03 - MPSA05 units] Control system shall have 1 stage for cooling and 1 stage for heating.

2.12 Controls (DDC)

- A. Provide a complete integrated microprocessor based Direct Digital Control (DDC) system to control all unit functions including temperature control, monitoring, unit safety protection, and diagnostics. This system shall consist of all required temperature sensors, pressure sensors, controller and keypad/ display operator interface.
- B. The stand-alone DDC controllers shall not be dependent on communications with any on-site or remote PC or master control panel for proper unit operation. The microprocessor shall maintain existing set points and operate stand alone if the unit loses either direct connect or network communications. The microprocessor memory shall be protected from voltage fluctuations as well as any extended power failures. No settings shall be lost, even during extended power shutdowns.
- C. The DDC control system shall permit starting and stopping of the unit locally or remotely. The control system shall be capable of providing a remote alarm indication. The unit control system shall provide for outside air damper actuation, emergency shutdown, remote heat enable/ disable, remote cool enable/ disable, heat indication, cool indication, and fan operation.
- D. The keypad interface shall allow convenient navigation and access to all control functions. The unit keypad/display character format shall be 2 lines × 16 characters. For ease of service, the display format shall be English language readout. The user interaction with the display shall provide the following information as a minimum:
 - 1. Return air temperature
 - 2. Supply air temperature
 - 3. Outdoor air temperature
 - 4. Space air temp
 - 5. Dirty filter indication
 - 6. Airflow verification
 - 7. Cooling status
 - 8. Unit status
 - 9. Last 10 active alarms and / or faults

- E. The user interaction with the keypad shall provide the following setpoints as a minimum:

Controls mode

1. Standby
2. Heat/cool
3. Cool only
4. Heat only
5. Fan only

Occupancy mode

1. Occupied
2. Unoccupied
3. Tenant override

- F. Night setback and setup space temperature



Daikin Applied Training and Development

Now that you have made an investment in modern, efficient Daikin equipment, its care should be a high priority. For training information on all Daikin HVAC products, please visit us at www.DaikinApplied.com and click on Training, or call 540-248-9646 and ask for the Training Department.

Warranty

All Daikin equipment is sold pursuant to its standard terms and conditions of sale, including Limited Product Warranty. Consult your local Daikin Applied Representative for warranty details. To find your local Daikin Applied Representative, go to www.DaikinApplied.com.

Aftermarket Services

To find your local parts office, visit www.DaikinApplied.com or call 800-37PARTS (800-377-2787). To find your local service office, visit www.DaikinApplied.com or call 800-432-1342.

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